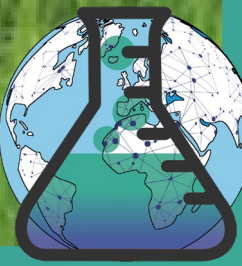


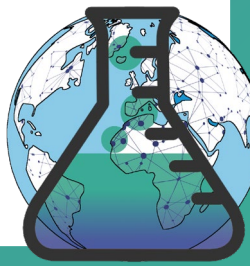
Pesticides Poison People and the Planet

By Sarojeni V. Rengam

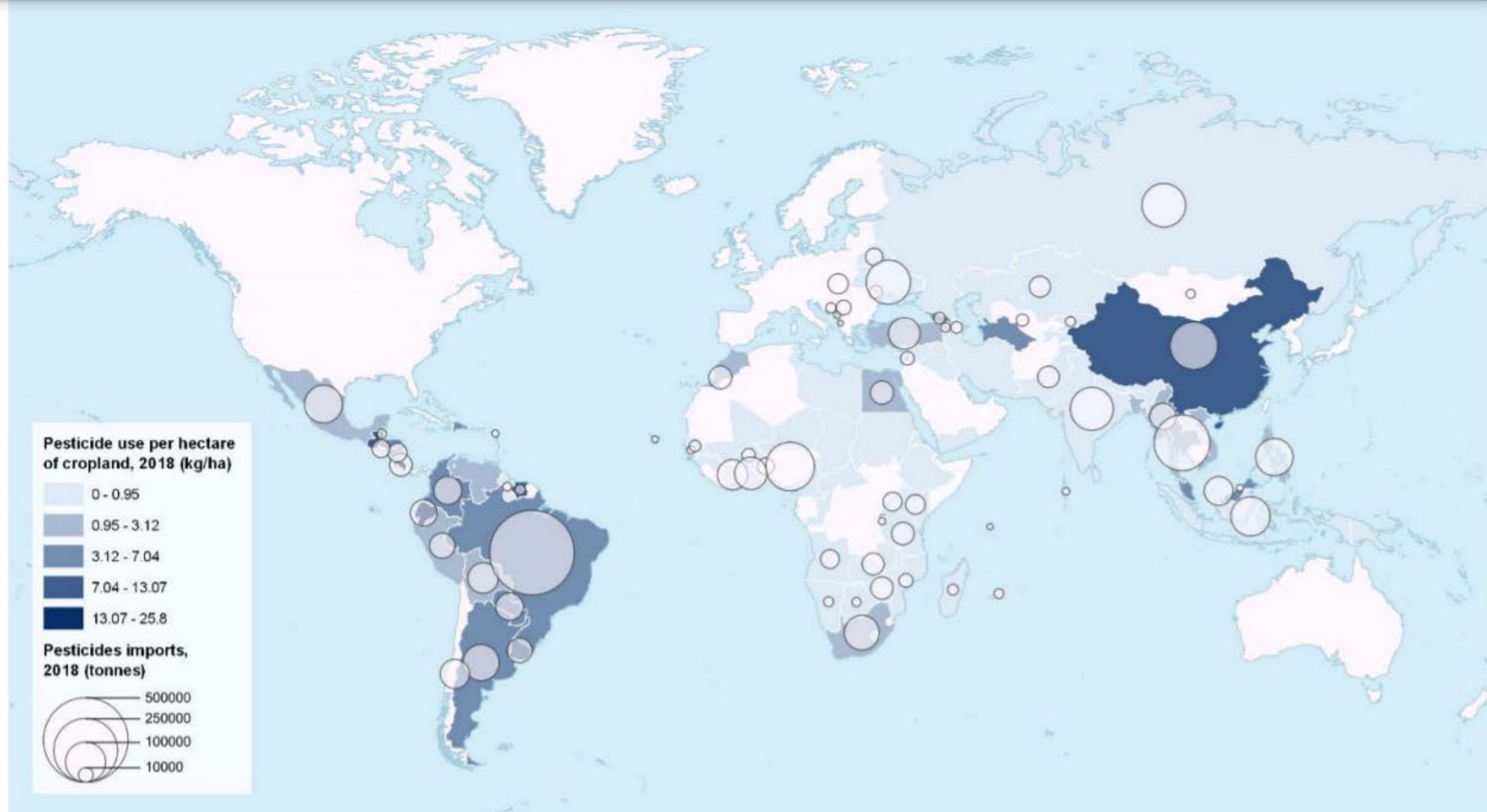


Global Pesticide Use

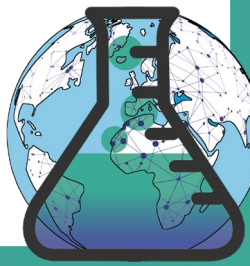
- About 2 million tonnes of pesticides are utilized annually worldwide. However, by the year 2020, the global pesticide usage has been estimated to increase up to 3.5 million tonnes.
- China is the major country, followed by the USA and Argentina
- Most are herbicides (50%), followed by insecticides (30 %), fungicides (18 %) and other types such as rodenticides and nematicides
- Demand is increasing in many developing countries, which together account for a quarter of global pesticide use (UNICEF, 2018).



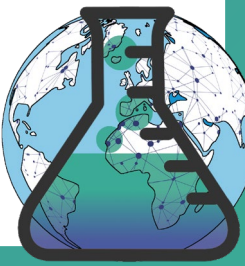
Scale of pesticide use, selected developing countries



Source: FAO (2018).



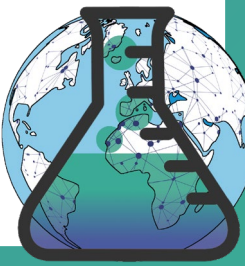
Pesticides Impacts on Human Health and the Environment



Unintentional acute pesticide poisoning (UAPP)

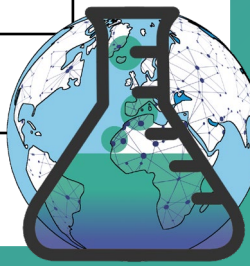
- Scientists from PAN Asia Pacific, PAN Germany and PAN North America estimated about 385 million cases of unintentional acute pesticide poisonings each year, mainly occupational, and including 11,000 deaths
- Huge increase from the estimated 25 million cases reported in 1990.
- 57 % of studies were self-reported to field researchers

