**Submission from Pesticide Action Network Asia and the Pacific (October, 2019)**

**1. Poisoning Cases of Pesticides in Asia and the Pacific**

**Summary of data from the news and publications**

PAN Asia Pacific has documented about [1,307](http://files.panap.net/resources/Cases-Studies-and-Newspaper-articles-on-Children-being-poisoned-by-Pesticides.xlsx) children have been poisoned by pesticides in the past five years. Of this number, 42 have died due to the poisoning. The children are mostly from Asia and are aged up to 17 years old. The data, which cover the period 2013 to 2018, are part of the Protect Our Children (POC) Watch, the latest initiative of PANAP to closely monitor and expose such violations to children’s rights.

Of the total number of victims, 642 children fell ill due to toxic fumes and pesticide drift while 616 were poisoned by consuming food contaminated by pesticides.

In the first five months of 2017 alone, 475 children in India were poisoned by toxic fumes while 9 children have died due to pesticide poisoning in India, US, South Africa and UAE.

Despite supposedly stricter pesticide regulations, children are still being poisoned. Poisoning symptoms include vomiting, diarrhoea and dizziness with severe cases causing death.

In many developing countries, poverty forces many children to work in farms and plantations where they are often engaged in using pesticides. Many rural children also live near plantations where they are exposed to pesticide spray drifts. In the Philippines, for instance, plantations that carry out aerial spraying are usually near communities and schools. Children are especially vulnerable to pesticides as they breathe more air, eat more food and drink more water per unit of body weight than adults. The 1,307 cases reported in the POC Watch also do not account for low-level long-term exposure to pesticides which can lead to learning disorders and cancer.

Notable Cases of Pesticide Poisoning (excerpt from [*Global Governance Of Hazardous Pesticides To Protect Children: Beyond 2020 by PANAP*](http://files.panap.net/resources/SAICM-PANAP-Children-and-Pesticides.pdf)*)*

Numerous cases of child poisoning occur throughout the world but are particularly high in Asia, where pesticides banned in the developed countries are still in use. Below is a brief synopsis of some recent cases.

**Bangladesh** In 2015, 12 children in Bangladesh aged 2 to 6 developed symptoms of pesticide poisoning including fever, convulsions and unconsciousness after eating pesticide-laced litchis (The Daily Star 2015). Eleven died shortly after. This was not an isolated incident as 14 children also shared the same fate in 2012 (The Daily Star 2012).

**Cambodia** In Oddar Meanchey province, 67 villagers including 49 children were poisoned after eating meat and vegetables kept in inadequately washed metal tubs previously used to hold pesticide for cassava trees (The Phnom Penh Post 2013). Insecticide-tainted cucumbers caused the mass poisoning of 610 villagers, 440 of whom are children, during an anti-child trafficking event for local school children in Siem Reap Province (Khmer Times 2015). From initial fact finding missions by PANAP and the Cambodian Center for Study and Development in Agriculture (PANAP 2016), children in rural Cambodia are often exposed to brain-harming pesticides like chlorpyrifos and the potential cancer-causing herbicide glyphosate during school hours.

**China** Thirty-nine preschool children in China were poisoned, two of whom died, after consuming tetramethylenedisulfotetramine or TETS-contaminated food (Liberty Voice 2014). Although banned in the early 1990s, this rodenticide is widely used due to its availability and low cost. 14 15

**Dubai** A three-year old Filipina together with another Filipino, died after inhaling toxic gas from banned aluminium phosphide which leaked through the AC duct of their Dubai apartment. The girl’s parents and four others were also hospitalised. The hospital report established the presence of phosphine gas in the victims’ bodies (Emirates 24/7 News 2014).

**India** At least 27 children in India aged 4 to 12, were killed after eating their mid-day meal (The Times of India 2013). Forensic examination showed the presence of high toxic levels of monocrotophos, a highly hazardous pesticide. WHO had urged India to ban monocrotophos in 2009. Previous incidents (The Times of India 2013) include: (i) the acute poisoning of 32 school children in 2002 due to the use of phorate in Kerala banana plantation; (ii) poisoning of students in 2006 brought about by phorate use in a Punjab sugarcane field; (ii) 30 schoolchildren falling ill in an agricultural field in West Bengal in 2005; (iii) hospitalisation of a 3 year-old child of Muktsar district after consuming pesticide-contaminated food; and (iv) death of a Safdipur village boy after drinking pesticide-contaminated water.

