

ENVIRONMENTAL HEALTH

AND PESTICIDES

Pesticides and its impact on human health and the environment

**Pesticide Action Network
Asia Pacific**

Human Health & Environment are linked

- Estimates by the World Health Organization (WHO) show that 24 per cent of the total burden of disease in Asia Pacific is attributable to environmental risk factors.
- WHO (2011) reported annual deaths globally due to occupational particulates (375,000),
- Chemicals involved in acute poisonings (240,000),
- Fifty four percent of the global burden of disease due to chemicals is borne by children under the age of 15 (Prüss-Ustün et al 2011).

Source: UNEP. 2015. Environmental Outlook and Pathways for the Asia Pacific.

UNEP. 2013. Costs of Inaction on the Sound Management of Chemicals

Accurate statistics of pesticide poisoning do not exist.

- **Estimates of acute poisoning of agricultural workers range from 1-5 million through 25 million and up to 50-100 million.**
- **In six Central America countries, 32,245 questionnaire responses indicated a regional estimate of 400,000 poisonings / year. This corresponds with 1.9 % of the entire population being poisoned annually, and documents an underreporting rate of 98% in these countries.** (Murray et al 2002)

Pesticide Exposure



**Woman farmer
diluting pesticides
before spraying in
Hai Hau, Vietnam**





Pesticide Application



Pesticides and Poverty

Malnutrition increases the health effects of pesticide

- **The poor are disproportionately affected because of :**
 - Illiteracy
 - Lack of capacity
 - Lack of information
 - Lack of options
 - Lack of labels in local language
 - Lack of protective clothing
 - Lack of training and information and use



Kamukaan in Mindanao, Philippines

Pesticide containers storage and disposal



- Herbicides, especially Gramoxone (paraquat) are the most commonly used chemicals

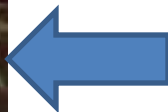


Repackaged pesticides





Exploitation of children as workers and women



Child labourers and their exposure

Pregnant
plantation
worker
working as
a pesticide
sprayer



Endosulfan poisoning in Kasargod, Kerala, India



SHRUTI: PHYSICALLY
CHALLENGED



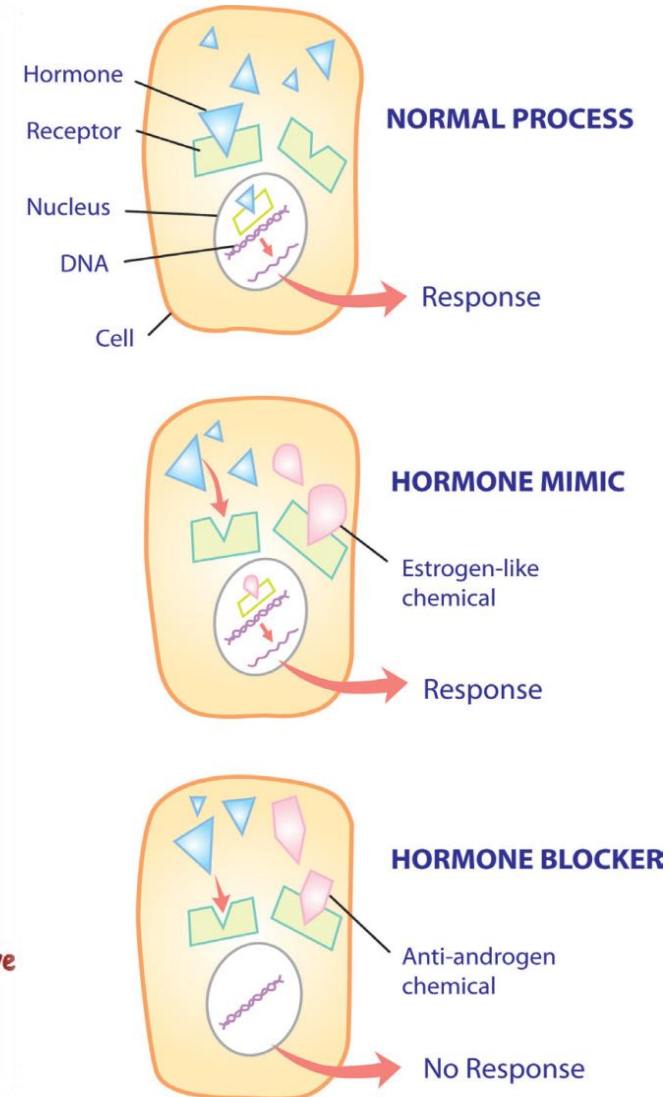
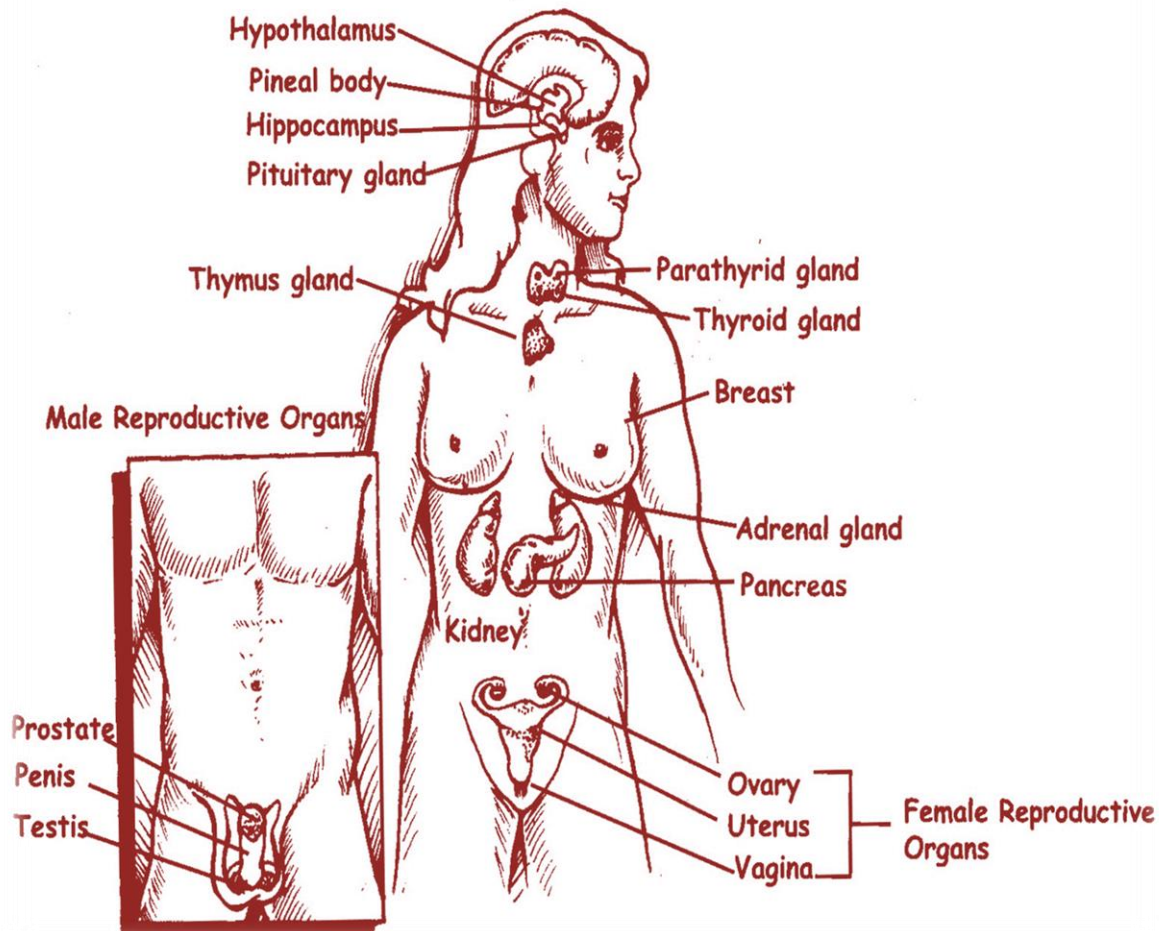
CHILD WITH BRAIN CANCER

