PAN Asia Pacific
For a just and pesticide-free future

HANDBOOK FOR COMMUNITY BASED PESTICIDE ACTION MONITORING, CORPORATE ACCOUNTABILITY AND INTERNATIONAL ADVOCACY

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Preface

Thirty years ago the International Code of Conduct on Pesticides Management (formerly called the International Code of Conduct on the Distribution and Use of Pesticides) was adopted to reduce pesticide risks to human health and the environment. The Code, fully revised in 2002 and again in 2014, sets out standards of conduct for governments and the pesticide industry, which have formed the basis for pesticide legislation in many developing countries. A number of international efforts on pesticides have followed the adoption of the Code, such as the legally binding Rotterdam Convention on Prior Informed Consent. The Convention lists problematic active ingredients and severely hazardous pesticide formulations for information sharing and trade controls. More recently, in 2006 the Strategic Approach to International Chemicals Management (SAICM) stresses shared and multi-stakeholder responsibilities so that by 2020, chemicals are 'used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment' (ICCM, SAICM 2006).

In spite of such international efforts, pesticide poisonings continue to heavily impact rural communities as shown in targeted surveillance exercises undertaken since 1985. Those living in poverty, women and children are disproportionately affected. At the same time, the market for pesticides in developing countries is growing, particularly in Asia and Latin America.

In this context, the PAN Regional Centres in Asia, Latin America, Africa together with civil-society partners[1] initiated the Community Monitoring and International Advocacy project in to investigate the use and impacts of pesticides in affected communities. The objectives were to:

- Highlight the impact of highly hazardous pesticides on the health of communities with the aim of strengthening regulations and recommendations to reduce and eliminate these pesticides at local, national, and international levels. This includes reducing acute poisonings, and exposures to pesticides causing chronic effects, such as carcinogens, reproductive toxins, endocrine disruptors, immunotoxins and neurotoxins.

[1] Full list available at http://www.panap.net/sites/default/files/PAN-Global-Report.pdf, p.iii

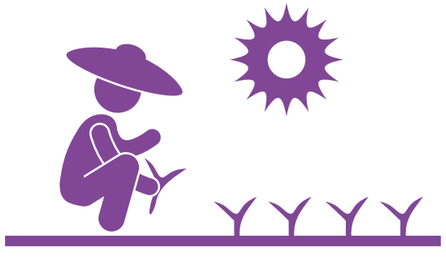
- Document the practices of agrochemical corporations that produce, distribute and use pesticides in relation to the Code with the aim of ensuring their accountability.

The result of the efforts was regional and global reports based on field research conducted under this project, focusing on the conditions of pesticide application, storage and disposal; health impacts; identification of pesticides used; and conditions of sale at retail stores.

The project was based on a participatory action research approach called Community Pesticide Action Monitoring (CPAM). This approach, developed by PAN Asia and the Pacific (PAN AP), documents and creates awareness of pesticide effects. For the purposes of this project, PAN groups and network partners engaged in a process to develop a questionnaire and train CPAM monitors from local areas to carry out the field survey. These tools were prepared by PAN with initial guidance of medical professionals and modified in consultation with local organisations and communities. This survey was delivered via interviews in local language, and was carried out in 21 areas of 13 countries among women and men farmers, agricultural workers, and members of rural communities affected by spray drift. Conditions in retail stores were also monitored through observations and interviews with salespersons.

This handbook provides some of the resources and tools used in the community monitoring and international advocacy project. The material within has been updated based on the field experience and learnings of the network in undertaking the survey, analysis and documentation.

We hope that these resources will be useful in understanding and strengthening international commitments, and in preparing documentation for campaigns to reduce the hazards of pesticides in rural communities and increase the level of accountability of agrochemical corporations to communities whose lives are affected by highly hazardous pesticides.



CHAPTER ONE

Section One: Introduction

National governments and representatives of the pesticide industry globally have agreed to improve their regulation and management of pesticides. Commitments have been made by signing legally binding conventions and agreeing to abide by voluntary standards. These international policy instruments state what governments, industry and other actors must or should do to reduce risks created by pesticides.

Pesticide Action Network (PAN) believes that pesticide use, distribution and management should be monitored at all levels. It is necessary for governments to put in place systems to monitor the use and distribution of pesticides. They must also ensure that they, and the pesticide industry, comply with the international instruments and agreements in place, and meet their commitments. PAN believes that stronger commitments should be made following the precautionary principle.

Community monitoring is an effective way to monitor, report, act and to advocate for governments to take action on health and environmental problems observed or experienced. In the case of common problems in different parts of the world, community monitoring enables communities to compare, share and take concerted action. Once an issue is known and documented, PAN and partner groups can advocate for strengthened national and international policy and monitor implementation of existing policies as well as the promotion of agroecological approaches to replace these pesticides.

This handbook provides information and monitoring tools to carry out community monitoring focused on collecting information on the situation at the local level on how pesticides are used and their impacts. And using the documentation from the monitoring for national and international advocacy. It outlines a monitoring and documenting approach, based on Community Pesticide Action Monitoring (CPAM). Elements of corporate accountability has also been added to the tools/questionnaires as corporations are among the biggest violators of human rights. Driven by the need to squeeze as much profits as they can, they often

violate the basic rights of communities and individuals. Thus, documenting these is vital for campaigning and advocacy to hold both States and corporations accountable for human rights violations.

Community monitoring material can be used to highlight the nature and extent of pesticide problems at local and national levels. It can be used to highlight problems such as poisoning, paying attention to conditions of use. Monitoring and documenting problems/cases can draw attention to the level of accountability, or lack thereof, of agrochemical companies under such conditions. It can also highlight national government policies and regulations, including gaps or ineffectiveness. The documentation can be targeted at policy makers, based on community monitoring results, to ensure the implementation of the international instruments, raise the standards of pesticide regulation and control, as well as reduce pesticide use and help to advance agroecological approaches.

The handbook focuses on four international instruments:

- **The Rotterdam Convention** on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
- **The Stockholm Convention** on Persistent Organic Pollutants
- The International Code of Conduct on Pesticide Management **(The Code)**
  The Strategic Approach to International Chemicals Management **(SAICM)**
- Exploring the United Nations Resolution on the Elaboration on a legally binding treaty for an international legally binding instrument to regulate, in international human rights law, the activities of transnational corporations and other business enterprises.

In 2011, the Permanent People's Tribunal (PPT) jury hearing over more than 30 cases backed with evidence of these violations brought a guilty verdict on these agrochemical TNCs. These include the violations to the right to life, health, a safe working environment as well as the rights of indigenous peoples, women and children. (For more information, please go to www.agricorporateaccountability.net).

Oftentimes, linking the human rights violations that are happening on the ground to the TNCs is a major challenge. There may be no evidence to show a direct link (i.e. causal link) between the violation(s) that occur on the ground e.g. pesticide poisoning, and the perpetrator (i.e. TNCs). While directly linking the violations to the TNCs is a challenge, it is possible to document their violations. As was used for the cases in the PPT documentation, PANAP plans to utilize the 'Threshold Criteria' set by the International Commission of Jurists, where they have set out criteria to make it possible to link TNCs to their human rights violations.

Exploring legal mechanisms - While there is a lack of mechanism to hold TNCs accountable for any human rights violations committed, the June 2014 UN Human Rights Council Resolution 26/9 on the Elaboration of an Internationally Legally Binding Instrument on Transnational Corporations and other business enterprises with respect to human rights looks to be a positive attempt to hold these TNCs accountable for human rights violations that are caused by them. Negotiations on the content of the Treaty are being discussed and these are expected to last till 2016 before a draft of the treaty is ready.

The Rotterdam Convention and the Stockholm Convention deal with specific pesticides. The Rotterdam Convention is a tool for information exchange for a limited number of pesticides, while the Stockholm Convention is a tool for global elimination of a limited number of pesticides. Both these conventions are legally binding.

The Code is different from the Rotterdam and Stockholm Conventions. It sets voluntary standards, and as such, is not legally binding. However, it is a far more comprehensive approach, and provides the basis for national pesticide legislation. Importantly, agrochemical corporations (represented by CropLife International) agreed to abide by the Code (CropLife International, 2005). Amongst its provisions, the Code says that pesticides should be avoided if they cannot be handled in a way that will not cause harm to the user. In addition, the Code says that IPM should be promoted and that non-chemical alternatives should be used.

SAICM, under the United Nations Environment Programme (UNEP), is a voluntary (non-binding) instrument that is aiming to bring together all the instruments to deal with chemicals including pesticides (incorporating the Code, the Rotterdam Convention and the Stockholm Convention) in one comprehensive and collaborative policy and plan of action at the international level.

Governments which are parties to the instruments must implement them at national level, and integrate them into their regulatory system. Governments must also monitor the implementation of the agreements. However, at national levels, there may be a 'patchwork' of different conventions and there may be limited capacity to monitor problems such as poisonings (Goldenman & Pozo Vera, 2008).

In this context, NGOs, CSOs and public interest groups have an important role in ensuring the implementation of the agreements. Such groups have contact with communities at grassroots level, and can monitor practical problems. They can find out government plans and actions, and can monitor and lobby for national action. PAN will also collaborate with national groups in advocacy at the international level and reporting back on progress made.

Cambodian children playing with bare foot in the grounds of Po Ampil School, Takeo Province. Some 2 years ago, almost 30 students reported having symptoms of pesticide poisoning. CEDAC, which monitors the pesticide use in the area and reported of finding pesticides such as chlorpyrifos, glyphosate, lamda-cyhalothrin and cypermethrin, in the Po Ampil commune.

Section Two: Advocacy on Highly Hazardous Pesticides and Corporate Accountability

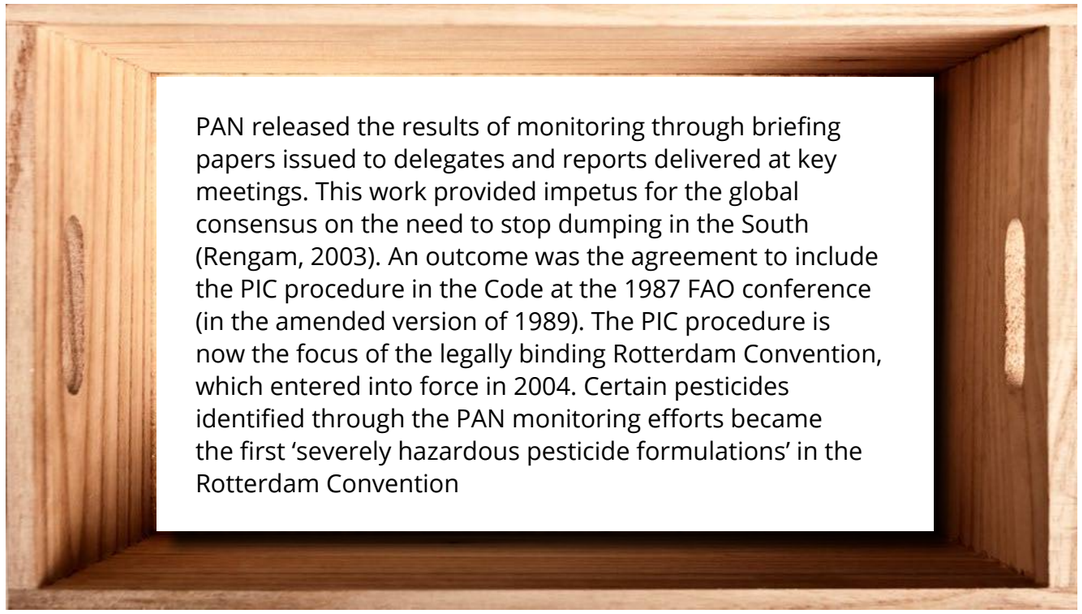
PAN has repeatedly and consistently called for the restriction, reduction and elimination of highly hazardous pesticides. Exposure to such pesticides can result in poisoning or diseases, and damage to the environment. Community monitoring is a tool to document health and environmental effects of pesticides under conditions in which they are used. It can also be used to monitor the implementation of the international instruments and the compliance of companies and governments to them. This section clarifies some of the issues central to PANs advocacy work, and the importance of community monitoring to them.

When PAN was originally formed in 1982, members observed pesticides that were banned or restricted in some industrialised countries being exported to countries with less stringent regulations, a practice known as 'dumping'. Some of PAN's early advocacy at the international level focused on stopping this practice through the prior informed consent (PIC) procedure (see Box 1). PAN also was integrally involved in developing the revised 2002 version of the Code. Other key efforts have targeted pesticides responsible for widespread harm. As a result of monitoring, reporting and campaigning by communities some pesticide bans in individual countries or states have been put in place (see Boxes 2-3).

Box 1: Advocacy for Prior Informed Consent

PAN was involved in the drafting process of the first International Code of Conduct, which was adopted by governments at the 1985 FAO Conference. PAN advocated the inclusion into the Code of the Prior Informed Consent (PIC) procedure amongst its provisions. This procedure would allow importing countries to make an informed decision about whether to import certain banned or severely restricted highly hazardous pesticides (See also Section Three).

PAN monitored the implementation of the Code, and prepared a Citizen's Action Guide with the International Organisation of Consumers Unions. Community monitoring by local groups and grassroots organisations was a vital part of the monitoring efforts. CSOs, NGOs, and public interest groups monitored and documented the impact of pesticides on communities, with PAN coordinating efforts (Pesticides Trust, 1989).



PAN released the results of monitoring through briefing papers issued to delegates and reports delivered at key meetings. This work provided impetus for the global consensus on the need to stop dumping in the South (Rengam, 2003). An outcome was the agreement to include the PIC procedure in the Code at the 1987 FAO conference (in the amended version of 1989). The PIC procedure is now the focus of the legally binding Rotterdam Convention, which entered into force in 2004. Certain pesticides identified through the PAN monitoring efforts became the first 'severely hazardous pesticide formulations' in the Rotterdam Convention

Box 2: Endosulfan Campaign

The insecticide endosulfan has caused severe poisonings and death in many parts of the world and is one of the main causes of poisoning in many countries (Kishi, 2002, PANNA, 2008). PAN and partners have worked to understand and document the effects on communities and call for governments to take action. Some examples of this work include:

In **West Africa,** PAN UK and its partners, especially Organisation Béninoise pour la Promotion de l'Agriculture Biologique (OBEPAB) from Benin, have been campaigning for a ban on endosulfan in Benin for many years. They undertook an investigation from 2001-2004, with partner NGOs in Africa. They released the report 'Living with Poison' (Glin et al., 2006), which highlighted problems including large numbers of deaths and environmental damage, finding that some of the worst poisoning cases occurred in Benin. In 2008, the government of Benin announced that endosulfan would be banned. This followed a recommendation by pest management experts, who acknowledged the unacceptable hazards of endosulfan. According to PAN UK (2008), this 'paves the way' for the phase out of endosulfan in other cotton-growing countries of West Africa, and the opportunity to scale-up organic cotton and integrated pest management.

In **Colombia,** Latin American NGOs, including PAN Latin America (RAPAL), were successful in persuading the Colombian government to ban the pesticide in 2001, after years of campaigning (PANNA, 2008).

In **Indonesia,** Gita Pertiwi's consistent involvement in the implementation of the Stockholm Convention and push of the endosulfan campaign contributed to the decision by Indonesia to ban the highly toxic pesticide. In **Kerala, India,** an investigation by Thanal into the aerial use of endosulfan over cashew plantations established links of various diseases and deformities to the use of this pesticide. Thanal and others campaigned successfully for a state-wide ban in Kerala in 2002 and successfully worked for the Kerala government to compensate and provide health support to the survivors of endosulfan poisoning.

In the **United States,** a coalition of indigenous groups, farmworkers, organic and environmental groups and others have pressured the US EPA to cancel the registration of endosulfan. PAN North America (PANNA) partners use the Drift Catcher, a community-based air monitoring tool, to document unsafe levels of endosulfan in the air, and have used this data for advocacy. Endosulfan is now being phased out in the US.

Globally after ongoing campaign by PAN International and partners, endosulfan is banned in more than 71 countries and has been included in the Stockholm and Rotterdam Convention in 2011.

Box 3: Paraquat Campaign

Paraquat is another pesticide which has featured strongly in PAN's international campaigns because of its high toxicity and frequent poisoning incidents PAN's monitoring and advocacy has contributed to government actions to ban or restrict the pesticide.

In **Malaysia,** plantation workers involved in spraying paraquat monitored their health daily for three months with the support of Tenaganita and PAN AP, followed by a blood sampling procedure with the National Poison Centre. The findings were documented and reported (Tenaganita & PAN AP, 2002). The report contributed to the ban of paraquat by the Malaysian Government in 2002, however with industry pressure the ban on paraquat was overturned.

In **Sri Lanka,** community monitoring, organising and action, including a postcard campaign, took place in response to problems with paraquat. The key group involved in this campaign, Vikalpani National Women's Federation, have recently been alerted that the initial steps to ban paraquat have been taken by the Government.

In China, **PAN China** created awareness with a survey on the impacts of paraquat on famers. In 2012, the Chinese Government announced the halting and production of liquid paraquat by 2016.

In **Central America,** paraquat has caused a significant number of acute poisonings as highlighted in an epidemiological study as part of the Occupational and Environmental Aspects of Exposure to Pesticides in the Central America Isthmus (PLAGSALUD) (PAHO, 2002). The aerial spraying of paraquat has now been banned in both Costa Rica and Colombia.

Globally, paraquat is banned in 34 countries such as Bosnia & Herzegovina, Cambodia, Ivory Coast, Kuwait, Norway, Switzerland, Syria, United Arab Emirates; and all countries of the European Union. Paraquat is restricted in Belize, Chile, Columbia, Costa Rica, Fiji, Indonesia, Philippines, Saudi Arabia, South Korea, Uruguay, USA. With ongoing campaigns major producers of bananas such as Dole and Chiquita) and tea (Unilever, Nestlé) have moved away from reliance on Paraquat. Paraquat is still up for review in the Rotterdam Conventions in 2017,

Highly Hazardous Pesticides

The type of health problems caused by pesticides depend on the properties of the pesticide and the nature and duration of exposure. Short-term exposure to an acutely toxic pesticide can cause poisoning. Exposure to pesticides with certain properties (such as carcinogens) can cause longer-term, chronic effects. Such effects can occur from repeated contact with a pesticide over a long period of time but can also be triggered by short-term exposure. Chronic health effects include diseases such as cancer, reproductive dysfunctions, hormonal imbalances, birth defects and neurological problems.

Pesticides are assigned hazard classifications according to their level of toxicity. The most widely acknowledged classification of pesticides is that of the World Health Organisation (WHO, 2004). This gives a conventional indication of acute toxicity, based on the toxicity of a pesticide to animals. Pesticides classified by WHO as Class Ia are called 'extremely hazardous' and Class Ib 'highly hazardous'. There are some anomalies in the WHO Classification, for example paraquat is listed in Class II (moderately hazardous) but has demonstrated to be highly hazardous under certain conditions of use. In addition, the WHO classification only includes the technical active ingredient and does not take into account other ingredients that may be more toxic and added to the formulation.

Under the Code, if the risks of a pesticide are unacceptable, pesticide industry and national governments must act. Governments are responsible for the legislation and regulation of pesticides. Industry's accountability extends through the lifecycle of its products. This responsibility is particularly important where national regulations and laws are inadequate.

In line with the SAICM Global Plan of Action, the FAO Committee on Agriculture recommended actions that address "risk reduction, including the progressive ban on highly hazardous pesticides" (FAO 2007a), and in line with this initiative, the FAO Panel of Experts outlined criteria to identify highly hazardous pesticides (FAO 2007b). PAN International, drawing on and expanding these criteria, has prepared a full list of HHPs: pesticides that have high potential to cause illness, injury or death to humans and animals or damage to the environment. Specifically, a pesticide is considered to be highly hazardous by PAN if it has one of the following characteristics:

- High acute toxicity (including inhalative toxicity) and/or,
- Long term toxic effects at chronic exposure (carcinogenicity, mutagenicity, reproductive toxicity, endocrine disruption) and/or,
- High environmental concern either through ubiquitous exposure, bioaccumulation or toxicity, and/or
- Known to cause a high incidence of severe or irreversible adverse effects on human health or the environment.

A full list of the criteria, the classifications and sources used is provided along with a list of known HHPs at https://www.panna.org/sites/default/files/PAN_HHP-List_1101(1).pdf (PAN International, 2011)

The use of hazardous pesticides results in a high number of acute pesticide poisonings in developing countries, many of which go unreported. The extent of chronic effects is unknown (Kishi, 2005, Watts, 2007) yet a growing number of studies and anecdotal evidence indicate the likelihood that those effects can be long-lived and severe.

Conditions of Use

Conditions of use are common and recognised patterns of use of a pesticide. They include the quality of application equipment, methods, timing and frequency of pesticide use. These technical factors are influenced by the availability of resources, training, and information; which are influenced by the social, economic and environmental context.

Even if users are aware of the hazards of the pesticides they use (from reading labels or being trained), they may not be able to reduce risks, due to social or economic barriers. For instance, if the Personal Protective Equipment (PPE) is expensive, uncomfortable, or unavailable, people may spray with inadequate protection. If washing facilities are not provided, workers may have no choice but to eat and drink with pesticide soaked hands. If health problems do occur, medical treatment is often unavailable or unaffordable. Some people continue to spray despite health problems, simply because 'economic survival generally overrides concerns for health' (Kishi, 2005).

Users are not the only ones at risk. While not an extensive list, some examples of non-occupational exposure which may affect communities include:

- Contact with spray drift from pesticides applied by the air or ground-based means
- Consumption of pesticide residues through contaminated food and drinking water
- Contact through washing or re-use of containers or vessels previously used for pesticide mixing or storage
- Bathing or swimming in contaminated water (e.g. in canals)
- Contact through contaminated clothing or equipment (for example washing, direct contact, storage).

Exposure to pesticides under unsafe conditions of use can increase poisonings. This has occurred with individual pesticide formulations, such as paraquat and endosulfan (see Box 2-3). However, pesticides are frequently applied as mixtures (or 'cocktails'). This increases the hazard posed by the pesticide formulation. For example, in Kamukhaan in the Philippines, exposure to pesticides cocktails sprayed aerially over banana plantations caused contamination of the local environment and many tragic health problems (Quijano & Quijano, 2002), and in recent monitoring, farmers in Cambodia were observed mixing up to eight products to kill insect pests.

It is therefore important to monitor and raise awareness on pesticide poisoning incidents and the related conditions. The international instruments require governments to gather this data. The parties to the Rotterdam Convention are asked to identify pesticide formulations are 'severely hazardous' under conditions of use in the South[2] (this convention is described further in Section Three), and

report on incidents caused by pesticides in their country. Governments must notify bans and restrictions at the international level. The Code calls for incident monitoring, surveillance programmes and data collection for improved information about the health and environmental effects of pesticides under conditions of use. Under the Code, pesticides with unacceptable risks should be restricted, banned or withdrawn from use.

Community members have vital knowledge about how pesticides are used and managed in fields and gardens where they work and live. They also have first-hand experience if they become very sick from use of a particular pesticide formulation or mixture. In such cases, community monitoring of conditions of use is important, especially where vulnerable groups are affected, including women, children, elderly and the sick.

A farmer from Indonesia is mixing pesticides with his bare hands

BOX 4: Protect Our Children (POC) from Toxic Pesticides Campaign

"PAN AP and partners (POC) campaign against HHPs seeks to raise awareness of the dangers of HHPs among the general public, particularly children, and to support agroecology. Children face a far greater risk of exposure to pesticides when compared to adults. They breathe more air, eat more food and drink more water per unit of body weight and thus have greater exposure in a pesticide-contaminated environment. Children at school can be subjected to pesticide exposures, both from use in the schools, and from nearby operations.

The UN Convention on the Rights of the Child recognizes children's rights to both physical and mental health. Yet, these rights are violated as children are exposed to HHPs from their surroundings, foetal environment, or their mother's breast milk. At least 127 pesticides in use today are known endocrine disruptors, which could cause birth defects, cancers, and development problems among children.

The "terrible twenty" HHPs that are particularly hazardous for children's health will be the focus of this campaign. The terrible twenty include chlorpyrifos, monocrotophos, malathion, methamidophos, DDT, permethrin, diazinon, paraquat, propoxur, atrazine, dichlorvos, cypermethrin, deltamethrin, mancozeb, methyl parathion, carbaryl, chlorothalonil, parathion, lambda-cyhalothrin, and maneb. PAN Asia Pacific and partners wants to raise awareness about the impact of these harmful pesticides on children both at the national and regional levels. We believe children our future and they should have a right to safe food and a clean environment. We aim to protect our children from toxic pesticides so that they can reach their full potential in their health learning and wellbeing.