*Boedeker W, Watts M, Clausen P, Marquez E. 2020. The global distribution of unintentional acute pesticide poisoning: estimations based on a systematic review. BMC Public Health 20:1875. <https://doi.org/10.1186/s12889-020-09939-0>



Yearly
incidence of
non-fatal
occupational
acute
pesticide
poisoning

Country	UAPP (%)
Cambodia	62.00
Indonesia	53.83
Laos	39.00
Philippines	57.99
Thailand	36.03
Vietnam	57.35
Bangladesh	55.64
India	62.00
Iran	59.35
Nepal	65.00
Pakistan	81.75



Long Term Health Impacts Of Pesticide Use



ACUTE
POISONING



CANCER



ASTHMA, ALLERGIES
AND IMMUNE SYSTEM PROBLEMS



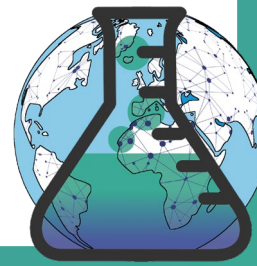
REPRODUCTIVE
DISORDERS
AND ABNORMALITIES



OBESITY, DIABETES AND
OTHER METABOLIC DISEASES



NEURODEVELOPMENTAL
AND BEHAVIOURAL DISORDERS

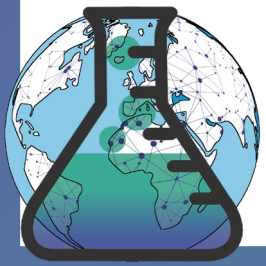


Environmental impacts of pesticides

- Declining bee populations pose a threat to global agriculture
 - 1 treated corn seed contains enough neonicotinoid to kill > 80,000 honey bees.
- Bird populations have declined 20-25% - pesticides
- Loss of biodiversity – 75% loss of flying insects (Germany)
- Waterways – widespread contamination & loss of aquatic life
- Soils – widespread contamination & loss of soil biodiversity
- All lead to Ecosystem Disruption – and loss of ecosystem services (biological controls)



USE OF PESTICIDES IN ASIA

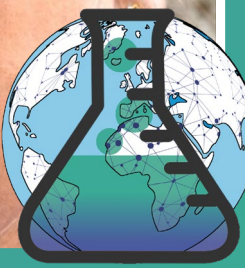


In Asia, **7 out of 10** farmers suffer from acute pesticide poisoning.