CHRONIC EFFECTS OF PESTICIDES

- CANCER
- REPRODUCTIVE PROBLEMS
- BIRTH DEFECTS
- DEVELOPMENTAL AND BEHAVIOURAL IMPACTS
- IMMUNE IMPACTS
- ENDOCRINE DISRUPTION
- NEUROLOGICAL IMPACTS

Endocrine Disrupting Chemicals

Diagram 1: Important glands, organs, and tissues sending or receiving hormonal messages in the human body



Children and pesticides

- Minute amounts of chemicals can affect the rapidly developing brain and endocrine and immune systems.
- More than 127 pesticides are suspected EDCs
- Even one year old babies have been found to be carrying many different contaminants. **Human health effects of concern now include adult impacts of fetal exposure.**
- Intergenerational impacts of pesticides – grandparents exposed can cause result in impacts in the grandchildren.



Environmental contamination



- Honey bees are pollinators that help to fertilise at least 30 percent of the world's crops and 90 percent of wild plants.
- Recently, honey bees have been disappearing and abandoning their hives and it has affected bee keepers across the globe particularly in France, Germany, Japan and the US.
- The phenomenon known as colony collapse disorder (CCD) is globally estimated to cost USD5.7 billion in terms of declining crop yields and increased production costs.
- Pesticides are implicated as one major cause of CCD including neonicotinoid pesticides (produced by Bayer). Some of the neonicotinoid pesticides have been banned in Europe but continue to be used in the US and Japan.
- The Beekeepers Italian Association recently announced that bees are repopulating northern Italy thanks to a ban on neonicotinoids by the Ministry of Agriculture as a precautionary measure.

Environmental degradation and Poverty

- Environmental degradation and pollution affect everybody, however the people impacted the most are the poorest of the poor.
- The quality of the environment where people live and work contribute largely to the social and economic problems, particularly in rural communities.

OBJECTIVES OF PAN AP

- **Reduce with the aim of eliminating highly hazardous pesticide use**
- **Promote people's food sovereignty and biodiversity based ecological agriculture**
- **Advance the rights of women in agriculture**
- **Protect the rights of children**
- **Ensure corporate accountability**
- **Strengthen people's movements and PAN AP network in the Asia-Pacific region to achieve food sovereignty**



Support **ORGANIC AGRICULTURE** and **Biodiversity based Ecological Agriculture**

- Ecological Agriculture including organic farming has been proven and it can ensure food security
- Ensure community based seed and grain storage systems
- The International Assessment on Agricultural Knowledge, Science and Technology (IAASTD), carried out by hundreds of scientist under the UN banner, recently concluded that the needs of small scale farmers in diverse ecosystems must be addressed and that they should access to land and other resources.



Biodiversity based ecological Agriculture

- The Special Rapporteur on the Right to Food, Olivier de Schutter identifies agro-ecology as a science and practice that has fast concretised the right to food for many vulnerable group.
- Such ecological agriculture systems have tended to learn from, and build on traditional farming with the tools and technology that local farmers have utilized.
- These approaches build on peasants resilience and knowledge and skill on food production to achieve food security
- There is a quiet change that is taking place – movement for ecological agriculture with women’s participation

