

Endosulfan Poisoning and the Struggle of the community in Kasaragod to regain life and the living land

Sridhar R, Thanal, Kerala (India), 2008



- The story – Poisoned Villages
- Victims of Chemical Pest Control



- People Realise, Study and Act
- Community led Monitoring and Remediation



- Industry and Regulators reacts
- Lies and Threats to Cover-up failures



- Local Governments recognise community concerns
- Takes action

Endosulfan Poisoning and the Struggle of the community in Kasaragod

to regain life and the living land



Kerala is located in the south of India

The Story – Poisoned Villages



- Aerial spraying of Endosulfan since 1976 in cashew plantations spread over 4500 hectares around 15 villages in Kasaragod district.
- The cashew plantations belong to the state owned public sector company – Plantation Corporation of Kerala (PCK).
- Aerial spray of Endosulfan using helicopters was recommended by Government scientific bodies to cut cost of manual labour

The landscape



Land, People, Tradition, Culture

- Biodiversity rich mid-land hills draining into wetlands, river and sea
- Rich culture, peaceful tradition
- Most are farmers and farm labourers
- Many Indigenous communities most of them speaks the oldest dialect in Dravidian languages- "thulu".
- Land of unique heritage, especially in farming, water management

Land, People, Tradition, Culture



There are thousands of water sources in our village.

This one is a Traditional water source, *Suranga*

The Rain of Poison

Once up on a time in the villages of Kasargod the gods went crazy, the calves were born with deformities, many animals died , snakes disappeared, bees never returned

The RAIN of ENDOSULFAN had begun.

This was to protect cashew from tea mosquito, cut cost of labour and save money for the corporation.

Over 25,000 people are now paying the cost and many are no more to pay that.....



Victims of Endosulfan

**Report published in
1979**

aerial spray of pesticides makes **life cheaper than cash**



ble have to the
foreseeance.
down for aerial
clearly indicate that
ration should ar-

the corporation giving any
regard to these precautions,
it does not even bother to
give advance notice to the
public about the dates of

couple of days in a panchayat
area, why can't the con-
cerned authorities notify the
specific dates of spray instead
of keeping the public in ten-
sion and suspense for 60
long days? Instead of putting
up a show of 'advance notice',
it would be in the inter-
est of people if the corpora-
tion makes use of all the
available media to convey the
exact dates of spraying and
takes proper care during this
period to protect the common
man.

