

Disclosed: Lies about
endosulfan



A Down To Earth expose

This story is about
people...



⌘ Sheelavathi

Their illness...their
suffering...

⌘ Guruva's
grandchild



This story is for people of
Padre



⌘ Kittana

Background



- ⌘ 2002: Central government sets up an expert committee – headed by O.P. Dubey, assistant director general ICAR – to examine:
 - ⌘ A. reports on the aerial spraying of endosulfan in Kasargod district of Kerala;
 - ⌘ B. safety assessment of endosulfan and to recommend on its continued use/restricted use or otherwise.

Endosulfan cleared



- ⌘ 2003: Dubey Committee submits report.
- ⌘ **Says:** “There is no link between the use of endosulfan in PCK (Plantation Corporation of Kerala) plantations and health problems reported from Padre”.
- ⌘ Central government accepts report.
- ⌘ October 2003: Informs Supreme Court that “it was found that endosulfan was being misused for catching fish by local people”.
- ⌘ **Case closed.**

But there is more to the story...



⌘ Dubey report says that the report of the Fredrick Institute of Plant Protection and Toxicology (FIPPAT) “established that there was no detectable level of endosulfan in human blood..cow milk..water sample...”

⌘ This report helped Dubey clear endosulfan.

But what did FIPPAT do?



- ⌘ Information in our hands that it suppressed information, fudged its calculations....
- ⌘ A. it found residues in blood but **did not report**.
- ⌘ B. it found both alpha and beta endosulfan but **did not report**.
- ⌘ C. **it underreported** the amount of pesticide it had found in leaf and soil.

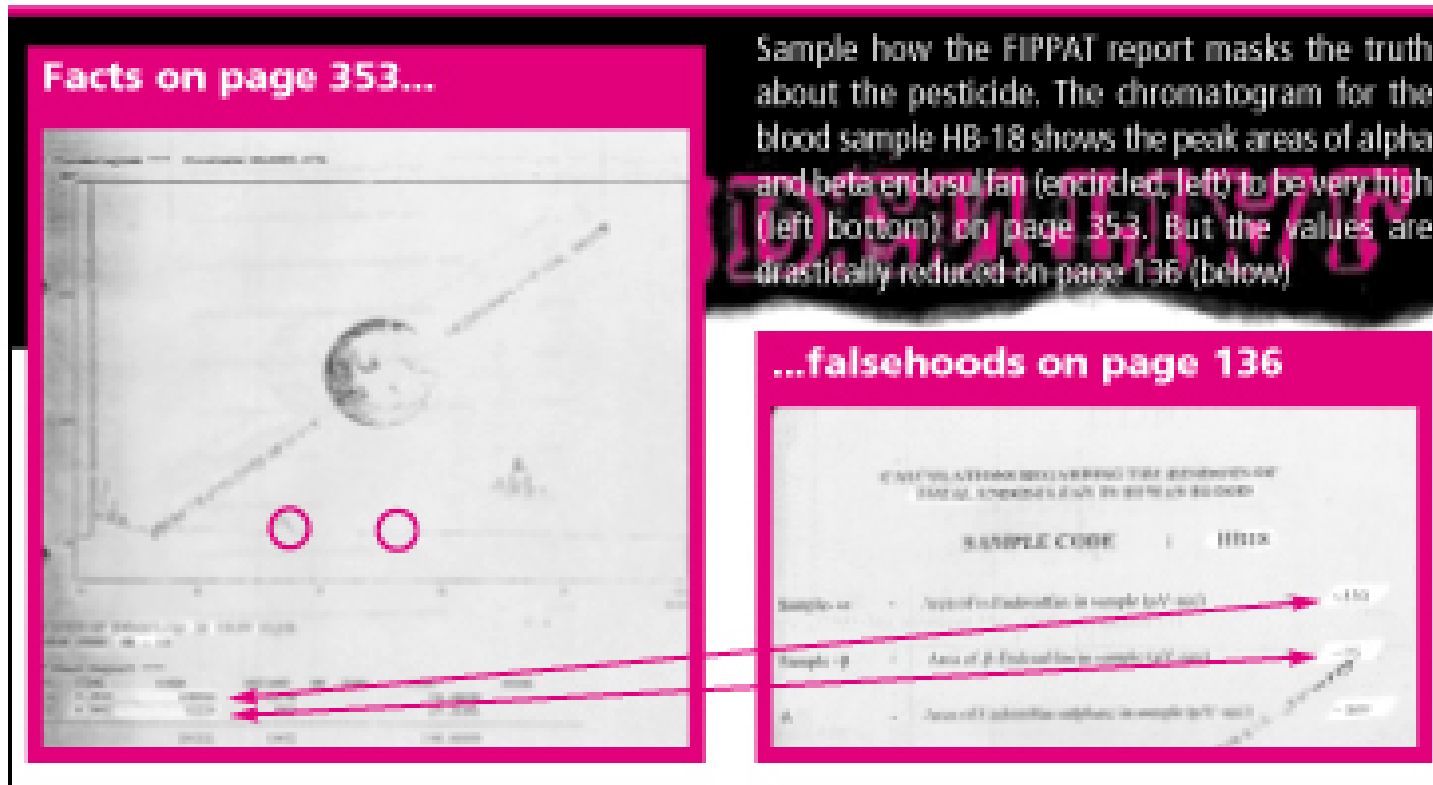
How do you test? How do you find?