**Malaysia** Carbamate-laden food caused severe poisoning of more than 30 people aged 2 to 71 in Siputeh, Batu Gajah (The Malay Mail 2016). The pesticide was found in food stall samples of nasi lemak sambal, kuey teow goreng, kuih bom and cucur badak. 14 15 Children aged 10 to 11 living near rice paddies were found chronically poisoned by an organophosphate (Hashim & Baguma 2015). The children had poor motor skills, poor hand/eye coordination, attention speed and perceptual motor speed.

**Pakistan** The intentional contamination of baked goods and candies with pesticides due to an alleged business dispute resulted in the death of at least 33 people, including five children (Mail Online 2016). A chemical examination indicated the presence of chlorfenapyr in the laddu, a baked confection.

**Pesticide residues in food and water in Asia** (excerpt from [*Global Governance of Hazardous Pesticides to Protect Children: Beyond 2020 by PANAP****)***](http://files.panap.net/resources/SAICM-PANAP-Children-and-Pesticides.pdf)

A Nordic project (Skretteber et al 2014) showed the presence of pesticide residues in fruits and vegetables from the Southeast Asian countries with residues most frequently found in guava, pitaya, chili pepper, chives and basil. Of the 111 different pesticides found in the samples, the insecticides cypermethrin, chlorpyrifos and imidacloprid, and the fungicides carbendazin/benomyl and metalaxyl were the most frequently detected.

Thai-PAN (Atthakor 2016) through multi-residue pesticide screens conducted by UKbased laboratories, found similar results in the market-sold vegetables and fruits in Thailand. Residues of banned carbofuran and methomyl were detected in cucumbers and mandarins, with all mandarin and guava sampled found to be too dangerous to eat. All chilies tested were contaminated. India’s Ministry of Agriculture found pesticide residues in 800 food samples and residue exceeding permissible levels in 46 percent of the samples in the states of Andhra Pradesh and Telangana in 2015 (Rao 2016).

A comprehensive review of food pesticide contamination studies in seven cities of Pakistan (Faheem et al 2015) showed that there are samples of fruits, vegetables and meat that exceed the maximum residues level. Testing of Quaker Oats Quick 1-Minute also showed traces of the pesticide glyphosate (Business Insider 2016). 12 13 In the Phillipines (Bajet 2015), carbaryl was detected in all vegetables tested while chlorpyrifos was found in 63% of the samples. Other pesticides detected were malathion, carbofuran, methomyl, traizophos, profenos, and diazinon. Vegetables tested include pechay, tomato, eggplant and green beans. Pesticides have contaminated the water resource of at least six villages in northern Laos where villagers were found getting sick from drinking water (Radio Free Asia 2014).

Organochlorine pesticide residues were also found in the surface water of Bertam and Terla Rivers in Cameron Highlands, Malaysia (Abdullah et al 2015), in the rivers of China (Tan et al 2009, Zhou et al 2006), India (Malik et al 2009), Korea (Kim et al 2009), Vietnam (Hung & Thiemann 2002) and Thailand (Poolpak et al 2008; Samoh & Ibrahim 2009)

**Community-based Pesticide Action Report: Of Rights and Poisons: Accountability of the Agrochemical Industry”**

In PANAP recent report [“Of Rights and Poisons: Accountability of the Agrochemical Industry”](http://files.panap.net/resources/Of-Rights-and-Poisons-Accountability-of-the-Agrochemical-Industry.pdf)

, a survey of 2025 small-scale farmers and agricultural workers was carried out in 7 Asian countries: Bangladesh, India, Indonesia, Malaysia, Pakistan, Philippines, Vietnam. The report includes information on 217 children in the study sites.

Children who handled pesticides directly were reported in India, Indonesia, and Pakistan. Pakistani children worked with pesticides as part of family chores. They open bags of granular pesticides, mix pesticides with water, and assist in spraying. None of them used gloves or other protective clothing when handling HHPs—including lambda-cyhalothrin, which is especially toxic to children and included in PANAP’s Terrible Twenty list.

Children were further exposed via spray drifts, through the pesticide-contaminated clothing

and PPEs of their household members, pesticides stored at home, and pesticide

containers that are improperly disposed of. In Pakistan, schools in the village were located

very close to the fields. Children also played with empty pesticide bottles—they fill the

bottles with water to splash on other children, or make a toy train out of these.

24 children in floriculture plantations in Tamil Nadu, India work as flower pickers. An in-depth interview of the children is available here <https://panap.net/2019/10/how-child-rights-are-violated-by-pesticides-use-in-india/>. They use their bare hands while plucking flowers and mixing pesticides, and also entered the fields immediately after the spraying of pesticides. Various symptoms of pesticide poisoning were identified among the child labourers.