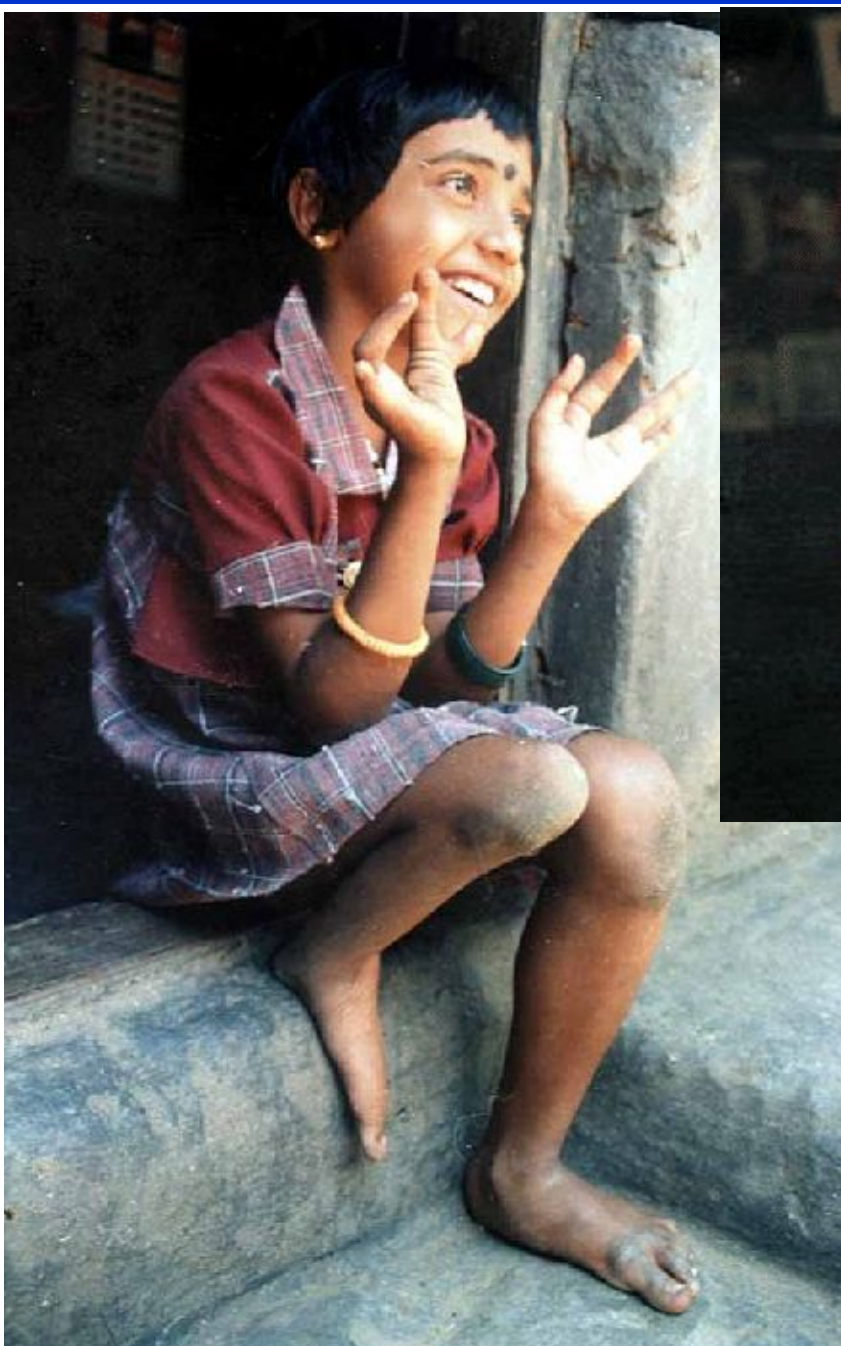


While the corporation no-
tice goes on to warn that
"until the power of the pesti-
cide diminishes, people
should neither collect food
from the area nor walk there
'carelessly' or allow their cat-
tle for grazing," on the other
hand, it doesn't mention the
number of days during which
the power of the pesticide re-
mains in the area or the name
of the antidote to be adminis-
tered in cases of danger. It
is the people expected to stay
indoors, keep their cattle tied
up and stop collecting food
for two full months plus the
period during which the
"power of the pesticide"

prayed: public health ignored.



Victims of Chemical Pest Control



Shruti, 12 year old girl now the most lucky survivor who is on her way of recovery with in her challenged limitation

People Realise, Study and Act



- Leelakumari, mother of two and working in agriculture department realises that what killed her brother and affected her son, daughter and herself is the spray. (1998)
- Sees similar health problems in community
- Files petition with local court to stop aerial spray



Bedu



**grand son
of Bedu**

People Realise, Study and Act

- PCK harass her, sprays her home, files police case
- Local Court orders stopping of aerial spraying – violates Article 21 of constitution – Right to Life (and Clean Environment)
- Case moves to High Court
- Leelakumari requests help from local environmental groups
- Thanal along with local environmental group SEEK conducts the first community health survey and starts monitoring. In the first two days itself of the 100 families surveyed more than 80% of them had at least two seriously affected cases in each family. Report submitted to District Collector, High Court and Government. (1999)
- Awareness spread to other areas, more public response.