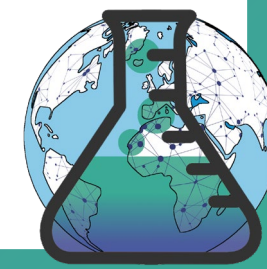
Of Rights & Poisons, PANAP (2018)



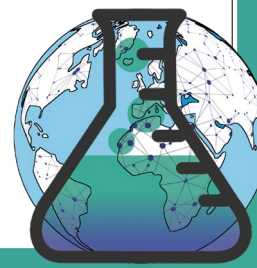
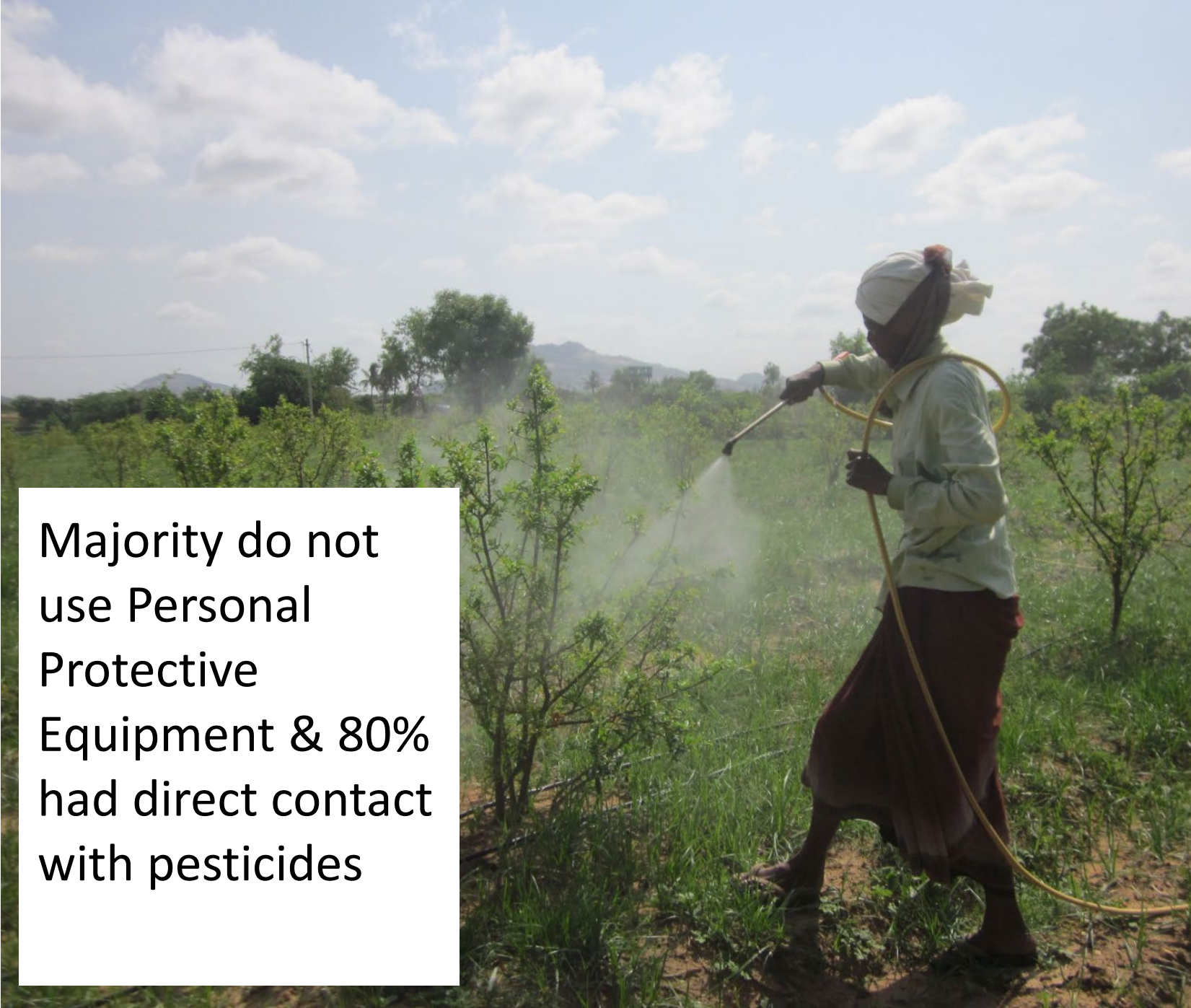
Blindness among mango orchard workers and their children in Andhra Pradesh