Farmers may not be aware of the impacts of pesticides on children

Pesticides Causing Chronic Health Effects

Pesticides can cause long-term problems in the environment and to human health, including effects on unborn children. PAN recognises the urgent need to study and act on these effects.

One category of chemicals (including pesticides) linked with chronic health effects is the Persistent Organic Pollutants (POPs). POPs are toxic, persistent, bioaccumulative and have potential for long-range transport (Stockholm Convention 2013, see also Section Three). Due to these properties, people throughout the world have a 'body burden' of POPs.

The extent of chronic effects of pesticides on human health is not easily available (UNEP, 2013, Pruss-Ustun A. et al, 2011, Beyond Pesticides, 2010). Only a few health surveillance studies have been undertaken in developing countries, and effects are often underreported (Ngow et al., 2013, Kishi, 2005, Watts, 2007). Several factors contribute to underreporting. At a physical level, signs and symptoms of chronic effects are not easily recognisable and there may be a long onset to illness. Poverty and illiteracy can also prevent access to information and medical care. Misdiagnosis is common, and if employment is at stake, people may feel pressured to accept a health problem or consider it minor. Finally, authorities or medical practitioners may fail to recognise pesticides as the cause of the illness.

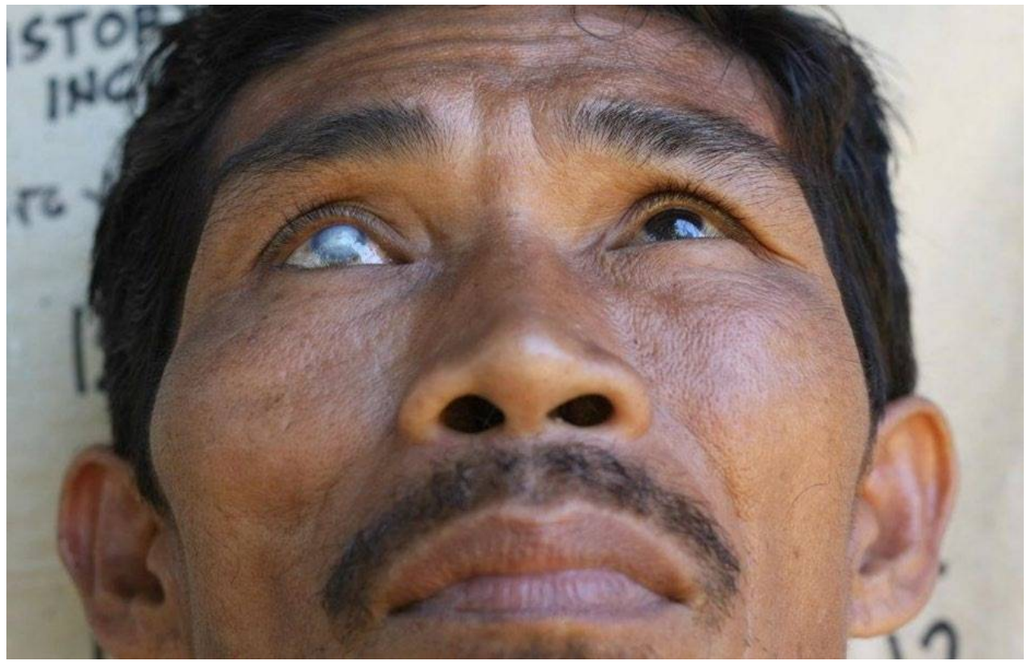
The "cause-effect" relationship of pesticide use may not be clear because:

i. Chronic effects can be developed through low-dose, long-term exposures or due to severe acute poisoning

ii. The link between a chronic health effect and exposure to pesticides may not be clear and there may be confounding factors including smoking, alcohol consumption or diet. However, these conditions can increase susceptibility and aggravate toxic effects.

iii. Effects may occur through direct exposure to pesticide spray, and also indirectly through environmental contamination, consumption of residues in food and water, or pre-birth exposure (Cohn et al., 2015, American Pregnancy Association, 2015, Guillette, 1999)

One effect can trigger a chain of effects, so understanding the effects themselves is complex. For instance, endocrine disruption can result in a number of effects such as lowered immunity, reproductive problems, and breast cancer (WHO-UNEP, 2013, International Programme on Chemical Safety, 2002, Watts, 2007, Colborn et al, 1996)



Palm oil plantation workers in Mindanao have reportedly being poisoned by pesticides and other toxic chemicals.

Agrochemical Corporation Compliance with International Standards

PAN recognises that the spread of highly intensive, monoculture agriculture has often resulted in increasing pesticide use without adequate regard for health and environmental effects (Rengam 2003). In this context, agrochemical corporations must be accountable to the communities who use their products. Therefore, PAN is aiming to ensure compliance to the Code as a minimum standard for industry. Some examples of monitoring corporate compliance are provided in Box 5 below.

Representatives of the pesticide industry agree to observe the Code. CropLife International (representing BASF, Bayer, Dow, DuPont, FMC, Monsanto, Sumitomo, and Syngenta), states that "CropLife International and the leading companies of the plant science industry have agreed to abide by the provisions of the latest revision of the Code" (CropLife International, 2005). Under the Code, industry's product stewardship extends throughout the product lifecycle. Product stewardship is the 'responsible and ethical management of a pesticide product from its discovery through to its ultimate use and beyond'. This includes proper labelling, packaging, information, and advertising of pesticides. It also includes dealing with waste, containers and obsolete pesticides. Industry has a responsibility to recall a product if it poses unacceptable risks. In situations where countries lack appropriate legislation, regulation and advisory services, this ethical obligation is vital.

National governments are required to implement rules and control measures to regulate industry. NGOs and community groups have a role in monitoring actions of the pesticide industry at the local and national levels. They can also monitor government implementation of the Code, and are invited by the FAO to monitor activities to the Director General of the FAO (FAO, 2003). Some activities might include monitoring at retail stores; and the collecting advertisements and examples of promotions that infringe the Code.

Box 5

Integrated Pest Management- contested claims: In Vietnam, some brands of insecticide were introduced by companies for use on paddy fields, and promoted as being compatible with Integrated Pest Management (IPM) practices. Rhône-Poulenc, since owned by Aventis and now Bayer Crop-Science, also claimed that its insecticide, Regent (fipronil) increases rice yields. Zeneca (now Syngenta AG) claimed that its product, lambda-cyhalothrin, could be safely incorporated into rice IPM practices as well. The Danish International Development Agency (DANIDA), conducted a study to assess the environmental impact of the pesticides. This involved a scientific study monitoring insects (including predators and pests) from treated and untreated fields. Results of the study contradict claims made by the companies. It found that: the insecticides actually damaged IPM efforts by killing both predators and pests; the insecticides would have adverse effects on a farmers' income; and that yield increases from Regent were not due to the active ingredient, fipronil. They were possibly due to micronutrients added to the formulation. Many companies promote or advertise that their products are compatible with IPM. This practice is against the Code of Conduct if there is evidence that suggests otherwise.

See PAN UK, 1998:http://www.pan-uk.org/pestnews/Issue/pn39/pn39p12.htm

Box 6

Availability of PPE at pesticide dealers: Under the Code of Conduct, it is recommended that pesticide users wear personal protective equipment to protect themselves against exposure to pesticides. In 2007, The Berne Declaration and partner groups did a survey of availability of PPE at dealers of paraquat (a Syngenta product with the common brand name Gramoxone) in China, Indonesia and Pakistan (Dinham, 2007). The study looked at whether the standards of the Code on PPE were met. Label directions for paraquat include strong precautionary measures regarding PPE. Local groups surveyed dealers of paraquat in 12 stores in each country they studied. In the majority of cases, they found that the recommended PPE was not available, and that dealers could not advise their customers where to buy it. Through interviews with dealers and direct observations, it was found that farmers and workers generally did not use PPE, suggesting that it is unavailable, uncomfortable, or expensive. The report makes a range of recommendations to governments in order to ensure the risks have been evaluated under local conditions of use, and that pesticide dealers are registered and licensed. The report recommended to industry that they fulfil their product stewardship obligations in awareness of risks to users, and take responsibility by withdrawing the product from sale.

See: http://www.evb.ch/en/p25012607.html

The experiences and examples described above have contributed to the PAN's new advocacy initiatives.

Illegal Pesticides found in Lao and are commonly found in many countries in Asia

Pesticide containers discarded in the vicinity of the home. These containers are also easily accessible to children.

SectionThree:International Instruments

This section outlines the international instruments, highlighting their objectives, provisions and clauses that are relevant to communities experiencing problems with pesticides monitoring the issues described in Section Two.

THE ROTTERDAM CONVENTION

The Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (the Rotterdam Convention) is a legally binding Convention which came into force in 2004. It establishes PIC, an export control on chemicals which certain parties have banned, withdrawn or severely restricted.

PIC is important as it provides an international list of pesticides that are banned, withdrawn or severely restricted, and can prevent unfair dumping of hazardous pesticides to countries in the South. It does this by requiring parties to notify banned or restricted substances. PIC requires that they cannot be exported to another country unless the importing country is fully informed of the risks and still consents. It also establishes importers' right to refuse exports, and obliges that exporters respect these decisions.

In each country which is party to the Convention, a Designated National Authority (DNA) must be assigned the responsibility for implementation, including notifying bans or restrictions, monitoring and reporting incidents.

There are two categories of chemicals that may be subject to PIC listing.

In the first, each party that has adopted a final regulatory action (ban or severe restriction) on a chemical must forward a notification to the Secretariat. In order to be considered for the PIC list, the ban or restriction must be taken by a government to protect human health or the environment (based on a scientific risk evaluation). Once at least one notification from each of two regions of the world are received by the Secretariat, they will forward these to the Chemical Review Committee for consideration. The Chemical Review Committee (CRC) is composed of government-designated experts in chemicals management. The CRC will prepare a Decision Guidance Document (DGD) which is forwarded to the Conference of the Parties (COP) to decide whether it should be listed.

The second covers 'severely hazardous pesticide formulations' causing problems under conditions of use in a developing country or country in transition. In the Rotterdam Convention, "severely hazardous pesticide formulation" means a "chemical formulated for pesticidal use that produces severe health or environmental effects observable within a short period of time after single or multiple exposures under conditions of use". Information must be provided by a government to demonstrate this, including information about the identity, common and recognised patterns of use, descriptions of incidents

and the way in which the formulation was used, and any measures taken by the government in response. The notification is reviewed by the Secretariat and, if it contains the required information, is forwarded to the CRC, which will take into account additional information. Intentional misuse of a chemical is not considered an adequate reason for listing. The CRC will then prepare the DGD to forward to the COP.

Recently, it has been increasingly difficult to get listed some of the substances that have met the test of having countries in two or more regions having banned or restricted the substance, in some cases despite very substantial scientific evidence supporting the listing, due to opposition of some governments.

The Convention has a useful mechanism for information exchange, due to the provision enabling the placement on the website of information regarding actions by various governments to restrict or ban substances that are of interest under the PIC Convention.

THE STOCKHOLM CONVENTION

The Stockholm Convention on Persistent Organic Pollutants (POPs) is another legally binding convention which entered into force in 2004.

Under the Stockholm Convention governments commit to eliminate restrict and reduce production, use and releases of POPs. These chemicals share four properties. They are:

- Highly toxic
- Persistent, lasting for years or even decades before degrading into less dangerous forms
- Evaporate and travel long distances through the air and through water
- Accumulate in fatty tissue.

The Convention acknowledges the harmful properties of POPs and their unequal effects on communities worldwide. It notes the health concerns, especially in developing countries, resulting from local exposure to POPs, in particular impacts upon women, and through them, future generations. It also recognises that arctic ecosystems and indigenous communities are particularly at risk because of the biomagnification of POPs and contamination of their traditional foods.

The Convention includes lists of POPs chemicals, including pesticides, that must be eliminated (Annex A of the Convention) or restricted (Annex B), and those arising from unintentional production, releases of which must be reduced, minimised and eliminated (Annex C). Pesticides listed on Annex A for elimination include aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, and toxaphene. Governments which are parties to the Convention are required to eliminate, restrict and reduce POPs, including stockpiles and dumps. They must develop and implement implementation plans, and take concrete measures to phase out POPs.

The Convention also sets out a process to identify and add new chemicals to the list. Any party can propose a chemical for listing. In order to be listed, the chemical must meet the screening criteria of POPs properties, and also be subject to risk profiling and risk evaluation.

INTERNATIONAL CODE OF CONDUCT ON PESTICIDE MANAGEMENT

The International Code of Conduct on Pesticide Management or Code is the key international agreement on pesticides. It is a comprehensive approach which sets voluntary standards and specifies responsibilities for all those involved with pesticide use and management.

The Code is particularly important in countries where regulatory capacity is limited. The Code was first adopted in 1985 at the 25th Session of the Conference of the FAO and has since been revised twice. Its provisions have been strengthened in 2002 and in 2014.

The Code assigns (specific and cooperative) responsibility for pesticide distribution and use.

Governments are assigned overall responsibility for regulation of "availability, distribution and use". The Code provides Governments with a starting point to help countries draw up their own regulatory systems, and establish monitoring and surveillance of the effects of pesticides, including poisonings.

Under the Code, standards for industry are set for the "manufacture, distribution and advertising of pesticides, particularly in countries lacking appropriate legislation and advisory services". It calls on industry to exercise product stewardship, which is defined as "the responsible and ethical management of a pesticide product from its discovery through to its ultimate use and beyond".

The Code is also important because it promotes low risk and non-chemical alternatives to pesticides, as well as Integrated Pest Management (IPM) (3.7-3.8).

Highly Hazardous Pesticides

Under the Code, both governments and industry have obligations to manage and eliminate risks to human health from highly hazardous pesticides.

Corporate Accountability

The Code provides (minimum) standards for the pesticide industry throughout the product lifecycle. These are especially important in countries without adequate legislation. All parties (including industry) should observe its provisions, and promote its principles and ethics regardless of others' ability to observe the Code. Since corporations agree to abide by its standards, the Code provides a baseline of performance against which to monitor industry's behaviour.

THE STRATEGIC APPROACH TO INTERNATIONAL CHEMICALS MANAGEMENT

Several international agreements on sustainable development, including chemicals management, stemmed from the Earth Summit, held in Rio de Janeiro in 1992. Agenda 21 and the Rio Declaration represent commitments made by heads of State and Government of the UN Member States at Rio. Agenda 21 is a comprehensive but non-legally binding action plan and called for improved coordination and cooperation on chemicals management, as set out in Chapter 19 of Agenda 21.

Global leaders gathered at the 2002 Johannesburg Summit on Sustainable Development (10 years on from the Rio Summit), and introduced the Johannesburg Plan of Implementation, which commits to minimising significant adverse effects from the production and use of chemicals on human health and the environment by 2020 (as initiated in Agenda 21).
To implement progress towards the 2020 goal, the Strategic Approach to International Chemicals Management (SAICM) was initiated. SAICM was adopted by Governments, international organisations, representatives of civil society and the private sector in Dubai on 6 February 2006, as part of the International Conference on Chemicals Management (ICCM). Under UNEP, SAICM is a voluntary (non-binding) instrument that aims to bring together all the instruments to deal with chemicals (including the Code, the Rotterdam Convention and the Stockholm Convention) in one comprehensive and collaborative policy and plan of action at the international level for risk reduction and chemical safety.

SAICM is still a 'work in progress', and some of its provisions were weakened by certain governments during the process. However, it is a holistic approach to chemicals management, which was developed by many stakeholders. It provides conditions whereby NGO and civil society efforts in chemicals management can become global.

The three core texts of the SAICM are The Dubai Declaration on International Chemicals Management; the Overarching Policy Strategy; and the Global Plan of Action. The overall objective, set out in the Overarching Policy Strategy, is:

To achieve the sound management of chemicals throughout their life-cycle so that, by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment (UNEP, 2006).

The specific objectives of SAICM are grouped in relation to risk reduction, knowledge and information, governance, capacity building and technical cooperation, and illegal international traffic.

The Overarching Policy Strategy also addresses financing, achieving existing principles and approaches, implementing and taking stock of progress. Based on the objectives above, the Global Plan of Action spells out (agreed) concrete actions, timeframes and responsibilities for each work area. It also provides indicators for measuring their success.

Highly Hazardous Pesticides

A work area in the Global Plan of Action is dedicated to highly hazardous pesticides in line with the objectives related to risk reduction outlined above. Governments and Industry are to encourage full implementation of the Code. Governments are also to give appropriate priority to pest and pesticide management in national sustainable development strategies and poverty reduction papers; prioritise least hazardous pest control measures and use best practices to avoid excessive or inappropriate supplies of chemicals; and encourage industry to extend product stewardship and to withdraw voluntarily highly toxic pesticides which are hazardous and cannot be used safely under prevalent conditions.

Focusing on the pesticide life-cycle and activities envisaged by SAICM, the FAO Council recommended actions that address "risk reduction, including the progressive ban on highly hazardous pesticides" (FAO 2007b).

Chemicals causing chronic effects are addressed in the approach. The Global Plan of Action includes a work area to address the risks of the following chemicals:

- persistent, bioaccumulative and toxic substances (PBTs)
- very persistent and very bioaccumulative substances (vPvBs)
- chemicals that are carcinogens or mutagens or that adversely affect, the reproductive, endocrine, immune or nervous system (among others)
- persistent organic pollutants (POPs).

Governments commit to act (within the timeframe of 2016-2020) to promote the use of safe and effective alternatives to these chemicals. Within the same timeframe, industry is called to prioritise studying and assessing groups of chemicals including those causing chronic effects.

Monitoring International Instruments

National governments are tasked with monitoring implementation of the instruments described above. However, there are areas where community monitoring of actual pesticide practices will be needed. Monitoring is essential to ensure implementation of the agreements at national level and that the benefits are reaching communities. This could involve monitoring:

- SAICM and Code implementation by governments and corporations: As companies agree to abide by the Code, groups can monitor actual practice to see whether this is the case.
- POPs listed pesticides and new POPs identified.
- Monitoring incidents of poisoning under conditions of use, and reporting these to DNAs of the Rotterdam Convention (where possible).

Monitoring with the life-cycle concept

The life cycle concept for pesticides, an approach also known as 'cradle-to-grave', was incorporated into the revised International Code of Conduct on Pesticide Management; this concept enables the identification and consideration of a pesticide's significant impact at various stages throughout its life cycle.

In CPAM, the life cycle concept is also a useful parameter to monitor pesticide use, its impacts and the implementation of national regulations and international conventions. The lifecycle of a pesticide is comprised of the following stages.

Import

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

Monitoring questions at the import stage:

- Are there quality control checks of pesticides at borders?
- Are custom officers aware and informed on up-to-date pesticide legislation?
- What are the fines imposed if a person is involved in illegal pesticide sale?

Formulation

Certain formulations and pesticides used may have been banned, are highly toxic and cause long term chronic effects.

Monitoring questions at the formulation stage:

- What are the pesticides used?
- What are the pesticide formulations and concentrations?

Packaging and Labelling

Some packages may leak and may not be easily disposed. Also, if farmers are not able to read the label they may not know the potential harm of using a particular pesticide.

Monitoring questions at the packaging and labelling stage:

- Do pesticide labels contain the necessary information?
- Are the labels readable?
- Are there proper instructions on the label?
- Are packaging types and sizes suitable for small-scale farmers?

Paraquat sold in plastic bags in India violates the Code.

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.

Monitoring questions at the advertising stage:

- Are there any incentives given in advertisements?
- Are there inaccurate statements, claims or pictures in advertisements?

Distribution and Sale

Monitoring questions at the distribution and sale stage:

- Do pesticide sellers have proper licenses to sell pesticides?
- Are pesticide sellers sufficiently trained to provide guidance on safe use to pesticide users?
- Are there compulsory sales of PPE through pesticide outlets?
- How are illegal and banned pesticides sold?

Storage and Disposal

Poor storage facilities are a significant factor behind pesticide stocks becoming out-of-date and deteriorating in quality. If not safely disposed of or allowed to accumulate at home, used pesticide containers can present a threat to the environment and human health.

Monitoring questions at the storage and disposal stage:

- How are leftover and unwanted pesticides disposed of?
- Are pesticide containers reused?
- How are pesticides stored?
- Are pesticides stored away from children?

Pesticide packets and pesticide spray backpacks are stored openly which are also easily accessible to children

Handling

At any point when handling pesticides, measures should be taken to ensure that risk of exposure to the pesticide is minimised or prevented.

Monitoring questions at the handling stage:

- Are there affordable and appropriate Personal Protective Equipment readily available at all pesticide outlets?
- Are applicators trained on the safe handling of pesticides?
- How are pesticides mixed?

Workers in India are mixing pesticides with their bare hands

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.

There are several specific conditions of use and practices common in developing countries that increase the risk factors of pesticide poisoning. A person may be exposed directly (through activities in the home or work) and indirectly (through use in the community).

Monitoring questions at the application stage:

Washing Facilitates

- What are the washing facilities available?
- How are the equipment washed?

Working conditions and environment

- What is the sector of employment (pesticide applicator/sprayer)?
- Duration of occupation
- How frequently are pesticides used?
- Do farmers re-enter sprayed fields?
- What is the wind-direction while spraying pesticides?

Training on pesticide use

- Is there training given for the use of pesticides?
- Are there trainings on the effects of pesticides?
- Are there trainings for personal protective equipment?
- How long is the duration of training?

Availability of health facilities

- Are there nearby health facilities?
- What happened when pesticides spilled?

Tools to monitor pesticide use and risk factors

1. Interviews
2. Surveys
3. Case Study
4. Observation
5. Participatory methods

Corporate Accountability

Industry participation and responsibility is encouraged under the approach, including full implementation of the Code. Industry's responsibilities in relation to pesticides are focused on the Code, and other voluntary initiatives. However, industry is encouraged to go beyond this by:

- Innovating and developing alternatives (especially alternatives to highly toxic pesticides as well as non-chemical alternative means of pest control)
- Promoting corporate social responsibility for the safe production and use of all products, including through the development of approaches that reduce human and environmental risks for all and do not simply transfer risks to those least able to address them.

Exploring new possibilities with the Human Rights Framework

While there is a lack of mechanisms to hold TNCs accountable for any human rights violations committed, the June 2014, UN Human Rights Council Resolution 26/9 on the elaboration of an Internationally Legally Binding Instrument On Transnational Corporations and other business enterprises with respect to human rights looks to be a positive attempt to hold these TNCs accountable for Human Rights violations that are caused by them. Negotiations on the content of the Treaty are being discussed and these are expected to last till 2016 before a draft of the treaty is ready for discussions and negotiations.

The 'Threshold Criteria'[2]

This section is to establish the complicity of the TNCs in regards to human rights violations that have been committed. While often times, there may be no evidence to show a direct link (i.e. causal link) between the violation(s) that occur on the ground and the perpetrator (transitional corporation/s), by using these criteria set by the International Commission of Jurists, it is possible to find that the TNCs are in fact complicit.

2 Corporate Complicity and Legal Accountability, Volume 1, 2, 3: Criminal Law and International Crimes. Report of the International Commission of Jurists Expert Legal Panel on Corporate Complicity in International Crimes, 2008.

