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NVESTEGATION OF UNUSUAL ILLNESSES
MATEGED BY ENDOSULFAN
ENPOSURE IN PAIDRE VILLAGE
OF KASARGOD DISTRICT (NEKERALA)
(GRST REPORT)





NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH (INDIAN COUNCIL OF MEDICAL RESEARCH) AHMEDABAD 380 016

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# Report of the Investigation of Unusual Illnesses Allegedly Produced by Endosulfan Exposure in Padre Village of Kasargod District (N. Kerala)

Reports of unusual diseases in certain villages of Kasargod district of Northern Kerala allegedly caused by spray of a pesticide, endosulfan, over the cashew plantations were published in Down to Earth (February 28<sup>th</sup>, 2001), The Hindu (July 22<sup>thl</sup> 2001), India Today (July 23<sup>thl</sup>, 2001) and several other magazines, local news papers and TV channels.

The National Human Rights Commission initiated suo moto action on the report entitled "Spray of Misery" published in India Today (July, 23 2001) and asked a number of agencies including ICMR to submit a report within four weeks. On the directives of the Director General ICMR, a three-member team from NIOH visited the affected areas and collected first hand information and a preliminary report was submitted to the NHRC. (Annexure 1). In the report it was mentioned that NIOH will carry out an environmental epidemiological study and submit the report within six months of which the first part of the report will be submitted by the end of three months and informed the Commission that the first results of the study will be available by the end of December 2001.

The review of the published reports showed following features:

The state of the s

- Around 1963-64, the agriculture department began planting cashew trees on the hills around Padre village in Kasargod district. In 1978, Plantation Corporation of Kerala (PCK) took over the plantations. Today, the area under PCK's Kasaragod Estate stands at 2,209 hectares. The aerial spray of Endosulfan is undertaken by PCK to control tea mosquito on cashew nut plantations for over 20 years.
- Several villages in the valley below the hill experience severe exposure to Endosulfan during the spray. The water bodies also get contaminated during the spray. There are unconfirmed reports of the disappearance of fish, frogs and snakes from the area following the aerial spray.

- 3. Cases of illnesses such as disorders of the central nervous system cerebral palsy, retardation of mental and/or physical growth, epilepsy among the children and congenital anomalies like stag hom limbs have been reported. There are also reports of cancer of the liver and blood; infertility and undescended testis among males; miscarriages and hormonal irregularities among women; skin disorders; and asthma, psychiatric problems and suicidal tendencies in the villages nearby cashew plantations.
- 4. Several villages near the cashew plantation are said to be affected by the diseases enumerated above. Amongst all these, 6<sup>th</sup> and 7<sup>th</sup> wards situated along the Kodenkiri stream in Enmakaje Gram Panchayat (village council) are reported to be the worst hit.
- 5. Team of researchers from Thanal, a Thiruvananthpuram based non-government organization carried out a house-to-house health survey in Periya, Cashew Plantation area of Kasargod district from October 1999 to December 1999. The researchers observed cases of anemia and generalized weakness in women and children, poor physical growth, frequent attacks of fever, numerous cases of infertility among men, miscarriages and menstrual disorders in women, kidney problems and swelling and discolouration of the skin of the limbs.
- Dr. Mohana Kumar Y S, a physician practicing in the area since 1982, has been keeping record of the cases coming to his clinic for treatment for the last ten years.
   His record as published in Down to Earth Magazine (28th February 2001) is follows:

List of confirmed cases of various diseases reported by Dr. Y.S. Mohankumar

Disease	No. of Cases
Cancer	49
Mental retardation	23
Congenital anomalies	9
Psychiatric cases	43
Epilepsy	23
Suicide	9
Total*	156
Total (by January 26)**	197
NOTE: * - cases counted available	by January 5, 2001 ** - break-up no

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- 7. Centre for Science and Environment (CSE) New Delhi analysed biological and environmental samples for Endosulfan residues on 17<sup>th</sup> February 2001, about one and a half month after the last aerial spray of Endosulfan carried out on 26<sup>th</sup> December 2000. The results published in the magazine "Down to Earth" showed that the concentration of Endosulfan in three water samples were 7 to 51 times higher than the maximum residue limit (MRL). Very high levels of Endosulfan were reported in samples of human blood, human milk, vegetables, spices, cow's milk, animal tissues, cashew, cashew leaves and soil. In one of the soil sample the levels of Endosulfan were 391 higher than MRL.
- 8. Fredrick Institute of Plant Protection and Toxicology (FIPPAT) at the request of PCK carried out evaluation of Endosulfan residues in 106 samples of human blood, one cow milk sample, one fish sample, 30 water samples, 29 soil samples and 28 cashew leave samples collected from 18.3.2001 to 02.05.2001 from Padre village. Their results show that there are no residues of Endosulfan in any of the

blood samples, cow milk and water samples. However, some residue of Endosulfan was detected in soil and leaf samples. The above reports have following weaknesses from scientific point of view:

- Only the number of persons suffering from diseases such as congenital malformations, cancers, psychiatric illnesses etc. without referring to the denominator (i.e. out of how many) was reported. These diseases also occur with varying frequency in general population. Hence their occurrence does not indicate exposure to unusual causative factor unless, the excessive incidence/prevalence compared to other similar population is proved. Therefore to establish the higher prevalence/incidence of any disease one must include control (referent) population in the study and then compare prevalence/incidence of various diseases.
- CSE Study: Quantitative estimation of Endosulfan levels in biological and environmental samples was done by a very sensitive and sophisticated technique called gas chromatography equipped with the ECD detector. This technique although very sophisticated for quantitative estimation, cannot identify an unknown substance, which needs to be confirmed by using standard tests. This was particularly essential because the investigators reported the levels of Endosulfan varying between 108 and 196 ppm in the blood of all subjects with varying degrees of illnesses. These levels are much higher than the reported blood levels of 4-8 ppm in three fatal Endosulfan poisoning cases (Coutselinis A., Kentarchou E and Boukis D. 1978 Concentration level of endosulfan in biological material (Report of three cases) Forensic Sc. 11:75 ) and 2.9 ppm in another case of fatal Endosulfan poisoning (Blanco-Coronado JL Repetto M Geinestal RJ et al. 1992. Acute intoxication by endosulfan J Clin Toxicol 30:575-583.). No attempt was made by the investigator to confirm the presence of Endosulfan.
- The FIPPAT study, though started one month later than CSE, shows just the opposite results, i.e. complete absence of endosulfan residues in blood, cow milk and water samples. The study reported Endosulphan residues in the range of 0.001 to 0.012 ppm in soil samples and 0.04 to 2.863 ppm in cashew leave samples. The FIPPAT did not use any confirmative test for Endosulfan.

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A well-planned environmental epidemiological study was therefore necessary to confirm the high incidence of diseases in the villages near the cashew plantation in Kasargod district and evaluate exposure to endosulfan and to find out its relationship with Endosulfan if any. NIOH carried out the actual field study from 24<sup>th</sup> Sept. 2001 to 7<sup>th</sup> October 2001 with the following objectives.

# Objectives:

- To confirm the reported disease pattern in the exposed populations and evaluate the
  magnitude of the problem by comparison with control populations through a well
  designed epidemiological study.
- To search for etiological factors if the exposed populations show abnormal disease patterns and generate a hypothesis.
- To confirm the presence of Endosulfan residues in environmental and biological samples and estimate their levels.

## Methodology and Plan of Work:

# 1. Study design:

- 1.1 For designing the study, discussions were held with senior members of the Scientific Advisory Committee of NIOH and its scientists and it was decided to start the first phase of the study in school children of Padre village, which is to be taken as the exposed area. The school children were selected for the following reasons.
  - a) Majority of the illnesses have been reported among the children.
  - b) It is physically very difficult to conduct a house-to-house survey involving specialized medical examination and laboratory investigations, as houses in Padre village are very scattered due to the topography of the area.
  - c) To estimate prevalence of disease, it is important that all the individuals selected for the study through statistical process, participate in the study. Nonparticipation of the selected population could result in selection bias, which

will make the validity and reliability of the estimates doubtful. It was expected that many of the villagers may not cooperate due to repeated visits of different committees and NGOs and only affected families (motivated groups) may come forward thus causing a bias in the selection.

- d) Due to high literacy standards in Kerala, most of the children attend school and through them it would be easy to call the parents to the school and record details of any diseases encountered in the family members.
- c) Co-operation among school children could be ensured due to goodwill of the state education department and the district collector.
- f) Study parameters related to growth and development in children need information on accurate age. The school records provide date of birth for the purpose.
- 1.2 At our request, the district authorities of the state education department sent a circular to all schools in the district to cooperate with the NIOH team.
- 1.3 Special proforma were designed separately for school children and families. Prof. U. V. Shenoy, Head, Dept. of Pediatrics, K. M. C. Mangalore extended full cooperation of his department for examination of school children. He also helped in design of proforma for school children (see annexure 2,3).
- 1.4 Selection of control groups. For any epidemiological study it is necessary to select a control group, which should be comparable with the exposed group in all respects except for the exposure, which in the present case was exposure to aerial spray of Endosulfan. The study group consisted of 619 children studying in Govt. Higher Secondary School, P.O. Vaninagar in Padre village. For comparison, 416 school children from two schools in Miyapavadu, Meenja Panchayath viz. Sri Vidya Vardanaka High School and Vani Vilas aided L. P. School were selected. The selection of controls was finalized after ensuring that these children had a similar socioeconomic background as the exposed group, and the control schools were also Kannada medium schools like the school in Padre. Meenja Panchayath is about 25 km. North of Padre and also has cashew nut crops but it was

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confirmed that this crop has never had any aerial spray of endosulfan. Three small rivers separate Meenja from Padre area thereby excluding any possibility of cross contamination of water sources.