Health problems seen in the villages sprayed with Endosulfan

- Congenital anomalies, mental retardation, physical deformities, cerebral palsy, epilepsy and hydrocephalus.
- Psychiatric problems, suicidal tendencies
- Doctors have reported many cases of cancer, especially of the liver and blood. Cancer among men is almost double that of women.
- Increased rate of breast, throat and intestinal cancer
- Infertility and undescended testis among men
- Miscarriages and hormonal irregularities among women
- Rheumatic complaints and paralysis was very common.
- Parkinson's Disease was also being reported.
- Endometriosis has been diagnosed.
- Skin disorders were very common.
- Respiratory diseases and frequent and persistent illness among children

People Realise, Study and Act

- Two doctors - Dr. Y S Mohankumar, Dr. Shripati identify about 250 cancer, mentally challenged and physically deformed people in their village.
- They join community to stop the spraying in 2000, but spraying continued under police protection. The Endosulfan spray protest action committee was formed.
- Both doctors were from the community and knew first hand all their patients and families.
- Teachers observe that children coming from one direction of the school are poor in studies and their physical and mental development are affected (*School Annual meeting records, 2000*)
- Centre for Science and Environment conducts chemical analysis of blood, milk, water, soil, leaves samples and finds massive contamination in area.
- National Human Rights Commission files case, orders ICMR to enquire.

People Realise, Study and Act – Endosulfan everywhere

OMNIPRESENT POISON

The maximum residue limits for the pesticide endosulfan in soil, water and vegetables from Padre have been breached several times over. But human blood! We couldn't find any maximum residue limit for that. The tests conducted at the CSE laboratory show that each resident of Padre whose blood sample was tested has endosulfan residues several hundred times the residue limit for water

Sample	Detected value of endosulfan*	Maximum residue limit (MRL)*	Number of times value exceeds MRL	Site/source of sample
Water	1.18	0.18*	7	Small stream in Kumbdaje village near Padre
Water	6.87	0.18*	38	Tank near the cashew plantation, Kajampady, Padre
Water	9.19	0.18*	51	The Kodenkiri stream near Varinagar, Padre
Butter	14.00	NA [†]	NA	From the milk of a cow of Saletatka, Padre
Cow's skin/fat tissue	49.99	0.1	500	From the abdominal region of a cow from Padre
Cow's Milk	31.80	0.5	64	From a cow that grazes around Kajampady, Padre
Cow's Milk	57.20	0.5	114	From a stall-fed cow in Kumbdaje village
Coconut oil	17.00	NA	NA	Extracted from produce of trees in Varinagar, Padre
Cashew	54.11	NA	NA	From a tree in the plantation near Kumbdaje village
Vegetables	31.24	0.4-2.0	78-16	Basak; leafy, spinach-like vegetable, from Kajampady
Human Milk	22.40	NA	NA	Lalitha, 35, resident of Kumbdaje village
Human Blood	108.90	NA	NA	Vishnu Kulkarni, 16; has epilepsy & mental retardation
Human Blood	114.13	NA	NA	Prabhawati Shastri, 35; has asthma & skin allergies
Human Blood	115.19	NA	NA	Mohana Kumar, 40; has chronic throat infection
Human Blood	109.50	NA	NA	Kittanna Shetty, 21; has cerebral palsy
Human Blood	196.47	NA	NA	Muthakka Shetty, 50; Kittanna Shetty's mother
Human Blood	176.90	NA	NA	Lalitha, 35, resident of Kumbdaje village
Live Frog	10.35	NA	NA	From a small stream in Kumbdaje village
Cashew	3.74	NA	NA	From the plantation near Kajampady, Padre
Spices	212.28	NA	NA	Pepper bunch from Kajampady, Padre
Fish	28.24	NA	NA	From a tank in Kajampady, Padre
Soil	35.16	0.09*	391	From Lalitha's house in Kumbdaje village
Soil	3.17	0.09*	35	From a few metres inside the plantation at Kajampady
Soil	6.40	0.09*	71	From plantation area on a hilltop in Periyal, Padre
Cashew leaves	6.52	NA	NA	From the heart of the plantation at Periyal, Padre

CSE study shocks the nation.

Agriculture Department wakes up to the problem, orders enquiry – to verify whether CSE is correct !

All their analysis reveals endosulfan presence but says not significant

Industry sponsors study – finds no contamination at all !!

People Realise, Study and Act – Media supports community

SCIENCE AND ENVIRONMENT FORTNIGHTLY

Down To Earth

NOVEMBER 2002

QUAKE-RAVAGED GUJARAT

SHOCK WAVES

crippling pesticides Kerala

Where is the science in our governance?