These include eye irritation, nausea, stomach ache, headaches, skin allergies, excessive sweating, blurred vision, body pain, lack of appetite, tiredness, burning sensation, coughing and vomiting. “I often suffer from stomach ache and have nausea. My parents do not take me to doctor,” one child labourer said. Learning and developmental problems among children were also noted.

The United Nations Convention on the Rights of the Child (UNCRC) states that “every child has the inherent right to life.” It declares that the survival and development of the child must be ensured to the “maximum extent possible,” and that “the right of the child to the enjoyment of the highest attainable standard of health” must be safeguarded and upheld by states.

Clearly, these fundamental rights of these children were violated when they were exposed to Highly Hazardous Pesticides. Their involvement in child labor also violates another fundamental right, recognised by Article 32 of the UNCRC, which states “the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child’s education, or to be harmful to the child’s health or physical, mental, spiritual, moral or social development.”

With pesticides drifting into classrooms and children unable to concentrate on their studies and even dropping out of school because of poisoning symptoms, their right to education is also violated. Article 28 of the UNCRC states that parties must “take measures to encourage regular attendance at schools and the reduction of drop-out rates.”

Finally, Article 24 of the UNCRC recognises children’s right to enjoy the highest standard of health, and should be able to have “adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution.” It must be assumed that with the high pesticide usage in the surveyed communities—with spraying equipment and pesticide bottles lying around—food and drinking water are contaminated as well.

**2. Promotion of Safer Alternatives**

Modern agro ecological approaches to food production, together with many of the ecological practices that have evolved with farmers working alongside nature through hundreds of years, are proving to be sustainable, economically advantageous and good for food security. Successful cases of agroecological farming in Asia, Africa, Latin America, Europe and USA, presented in the book “[Replacing Chemicals with Biology, phasing out highly hazardous pesticides with agroecology](http://files.panap.net/resources/Phasing-Out-HHPs-with-Agroecology.pdf)” substantiating the long-standing claim that ecological principles applied to agriculture are effective tools in the management of pests, including weeds, and provide sustainable livelihoods to farmers and rural communities. There is a wealth of scientific and evidential data showing that crops can be grown perfectly well without using pesticides. The case studies show that agroecological farming can improve food security and strengthen food sovereignty, while providing better adaptation to climate change and reducing harmful environmental impacts.

PANAP has documented how some [schools in Cambodia and Vietnam have adopted pesticide-free buffer zones](https://www.youtube.com/watch?v=N-LjHe3dbJ8), through the efforts of local organisations, school and government authorities.

**3. Corporations’ Role in Preventing another Pesticide Tragedy**

PANAP and its partners have documented that Syngenta, Bayer, Dupont and Monsanto and their local counterparts dominate the agro-chem industry in the South Asia and South East Asian region.

In South and South East Asia, highly hazardous pesticides (HHPs) produced by Syngenta, Bayer, DuPont and Monsanto such as atrazine, paraquat fipronil, carbofuran, chlorpyrifos, cypermethrin, glyphosate, lambda-cyhalothrin, imidacloprid, malathion and monocrotophos have been recently [documented](http://files.panap.net/resources/Of-Rights-and-Poisons-Accountability-of-the-Agrochemical-Industry.pdf).

They are used on farms, cotton fields, rice paddies, mango and oil palm plantations and in floriculture, violating the rights of plantation workers, farmers, rural women and indigenous peoples to a safe and healthy working environment and the rights of communities to a healthy environment. Rights to information on the pesticides they use or to which they are exposed are constantly violated. Specific cases of violations of women and children’s rights, labor rights and right to civil liberties have been [documented.](http://files.panap.net/resources/Of-Rights-and-Poisons-Accountability-of-the-Agrochemical-Industry.pdf)

The agrochemical companies are further consolidating with buyouts and mergers. According to the [Action Group on Erosion, Technology, and Concentration (ETC Group](http://www.etcgroup.org/content/breaking-bad-big-ag-mega-mergers-play)), “with collective revenues of more than USD 65 billion in agrochemicals/seeds and biotech traits (2013 figures), the Big Six (Monsanto,Syngenta, Bayer, Dow, DuPont, and BASF) control 75% of the global agrochemical market; 63% of the commercial seed market; and more than 75% of all private sector research in seeds/pesticides”. Syngenta has been bought out by state-owned ChemChina while Dow recently completed its USD 130 billion merger with DuPont to form the world’s largest chemical company. The Big Six has turned into the Big Four that control over [70%](http://www.etcgroup.org/sites/www.etcgroup.org/files/files/too_big_to_feed_short_report_etc_ipes_web_final.pdf) of the pesticide market.