- 1.5 The Regional Remote Sensing Service Centre (RRSSC) at Bangalore, an organization belonging to Indian Space Research Organization (ISRO) was requested to provide physiography of the exposed and control areas through satellite imaging. (Annexure 4)
- 1.6 Teams from following three organizations participated in the study. (Annexure 5)
  - 1. National Institute of Occupational Health (NIOH), Ahmedabad.
  - 2. Regional Occupational Health Centre (ROHC) (S), Bangalore.
  - 3. Department of Pediatrics, Kasturba Medical College, Mangalore.
- 1.7 All staff were explained the objectives of the study and trained for different aspects. During briefing/training the importance of unbiased recording of abnormalities (using same technique and criteria for exposed and control subjects) was emphasized.
- 1.8 The laboratory techniques and methodologies were standardized at NIOH and the necessary glassware, chemicals, reagents and equipments were carried from NIOH/ROHC to the study site. A field laboratory was set up for lymphocyte cultures and separation of serum samples. The serum and environmental samples were coded to avoid bias.
- 1.9 Same teams performed examination of children belonging to exposed and control groups, using same instruments and similar techniques and same persons recorded the family details.
- 2. Conduct of the study:
- 2.1. Examination of School children:

After all above mentioned preparations and two preliminary visits, the actual study was started from 24<sup>th</sup> September and continued till 7<sup>th</sup> of October 2001. Every day about 50-70 children were asked to bring their parents with them on the next day. The

parents were explained the objectives of the study and consent form in the local language was read out to them. Only after taking written consent of one of the parents, the children were examined and only in willing cases blood samples were collected and the sexual maturity rating (SMR) examination was performed. The SMR examination of the boys and girls was carried out by male and female pediatricians respectively observing necessary privacy required for this delicate examination. Every case whether from exposed or control group, which showed any major abnormality, was referred to a senior pediatrician and only after reconfirming the findings, the proformas were filled up.

# 2.2: Recording of major illnesses in the family;

The parents who accompanied their wards were interviewed by trained staff, who could communicate well in the local languages (Kannada, Malyalam, Tulu or Konkani), on the same day. Details about all family members living in the household were recorded with special reference to the important diseases reported in the area. Deaths in the family and their causes were also recorded and the respondents were asked to bring related case papers if available.

Checking of the proformas and data entry: During the study, the proforma were checked daily by one of the senior investigators for any anomalies which were rectified on the next day. Before data analysis, the investigators and the statistician rechecked the proforma and in doubtful cases the examining pediatricians were consulted.

### 2.3 Investigations:

2.3.1 Satellite based assessment of physiographic disposition of villages in the cashew plantation area of Kasargod district: The Regional Remote Sensing Service Centre (RRSSC), Bangalore, of Indian Space Research Organization (ISRO) was requested to assess and provide information on environmental data such as topographic location of the villages, water sources, land use, crop and type of plantation in the region. Dr. P. P. Nageswara Rao, Head, RRSSC, Bangalore and his team analysed the satellite data and visited the villages from 2<sup>nd</sup> to 4<sup>th</sup> November, 2001.

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- 2.3.2 Analysis of blood samples: The blood samples were collected for the following investigations:
  - 1. Endosulfan residues.
  - 2. Hormonal Analysis.:
  - i. Thyroid Hormones: T3, T4 and TSH
  - ii. Sex Hormones: Testoterone, Oestradiol, Progestrone, FSH, LH, Prolactin and growth hormone.
  - iii. Cytogenetic Studies Study of chromosomal aberrations and sister chromatid exchange in peripheral lymphocyte culture.

A total of 262 (170 exposed + 92 control) school children agreed for the blood examination. After separation, the serum samples were carried by air under dry ice (-80°C) to NIOH. Lymphocyte culture were carried out in the field laboratory.

2.3.3 Estimation of Endosulfan residues in environmental samples.

The methods of sample collection and analyses are described in Annexure  $\boldsymbol{6}.$ 

# RESULTS:

1. Endosulfan Levels in Water and Blood Samples:

Table 1. Levels of Endosulfan Residues in water Samples

Sample & Endosulfan	Be Chrosulan	Endosulfan	Total Endosulfan (sum
Code (DDb)	(ppb)	sulfate (ppb)	of α, β and Endosulfan sulfate)
PS #200 - 800 0:0086	Men = 500 N==0.0088	20:0035	10.0209
767#3656 0.0062	0:0023	7 N.D.	1844 × 0.0085
50m 2000 A 2000 0.0065	\$216.0.0022	MEND.	S-0.558.0.0087.
1983#Jens   250 0.0046 1276	22 0.0032 12 13 13	AND.	20.0078
#8.447	sign 0.0123 : 3日 g	WAN DESIGN	######################################
W 9 # 9 7 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.0416	0.0113	*E************************************
Maria Maria P. Selection of Maria St	数据共和的现在分词 电影客时间 诗	国家的人 拉明的语	A STATE OF THE STA

N.D. = Not detected.

Details of the location from where the samples have been collected:

- #2 Sample collected from the well used by the students of Primary school, Vaninagar
- #3 Sample collected from the house (well) situated 50 meters away from Kodenkiri stream.

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- # 5 Sample from the house (Suranga) situated 50 meters away from Kodenkiri stream.
- $\#\,7$  Sample from small water fall joining Kodenkiri below the road to Kajampady village.
- #8 Sample from the well of a house just next to Kodenkiri stream (<5 meters).
- #9 Sample from the pond in the course of fall joining Kodenkiri stream (below road to Kajampady).

Table 1 shows the levels of endosulfan in various water bodies. Most of these water bodies form the source of drinking and irrigation water for the villagers. These levels of endosulfan are much below the US Environmental Protection Agency (EPA) recommended maximum amount of endosulfan in lakes, rivers, and streams of 74 parts endosulfan per billion parts of water (74 ppb). But the detection of even very small endosulfan residues signifies continuous exposure of the population since the spray began more than 20 years back. It should however, be appreciated that the levels of endosulfan reported by us do not represent the real levels of exposure and probably represents the lowest levels for the year for following reasons:

- Water samples were collected in September October 2001, almost nine to ten months
  after the last spray of endosulfan and just two months before the next round was due had
  there been no ban on the aerial spray.
- The district has an average annual rain fall of 3500 mm (140 inches) and the rainy season extends from end of May to October. Heavy rain would have washed out most of the endosulfan present in the water and soil.

Table 2 shows the presence of endosulfan residues in blood samples of children from Vaninagar school. Endosulfan could be detected in 18 out of the 22 samples analyzed so far. Alpha and beta endosulfan have been reported to have excretion half life of 23 and 27 hours respectively (Arrebola FJ Martinex Vidal JL et al 1999. Excretion study of endosulfan in urine of a pest control operator. Toxicol Letters 107:15-20.). The presence of endosulfan in blood therefore signifies continuous exposure which could be through water, food or soil. Endosulfan is most persistent in soil. Exposure through soil is particularly important for children during outdoor activities such as playing. Moreover, the intake of food, water and air per kg of body weight which would result in greater intake of the chemical.

Table 2 Levels of Endosulfan Residues in blood samples of children of Vaninagar School

Subject Code	α- Endosulfan (ppb) (a)	β - Endosulfan (ppb) (b)	Endosulfan sulfate (ppb) (c)	Total Endosulfan (a+b+c)
<b>加起到第</b> 一地	34.49	30.06	14.19	78.74
<b>建筑</b> 设置	9.18	N.D.	N.D.	9.18
W 120 - 120	3.5	72.24.25.7.44.4	6.89	17.83
<b>1</b> (1)	16.26	12.18	N.D.	28.44
1.11	30° n 8' 5.08	5.02	3.77	13.87
EM IR	2.35	23.6	22:14	48.09
	9.71	3.04	11.75	24.5
	2.95	1.64	2.9	7.49
486	3.16	1.25	8.59	13
are a second	Transaction	Sanither 1.5.5 mendara	Temper 2: 15 miles	17.41
<b>建</b>	6.64	N.D.		16.07
AND IN	16 y 17 5.35 j.,	2.57	N.D.	7.92
<b>建筑</b>	15.2kgt.4.08	(数1.1. s3.31 海北:	N.D.	7.39
<b>期料</b> 1%	\$ 5.09 FF TE	25 1 + 10.04	2,79	17.92
提出的原	编号编码1,42 F A 1657	国际第18 3.42 Ar est	nava N.D.	4.84
<b>61</b> (10 y 11)	Tin.N.D. L	eleni N.D.	N.D.	ALA, N.D.
	A PARTY TO	CAN CAN D. S. COM	N.D.	N.D.
<b>94</b> 3482 - 434	High 18 4.67:10 15:50	244 h 5.42 m	建定12.17.57 在20.78	11.66
A 112	1.28	N.D.	J., N.D.	¢ 1.28
44 420 FEE	N.D.	N.D.		N.D.
T. 12 ( 4 )	N.D.	N.D.	N.D.	N.D.
	Fall (M.D.41badeense	1237.4.554	117975	33,57

N.D. = Not detected.

# Medical Findings:

# Comparison of Anthropometric data:

Table 3 Mean (± SD) age, height and weight in control and exposed population

		0. 0	9	The suppos	ou population
		Contr (n=4)	ol 6)	Es (n	posed =619)
	ltemate (SS(444)		Viole (1976)	- C-1 77 01 0	26 (68 59 a)
(Height (cms))	$129 \pm 15$	6 (182) i. l	30 ± 15.4 (23)		[1] [1] [1] [1] [1] [1] [1] [1] [1] [1]
Weight (kg)	12 12 12 12 12 12 12 12 12 12 12 12 12 1	9.374.2	725.7 ± 81168	30.8 = 11/1	101211111111111111111111111111111111111

Table 3 shows the comparison of mean age, height and weight of the exposed and control group of study population. The sex wise distribution is comparable in exposed and control groups. The mean age of the exposed group is higher as compared to controls. This is because the school taken for exposed population at Padre has classes up to XII standard, whereas the schools in control village has classes up to X standard.

