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International SAICM Implementation Project (ISIP)

In 2010, in an effort to demonstrate SAICM implementation via IPEN Participating Organizations, IPEN launched an International SAICM Implementation Project, also known as ISIP. ISIP aims to mobilize resources for initial enabling activities pertaining to national priorities, in keeping with the work areas set out in the strategic objectives of section IV of the SAICM Overarching Policy Strategy.

In particular, the ISIP supports the Governance objective of SAICM's Overarching Policy Strategy paragraph 26, which calls for enhanced "cooperation on the sound management of chemicals between Governments, the private sector and civil society at the national, regional and global levels."

In addition, ISIP builds on the 2008-2009 Global SAICM Outreach Campaign to raise awareness about SAICM and strengthen collaboration among the public interest, health and labor sectors.

ISIP Objectives

ISIP's four objectives include:
• Promoting the need for sound chemicals management
• Advancing National SAICM Implementation
• Promoting global SAICM implementation by global civil society
• Building capacity among NGOs developing countries and countries with economies in transition

Title of activity: Participatory Monitoring of banned household pesticides (Dichlorvos and Chlorpyrifos) by Consumers Group in Solo City and Boyolali District
NGO: Gita Pertiwi
Country: Indonesia
Date: August 2012

Elements of SAICM Covered:

Promoting full and effective implementation of the Code and its guidelines (23); Addressing problem areas where policy or practice falls short of the Code guidelines (23); Contributing to training in IPM and safe occupational practices in support of improved implementation of the Code (29)

Description of the FAO Code of Conduct:

Implementation of the FAO Code in Indonesia is translated into various national regulations issued by Ministry of Agriculture in the form of Permentan regulation about the term and

procedures of pesticide registration. Regulation issued by Ministry of Agriculture is part of regulation from pesticide policy for production licensing and types of active ingredients may be used. This ministerial- level regulation continues to change, at least once for 3 -4 years. The other supporting regulation is regulation of various active ingredients which categorized as banned, restricted and general. All types of pesticide in POPs category have been banned for distribution and use in Indonesia. Nowadays in Indonesia, there are 38 types of banned pesticides. Some of them include 9 types of POPs pesticides, endosulfan, and 2 types of household pesticides (chlorpyrifos and diclorvos).

In Indonesia, there are 5 active ingredients into the category of restricted pesticides, and one of them is paraquat. Paraquat is an active ingredient which continues to be produced and traded in Indonesia. From monitoring done by Gita Pertiwi on paraquat pesticides, it was learned that from year to year paraquat continues to have rapid growth in the number of new trademarks and amount traded. These types of pesticides are more widely used for herbicides. This is in line with the growth of new area of oil palm plantations in Indonesia. The rapid growth industry of pesticides occurs not only in agriculture and plantations, but also in the household. Pesticide use by household consumers increases because of the evolution of various diseases due to environmental pollution. Indonesia, a tropical area, is an endemic area of mosquitoes that cause malaria and dengue fever. Both mosquitoes cause serious illness that is repeated throughout the year. For this reason the using of household pesticides has increased. In addition, climate change is triggering the increase of malaria and dengue fever attacks, which in turn also encourages the use of pesticides. Indeed, the use of pesticides at this time is not only to control mosquitoes, but also to control all insects in household, garden and home care.

Data from the Poisoning Information Centre, Agency of Drug and Food Controller, and Health Department states that poisoning cases in households tend to increase from year to year. There were 516 cases in 2009, 635 cases in 2010 and 181 cases in 2011. From those cases, 65%-70% of the victims are women. Cases of pesticide poisoning were highest in households (ranked no 1) and offices, then public places. This situation is relevant to the situation in which women as mothers and domestic workers are more susceptible to toxins in their daily environments.