- ⌘ Testing procedure: inject standard material into equipment. Resultant chromatogram shows various peaks corresponding to alpha-beta-sulphate endosulfan..Then inject sample to be tested into equipment. If the peaks match with standard material's chromatogram, the presence is confirmed.
- ⌘ **Lab report indicates the area of peak.**
Analyst calculates the quantum of residue using a predetermined formula.

You can find and not report

⌘ The graph for HB18



Found...



- ⌘ Reported: total endosulfan sulfate less than 0.001 ppm.
- ⌘ Found: Alpha+ beta (did not report).
- ⌘ When we calculated what was really found:

HB 18: 0.186 ppm of endosulfan residues

(higher than what NIOH reported: 0.078 ppm of total endosulfan residues in human blood)

You can find and underreport.. Case of L17

⌘ Found: Alpha-endo: 30815+ beta-endo 6120

⌘ Standard: Alpha endo: 447237+ beta endo 66325


⌘ Calculate: $\frac{30815+6120 \times \text{Vol} \times 1}{447237+66325} \times \text{wt}$ (concentration)

⌘ _____

⌘ = **0.4795 ppm**

⌘ **Reported: less than 0.001 ppm**

Found alpha+beta. Did not report



- ⌘ Technical grade endosulfan purity 98.13. Mixture of alpha (81% in this case) and beta (16%).
- ⌘ Sulphate is a breakdown compound.
- ⌘ It is reported always as sum of total endosulfan residues (alpha+beta+sulphate).
- ⌘ Found alpha/beta in many cases.
- ⌘ Reported: total endosulfan sulfate.
- ⌘ Small sleight of hand..Big difference. Why?

Because it suits industry



⌘ Industry contends:

⌘ A. Endosulfan is not found in Padre;

⌘ B. Endosulfan is not persistent. It breaks down very quickly in the environment. Therefore, cannot be a problem.

⌘ C. Cannot find alpha+beta isomers. Will disintegrate into sulphate.

FIPMAT report establishes the industry view.

What else was available to Dubey? NIOH 2001



- ⌘ Found **alpha and beta** endosulfan in soil, water as well as human blood samples collected from the region.
- ⌘ Found **samples of blood** collected from Padre showed high levels of endosulfan as compared to samples collected from the control village of Meenja Panchayat.
- ⌘ In its considered view “**endosulfan was the causative factor**” for health problems in the village.

