International POPs Elimination Project

Fostering Active and Efficient Civil Society Participation in Preparation for Implementation of the Stockholm Convention

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POPs Environmental Scanning and Social Investigation of Toxically Critical Areas Along Manila Bay

Fisherfolk Against Toxics

Philippines
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About the International POPs Elimination Project

On May 1, 2004, the International POPs Elimination Network (IPEN http://www.ipen.org) began a global NGO project called the International POPs Elimination Project (IPEP) in partnership with the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Program (UNEP). The Global Environment Facility (GEF) provided core funding for the project.

IPEP has three principal objectives:

- Encourage and enable NGOs in 40 developing and transitional countries to engage in activities that provide concrete and immediate contributions to country efforts in preparing for the implementation of the Stockholm Convention;

- Enhance the skills and knowledge of NGOs to help build their capacity as effective stakeholders in the Convention implementation process;

- Help establish regional and national NGO coordination and capacity in all regions of the world in support of longer-term efforts to achieve chemical safety.

IPEP will support preparation of reports on country situation, hotspots, policy briefs, and regional activities. Three principal types of activities will be supported by IPEP: participation in the National Implementation Plan, training and awareness workshops, and public information and awareness campaigns.

For more information, please see http://www.ipen.org

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Executive Summary

The *POPs Environmental Scanning and Social Investigation of Toxically Critical Areas along Manila Bay* project was undertaken to identify pesticides and fertilizers used in fishpond communities in the towns of Hagonoy and Malolos, located in the province of Bulacan. It also aimed to determine the impact and negative effects of pesticides and other chemicals to the environment and the community folks exposed to heavy utilization of pesticides and fertilizers.

Ten (10) field workers and research staff, all personnel of Fisherfolk Against Toxics, were assigned to perform social investigations and field interviews. They began their POPs work from July 2005 and finished on April 2006.

Leaders and mass members of the local fisherfolk group Samahan ng mga Maliliit Na Mangingisda ng Hagonoy (Hagonoy Small Fisherfolks Association) and Malolos Fisherfolk Association (MFA) assisted the field workers and staff of the NGO in the six-month research and community work.

A total of 115 respondents (all fishpond workers) were interviewed, representing approximately 0.59 % of the total population of Barangays San Juan and San Miguel in Hagonoy (65 out of 11,000 population) and 1.66 % of the total population of Barangay Taal in Malolos (50 out of a population of more than 3,000). Most of those interviewed were male fish workers (73%), while female fish workers accounted for 27% of those interviewed from October 2005 to March 2006.

Most of those interviewed were old fishpond workers whose ages fell between 50 to 80 years old (57 persons or 49.56%). 28 persons or 24.34% of the respondents were between 30-49 years old, and 30 persons or 26.08% of the respondents were between 16-29 years old. 77 % of the respondents were married and 23 % were single.

The study revealed that prior to 2004, most of the commonly used pesticides in fishpond production were *Bullet (Cypermethrin), Attack (Cypermethrin), Diuron, Cypermethrin, Nominee (Bispyribac sodium), Chlordane* and *Baygon (Propoxur)*, which were used against rats and other pests. Another set of pesticides and chemicals like *Brodan (Chlorpyrifos), Magnum (Cypermethrin)* and *Sofit (*pretilachlor + fenclorim) were also used for pest control and weeding out of grasses.

These pesticides were banned in the communities because of their negative impact to health and environment. However, the local government has allowed the use of Cymbush (Cypermethrin*) and Malathion* beginning 2004, when landlords began converting their rice fields into fishponds. According to the fishpond worker-respondents, pesticide use had a devastating effect on their health and environment. They experienced various illnesses which they attributed to their use of pesticides, including POPs pesticides.

Public Disclosure

The results of the project were first publicly disclosed on April 5 and 6, 2006 in two fishing villages where the research was conducted. On April 5, staff of Fisherfolk Against Toxics initiated a meeting attended by over 125 fishpond workers and residents in Barangay Taal in Malolos. On the following day, another meeting was held for residents of Barangay San Juan and San Miguel, Hagonoy to discuss the results of the POPs research project.

