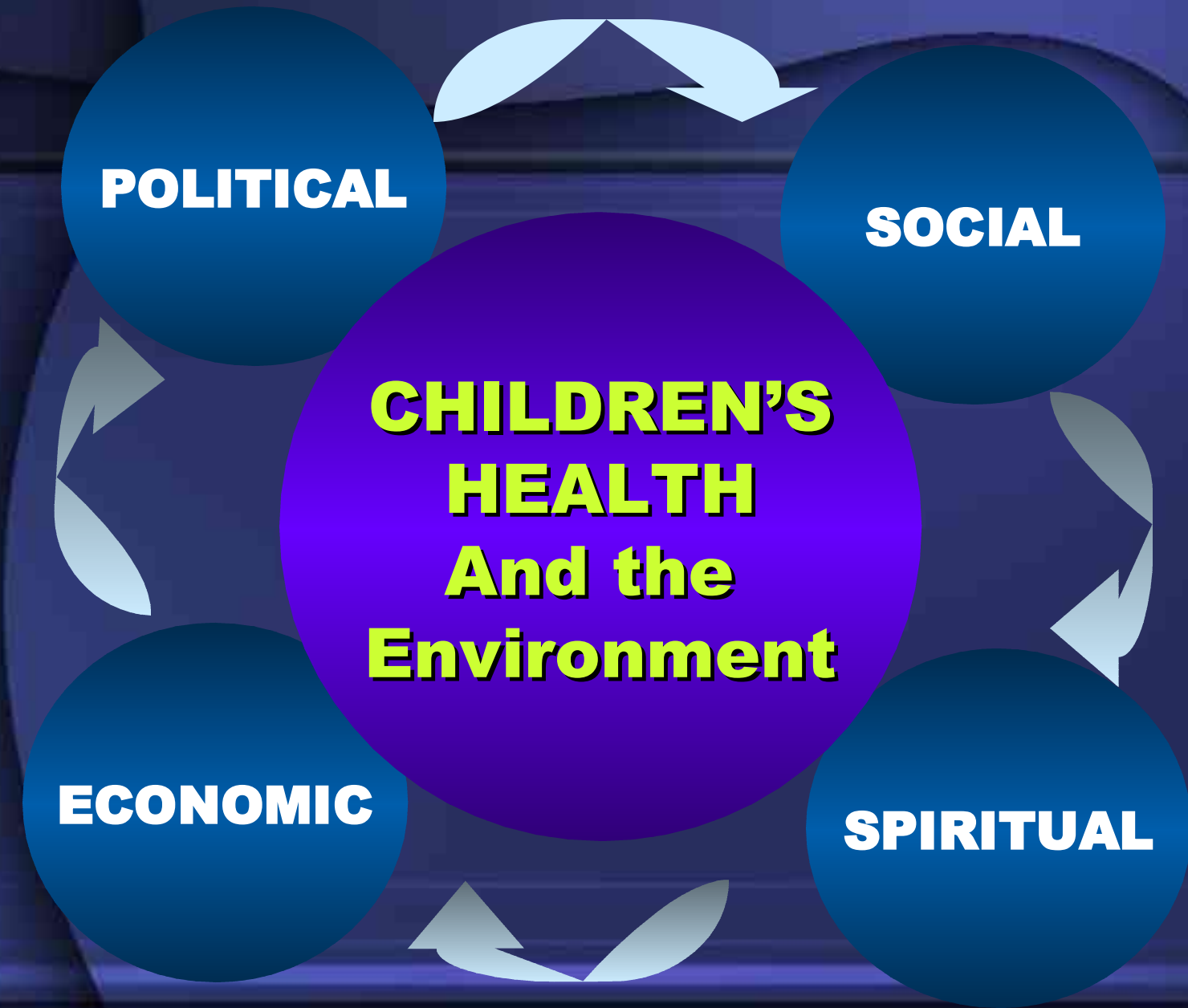