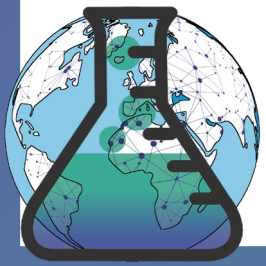
Paraquat sold in polythene bags in India



Majority do not use Personal Protective Equipment & 80% had direct contact with pesticides



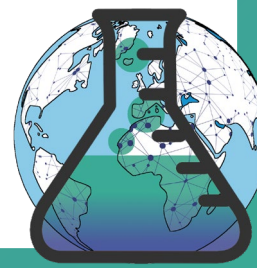
Health and Environmental Concerns



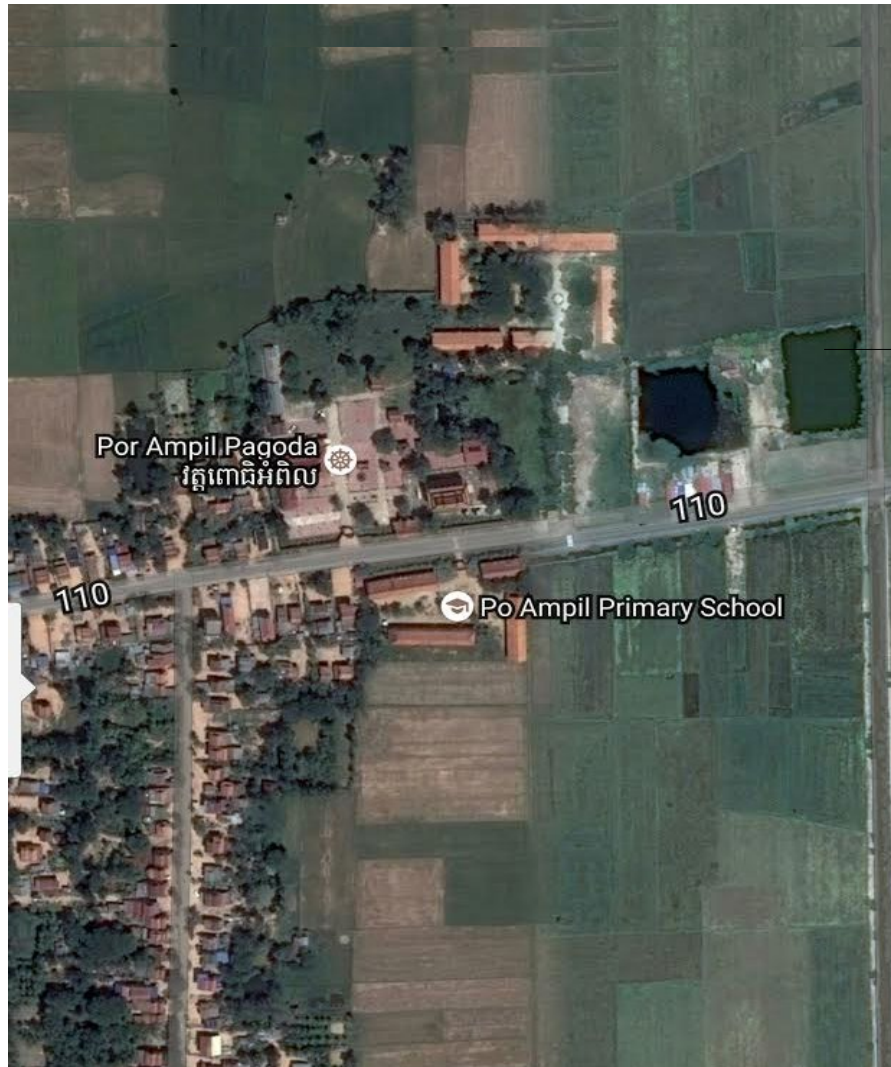
Children are exposed to pesticides in their food



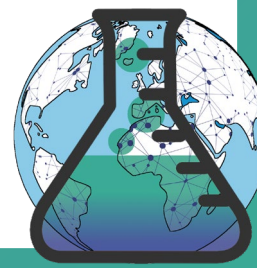
Children cakes packed from previous pesticide packets in Cambodia