Future shock: more of drought and floods
No headway on setting fuel standards
Science of sinks gets trapped in a bog

THE HINDU

Magazine

Cashews for human life!

For over 20 years, the villages near the cashew plantations in Kasargod district, Kerala, have been devastated by an unusually large number of cancer deaths, neurological disorders and different kinds of physical and mental impairment. Recent reports in the media and studies done in the area indicate a strong link between the spraying of a pesticide called endosulfan and the deteriorating health of the local people.

ഭാരതീയ ശാസ്ത്രസംഗ്രഹം

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2002 ജൂലൈ 21

വാരിക

People Realise, Study and Act – Health experts confirm impacts

- Pesticide Action Network Asia and Pacific (PANAP) conducts Community Pesticide Monitoring led by Dr Romeo Quijano and experts from Community Health Cell, Thanal and local community leaders. Report confirms that “the occurrence of illnesses is due mainly to Endosulfan”
- District chapter of Indian Medical Association (IMA) organises meeting and discusses the situation and findings. IMA studies also confirm poisoning due to endosulfan, recommends remediation and relief.
- ICMR conducts detailed epidemiological study – concludes on effects on male reproductive organs of children and mental impairment due to exposure to endosulfan.

Regulations were never implemented – and can never be as well !!

Two Government committees and all independent studies confirmed gross failure in regulations and safety measures and recommended remediation and relief.

- The regulations were completely violated in Kasaragod
- Spraying had occurred at heights (upto 50 metres above canopy) which aided wind drift and wide spread of chemical into villages.
- Adequate notice to the community before spraying was sparingly followed.
- Protection of water bodies could never be implemented.
- Children in the fields and schools and cattle were the first victims
- Workers never used any precautions and were forced to be exposed
- The Insecticides Act and the Rules failed in protecting the people from exposure.

Regulations were never implemented – and can never be as well !!

The National Government fails to implement regulatory recommendations, monitor contamination.

- In 1991 and 1999 government committees to review the continued use of pesticides [Banerjee 1991, R B Singh 1999, Interministerial committee 1999] had recommended that endosulfan
 - should not be used near any water bodies and labelled thus.
 - Should not be sold in small packets.

These recommendations were never implemented.

- The Central Insecticide Board have not permitted aerial spraying since 1993.
- *But it continued illegally upto 2001.*

For whose interest ??

Industry and Regulators react

- Department of Agriculture Kerala constituted two studies – both find no contamination with endosulfan. One of the studies, released by Pesticide association - PMFAI (!!) was later discovered to have skewed their data.
- The Indian Ministry of Agriculture constitutes two committees – both find no link between endosulfan and local health problems. At least three scientific members of the committee dissent. Chairman accepts position of the two industry members.
- Ministry claims Endosulfan is “Safe” and “Soft”. Industry backs claims.
- Pesticide manufacture association threatens to sue local doctor for criticising Dr Dubey (Chairman of Committee constituted by Ministry of Agriculture where two members were from industry)

Endasura Vadhe (Slaining the Demon Endosulfan)

– A traditional theatre – spreading awareness



Local Governments recognise and takes action

- Local District Panchayath (Government) start relief and remediation work. Sets up a special endosulfan victims relief cell.
- State High Court and Government of Kerala bans use and sale of endosulfan
- Local community supported by Thanal, NIOH and health experts prepare remediation and relief plan for local government.
- State starts paying a solatium to families of dead. Commits to comprehensive relief and remediation work.
- More than 4000 cases of chronic illnesses have been identified and more to be surveyed.
- Till now Rs. 12 million spent. Another Rs. 5 million committed.
- District Panchayath declares to make Kasaragod Pesticide-free in 5 years.