Currently there are 71 active ingredients that are allowed to used for household pesticides. Diclorvos (DDVP) and chlorpyrifos are 2 of them. In 2007, through Permentan no. 01/2007, 2 types of these pesticides were banned from use as household pesticides, hygiene and sanitation. But strangely, from studying documents of lists of pesticides issued by the Licensing and Investment Center, Secretary of Indonesian Agriculture Ministry about household pesticide and diseases vector control to humans in 2008, 2010 and 2011, we learned that both types of pesticides were still allowed to circulate. There was even one type of pesticide that obtained fixed permission in 2011 (which means that it may circulate and be traded until 2016). Both of these insecticides (Diclorvos and Chlorpyrivos) are highly toxic organophospate pesticides. Several countries have started banning their use, but in Indonesia it is still traded secretly. In 2004, there was a withdrawal of a household pesticide from market (trademark : HIT) because it contains both of these ingredients. But in fact, the Pesticide Commission secretly still allowed some trademarks that use these ingredients to be circulated and used by household consumers. Based on this situation, participatory monitoring was conducted with consumer groups in Solo and Boyolali. Beside aiming to provide education for consumers, the activity also aimed to proposed a ban of pesticides at the national level.

Description of existing national pesticide legislation:

Pesticide regulation in Indonesia is governed by the level of minister (Ministry of Agriculture) and issued every 4 years. Regulation on how to register new pesticides is Minister of Agriculture Decree no. 24/tahun 2011. This regulation is equipped with an attachment of banned pesticides, restricted pesticides, and permission procedure before trading. Diclorvos and Chlorpyrifos were banned in previous regulations (2004 and 2007), and then in 2011 both types of pesticides were still banned for household use, but still allowed in agriculture and plantation pesticide. However, the Pesticide Commission still allows 7 trademarks (2011) and 9 trademarks (2010) using 2 of these chemicals in their products (although in the document, some pesticides are listed as vector-diseases controller in humans). In 2011, there are 4 trademarks of Dichlorvos and 46 trademarks of Chlorpyrifos that are allowed to trade. Meanwhile in 2010, there are 4 trademarks of Dichlorvos pesticide and 46 trademarks of Chlorpyrifos. Permission is given for agricultural and plantation area, but in fact, this condition is hard to maintain. Farmers and consumers are free to use it in any area, including in the household. This is because ecologically, there is no separation between household environment, backyard, and farming in rural area.

Description of conditions of work:

This research tries to determine if there is still circulation and use of household pesticides – dichlorvos and chlorpyrifos - in urban and rural areas. City of Solo was chosen as research focus in city area, and Klaten and Boyolali as a research base in rural areas. The three sites were chosen because they are urban and agricultural areas (rice and horticulture) which have the potential to use pesticides. Besides, the three regions are endemic areas of dengue fever that occurs most of the year.

Description of highly hazardous pesticides formulations sold and/or used in your country:

Several types of hazardous pesticides are still traded in Indonesia. There are 7 types,including restricted pesticides. The seven substances are paraquat diclorida, aluminum phosphide, magnesium phosphide, sufuril fluoride, methyl bromide, zinc phosphide and dikuat bromide. In 2011, there were 101 trademarks that are allowed to use the 7 substances, from the 2247 total trademarks permitted by the Pesticide Commision. Each trademark has a marketing strategy that follows ethics code of trade, but many of them use excessive promotion. As found by Gita Pertiwi in research of restricted pesticides in Wonosobo regency, Central Java, some distributors deliberately give gifts by lottery, such as a pilgrimage to Mekkah, cars, electronic items, etc. According to the law, users of restricted pesticide are only farmers who have received training and a certificate from the Agriculture Department. But in fact, it is almost hard to find farmers who use restricted pesticides (especially paraquat) that had been trainned and have security certificates. It is also supported by a brief survey of Gita Pertiwi in 2006, that 11 of 12 paraquat stores didn't sell safety equipment (Personal Protection Equipment/PPE) according to the rules.