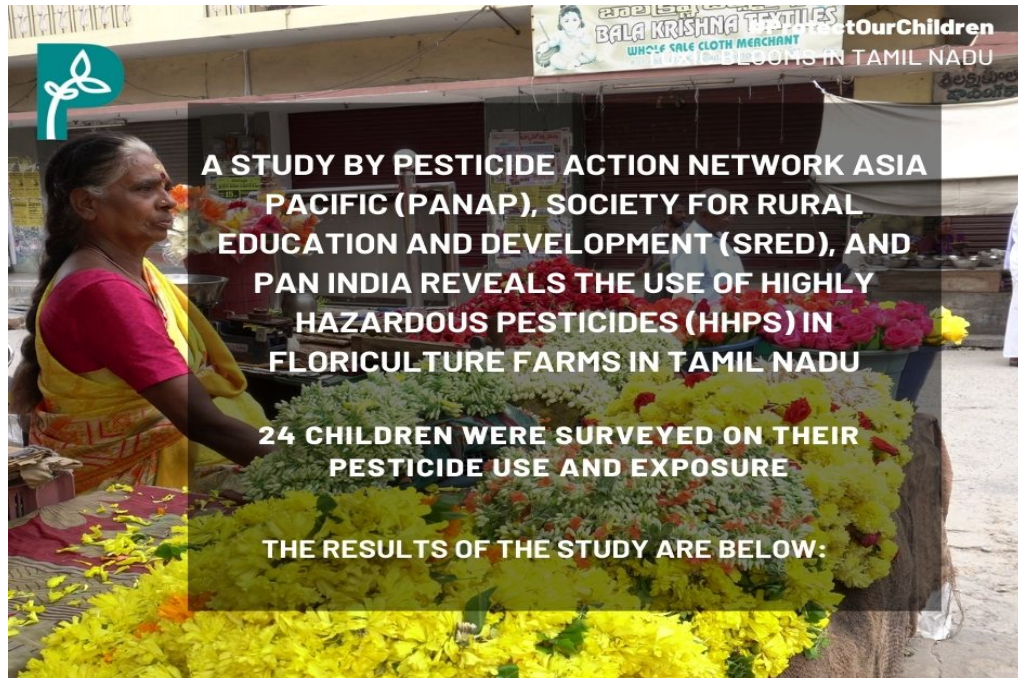


CPAM Survey in Sambour Commune



Common Name	Type
Chlorpyrifos-Ethyl	Insecticide
Profenofos	
Lambda-cyhalothrin	
Abamectin+Chlorantraniliprole	
Abamectin	
Alpha-Cypermethrin	
Carbosulfan	
Permethrin	
Alpha Cypermethrin	
Abamectin	
Abamectin+Chlorantraniliprole	Herbicide
Chlorpyrifos Ethyl 200g/l + Imidacloprid 20g/l	
Bispyribac-sodium 15g/l + Thiobencarb 900 g/l	
Bispyribac sodium	
Quinclorac+Pyrazosulfuron-Ethyl+Fenoxaprop-P-ethyl	
Cyhalofop-butyl	
Pretilachlor	
Glyphosate Isopropylamine salt	
2,4-D	
Bispyribac-sodium+Propanil	
Pyrazosulfuron-ethyl	
Glyphosate IPA	
Glyphosate isopropylammonium	
Pyribenzoxim	





#ProtectOurChildren
TOXIC BLOOMS IN TAMIL NADU

A STUDY BY PESTICIDE ACTION NETWORK ASIA PACIFIC (PANAP), SOCIETY FOR RURAL EDUCATION AND DEVELOPMENT (SRED), AND PAN INDIA REVEALS THE USE OF HIGHLY HAZARDOUS PESTICIDES (HHPS) IN FLORICULTURE FARMS IN TAMIL NADU

24 CHILDREN WERE SURVEYED ON THEIR PESTICIDE USE AND EXPOSURE

THE RESULTS OF THE STUDY ARE BELOW:



#ProtectOurChildren
TOXIC BLOOMS IN TAMIL NADU

5

PESTICIDES

FOUND ARE ESPECIALLY TOXIC TO CHILDREN



- CYPERMETHRIN
- LAMBDAHALOTHIN
- MONOCHROTOPHOS
- CHLORPYRIFOS
- PARAQUAT



#ProtectOurChildren
TOXIC BLOOMS IN TAMIL NADU

23 OUT OF 24 CHILDREN

WORKING IN THE FIELDS THAT ARE SPRAYED WITH PESTICIDES



#ProtectOurChildren
TOXIC BLOOMS IN TAMIL NADU

21 OUT OF 24 CHILDREN

FELT ILL AFTER PESTICIDE SPRAYING

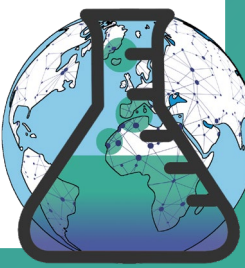
- HEADACHE
15
- RASHES
8
- VOMITTING
6
- INSOMNIA
4
- TREMORS
4
- FATIGUE
5





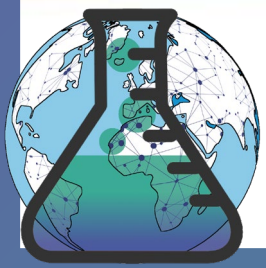
Children and Pesticides

- 108,000,000 children are engaged in agricultural work globally. Children regularly work in the fields during, or following, the spraying season when levels of pesticide residues are high (UNICEF)
- 4 TO 5 TIMES the amount of toxins from a given source is absorbed by children compared to adults (WHO)
- In August 2016, the Special Rapporteur on Toxics, Baskut Tuncak, issued a report describing the **“silent pandemic”** of disability and disease associated with childhood exposure to toxics and pollution, and explaining the obligations of States and the responsibilities of business enterprises to protect against such exposure



WHO PROFITS

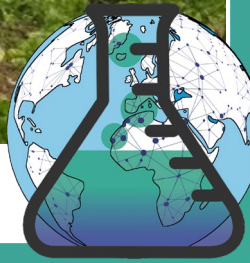
Market shares of the largest companies in the agricultural and food sector¹

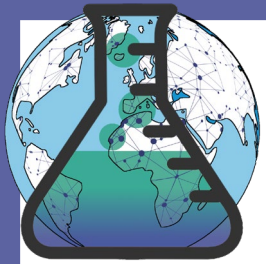


SOURCE: PAT MOONEY, BLOCKING THE CHAIN: INDUSTRIAL FOOD CHAIN CONCENTRATION, BIG DATA PLATFORMS AND FOOD SOVEREIGNTY SOLUTIONS. ETC, GLOCON, INKOTA, ROSA LUXEMBURG ST

Agroecology as a viable, pro-people, pro-planet alternative

- Agroecology can only be truly viable and beneficial if pursued in the context of thoroughgoing **agrarian reform & long-term rural development**.
- Agroecology can only thrive when there is substantial & reliable state support for production & extension services; & when there is a steady domestic market that will absorb locally & agroecologically grown farm produce
- Thousands of small food producers in Asia are producing food and fibre through agroecology





Recommendations



- Phase Out Highly Hazardous Pesticides and Replace them with Agroecology
- Support Children's Rights to a Safe Environment by promoting Agroecology
- Stop pesticide Industry to continue to pollute the environment and violate people's rights to a healthy and safe environment. Place strict liability on pesticide producers.
- Create buffer zones around plantations and farms until pesticides are phased out, to reduce pesticide exposure risk;
- Remove existing double standards among countries that are particularly detrimental to countries with weaker regulatory systems
- The international community must work on a comprehensive, binding treaty to regulate hazardous pesticides throughout their life cycle, taking into account human rights principles.

FOR A JUST AND PESTICIDE-FREE FUTURE

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Twitter: @PANAsiaPacific

Website: www.panap.net

- Sarojeni V. Rengam
- Sarojeni.rengam@panap.net

THANK YOU

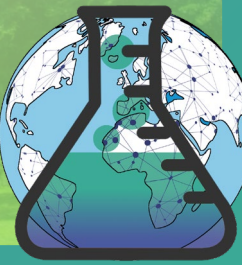


How chemical industry and programs like AGRA force people to use pesticides thus generating dependency.