Causation/ contribution	***Did the Corporation's conduct enable gross human rights abuse?*** - Corporation's act or failure to act - enables abuses by Perpetrator to occur, i.e. abuses would not occur without the contribution of the Corporation. The corporation or company is critical component in chain of causation. Without it, abuse can't occur by Perpetrator - exacerbates (makes the situation worse); Perpetrator carries out abuse but the Corporation's contribution increases the abuse by the Perpetrator (increased no. of victims or severity of harm) - facilitates the abuses i.e. Corporation's conduct makes it easier to carry out the abuse; Corporation's conduct provides sufficient level of assistance/encouragement for abuses of HR; Corporation's contribution changes nature and extent of harm suffered (CF pg 12 para 2.1.3) - contribution: e.g. business agreement in which a Company makes a deal and when it performs its obligation in the deal, the business partner will commit abuses of HR
Knowledge and foreseeability	***Did the Corporation know or should know that its conduct would contribute to human rights abuse?***
Proximity	***Was the Corporation close or proximate to the Perpetrator of the HR abuses?*** - geographic closeness; duration; frequency; intensity; nature of connection; interactions or business transactions - the closer the above factors, the more the Corporation's conduct would be in proximity
OTHER INDICATORS	
Silent presence	There is presence and silence. - This relationship means, Corporation's exercises influence; weight and authority over Perpetrator. The Corporation's silence means approval and moral encouragement to commit the abuses by Perpetrator. - Political and economic influence wielded by the Corporation (law imposes obligation to take proactive steps to protect victims from harm. Business partner relationships).
Receiving Economic benefit	Benefit commercially, that is profits. Benefit from a favourable business environment created by another actor (state) thereby enabling lucrative business operations.
Knowledge and foreseeability of risk	Knowledge factor is irrelevant. A corporation has positive duty to regularly and carefully assess the potential HR impact of its conduct and inform itself about the risk (note: in today's world, communication processes and information resources, expertise readily available)
Level of participation in abuses	When Corporation participates in abuse, the size of contribution in executing plan of abuse is not relevant. Equally complicit.
Co's knowledge of abuse	Its conduct likely to contribute to abuse. Not necessary for Corporation to have knowledge of full extent of abuse. Corporation is required to make its own enquiries or should have undertaken such enquiries to ascertain whether gross HR abuses would not occur through the Corporation's actions. - Information brought to attention to Corporation by NGOs, CSOs or community - Publicly available information - duration of business relationship
Willful blindness: Knowledge and foreseeability in a globalised world	1) Corporation's failure to carry out due diligence, fact finding missions – absence of measures will be a deeming factor (don't ask, don't tell approach). Corporation's lack of knowledge of risk (purposely otherwise) is irrelevant.
Proximity:	1) the closer a Corporation (more proximate) is in relationship to the Perpetrator (time, space and relationship), the more complicit it is 2) Sphere of influence – positive obligation to do no harm to whom they are closest (proactively promote HR). The closer the Corporation is to the Perpetrator, the greater it will have the power to influence, have authority or provide opportunity for its conduct to have impact on the Perpetrator. More likely the Corporation would have known what is happening. Implausible for Corporation to claim no knowledge. The closer the relationship, the greater the knowledge of risk, higher requirement of the Corporation to avoid harm.

Proximity:	Evidence of proximity (factors): 1) Geographical proximity – same place as Corporation's operations. Daily interaction with Perpetrators or victims. Greater possibility of Corporation's understanding abuses. 2) Economic and political relationships – the higher economic dominance, the higher the access to corridors of power, inside information and opportunities to influence actions of 3rd parties who depends on business relationships. 3) Legal relationships – great control, influence and knowledge of business relationship. Legal relationship leads to shared decision making and close coordination. Increases shared knowledge and influence. 4) Intensity, duration and texture – quality of relationship; openness; closeness; frequency; duration of informal or personal contacts and discussions - points to degree of proximity of Corporation's and Perpetrators.
Supply chains:	Failure of Corporation to ensure supply of materials did not involve HR abuse. Closeness of supplier to Corporation. More knowledge the Co will have, more impact its conduct will have on situation.

USING RESEARCH RESULTS FOR POLICY AND ADVOCACY

Community monitoring material can be used to highlight the nature and extent of pesticide problems at local and national levels. Monitoring can draw attention to the level of accountability, or lack thereof, of agrochemical companies under such conditions. It can also highlight national government policies and regulations, including gaps or ineffectiveness.

The documentation can be targeted at national policy makers and government official, based on community monitoring results, to ensure the implementation of international policy instruments relevant to pesticides, raise the standards of pesticide regulation and control, as well as reduce pesticide use. These instruments set standards of conduct for governments and the pesticide industry, which have formed the basis for pesticide legislation in many developing countries.

Governments which are parties to the policy instruments must implement them at the national level, and integrate them into their regulatory system. Governments must also monitor the implementation of the agreements. However, at national levels, there may be a 'patchwork' of different

conventions and there may be limited capacity to monitor problems such as poisonings (Goldenman & Pozo Vera, 2008).

In this context, NGOs, CSOs and public interest groups have an important role in ensuring the implementation of the agreements. Such groups have contact with communities at grassroots level, and can monitor practical problems. They can find out government plans and actions, national laws based on the pesticide life cycle, degree of enforcement of these laws and lists of banned or restricted pesticides.

Some tools were designed to monitor government and pesticide industry compliance of international policy instruments in countries that have ratified and/or adopted these instruments. Tools were also used to assist in the strengthening of existing national pesticide laws and sometimes in creating new laws. CPAM tools are found in section D.

For more detailed information, refer to the International Code of Conduct on Pesticide Management module, the Handbook for Community Monitoring and International Advocacy, and Profiting from Poisons: The Pesticides Industry - CPAK Kit.

Tools and methods that are available:

1. Observation
2. Interviews
3. Surveys
4. Case Study
5. Literature review - meta analysis

The success and importance of CPAM is evident at the local, national and international levels. In 1997, five pesticides were added to the list subject to the PIC procedure (Rotterdam Convention) as a result of documentation done by PAN AP and other regional centres on the problems these pesticides cause under the conditions of use in developing countries. Also, the formulation of paraquat dichloride 20% and above was nominated for listing in the Rotterdam Convention. On the ground evidence of the negative impacts of paraquat has been documented in Malaysia, China, and the Philippines. Endosulfan was added to both the Stockholm and Rotterdam Conventions in 2011. A major part of the documentation of the serious impact of endosulfan on human health and the environment was done by Thanal and other groups in India.

An example of monitoring work done in Malaysia in collaboration with Tenaganita, the National Poison Control Centre and PAN AP is the documentation of the severe pesticide poisoning of plantation workers. The report on the work was instrumental in achieving the stopping by Malaysian government of all new application and re-registration for pesticides containing Paraquat and calcium cyanide. However, even though this was announced by the Pesticide Board in 2002, paraquat was allowed for use in plantations due the pressure from plantation industry & and the producer of Paraquat, Syngenta.

The monitoring work also initiated the organising of workers who not only refused to continue spraying Paraquat but also demanded better working conditions. Workers began to form committees in the different estates. Leaders have emerged from the trained women workers who have found courage to articulate their problems in the workplace. Continued discussions at the local level have steered workers into campaign and advocacy activities against Syngenta and the National Union of Plantation Workers (NUPW). In Malaysia, the Pesticide Board Announced a phase out paraquat by 2020.

In Sri Lanka, the recommendations from the study conducted by the Vikalpani Women's Federation on occupational pesticide poisoning of farmers were referred to national and international organisations. As a result, the concerned institutions gave attention to the importance of pesticide registration. It also raised the awareness of the Pesticides Board to the global ban on certain pesticides. At the local level, the study resulted in strengthening the organising of local plantation workers and the women's federation as well as pushing for awareness programmes on the Rotterdam Convention. In addition, Vikalpani now has ongoing programme to work with their members to advance agroecological solutions.

The CPAM experience has shown that farming communities and plantation workers can be valuable sources of information and can develop the skills to assess pesticide poisoning in a methodological manner. CPAM puts information in their hands which they can use to make informed decisions about their own personal pesticide policies. Community involvement increases local level capacity and sustains partnerships between different stakeholders e.g. other women plantation workers, farmers' organisations, peasant organisations, genuine trade unions, other agricultural organisations, medical professionals and NGO staff. Through participation, the community is placed in control of their action, and advocacy efforts are enhanced. CPAM engenders links to decision makers in the government and results from field activities serve as inputs to media work, publications and actions supporting policy and advocacy work.

Useful Resources

General:

- Goldenmann & Pozo Vera (2008) General International Tools for Preventing Local Pesticide Problems: A Consolidated Guide to the Chemical Codes and Conventions.

SAICM:

- SAICM Website: http://www.chem.unep.ch/saicm/
- Global Outreach Campaign Website: http://www.ipen.org/campaign/campaign.html

Rotterdam Convention:

- Rotterdam Convention website: http://www.pic.int/home.php?type=t&id=5&sid=16
- Guide to the Rotterdam Convention on hazardous chemicals and pesticides: http://unep.org/dec/ docs/PIC_GUIDE_English_4.0.pdf (FAO & UNEP, 2004)

Stockholm Convention

- Stockholm Convention website : http://www.pops.int/
- Ridding the World of POPs: a Guide to the Stockholm Convention on Persistent Organic Pollutants: http://www.pops.int/documents/guidance/beg_guide.pdf (UNEP, 2005)
- International POPs Elimination Network (IPEN) Website: http://www.ipen.org/

The International Code of Conduct on Pesticide Management

- The Code is available at: http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf
- FAO Guidelines on Pesticide Management in Support of the Code on the Distribution and Use of Pesticides:http://www.fao.org/ag/agp/agpp/pesticid/Code/ Download/protect.doc. This includes Guidelines to Personal Protective Equipment in Hot Climates, and Guidelines on Management Options for Empty Pesticide Containers, amongst others.

The legally binding Treaty for TNCs

- The UN Human Rights Council Resolution 26/9[1], mandates an intergovernmental working group to elaborate on an international legally binding instrument to regulate, in international human rights law, the activities of transnational corporations and other business enterprises.This is a positive step towards making corporations accountable, in view of the lack of mechanisms available to hold TNCs accountable for human rights violations.
- http://www.ohchr.org/EN/HRBodies/HRC/WGTransCorp/Pages/IGWGOnTNC.aspx

Vietnamese women washing her clothes and dishes at the Bassac River after a long day at the rice field while her children is swimming.

Section Four: Community Pesticide Action Monitoring for advocacy

The approach described in this handbook is based on Community Pesticide Action Monitoring (CPAM). The approach and focus is relevant to advocacy efforts based on the international instruments on pesticides, described in Section 3.

The Community Monitoring Approach

CPAM is a Participatory Action Research process to document and create awareness of pesticide impacts on human health and the environment. It involves community members who undertake the research, and encourages organising and action. CPAM involves recording of the impacts of pesticide use on health and raising awareness of the hazards of pesticide use. CPAM aims to empower communities to address their situation themselves and get actively involved in solving their problems. This approach drives the changes required to reduce the use of pesticides, adopt more ecological and sustainable agricultural practices, and pressure governments for the implementation of better pesticide regulations and international conventions on pesticides (Quijano, 2006).

PAN AP's CPAM programme has evolved for over a decade. The aims of the CPAM programme are:

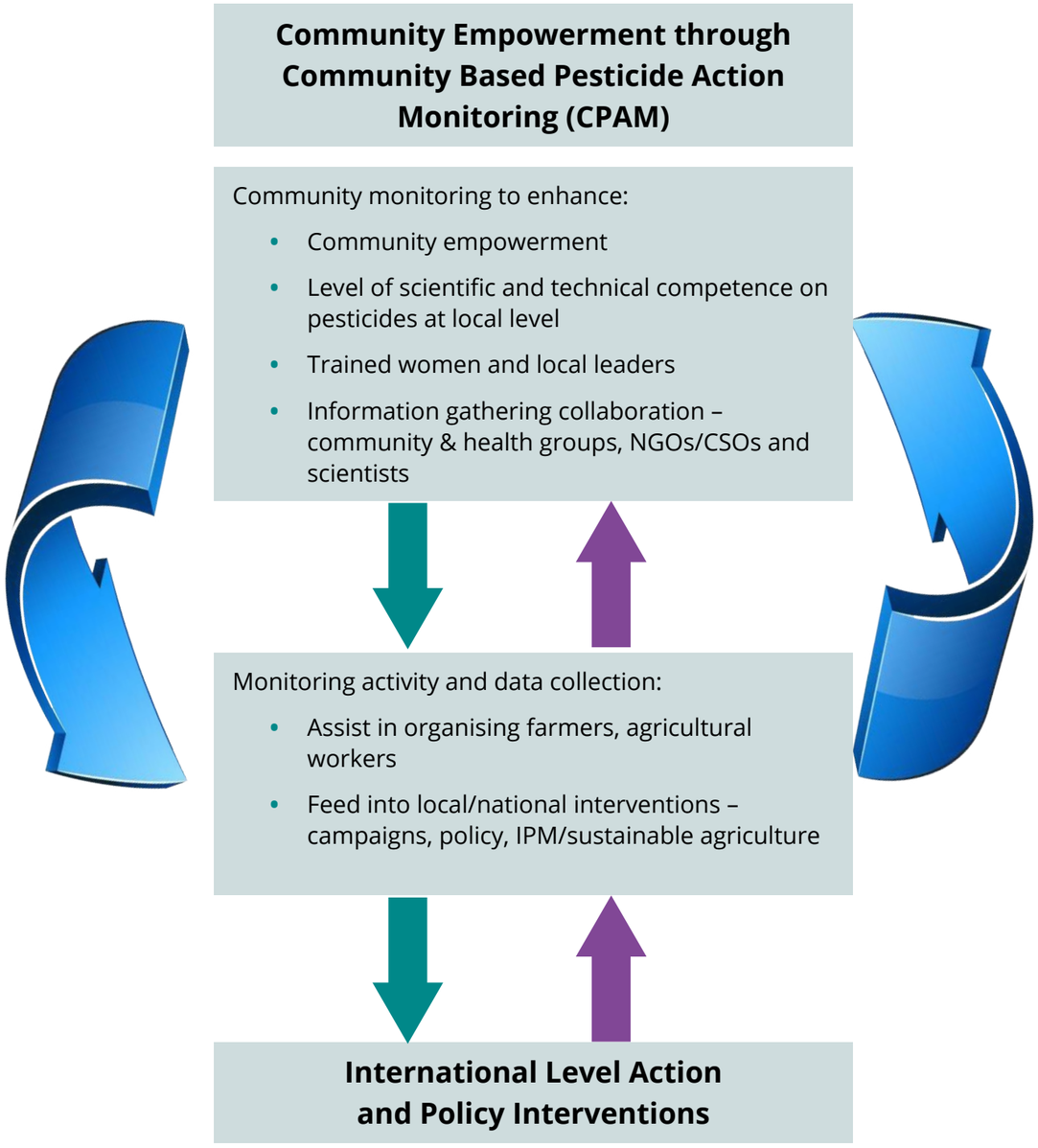
1. To increase awareness among farmers and agricultural workers of the adverse impacts of pesticides on their health and the environment
2. To facilitate the organising of communities and workers to take action to reduce risks due to pesticide use and to adopt ecological agricultural practices
3. To establish the rapid alert response system, PQRST (Pesticide Quick Response and Surveillance Team)
4. To document the practices and impact of pesticide use at the local level

The interrelationship between CPAM, organising, action and advocacy is illustrated in the diagram below.

In line with this programme a range of modules have been published by PAN AP for use with communities. The module "Seeking Out the Poisons: A Guide to Community-Based Pesticide Action Monitoring" describes in detail the CPAM methodology.

Farmers are being interviewed with the CPAM questionnaire

CPAM training with local Civil Society Organizations (Photo: Gilbert Sape)



This handbook provides some monitoring tools (in Chapter Two) for documenting pesticide issues for advocacy projects using a CPAM approach that is focused on the international instruments on pesticides. The monitoring tools focus on:

- documenting exposure to highly hazardous pesticides under conditions of use
- where groups have capacity and support, to collect information on the health status of people in communities, case study documentation and conduct literature searches on cases where pesticides are causing chronic effects
- reporting and investigating incidents
- collecting information about corporate compliance with the Code, focusing on the retail level sales and advertising

The Monitoring Tools can be used in conjunction with other CPAM modules and training which groups may have. Specific training or skills may be needed in some cases. In particular, it is recommended that groups do Questionnaire 1, Part B *(Pesticides and Community Health)* only if they have been trained by a medical doctor, or accompanied by a doctor or health worker for data collection and analysis. A companion manual to this Questionnaire is available - the Pesticide Quick Response Surveillance Team module (PAN AP & PAN-PHIL), which is developed as an approach to quickly respond to pesticide incidents with the skills of a multi-disciplinary team.

Community based Participatory Action (CPAM) workshop in Pakistan

Principles and Ethics

Pesticides are used widely, affecting communities in different countries, geographical areas, social groups, ethnic groups and employment sectors. The users and affected communities may be farmers, agricultural workers, migrant workers, women, men and children. Thus, the CPAM approach used by monitoring groups may vary depending on the characteristics of the community affected in their social, cultural and political context.

Although such differences exist, there are common principles, characteristics and ethics that are important in a CPAM approach. A gender focus is integral to all PAN's programmes. PAN recognises women's vital role and contribution in agriculture, and supports their equal participation in CPAM projects. If it is not possible for both men and women to participate equally in the monitoring, then a focus group (e.g. with a women's group) may be appropriate. If the organisation has a focus on women, then this might be an area of special attention for that group. Participatory approaches including CPAM must involve the community and use the tools and knowledge within an appropriate process.

The principles are summarised here in Box 7.

Box 7: CPAM characteristics, principles and ethics

Principles: CPAM is a holistic and integrated approach that recognises that methodology is part of the empowerment process. It addresses gender (both balance and perspective). It educates on adverse effects of pesticides. Communication is free and open, generating trust, respect and cooperation. It is acknowledged that ownership of the information resides primarily with the communities. The approach is not imposed on communities.

Characteristics: CPAM is consultative, involving regular meetings (before, during and after the monitoring); it is also holistic; community organising and involvement is a main component, and communities are involved in organising strategies and actions; finally, alternatives, such as biodiversity-based ecological agriculture and IPM, are shared.

Ethics: Before conducting the monitoring, the prior informed consent of the community is ensured. The monitoring process is participatory and must be of benefit to the community. It must involve women. The parties carrying out the monitoring must be responsible and accountable to the community. Support (legal or medical) should be provided if needed. In summary CPAM studies:

- Are participatory
- Have prior informed consent sought from participants
- Must benefit community
- Must involve women
- Responsible and accountable to communities
- Provide support to community if needed (medical or legal support)
- Provide alternatives
- Communities must decide on action

The ethics, principles and characteristics of the CPAM approach are expanded in the module *Seeking Out the Poisons: A Guide to Community-Based Pesticide Action Monitoring* (PAN AP).

This handbook provides a set of structured questionnaires. However, these are intended for use within an overall CPAM approach described above. It is important to seek participant's informed consent to proceed, and to recognise people's rights to refuse to answer any questions. A consent form is provided.

Community Organising and Campaigns

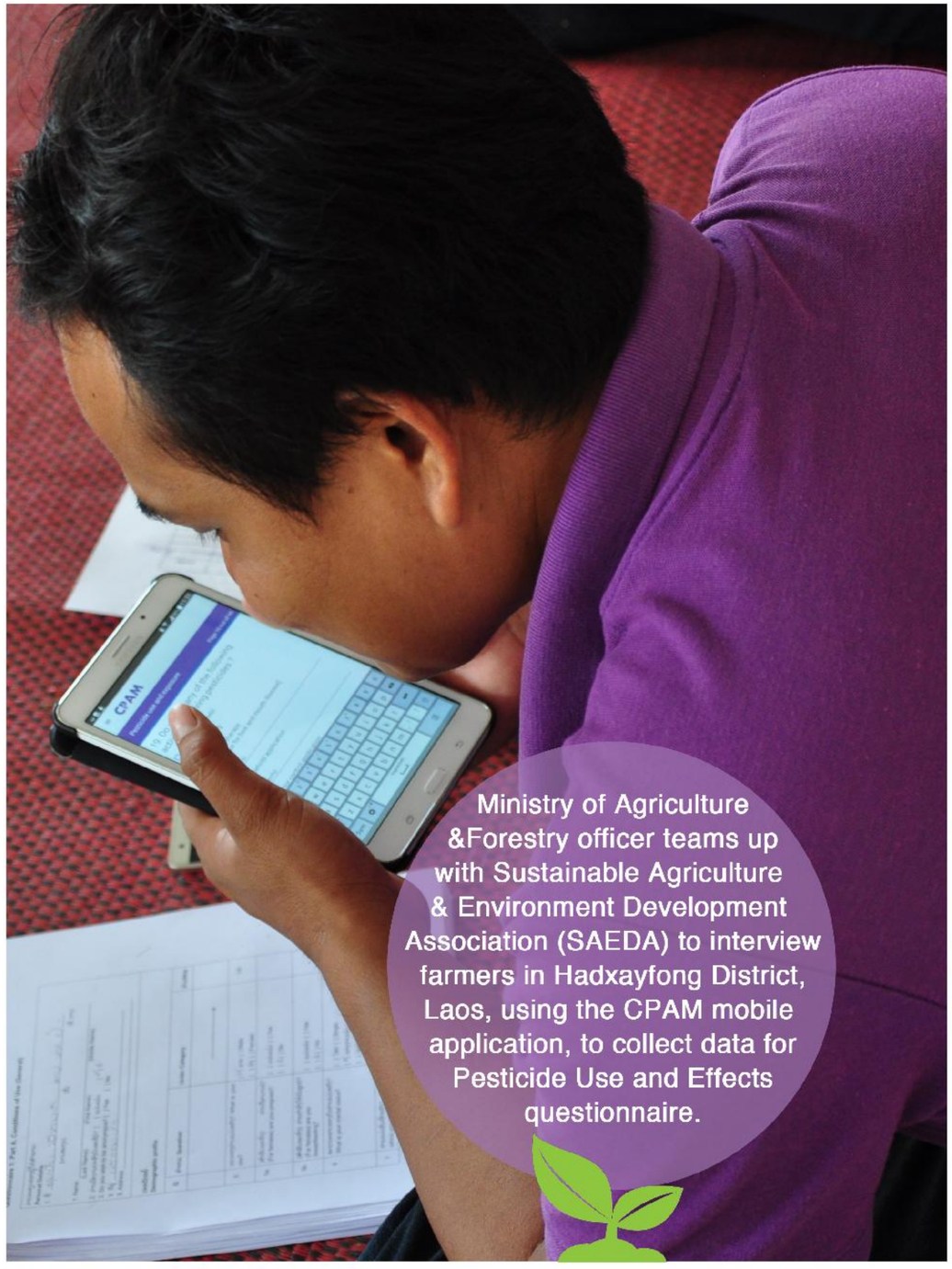
To enable greater community involvement in the process of documenting and campaigning,

monitoring is best undertaken with communities who are either formed as an organised group or in the process of organising. Actions could start by identifying a community organiser to build rapport with, and involve community members. This includes finding contacts with persons in the affected community. In the absence of groups with a focus on pesticide issues, other social organisations (such as Church groups) could be approached. Discussions could begin by finding out interest in monitoring the effects of pesticides in their community (see Box 8).

Box 8: Why monitor?

- There have been complaints of health problems in your community
- Huge amounts of pesticides are used and sprayed
- There have been serious pesticide poisoning incidents
- You may know that pesticides banned in other countries are being used in your community
- There are serious chronic effects that are becoming more frequent.
- You just want to know if there are pesticide problems

Thannal and PAN AP protesting against the use of DDT in Eloor



Section Five: Community Pesticide Action Monitoring Mobile Application

The Community Pesticide Action Monitoring Mobile Application has been build on an Android platform and are designed to provide a more focused approach towards data gathering for the various questionnaire under the Information and Consent form for respondents.

Introduction to the CPAM Mobile Application

The CPAM mobile application has 3 main modules, which makes it a feasible data collection, data storing and data analytical application.

In order to support the modules mentioned above, the mobile application has been broken into 3 main components with varying roles as shown below;

1. Application program interface (API)

The API in this application are made of sets of routines, protocols, and tools on, how the components should interact with the graphical user interface (GUI) components.

2. Middle Layer

The middle layer of the CPAM application comprises of management system on PHP environment which collects, stores and hosts all the files such as Database, Content Management, Messaging and Resources.

3. Android Mobile Application

The mobile application can be used in a variety of languages, and also will be able to collect media such as photos, audio and video as part of its survey, and embed those files into the survey data separately. The media collected through Contribute Page will be stored separately.

Every data generated by the mobile app users will be encrypted as secured data while being transmitted to the Database as mentioned in the Middle Layer. Only Administrators and those with access will be able to view the data.

Typical breakdown of the Data Management and Infor- mation dissemination module are as shown below.