Table 4 Average (± SD) height (cms) and weight (kg) of the exposed and control groups according to sex

Age (completed	Control				Exposed			
(completed	. Fem	ale	М	ale	Fer	nale	М	ale
40.	Height	Weight	Height	Weight	Height	Weight	Height	Weight
Below 10 (337)	116 ± 9.75	18.6 ± 3.50	116 ± 9.63	19.1 ± 3.78	115 ± 8.07	18.4 ± 4.27	118 ± 8.44	20.3 ± 5.82
10 (91)	131 ± 6.22	25.1 ± 4.07	130 ± 4.35	24.5 ± 2.73	128 ± 7.72	23.7 ± 3.24	128 ± 5.86	22.9 1
11 (117)	138 ± 6.71	28.7 ± 4.80	135 ± 7.07	26.6 ± 3.91	134 ± 6.52	26.5 ± 3.88	134 ± 7.43	25.4 ± 4.47
12 (117)	140 ± 5.82	30.8 ± 5.54	138 ± 7.28	29.1 ± 6.03	144 ± 9.23	34,7 ± 7.59	138 ± 7.76	29.5 ± 6.36
13 (105)	143 ± 6.63	33.8 ± 9.14	141 ± 8.33	31.0 ± 6.63	147 ± 6.23	35.9 ± 5.38	142 ± 9.36	32.7 ± 7.30
14 (95)	147 ± 6.13	37.4 ± 6.20	149 ± 8.21	35.0 ± 4.81	148 ± 5.70	40.3 ± 6.58	151 ± 9.28	37.4 ± 12.9
15 (83)	151 ± 6.78	44.0 ± 5.15	153 ± 6.47	39.7 ± 5.07	154 ± 8.57	42.7 ± 7.96	155 ± 7.47	40.2 ± 6,89
16 (43)	146 ± 6.78	36.3 ± 4.35	154 ± 7.03	41.8 ± 9.24	147 ± 7.25	39.8 ± 6.69	159 ± 8.13	43.7 ± 7.00
17 (21)	144 ± 0.00	30.0 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	154 ± 5.38	49.0 ± 9.47	160 ± 6.10	45.8 ± 6.45
18 and above (17)	140 ± 0.00	34.0 ± 0.00	145 ± 2.83	35.5 ± 3.54	155 ± 8.96	41.0 ± 5.48	164 ± 7.85	50.8 ± 9.28

Figures in bracket indicate number of subjects whose data on height and weight is available

Table 4 shows comparison of mean-height and weight of the exposed and control population according to age and sex. It may be noted that the data for height and weight were not available for 9 subjects. It is seen that mean height and weight are in exposed and control subjects are comparable for the same age and sex group. Nutrition and ethnic background are the two major factors, which determine the height and weight. The results thus signify that the nutritional status of the exposed and control population of the two groups are comparable.

Neurobehavioural problems: These were investigated both subjectively as well as by objective tests.

Table 5. Prevalence of scholastic backwardness (learning disability) as reported by the class teacher and the results of annual examinations.

	Control Exposed (416) (619)	Significance	desta production (958%) (me divisoral)
Bearing disability	(10 60 (2,60%) (10,7%)	P<0.001	4.03 (2.316=7/454)
Retained in the	76   126   13 50%   720 40%	P=0.0055	(1,13 = 2,0 <b>2</b> )

Table 5 shows the prevalence of scholastic backwardness (learning disability) as reported by the class teacher and results of annual examinations. It is seen that the prevalence of poor scholastic performance and the incidence of being detained into the same class was significantly higher in the exposed children as compared to the controls.

Table 6 shows the performance of the two groups of children in a test called 'Draw A Man Test' which is a standard but preliminary test used to evaluate Intelligence Quotient (IQ) of children between 3-15 years of age. This is a simple screening test for IQ. The child is asked to draw a man as perceived by him and the scoring is done on the basis of standard laid down criteria. The test was administered to children up to 15 years of age in both groups and the results show that the proportion of children having low IQ was significantly higher in the exposed group. The proportion of children having higher IQ was also lower in the exposed

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group. As an isolated test, it has very limited significance, however, if the results of this test are seen in the light of the findings shown in previous table, it assumes greater significance.

Table 6. Results of IQ evaluation by Draw A Man Test in Exposed and control population.

IQ range	Control	Exposed	Significance
201	155/2391	398/5111	P<0.001
60.06-0.00	(64,90%))	(77/90%)	
84-115.99	68/239	107/511	
	(28-50%)	(20,90%))	
	16/239	6/5110	
	(6.70%)	(1.20%)	

Table 7. Behaviour in the class as reported by the class teacher.

Behaviour	Control (416)	Exposed (619)	Significance
Aggressive	(0/4116) (0(00/6)	(012096) (012006)	P=010012
Avirogani	* 17/4116 (0),202/6)	(11/619 (11/619)	
Resiless	0/4116 ((010026)	2/6(19) (0.30%)	
Normal	415/416 (99/80%)	(96:60%)	

Table 7 shows abnormal behaviour as reported by the teachers in two groups. The prevalence of arrogant and aggressive behaviour and restlessness were higher in the exposed group as compared to the controls. The overall prevalence of these behavioural abnormalities was

significantly higher in exposed group as compared to the controls. The findings reported in tables 5, 6 and 7 taken together signify that in the exposed group the children are having a number of functional abnormalities of the nervous system which though not severe enough to prevent them from attending school, may interfere with their optimal intellectual development and total personality.

Table –8 Prevalence of seizure disorders in exposed and control subjects according

	Female Male
	Control (1924) 15185 (1955) 2032 38 472 1540 72 20
Epilepsy/seizure disorder	
4	Control 5 2 3 /4 8 3 / (1 6 4 ) 7 (3 4 5 1 7 2 2 3 7 0 1 4 3 )
Rebrile convulsion of	
	EEEXposed() 4.258 (1555)) 2.54 (5171)
	# Promittor: 1/2 - 1/2   1/2
Any of the above	
-	Exposed 1. 1.97258 (63/49) 5. 5. 5. 6/9/19/21/10/49
<b>祖籍的证明</b> ,在1000年的日本的	E this course is a larger of the delication of the course

Figures in parenthesis are percentages.

Table 8 shows the prevalence of seizure disorders in exposed and control population. The diagnosis of epilepsy or seizure disorder was made by the examining paediatrician only in those cases where there was a clear-cut history suggesting the diagnosis. The history of convulsions regularly associated with fever has been classified as febrile convulsions. The prevalence of epilepsy was higher in exposed girls, however, the differences were statistically non-significant.

#### Congenital abnormalities:

Table 9. Prevalence of congenital abnormalities

rable 5. Frevalo	ince or conge	intar abnormanties	
	Group	Female	Male
Congenital hydrocele	Control"	0 / 183 ( 0.00)	0 / 233 ( 0.00)
Congenial hydroceic	Exposed	0 / 258 ( 0.00)	4/361(1.11)
Land American Company	Control	0 / 183 ( 0.00)	0 / 233 ( 0.00)
Undescended Testes (Cryptorchidism)	Exposed	0 / 258 ( 0.00)	2/361 (0.55)
idda - seas conserva	Control	0 / 183 ( 0.00)	1 / 233 ( 0.43)
Congenital Inguinal Hernia	Exposed	0 / 258 ( 0.00)	1/361 (0.28)
Missier Name	Control	0 / 183 ( 0.00)	1 / 233 (0.43)
Macrocaphely	Exposed	0 / 258 ( 0.39)	0/361 (0.00)
See 1. A. L. Linner	Control	0 / 183 ( 0.00)	1 / 233 ( 0.43)
Minor malformation	Exposed	0 / 258 ( 0.00)	0 / 361 ( 0.00)
at take	Control	1 / 183 ( 0.55)	4 /233 ( 1.72)
Congenital heart disease	Exposed	97258 (3.49)	27 361 ( 0.55)
Color	Control	-07183 (0.00)	07.233 ( 0.00)
Cerebral Palsy	Exposed	0 / 258 ( 0.00)	1/361 (0.28)
ato.	Control	2 / 183 ( 1.09)	1 / 233 ( 0.43)
Congenital skeletal disorder	Exposed	5 / 258 ( 1.94)	3/361 (0.83)
	Control	0,/183 ( 0.00)	1/233 (0.43)
Congenital cataract	Exposed	17 258 ( 0.39)	27361 ( 0.55)
	Control	0/183 (0.00)	0 / 233 ( 0.00)
Congenital retinopathy:	Exposed	1 / 258 ( 0.39)	1/361 (0.28)
	Control	2/ 183 ( 1.09)	8/ 233 ( 3.43
Any congenital abnormality	Exposed	15/ 258 ( 5.8)	14/361 ( 3.88)
Table Bill (NEW CALL)		5.32 (1.23 – 22.98)	1.13 (0.48 – 2.65)
Relative Risk (95% C.L.)		(p < 0.05)	NS

Figures in parenthesis are percentages

<sup>\*</sup>One exposed male, one exposed female and one control female showed two congenital abnormalities.

Table 9 shows the prevalence of various congenital abnormalities in exposed and control subjects. The overall prevalence of congenital abnormalities was significantly higher in the exposed female as compared to the control female. The prominent abnormalities were congenital heart diseases and skeletal abnormalities. The diagnosis of congenital heart disease was based on clinical findings and the examining paediatricians have suggested confirmation diagnosis by echocardiography and other investigations. The abnormalities of testes like Cryptorchidism and hydrocele were reported exclusively amongst the exposed subjects. The former abnormality is suspected to be the result of exposure to the environmental oestrogens of the mother during the pregnancy.

# Reproductive Development:

Female Subjects: In most of the girls the definite time of menarche could not be elicited. Therefore comparison is made between distribution of menstruating girls according to age. It is seen that the proportion girls who had attained menarche was higher in exposed groups 11,12,13,14 and 15 years. Overall these differences are statistically significant. It may be noted that 5 girls above 16 years in the exposed group and one girl in control group who had not attained menarche need to be investigated

Table 10 comparison of age wise distribution of menstruating girls.

Age Group (completed years)	Control	Exposed		
Below 10	**F0/89 ( 0.00) 45	0 / 71 ((0.00)		
10	52-07-11-(-0.00)	0/18((0,00))		
	\$\$10!/16!(£0:00)***	3//29 (10:3)		
12	17/21 ((4/8)	8/35(22.9)		
18	47/16 (25:0)	13 / 25 (52 0) SW / 1		
14	45-11/17 (64:7) is:	16/26(61.5)		
15	数457/8 (62:5)5元	21/23/(91/3)		
6	47/41(100:0) = h	17/21 (81.0)		
17 and above	NS = 0/1 (0.00) = 035	(\$10°(90.0)		
Odds Ratio: 1.56				
95% Confidence Interval 1.10 –	2.21	· <b>1</b>		

Table 11. Prevalence of Menstrual Cycle Disorders

	Control	Exposed	Significance
	25	87	Significance
Menstrual period		52	
more than 4 days		(50,77%)	P = 0.001
Excessive flow-		111	NS.
	(4.00%);	÷/(12.60%)	
-Irregular cycle	0		NS
	(0:00%)	(12:60%).6-	
Excessive flow or	1	19	
Irregular cycle	(4.00%)	(21.80%)	P=0.041

Table 11 shows that the prevalence of menstrual disorders was significantly higher in the exposed group.