Local Governments recognise and takes action

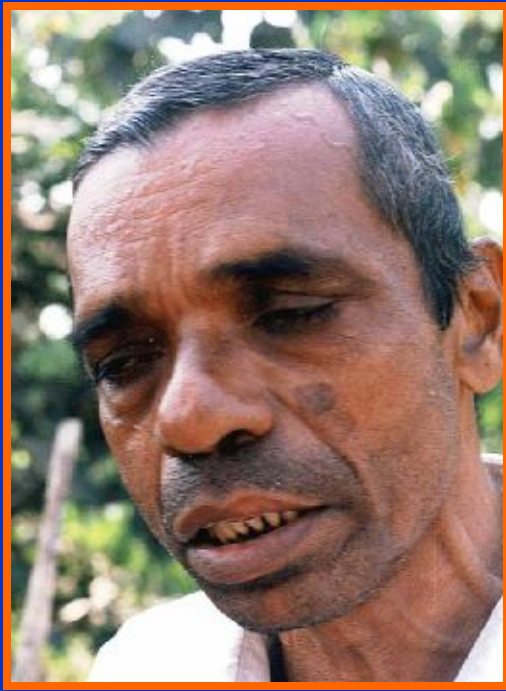


The Chief Minister of Kerala declares payment of relief money to families of victims and meets them in the village.

He promises to bring justice to the victims and states that the endosulfan manufacturers must pay for this crime.



They are no more – victims of wrong priorities !!