Login Page

Dashboard

- News Updates
- Messages
- Resources Updates
- User Management
- Reports

Data Management

- Data Viewer
- Data Editor
- New Survey Creation
- Data Searching
- Data Analytics
- Data Ploting
- Report Generation
- User Management

User Contribution

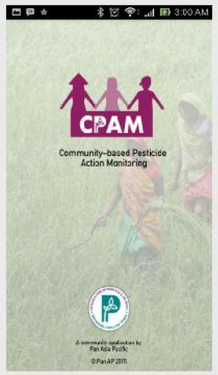
- Submission Feed Viewer
- Submission Editor
- Content Management

In App Messaging

- Messages Listing
- Messages Broadcaster

CPAM Mobile Application User Guide

The following images are screen captures of the various pages from the CPAM mobile application. Each page indicates the functionailty of the application. Only main pages of a specific functionality has been shown here.

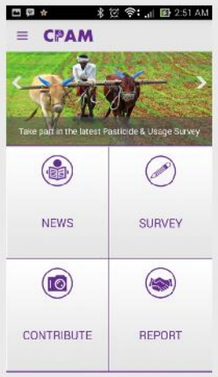


Splash & Login Page

Splash page and Login page are the first few pages will be seen by the user upon launching the CPAM app.

Login page will open after Splash Page quits. Users will have to key in their 8 digit access code, which has been generated from Admin Panel.

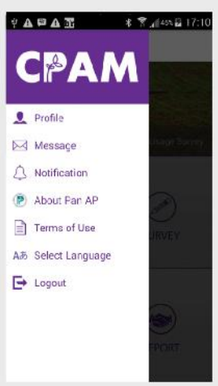
Users must be a member of PANAP partner and provide their email and mobile phone number.



Index Page

In the Index Page, users will be able to access various functionalities. Users will only gain access to the complete functionalities of this page if they are a registered user.

Unregistered users will only have access to News Pages.



Index Menu Page

In the Index Menu Page, users will have to their profile. A registered user will already have their profile updated and they can change their details whenever necessary.

An unregistered user will be able to create their profile but their access to other functionalities will be dependant on the discrecition of PANAP.

Survey Page

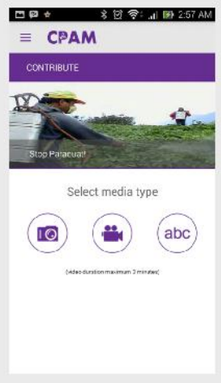
Only registered users can gain access to this page. All the relevant questionnaires will be loaded in this page.

By clicking each button, users can access the complete questionnaire and its functionalities. The user can collect data by filling up the answers for each questions, review and later submit. The submitted answer will be captured in the database.

News Page

Registered and unregistered users can access this page and share the content.

The relevant content and news will be updated from the Admin Panel.



Contribute Page

Registered users will be able to capture and contribute relevant content through this page. The content will be captured in Admin Panel pending approval. Once vetted the content will be posted and can be viewed on the CPAM mobile application.

CPAM Mobile Application User and Data Security

The user information and data, which is being collected and transmitted between mobile device and server are of sensitive nature. In order to protect the integrity of the CPAM mobile application backbone, which holds and manages the data, a robust security plan has been implemented.

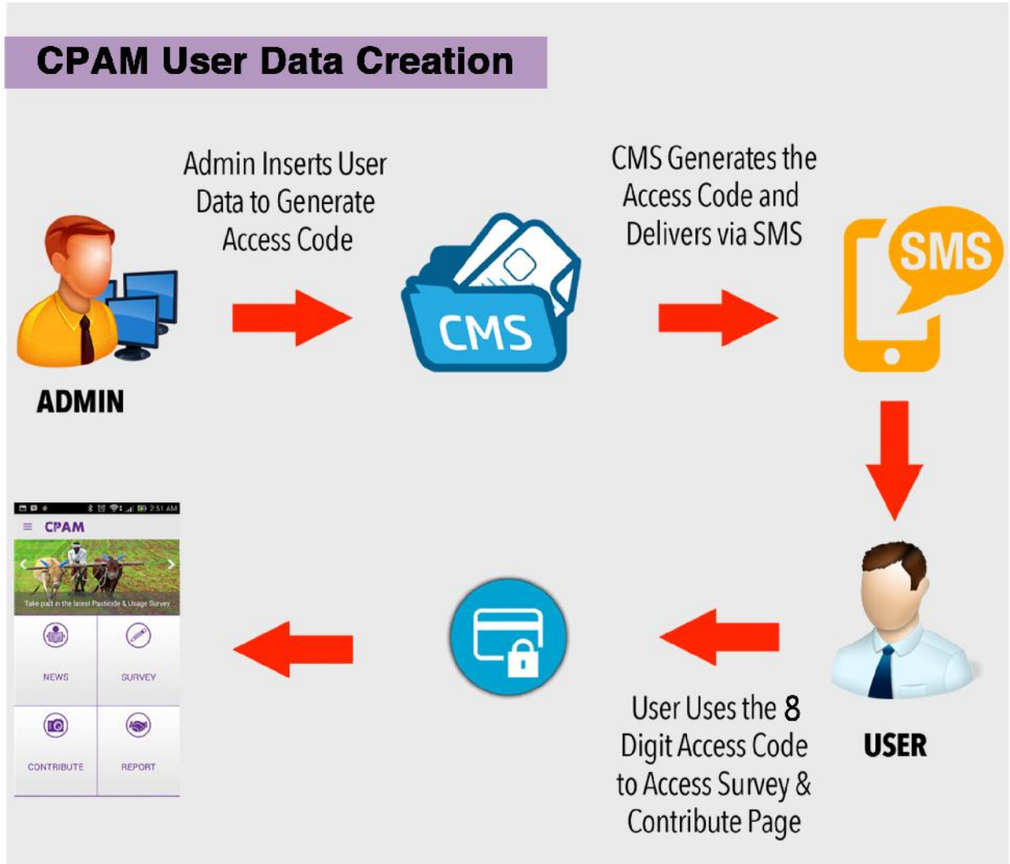
Content Management & Data Loss Prevention

In order to safe guard Content Management and Data Loss Prevention, on-device data storage has been disabled to avoid cut-and-paste controls and to prevent data "leakage" and/or to restrict the intentional or inadvertent non-compliant sharing of protected content and data.

User Authentication

User Authentication requires confirmation of the user's identity as described by PANAP before giving access to secured data. Two-factor authentication is typically recommended for confidential data -- such as 8 digit access code, user name/password and/or mobile phone number combination.

CPAM User Data Creation




Nguyen Kim Thuy of Research Centre for Gender, Family and Environment in Development (CGFED), goes through the Pesticide Use and Effects data before submitting via the CPAM mobile application in An Giang Province, Vietnam.

CPAM Mobile Application Data Collection Ethics

When a user (member of a CSO or community worker), interviews a subject for any of the questionnaire in the CPAM mobile application, the data generated flows through various stages before the actual data strings being analysed and reflected in a simplfied and usable manner. Among the considerations taken into is the data security and ethics.

Interviewers involved in the CPAM surveys, must have professional and legal responsibilities to their respondents.Underlying these specific responsibilities are four fundamental ethical principles, which has been adapted based on Council of American Survey Research Organizations:

Respondents should be:

a. willing participants in survey ;
b. appropriately informed about the survey's intentions and how their personal information and survey responses will be used and protected;
c. sufficiently satisfied with their survey experience;
d. willing to participate again in survey.

Confidentiality

Since option to be anonymous through out the interview has been made within the CPAM mobile application, individuals who are interviewed must be advised accordingly that they have an option to be anonymous. It is essential that the interviewer be responsible for protecting from disclosure to third parties - the identity of individual Respondents as well as Respondent-identifiable information, unless the Respondent expressly requests or permits such disclosure.

Privacy and the Avoidance of Harassment

Surveying organisation and interviewer must respect the right of individuals to refuse to be interviewed or to terminate an interview in progress. Techniques that infringe on these rights should not be employed.

Interviewers may make reasonable efforts to obtain an interview including: (1) explaining the purpose of the research ; and (2) re-contacting an individual at a different time if the individual is unwilling or unable to participate during the initial contact.

Responsibilities in Reporting Data to Public

When reports are being prepared for any agency or public release purposes, it is the obligation of the PANAP to insure that the findings they release are an accurate portrayal of the survey data, and careful checks on the accuracy of all figures are mandatory

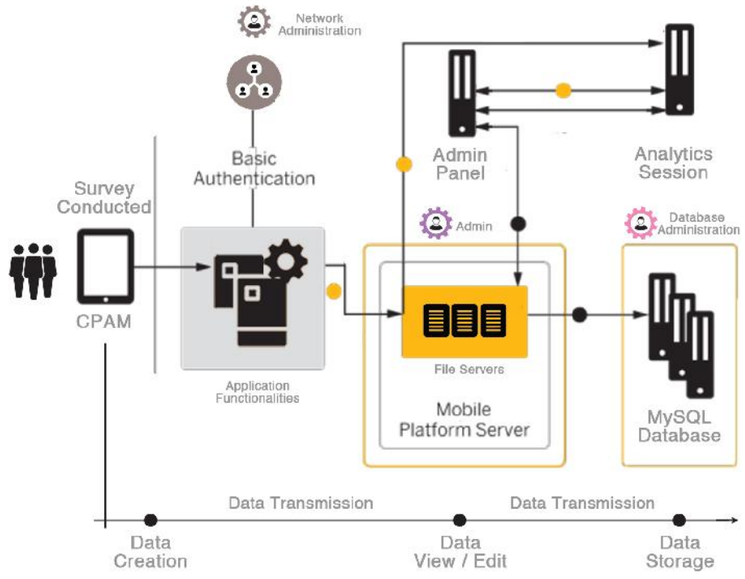
CPAM Mobile Application Survey Data Flow

Data flow for CPAM mobile application depicts locations where sensitive information transits through and beyond the organisation.

The overlays should always show encryption status of sensitive information and all possible storage locations for sensitive information. All stages in the lifecycle of sensitive information which has been obtained and transmitted should be noted where appropriate, including where sensitive information is created, where it is altered and where it is destroyed.

The complex and arduous process of systematic collection and creation of data for CPAM mobile application through its various questionnaire is depicted in the diagram below.

The data flow map below depicts sensitive information at data collection and creation point in all of its forms, origins, paths, exit points and storage locations. The diagram shows where sensitive information is processed, where it transits the organisation's network and where it is stored.



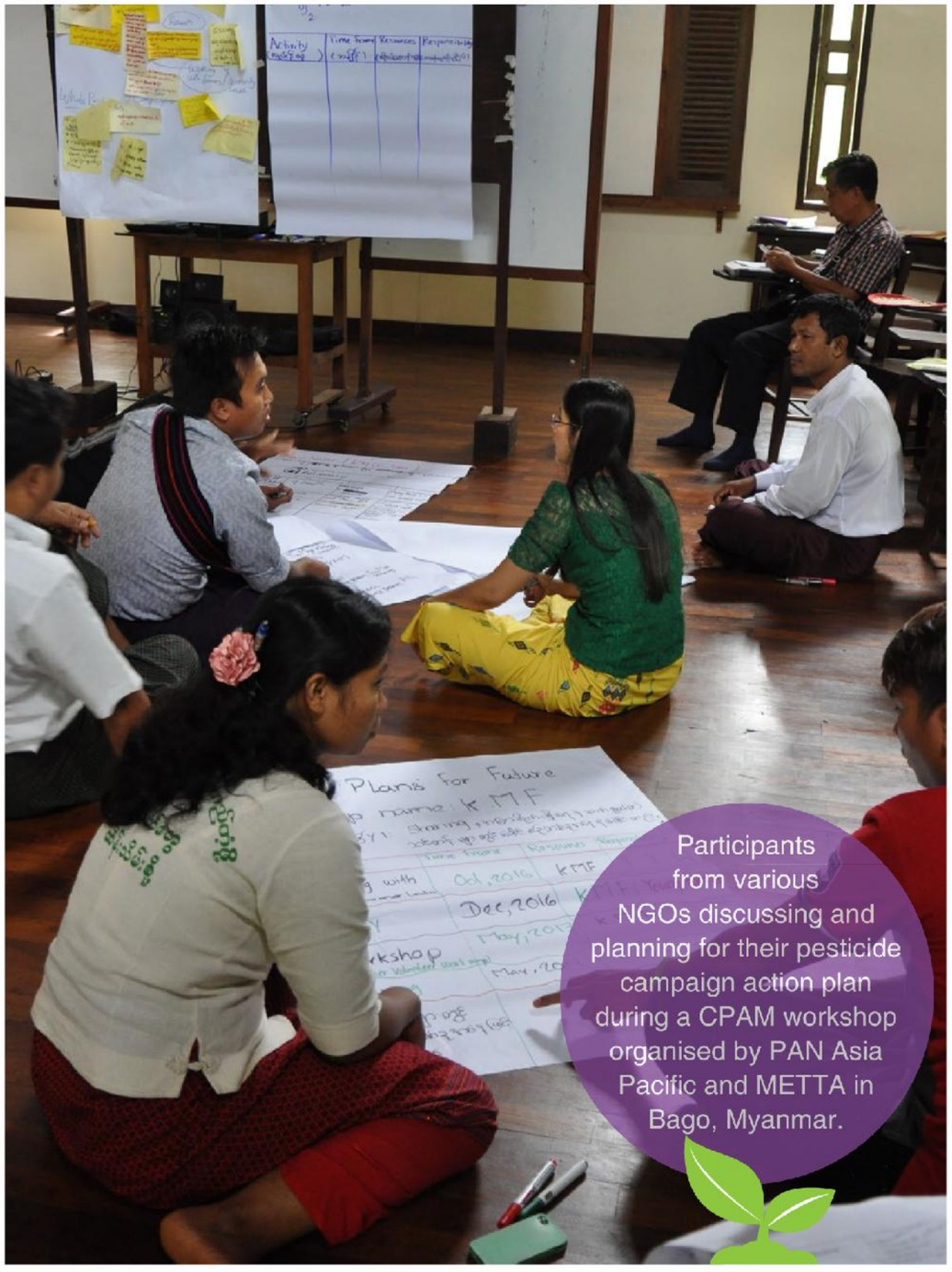
Useful Resources

Quijano.R, PQRST (Pesticide Quick Response Surveillance Team), A Practical Guide. PAN AP, Penang.

IPEN's Handbook chapter on Research Ethics, which includes Diane Quigley's paper 'Considering Research Ethics in the Conduct of Health and Environmental Monitoring Activities': http://www. oztoxics.org/cmwg/community/research%20ethics.html.

PAN AP, Seeking Out the Poisons: A Guide to Community Based Monitoring. Community Pesticide Action Kit. Penang, Malaysia.

PANNA & CPR (2005): Organizing a Drift Campaign.



Participants from various NGOs discussing and planning for their pesticide campaign action plan during a CPAM workshop organised by PAN Asia Pacific and METTA in Bago, Myanmar.

CHAPTER TWO

Monitoring Tools

Introduction to the Tools

This section provides guidance notes to the monitoring tools, and the tools themselves. These are divided into two sections: highly hazardous pesticides and corporate accountability.

Some questionnaires are supported by descriptions, illustrations and lists of the aspect being monitored, such as the effects of pesticides on health. These are provided in the annexes.

How to use the Tools?

What do you want to research?	Tools
How are pesticides used in the community?	Highly Hazardous Pesticides: Questionnaire 1. Part A
What pesticides are used?	Highly Hazardous Pesticides Questionnaire 1 Part A
What are the health effects/poisonings?	Highly Hazardous Pesticides: Questionnaire 1 Part A and Part B Questionnaire 2 incident reports
What is the health status of people using or exposed to pesticides?	Highly Hazardous Pesticides: Questionnaire 1. Part B

What do you want to research?	Tools
What are the conditions of sale of pesticides in shops?	Corporate Compliance: Questionnaire 3. Part A
How are pesticides labeled?	Corporate Compliance: Questionnaire 3. Part B
How are pesticides advertised?	Corporate Compliance: Questionnaire 4.
What are corporate profiles?	Corporate Profiles: Questionnaire 5:
What are the impacts of pesticides on children?	Survey on Children's Exposure to Pesticides: Questionnaire 6

Guidance notes to Highly Hazardous Pesticides Monitoring Tools

The questionnaires provided here may be used as one part of a CPAM approach to gather documentation on how highly hazardous pesticides are used in communities to prepare for advocacy. As well as questionnaires, other qualitative data gathering such as group discussion, observations, background research and gathering direct testimonial evidence from people on their stories about pesticide use for case studies can be highly valuable.

The approach taken will depend on several factors, so it is worth questioning:

- How organised is the community is in addressing pesticide hazards? Do they have an organisation set up to address this, or are they part of another group (e.g. church or womens' group) that may like to take up the issue?
- Have the participants been trained in CPAM or similar approach? Is more training needed before beginning?
- How will you choose the participants in the research? You may need to decide on a sampling strategy for selecting the households and respondents within the participating community. The approach should be selected based on the focus and capacity of your group. Depending on your approach, you may need statistical guidance.
- Will all the questions be easily understood? You may wish to use visual tools (e.g. Annex 1 for illustrations of symptoms)
- How will you collect and analyse the responses?

N.B. ensure you have the consent form (adapted to your study) to gain prior informed consent form from all participants before starting.

Group discussions and background research

Background research, observations and discussions with communities should be documented to highlight the local and national context, highlight community concerns and strengthen understanding. The following factors may be relevant:

- Social conditions: what is known about the socio-economic situation, livelihood sources, life expectancy, levels of literacy and nutrition or malnutrition? What is the level of access to social services such as access to medical care and education?
- Environmental and infrastructure conditions and issues: E.g. are the farms in a remote area with difficult access or producing produce for an urban centre? Are there any known problems with contamination of land or water?
- National laws, regulations, institutions and services: What are the important aspects that influence the use of pesticides and their effects? For example, is there a poison control centre nearby? Can you access a list of banned or restricted pesticides that you can cross-check?
- Local agriculture, including common patterns of pesticide use: Are spray drift, contamination of water or food, exposure to neighbour's use of pesticides, or governments spraying for public health purposes (e.g. for malaria control) known? What are the main local employment sectors and crops grown?

Questionnaire 1: Pesticide Use and Effects

Part A: Conditions of use (general)
What is this questionnaire for?

This questionnaire will gather information to get a 'snapshot' of pesticide use in a community and indicate risk factors which may lead to poisoning. Participants could be those who may be exposed directly (through activities in the home or work) and indirectly (through use in the community).

The example questionnaire can be adapted based on the information needs of the research team and community discussions. Table 1 details aspects that are included in the questionnaire.

Table 1: Objectives of survey on pesticide use and effects

Detailed objective	Relevant question and question number	Analysis notes
Pesticide Use and Effects		
Conditions of Use		
Create a demographic profile of the study participants. *Information may be used to identify whether there are different risk factors for certain groups*	- age - sex (for females: pregnancy/ breastfeeding) - ethnicity - marital status (can be used to identify if there are risks associated with spouses' pesticide use) - educational attainment* - household size - income (annual)** - sector of employment	*school levels will need to be adjusted depending on the country **Measurement of income may need to be adjusted, especially in cases where the participants are seasonally employed workers
Describe pesticide use and exposure	- pesticide applicator/sprayer - location of pesticide use - how many years - [if pesticides are not used] how are weeds and pests controlled - activities involving pesticides* - exposure to pesticides** - frequency of use or exposure	*For pesticide sprayers **For pesticide sprayers and non-sprayers (if included in study)
Identify the pesticides used: identify highly hazardous pesticides, and any banned or restricted pesticides.	- product or trade name - active ingredient name - company name - crop or animal treated - target pest/weed/disease - date of last use - equipment used - mixtures *Any other relevant questions may be added* (e.g. type of formulation, dose, application time, frequency of use, duration)	As well as asking farmers and workers, other ways to support the data collection could include: recording information from labels or taking photographs. To make sure results are current, a timeframe (e.g. 2 years) should be selected. Pesticides used earlier than the selected date should be excluded.
Describe conditions of use of pesticides (in respect to the users' exposure)	- re-entry into sprayed fields - wind-direction while spraying - spillages - leftover and unwanted pesticides disposal - equipment washing <u>protective clothing:</u> - use of protective clothing - if not worn, why not - if yes, what items - availability of washing facilities - what are the washing facilities	Direct observations would support this data. Observations about the adequacy of the clothing (e.g. material, quality etc), would support the information.

Assess access to information and training on pesticide hazards	- access to labels - can they read the label - training: participation in training, mode and length of course	
Purchasing pesticides	- where they are purchased - how they are chosen - wearing protective clothing	
Describe storage and disposal practices (in respect to community and environmental health)	- storage - locked/away from children - separation from other items - decanting into containers - disposal of containers - reuse of containers	Direct observations would support this data
Acute poisoning signs and symptoms	- experience of acute pesticide poisoning signs and symptoms (dizziness, blurred vision, headache etc) - response in poisoning case	Further analysis of health is in Part B, which should be done with the help of a health professional.

Important: If the respondent has had acute pesticide poisoning (an incident) that they can remember they should also complete **Questionnaire 2: Incident report.**

Questionnaire 1

Part B: Pesticides and community health
What is this questionnaire for?

This questionnaire is based on the initial work on the Pesticide Quick Response Surveillance Team, a PAN AP project. It is intended for more in-depth investigation into the effects of pesticides on community health, including health history, lifestyle and symptoms. The results will help to see if there is a clear link between use of a pesticide and exposure, or whether health problems are due to other causes and pesticide exposure can be ruled out.

Important: Part B should be used only if you have medical or community health training, or are accompanied by a health worker and medical advice will also be needed to analyse the data. It covers health history and complex medical terminology, including sensitive personal questions. The respondent should be fully informed about the project and their right to refuse to answer any questions.

Questionnaire 2: Incident Report (specific incident)

What is this questionnaire for?

If the respondent has had acute pesticide poisoning (an incident) that they can remember they should also answer this questionnaire which can be reported.

This questionnaire is based directly on the Incident Report Form for reporting by the Designated National Authority to the Rotterdam Secretariat. The form was developed to help identify possible formulations for inclusion in this Convention (See Section Three). It is to provide "a clear description of the incidents related to the problem, including the adverse effects and the way in which the formulation was used". The report form has been adapted for use in Community Monitoring. This Questionnaire covers:

- product identity
- description of incident
- description of adverse effects
- medical treatment received

Important: Report the completed incident form to the Designated National Authority immediately, if possible. If this is not possible, the incident should be immediately reported to the PAN Regional Centre.

For Further Research: Chronic Effects

If there are common long-term health problems in a community, these might be a basis for case studies. Chronic effects will be more difficult to monitor than poisoning incidents, but monitoring can be valuable. In such cases, you could collect:

- **Case study material:** Material could include direct reports of common health problems and pesticide exposure. Alternatively, it could focus on environmental problems, such as the deaths of indicator species like frogs or birds
- **Literature searches:** material may be sourced such as statistics from local poisoning centres, autopsy reports, or university studies such as PhD research
- **Direct Testimonial** Evidence: Wherever possible, it would be useful to collect and document direct testimonial reports from the respondents. This will be important to understand the effects of pesticides from people's subjective experience.

Where possible the PAN Regional Centre will carry out a Fact Finding Mission to investigate cases of chronic pesticide effects and support communities where such problems are experienced.

Guidance notes to Corporate Compliance Monitoring Tools

Background research for retail store monitoring

A retail store includes any shop that sells pesticides (e.g. farm supply store, market stall, road side stall, supermarket outlet). You should decide and describe your approach to selecting the stores, and will need to decide:

- Are there particular pesticides you will look at in-store? These could be highly hazardous pesticides or known to cause poisonings. Annex 2 provides a list of Highly Hazardous Pesticides by PAN for further guidance.
- What level of distribution do you want to investigate? A main supplier in town, a smaller agricultural distributor, or a shop in a small village, home-stores or several of each?
- The location and distance between the stores. Where and how far apart are the stores you intend to monitor?
- Are there any other relevant details? E.g. socio-economic conditions? Crops grown?
- In your country, are stores required to have government licenses, and what are the training requirements for staff?

You will also need to consider your approach. You should state that you are conducting a survey and seek the salesperson's cooperation and consent to answer questions (using the consent form provided). In many places, you may make the process easier by getting endorsement of the survey from a higher authority, such as the local government, mayor, or the distributor's association in your country. If you feel that it is not possible to gain this kind of co-operation from the salesperson by stating the reasons for conducting your survey you could consider other methods appropriate to your local situation. Be aware of any legal issues in consequence of conducting your survey.

Photographs will be useful. Include the date time and place of all photographs taken. You may need consent to take photos in-store.