Table 12. Female subjects showing SMR grade 2 or more for breast development and/or pubic hair

Age Group (completed years)	Control	Exposed
15 - 19 <del>- 1</del> - 19 - 19 - 19 - 19 - 19 - 19 - 19	0 / 67 ( 0.00)	0 / 71 ( 0.00)
10.5 Z. 1 E.	0/2(0.00)	2 / 14 (14.29)
11198-2004	N9 5 0 / 1(-)	3 / 5 (60.00)
126-20-20-2	2 / 3 (66.67)	6 / 8 (75.00)
138	0/1(0.00)	2/3 (66.7)
1444	0/1(0.00).	2 / 2 (100.0)
E158	1/1 (100.0)	1 / 1 (100.0)
167	0/0(-)	4 / 4 (100.0)

Table 12 shows the number of female subjects showing SMR grade 2 or more for breast development and/or pubic hair. It may noted that limited number of girls consented for SMR evaluation. Although the number of girls attaining puberty earlier is higher in exposed group, definite conclusions can not be drawn because of small number in each group.

	gniffeance	FNS.	=0.039	N.	2=0.032	P=0.037	>0.001	NS	=0.001				ufficance		=0.039	900.0≡	NS	NS	NS	NS	NS	NS			NS
	S S		0 ET			7865		81.21		1.69			S O O		183	6			144	.33	41/1	.13	.15	6,6	74
Exposed	OS III	297 12598	357 52 744	86.4 (1993)	77, 63, 134	909 82-764	23 (1957	33: 3:103	3	50 2.9665		pasodsg	S.D.	1 00	8: 12,2821	9,11,746	7.42.1089	7-121396184	4 1 2 9900	7 2.2032	7, 2,2276	5 3.0988	7 11.9223	7. 2.0656	0 6.2915
Temale	No.	882.88	10.5			16.166	961	8 11113	45,614.00	1,203,12	Male		No Mea	00.11	四篇文6	24,534	35-17-67	17, 57,85	21, 18386	18 7,666	13 7292	6 7,538	7.866	2,666	7.750
letino.	GS.	77,022,827	0 2.0000	E 1349	250	4,004		3.0208	11.5000			South S	CI S		47.64	2,1328	3.02703	12,4808,117	239	16	1.4412	2.0000			0000
	Neil Neil	9.022	10.000	8:025	7650	057580	25.283	93750	8.2500	10.000			Меап		F 8 8 9 4 7	8.1250	8.1145	# B7 8235#	7.6190	6.6111	6.9231	7.0000			0.0000
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										Je 17 and			enno.			01				2.45.5	15	2 16	200.17	8	1
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Table 13 shows the average skin fold thickness in exposed and control population according to age and sex. In the female rubjects the average skin fold thickness is higher in the age groups 12,13, 14, 15 and 16. These differences are statistically significant in the age groups 12, 13, 14, and 16. This age groups belong to the pre-pubertal and pubertal period. In male subjects, the average thickness of the skin fold was significantly lower in the age groups Below 10 and 10 years. In addition to nutrition, the skin fold thickness particularly in female subjects is affected by the levels of sex hormones.

# Male Subjects:

Table 14. Male subjects showing SMR grade 2 or more for pubic hair, penis and testes.

Will a grant of	Pubic	Hair	Pe	nis	Te	stes
Age Group (completed years)	Exposed	Control	Control	Exposed	Control	Exposed
15E-9-11 (A) 11 (A)	11/486	0//81	(213):86 S	22//81	91 / 86th	#11/481F
	(31:16);	(:0:00)	(11.16)	(246)	((1:16)	(°iL23)
10	31/4174	25/27	7 / 17 /	c9://27/	5//17	97/27
	(17,65)	(7.41)	(41:18).	(83,38)	(29,41).	(33(33))
	747/17	2//2158	16//17	55/21	257/17/5	67/21
	(23(53))	(19152)	(35:29)	(28.81)(4	(29.41)	(28,57)
12	9//12/5	51½19±	19//12/1	5/194	87/12	6:/-19:2
	(75.00)	(5.26)	(75,00)	(26.32)	(66.67)	(31.58);
130-150-150-150-150-150-150-150-150-150-15	\$11//13%	77/617	111/413	11/178	20110/413	211/17
	(84.62)1	(41/18)	(84.62)	(64,71)	(84,62)	(64.71)
144	14/4152	10//12	14//15	9/:12	2147(15)	6101/s12
	(9838).	(83,33)	(93(33)):	(75.00)	(03133));	(83.33)
15854944	87,913	7/611	97/9 sid	09/111	8//9/	9/4119
	(88.89)	(63,64)	(100.0)	(81,82)=	(88/89)	(81L82) =
16.4	47/35 N	2//3/05	5//5	11//3	51//5160	#143×#
	(80.0)	(66 67)	(100:0)	(33,33)	(100.0)	(38-33)
Odds Ratio	2.6	6		1	1	43
95% Confidence Interval	1.77 –	3.99	1.17 -	2.21	1.04	1.97
Statistical Significance	p< 0	01	P<0	.01	p<(	.05

Figures in parenthesis indicate percentage.

Table 14, shows number of male subjects showing SMR grade 2 or more for pubic hair, penis and testes. It is seen that in most of the age groups, the number of boys showing SMR changes were lower in exposed group as compared to controls. The overall differences were statistically significant. Figures 1, 2 and 3 illustrate average SMR scores for pubic hair, penis and testes for each age group. The average SMR scores were lower in the exposed group as compared to controls.

Figure 1 Mean (SEM) of SMR Score for Pubic Hair

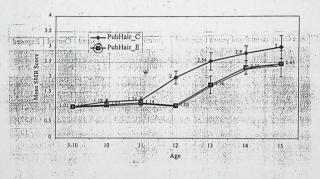
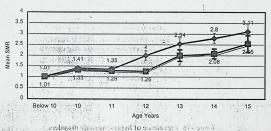
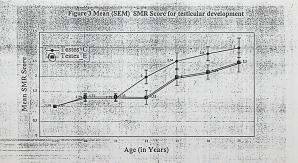


Figure 2 Mean SMR Score for Penis according to age



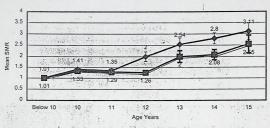
attendent to the state of the s



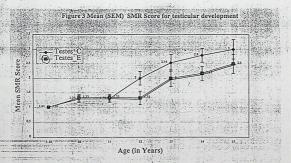
#### Other Abnormalities:

Table 15 shows the prevalence of goitre in the exposed and control subjects. It may be noted that all cases of goitre were classified as physiological goitre occurring at the onset of puberty. The significance of higher prevalence of this physiological variation in the exposed girls is not clear and may be investigated in further details.

Figure 2 Mean SMR Score for Penis according to age



Euro - 16 revalence of hyperseletrothe disorders.



#### Other Abnormalities:

Table 15 shows the prevalence of goitre in the exposed and control subjects. It may be noted that all cases of goitre were classified as physiological goitre occurring at the onset of puberty. The significance of higher prevalence of this physiological variation in the exposed girls is not clear and may be investigated in further details.

Table -17. Prevalence of past history of jaundice

	Fen	nale		Male
e Control	0/183	(0.0%)	3/23	3 (4:3%)
Exposeda	10/258 P=0,	(3.9%), 0064	8/36	1 (2:2%)
Figure	s in parentl	nesis are pe	ercentage	es.

Table 17 shows the prevalence of past history of jaundice in exposed and control population according to the sex. The prevalence higher in both male and female exposed population and the differences are statistically significant in female subjects.

Table 18. Incidence of Chromosomal aberration and sister chromatid exchange per cell in exposed and control population

Chromosomal aberration per cell

		Control			Exposed	
	Mean	S.d.	No.	Mean	S.d.	No.
r Female (	9.0.0387	7,0:0201°	3	< 0.0401	0.0085	11
Males	0:0320	0:0109	5.5	-0.0393	0.0130	18
Total	0.0345	0.0140	8	0.0396	0.01113	29
Sister Chi	omatid Ex	change	STATE OF	F. 04 1 1 1 1 1	t recen	
Na sala	l e	Control			Exposed	14 Y 2
	Mean	S.D.	No.	Mean	S.D.	No.
Fémale	156.409	E ## 0!#11P	375375	6:374	三0:230号	8
Male	6.051	0.572	3 2 5 3 2	6:395	0.215	13

Table 18 shows incidence of Chromosomal aberrations and sister chromatid exchange per cell in exposed and control population. The incidence of these abnormalities are comparable

in exposed and control subjects. It may be noted that the chromosomal abnormalities like dicentric chromosome and chromatid exchange (figure 4)were observed in two each of the exposed subjects. These abnormalities are rarely observed in healthy children.

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Figure 4. Chromosomal aberrations in phytohemagglutinin stimulated peripheral leucocytes A. Normal, B. Chromatid exchange C. Dicentric chromosome.

# Conclusions: The results of the study carried out so far show:

Presence of Endosulfan residues: Endosulfan residues have been detected in water samples as well as blood samples in the exposed area, i.e. Padre village. Alpha, Beta Endosulfan and Endosulfan sulphate have different half-lives in different media. The detection of endosulfan in the blood samples of children and water samples, 10 months after the last aerial spray of endosulfan, signifies a source of centinuous exposure to endosulfan. Villagers living in Padre village use well water or Surunga water as source of drinking water and use even the water from Kodenkiri stream for washing and other purposes as there is no piped water supply in the area. The cashew plantation as continuous source for endosulfan is further supported by the report of the RRSSC which has indicated that the villages are located in the microwatershed that have steep islopes, nearly circular in shape, high run off potential, with predominantly cash crops. It was also concluded from the available data by RRSSC watershed characteristics are favourable for any aerially sprayed toxicant to reach the soil-water-plant continuum in a very short span-off time and get accumulated.

#### Medical Findings:

Congenital malformations: Significantly higher prevalence of congenital malformations in the exposed group points to the exposure of this group to some genotoxic agent, which in the present study could be endosulfan. However, there is a need to confirm suspected cases of congenital heart diseases through further investigations such as echocardiography.