As part of the post-project activities, the Fisherfolk Against Toxics has drafted a month-long plan beginning 3rd week of May up to 3rd week of June 2006 to disseminate and popularize the results of the social investigations on POPs in nearby barangays through discussion groups, seminars, inter-barangay workshops and public meetings.

A press conference is scheduled on the first week of June 2006 to inform the general public about the harsh effects of pesticides and chemical fertilizers on fishpond workers, public health and the environment.

An advocacy group composed of NGOs, fisherfolk associations and advocates will meet on the second week of June to determine future plans for their collective advocacy work against pesticides and other toxic-ridden chemicals employed in fishpond and aquaculture production.

Justification for the Project

Efforts to stop, if not reduce the heavy use of pesticides, and other toxic and harmful substances in agricultural and fisheries production have been hampered by the billion-dollar funded, all-out campaign of transnational pesticide companies to promote, market and distribute their toxic products. Unfortunately, the government appears to endorse these products to the local market for local consumption.

The POPs project becomes highly necessary to inform the affected communities about the impact and negative effects of pesticides and other chemical fertilizers and mobilize them to carry out the grassroots' fight against the invasion of pesticides, and triple their efforts to promote the elimination of POPs substances to attain genuine, health hazard-free and pro-environment sustainable growth.

The participation of the community and other affected sectors and interested parties is necessary to achieve the goal for POPs-free agricultural and fisheries production, and

amplify the national objective of transforming production without relying on dangerous pesticides and chemical fertilizers.

Area Profile and Project Objectives

The project was undertaken in Malolos City, the capital city of the province of Bulacan, and in Hagonoy, Bulacan. They are situated 40 kilometers and 60 kilometers north of Manila, respectively.

The city of Malolos is a major suburb outside Metro Manila. As of 2000, according to the National Census Statistics Office (NCSO), Malolos has a population of 175, 291 in 36,663 households.

The major industries in Malolos, according to national government data, are agriculture, fishing and manufacturing. The project was specifically conducted in Barangay Taal, one of the 51 barangays of the capital city.

Barangay Taal is a farming and fishpond community. Most of the rice lands in the community were converted into fishponds following the increased demand of fish cultured products in the early 80s both in domestic and international markets.

The farming and fishing village of Taal approximately has a total population of 3,500. Approximately 80 percent are rice farmers, fishpond workers and municipal fishermen. At least 40 to 50 percent of the population is engaged in fishpond production due to the surge in demand for fish and other water cultured products such as milkfish, *tilapia*, shrimp, prawn, crab and lobster.

Meanwhile, the farming and fishing villages of Barangays San Juan and San Miguel in the town of Hagonoy have a combined total population of not less than 11,000 people. 75 percent of the population is composed of small farmers, occasional fishpond workers and municipal fishermen. The rest are either working in Manila, government employees, or jobless. Around 70 percent of the total agricultural production force in the two barangays are farmers and fishpond workers, and therefore highly knowledgable and exposed to the use of POPs pesticides.

Respondents said they buy most of their pesticides and fertilizers from outside the villages. In Malolos City, the research found out that 70 percent of pesticide users buy pesticides in the city proper with more than 10 big stores spread all over the city.

The same applies to pesticide users in Hagonoy town. They said they buy most of their pesticide needs in the town proper, which is just a tricycle ride away from their homes and agricultural productivity area. Researchers found out that there were about 15 stores in the town proper selling various brands of pesticides, despite the government order banning the use of pesticides.

The objectives of the POPs project were as follows:

- Undertake the formation of a task force, and hold a meeting for action planning and identification of needs and opportunities
- Establish or reconstitute baseline data for POPs
- Draw out the framework for theoretical, analytical and scientific analysis on the results of the POPs project
- Massive information drive on the impact and negative effects of POPs pesticides
- Harness and strengthen advocacy work against POPs pesticides from the grassroots up to the national level