Example Questionnaire 3: Retail Stores

What is this questionnaire for?

The aspects that may be monitored through this questionnaire are described in Table 2. You may adapt these to your needs.

Table 2: Objectives of retail store survey

Detailed objective	Relevant question and question number	Analysis notes
QUESTIONNAIRE 3, PART A		
Obtain general store profile	- location - type of store - proximity to other stores - crops in area	
Conditions in the store	- sale of other consumer products - segregation of hazardous materials - hazard signage - availability of protective clothing	Compare to Code requirements on sale of pesticides
Identify any banned or restricted pesticides available for sale	- details about the banned / restricted products, or WHO Class I pesticides available	
QUESTIONS FOR THE SALESPERSON		
Identify particulars of salesperson	- age - sex (including pregnancy/ breastfeeding for females) - ethnic group - protective clothing worn	Data can be later analysed to identify if there are particular hazards faced by salespersons (e.g. children working in the store, pregnant women handling pesticides without protective clothing)
Describe the training of the salesperson	- training provider - mode and length of course, and coverage	Compare to Code requirements on training
Identify if packaging/ repackaging is done in store	- packaging and repackaging practices and facilities	According to the Code, packaging and repackaging can only be done on licensed premises
Identify if stores have government licenses	- licensing information	Compare to Code requirements and national legislation
Find out guidance with regard to container disposal	- container disposal and advice given to customers	
QUESTIONNAIRE 3, PART B (1 FORM TO BE COMPLETED PER PRODUCT) (N.B. prior to survey, a particular pesticide could be chosen for surveying)		
Describe conditions in store in relation to Code of Conduct requirements on labelling	- existence of label, - clear and concise, - symbols and pictograms - local language instructions etc	Compare to Code requirements on labelling
QUESTIONNAIRE 3, PART C (1 FORM TO BE COMPLETED PER PRODUCT) (N.B. prior to survey, a particular pesticide could be chosen for surveying)		
Describe conditions in store in relation to Code of Conduct requirements for packaging	- Ready-to-use - attractiveness for re-use - child-proof, - repackaging etc.	Compare to Code requirements on packaging

Questionnaire 4:

Documenting Advertisements

Pesticide advertising is a communication aimed at promoting or selling a product or range of products, which is targeted to those with an interest in the storage, sale, supply or use of pesticides such as wholesalers, retailers and farmers, or which is addressed to the general public. The Code defines an advertisement as "... the promotion of the sale and use of pesticides by printed and electronic media, signs, displays gift demonstration and word of mouth". Advertising includes internet-based material, 'advertorials', sponsorships (e.g. of conferences or sales meetings), and offering free gifts.

This section gives guidance for monitoring and documenting advertisements containing infringements of the Code. You may wish to monitor some or all of the Code's provisions on advertising.

Some research (e.g. into scientific claims) will be necessary in some cases.

There is a questionnaire that can be used as a guide to monitoring advertisements or incentives. These can be compared to the Code of Conduct provisions on Advertising (Article 11).

Photos and copies of any infringements should be kept wherever possible.

The questionnaire covers:

Advertisement details: date, time, form (etc)- complete for each advertisement.

Essential information: that must be included in all pesticide advertisements

Inappropriate practices: such as depicting dangerous practices, or giving misleading information.

Statements that must be backed up with evidence: All statements used in advertising must be technically justified. Some aspects will require extra research to find out whether they infringe the Code. The following areas could be studied further:

- **Safety claims:** These include words like "safe", "non-poisonous", "harmless", "non toxic", or "compatible with IPM"). If such words are included, they should be backed up with a qualifying statement, such as "when used as directed", or a qualification relating to IPM
- **Efficacy claims:** Such as "proven insecticide against...". If such claims are included, they must be backed-up with technical evidence
- **Guarantees:** Claims such as "more profits with" or "guarantees high yields". If included then definite evidence to substantiate the claim must be given

- **Use (or misuse) of scientific research or jargon:** Research results, scientific jargon, or quotes from literature should not be used to make inaccurate claims or mislead the buyer. If you are aware of these practices, then record the text used, and explain why you consider it inaccurate or misleading.

Incentives

Advertising can include demonstration of a product (highlighting its benefits) or offering free gifts. Inappropriate incentives given by dealers, extension workers or employers can also be monitored. Examples of inappropriate incentives include invitations to dinner or being offered a free gift in order to use a pesticide.

Reports can be provided directly back to the PAN Regional Centre. And PAN Regional Centre will work with the local group to report back to FAO.

Questionnaire 5: Corporate Profiles

The questionnaire are specific to the 'Big 6' transnational corporations (TNCs) – Syngenta, Bayer, Monsanto, Dow, DuPont and BASF – that are a major producers of pesticides. The questions in these questionnaires are specifically designed to collect data on the presence, influence, and operations of a particular TNC operating in a country.

Questionnaire 6:

First-hand accounts about children's exposure to pesticides and how this exposure affects them are being documented in Questionnaire 6. The questionnaire has three parts: (1) exposure to pesticides as well as their use and management by the school/agricultural community; (2) Child/individual interview; and (3) community health concerns.

Information and Consent form for Respondent (EXAMPLE FORM)

Date of interview:

Interviewer :

Record No:

Purpose of questionnaire

You are invited to participate in a questionnaire conducted by _____. The purpose of this survey is to learn more about the use and management of pesticides, and their effects and to determine ways to address the problem.

Procedures to be followed

Either:

(Questionnaire 1 and 2) : You will be asked to answer some questions about your work, home, pesticide use and/or your health or family's health. The interview will last approximately 45 minutes.

Or:

(Questionnaire 3): You will be asked to answer some questions about your work and the pesticides you sell. The interview will last approximately 30 minutes.

Risks and Benefits

_____

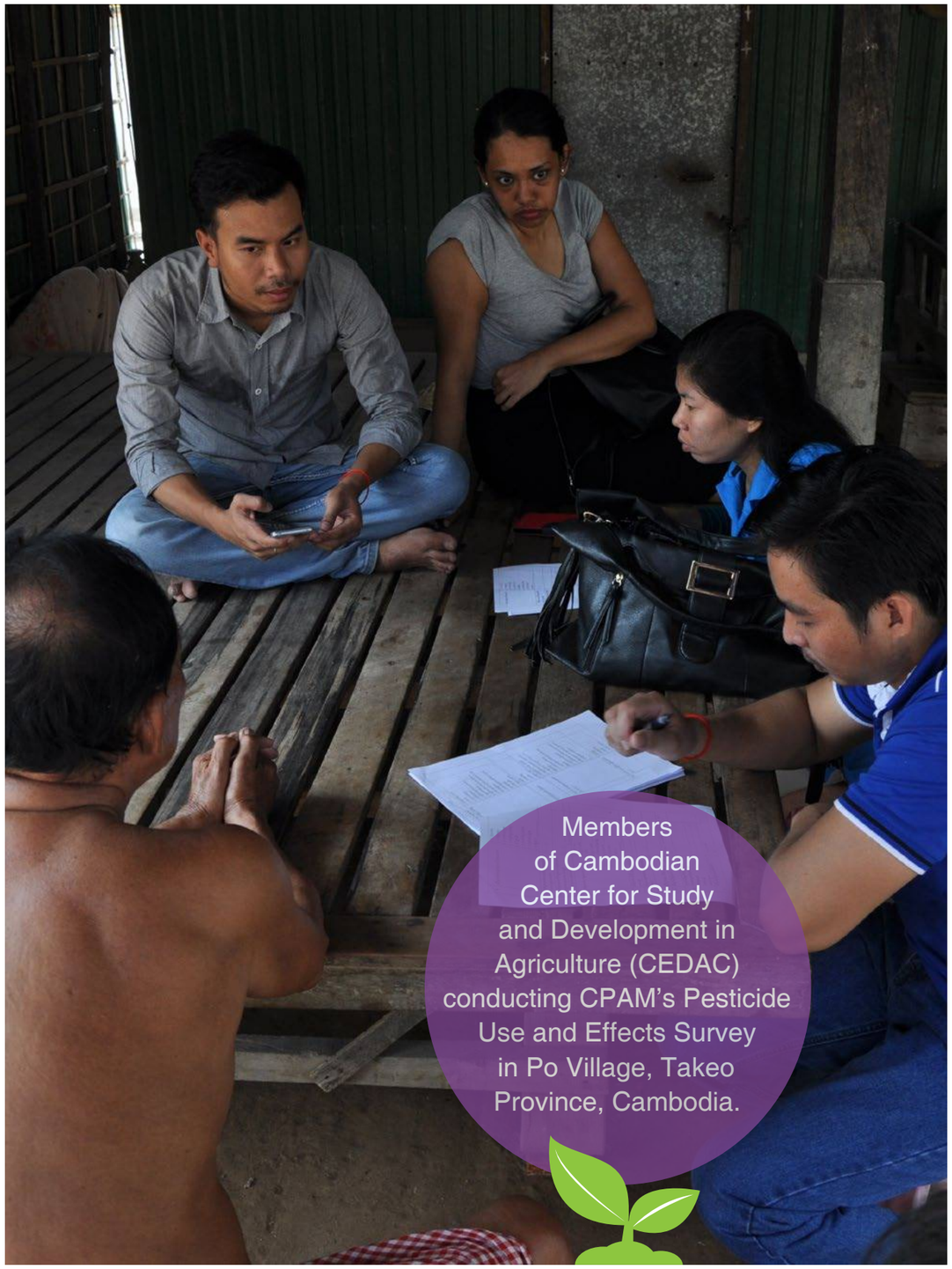
[before using this form, write above any risks and benefits to the participants (if any) that might happen through their involvement in this survey]

Confidentiality:

Your answers to the questionnaire will be kept private to the extent allowed by law. This means that the interview record will be kept in a secure place and only researchers directly involved in the study will be allowed to see this information. Your name will not appear in any report about this survey.

_____ _____

Name and signature of respondent Date



Questionnaire 1: Pesticide Use and Effects

Questionnaire 1: Part A. Conditions of Use (General)

PERSONAL DETAILS

1. Name: _____

(Last Name) (First Name) (Middle Name)

2. Do you wish to be anonymous? [ ] Yes [ ] No

3. Address _____

DEMOGRAPHIC PROFILE

Q	Question	Category
4.	What is your age? *N.B. Under 18s should not complete this questionnaire*	☐ 18-19 ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60-69 ☐ 70-79 ☐ 80+
5.	What is your marital status?	☐ Single ☐ Married ☐ Separated ☐ Widow/er
6.	What is your gender identity?	☐ Men ☐ Women ☐ Others
6.a	Are you pregnant?	☐ Yes ☐ No
6.b	Are you breastfeeding?	☐ Yes ☐ No

7.	What is your ethnic group?	[_____]
8.	What is your educational attainment?	☐ None ☐ Preschool ☐ Elementary ☐ High school ☐ Vocational ☐ College ☐ Post graduate ☐ Other _____
9.	How many people live in your household?	[____]
10.	Of these, how many children are less than 18 years old	[____]
11.	What is your occupation?	[_____]
12.	Are you employed or self-employed	☐ Employed ☐ Self-employed
12.a	What sector are you working in	☐ Farm (specify crop): _____ ☐ Plantation (specify crop): _____ ☐ Orchard (specify crop):_____ ☐ Floriculture ☐ Others, specify: [_____]
12.b	Why do you do this work?	☐ Follow my parents ☐ No other jobs available ☐ Unable to find a job ☐ Others, Specify: [_____]
13.	(If married) what is your spouse's occupation?	[_____]
14.	What is your [annual] household income?	[_____]

PESTICIDE USE AND EXPOSURE

15.	Do you use pesticides?	☐ Yes ☐ No
16.	If not, how do you control pests or weeds?	In the garden [_____] In the home [_____] On the farm [_____]
17.	Where do you use pesticides?	☐ work ☐ home ☐ farm
18.	How many years have you been using pesticides?	[____]
19.	Do you do any of the following activities involving pesticides?	☐ Apply/spray in field ☐ Mixing/loading ☐ Veterinary therapy [for eg, use for foot and mouth disease] ☐ Household application [_____] ☐ Vector control application [_____] ☐ Human therapy [for eg, head-lice] ☐ working in fields where pesticides are being used or have been used ☐ washing clothes used when spraying or mixing pesticides ☐ washing equipment used when spraying or mixing pesticides ☐ purchasing or transporting ☐ Other, specify [_____]

20. How often do you use pesticides?

- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Other, specify [_____]

21. Are you exposed to pesticides in any of the following ways?

- ☐ ground spray (backpack, tractor)
- ☐ applied from the air (plane, helicopter)
- ☐ water contamination (e.g. drinking or bathing in water that is close to sprayed areas)
- ☐ eating contaminated food
- ☐ eating food after spraying pesticides without washing your hands first
- ☐ neighbours' use of pesticides
- ☐ governments spraying for public health purposes (e.g. malaria, dengue)
- ☐ other ways, please describe: [_____]

22. How often are you exposed to pesticides?

- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Other, specify [_____]

23. Product identity and use

Please describe the pesticides you use:

a. What is the product or trade name?	b. what is the active ingredient	What is the concentration	c.What is the company name (manufacturer)?	d.What equipment do you use to apply it?	e.How often do you use it?	f.What crop (or animal) is it used to treat?	g.What is the target pest / weed/ disease?	h.When was the last time you used it?
				Open ended		Open ended	Open ended	Open ended

OR describe the pesticide in other words (if a mixture, state the names of the products being mixed): [_____]

23.a.	Do you know who sells/ provides the pesticides to your employer?	☐ Yes. Specify: [_____] ☐ No

PESTICIDE USE AND EXPOSURE (CONTINUED)

24.	How soon do you enter a field after it has been sprayed?	☐ same day ☐ after 1 day ☐ after 2 days ☐ after 3 days[ ] others [_____]
25.	Do you spray: Tick (or fill-in) one or more of the following	☐ Against the wind direction ☐ Along the wind direction ☐ Unknown
26.	Have you ever had pesticide spilled on you?	☐ yes ☐ no
26.a	When did the spill/s occur? Tick (or fill-in) one or more of the following	☐ While spraying ☐ While loading ☐ While mixing
26.b	What part/s of the body?	☐ face ☐ eyes ☐ mouth ☐ hands ☐ feet ☐ upper body ☐ lower body ☐ front of body ☐ back of body ☐ genital area ☐ others [_____]
26.c	Reason for spill	☐ faulty spray equipment ☐ fell while spraying ☐ change in the wind direction ☐ playing with the spray ☐ bottle cap is loose ☐ children playing with pesticide containers ☐ decanting while mixing ☐ faulty packaging ☐ others _____
26.d	What did you do about the pesticide spill?	☐ washed hands or area affected ☐ took a bath ☐ washed the clothes ☐ changed clothes ☐ applied home remedy ☐ sought medical attention [_____]
27.	Where are leftover or unwanted pesticides disposed of?	☐ used until it is finished ☐ kept in the home ☐ kept in grain store ☐ thrown in the river ☐ buried ☐ burned **Upload photo?**_____]
28.	Where is equipment washed?	☐ at the water course/irrigation drain ☐ in the river ☐ at home ☐ at the well ☐ in the farm ☐ do not wash ☐ others [_____]

PROTECTIVE CLOTHING

29.	Is PPE provided to you?	☐ Yes Specify what: [_____] ☐ No
29.a	Do you wear protective clothing when applying pesticides?	☐ Yes ☐ No
29.b	If no, please explain why? Tick (or fill-in) one or more of the following	☐ Too expensive ☐ Not available ☐ Uncomfortable ☐ Other, specify [_____]
29.b 1	Do other workers use PPE?	☐ Yes Specify what: [_____] ☐ No
29.b 2	Does your employer know that you do not wear PPE?	☐ Yes ☐ No
29.c	If yes, what items? Tick (or fill-in) one or more of the following	☐ Gloves ☐ Overalls ☐ Eyeglasses ☐ Respirator ☐ Face mask ☐ Boots/shoes ☐ Long-sleeve shirt ☐ Long pants ☐ Other, specify [_____]
30.	Are there washing facilities (for your hands and body) where you apply the pesticides?	☐ Yes ☐ No

30.a	Please describe the washing facilities:	☐ water course/irrigation drains ☐ water containers ☐ taps ☐ river ☐ wells ☐ ponds ☐ others ☐ _____]
31.	Have you had problems using PPE?	☐ Yes Specify: [_____] ☐ No ☐ Don't Use
31. a	Did you inform your employer of these problems?	☐ Yes. If yes, what action was taken? [_____] ☐ No Why not? [_____]

UNDERSTANDING OF HAZARDS AND ALTERNATIVES

32.	For the pesticides you use, do you have access to a label?	☐ Yes ☐ No
32.a	Do you read the label?	☐ Yes ☐ No ☐ Sometimes
32.b	Are the labels in the local language?	☐ Yes ☐ No ☐ Sometimes
32.c	Is the information big enough to read?	☐ Yes ☐ No ☐ Sometimes
32. d	Can you provide photos of the label?	☐ Yes ☐ No

33.	Have you received any training on the pesticides you use?	☐ Yes ☐ No
33.a	What was the mode of the training?	☐ Seminar ☐ Field demonstration ☐ Course ☐ Other, Specify [_____]
33.b	What was the length of the training?	[_____] hours [_____] Days [_____] Weeks

PURCHASING PESTICIDES

34.	Where do you buy the pesticides?	[_____]
35.a	How do you choose those pesticides? Tick (or fill-in) one or more of the following	☐ Own experience ☐ Other's recommendation (who_____) ☐ Labels on pesticides ☐ Suggestion from pesticide sellers ☐ Other, specify [_____]
35.b	When purchasing, do you wear protective clothing to avoid contacting pesticide containers?	☐ Yes ☐ No
35.c	If yes, please specify	[_____]

STORAGE AND DISPOSAL

36	Where are the pesticides stored? Tick (or fill-in) one or more of the following	☐ Field ☐ Shed ☐ Garden ☐ Home ☐ Other, specify [_____]

37.	Are they locked up and away from children?	☐ [ ] Yes ☐ [ ] No
38.	Are they separated from other items?	☐ [ ] Yes ☐ [ ] No
39.	Do you decant into other containers (from original container)?	☐ [ ] Yes ☐ [ ] No
40.	Are the pesticide containers, packets and bags used for other purposes afterwards?	☐ [ ] Yes ☐ [ ] No
40.a	If yes, what purposes?	☐ [ ] water and food storage ☐ [ ] toys ☐ [ ] package for food items ☐ [ ] decorations and handicrafts ☐ [ ] household items ☐ [ ] others ☐ [_____] ☐ Upload photo?
41.	How are the containers disposed of? Tick (or fill-in) one or more of the following	☐ [ ] Returned to company/distributor ☐ [ ] Thrown in open field ☐ [ ] Buried ☐ [ ] Burnt ☐ [ ] Put in rubbish/thrash ☐ [ ] Other, specify [_____]

DESCRIPTION OF ADVERSE EFFECTS

42. When using pesticides or being exposed to them, have you experienced the following?

Tick (or fill-in) one or more of the following

- ☐ Dizziness
- ☐ Headache
- ☐ Blurred vision
- ☐ Excessive sweating
- ☐ Hand tremor
- ☐ Convulsion
- ☐ Staggering
- ☐ Narrow pupils / miosis
- ☐ Excessive salivation
- ☐ Nausea
- ☐ Vomiting
- ☐ Sleeplessness/insomnia
- ☐ Difficulty of breathing
- ☐ Skin rashes
- ☐ Diarrhea
- ☐ Irregular heartbeat
- ☐ Other, specify [_____]

FOR MORE EFFECTS, REFER TO QUESTIONNAIRE 1B (AND STATE ANSWER IN "OTHER" ABOVE). PLEASE CHECK ANNEX 1 FOR SOME ILLUSTRATION AND DESCRIPTION

43. Can you recall the last time you had these symptoms from pesticide exposure?

- ☐ Yes
- ☐ No

If the respondent answers **YES** to this question, please complete questionnaire 2: Incident Report

44. If you think someone is poisoned, who would you call?

Tick (or fill-in) one or more of the following

- ☐ Local doctor
- ☐ Company
- ☐ Friend
- ☐ Family member
- ☐ Local remedies
- ☐ Hospital
- ☐ Poison center
- ☐ Other, specify [_____]

Questionnaire 1: Part B. Pesticide and Community Health

This part should be used only if you have medical or community health training, or are accompanied by a health worker.

HEALTH HISTORY

Q	Question	Category	Skip
1.	Have you visited someone for health care in the past month?	☐ Yes ☐ No	
1.a	If yes, how many times	[_____]	
1.b	Where did you go? Tick (or fill-in) one or more of the following	☐ Plantation medical facility ☐ Government hospital ☐ Private hospital ☐ Private clinic ☐ Other, specify [_____]	
1.c	From who did you seek consultation? Tick (or fill-in) one or more of the following	☐ General practitioner ☐ Medical specialist ☐ Alternative medicine practitioner (Herbalist, traditional healer, etc) ☐ Other, specify [_____]	
1.d	Was this related to your contact with a pesticide?	☐ Yes ☐ No	
1.e	What was the doctor's diagnosis and advice?	[_____]	**Q**
1.f	If no, do you have access to a doctor or health practitioner?	☐ Yes ☐ No	

2. Do you have any of the following illnesses?

Indicate your illness and if there is a family history of the same illness

Tick (or fill-in) one or more of the following

Illness	Yourself	Family members
Hypertension	☐	☐
Diabetes Mellitus	☐	☐
Ischemic heart disease	☐	☐
Kidney disease	☐	☐
Asthma	☐	☐
Liver disease	☐	☐
Tuberculosis	☐	☐
Thyroid disease	☐	☐
Allergy (specify) [_____]	☐	☐ [_____]
Cancer (specify) [_____]	☐	☐ [_____]
Psychiatric disease (specify) [_____]	☐	☐ [_____]
Autoimmune disease (specify) [_____]	☐	☐ [_____]
Other (specify): [_____]	☐	☐ [_____]

3. Are you taking any medication at the moment? [ ] Yes [ ] No

3.a If yes, list the names of the medicine (including contraceptives) [_____] [_____] [_____]

OBSTETRICAL AND GYNECOLOGIC HISTORY (FOR FEMALE RESPONDENTS)

4. Have you been sexually active for the past 5 years?
Note: his question is relevant to understanding cervical cancer, if this condition is a problem.
- ☐ Yes
- ☐ No

5. Age of first menstruation [____]

5.a Subsequent menstrual period
- ☐ Regular
- ☐ Irregular

5.b Indicate your cycle
- ☐ 26 days
- ☐ 28 days
- ☐ 30 days
- ☐ Other, specify [_____]
- ☐ Don't know

5.c Duration of menses per cycle [____]

5.d History of dysmenorrhea
- ☐ Yes
- ☐ No

5.e History of
- ☐ Increased menstrual flow
- ☐ Decreased menstrual flow

6. Pregnancy (Please indicate any pregnancies below)

Age (of mother at pregnancy)	Number of pregnancy (1st, 2nd, etc.)	Outcome (full term, term, premature, aborted, stillborn)

SOCIAL HISTORY

7. Do you smoke?
- ☐ Yes
- ☐ No

7.a If yes, how many cigarette sticks per day? [____]

7.b Do you smoke while you work?
- ☐ Yes
- ☐ No

7.c How many years did you smoke? [____]

8. Do you drink alcohol?
- ☐ Yes
- ☐ No

8.a If yes, how many drinks per day? [____]

9. Do you chew tobacco?
- ☐ Yes
- ☐ No

10. Do you chew betel nut?
- ☐ Yes
- ☐ No

11. Others (e.g. drugs, neutriceuticals)?
- ☐ Yes. Specify [____]
- ☐ No

12. How many meals do you eat per day? [____]

13. Where do you get your drinking water? [_____]

ENVIRONMENTAL HISTORY

14. Length of stay in present address [_____] years

15. Distance of residence from plantation/ workplace
[_____] km
[_____] m

16. Have you ever changed your residence or home because of a health problem?
- ☐ Yes
- ☐ No

16.a If yes, please describe the circumstance [_____]

17. Do you do things at home that involve the use of any chemical?
- ☐ Yes
- ☐ No

17.a If yes, please describe [_____]

18. Does your spouse or any other household member have any contact with chemicals at work or at home?
- ☐ Yes
- ☐ No → Q20

18.a If yes, please describe the activity [_____]