PESTICIDES USE AND EXPOSURE

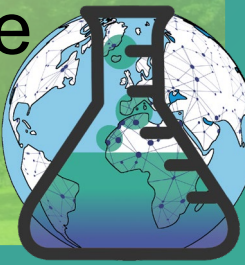
24th November 2021

biba 



AGRA IMPACT IN AFRICA

- AGRA has supported the establishment of a network of Agrochemical dealers (Agrovets) to ensure the distribution of chemical agricultural inputs and toxic pesticides in all corners and villages
- The Agrochemical dealers are supported by Village Based Advisors (VBAs) who act as extension officers advising farmers on an Input package comprising toxic pesticides
- AGRA systematically exerts political influence and changes to policies and laws on fertilizer and seed legislation to the disadvantage of Small Scale Farmers
- There is too much focus on input dependent maize production at the expense of nutritionally rich and locally adapted crops like millet and sorghum



AGRA'S IMPACT IN AFRICA



Strategic Partnership

Kilimo Biashara – Farming as a Business

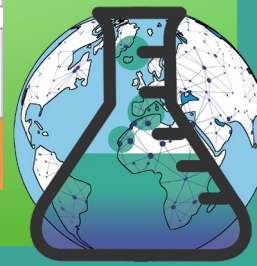


Solution

- Agriculture value chains – Input finance to market linkages
- Staff trained in agriculture – Offering technical training to farmers.
- Kilimo Biashara loans - New credit product design and roll out
- 10% risk sharing fund

Result

- 78,772 Households since the year 2008
- Over US\$ 70 Million in loans to smallholder farmers, agro input suppliers e.t.c



TOXIC PESTICIDES USE IN AFRICA

- In Kenya pesticides are registered without adapting test results to local conditions (e.g. different species, climatic conditions and diet). Maximum residue levels are taken from European or US results without testing
- The registration situation is especially problematic, because no monitoring data is collected in Kenya in terms of input and exposure therefore, we don't know how pesticides are being used and if there are residues exceeding maximum residue levels in our local context.
- However, for export of horticultural crops, testing for MRLs is done at the airport before loading and if found to have high MRLs, the product is reject at the exporters cost



TOXIC PESTICIDE USE IN AFRICA

- The effect of neonicotinoids, most toxicity tests are done with the European honey bee. No results are available on the effect on local bees (like stingless bees). This means we don't know what impact these neonicotinoids have on our local pollinator populations.
- The diet in Sub Saharan Africa consists of much more maize (corn) than European diets. This should result in lower MRLs for glyphosate in maize in Kenya.
- The sale and use of toxic products is poorly regulated. pesticides are sold 'on-the-shelf' by agro-vet store owners or sales people that might have no training in the product
- More than 70% of Kenya`s rural people are involved in agriculture thus a higher exposure and harm to people working in farms
- Most small scale farmers farm on less that 2 acres thus difficult to have mitigation measure such as buffer zones with runoff close to the water sources

Agroecology as an alternative

Agroecology combines local farmers' knowledge with the most recent scientific knowledge to create new technologies and practices

Agroecology is a food system with people and farmers at its heart, which combines modern science and innovation with nature and biodiversity

Small scale farmers are already practising this form of agriculture by building on the traditional agricultural methods based on local landraces and knowledge from their forefathers

Agroecology is a science, but is also seen as a movement, or practice which is concerned with farming methods that are based on peasant's knowledge, local inputs as well as nature's own principles rather than external inputs and technologies that damage nature such as the green revolution model (La Via Campesina).

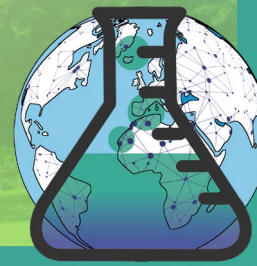
Agroecology is diverse, knowledge intensive and low in external inputs and fossil fuels and protects the environment

Farmer Managed seed systems are best positioned to deal with failures of hybrids and GMOs against performance and against climate change.

Open pollinated varieties, or farmers varieties are very different. They have been bred over generations through selection and swapping. Each seed is a mixture of many characteristics, making them very stable and robust. The farmers field will always have a variety of characteristics. The plants that display the most useful characteristics will be chosen for seed. This is how the farmer interacts with nature to develop useful varieties. Seeds can be saved and planted year after year and they will continue to give good results.