Permentan No 24/Permetan/SR.140/4/2011 about term and procedure of pesticide registration, regulates the dangerous pesticides, namely (i)banned pesticide, and (ii) pesticide that can be registered. Banned pesticide are : (a) formulation of pesticides include to class 1a, which means very dangerous, and class 1b, which means dangerous according to WHO classification as listed on ANNEX XII, and (b) active ingredients and / or additional ingredients that have carcinogenic, teratogenic, or mutagenic effect (category I and IIa based on classification of *International Agency for Research on Cancer),* and based on FAO, WHO, US – EPA, and other

provisions. There are 38 pesticides that are banned in agriculture and plantations, and 2 pesticides (Diclorvos dan Chlorpyrifos) that are banned to use in household pesticides.

Based on the official book “Household pesticides and diseases vector control for human,” which was published by the Directorate of Fertilizers and Pesticides, Director General of Agriculture Infrastructure and Facilities, Agriculture Ministry, Republic of Indonesia, in 2010 and 2011, the following are the list of household pesticides that contain dichlorvos and chlorpyrifos:

Year of 2010				**Year of 2011**			
Dichlorvos		**Chlorpyrifos**		**Dichlorvos**		**Chlorpyrifos**	
trademark	**Production**	**trademark**	**Production**	**trademark**	**Production**	**trademark**	**Production**
Agrobest 250 EC	PT Global Agrotech	Akofos 250 EC	PT Kurongkor Utama	Agropbest 250 EC	PT Global Agrotech	Mosquiban 480EC	PT Petrokimia Kayaku
Divostar 250 EC	PT Nugroho Pratama Chemica Asia	Masquiban 480 EC	PT Petrokimia Kayaku	Bestacid 300 EC	PT Biotek Sarana Industri		
Nuvet 200 EC	PT Bumi Makmur Lestari Utama	Lorsban 480 EC	Dow Agro Sciences	Greendivos 250 EC			
Provap 200 EC	PT Megasari Makmur	Empire 200 EC	Dow Agro Sciences	Nuvet 200 EC	PT Bumi Makmur Lestari Utama		
Bestacid	PT Biotek Sarana Industri	Lorsban 150 ULV	Dow Agro Sciences	Provap 200 EC	PT Globina Karya		
				Pyrinex 250 EC	PT Kurongkor Utama		

In addition, some types of banned pesticides are still traded in the market. Endosulfan has been banned since 2007, but was still traded until 2009, especially in the area of oil palm plantations in North Sumatra. Even sales of pesticides that claim to use the name of DDT are still easy to find in many agricultural areas.

Dichlorvos is an insecticide which is colorless liquid, solid. It has a sweet aroma and mixes easily with water. Dichlorvos is used in pest control; it is diluted with other chemicals and used as a spray. It can also be included into plastic that slowly releases the chemicals. Dichlorvos is used to control pest insects in food storage areas, green house and barns, and to control insects on cattle. It is not commonly used on outdoor plants. Dichlorvos is sometimes used to control pest insects in the workplace and at home. Veterinarians use it to control parasites on pets.

Dichlorvos can affect the nervous system, where it can cause nausea and vomiting, restlessness, sweating and muscle tremor at high levels. Dichlorvos has been found in at least 3 from 1.430 sites priority list, identified by National Environmental Protection Agency (EPA).

The main effect of dichlorvos is to the nervous system. Study of the people who are exposed to dichlorvos through breathing air in the workplace containing low levels of dichlorvos has not shown any harmful effects. Research to animals show that a high level of breathing can cause nausea and vomiting, restlessness, sweating and muscle tremor. While in very large doses, it can cause coma, inability to breath, and death. Research to animals also shows the effects to the nervous system when the animal drinks water or eats food containing dichlorvos.

Chlorpyrifos is organophospate, with the potencial for both acute toxicity in larger quantities and neurological effects to fetuses and children even in small amounts. For accute effects, EPA classified chlorphyrifos as class II: quite poisonous. Recent research indicates that children exposed to chlorpyrifos in the uterus have an increased risk of delays in mental and motor development at 3 years old and an increase in pervasive developmental disorders such as ADHD.