18.b Give the name of the chemical [_____]

19. What do you use for cooking at home

Tick (or fill-in) one or more of the following
- ☐ Wood
- ☐ Gas stove
- ☐ Clay stove
- ☐ Electric stove
- ☐ Charcoal
- ☐ other, specify [_____]

20. Do your burn your rubbish
- ☐ Yes
- ☐ No

21. Distance of house from street or road where vehicles pass by
- [___] kms
- [___] meters

PESTICIDES AND YOUR HEALTH

22. During the past 12 months, did you come sick or have any health complaints because of pesticides?
- ☐ Yes
- ☐ No
- ☐ Unknown

23. If yes, how many times? [_____]

24. Do you have access to a doctor or health practitioner?
- ☐ Yes
- ☐ No

24.a How far away are there? [_____]

24.b Do you have transport to get there?
- ☐ Yes
- ☐ No

24.c Do you have medical insurance?
- ☐ Yes
  Who provides it? Own or employer?
- ☐ No

25. If you are employed by a plantation, do your employers provide regular check-ups?
- ☐ Yes
- ☐ No

26.a Can you provide the doctor's report?
- ☐ Yes
- ☐ No

26.b Could you afford the medical costs?
- ☐ Yes
- ☐ No

27. If yes, please identify

Tick (or fill-in) one or more of the following

General
- ☐ Weakness
- ☐ Easily fatigued
- ☐ Muscle pains
- ☐ Weight loss
- ☐ Fever
- ☐ Chills
- ☐ Loss of appetite
- ☐ Change in taste
- ☐ Other (specify): [_____]

Respiratory system
- ☐ Coughing
- ☐ Breathlessness
- ☐ Noisy breathing
- ☐ Difficulty in breathing
- ☐ Pain on deep breathing
- ☐ Cyanosis
- ☐ Pulmonary secretions
- ☐ Blood in the sputum
- ☐ Other (specify): [_____]

Ears, Eyes, Nose, Throat
- ☐ Eye pain
- ☐ Eye redness
- ☐ Eye tearing
- ☐ Eye itchiness
- ☐ Blurring of vision
- ☐ Photophobia
- ☐ Earache
- ☐ Alopecia
- ☐ Pallor
- ☐ Sweating
- ☐ Jaundice
- ☐ Nail changes
- ☐ Other (Specify): [_____]

Genito-urinary system
- ☐ Blood loss in the urine
- ☐ Pain on urination
- ☐ Increased urination
- ☐ Decreased urination
- ☐ Other (specify): [_____]

Neurologic
- ☐ Confusion
- ☐ Dizziness
- ☐ Headache
- ☐ Vertigo
- ☐ Paresthesias
- ☐ Fasciculations (local)
- ☐ Fasciculations (general)
- ☐ Convulsions
- ☐ Loss of consciousness
- ☐ Paralysis
- ☐ Ataxia
- ☐ Hallucinations
- ☐ Drowsiness
- ☐ Tremors
- ☐ Other (specify) [_____]

- ☐ Deafness/hearing impairment
- ☐ Tinnitus
- ☐ Nasal secretion
- ☐ Nose bleed
- ☐ Nasal congestion
- ☐ Hoarseness
- ☐ Neck mass
- ☐ Other (specify): [_____]

Cardiovascular system

- ☐ Chest pain
- ☐ Palpitations
- ☐ Exertional dyspnea
- ☐ Arrhythmia
- ☐ Tachycardia
- ☐ Pillow orthopnea
- ☐ Calf pains
- ☐ Syncope
- ☐ Bradycardia

Integument/Skin

- ☐ Skin discolouration
- ☐ Easy bruising
- ☐ Skin rashes
- ☐ Skin itchiness
- ☐ Blisters
- ☐ Skin lesions

Gastrointestinal system

- ☐ Abdominal pain
- ☐ Nausea
- ☐ Vomiting
- ☐ Abnormal masses
- ☐ Salivation
- ☐ Throat irritation
- ☐ Heartburn
- ☐ Dyspepsia
- ☐ Difficulty swallowing
- ☐ Hematemesis
- ☐ Perforation of bowel
- ☐ Other (specify): [_____]

Obstetrical, gynaecological(F)

- ☐ Miscarriages
- ☐ Abnormal bleeding
- ☐ Amenorrhea
- ☐ Menstrual disturbances
- ☐ Abnormal vaginal discharges
- ☐ Other (specify) [_____]

Reporting

Name of interviewer: _____

Date of Interview _____ **Time started** _____ **Time ended** _____

Organization/address _____

Return this questionnaire to: _____

Members of CSO and community workers congregated at Zwe Bar Village, Kawa Towship, Bago Division, Myanmar recently to participate in the Community Pesticide Action Monitoring survey session. The members of CSO briefed the farmers from Zwe Bar on the purpose of the survey.

A used pesticide container floating in of the canals near a rice field at Vinh Phuoc Commune, Tri Ton District's in An Giang Province.

Questionnaire 2: Incident Report Form[3]

This form should be completed for each individual exposed in a given incident - Where an incident involves more than one formulation please complete Section I and question 13 for each.

I. Product identity: *What formulation was used when the incident took place.*

1. Name of the formulation: _____

2. Type of formulation (check one of the following)

- ☐ Emulsifiable Conc. (EC)
- ☐ Wettable Powder (WP)
- ☐ Dustable powder (DP)
- ☐ Water Soluble Powder (SP)
- ☐ Ultra Low Volume (ULV)
- ☐ Tablet (TB)
- ☐ Granular (GR)
- ☐ other, please specify:_____

3. Trade name and name of producer, if available: _____

4. Name of the active ingredient(s) in the formulation: _____

5. Relative amount of each active ingredient in the formulation: _____
(% concentration, g/l, etc.).

6. Attach copy of the label(s), if available.

II. Description of the incident: *How the formulation was used.*

7. Date of incident: (M/DD/Year) _____

8. Location of incident: village/city: _____
province/state/region: _____
country: _____

9. Person exposed (identity should be checked and recorded before submission of the form)

Sex: ☐ male ☐ female ☐ age: _____

If age unknown: ☐ child (<14yrs) ☐ adolescent (14-19 yrs) ☐ adult (>19yrs)

3 **Source: Rotterdam Convention Secretariat (www.pic.int).**

10. Main activity at time of exposure (check one or more of the following):

- ☐ application in field
- ☐ mixing/loading
- ☐ veterinary therapy
- ☐ household application
- ☐ vector control application
- ☐ human therapy
- ☐ re-entry to treated field
- ☐ other, please specify: _____

11. Was protective clothing used during application? ☐ no ☐ yes
If no, please explain why: _____

If yes, briefly describe (check one or more of the following):

- ☐ gloves
- ☐ overalls
- ☐ eye glasses
- ☐ respirator
- ☐ face mask
- ☐ boots/shoes
- ☐ long-sleeve shirt
- ☐ long pants
- ☐ other, please specify: _____

12. Information on how product was being used:

(a) Location of exposure/incident (field, garden, greenhouse, house, etc.)

(b) List the animals/crop(s)/stored products treated if relevant:

(c) Application method: (How product was used e.g. hand, bucket & brush, soil injection, spray (backpack, tractor mounted,etc), drip irrigation, aerial (helicopter, plane etc.)):

(d) Dose applied/concentration (or amount of pesticide applied)

(e) Duration of the exposure period:

- ☐ hours
- ☐ ½ day
- ☐ day
- ☐ other (specify): _____

13. If more than one pesticide formulation was used at the same time, please respond to points i) to iv) below for each formulation. *(see also Part I Product Identity)*

i) Was the pesticide in its original container? ☐ no ☐ yes

ii) Was the label available? ☐ no ☐ yes

If yes, was exposed individual able to read and understand label? ☐ no ☐ yes

iii) Does the label include the reported use? ☐ no ☐ yes

If no, describe how the use reported above differs from that recommended on the label:

(use a separate page if necessary) _____

iv) Is the reported incident typical of how the formulation is generally used?
☐ no ☐ yes

13. Climatic conditions under which the incident occurred (eg. temperature, relative humidity): _____

14. Were other individuals affected in the same incident? o no o yes

15. Include any other details that may be useful in describing the incident and the way in which the formulation was used, in particular how the use reported here reflects common or recognized use patterns for this formulation (additional pages may be attached).

III. Description of adverse effects:

16. Individual's reaction (check one or more of the following) :

- ☐ dizziness
- ☐ headache
- ☐ blurred vision
- ☐ excessive sweating
- ☐ hand tremor
- ☐ convulsion
- ☐ staggering
- ☐ narrow pupils/miosis
- ☐ excessive salivation
- ☐ nausea/vomiting
- ☐ death
- ☐ other, please specify: _____

17. Route of exposure (check main route or more than one if applicable)

- ☐ mouth
- ☐ skin
- ☐ eyes
- ☐ inhalation
- ☐ other, please specify: _____

18. How soon after last use of the formulation were the adverse effects observed:

_____

IV. Management:

19. Treatment given: ☐ No ☐ Yes ☐ Unknown

20. Hospitalization: ☐ No ☐ Yes ☐ Unknown

21. Include any other details/information regarding treatment including medical intervention/ first aid/hospitalization/local practices etc. (additional pages may be attached): _____

V. Reporting/communication:

22. Date of data collection/consultation: _____

23. Name and address of investigator/data collector: _____

24. Category of investigator/data collector:

- ☐ medical
- ☐ paramedical
- ☐ non-medical

If non-medical, then specify type of person *(applicator, formulator, vendor, extension worker, manager, etc.):* _____

25. Contact if further information if needed:

Tel: _____

Fax: _____

Email: _____

26. Has this incident been reported elsewhere? ☐ No ☐ Yes

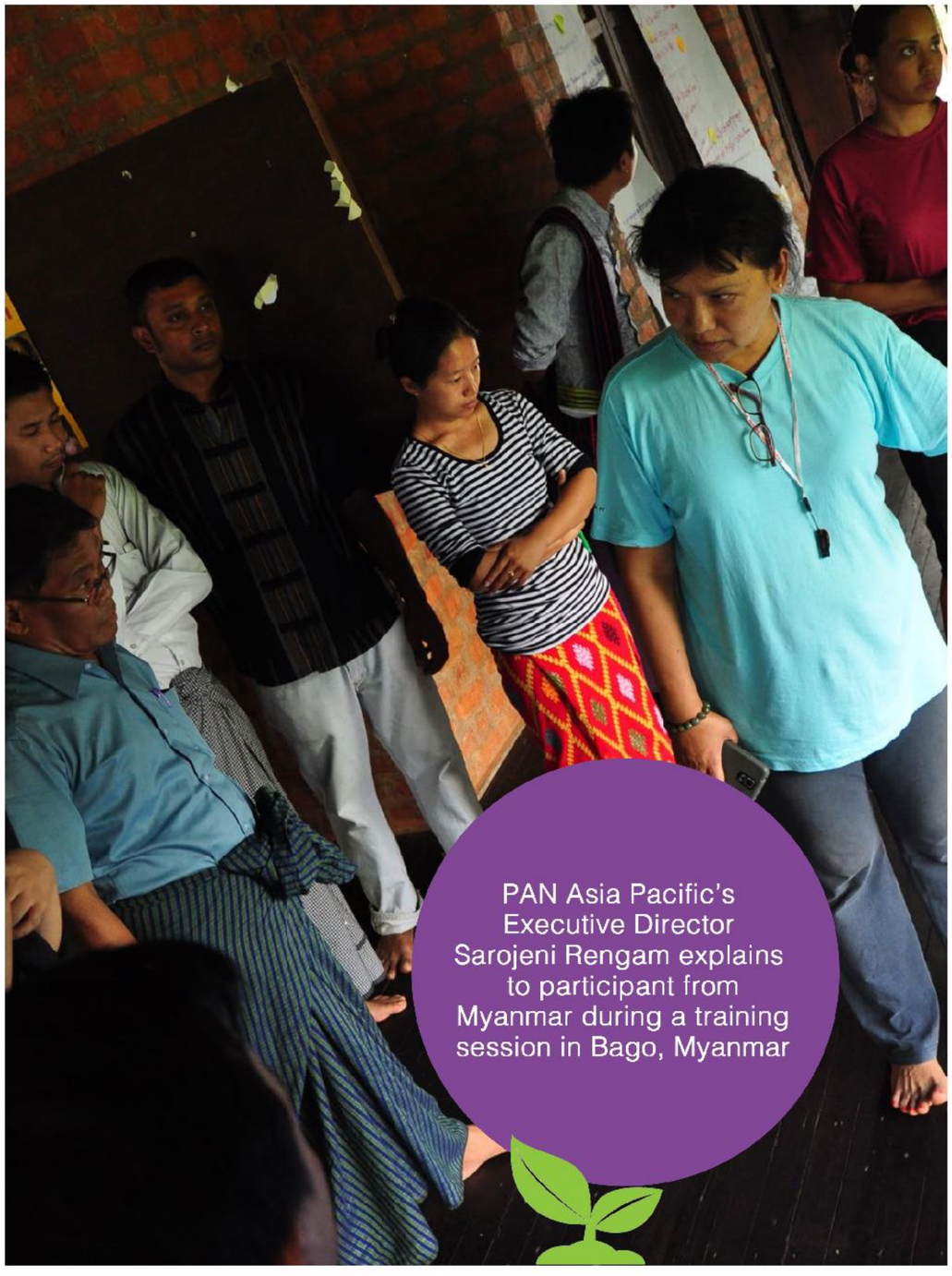
If yes, where: _____

Reporting

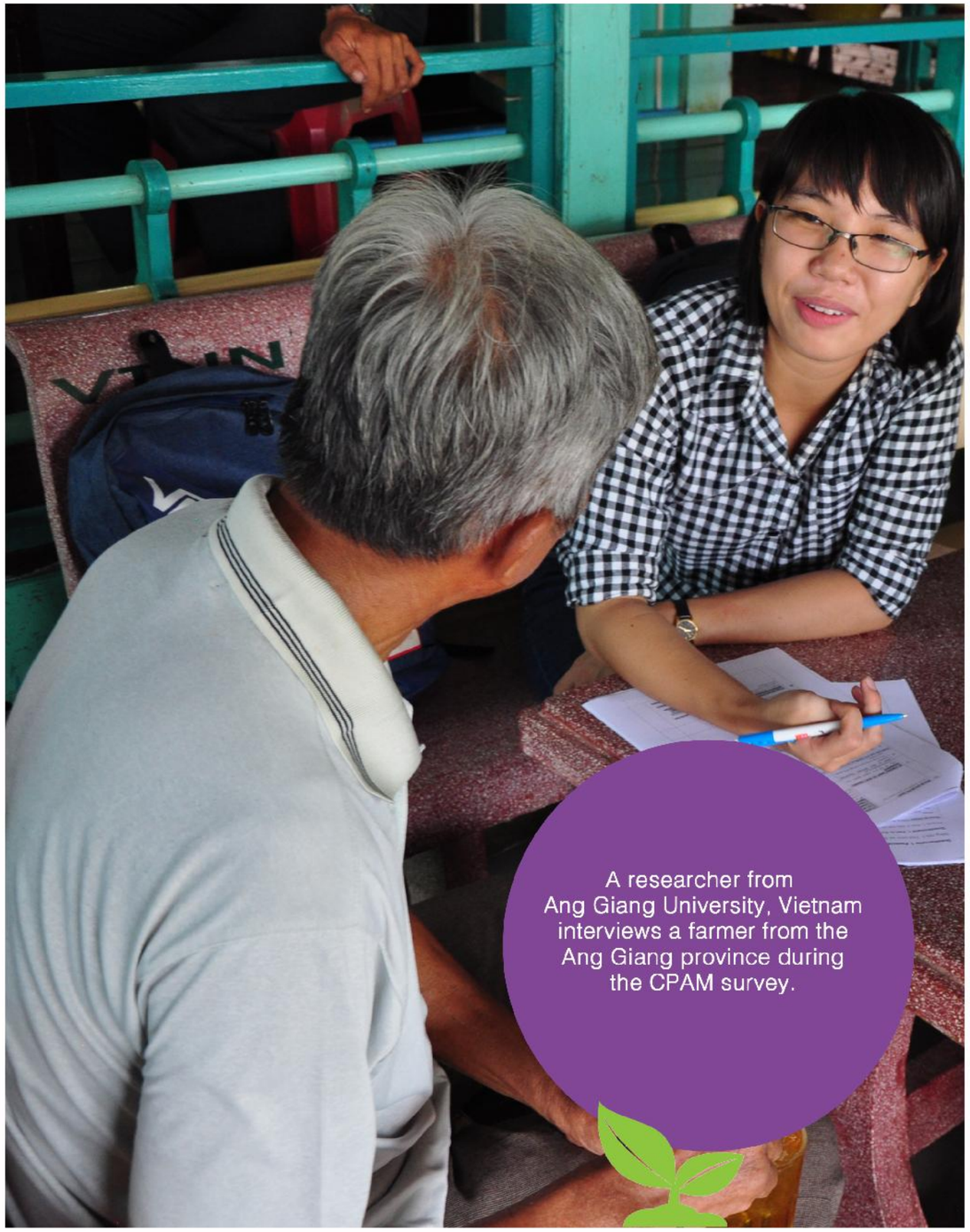
Name of interviewer: _____

Organisation/address: _____

Return this Questionnaire to: _____



PAN Asia Pacific's Executive Director Sarojeni Rengam explains to participant from Myanmar during a training session in Bago, Myanmar



A researcher from Ang Giang University, Vietnam interviews a farmer from the Ang Giang province during the CPAM survey.

Questionnaire 3: Retail Questionnaire

GENERAL DETAILS

1.a. Date of Interview/Observations : [_____]
dd / mm / yyyy

1.b. Name and Address of Shop:
[_____]

[_____]

Questionnaire 3: Part A. How pesticides are sold

Q	Question	Category	Skip
	GENERAL DATA/ OBSERVATIONS		
2	Location of store	☐ City ☐ Town ☐ Village ☐ Other, Specify [_____]	
3	Type of store	☐ Farm supply store ☐ Market stall ☐ Roadside stall ☐ Supermarket outlet ☐ In home store ☐ Other, Specify [_____]	
4	What is the main crop grown in the area?	[_____]	
5	Is the store close to Tick (or fill-in) one or more of the following	☐ School ☐ Creche ☐ Medical / Care center ☐ Food store ☐ Water sources ☐ Eatery ☐ Other, Specify [_____] Give details [_____]	

6	Are pesticides stored alongside	☐ Food ☐ Pharmaceuticals ☐ Clothing ☐ Other products, Specify [_____]
7	If yes, are the pesticides physically segregated from other products?	☐ Yes ☐ No
8	Is there any sign that they are hazardous?	☐ Yes ☐ No
9	Are pesticides provided in different sizes including small sizes appropriate for small-scale users?	☐ Yes ☐ No Further detail [_____]
10	Is there protective clothing sold in the store?	☐ Yes ☐ No
10.a	If yes, identify the items of protective clothing	☐ Gloves ☐ Overalls ☐ Eye glasses ☐ Safety goggles ☐ Respirator ☐ Face mask ☐ Boots/Shoes ☐ Long-sleeve shirt ☐ Long pants ☐ Other, Specify [_____]
11	Are there any banned or restricted products available for sale?	☐ Yes ☐ No _____

11.a	If yes, list brand name, active ingredients and their concentrations and manufacturers name and address	**Brand name** / **Active ingredient and concentration** / **Manufacturer name & address**
12	Are there any WHO Class Ia or Ib pesticides (or other notable HHPs) for sale in the shop?	☐ Yes ☐ No
12.a	If yes, list brand name, active ingredients and their concentrations and manufacturers name and address	**Brand name** / **Active ingredient and concentration** / **Manufacturer name & address**

QUESTIONS FOR THE SALESPERSON

Personal details of seller (optional)

13	Age	☐ Child (<14 years old) ☐ Adolescent (14 – 19) ☐ 20 – 29 ☐ 30 – 39 ☐ 40 – 49 ☐ 50 – 59 ☐ 60 – 69 ☐ 70 and above
14	Sex	☐ Male ☐ Female
15	For females	☐ Pregnant ☐ Breastfeeding
16	Ethnic group	[_____]

Training		
17	Where do the retailers get their products?	☐ Manufacturer ☐ Third party ☐ Sales person Others, please specify: [_____]
17a	Do they have a contract with their supplier?	☐ Yes ☐ No
18	Have you received training on the pesticides you sell?	☐ Yes ☐ No
18.a	If yes, was it provided by	☐ Government ☐ Company, specify [_____] ☐ Other, specify [_____]
18.b	Mode of training	☐ Seminar ☐ Field demonstration ☐ Course ☐ Other, specify [_____]
18.c	Length of course (Answer only one)	[_____] hours [_____] Days [_____] Weeks
18.d	Did the training cover Tick (or fill-in) one or more of the following	☐ Precautions when mixing/spraying ☐ Precautions for storage/disposal ☐ Information about alternatives to pesticides ☐ Health hazards of pesticides ☐ Environmental hazards of pesticides ☐ Other, please specify [_____]
19	Do you have a government license to sell pesticides?	☐ Yes ☐ No

Packaging and re-packaging		
20	Do you package or repackage pesticides?	☐ Yes ☐ No -
21.a	If yes, where do you repackage the pesticide?	☐ Shed ☐ Shop ☐ Reformulation facility ☐ Elsewhere, specify [_____]
21.b	How do you repackage the pesticide?	[_____]
21.c	What kind of packaging do you use?	[_____]
21.d	Do you label the repackaged pesticide?	☐ Yes ☐ No
Container disposal		
22	Do you give buyers of pesticides advice on disposal of used package/containers?	☐ Yes ☐ No
22.a	What is this advice?	[_____]
23	Do you collect used packages?	☐ Yes ☐ No
23.a	If yes, how are these disposed of? Tick (or fill-in) one or more of the following	☐ Returned to company/distributor ☐ Thrown in open field ☐ Buried ☐ Burnt ☐ Put in rubbish/trash ☐ Reuse ☐ Other, Specify [_____]
24.	Other observations	[_____] [_____]

Questionnaire 3: Part B. Pesticide Labels (complete 1 form per product)

1.	Product name/ trade name	[_____]
2.	Active ingredient and concentration	[_____]
3.	Manufacturer	[_____]
4.	Does the package have a label?	☐ Yes ☐ No
4.a	Is the label easy to read?	☐ Yes ☐ No
4.b	If no, why not?	[_____]
5	If yes, does the label carry:	
5.a	Product or trade name	☐ Yes ☐ No
5.b	Active ingredient/s	☐ Yes ☐ No
5.c	Manufacturer	☐ Yes ☐ No
5.d	Instructions in local language	☐ Yes ☐ No
5.e	Warning symbols	☐ Yes ☐ No
5.f	Precautionary statement	☐ Yes ☐ No
5.g	Hazard classification	☐ Yes ☐ No
5.h	Instructions on how to use the product	☐ Yes ☐ No
5.i	Instructions on how to dispose of the product	☐ Yes ☐ No
5.j	Instructions on how to decontaminate containers	☐ Yes ☐ No
6	Other observations	[_____] [_____] [_____] [_____] [_____]

Questionnaire 3: Part C. Pesticide packaging (complete 1 form per product)

1	Product name/ trade name	[_____]
2	Active ingredient and concentration	[_____]
3	Manufacturer	
4	What is the state of the container?	☐ Intact ☐ Leaking ☐ Weakened ☐ Damaged, Describe [_____]
5	Has the pesticide been transferred into another container?	☐ Yes ☐ No
6	If repackaged to recanted, state the kind of container Tick (or fill-in) one or more of the following	☐ Sealed container ☐ Plastic bag ☐ Softdrink bottle ☐ Other, specify [_____]
7	Is the container attractive for reuse for storing?	☐ Yes ☐ No
8	Describe the container Tick (or fill-in) one or more of the following	☐ Jar with a screw-on cap ☐ Container with a handle and/or a wide closure ☐ Other, specify [_____]
9	Is the container child-proof (unable to be easily opened by a child)	☐ Yes ☐ No
10	Is it ready to use (i.e. already diluted or mixed)?	☐ Yes ☐ No
11.	Other observations	[_____] [_____] [_____] [_____] [_____]

Questionnaire 4: Documenting Advertisements

ADVERTISEMENT DETAILS

1. Date of publication / observation / incentive [_____]
dd / mm / yyyy

Q	Question	Category	Skip
2	Name of Company advertising	[_____]	
3	Brand being advertised	[_____]	
4	Active ingredients (if stated)	[_____]	
5	Name of the publication or station in which it appeared or description of location where it appeared?	[_____] [_____]	
6	Description of the form of the original advertisement	☐ Brochure ☐ Newspaper advertisement ☐ Journal ☐ Magazine ☐ Advertorial ☐ Roadside poster ☐ Billboard ☐ Radio ☐ Television ☐ Internet ☐ Video or DVD ☐ Promotional clothing ☐ Incentive or offer	

ESSENTIAL INFORMATION

7 Does the advertisement include appropriate hazard phrases and warning symbols?

- ☐ Yes, details [_____]
- ☐ No

8 Does the advertisement include instructions to the user to read the label carefully or have it read out to them if they cannot read?