Thank you
Asante Sana

biba 



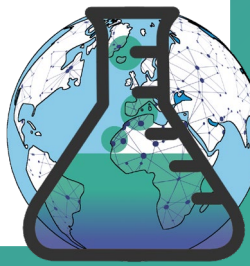


Case study: Overview of the Situation on Highly Hazardous Pesticides (HHP) and Alternatives in Armenia

Conducted by Armenian Women for Health
and Healthy Environment (AWHHE) NGO

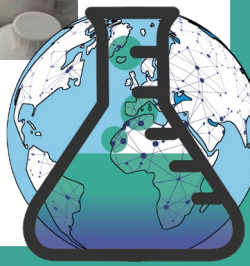
With technical support from IPEN

2021



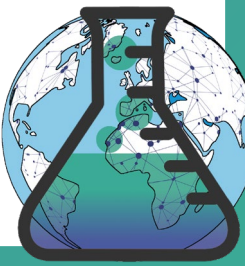
Main findings: HHPs in Armenia

- 95 active ingredients belonging to the PAN HHPs list of 2019 are registered for use in Armenia
- 48 (50.5%) out of 95 HHPs registered for use in Armenia are prohibited or not approved for use in other countries.
- **HHPs** (such as insecticides, herbicides, fungicides, acaricides, miticides or rodenticides) can be **applied to about 33 crops**; Imported mainly from China.
- Comparison to PAN HHP list of 2019 showed:
 - 3.4% belonged to the first group (acute toxicity)
 - 31% - to the second (long-term effects),
 - 34.5% belonged to the third group (toxic to the environment), and 31% included combinations of groups 1,3; 1,2; 2,3 and 1,2,3.



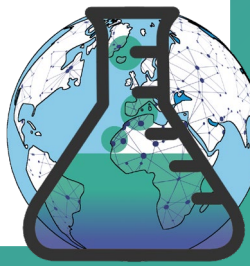
Main findings: Opportunities for phasing out HHPs

- Currently, there are no opportunities in Armenia for the adoption (in the near future) of laws and regulations to phase out and ban all HHPs.
- **There is no national policy on the HHP governance** and for limiting the use of HHPs
- Although **there is a policy and legislation for the regulation of pesticides, including a system for the registration, sale and use of pesticides throughout their life cycle**, the necessary provisions for its effective coordination and enforcement are lacking.
- The government does not conduct any needs assessment that would establish the extent to which a product is actually required for its current use, and whether alternative approaches or products that present less risk are effective, less hazardous, more available.
- Although there is a policy framework for the pesticide registration system, registration schemes are poorly functioning, they are affected by limited human and financial resources and lack sufficient capacity to assess risks.
- There is a lack of knowledge about the use and risks of pesticides, as well as knowledge about alternatives.



Main findings/Alternatives: IPM

- **IPM initiatives** in Armenia are implemented at the level of individual initiatives of international organizations for about two decades.
- Armenia imports insignificant quantities of pheromone traps, predatory and parasitic insects, and other biological controls against several types of pests due to a small market, high prices, problems with transportation, maintenance and other reasons.
- **No significant progress has been seen**, problems include:
 - ✓ Product manufactured using IPM is not advertised and **product is not labeled** as "IPM product"
 - ✓ The **policy framework** for IPM has **not** been **developed**
 - ✓ **lack of knowledge** and interest from **farmers**,
 - ✓ **lack of consumer awareness**, and lack of demand for IPM products
 - ✓ **Lack of production of any alternative** plant protection products.



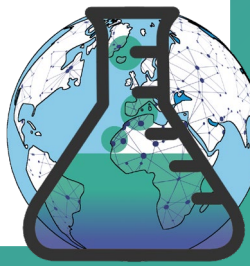
Alternatives: Agroecology

- There is **no strong agroecological movement in Armenia**, however, **informal agricultural production is widespread** in the country, most of which is in line with agroecological practices.
- The **government does not promote agroecology** at the national or province level
- There are some **initiatives of various organizations that contain components and methods of agroecology**.
- In the professional education sector: The **Agrarian University graduates specialists** in the specialization of agroecology.



Alternatives: Organic Farming

- Organic agriculture sector started developing in late 1990s.
- [Law on the Organic Agriculture](#) has been in effect since 2009.
- The first producer was certified environmentally friendly in 2005
- Currently, about 55 producers are undergoing certification
- [Organic agriculture is identified as a priority sector](#) in the "Program for Sustainable Development of Agriculture and Rural Areas 2010-2020."
- [There is a local certification body](#) that provides organic certifications recognized in the US, Canada, EU and Switzerland markets, as well as in the Caucasus.



Thank you
www.awhhe.am