Neurological problems: School Children from the exposed area demonstrated a significantly higher prevalence of learning disabilities, low IQ and scholastic backwardness further confirmed by higher rate of failures in this group. These functional abnormalities of the nervous system again signify exposure to some neurotoxic agent during developmental stages. Exposure to endosulfan in utero could be responsible for these abnormalities. The prevalence of other disorders such as epilepsy was not found to be different in the two groups. Severe neurological disorders such as cerebral palsy could not be detected in the school children. This may due to the fact that such children would not be able to attend school. Analysis and comparison of the family data would be a better indicator of crippling diseases.

Abnormalities of Reproductive system: Though SMR could be carried out in limited number of exposed and control children, the findings are very striking and point to exposure to an Endocrine disruptor. The girls from exposed area attained menarche early, which was further confirmed by higher age related skin fold thickness in this group. Menstrual disorders were also more frequent in this group. Among boys, on the other hand puberty was delayed in the exposed group as evidenced by lower SMR scores in this group as compared to the control group. Since the exposed and control group of boys and girls are comparable in their nutritional status, these abnormalities signify exposure to oestrogenic substances and endosulfan is experimentally shown to have oestrogenic effects. Analysis of blood samples for reproductive hormones may provide further evidence and is under way.

Other diseases: No significant difference—was observed in the prevalence of bronchial asthma, skin allergies or seizure disorders. However, there was higher prevalence of goitre and past history of jaundice in the exposed group.

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#### Limitations of the study:

- This study is limited to school children and all the children in Vaninagar school may not come from the affected areas where Endosulfan spray has been carried out.
- The study is limited to a defined age group. Some of the cases reported by Dr. Mohan Kumar e.g. Cancers, Sterility among adults can not be detected in this age group. However, when the family proformas are analysed, these problem may be partly solved.
- Children suffering from disabling diseases may not be able to attend school and therefore their ailments are not reflected in the present study.

## Future Plan of work:

- 1. The data of families of children from exposed and control areas will be analysed.
- 2. All environmental and biological samples will be analysed for endosulfan residues.

The serum samples will be analysed for hormonal changes. The results of the above will be submitted after three months,  $\mathbf{a}_{2}$ 

#### Recommendations:

- All kinds of pesticide spray should be immediately stopped in the cashew plantation area of Kasargod district. All methods of pest control other than chemical pesticides should be explored.
- Extensive epidemiological studies in the areas where endosulfan has been sprayed should be carried out to investigate occurrence of illnesses similar to those reported in Padre village.
- There is a need for investigating the effects of endosulfan spray on ecosystems in the exposed areas, especially the streams, rivulets and ponds.

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- Endosulfan residues should be estimated in water, and agriculture produce of the area such as food grains, cashew nuts, areca nuts, pepper, vegetables, fruits, fish, milk etc.
- 5. Epidemiological survey among cattle in the area should be made by animal husbandry department of the state government.
- 6. There should be regular monitoring of the exposed population.
- 7. The affected persons should be provided relief:
- Finally, we request the Commission to take note of the recommendations of Achyuthan Committee appointed by Government of Kerala. (Annexure 7).

# List of Annexures

- Annexure- 1. Report of visit of I.C.M.R. Team to Kasaragod District, Kerala State for preliminary investigation of the health hazards related to spraying of Endosulfan in the Cashewnut Plantations, from 9-11 August 2001
- Annexure- 2. Proforma for examination of School Children
- Annexure- 3. Proforma for History Collection of the families of school children
- Annexure- 4. Satellite-based assessment of Physiographic disposition of a few villages affected by neurological health problems in Kasargod district, Kerala
- Annexure- 5. List of Participating Institutes and members
- Annexure- 6. Methodology for Endosulfan Analysis and Cytogenetic Studies
- Annexure- 7. The recommendations of Achyuthan Committee appointed by

  Government of Kerala, and a second sec

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#### Annexure I

REPORT OF VISIT OF I.C.M.R. TEAM TO KASARAGOD
DISTRICT, KERALA STATE FOR PRELIMINARY
INVESTIGATION OF THE HEALTH HAZARDS RELATED TO
SPRAYING OF ENDOSULFAN IN THE CASHEWNUT
PLANTATIONS, FROM 9-1-1 (AUGUST 2001)

As per the directives of Director-General ICMR, the following team visited Kasaragod District of North Kerala from 9-11 August, 2001.

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Dr. H.N.Saiyed, Director, N.I.O.H., Ahmedabad, and an additional and a second

Dr. Aruna Dewan, DD(SG), N.I.O.H., Ahmedabad and arthur ar had to

Dr. H.R. Rajmohan, Officer-in-charge, R.O.H.C., Bangalore

Before and during the visit, the scientists scrutinized reports published in various popular and scientific magazines (India Today, 23 July, 2001, Down to Earth, February, 2001) the national dailies (The Hindu, 22 July 2001), and local newspapers about diseases reported from various villages of Kasaragod taluka which are being associated with Aerial spray of Endosulfan on cashew nut plantations in the area. Scientific published data on Toxicity profile of Endosulfan was also obtained and scrutinized.

During the visit, the team had discussions with Shri C. K. Viswanathan, District Collector, Kasaragod District, Dr. Abdul Salam, District Medical Officer, and Dr. Venkatgiri, Deputy D.MO. Talks were also held with Shri Padre, Dr. Mohana Kumar, Dr. Sripathy Kajampady and other members of ESPAC (Endosulfan Spray Protest Action Committee). The team also met teachers of two schools situated in Vaninagar and Swarga village of Enmakaje Panchayath.

#### INFORMATION COLLECTED

- 1. Dr. Mohana Kumar, MBBS, who has been practicing in Vaninagar for 20 years, has noticed a high prevalence of cancers of different organs, neurological disorders like epilepsy, cerebral palsy, psychiatric disorders, congenital malformations and reproductive problems, asthma and skin diseases during the past 10 years among villagers living near the cashew nut plantations. He has been writing to various Medical Associations to get an answer. He has collected 10 years data from his own records which has been published in different forms in newspapers and magazines. He thinks that the diseases are due to aerial spray of Endosulfan, which has been going on for more than 25 years.
- Shri Padre gave copies of reports which he had published way back in 1981 on congenital malformations of limbs noticed in cattle and also gave electronic copies of some recent documentaries prepared by a group from Manipal and another by a German croup.
- 3. The school teachers of Vaninagar (Primary school 1-4<sup>th</sup> standard, Kannada medium) showed many children who were either mentally or physically handicapped. 50% of the children attending the school were tribals called "Naiks". They also showed minutes of the School Resource Group (SRG) meeting held on 3-1-2000 where it was written that the teachers were perplexed that students coming from the plantation side seemed to have low IQ, frequent illness and many had physical deformaties. It was also remarked by one teacher that in the secondary school, the results of 10 th standard examination have been very poor in the last few years.
- In the school at Swarga (1-7<sup>th</sup> Standard), there were no physically abnormal children but there were many children with low IQ.
- The District Collector and D.M.O. were very much concerned about the health problems in the Taluka. The State Government had asked the DMO to undertake a health surveillance study in the affected areas but the funds provided were very meager.

#### Conclusions:

After this preliminary visit and first hand discussions with various authorities, and available information on Endosulfan, it is felt that there is a need to undertake a well designed epidemiological study to find out the disease pattern in the affected areas and compare the same with a control village. The diseases observed do not fall in any specific category, but they could be linked to some factors causing genotoxicity. The causative agent may or may not be endosulfan or it may be something in addition to or other than endosulfan.

#### Future Plan of Action:

The I.C.M.R. is planning to undertake a cross-sectional Environmental-Epidemiolo-gical Study, through its National Institute of Occupational Health, Ahmedabad. This study will be carried out to investigate the disease pattern in the affected villages and control population. The study will be carried out in villagers, school children and plantation workers, and is expected to be completed within a period of six months.

It is requested that the National Human Rights Commission may write to the concerned Health authorities of the State to provide fullest co-operation to the LC.M.R. to undertake this study.

# Annexure -2 Proforma for Medical Examination of School Children

# National Institute of Occupational Health (Indian Council of Medical Research)

Health check-up for school children in Kasaragode
Part-I

	1 41(-1
Date of Interview	Individual ID
Name Name Name Name Name Name Name Name	and the second of the second o
Date of Birth	(Cross check from school record)
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Residential Address (Name of	the village	& Location of the	e house in the village)
If Yes, give details	1	_	
1637			
	class	Yes	No

The examining physician should record the presence or absence of each symptom and its duration and 'explore further history to give any provisional/possible diagnosis for each symptom complex after clinical examination.

## Present History

Do you suffer from any of the following symptom

Symptom	Yes	Duration.				
•		Years	Months	Days		
Cough	0					
Expectoration	0		2			
Breathlessness						
Palpitation						
Convulsions	0					
Frequent cold and coughs	0			-		
Jaundice	0					
Skin problem	2.0	41 1	1			
Any other symptom		-				

## Past History

Did you suffer from any of the following symptom

Symptom	Yes	1	Duration.			
		Years	Months	Days		
Cough						
Expectoration	. 0					
Breathlessness	0.					
Palpitation	0					
Convulsions	0					
Frequent cold and coughs	., 0					
Jaundice	0					
Skin problem						
Any other symptom			1 200			

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	8.2.2.2 to the the transport of the tran

#### History of hospitalization

Have you ever been hospitalized

Nο

Yes

If yes, the reason for hospitalization

Duration of hospitalization

Name of the hospital

Any case papers available

Give details

#### PHYSICAL EXAMINATION

#### ANTHROPOMETRY

Height(Cm.)

.Upper segment(Cm.)

.Lower segment (Cm.)

.Weight (Kg.)

Head circumference (Cm.)

Skin fold thickness over tricepts (mm).