Description of problem areas where practice or policy is not consistent with Code guidelines:

1. Pesticides diclorvos and chlorpyrifos have been banned as household pesticides, but are still allowed to circulate in Indonesia. The official book "Household pesticide and diseases vector controller to human," 2011, found 11 household pesticides containing dichlorvos and chlorpyrifos. This contrasts with the regulation of the Ministerial Agriculture decree No 24 /Permentan/SR.140/4/2011 that categorizes dichlorvos and chlorpyrifos as dangerous pesticides with restrictions on import, production and circulation in Indonesia.
2. Dichlorvos and chlorpyrifos are still allowed to circulate and be used for agriculture and plantation pesticide. The official book "Pesticide for agriculture and plantation," 2011, found 66 pesticides containing dichlorvos and chlorpyrifos that can be allowed to circulate and be used for agriculture and plantation.

<u>Project Outcomes:</u>

Description of the activity conducted to promote the FAO Code of Conduct:

The following are the findings of monitoring conducted participatory by the consumer groups:

1. **The behaviour of pesticide consumers in rural and urban areas :**
    - Of the 100 people (66% female) of the respondents interviewed, 64% of them work in the private sector, with an average income of less than Rp. 500.000 per month.
    - There are 83% respondents who spend between Rp. 25.000 – Rp. 100.000 per month to buy pesticide. Rural respondents spend more money because they have to buy agricultural pesticides and household pesticide. This indicates the dependence of the community on pesticides.
    - There are 97% respondents who use pesticide. Insecticide is most widely used pesticide (88%) to evict cockroaches, mosquitoes, ants, flies (household) and white flea pest, insect, flies (agriculture and plantation). These respondents on average use 3 types of household pesticides (anti mosquito, anti flies and anti ant/cockroaches).
    - The most widely used insecticides is anti-mosquito (91%). The most widely used anti-mosquito: solid (67%) and mat (29%). This is quite concerning, because solid is the form that causes the most poisoning risk such as coughing, shortness of breath and fire. Although solid form is still an option, in urban communities

people began to prefer mat form, for reasons of practicality and to not disturb breathing. Though, mat form is also dangerous, because waste of mat is usually disposed of in any place and widely used as child's toys.

- There are 67% of respondents that buy pesticides in the shop close to home. It shows that pesticides are easily found, both in big cities and remote rural areas. Almost all stalls / kiosks in rural areas always provide pesticides, especially anti-mosquito. It is also found in vegetable and grocery traders, who make pesticide one of the principal goods sold because it is always needed by the buyers/ consumers.

2. Diclorvos and Chlorpyrifos

- A study document of household pesticides and diseases vector control to humans in 2010 and 2011, which was published by Directorate of Fertilizers and Pesticides, Director General of Agriculture Infrastructure and Facilities, Agriculture Ministry, Indonesian Republic, finds the following data:

Year / Kind of pesticides	Diclorvos	Chlorpyrifos	Total
2010	5	5	10
2011	6	1	7

- From the result of interviews with 100 respondents, we found there were only 2 people who knew about dichlorvos and chlorpyrifos, because they joined trainings of the dangers of pesticides.

- While surveying at the store / market, it was found that there are 7 agriculture pesticides that contain chlorpyrifos and 1 household pesticide (Masquiban 480 EC) that contains chlorpyrifos. Findings are detailed in the table below. The table below shows that pesticide dichlorvos and chlorpyrifos are found more in rural than urban areas. This shows that consumers in rural areas are using more pesticides than in urban areas, because pesticide has become one means of agricultural production. Although the movement of eco-friendly and "go organic" farming started the campaign 10 years ago, the reality is that it is still difficult to get farmers to leave pesticides.