Kumaran Master

Sainaba

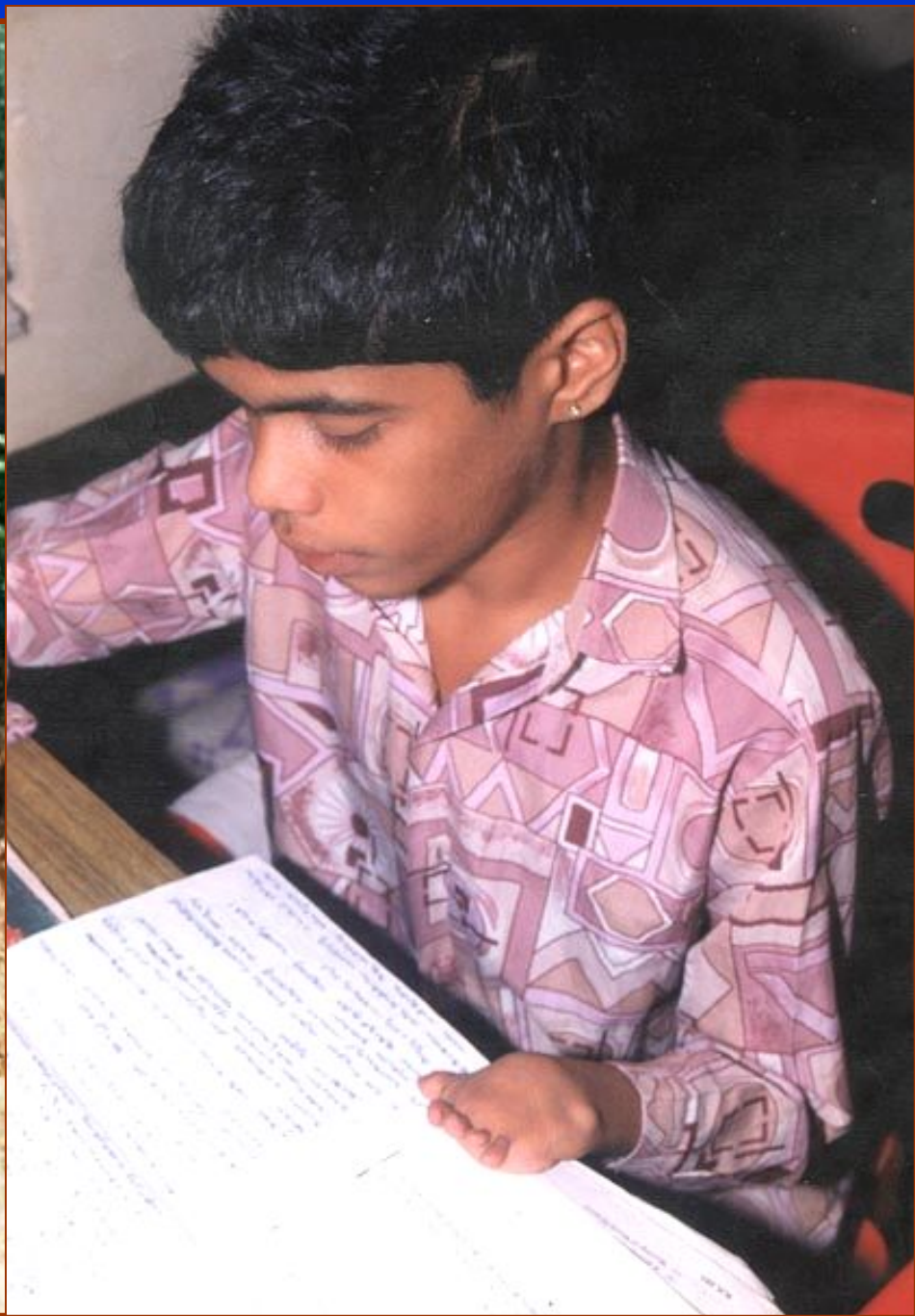


Balakrishnan

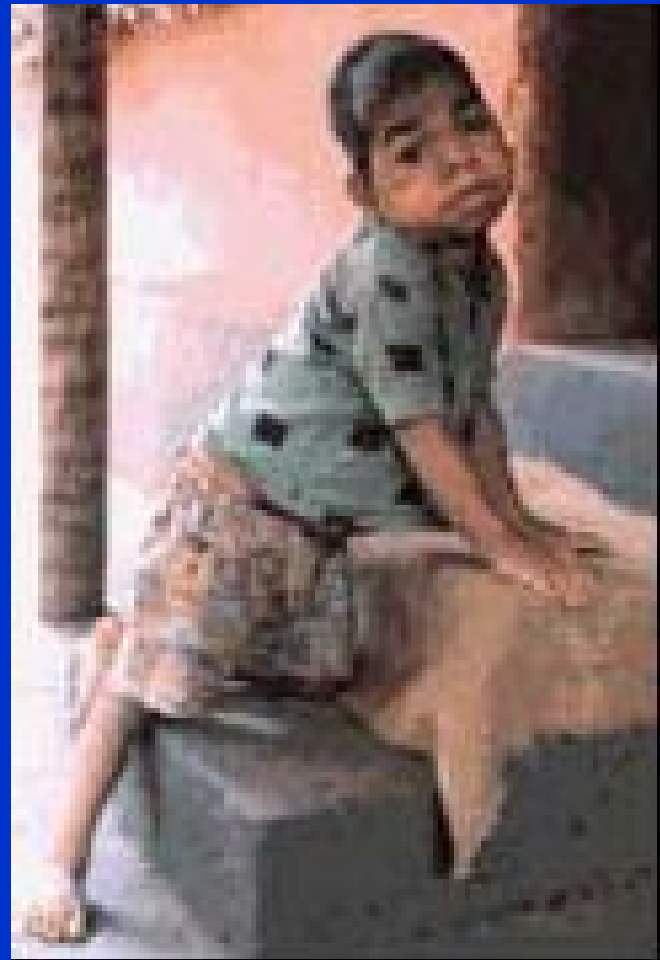
The State Government of Kerala paid Rs. 50,000 to 135 families of the dead as a solatium.

But a lot needs to be done to stop the suffering...









After the ban in 2002, There is a lot of hope...

In Kasaragod

- **No decrease in Cashew Production**
- **Honeybees are back , good honey production**
- **Crows , birds ,snakes, Frogs, Fishes and jackals reappearing**
- **Decrease in Epilepsy, Asthma, Miscarriages and birth of mentally and physically challenged children.**

In Kerala / India

- **A major pesticide awareness in the state / country**
- **National ban on aerial spraying. State ban on Endosulfan**

Globaly

- **“Ban Endosulfan Campaign” – More countries have started regulating / notifying / phasing out Endosulfan**

We appeal

For the people of Kasaragod, we appeal to all to support our relief and remediation work. We request you to get in touch with one of these emails given below for more information

- "Thanal" <thanal@md4.vsnl.net.in>
- <admin@thanal.co.in>
- "PAN Asia Pacific" <panap@panap.net>

Websites : www.thanal.co.in

www.panap.net

www.endosulphanvictims.org

Thank you for your attention