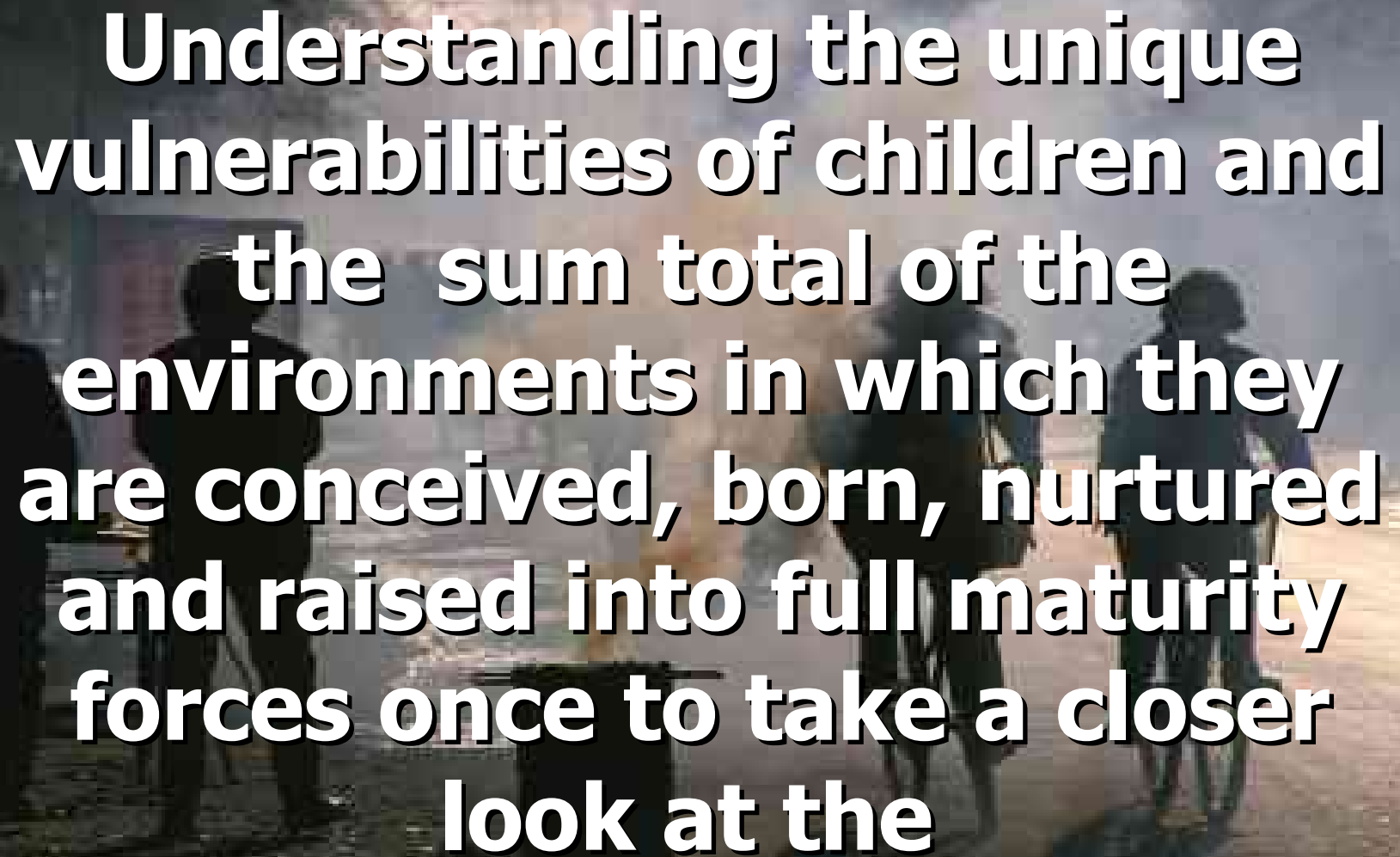