- ☐ Yes
- ☐ No

PRACTICES

9 Does the advertisement include pictures of potential dangerous practices?

- ☐ Yes
- ☐ No

9.a What are these?

- ☐ Using pesticides near the food
- ☐ Using pesticides by or near children
- ☐ Using pesticides without sufficient protective clothing

Details
[_____]

10 Does the advertisement include comparison with other pesticides?

- ☐ Yes
- ☐ No

10.a What are these?

- ☐ Comparing the risk
- ☐ Comparing the hazard
- ☐ Comparing the safety of other pesticides

Details
[_____]

11 False or misleading comparisons (Give details)
[_____]
[_____]
[_____]

12 Misleading information to the buyer. These could include implication, omission, ambiguity, or an exaggerated claim (Give details)
[_____]
[_____]
[_____]

13 Encouragement of uses other than those specified on the label (Give details)
[_____]
[_____]
[_____]

14 Inappropriate offers of free gifts or incentives (Give details)
[_____]

INCENTIVES/OFFERS

15 What is the incentive?

- ☐ Prize
- ☐ Chance to win (or lottery)

What was on offer?

- ☐ Clothing
- ☐ Travel
- ☐ Vehicle
- ☐ Scholarship
- ☐ Free meal
- ☐ Invitation
- ☐ Other, specify [_____]

16 How was it offered? [_____]

17	Do you see this as appropriate?	☐ Yes, why [_____] ☐ No, why not [_____] Other details [_____]
18	Other observations	[_____] [_____] [_____] [_____]

Reporting

Name of interviewer _____

Last Name First Name Middle Name

Organization _____

Address _____

Return this questionnaire to _____

Myanmar children walking back from school at Zwe Bar Village, Kawa Township, Bago Division, Myanmar.

Questionnaire 5: Corporate Profiles

The questionnaires below are specific to the 'Big 6' transnational corporations (TNCs) – Syngenta, Bayer, Monsanto, Dow, DuPont and BASF – that are the main producers of pesticides. The questions here are specifically designed to collect data on the presence, influence, and operations of a particular TNC operating in a country.

SYNGENTA

1. Does Syngenta exist in your country?

☐ Yes ☐ No

If yes, what is the name of the company?

2. Is the subsidiary company linked to the parent company in Switzerland?

☐ Yes ☐ No ☐ Don't Know

If yes, how do you know this (annual reports, centralised company policies): please state

2a. Are there any documentary evidence of financial transactions between the subsidiary and parent company e.g. profits from the subsidiary are transferred to the parent company?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide the evidence (reports, financial statements etc)

3. What products do they sell?

☐ Pesticides ☐ Seeds ☐ Fertilisers

3a1. If they sell pesticides, what are they?

PRODUCT MAIN BRANDS	ACTIVE INGREDIENT
ACTARA®	Neonicotinoids
CHESS®/PLENUM®/FULFILL®	Pymetrozine
CURACRON®	Profenofos(organophosphate)
DURIVO®	Chlorantraniliprole based solutions

FORCE®	Tefluthrin
INSEGAR®	Fenoxycarb
KARATE ZEON®	Lambda-cyhalothrin
MATCH®	Lufenuron
NEMATHORIN (Trademark of Ishihara Sangyo Kaisha Ltd.)	Fosthiazate
PIRIMOR®	Pirimicarb
POLO®	Diafenthiuron
PROCLAIM®	Emamectin benzoate
SUPRACIDE®	Methidathion (organophosphate)
TRIGARD®	Cyromazine
VERTIMEC®	Abamectin

Drop down of list of pesticides – active ingredient and brand name

3.a2. Are any of these pesticides banned in your country?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

Are these pesticides banned in other countries?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

Do the labels on the products sold come in the local language?

☐ Yes ☐ No

Do the safety data sheet or information sheet that is provided with the products come in the local language?

☐ Yes ☐ No

3.b. If they sell seeds, what are they?

LIST OF SEEDS
Corn
Soybeans
Cereals
Sugarbeets
Alfalfa
Sunflowers
Vegetable seeds

3.c. If they sell fertilisers, what are they?

LIST OF FERTILIZER	ACTIVE INGREDIENT
APRON® XL	Metalaxyl-M
AVICTA AVICTA® Complete Corn	Abamectin
AVICTA® Complete Beans	Abamectin
AVICTA® Complete Cotton	Abamectin
AUSTRAL®	Fludioxonil and Tefluthrin
CELEST®	Fludioxonil
BERET®	Fludioxonil

LANDOR®*	Fludioxonil
CLARIVA™	Pasteuria nishizawae
CRUISER®	Thiamethoxam
HELIX™	Thiamethoxam
DIVIDEND®	Difenoconazole
DYNASTY™	Azoxystrobin.
FarMore® Technology	Mefenoxam
FORCE® 20CS	Tefluthrin
FORTENZA™ Duo	Cyantraniliprole
MAXIM®	Thiabendazole
VIBRANCE®	Sedaxane

4. Has Syngenta or its subsidiary been involved in any training on the use/handling of pesticides?

☐ Yes ☐ No

If yes,

> to whom -> farmers, retailers, plantation owners, plantation workers?

> when was this?

> how long was it?

> were there any materials provided?

☐ Yes ☐ No

If yes, what were they? >> Leaflets >> Brochures >> Modules etc

5. Does the subsidiary have a health and safety policy e.g. Syngenta Code of Conduct?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details

6. Do they have a human rights or corporate social responsibility policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

7. Do they have a policy on environmental protection?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

8. Are you aware if there are existing reporting mechanisms for incidences or emergencies?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (where to do this, how is it done)

9. Have you seen any people from Syngenta Headquarters or its subsidiary visit the plantations/farms/retailers?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details – when, who, reason for visit (training, fact finding missions, inspections)

How did you know they were from the headquarters?

MONSANTO

1. Does Monsanto exist in your country?

☐ Yes ☐ No

If yes, what is the name of the company?

2. Is the subsidiary company linked to the parent company in the US?

☐ Yes ☐ No ☐ Don't Know

If yes, how do you know this (annual reports, centralised company policies): please state

2.a. Are there any documentary evidence of financial transactions between the subsidiary and parent company e.g. profits from the subsidiary are transferred to the parent company?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide the evidence (reports, financial statements etc)

3. What products do they sell?

☐ Pesticides ☐ Seeds ☐ Fertilisers

3.a. If they sell pesticides, what are they?

TRADE NAME	ACTIVE INGREDIENTS
Herbicide	
Degree Xtra	Acetochlor
Harness	Acetochlor
Intrro	Alachlor
Lariat	Alachlor
Micro Tech	Alachlor
Outrider	Sulfosulfuron
Round Power MAX	Glyphosate
Roundup Ready PLUS	Glyphosate
Roundup Ready PLUS	Glyphosate
Roundup WeatherMAx	Glyphosate
RT3	Glyphosate
Triple FLEX	Glyphosate- and triazine-

3.a1. Are any of these pesticides banned in your country?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

> Are these pesticides banned in other countries?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

> Do the labels on the products sold come in the local language?

☐ Yes ☐ No

> Do the safety data sheet or information sheet that is provided with the products come in the local language?

☐ Yes ☐ No

3.b. If they sell seeds, what are they?

SEEDS
Corn
Cotton

Peanuts
Rice
Soybeans
Sunflower
Wheat
Barley
Sorghum

3c. If they sell fertilisers, what are they?

> Drop down of list of fertilisers – active ingredient and brand name

4. Has Monsanto or its subsidiary been involved in any training on the use/handling of pesticides?

☐ Yes ☐ No

If yes,

> to whom -> farmers, retailers, plantation owners, plantation workers?

> when was this?

> how long was it?

> were there any materials provided?

☐ Yes ☐ No

If yes, what were they? >> Leaflets >> Brochures >> Modules etc

5. Does the subsidiary have a health and safety policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details

6. Do they have a human rights or corporate social responsibility policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

7. Do they have a policy on environmental protection?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

8. Are you aware if there are existing reporting mechanisms for incidences or emergencies?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (where to do this, how is it done)

9. Have you seen any people from Monsanto Headquarters or its subsidiary visit the plantations/farms/retailers?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details – when, who, reason for visit (training, fact finding missions, inspections)

> How did you know they were from the headquarters?

BAYER

1. Does Bayer exist in your country?

☐ Yes ☐ No

If yes, what is the name of the company?

2. Is the subsidiary company linked to the parent company in Germany?

☐ Yes ☐ No ☐ Don't Know

If yes, how do you know this (annual reports, centralised company policies): please state

2.a. Are there any documentary evidence of financial transactions between the subsidiary and parent company e.g. profits from the subsidiary are transferred to the parent company?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide the evidence (reports, financial statements etc)

3. What products do they sell?

☐ Pesticides ☐ Seeds ☐ Fertilisers

3.a. If they sell pesticides, what are they?

TRADE NAME	ACTIVE INGREDIENTS
Herbicide	
Basta™	Glufosinate-ammonium
Corvus™	isoxaflutole + thiencarbazone + safener
Adengo™	isoxaflutole + thiencarb
Atlantis™	Mesosulfuron methyl + iodosulfuron
Fandango™	prothioconazole, fluoxastrobin.
Liberty™	glufosinate-ammonium
Capreno™	glyphosate, PPO, ALS, dicamba and triazine
Basta™	Glufosinate-ammonium
Corvus™	isoxaflutole + thiencarbazone + safener

Insecticides	
Belt™	flubendiamide
Confidor™	IMIDACLOPRID
Decis™	DELTAMETHRIN
Movento™	spirotetramat
Gaucho™	imidacloprid
K-Othrine™	Deltamethrin
Gaucho™	imidacloprid

3.a1. Are any of these pesticides banned in your country?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

> Are these pesticides banned in other countries?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

> Do the labels on the products sold come in the local language?

☐ Yes ☐ No

> Do the safety data sheet or information sheet that is provided with the products come in the local language?

☐ Yes ☐ No

3b. If they sell seeds, what are they?

TYPES OF SEEDS
Corn
Cotton
Peanuts
Rice
Soybeans
Sunflower
Wheat
Barley
Sorghum

3c. If they sell fertilisers, what are they?

4. Has Bayer or its subsidiary been involved in any training on the use/handling of pesticides?

☐ Yes ☐ No

If yes,

> to whom -> farmers, retailers, plantation owners, plantation workers?

> when was this?

> how long was it?

> were there any materials provided?

☐ Yes ☐ No

If yes, what were they? >> Leaflets >> Brochures >> Modules etc

5. Does the subsidiary have a health and safety policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details

6. Do they have a human rights or corporate social responsibility policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

7. Do they have a policy on environmental protection?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

8. Are you aware if there are existing reporting mechanisms for incidences or emergencies?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (where to do this, how is it done)

9. Have you seen any people from Bayer Headquarters or its subsidiary visit the plantations/farms/retailers?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details – when, who, reason for visit (training, fact finding missions, inspections)

> How did you know they were from the headquarters?

DOW

1. Does DOW exist in your country?

☐ Yes ☐ No

If yes, what is the name of the company?

2. Is the subsidiary company linked to the parent company in the US?

☐ Yes ☐ No ☐ Don't Know

If yes, how do you know this (annual reports, centralised company policies): please state

2.a. Are there any documentary evidence of financial transactions between the subsidiary and parent company e.g. profits from the subsidiary are transferred to the parent company?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide the evidence (reports, financial statements etc)

3. What products do they sell?

☐ Pesticides ☐ Seeds ☐ Fertilisers

3.a. If they sell pesticides, what are they?

TRADE NAME	ACTIVE INGREDIENTS
Herbicide	
Pindar® GT	Penoxsulam and Oxyfluorfen
Trellis®	Isoxaben
Goal® 2XL	oxyfluorfen
GoalTender®	oxyfluorfen
Stinger®	Aminopyralid
Starane® Ultra herbicide	fluroxypyr
Durango® DMA®	Glyphosate dimethylammonium

Pindar® GT	penoxsulam and oxyfluorfen
Insecticides	
Blackhawk® Naturalyte®	Spinosad
Closer® SC insecticide	sulfoxaflor
Delegate® WG insecticide	spinetoram
Entrust® SC Naturalyte® I	Spinosad
Intrepid® 2F insecticide	methoxyfenozide
Lorsban® 15G	chlorpyrifos
Lorsban® Advanced	chlorpyrifos
Radiant® SC insecticide	spinetoram
Sequoia™	Sulfoxaflor
Transform® WG	Sulfoxaflor
Transform® WG	Sulfoxaflor
Blackhawk® Naturalyte®	Spinosad
Closer® SC insecticide	sulfoxaflor
Delegate® WG insecticide	spinetoram
Entrust® SC Naturalyte® I	Spinosad
Intrepid® 2F insecticide	methoxyfenozide
Lorsban® 15G	chlorpyrifos
Lorsban® Advanced	chlorpyrifos
Radiant® SC insecticide	spinetoram
Sequoia™	Sulfoxaflor

3.a1. Are any of these pesticides banned in your country?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

> Are these pesticides banned in other countries?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

> Do the labels on the products sold come in the local language?

☐ Yes ☐ No

> Do the safety data sheet or information sheet that is provided with the products come in the local language?

☐ Yes ☐ No

3b. If they sell seeds, what are they?

Drop down of list of seed

Corn
Cotton
Peanuts
Rice
Soybeans
Sunflower
Wheat
Barley
Sorghum

3c. If they sell fertilisers, what are they?

BRAND NAME	ACTIVE INGREDIENTS
N-Serve®	nitrapyrin
Instinct® II	nitrapyrin

4. Has DOW or its subsidiary been involved in any training on the use/handling of pesticides?

☐ Yes ☐ No

If yes,

> to whom -> farmers, retailers, plantation owners, plantation workers?

> when was this?

> how long was it?

> were there any materials provided?

☐ Yes ☐ No

If yes, what were they? >> Leaflets >> Brochures >> Modules etc

5. Does the subsidiary have a health and safety policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details

6. Do they have a human rights or corporate social responsibility policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

7. Do they have a policy on environmental protection?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

8. Are you aware if there are existing reporting mechanisms for incidences or emergencies?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (where to do this, how is it done)

9. Have you seen any people from DOW Headquarters or its subsidiary visit the plantations/farms/retailers?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details – when, who, reason for visit (training, fact finding missions, inspections)

> How did you know they were from the headquarters?

DuPont

1. Does DuPont exist in your country?

☐ Yes ☐ No

If yes, what is the name of the company?

2. Is the subsidiary company linked to the parent company in the US?

☐ Yes ☐ No ☐ Don't Know

If yes, how do you know this (annual reports, centralised company policies): please state

2.a. Are there any documentary evidence of financial transactions between the subsidiary and parent company e.g. profits from the subsidiary are transferred to the parent company?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide the evidence (reports, financial statements etc)

3. What products do they sell?

☐ Pesticides ☐ Seeds ☐ Fertilisers

3.a. If they sell pesticides, what are they?

TRADE NAME	ACTIVE INGREDIENTS
Abundit®	glyphosate
Accent®	
Accent® Herbicide	Nicosulfuron
Affinity® BroadSpec	thifensulfuron-methyl and tribenuron-methyl
Affinity® TankMix	thifensulfuron-methyl and tribenuron-methyl
Agility® SG	Sodium salt of dicamba
Ally® Extra	Thifensulfuron methyl
Ally® Extra SG	Thifensulfuron methyl
Ally®	metsulfuon

Ally® XP	Metsulfuron Methyl
Assure® II	Quizalofop P-Ethyl.
Basis® Blend	Rimsulfuron
Basis® Gold	rimsulfuron, thifensulfuron and atrazine
Basis®	rimsulfuron and thifensulfuron
Breakfree® ATZ	acetochlor + atrazine
Breakfree® ATZ Lite	
Breakfree®	acetochlor
Canopy® EX	chlorimuron + tribenuron
Canopy®	metribuzin + chlorimuron
Cinch® ATZ	s-metolachlor + atrazine
Cinch® ATZ Lite	Atrazine
Cinch®	s-metolachlor
Classic®	chlorimuron
Enlite®	Chlorimuron ethy
Envive®	Chlorimuron ethyl
Express®	tribenuron
Exirel®	cyantraniliprole
Finesse® Grass & Broadleaf	
Finesse®	chlorsulfuron + metsulfuron
FirstShot® SG	Tribenuron + thifensulfuron
Glean® XP	Chlorsulfuron
Harmony® Extra SG	thifensulfuron + tribenuron
Instigate®	Rimsulfuron.
LeadOff®	Rimsulfuron and Thifensulfuron

Matrix® SG	rimsulfuron
Prequel®	Rimsulfuron
Realm® Q	Rimsulfuron
Require® Q (Mp)	Rimsulfuron.
Resolve® Q	Rimsulfuron
Revulin™ Q	nicosulfuron and mesotrione
Staple® LX	pyrithiobac
Steadfast® Q H	nicosulfuron + rimsulfuron
Synchrony® XP	chlorimuron + thifensulfuron
Upbeet®	Triflusulfuron methyl
Insecticides	
Altacor®	chlorantraniliprole
Avaunt®	Indoxacarb.
Coragen®	Rynaxypyr®
Lannate® LV	Methomyl
Lannate® SP	Methomyl
Prevathon®	Chlorantraniliprole
Steward® EC	indoxacarb
Vydate® C-LV	Oxamyl.
Vydate® L	Oxamyl.
Marlin®	Methomyl
Altacor®	chlorantraniliprole
Avaunt®	Indoxacarb.
Coragen®	Rynaxypyr®
Lannate® LV	Methomyl

Lannate® SP	Methomyl	
Prevathon®	Chlorantraniliprole	
Steward® EC	indoxacarb	
Vydate® C-LV	Oxamyl.	
Vydate® L	Oxamyl.	
Marlin®	Methomyl	
Altacor®	chlorantraniliprole	
Avaunt®	Indoxacarb.	
Coragen®	Rynaxypyr®	
Lannate® LV	Methomyl	
Lannate® SP	Methomyl	

3.a1. Are any of these pesticides banned in your country?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

> Are these pesticides banned in other countries?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

> Do the labels on the products sold come in the local language?

☐ Yes ☐ No

> Do the safety data sheet or information sheet that is provided with the products come in the local language?

☐ Yes ☐ No

3.b. If they sell seeds, what are they?

Alfalfa
Canola
Corn/Maize
Cotton
Inoculants
Mustard
Pearl Millet
Rice
Sorghum
Soybeans
Sunflowers

3c. If they sell fertilisers, what are they?

4. Has DuPont or its subsidiary been involved in any training on the use/handling of pesticides?

☐ Yes ☐ No

If yes,

> to whom -> farmers, retailers, plantation owners, plantation workers?

> when was this?

> how long was it?

> were there any materials provided?

☐ Yes ☐ No

If yes, what were they? >> Leaflets >> Brochures >> Modules etc

5. Does the subsidiary have a health and safety policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details

6. Do they have a human rights or corporate social responsibility policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

7. Do they have a policy on environmental protection?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

8. Are you aware if there are existing reporting mechanisms for incidences or emergencies?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (where to do this, how is it done)

9. Have you seen any people from DuPont Headquarters or its subsidiary visit the plantations/farms/retailers?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details – when, who, reason for visit (training, fact finding missions, inspections)

> How did you know they were from the headquarters?

BASF

1. Does BASF exist in your country?

☐ Yes ☐ No

If yes, what is the name of the company?

2. Is the subsidiary company linked to the parent company in Germany?

☐ Yes ☐ No ☐ Don't Know

If yes, how do you know this (annual reports, centralised company policies): please state

2a. Are there any documentary evidence of financial transactions between the subsidiary and parent company e.g. profits from the subsidiary are transferred to the parent company?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide the evidence (reports, financial statements etc)

3. What products do they sell?

☐ Pesticides ☐ Seeds ☐ Fertilisers

3a. If they sell pesticides, what are they?

BRAND NAME	ACTIVE INGREDIENTS
Herbicides	
Basagran®	Bentazon
Banvel®	Dicamba
Distinct®	
Clarity®	
Frontier®	Dimethenamid
Guardsman®	Dimethenamid-p
Outlook®	
Pursuit®	Imidazolinones
Scepter®	
Beyond®	
Clearsol®	
Onduty®	
Sweeper®	
Novall®	Pendimethalin
Stomp®	
Prowl®	
Pico®	Picolinafen
Facet®	Quinclorac
Heat®	Saflufenacil
	(Kixor™)
Bialthlon®	Tritosulfuron
Tooler®	
Fungicides	
Bellis®	Boscalid
Cantus®	
Pristine®	
Tracker®	
Endura®	
Signum®	
Collis®	

Acrobat®	Dimethomorph
Forum®	
Swing ® Gold	Dimoxsystrobin
Pictor®	
Cantus® Gold	
Delan®	Dithianon
Opus®	Epoxiconazole
Opus Team®	
Duett®	
Opal®	
Corbel® [1)]	Fenpropimorph
Volley®	
Enervin®	Initium
Zampro®	
Orvego®	
Allegro®	Kresoxim-methyl
Juwel®	
Juwel® Top	
Stroby®	

Pix®	Mepiquat Chloride / Mepiquat Pentaborate
Terpal®	
Pentia®	
Caramba®	Metconazole
Twinline®	
Polyram®	Metiram
Flexity®	Metrafenone
Vivando®	
Arashi®	Orysastrobin
Regalis®	Prohexadione-Calcium
Medax-Top®	
Apogee®	
Sportak®	Prochloraz
Opera®	Pyraclostrobin
Cabrio®	(F 500®)
Headline®	
Comet®	
Calixin®	Tridemorph
Alios®	Triticonazole

Insecticides	
Fastac®	Alphacypermethrin
Mageos®	
Fendona®	
Phantom®	Chlorfenapyr
Mythic®	
Stealth®	
Chu-Jin®	
Cascade®	Flufenoxuron
Tenopa®	
Regent®	Fipronil
Prince®	
Termidor®	
Cosmos®	
Standak®	
Goliath®	
Faslane®	Hydramethylnon
Siege®	
Amdro®	
Subterfuge®	
Alverde®	Metaflumizone
RAK	Pheromones
Breeze	
Nomolt®	Teflubenzuron
Nomax®	
Abate®	Temephos

3.a1. Are any of these pesticides banned in your country?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

> Are these pesticides banned in other countries?

☐ Yes ☐ No ☐ Don't Know

If yes, which ones _____

> Do the labels on the products sold come in the local language?

☐ Yes ☐ No

> Do the safety data sheet or information sheet that is provided with the products come in the local language?

☐ Yes ☐ No

3b. If they sell seeds, what are they?

Corn
Cotton
Peanuts
Rice
Soybeans
Sunflower
Wheat
Barley
Sorghum

4. Has BASF or its subsidiary been involved in any training on the use/handling of pesticides?

☐ Yes ☐ No

If yes,

> to whom -> farmers, retailers, plantation owners, plantation workers?

> when was this?

> how long was it?

> were there any materials provided?

☐ Yes ☐ No

If yes, what were they? >> Leaflets >> Brochures >> Modules etc

5. Does the subsidiary have a health and safety policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details

6. Do they have a human rights or corporate social responsibility policy?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

7. Do they have a policy on environmental protection?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (report, website etc)

8. Are you aware if there are existing reporting mechanisms for incidences or emergencies?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details (where to do this, how is it done)

9. Have you seen any people from BASF Headquarters or its subsidiary visit the plantations/farms/retailers?

☐ Yes ☐ No ☐ Don't Know

If yes, please provide details – when, who, reason for visit (training, fact finding missions, inspections)

> How did you know they were from the headquarters?