Agrochemical corporations profit from the production and sale of pesticides that are inherently poisonous while the world’s rural populations and children face the daily hazard of pesticide poisoning. Corporations have used their political, economic and other influences to promote and protect their vested interests. These corporations have the obligation to ensure that chemicals are used in such a manner that they are not a threat to human health and the environment. Moreover, the realisation of the right to health requires proactive action to eliminate risks to health (and health risks from their presence in the environment) posed by chemicals and pesticides in their production, use, release, and incorporation into products. This realisation requires the elimination of pesticides that are known to cause cancer and other chronic, irreversible effects and the distribution of information about these to the general public. This is further emphasised in the International Code of Conduct on Pesticide Management which states that corporations have the responsibility to ensure pesticides are handled safely during their life cycle and disposed of in such a way that they do not constitute a threat to human health or communities living in their proximity.

**4. National and existing global governance is inadequate (excerpt from** [***Global Governance Of Hazardous Pesticides To Protect Children: Beyond 2020 by PANAP***](http://files.panap.net/resources/SAICM-PANAP-Children-and-Pesticides.pdf)***)***

National regulatory processes and government policies fail to protect children from pesticides due to the (i) inadequacy of pesticide registration processes to assess the real effects of pesticides on children; (ii) weak monitoring systems; and (iii) the assumption by most state governments that hazardous pesticides are essential for crop production. These failures stem from the lack of political will to question norms and apply the precautionary principle, despite the latter’s widespread inclusion in a number of international conventions and treaties, such as the Stockholm Convention on Persistent Organic Pollutants.

Global governance of pesticides is weak and fragmented. It relies heavily on the voluntary International Code of Conduct on Pesticide Management (FAO & WHO 2014) that, under its former title of the FAO Code of Conduct on the Distribution and Use of Pesticides, was first agreed in 1985. Despite name changes, revisions, and the development of guidelines, there are widespread violations of this Code by industry and some governments. Additionally, the Code and its guidelines fail to include environment impacts such as pollinator decline and other biodiversity losses. In addition to the Code, two binding UN Conventions address a limited number of pesticides.

The Stockholm Convention on Persistent Organic Pollutants bans a small number of mostly obsolete pesticides that are deemed to be POPs.1 The Rotterdam Convention on Prior Informed Consent in Trade of Certain Hazardous Chemicals and Pesticides has the requirement for information on, and agreement to the import of, listed pesticides (33 to date, of which 9 are also listed under the Stockholm Convention). Additionally, the UN’s International Labour Organisation (ILO) Conventions address issues related to children’s occupational exposure to pesticides:

• Under ILO Convention 138, the minimum legal age for children to be employed in hazardous work, which includes exposure to pesticides

• ILO Convention 182 forbids children being involved in “work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children” (ILO 2011). Yet nearly 70% of the 215 million child laborers worldwide work in agriculture – around 150 million children. In some countries, children under the age of 10 make up 20% of the rural child labour force (ILO 2006, 2011).

Yet nearly 70% of the 215 million child laborers worldwide work in agriculture – around 150 million children. In some countries, children under the age of 10 make up 20% of the rural child labour force (ILO 2006, 2011). In Mali, as much as 50% of the work force in some cotton areas are children; in Kazakhstan, that figure rises to 60%; and, in Egypt, as many as 1 million children between the ages of 7 and 12 are employed to help with pest management in cotton crops (EJF 2007).

Despite these existing mechanisms, a large number of highly hazardous pesticides remain in use especially in low income countries where unacceptably high levels of exposure and poisoning continue to occur.

Many of the working children use or are exposed to HHPs. As workers, they have little if any information about, or control over, the types pesticides they are using or even to stop applying these pesticides. The lack of protective equipment – ill-adapted to hot tropical weather conditions, not suitable for children, and rarely used – contributes to pesticide poisoning.

One indication of the significant failure of governance at both national and global level is that there is still very little understanding of the extent of even acute poisoning by pesticides, let alone chronic impacts on health, or the environment.

The paper by the Nordic Council of Ministers (2017) – Global Governance of Chemicals and Waste – when stating “It is estimated that excessive exposure to and inappropriate use of pesticides contribute to poisoning a minimum of 3 million people per year” used a seemingly up-to-date reference, UNEP 2016.