## GENERAL EXAMINATION

	B.P. Systolic		iastolic 💷				
	Anemia Lymphadend Tongue	ppathy	Oedema Nails	Eyes	Nails	Teeth	
RES	RESPIRATORY SYSTEM						
Norm	al	Abnor	mal	if abn	ormal, Gi	ve details below	
CAR	RDIOVASC	ULAR	SYSTE	4			
Norm	al		Abnormal	if abn	ormal, Giv	ve details below	
SKII	4						
Evide	nce of allergy		No	Yes	G	ive details	

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MENTAL STATUS (IQ)

NORMAL

ABNORMAL

GIVE DETAILS

SEXUAL MATURITY RATING

## PROFORMA FOR GIRLS

A. Menstrual history :			
Do you menstruate?	Yes.	No.	
If yes, answer following	questions		
Age at menarche			
Cycle: Regular	Irregular (gi	ve details)	
<u> </u>			
Duration: (No. of	f days)		
Flow: Scanty Mode	erate	Excessive	
Associated symptoms :		al pain	
Axillary hair :	Absent	Present	
If present,	(a) Site and	distribution	
	(b) Colour_		
	(c) Amount		

Distribution of fat:	Hips	Lumbar area			
	Axilla	Back			
Feminine characte	eristics:				
Skin of th	e face : Normal	Oily Dry Presence of acne			
Broadeni	ing Yes	No.			
of pel	•				
Sexual Maturity Ra	ating (SMR) by Tai	nner's classification :			
1 SMP of	breast changes				
1, 31/11/01	breast changes	:-			
2. SMR of	pubic hair				
3. SMR scoring (Grade I to V)					
	PROFORI	MA FOR BOYS			
Axillary hair :	Present	Absent			
If present,	Site and dis	stribution			
	Colour				
	Amount				
Facial hair :	Present	Absent			
If present,	Site and distribution	ion			

	Chest:	Yes			No	
	Hair line (fro	m umb	licus to pub	oic symph	ysis): Yes	No
	If Yes, wheth	ner	Thin		Thick	
Voice:	Normal	Childl	hood type		Feminine ty	ре
Masculine	characters :					
Breaking of	voice		Yes		No	
ppearence	of cricoid car	tilage	Yes		No	
Broadening	of shoulders		Yes		No	
Acne on the	e face :		Present		Abse	nt
Orchidomet	try :					
Sevual Mate	urity Rating (	SMEL	ov Tannar's	c classifi	ration:	
cxuui mat	unity italing (	511117	by rainter s	Classiii	ation .	
1. SN	1R of pubic ha	ir				
2. SN	1R of external	genital	ia and teste	es		
3 SM	3 SMP scoring // to //)					

## Congenital malformations

	Skeletal	No	Yes	If yes, descri	be
	Hypospadias	No	Yes		
If yes,	Mild Moder	ate Severe			
	Cryptorchidism	No	Yes		
	Congenital Cardiac	disease		No	Yes
		If yes,	, descri	ibe	
	Neural. Tube defect	s		No	Yes
		If yes,	, descri	ibe	
On the	basis of history and	clinical exami	nation	please give a p	rovisional diagnos
Bronc	hial asthma	Yes		No	

Allergic dermatitis Yes No Congenital Malformations Yes No Neurological problems Yes No Cancer Yes No Hormonal imbalance Yes No Does the child need further referral

Yes

No If yes, which speciality

Neurologist

Psychologist Oncologist

Dermatologist

Endocrinologist

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## Annexure 3 Family Proforma

mily	

Name of the Father					
Caste Non-Tribal	· . Triba	1			
Residential Address					
Is the house in your name	Yes	No			
If no, who is the owner					
Since how many years you are s	taying in this	area			
FAMILY OCCUPATION					
DO YOU HAVE YOUR OWN L.	and No		YES		
If yes, what are the crops in your	land				
Do you use any pesticide	No	Yes			
If yes, name					
Occupation	Diostatio	o el co eo		Othora	
Farmer	Plantation w	orkers	(	Others	

Father				
Mother				
Other famil	y members			
FOOD H		VEGET.	ARIAN	Non-
ANY SPEC	CIAL FOOD HABITS PEC	CULIAR TO	THE FAMILY	
Any ayurve	dic herbs used routinely		-	
Any	storage	methods	for	food
STREAM	Name of the strea	1 <i>M</i>		
Well	Suranga			
ANY CA	TTLE IN THE FAMIL	-Y		
No	Yes If yes, how	many & whic	th type	
Any cattle w	vith physical abnormalities	Yes	No	
Any cattle s	uffering from convulsions	Yes	No	
Any cattle s		Yes Yes	No No	

#### DETAILS OF THE FAMILY MEMBERS

S.No.	Name	Age	Sex	R*	Any disease	Staying with family
			7			

## Deaths in the family

S.No.	Name	Age	Sex	R*	Cause of death	Date of death
			-			

R\* relation

Maternal his	stor
--------------	------

Present age Age at marriage

Consanguineous marriage Yes No

## Obstetrical history:

Serial number of pregnancy	1	2	3	4	5	6
Age at pregnancy						
FTND						
Premature						
Stillbirth						
Abortion						1
Congenital malformation						
Neonatal death						
Any special diet during pregnancy			* 1			
Any illness or fever during pregnancy			•			

# Sexual Maturity Rating (SMR) - Marshall and Tanner Classification

## GIRLS:

Pubic Hair	Breasts
Preadolescent	Preadolescent
2.1 Sparse, lightly pigmented straight medical border of labia	Breast and papillae elevated as smal mound; areolar diameter increased
13.1 Darker, beginning to curl, increased	Breast and areola enlarged, No contour separation
4.1. Coarse, curly, abundant but amount less than in adult	Areola and papillae form secondary mound
35.1 Adult feminine triangle, spread to media surface of thighs	Mature, nipple projects, areola part o general breast contour

## BOYS:

E-2003-500	Pubic hair	Penis	Testes
1	None	Preadolescent	Preadolescent
2	Scanty, long, slightly pigmented	Slight enlargement	Enlarged scrotum pink texture altered
3.1	Darker, starts to curl, smal amount	Longer	Larger
4.1	Resemble adult type, but less in quantity, coarse, curly	Larger, glans and breadtl increase in size	Larger, scrotum dark
5.1	Adult distribution, spread to medial surface of thighs	Adult sizer	Adult sizei

भारत सरकार अन्तारेश निभाग भारतीय अन्ति रिश्व अनुसंधान संगठन शरेशिक तुरु सबेदन तेवा केन्द्र 40. वा पुट्टा गर्वा, क्षेत्रकारी, केन्द्र 7-560 070, भारत

फैक्स 6661059 तार इरारो



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Dr. P P Nageswara Rao Eead, RRSSC-B

No RC/BG 20.91

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November 07, 2001

Dear Dr. Saiyed,

In continuation of our letter dated September 19, 2001 please find enclosed satellite based assessment of physiographic disposition of the villages affected by neurological health problem in Kasargod district. The satellite images (A4 size) are also enclosed for the study area. Your feedback on the report would be very valuable for us.

We will be very glad to provide any further clarifications in this regard.

With regards,

Yours sincerely,

(P P Nageswara Rao) | 11

Dr. H N Saiyed Director National Institute of Occupational Health Meghani Nagar Ahmedabad - 380 016

Cc: Officer-in-charge, ROFIC(S), Bangalore

Annexure 4 Satellite-based assessment of Physiographic disposition of a few villages affected by neurological health problems in Kasargod district, Kerala

#### 1.0 Introduction:

A quick analysis, done using 1:25,000 scale toposheets, showed a favourable disposition of the croplands and villages to easily come in contact with any persistent toxicant. This was further examined in detail for a few specifically identified villages (as per the list given by Regional Occupational Health Centre, Bangalore vide their letter No.ROHCS/700/881 dated 4-10-01). This report gives salient findings of the assessment done using satellite remote sensing and field survey.

#### 2.0 Satellite-data used:

Linear Imaging Self Scanning Sensor (LISS)-ill data of path 98 and row 65 of Indian Remote Sensing Satellite (IRS) -ID acquired on January 18, 1999 was used. Digital data was analyzed using the computer facilities at the Regional Remote Sensing Service Centre (RRSSC), Bangalore.

#### 3 0 Field visit:

A field visits and "ground truth" collection was carried out during November 2-4,2001

#### 4.0 Analysis of satellite data:

Supervised classification algorithm was applied wherein for each pixel the probability of its falling into a particular land cover / land use class was defined by a set of statistical parameters (based on mean, variance and convenience among four spectral bands of LISS- ill sensor). The spectral response, spectral separability and accuracy of delineation of different land cover types were examined using standard algorithms

## available with RRSSC-Bangalore.

#### 5.0 Analysis outputs:

#### 5.1 False Colour Composite (FCC):

In the FCC prepared for the study area (Plate-1), live vegetation is represented in shades of orange, red and magenta depending on its condition and type. Deep and clean/clear water appear black, progressively changing to blue shades depending on depth and sediment loads. Lateritic rock surface and bare soil appear in shades of cyan and grey depending on area exposed and soil moisture. Natural vegetation (reserved forest) is bright red in colour, Arecanut and Coconut plantations in the valleys are dark red and Cashew plantations on hill slopes are pink in tone and fine textured. A portion of the major road from Vittol to Hosdurg passing through Perla town, road from Perla to Bettampadi via Sorga village, road to Yetteduka, Kumbadje, Kajmpadi villages are shown in white. The watershed boundaries of the micro- watersheds covering the affected villages are shown in blue.

#### 5.2 Computer classified output:

Plate-2 is the computer-classified output showing the different land cover/use, water source and built-up land. Casnew plantations are yellow in colour, natural vegetation (reserved forest) in dark green, Arccanut and Coconut in the valleys are light green in colour. The white tones are built-up areas (villages, towns, houses etc.,) located on lateritic hillocks (bluish green) and along the valleys. The dark red tones in the valleys are also mixed plantations of Arccanut plus Coconut with Banana.

#### 6.0 Salient findings:

The entire study area was divided into physiographic units (watersheds) which collect precipitation and serve as storage for water and sediment (micro-watersheds of size 500 to 1500 ha.). Such an approach is necessary to know how aerial-sprayed toxicant moves through the drainage system.

The aerial sprayed toxicant that falls on the hill-slopes move down the slopes as surface and sub-surface flow and get collected in the streams. The smaller streams (first order) feed water to the larger stream and eventually the water exits the drainage basin at the basin mouth. The volume of water that exits the drainage basin per unit time (stream discharge) is much faster from the circular or fan shaped watersheds than in an clongated watershed.

Circularity of the watersheds was calculated as follows:

A = Area of the basin

p = Perimeter of the basin F = Shape factor

As F approaches 1, the basin shape approaches a circle. As F becomes 0, the basin shape tends to be linear.