Facing the Threats to Children's Environmental Health in the Philippines through Sustainable Partnerships

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Understanding the unique vulnerabilities of children and the sum total of the environments in which they are conceived, born, nurtured and raised into full maturity forces once to take a closer look at the

NEW Pediatric Diagnosis



We're exposed to lots of chemicals but at very low concentrations over time. We need tools to help us understand how complex exposures perturb complex systems.

— William Suk

Multiple Low Dose Chemical Exposures?

One of the KEY concerns in the Philippines is the net effect of low dose chemical exposures coupled with other factors like poverty and malnutrition

Child Labor

- **FARMING**
- **Pyrotechnics and fireworks**
 - White phosphorus, nitrates, chlorates
- **Mining sites**
 - Lead, mercury, arsenic
- **Scavenging and garbage collection**
 - Hydrogen sulfide



Children Living in Highly Contaminated Areas



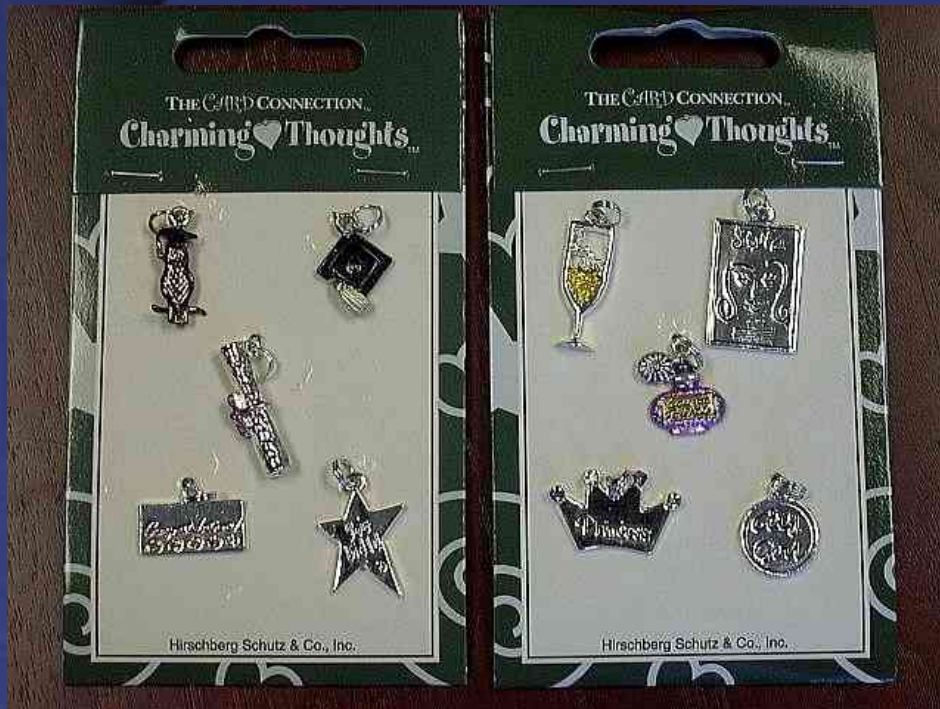
- More apt to reflect
 - Toxicity-induced syndromes
 - High rates of infectious disease
 - Immune system disorders
 - Lower than expected intelligence score

Environmental Exposures that Threaten the Filipino Child

- **Metals (Lead, Mercury and Arsenic)**
- **Air pollution**
- **Pesticides**
- **Second hand smoke**
- **Drinking water contamination**
- **Toxic industrial chemical spills and incidents**

We have faced out lead from gasoline but ...

- We need to be more vigilant about the other sources of exposure such lead from battery recycling and children's toys



Mercury consumed by a pregnant woman through contaminated fish can cross her placenta to damage the brain of her baby

The BFAR and the DOH has been working together on mercury fish advisories in high risk areas where mercury contamination has been documented in partnership with the NIMD Japan

Pesticide Exposures During Pregnancy



Prevalence and concentration of fetal exposure to environmental toxicants – NIH funded study by Enrique Ostrea, Jr et al

Toxicants	Substrate		
	Meconium (N = 718)	Cord Blood (N = 631)	Infant Hair (N = 734)
Propoxur	155 (21.3%)	12 (1.9%)	1 (0.1%)
Pyrethroids	18 (2.5%)	0	0


Pregnant women living close to farms where pesticides are sprayed on fields may have an **increased risk of having a fetus die due to birth defects**

Much of the first trimester -- appears to be a special window of vulnerability

Epidemiology March 2001;22:148-156

City Ordinance signed by the Mayor of Davao

**The ordinance will now impose
a ban on aerial spraying of
pesticide previously used in
agricultural practice in the
Davao City**

A sunset over the ocean with a golden sky and a shimmering reflection of the sun on the water. Several people are visible in the water in the foreground, and a few sailboats are on the horizon.