Area	Trademarks	Category	Formulation	Active Ingredient	Factory	Registration permit
CITY	Lentrex	Agriculture	400 EC	Chlorpyrifos	PT Dow Agrosciences Ind	
	Dursban	Agriculture	200 EC	Chlorpyrifos 200g/l	PT Dow Agrosciences Ind	RI 6/5.2006/T
	Profos	Agriculture	Konsetrat emulsi (EC)	Chlorpyrifos 100 ml	PT Megasari Makmur	RI 1307/12-2005/T
RURAL	Dursban	Agriculture	200 EC	Chlorpyrifos 200g/l	PT Dow Agrosciences Ind	RI 6/5.2006/T
	Beliung	Agriculture	200 EC	Chlorpyrifos 200g/l	PT Adil Makmur Fajar	RI 3317/12-2008/T
	Starban	Agriculture	585 EC	Chlorpyrifos 530g/l	CV Mitra Agronusa	RI 010120062192
	Chlormite	Agriculture	4OO EC	Chlorpyrifos	PT Agro persada	RI 1960/7-2008/T

				400g/l		
	Mosquiban	Household	480 EC	Chlorpyrifos 480 g / l	PT Petrokimia Kayaku	RI 949/4 - 2009/T

- Although only one pesticide containning chlorpyrifos was found, this shows that Permentan No 24/Permentan/SR.140/4/2011 about Term and Procedure of pesticide registration is not implemented and the role of Pesticide Commissions does not exist because they still allowed banned pesticides to be widely circulated.
- Annex of article 2 Permentan 24/ 2011 clearly states that banned pesticides should not be imported and domestically produced. Article 3, also confirmed that if those pesticides are found in the Indonesian Republic, they must be destroyed by the owner or parties who control it, and the implementation should be followed according to the applicable provisions.

- Six agricultural pesticides contain chlorpyrifos; in fact, besides being used in the agriculture, it was kept at home and being used to control insects in the household.

Impact on target groups:

Monitoring is done in a participatory manner. It is performed by cadres from an alliance of producers and consumers in 3 districts (Klaten, Boyolali, and Solo). There are 9 people (8 female, 1 male). Cadres function as monitoring people as well as a source of information.

To improve the understanding and skill of cadres to carry out monitoring, the following activities were carried out:

1. Debriefing of cadres: basis of monitoring, the dangers of dichlorvos and chlorpyrifos, policy studies, and arrangement of instruments of monitoring at the household and store.
2. Assistance cadres for data collection in the field. Data collection is done by in depth interview and FGD (Focus Group Discussion).
3. Assistance cadres for analysis and preparation of reports based on data in the field.

From the three activities above, all cadres were skilled to do monitoring and understand about the dangers of diclorvos and chlorpyrifos. With this knowledge, cadres disseminate it to member of their groups and other forums that followed this activity (PKK, the school comittee, Posyandu, religious – church –Moslem ceremony).

Impact on target policies:

1. Urges restriction of pesticide Mosquiban 480 EC to Directorate of Fertilizers and Pesticides, Director General of Agriculture Infrastructure and Facilities, Agriculture Ministry, Pesticide Commission, as a consequence of the implementation of Permentan No. 24 / Permentan/ Directorate of Fertilizers and Pesticides, Director General of Agriculture Infrastructure and Facilities, Agriculture Ministry
2. Withdraw all of Mosquiban products that still circulate in the market
3. Provide compensation to sellers and consumers who have bought Mosquiban pesticide
4. Encourage the government to formulate a policy of restriction of diclorvos and chlorpyrifos in agriculture and plantation

Outreach to stakeholders:

1. Alliance of group of healthy food producers and consumers in 4 districts (Wonogiri,

Boyolali, Klaten, and Solo) to increase public awareness about the dangers of diclorvos and chlorpyrifos.

2. Indonesia Toxic Free Network, to urge ban / withdrawal of all products of diclorvos and chlorpyrifos that are still circulating and provide penalties for the producers.

Deliverables, outputs and/or products:

1. Leaflet of the danger of diclorvos and chlorpyrifos (household, agriculture and plantation) as medium of public education.
2. Radio broadcast about the dangers of household pesticide
3. Press release about the findings of the household pesticide research - chlorpyrifos still found circulating freely in the market.

Communication efforts:

1. Activities photographs
2. Radio broadcast
3. Mass media clippings

NGO Recommendations for next steps:

1. Monitoring result is used as basis of advocacy at international level to ban diclorvos and chlorpyrifos
2. There is media campaign for consumer and farmer groups in order to be more cautious in using household and agriculture pesticides that contain diclorvos and chlorpyrifos