The rainfall of the study area was found to be 20-30cms per month during spraying season (October to December) and does not seem to vary much between the villages affected. The only prominent difference could be in the topography, vegetation distribution and watershed size and shape. Hence, further analysis was carried out on these characteristics.

Slope Characteristics:

The watershed covering Kumbadaje and Bellur villages has an average slope of 10% (moderately steep) that of Kajampadi and Sorga villages (Padre) has steep slopes (average 25%). Whereas the watershed covering Vaninagar and Nattanige have 20% slope (steep).

Circularity of watersheds:

It was found that the micro-watersheds covering Kumbadaje village has a circulatory of 03, Belluru village- 0.8, Nattanige village-1.0, Vaninagar village-0.8, Sorga village-0.8, Kajampady village-0.84.

- In the micro-watershed covering the Kumbadaje village, the Cashwnut plantations are about 2 to 3 ha/sq.km. and has 4 first order streams originating from cashew plantations.
- In the micro-watershed covering Belluru village, the Cashew nut plantations are about 15 to 20 ha/sq.km and have 16 first order streams originating from cashew plantations.
- .Kajampady micro-watershed has 6 to 10 ha of Cashew nut plantations per sq.km of geographical area and has 5 to 6 first order streams originating from the cashew plantations.
- .Padre village micro-watershed has about 6 to 10 ha of cashew per sq.km of geographical area. It has 12 first order streams originating from cashew plantations.
- .Vaninagar village and Nattanige village micro-watershed has about 5 to 8ha of cashew per sq.km of geographical area. About 6 first order streams originating from cashew plantations.
- Buntuje reserved forest at an altitude of 280-312 meters above MSL acts as a
  barrier to NE winds thus allowing the sprayed chemical to settle down on the
  narrow valleys.

#### Conclusions:

- The physiographic analysis and vegetation type distribution shows that the
  villages affected by the neurological health problems are located in the
  microwatershed that have steep slopes, nearly circular in shape, high run-off
  potential, with predominantly cash crops (viz., Cashew, Arecanut, Coconut etc.)
- The soils of these watersheds are lateritric and porous 4ll nature with an
  impervious clay layer at the lithomerge.
- The first order streams of the drainage system are originating from the cashew planted on the steep to moderate hill slops of these watersheds.

- Majority of the habitations (built-up areas) are along the valleys and close to the stream banks.
- Most of the inhabitants depend on run-off water for their domestic and irrigation purposes.
- The watershed characteristics are favourable for any aerially sprayed toxicant to reach the soil-water-plant continuum in a very short span of time and get accumulated.
- Therefore, there is an urgent need for stopping any form of spraying of toxicants on the cash crops of these watersheds.

Sd/- Dr. P.P. NAGESWARARAO

Head RRSSC Regional Remote Sensing Service Centre Govt.of India Department of Space, ISRO, Bangalore False Colour Composit

Plate - 2: Computer classified output Yellow: Carhun Arecanut Coconut Banana

## Annexure 5 List of Participating Institutes and members

Principal Investigator Dr. H.N. Saiyed, Director, .

Co-Investigator Dr. (Mrs.) A. Dewan, Dy. Director (S.G.), NIOH,

Ahmedabad

Participating staff

National Institute of Occupational Health, (NIOH), Ahmedabad.

Analytical Work Dr. T.S. Patel, Dy. Director

Dr. V.K. Bhatnagar, S.R.O.

Dr. Rekha Kashyap, S.R.O.

Dr. S.N. Sinha, R.O.

Mr. M.R. Varia, R.A.

Mr. N.M. Desai, R.A.

Mr. M. M. Mansoori, Lab. Asst.

Cytogenetic Assay Mr. B.C. Lakkad, Asst. Director

Mr. A.M. Suthar, T.O. Mr. M.M. Patel, R.A.

Mr. A.K. Gautam, R.A.

Hormone Assay Dr. K. G. Patel.

Dr. S.S.A. Zaidi, Asst. Director

Mrs. S.J. Gandhi, T.O.

Mr. K.A. Patel, Lab. Tech.

Mr. J.K. Dabhi, T.A.

Mr. R.C. Kushwah, Field Attendant

Statistical Analysis: Mr. P.K.Kulkarni, Dy. Director

#### Participating staff from ROHC (Bangalore)

Dr. H.R. Rajmohan, Dy Director

Mr. B.K. Rajan, Asst. Director

Mrs. Lalitha Nagaraj, R.A.

Mrs. M. Ramasubbama, Field Asst.

Mr. H.C. Rangaswamy, Lab. Attndt.

# Participating staff from Department of Pediatrics, Kasturba Medical College, Mangalore.

Prof. U.V. Shenoy

Dr. Rathika D. Shenoy

Dr. Roshan Ann Oommen

Dr. Sangeetha Mahesh

Dr. Duggabatti Anjaneya Prasad

Dr. Vasanth

Dr. Prathiba Kamath S

Dr. Siddharthan S.

Dr. E. Venkatakamalakar Rao

Dr. Habib Alam Raza

Dr. Bodla Hari Prasad

Dr. Syed Mohamed Omran

Dr. Venkatagiri Praveen Kumar

Dr. Podalakur Madhusudhan Rao

Dr. Venkata Ravanamma P.

Dr. Vadlamudi Radha Madhavi

Dr. Maya Menon

# Annexure 6 Methodology for Endosulfan Analysis and Cytogenetic Studies

Blood samples were collected for the following investigations.

- Endosulfan residues
- Hormonal analysis
- Cytogenic studies

5–7 ml blood sample was collected using vacutainer syringes under aseptic conditions and in randomly selected cases, 0.5 ml of the blood sample taken in heparinized sterile vials for tissue culture to study chromosomal aberrations and SCE. The remaining blood sample was centrifuged at 5,000 rpm for 5 min and serum was separated. The serum samples were transported every day and stored at -20°C at Kasturba Medical College, Mangalore. A total of 262 blood samples (170 exposed + 92 control) were collected from children and coded. The serum samples were carried by air under dry ice (-80°C) to NIOH, Ahmedabad for further analysis.

### Endosulfan Analysis:

#### Soil samples:

Soil samples were collected for estimation of endosulfan residues in the polythene bags from the different locations in the cashew nut plantation on Periyal near Kajampady hill and sediments from the ponds of Kodenkiri and residential area. Eight soil samples were collected in polythene bags from the exposed area (Village Vaninagar Padre) and three samples from the control area (Miyapadavu, Meenja Gram Panchayat.). The soil samples were collected after digging to a depth of 1 foot.

#### Water samples:

A total of seven water samples were collected from the exposed area (Village Vaninagar Padre) and three samples from the control (Miyapadavu, Meenja Gram Panchayat). The collection sources were the well, hand – pump, Kodenkiri stream's water and residential area. The samples were collected in IL brown coloured glass bottle and HgCl<sub>2</sub> was used as preservative.

Extraction, Cleanup and Quantification of Endosulfan:

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The method for endosulfan analysis was based on EPA method Section 5,  $\Lambda$  (3), (a).

#### Blood

 $0.5\,$  ml serum was taken in a graduated round-bottom centrifuge tube and extracted with  $6.0\,$  ml of Hexane (HPLC grade, Qualigen). The contents were mixed and extraction conducted for 2 hours on a slow speed roto rac shaker. After the settlement of the contents,  $5.0\,$  ml upper layer of hexane extract was taken in a separate tube and concentrated to dryness under the stream of  $N_2$ . The residue was made up to appropriate volume in hexane and a suitable aliquot was analysed by GC-ECD.

500 ml of water was taken in a separatory funnel. The sample was partitioned with 50 ml portions of methylene chloride (twice). The aqueous layer was then discarded. The combined layer of methylene chloride was dried on anhydrous sodium sulphate and concentrated to dryness. The residues were then transferred in hexane and finally quantified by GC – ECD.

#### Instrument Conditions

The GC (HP Model 6890 equipped with Electron capture detector). Instrument conditions were:

Oven initial temp 80°C, Ramp rate 20°C per min to 200°C;

Capillary column : HP5, 60 m, 0.25 mm id, 250 um:

Injector Port temp : 220°C; Splitless mode

Detector temp : 275°C;

Carrier gas :  $N_2$  (UHP grade)

Standerd refrence material : \(\alpha\)- Endosulfan (99.0%)

: β - Endopsulfan (99.0%)

: Endosulfan sulphate (99.0%)

These standards were procured from CCSRI,

Excel Estate, Mumbai.

#### Minimum detection limit

The minimum detection limits of  $\alpha$ - Endosulfan,  $\beta$  - Endopsulfan and Endosulfan sulphate were 1, 1 and 3 pg/ $\mu$ 1 respectively.

#### Confirmation Tests

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- (1) A case of acute poisoning due to Endosulfan was referred to NIOH Poisoning Information Centre on 04-12-2001, by Civil Hospital, Ahmedabad In this patient, the blood samples were collected at the interval of 6, 30, 54, and 78 hours. The patient died on the  $5^{th}$  day due to multiple organ failure. Tissue samples will be obtained from FSL and analysed for endosulfan. The various residues ( $\alpha$ -Endosulfan,  $\beta$ -Endopsulfan and Endosulfan sulphate) and standard chromatogram were further confirmed by GC-MS (Varian GC 3800, MS detector Saturn) (Figure 1, 2 and 3).
- (2) The recovery tests were performed to check the efficiency of the extraction procedure of the estimation of endosulfan residues in the samples. Such recovery tests were performed from time to time.

Analysis of the samples (biological and environmental) for the endosulfan residues concentration is in progress.

## Confirmation of Peaks Relating to Endosulfan Residues by GCMS

Analytical resolution of various residues of endosulfan ( $\alpha$ - Endosulfan ,  $\beta$ - Endosulfan and Endosulfan sulphate) in the study samples collected from the population of Kasargod, Kerala by GC-ECD requires further confirmation by GC-MS technique We performed confirmatory tests employing standard endosulfan samples and serum sample of a positive control (an acute poisoning patient who consumed endosulfan) and study population with following objectives.

 To confirm the residues of α- Endosulfan, β - Endopsulfan and Endosulfan sulphate in scrum samples of acute poisoning case and study population using GC-MS.  To establish the minimum detection limit of α-endosulfan, β - endosulfan and endosulfan sulphate by GC-MS.