Description of Project Accomplishments

Date	Activity	Description	Results
June 30, 2005	Consultation with leaders and members of fisherfolk groups and local barangay officials in Barangay Taal, Malolos. The consultation was attended by 20 participants	Discussion of the POPs project with the locals, including its objectives and the phases of project implementation	5 fisherfolk leaders and one barangay councilor agreed to work with Fisherfolk Against Toxics staff by identifying the interviewees and giving assistance and coordinative support to the staff during field work
July 14, 2005	3- hour ocular inspection in Barangay Taal	Familiarization with the community	The researchers had an initial grasp of the situation and were given a brief situationer about the area of research and field work
July 29, 2005	Consultation with leaders and members of fisherfolk groups and local barangay officials in Barangays San Juan and San Miguel, Hagonoy. The consultation was attended by 35 concerned individuals like fish	Discussion of the POPs project with the locals, including its objectives and the phases of project implementation	10 fisherfolk leaders and one barangay councilor agreed to work with Fisherfolk Against Toxics staff by identifying the interviewees and giving assistance and coordinative support to the staff during field work

	workers, councilors and barangay chairmen of San Juan and San Miguel		
August 12, 2005 to August 13, 2005	Ocular inspection in Barangays San Miguel and San Juan	Familiarization with the community and two-day immersion program with fishpond workers	The researchers had an initial grasp of the situation and were given a brief situationer about the area of research and field work
September 1, 2005	Brief assessment and updating of previous works, preparation for interviews	Identification of research needs and formulation of work plan according to standards and objectives set for the POPs project	A seven-month-plan (October 2005 to April 2006) for the research was drawn out and included post-research plans
October 2005 – March 2006	Interviews and data gathering conducted in Barangay Taal, Malolos and Barangays San Juan and San Miguel in Hagonoy, Bulacan. *Note:* Fisherfolk Against Toxics did not schedule any activity on December in preparation for the group's participation in the anti-toxic seminar last December in Hong Kong	Data gathering, collation of reports, analysis and formulation of recommendations	The POPs research work was initially evaluated in the first week of March 2006, validated with the respondents on the third week of March and officially disclosed on the first week of April 2006
April 2006	Validation and evaluation of reports and drawing out of post-research plans	Further validation of reports and thorough discussion of resolutions regarding advocacy against POPs pesticides	Prepared for press conferences and advocacy work at the legislative arena in June 2006
May 2, 2006	Meeting of persons and groups involved in preparation for	Lining up of activities for July – October 2006 as	Identified activities to be undertaken

	other plans in post-research POPs activities	post-research POPs activities	

On June 30, 2005 the staff of Fisherfolk Against Toxics, headed by Ms Cecilia Palma-Ripalda and Roberto Santos, identified and contacted fisherfolk leaders and barangay officials at Barangay Taal, city of Malolos. The nature and objectives of the POPs research project was thoroughly discussed in order to provide the affected residents with an initial understanding of the impact and negative effects of pesticide and fertilizer use in land cultivation and fishpond farming. A total of 20 fishpond workers attended the whole day briefing. The local fisherfolk group in Malolos- the Malolos Small Fisherfolk Association (MFA) agreed to cooperate with Fisherfolk Against Toxics and identified at least 50 persons who would serve as participants in the interviews.

On July 14, 2005 an ocular inspection was conducted by the staff of Fisherfolk Against Toxics in Barangay Taal, Malolos as part of the familiarization activity in the area. The personnel found out that most of the rice agricultural lands were already transformed into fishponds as early as 1980s because of the increasing demand of the international market for Philippine-based fish and other water- cultured products.

In one small village of Barangay Taal, an agricultural rice land measuring 10 hectares was destroyed by heavy use of POPs pesticides such as *DDT, chlordane,* and *endosulfan*. The owner decided to convert it to fishpond, but it did not stop him from using POPs pesticides, and other pesticides like *Malathion*.

The barangay is now a host to over 300 hectares of fishponds, which are highly dependent on pesticides to weed out grasses and control pests.

On July 29, 2005 the staff of Fisherfolk Against Toxics, led by Roberto Santos, conducted a meeting with fishpond workers and local village officials of Barangay San Juan and San Miguel in Hagonoy, Bulacan to discuss the capacity and awareness-building program against the use of pesticides and other chemical fertilizers. A total of 35 people attended the meeting, which was facilitated by identified contacts in two barangays. After a lengthy discussion, the residents agreed to have their areas as focus points for the research work on POPs pesticides. Some 10 fishpond workers and a local barangay official agreed to cooperate with Fisherfolk Against Toxics in their development work and advocacy against POPs pesticides.