Dubey dismisses NIOH



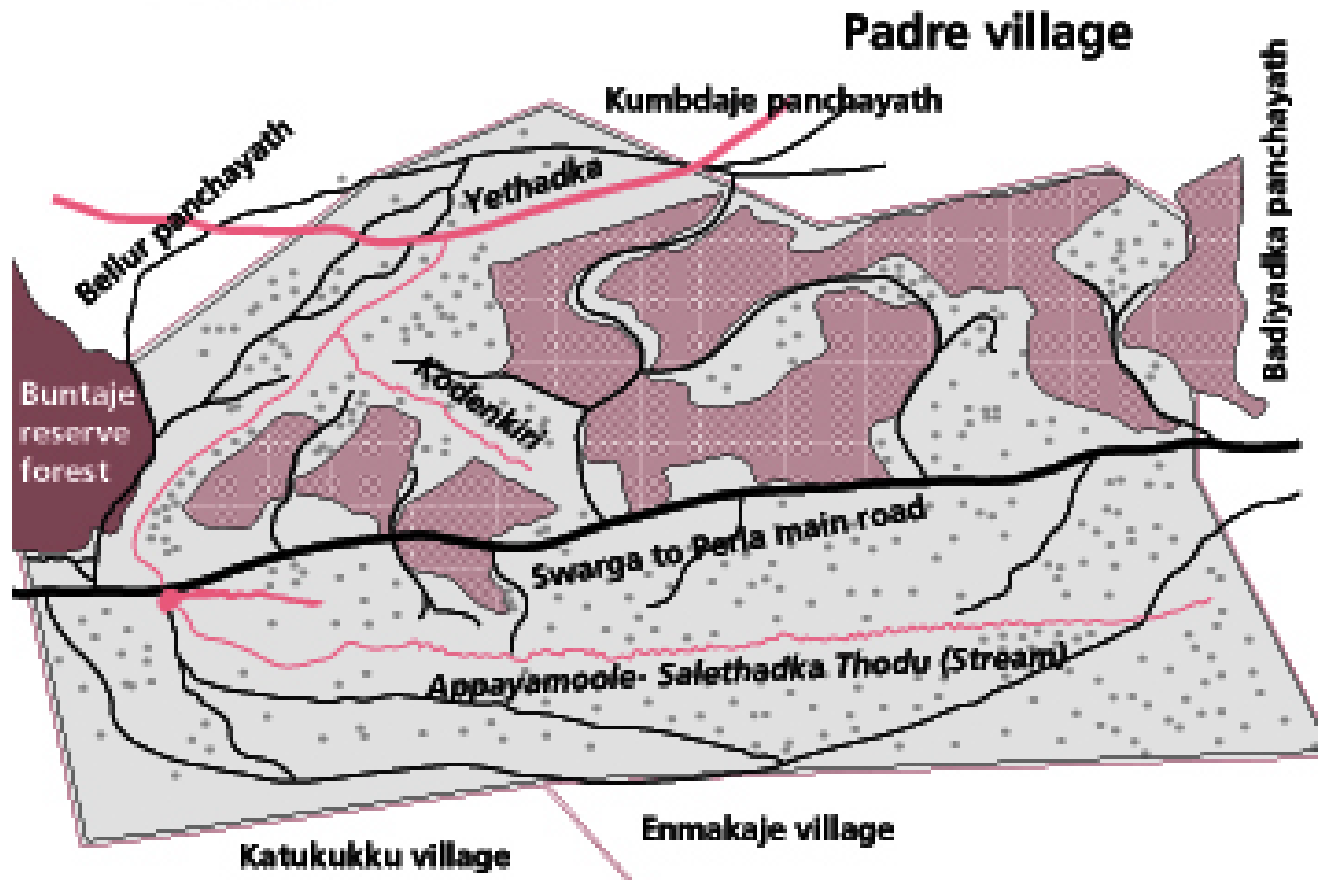
- ⌘ "The findings of NIOH study are not in conformity with the known and accepted properties, chemistry and toxicology of endosulfan."
- ⌘ Why? All clarifications provided by NIOH. But not considered.
- ⌘ Why? Did not suit interests????