Questionnaire 6: Children's Exposure to Pesticides

Dear community member,

PANAP is documenting first-hand accounts about children's exposure to pesticides and how this exposure affects them. The information we gather will directly inform our regional campaign to limit the exposure of children and their communities to highly hazardous pesticides (most of which are still in use throughout Asia despite international calls to ban these toxic chemicals).

The questionnaire has three parts: (1) exposure to pesticides as well as their use and management by the school/agricultural community; (2) Child/individual interview; and (3) community health concerns.

Your responses will be treated with utmost confidentiality. If you wish to remain anonymous or submit a pseudonym, you may do so.

Thank you for your time and cooperation.

Very truly yours,

Pesticides Action Network - Asia and the Pacific (PAN AP)

1. Name (Surname, First Name, Middle Initial OR "Anonymous")
2. Gender: Male Female Prefer to be unidentified
3. School and Position (if affiliated to a community school):

Demographics (General information about the school/area and its use of pesticides.)

4. Where is the school located? (Please provide GPS coordinates if possible or a Google map)

   Village
   Province
   Country
5. How many students are in the school?
6. How old are the children? (Please give the range.)
7. Are there farms, plantations or pesticide manufacturing sites near the school?
   ☐ Yes ☐ No

7.a. If yes, how far in km?

8. Are children exposed to pesticides? Yes No

8.a. If yes, how are children exposed to pesticides?

Aerial Spraying
Lawn pesticides
Vector control
Pesticides used at home
From farms near by
From plantations near by
From pesticide factories nearby
From household member/s handling pesticides
Other (please specify)

9. Is there a notice/alert on when pesticides are sprayed?
☐ Yes ☐ No

9.a. If yes, in what form is the advisory?

Letter from the school board
Verbal information
Signages/Sign boards
Other (Please specify)

10. What were the pesticides used? (Please give product identity and use)

a. What is the product or trade name?	b. What is the active ingredient	c. What is the concentration	d. What is the company name (manufacturer)?	e. What equipment do you use to apply it?	f. How often do you use it?	g. What crop (or animal) is it used to treat?	h. What is the target pest / weed/ disease?	i. When was the last time you used it?
				Open ended		Open ended	Open ended	Open ended

If you are able to interview children, please include their responses below.
Please verify:

i) Consent of the child/ren interviewed: (attach photo of waiver form)

ii) Parental/Guardian's Consent: (attach photo of waiver form)

11. Name/s of the child/ren being interviewed (or Anonymous):

12. Gender of the child/ren being interviewed:
☐ Male ☐ Female ☐ Wants to Remain Unidentified

13. Age of the child/ren being interviewed:

14. Do the children know when pesticides are being sprayed?
☐ Yes ☐ No

14.a. If yes, how do they know pesticides are being sprayed?

See the spraying being done
Mix or spray the pesticide
Smell the spray
Informed by the adults
Other (Please describe)

14.b. What did the children do during pesticide spraying?

Nothing special
Stay indoors
Avoid the sprayed fields
Other (Please describe)

14.c. Have they ever felt the pesticide spray (on their skin) or smelt it?

14.d. Have they ever felt ill after pesticide spraying?
☐ Yes ☐ No

14.e. If yes, how often?

Once or twice
Sometimes
Usually
Don't remember

15. The last time they were unwell after pesticide spraying, how did they feel?

Dizziness
Vomiting
Headache
Sleeplessness
Skin rashes
Diarrhea
Irregular heartbeat
Increased salivation and perspiration
Fatigue/Muscle weakness
Tremors
Seizures
Confusion
Aggressiveness

Hyper excitation
Uncoordination
Breathing problems
Other (Please specify)

15.a. Did they see a doctor?
☐ Yes ☐ No

16. Has the child reported any health problems that may be attributed to pesticide exposure?
☐ Yes ☐ No

16.a. If yes, what are these health problems?

Asthma
Allergies/Hypersensitivity Reaction
Altered or uncontrollable mood and general behavior
Reduced speed of response to stimuli
Reduced visual ability
Reduced motor skills
Loss of coordination
Memory loss
Disruption of menstrual cycle
Cancer (Leukemia, brain tumor, etc.)
Liver disease
Kidney disease
Birth defects (missing limbs, small heart)

17. Are there other symptoms/health problems the child/ren experience which you think are due to pesticide exposure?
☐ Yes ☐ No

17.a. If yes, please specify or describe in detail.

18. If children are exposed to pesticides at home, how are they exposed?

Buy or sell pesticides
(Image: © FAO and ILO 2015)

Apply pesticides by hand
(Image: © FAO and ILO 2015)

Prepare and/or mix pesticides
(Image: © FAO and ILO 2015)

Spray pesticides in the farm
(Image: © FAO and ILO 2015)

Work in fields that are sprayed
with pesticides
(Image: © FAO and ILO 2015)

Clean containers or equipment
used to apply pesticides
(Image: © FAO and ILO 2015)

Wash clothes that were used in pesticide
preparation/application or in pesticide
sprayed farms
(Image: © FAO and ILO 2015)

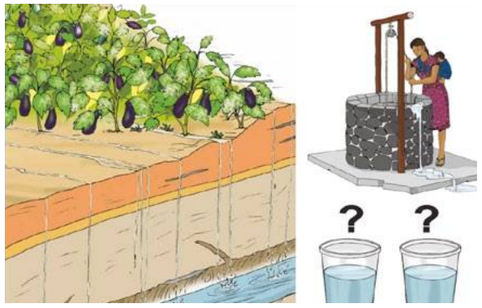
Drinking or eating from
reused pesticide containers
(Image: © FAO and ILO 2015)

Reuse of pesticide containers for food
and water storage
(Image: © FAO and ILO 2015)

Play in yards/fields/gardens that
have been sprayed or are reached by
pesticide drift
(Image: © FAO and ILO 2015)

Play with pesticide containers
(Image: © FAO and ILO 2015)

od/water
(Image: © FAO and ILO 2015)



Exposure while still in the womb
(Image: © FAO and ILO 2015)

18a. If the mode of pesticide exposure is not in the above choices, please specify.

Community (There might be symptoms/health concerns that may be observed in the community that was not captured by the above items. Please indicate them.)

19. Are the following concerns/issues observed in the community)?

Autism
ADHD
Deaths due to accidental pesticide poisoning
Sterility (inability to bear children)
Low birth weight of babies
Boys born with malformed penis (opening for urine abnormally located)
Boys with undescended testis
Malformed babies, e.g. with missing limbs, etc.
Increased incidence of respiratory diseases
Increased incidence of skin diseases
Increased incidence of cancer
Increased incidence of kidney/liver disease

19a. If there are other concerns observed in the community which you think may be caused by pesticide exposure, please specify.

20. Please specify below if you would like to keep your community name confidential.

Please keep the community name confidential

You may divulge the community identity

21. If you are willing to be contacted for a follow up discussion with a PANAP campaign staff, please fill out your contact details below. Thank you!

Name:

Mobile/Email:

Country:

Glossary

Acute toxicity: when the poisonous effects of the pesticide are felt right away. Another name for acute toxicity is acute poisoning.

In a technical definition, in the Globally Harmonized System of Classification and Labelling of Chemicals, it means adverse effects occurring following swallowing or skin contact of a one dose of a substance, or multiple doses given within 24 hours, or an inhaling for 4 hours (UN, 2007).

Advertising: pesticide advertising is a communication aimed at promoting or selling a product or range of products, which is targeted to those with an interest in the storage, sale, supply or use of pesticides such as wholesalers, retailers and farmers, or which is addressed to the general public. The Code defines an advertisement as "... the promotion of the sale and use of pesticides by printed and electronic media, signs, displays gift demonstration and word of mouth" (FAO, 2003). Advertising includes internet-based material, 'advertorials', sponsorships (e.g. of conferences or sales meetings), and offering free gifts.

Agroecology: is a whole-systems approach to agriculture and food systems development based on traditional knowledge, alternative agriculture, and local food system experiences (agroecology.org, 2008). An Agroecological System is based on the knowledge of agroecology stemming from the interaction between scientific and traditional knowledge, and aimed at reducing the negative impacts of the conventional systems through productive diversification and the use of ecologically-friendly technologies" (IAASTD, 2008).

Carcinogen: a chemical substance or a mixture of chemical substances that induce cancer or increase its incidence (UN, 2007).

Community Pesticide Action Monitoring: ordinary people involved in collecting information on how pesticides are used and the problems they cause. To do this, the people work together to observe and record data about pesticides and the danger they cause to people and the environment- as well as collecting data on alternatives.

Endocrine disruptor: Endocrine disrupting pesticides alter the normal functioning of the body's hormonal system and can cause a wide variety of adverse health outcomes—including effects on the reproductive, immune system and nervous system and cancer.

Final regulatory action: an action taken by a Party to the Rotterdam Convention, that does not require subsequent regulatory action by that Party, the purpose of which is to ban or severely restrict a chemical (UNEP & FAO, 2005);

Highly hazardous pesticides: are those that have high potential to cause illness, injury or death to humans and animals or damage to the environment. These include pesticides that are acutely toxic or for which there is evidence of carcinogenicity, mutagenicity, reproductive toxicity, immunotoxicity, endocrine disruption, neurological and developmental toxicity.

Immunotoxin: a chemical that can cause the immune system with malfunction with exposure. Immunotoxic pesticides affect the immune system of humans and animals making them more susceptible to disease and cancer by, for example, altering the development of the thymus and spleen, reducing the number of white blood cells and lymphocytes and impairing their ability to respond to and kill bacteria, viruses and cancer cells.

Integrated Pest Management: "the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment. IPM emphasises the growth of a healthy crop with the least possible disruption to agroecosystems and encourages natural pest control mechanisms" (FAO, 2003)

Mutagen: in the GHS, is a chemical that increases mutations in cells and/or organisms. A mutation is 'a permanent change in the amount or structure of the genetic material in a cell'. Germ cell mutagenicity refers to chemicals may cause mutations in the germ cells of humans that can be passed on to offspring (UN, 2007).

Neurotoxin: a chemical that has adverse effects on the nervous system.

Reproductive toxin a chemical that causes adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring.

Spray drift: Spray moving from the target area to other areas.

Persistent Organic Pollutants: are chemicals which possess toxic properties, resist degradation, bioaccumulate and are transported, through air, water and migratory species, across international boundaries and deposited far from their place of release, where they accumulate in terrestrial and aquatic ecosystems (UNEP, 2001)

Precautionary principle (Principle 15 of the Rio Declaration): Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

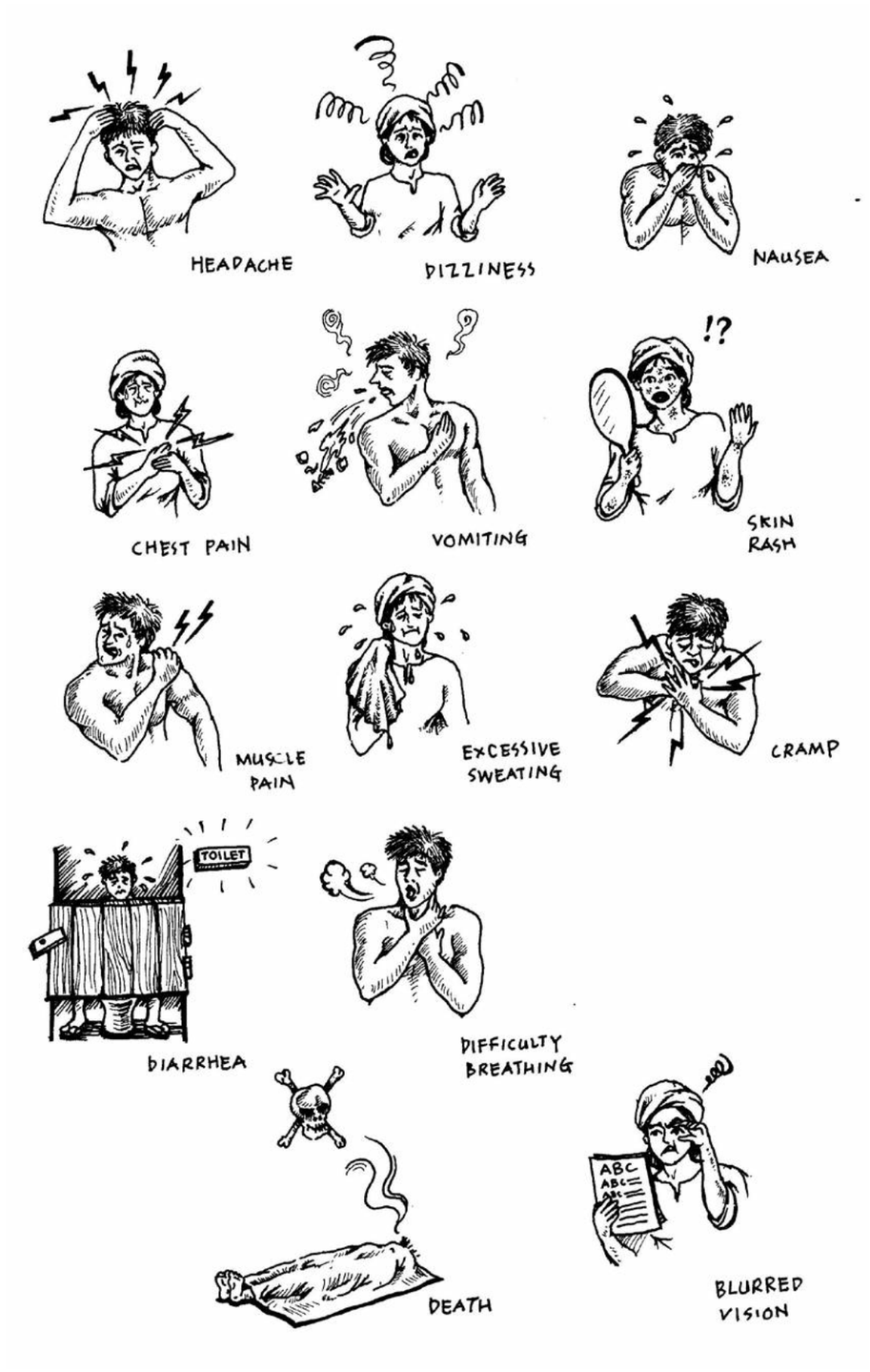
Product stewardship: the responsible and ethical management of a pesticide product from its discovery through to its ultimate use and beyond (FAO, 2003)

ANNEX 1: Some health effects, signs and symptoms

Acute toxicity occurs when the poisonous effects of the pesticide are felt right away. Another name for acute toxicity is acute poisoning.

Chronic toxicity occurs when the poisonous effects of pesticides on your health are delayed. That is, they take a long time to develop. These long-term effects may not occur until after months or years of exposure to the pesticide.

Some Acute Health Effects include:



Symptoms:

Below are some descriptions of symptoms that may be caused by pesticides. Guide only- local descriptions and explanations will be necessary.

GENERAL	
Weakness	Self explanatory
Easily fatigued	To easily become exhausted or weary
Muscle pains	Self explanatory
Weight loss	Self explanatory
Fever	Increase in body temperature to levels above normal
Chills	a cold feeling in the body accompanied by shivering
Loss of appetite	Lack of or no interest in eating
Change in taste	Alteration in taste sensation
Muscle pains	Self explanatory
EARS, EYES, NOSE THROAT (EENT)	
Eye pain	Self explanatory
Eye redness	Self explanatory
Eye tearing	presence of tears in the eyes but not actually crying
Eye itchiness	Self explanatory
Blurring of vision	Self explanatory
Photophobia	Excessive sensitivity to light and aversion to sunlight or well-lit places. Experience of discomfort or pain to the eyes due to light exposure.
Earache	Self explanatory
Deafness, hearing impairment	Full or partial loss of hearing
Tinnitus	The perception of sound in the ear in the absence of corresponding external sound(s). This could be a ringing or buzzing in the ears.

Nasal secretion	Fluid (watery or mucous) coming out of the nose
Nasal congestion	Blocked nose
Nose bleed	Self explanatory
Hoarseness	a voice that is croaky and unable to produce a full range of sound
Neck mass	Self explanatory
Others	Self explanatory
NEUROLOGIC	
Confusion	loss of orientation (ability to place oneself correctly in the world by time, location, and personal identity) and often memory (ability to correctly recall previous events or learn new material).
Dizziness	Feeling unable to balance. Lightheaded, floating, woozy, giddy, confused, or fuzzy.
Headache	Self explanatory
Vertigo	the sensation of spinning or swaying while the body is stationary with respect to the earth or surroundings
Paresthesias	is a sensation of tingling, pricking, or numbness of a person's skin with no apparent long-term physical effect, more generally known as the feeling of pins and needles or of a limb being "asleep"
Fasciculations (local)	This is a muscle twitch: is a small, local, involuntary muscle contraction (twitching) visible under the skin
Fasciculations (general)	As above, but in many areas the body
Convulsions	Also called 'seizures' or 'fits'. Abnormal, intense and involuntary contractions or series of contractions of the muscles resulting to visible shaking of the body or parts of the body.
Loss of consciousness	Self explanatory

Paralysis	Complete loss of muscle function for one or more muscle groups. Paralysis can cause loss of feeling in the affected area.
Ataxia	Gross incoordination of muscle movements.
GASTROINTESTINAL SYSTEM	
Abdominal pain	Colicky, gnawing, diffuse pain or tenderness
Nausea	the sensation of unease and discomfort in the stomach with an urge to vomit
Vomiting	Also called throwing up, puking or emesis
Abnormal masses	Self-explanatory
Salivation	Self explanatory
Throat irritation	Self explanatory
Heartburn	Painful or burning sensation just below the breastbone caused by regurgitation of gastric acid
Dyspepsia	Sensation of Indigestion, burping, diffuse or colicky pain; upset stomach
Difficulty swallowing	Self explanatory
Hematemesis	the vomiting of blood
Perforation of the bowel	penetration of the wall of the bowel, resulting in intestinal contents going into the abdominal cavity
RESPIRATORY SYSTEM	
Coughing	Self explanatory
Breathlessness	In this context, a sensation of "catching your breath" as what you feel after running fast)
Noisy breathing	Self explanatory
Difficulty in breathing	Refers more to labored breathing, usually due to obstruction (as in asthmatic attack)
Pain on deep breathing	Self explanatory

Cyanosis	blue coloration of the skin and mucous membranes
Pulmonary secretions	Secretions of the lungs (usually phlegm or mucus)
Blood in the sputum	Blood in the sputum (phlegm or mucus from respiratory tract), which may be coughed up and spat out
CARDIOVASCULAR SYSTEM	
Chest pain	Self explanatory
Palpitations	a sudden awareness of the beating of the heart, usually with an increase in frequency or force, with or without irregularity in rhythm
Exertional dyspnea	Difficulty breathing or painful breathing that occurs during physical activity
Arrhythmia	irregular heart beat
Tachycardia	Rapid beating of the heart
Pillow orthopnea	Difficulty breathing when lying flat (measured by the number of pillows needed to prop up a patient to ease breathing).
Calf pains	Self explanatory
Syncope	Also called fainting- is a sudden, and generally momentary, loss of consciousness, or blacking out.
INTEGUMENT/SKIN	
Skin discolouration	Self explanatory
Easy bruising	Self explanatory
Skin rashes	is a change of the skin which affects its colour (usually reddish), appearance, or texture. A rash may be localized in one part of the body, or affect all the skin.
Skin itchiness	Self explanatory
Blisters	a small pocket of fluid within the upper layers of the skin.
Skin lesions	areas of discolored, abnormal or diseased skin tissue.
Alopecia	loss of hair from the head or body, sometimes to the extent of baldness
Pallor	A pale color of the skin
Sweating	Self explanatory
Jaundice	(also known as 'icterus'), is yellowish discoloration of the skin, sclerae (whites of the eyes) and mucous membranes
GENITO-URINARY SYSTEM	
Blood loss in the urine	Self explanatory
Pain on urination	Self explanatory
Increased urination	Self explanatory
Decreased urination	Self explanatory
OBSTETRICAL AND GYNAECOLOGICAL	
Miscarriages	(Also called *spontaneous abortion*) is the end of a pregnancy at a stage where the prenate (embryo/fetus) cannot survive, generally before 20 weeks of gestation
Abnormal bleeding	Bleeding in post-menopausal women, or abnormal bleeding (e.g. bleeding between periods, or very heavy bleeding) in women of reproductive age
Amenorrhea	The absence of menstrual bleeding in a woman of reproductive age. There are two types: primary amenorrhea (menses never starting) and secondary amenorrhea (menses ceasing)
Menstrual disturbances	Self explanatory
Abnormal vaginal discharges	Refers to the quantity, colour, or odour
Source: Quijano (2008). Some descriptions from wikipedia.org.	

ANNEX 2:
PAN International Highly Hazardous Pesticide List

http://pan-international.org/wp-content/uploads/PAN_HHP_List.pdf

ANNEX 3:
Pesticide Formulation Types

This annex contains a list of common pesticide formulation types.

Emulsifiable concentrates (EC or E)

The active ingredient is mixed with an oil base (often derived from petroleum) forming an emulsion which is diluted with water for application.

Wettable powders (WP or W)

Wettable powder formulations are made by combining the active ingredient with a fine powder. They look like dusts, but they are made to mix with water.

Dustable Powders, or Dusts (D)

Made by adding the active ingredients to a fine, inert powder or talc; generally used dry. A dustable powder can be ‘dusted’ onto the crop.

Water Soluble powders (SP)

Made of an active ingredient in powder form; dissolves in water.

Ultra-Low Volume (ULV)

A liquid pesticide sprayed through ultra-low-volume equipment.

Tablet (TB)

Pesticide in solid form

Granules/ Granular (GR)

Granular formulations are made by adding the active ingredient to coarse particles (granules) of inert material like fired clay particles.

Aerosols (A)

These are very low-concentrate solutions, Sold in aerosol cans, these are usually applied as a fine spray or mist. They are generally sold in aerosol cans [delete: and are a very expensive source of pesticide.]

Baits (B)

A bait formulation is made by adding the active ingredient to an edible or attractive substance. Baits are often used to control slugs, snails, ground-dwelling insects, and rodents.

Others:

- **Solutions (S):** These formulations are premixed, ready to use (often used in household pest products).]
- **Flowables (F or L):** A flowable, or liquid, can be mixed with water to form a suspension in a spray tank.
- Fogging concentrates
- Mosquito coils

Source, University of Arizona (1998)

ANNEX 4: Pesticide Application Methods

Ground Sprayers

Backpack Sprayer (or knapsack sprayer) has a spray tank that is worn on the back. The user pumps the sprayer handle to build up pressure in the tank and applies the product through a small hose / single nozzle assembly. The usual tank capacity is about 15 litres (CPMRA, 2006).

Vehicle mounted or boom sprayers: have multiple nozzles spaced over the length of the boom. They can be mounted on tractors are generally used to spray liquid pesticides over large areas.

Aerosol can: the pesticide is sprayed directly from a hand-held can, e.g. to control mosquitoes.

Hand-held Sprayers: Also called hand-wand sprayers. They have a long metal extension that ends in a nozzle.

Airblast Sprayers: have nozzles placed in a very high speed air stream produced by a fan. The air stream propels the very fine spray droplets to the target.

Applying solids

Granular Spreader: these are for applying pesticide granules over an entire field surface or in bands that correspond to crop rows.

Dust Applicators: Equipment used to apply products as a dust range from simple shaking devices to power dusters. Dusts may be applied indoors or outdoors.

Aerial Sprayers

Fixed wing aircraft and helicopters are used to apply pesticides either as a solid or liquid.

Fumigation: A fumigant is a pesticide in a gaseous state enough to kill the pests. Fumigants can be applied in the soil (soil fumigation) or through air in structures (space fumigation).

Fogging: Outdoor foggers or space sprayers can be mounted on a truck or aircraft to form a cloud of pesticide. It is often used to control mosquitoes and flies. Fogging equipment may also be used indoors, such as in greenhouses, warehouses and farm buildings.

Chemigation (including drip irrigation)

Chemigation is the application of chemicals, such as pesticides and fertilizers, to crops through an irrigation system (e.g., sprinkler, flood, furrow, drip or trickle) by mixing them with the irrigation water.

Source: Canada Pest Management Regulatory Agency (PMRA, 2006).

While the above are conventional methods, a range of other ways are also used to apply pesticides (although not recommended):

- Hand
- Bucket and brush
- Broom
- Plants or grasses

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