On August 12-13, 2005 preliminary ocular inspections were conducted in Barangay San Juan and San Miguel, Hagonoy, Bulacan. Ripalda Santos and Gerry Corpuz, staff of Fisherfolk Against Toxics, found out that large tracts of rice lands in Hagonoy were converted into fishponds. These tracts of converted land were bigger than the ones in Malolos and almost comparable to a nearby fishpond village- the Paombong town of Bulacan.

During a brief consultation with the locals after the ocular inspection, the group was able to identify possible participants for the interviews- 35 from San Miguel and 30 from San Juan.

On September 1, 2005 Fisherfolk Against Toxics and contact persons in Barangays Taal, San Juan, and San Miguel held a meeting during which they updated, discussed and finalized the mode and approach of the research work on POPs pesticides in the three identified fishpond areas. A combined plan for October 2005 to April 2006 was brainstormed, discussed and approved.

From October 2005 to March 2006, interviews on identified participants were conducted. Interviews were only conducted during times in which the respondents were available, as they were all working and utilized most of their free time for family and household activities. Nevertheless, participants still found time to grant interviews regarding POPs pesticides during the duration of the project.

Results of the POPs Pesticides Study

The results of the POPs Pesticides Study revealed the following information:

1. In Barangays Taal, San Juan and San Miguel the commonly used pesticides were *Bullet (Cypermethrin), Attack (Cypermethrin), Phosphamidon , Cypermetrin, Chlordane, Nominee* (sodium bispyribach), and *Baygon*, which were used against rats and pests. Another set of pesticides and chemicals like *Brodan* (chlorpyrifos), *Magnum (Cypermethrin), 2-4 D, 2-ethylhexyl ester, Thiodan* (endosulfan) and *Sofit* (pretilachlor + fenclorim) were also used for pest control and weeding out of grass. 100 percent of those interviewed (who were rice farmers before) admitted that they had used and were exposed to all pesticides mentioned above until 2004 when production shifted to fishpond production. In addition, the shift from rice to fishpond production promoted the use of *Cymbush* and *Malathion.*

   Today, they employ *Cymbush* and *Malathion* as a regular pesticides to weed out grasses, because the pesticides they had previously utilized for weeding out grasses were already banned beginning 2004. However, some unscrupulous pesticide traders and merchants still sell banned pesticides in the local market because they are tolerated by the local government officials and authorities.

   Sixty respondents (52.17 %) said that although *Malathion* is now the commonly used pesticide for pest control and for weeding out grasses, they admitted that on some occasions they still used banned pesticides such as *Thiodan* and *Chlordane*.

   Thirty respondents, or 26 % of those interviewed said banned pesticides such as *Aldrin* and *Heptachlor* are still occasionally used by fishpond workers, and that they are still available in the market, where selling and distribution are done either

openly or discreetly. The rest said they are not aware since they are now contented with the use of *Malathion* pesticide.

2. Pesticides such as *Chlordane, DDT, Dieldrin, Endrin, and Heptachlor* were either banned or restricted by the national government but these pesticides, according to some respondents, still existed and proliferated even prior to the conversion of rice lands to fishponds. About 34 resource persons or 29.56 % said they had direct knowledge that these banned and restricted pesticides are still being used in farming areas. In the case of 23 respondents or 20 %, they admitted that they had retried to use these banned pesticides in some occasions due to lack of supply of *Malathion*.

3. Local government officials said the ban of pesticides continues, but they cannot comment on the proliferation of banned pesticides in their respective areas. Respondents said that the some banned pesticides are still used because the national and local government failed to inform the people about these POPs pesticides. Furthermore, the promotional blitzkrieg for the use of pesticides is still very much effective, luring fishpond operators to apply pesticides to weed out grasses and control pests.