However, UNEP in turn referenced a paper published in 1990 (Jeyaratnam 1990), which was based on information from a study undertaken in two Asian countries in the 1980s. Despite these severe limitations, the Jeyaratnam paper is still the most authoritative estimate of global acute pesticide poisonings which is a very real indication of the lack of attention to this problem at the global level. Jeyaratnam actually used the figure 3 million as an estimate of hospitalised cases of pesticide poisoning, and estimated that there could be as many as 25 million poisonings in developing countries alone, per year.

There is no reason to assume that poisoning levels are any less now: “In Central America, PAHO has tracked a steady increase in acute pesticide poisoning cases each year for the past two decades, and this trend closely parallels upward trends in pesticide imports.

Acute pesticide poisoning is widespread in Latin America, and PAHO estimates that acute pesticide poisoning cases are underreported by 50-80%” (Laborde et al 2015). There is no clue as to how many children are affected by pesticides each year, but indications are that the number would be unacceptably high. International conventions and national regulations are inter-linked and the former can facilitate change at the national level, while strong national policies can promote strong leadership in international conventions.

The existence of double standards in the international trade of pesticides from developed countries to developing countries is still prevalent and involves both the export of hazardous pesticides and the transfer of production facilities. Numerous highly hazardous pesticides, such as paraquat, are produced in and exported from countries that do not allow their use. This situation is intensified by the lack of resources for prevention and control of pesticides in developing countries and lack of legislation and inspection by governments. Overall, this factor further contributes to the continued impact of pesticides on children’s health and well-being. Only one country in Asia is known to prohibit the importation of pesticides that are banned in their home country: Palestine (Watts et al 2016). Additionally, the Palestinian Authority actively confiscates pesticides illegally imported into the Occupied West Bank, including those not registered in their country of origin. This small territory, struggling against immense odds, can be a role model for the rest of the world in this respect.

Many of the pesticides banned in developed countries are still in use in developing countries. PAN is releasing updated versions of two documents underlining the strong need for a global framework to ban HHPs. These are a [PAN International List of Highly Hazardous Pesticides](http://pan-international.org/wp-content/uploads/PAN_HHP_List.pdf)  and a [PAN International Consolidated List of Banned Pesticides](http://pan-international.org/pan-international-consolidated-list-of-banned-pesticides/). These two documents together show the large numbers of hazardous pesticides used around the world and the very uneven nature of regulation of hazardous pesticides around the globe. An example illustrating such uneven regulation of pesticides is the highly toxic pesticide monocrotophos. Of the 154 countries for which information was available for the Consolidated List of Banned Pesticides, at least 112 have banned the insecticide monocrotophos, but its use in other countries continues to harm many people. It was responsible for killing 23 school children in India in 2013, implicated in the deaths of cotton growers in India in 2018, and in numerous other poisonings – despite the WHO calling on India to ban it 10 years ago. This is just one example of a HHP that should have been banned long ago, but remains in use and continues to poison people in countries where it is still used.

In summary, in order to protect children from the developmental effects of hazardous pesticides, government policies and practices including pesticide registration processes, need to change dramatically—to adopt the precautionary principle and the principle of minimum harm; and implement alternatives assessment and substitution while exploring other forms of agroecological practices.

PANAP provides the following recommendations to address the problems of children’s exposure to highly hazardous pesticides:

Governments and relevant others should:

1. Change agricultural policy and practice to remove the assumption that pesticides are necessary; and encourage farmers to change to agroecology, biodiversity-based ecological agriculture, or organic agriculture; and ensure that pest, weeds, and diseases are managed by the methods that cause the least harm to humans and the environment (Principles of Precautionary and Minimum Harm);
2. In pesticide registration, replace risk assessment with alternatives assessment and hazard assessment, using the precautionary principle as the framework, such that pesticides are only registered if there is no effective less harmful alternative, including non-chemical methods of management; in pesticide registration, institute cut-off criteria such that pesticides that are carcinogenic, mutagenic, developmental neurotoxins or immunotoxins, or endocrine disruptors are not registered or used; ensure the registration process is based on studies from independent scientists not industry science, but require industry to reveal all it knows about the toxic effects;
3. require buffer zones for plantations or farms that use pesticides, and to regularly monitor these; ban aerial spraying of pesticides; ban the use of genetically modified crops that require massive use of pesticides/herbicides.
4. ensure that pregnant women and children are not exposed to highly hazardous pesticides, or pesticides that have the potential for developmental toxicity or endocrine disruption, including through residues in food and
5. build individual and community awareness of the pathways of exposure for children, and the potential effects on their health.