What were issues Dubey raised with NIOH?



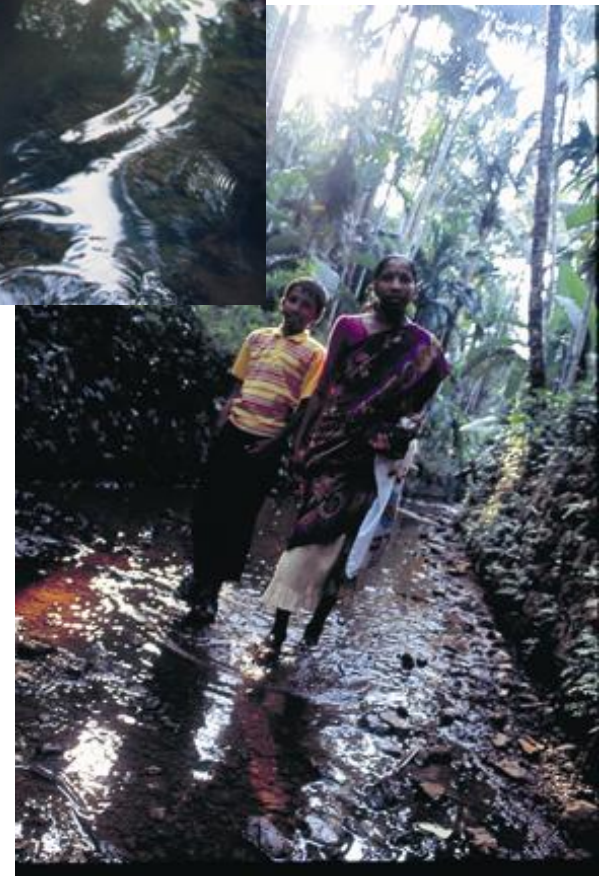
- ⌘ **A. Selection of control village wrong:** It is close enough to minimise confounding factors. But different because it was not subjected to aerial spraying. Streams divided village.
- ⌘ **B. Finding alpha+beta in blood and environment 10 months after last spray wrong:** Clearly stopping spraying does not mean end of exposure. Persistent and in environment.
- ⌘ **C. Finding endosulfan 3-5 km from spray site wrong. Finding more in blood than water wrong:** Remote sensing shows movement of water and pesticides.

Topography makes this a poisoned land..



A poisoned land..

⌘ 20 years. Spraying twice a year. Pesticide brought down through runoff or seepage, accumulated in soil, surface water, wells, crops cultivated from this water, on this soil, feed people.



What does this show..



- ⌘ Chronic impacts, one pesticide, long term exposure..what does it do to human being.
- ⌘ No study in the world. Because nobody ever studies impacts on humans. Only only lab animals. Chronic and acute exposure studies. Used to determine toxicity.
- ⌘ "This is the first study to measure the effects of endosulfan on the male reproductive system. Decades of spraying this, **and only this, pesticide** provided a unique opportunity to analyse impact." *Says science editor of Environmental Health Perspectives from US.*

Why are people ill?



- ⌘ Industry says
“inbreeding..malnutrition..background radiation”
- ⌘ Dubey says **Nothing**
- ⌘ NIOH says “significantly higher prevalence of neurobehavioural disorders, congenital malformations in females and abnormalities related to male reproductive system in Padre samples as compared to the reference group...the only difference between the two groups was the aerial spraying of endosulfan..is a causative factor” ...

This would clearly not suit industry...



- ⌘ ..maybe would also not suit government.
- ⌘ So Dubey Committee, which is based on **fudged data** accepted.
- ⌘ Not a consensus report. Not a signed report.
- ⌘ How has Central government accepted?
Why has it accepted report?
- ⌘ **What happens to people of Padre?**