Negative Impact and Effects of POPs pesticides to Persons exposed to Pesticides (based on a total of 115 respondents)

The following table shows the percentage of respondents who experienced symptoms most likely associated with exposure to pesticides (including POPs):

Type of Disease/Ailment	No. Of Respondents	Percentage of Respondents
Flu	73	63.47%
Colds	45	39.13%
Cough	94	81.73%
Rheumatism	55	47.82%
Difficulty in breathing and cardiovascular related ailments	62	53.19%
Severe headache	39	33.91%
Dizziness	79	68.69%
Hyperacidity	34	29.56%

Case Examples

1. Alfedo Pingol, 53 years old, former farmer in Barangay Taal, Malolos and the highest barangay official in the village said prolonged exposure to pesticides made him sickly and weak. He said he used to encounter common illness at the

time he was exposed to use of POPs pesticides like flu, colds, cough, rheumatism and difficulty in breathing.

2. The barangay captain had blamed the death of four of his people in Barangay Taal due to long exposure to pesticides. According to Alfedo Pingol, farmer Herminio Pingol died of TB, farmer Jesus Matutina died of hypertension, Felizardo Paraiso died of TB and hypertension, and farmer Ben Pingol died of *Gusathion* poisoning.
3. Francisco Paraision, 69 years old, married with 8 children, and a farmer-fishpond worker in Barangay Taal said he used to encounter different illnesses when he was exposed to pesticides such as rheumatism, hypertension. He also had lung and heart ailments, which were attributed to his long exposure to pesticides and chemicals.
4. Nine more Taal residents- Moises Santos (56 years old), Trinidad Santiago (74 years old), Jose Bautista (60 years old), Feliciano Roxas (75 years old), Florencio Cundangan (62 years old), Manuel Paraiso (56 years old), Jose Paraiso (60 years old) and Juan Bautista (63 years old) also indicated they had experienced the same common illnesses due to their exposure to pesticides.
5. Joselito Ingco, 50 years old and fishpond worker in San Miguel said he has been suffering from different common illnesses since his exposure to POPs pesticides. He used to encounter and experience rheumatism, intermittent cough and flu most of the time. His father, on the other hand, died of a heart attack in the early 70s at the time banned pesticides were being introduced in the Philippines. Basilio Sebastian, 35 years old, said he is used to experiencing flu and cough. Almost all respondents in Barangays San Juan and San Miguel narrated the similar stories to us.
6. Angel Alvarez, 62 years old, from San Miguel said his diabetes was further complicated by his exposure to pesticides.
7. Nicanor Felipe, 75 years old, from San Juan said he has been experiencing on and off rheumatism, hypertension and flu due to regular exposure to POPs pesticides.
8. Anastacio Sebastian, 40 years old, of San Juan village said his father died in the early 70s when his father accidentally mistook *Endrin* (used to poison pests) to be his medicine.
9. Brothers Ruperto Roque (38 years old) and Clarito Roque (41 years old), both from Barangay San Juan, currently experience difficulty in breathing and have heart ailments, which they blamed on their exposure to pesticides.

Proposed Program of Action and Advocacy Work as Post-Project Activities

On April 10, 2006, validation and evaluation of the collated information from respondents in three fishing villages in Malolos City and Hagonoy were conducted. The undertaking was attended by staff of Fisherfolk Against Toxics (who also acted as coordinators and interviewers during the interview proper), along with the fisherfolk leaders who collaborated with the NGO on this POPs research.

On May 2, 2006 the following post-project advocacy work plan in connection with the national and local campaign on POPs and other pesticides was formulated in a meeting:

1. Production of primer on POPs pesticides. The primer will be used as educational material for future discussion on POPs pesticides
2. The launching of Capability Training seminars for fisherfolk leaders and local barangay officials on POPs and other pesticides
3. The launching of barangay and inter-barangay education and massive information campaign.
4. Holding of dialogues with local government officials and pressure them to implement and execute laws and regulations banning the use of POPs pesticides.
5. Public information drive by means of fora and seminars in schools, factories, churches and other communities; establishment of monitor bulletins to update the public on the status of the campaign against toxics; press conferences and mass actions against pesticides and toxics.
6. International information drive in collaboration with national and international networks engaged in campaign and advocacy against pesticides and toxic substances.
7. Holding of public inquiries by the Senate and the House of Representatives that would look into the negative and disastrous effects of pesticides and urge the legislative body to come up with legislation and strengthen the implementation of existing laws, regulations and policies on POPs and other hazardous pesticides.