



## Insecticides & public health

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October 6<sup>th</sup>, 2009

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## DDT and malaria control

- Used widely in public health from WWII onwards;
- 1960s onwards, many environmentalist campaigns seek to ban DDT;
- Unfairly blamed for harming bald eagles, falcons & other wildlife;
- Agricultural pesticide, banned in 1972 (US);
- EPA recommends methyl parathion instead (human deaths recorded from methyl parathion, no deaths from DDT)
- Real causes of wildlife harm lie elsewhere;

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## DDT and wildlife

- Hunting, trapping, land-use changes, poisoning, bounties etc.;
- *Hornaday's American Natural History, 1935*

On falcons:

"It can best be studied with a rope, a basket, and a chokebore shot-gun loaded with No. 6 shot. First shoot both male and female birds, then collect the nest, and the eggs or young, whichever may be present."

Hornaday, W.T., *Hornaday's American natural history*, 16th ed (New York: Charles Scribner's Sons, 1935), p 228.

- Recovery in bald eagles related to improved legislation, enforcement, re-introduction of breeding pairs;

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## DDT & Human Health

- Pine River Statement – assesses over 500 scientific studies – fails to come up with evidence of actual human health harm. Fails to satisfy criteria for cause and effect relationship.
- DDT still used in malaria control, highly effective in saving lives & benefits > potential costs

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## DDT and malaria control

- After agricultural bans, DDT more expensive, less available for public health;
- WHO & donors starts to withdraw support for indoor house spraying;
- As house spray rates decline, malaria cases rise – good data from Latin America

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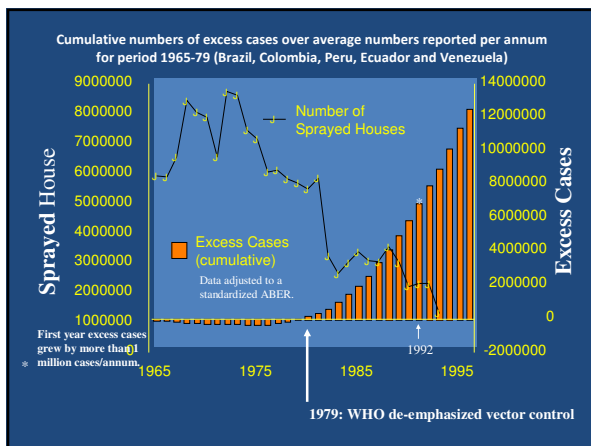
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## Insecticides & public health

- Campaigns widen to other insecticides – leads to 1997 World Health Assembly resolution – calling on countries to reduce reliance on insecticides in public health;
- WHA lobbied by Consumers International & others – not by public health groups;
- Resolution passes as insect-borne diseases increase & with no viable replacements for insecticides

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## DDT's comeback?

- 2006 Arata Kochi calls for return of DDT – yet little impact; US PMI funds IRS, no new countries using DDT;
- Supplies continue to dwindle;
- Uganda attempts to use DDT – highest recorded malaria transmission on earth – but efforts thwarted by environmentalist groups, Ag. exporters;
- Lukyamuzi – “Get your saw, get your machete, greet the spraymen at your house”

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## Trade rules shut down malaria control

- DDT spraying goes ahead – malaria declines 40%;
- EU's trade threats to legal action from exporters, spraying halted, malaria rises;
- DDT found was on 55% of samples at concentrations ranging between 0.011 and 0.26 mg/kg. If European consumer drinks 2 to 3 cups of coffee DDT exposure = 12,000 times below NOEL level.

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## Bad policies = bad public health outcomes

- Zambian ECZ requires officers escort DDT waste products, at considerable expense;
- EPA 1972 decision paves way for Lukyamuzi, EU officials, environmental campaigners;
- “Though unpopular among certain segments of EPA’s constituency, his [Ruckelshaus’s] decision did serve to enhance the activist image he sought to create for the agency, and without prohibitive political cost.”

EPA, “History - Pesticides and Public Health” available at: <http://www.epa.gov/pesticides/eh/ehhistory.html>

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## Future for PHIs

- Will new EU regulations turn all PHIs into DDT, restricting trade, public health, development?
- Insecticides essential for public health – yet governments invest in vaccines, drugs - and not in public health insecticides;
- Only significant investment in new PHIs from Gates Foundation;
- Growing resistance & limited options; R&D costs increased 500% over past 2 decades, mostly due to regulatory requirements;

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