Changing
people's beliefs,
practices,
values and behaviour

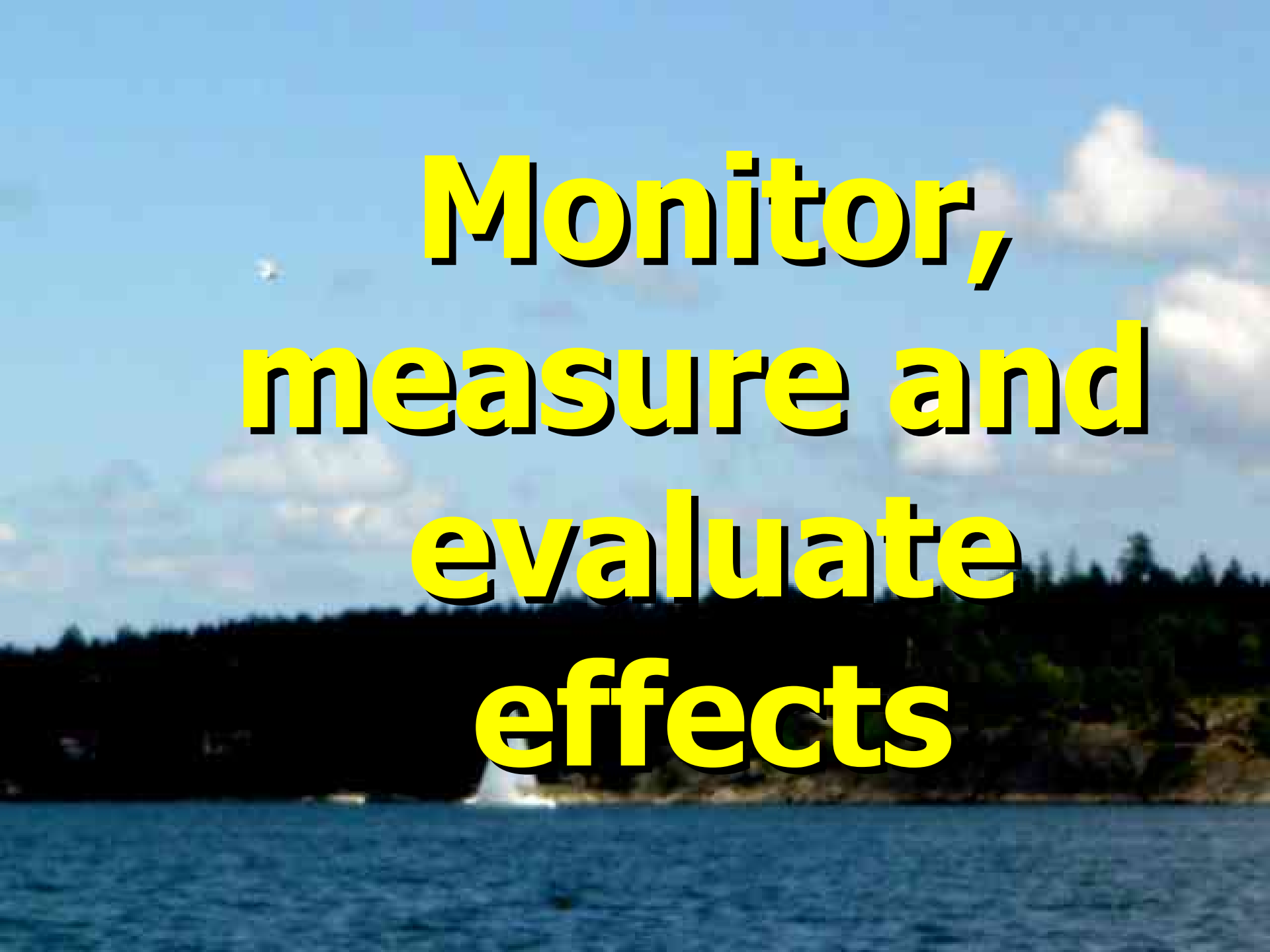
**is sometimes very
difficult**

How will sustainable partnerships reduce or minimize the threats to CEHIs in the Philippines?

There will be a multi-sectorial engagement to move the issues forward

What can the national, regional and international partnerships provide for the CEHIs?

- **Education and training**
- **Research agenda**
- **Awareness raising and advocacy**
- **Policy and legislation**




**Monitor,
measure and
evaluate
effects**

Protecting children from the harmful exposures to environmental chemicals is within our grasp



Residual uncertainties can not be an excuse for inaction when the weight of evidence establishes the likelihood of harm



A photograph of a person, likely a farmer, standing in a field of green plants. The person is wearing a light-colored shirt and dark pants. The background is blurred, showing more of the field and some trees. The overall scene is outdoors and appears to be a rural setting.

“To respond to the challenge to the health of present and future generations and to the quality of the environment made by the increased use of chemicals and to more effectively use scarce resources, considerable efforts should be made to work together at all levels to achieve globally sound management of chemicals”

Bhopal, India

Photo - Courtesy : Pablo Bartholomew

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