Method:

The standards σ-endosulfan, β - endosulfan and endosulfan sulphate were procured from CCSRI, Excel Estate, Mumbai. Standard stock solutions were prepared in Hexane (HPLC grade, Qualigen) and further diluted of required strength. A case of acute poisoning due to Endosulfan was referred to NIOH Poisoning Information Centre on 04-12-2001, by Civil Hospital, Ahmedabad. In this patient, the blood samples were collected at the interval of 6, 30, 54, and 78 hours. 0.5 ml serum was taken in a graduated round-bottom centrifuge tube and extracted with 6.0 ml of Hexane (HPLC grade, Qualigen). The contents were mixed and extraction conducted for 2 hours on a slow speed roto rac shaker. After the settlement of the contents, 5.0 ml upper layer of hexane extract was taken in a separate tube and concentrated to dryness under the stream of N<sub>2</sub>. The residue was made up to appropriate volume in hexane and a suitable aliquot (1til) was analyzed by GC-MS. (Varian GC-MS Saturn 2000 system).

Instrumental conditions were:

DB-5 capillary column (30 m  $\times$  0.25 mm (id) of 0.25 $\mu$ m particle size) at a flow rate of 1ml / min of He gas. MS was operated in EI Auto ionization mode. The detail instrumental condition are as .

Column oven:

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Initial	80	0.0	0.0	0.0
Final	250	5.0	6.0	40.0

INJECTOR : 250°C

#### INJECTION MODE:

Time	Split mode	Split ratio
Initial	On	10
0.00	Off	Off
5.00	On	10

## RESULTS

Spectrochromatograms of the standard mixture of  $\alpha$ -endosulfan,  $\beta$  - endosulfan and endosulfan sulphate shown in spectrochromatogram 1a, b & c clearly defines that the molecular ion peaks were obtained at M/Z 339, 339 and 422 respectively, and also the retention time at 28.8, 30.909 and 32.453 were obtained for  $\alpha$ -endosulfan,  $\beta$  - endosulfan and endosulfan sulphate as confirmed by NIST and Saturn MS library search. The results on the three peaks for a positive control and standard samples as confirmed by GC-MS also stands for the residues of endsulfan present in the study population But as the minimum detection limit of  $\alpha$ -endosulfan,  $\beta$ - endosulfan and endosulfan sulphate by GC-MS were 100 pg/µl for each and is higher as compared to GC-

ECD detection limit, (for  $\alpha$ -endosulfan 1pg/ $\mu$ l,  $\beta$ -endosulfan 1pg/ $\mu$ l and endosulfan sulphate 3 pg/ $\mu$ l) the results as confirmed by GC-MS may reflect indirect confirmation for the samples of the study population. The spectro-chromatograms of serum sample are given in spectro-chromatogram 2 which confirm the presence of .  $\alpha$ -endosulfan,  $\beta$ -endosulfan and endosulfan sulphate in the sample. The relevant parameters used for identification and confirmation of these compounds are given in table

TABLE-1

Identification Parameters of serum sample of acute poisoning case

Compound	Base peak	Molecular ion peak	Retention time (min)
α-Endosulfan	85	339	28,808
β-Endosulfan	85	339	30.909
Endosulfan Sulfate	272	422	32.453

# Figure - 1

Chromatograms of alpha-Endosulfan in standard, a poisoning case and study subject.

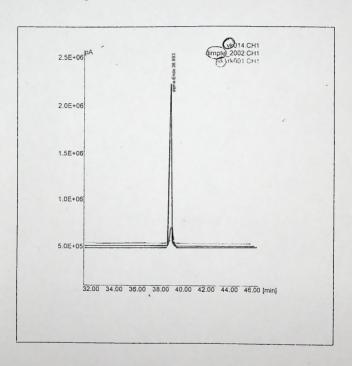
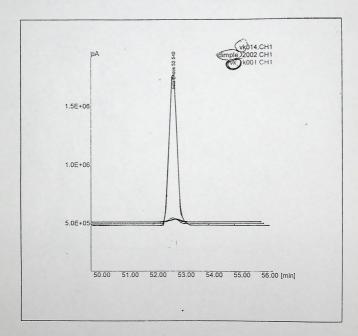


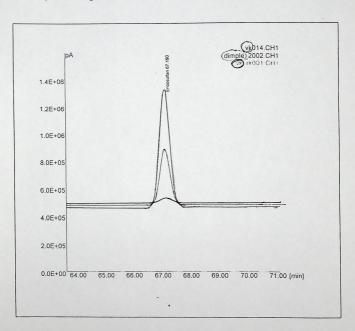
Figure - 2

Chromatograms of beta-Endosulfan in standard, a poisoning case and study subject.



# Figure - 3

Chromatograms of Endosulfan sulfate in standard, a poisoning case and study subject.

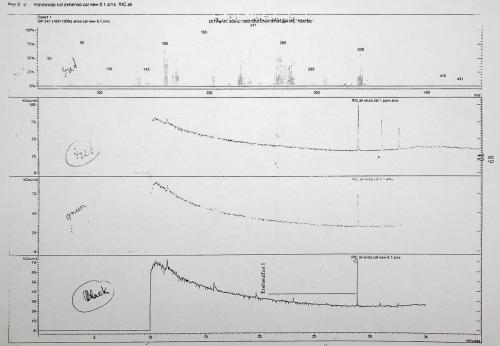


#### Chromatogram Plots

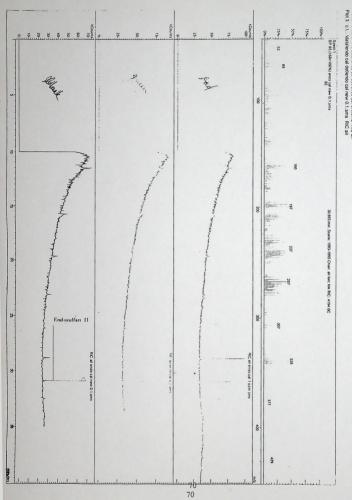
Plot 1: c \ \data\enoc cal det\endo cal 1 ppm.sms RIC all Plot 2: c \saturn\ws\data\endo cal det\endo cal o.5 sms RIC all

## Spectrochromatogram 1a

A 4 4 4 5 5 4 4 6 5 5 5 5 5 5 5 5 5 5



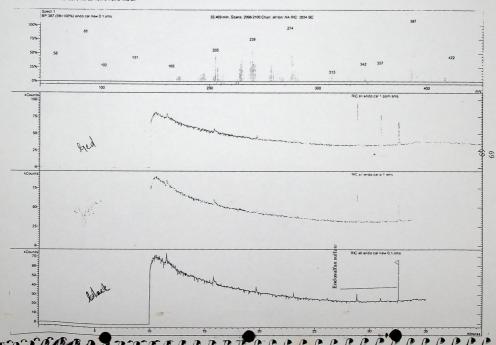
Plot 1: c.\. \data\endo cal det\endo cal 1 ppm.sms RtC all Plot 2: c.\saturnws\data\endo cal det\endo cal o.5.sms RtC all Spectrochromatogram 1c



#### Chromatogram Plots

Plot 1: c.\.\ \data\endo cal det\endo cal 1 ppm.sms. RiC all Plot 2: c.\saturnws\data\endo cal det\endo cal 0.5 sms. RiC all Plot 3: c.\.\ \data\endo cal det\endo cal new 0.1.sms. RiC all

## Spectrochromatogram 1b

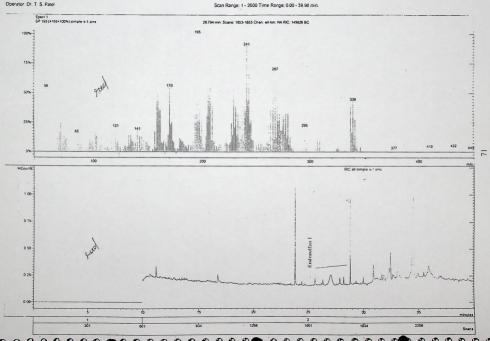


Chromatogram Plot

File: c'\saturnws\data\wh\dimnle s-1 sms Sample: endo std repeat 19-Dec-01 3:15 PM Sample Notes

# Spectrochromatogram

Scan Range: 1 - 2600 Time Range: 0.00 - 39.98 min.



## Cytogenetic Studies:

# Method for Peripheral Leucocyte Culture for Chromosomal Aberration:

Sample Collection: A total of 48 Blood samples were collected from exposed and control subject by vein puncture, in heparinized sterile syringe. The blood samples will be transported to the laboratory, set up in the field, in a well-insulated ice-box.

Culture Technique: 48 Cultures in duplicate were set using Method of Morhead et al, (1960) for each of the subject using 7 ml of RPMI - 1640 medium (pH 7.4) supplmented with 15% fetal bovine serum, and 0.1 ml of phytohemagglutanin (PHA). 0.5 ml of blood w is added to each culture vial and incubated at 37°C for 72 hrs. 2 hours prior to the harvesting 10 µl/ml colchicine was added to each culture vial. The culture vials were centrifuged at 1000 rpm for 10 mins. Than the medium was discarded. The cell button was suspended in 5 ml of 0.075 M KCl solution at 37°C for 10 to 15 mins. followed by centrifugation at 1000 rpm for 5 mins. Freshly prepared 1:3 acetic acid methanol fixative was added slowly to the cell button and then cell were suspended. The fixative was changed 2 times at an interval of 10 mins. each. After final centrifugation the cells were suspended in adequate fresh fixative to form a slightly milky suspension. Then 1-3 drops of cell suspension were dropped evenly from a distance on wet, clean grease free slide. The slide were kept in a standing position and allowed to dry at room temperature.

For studying the chromosomal aberration slides were stained with 4% Giemsa in Sorenson's buffer (pH 7) for 10-15 mins. About 50 well spread metaphases were scored for various types of aberrations in each of the subject from blindly coded slides. Statistical analysis done by using student 't' test.

### Chromosomal aberration scoring Criteria:

- Chromatid Gap: a non-staining, constricted region in the chromatid arm on alignment with damaged segments of the chromatid.
- Chromosome Gap: Chromatid gaps involving both chromatids at iso-locus points of the chromosome arm.

- Chromatid Break: a non-alinged broken chromatid or the attenuated region being wider than the diameter of the chromatid.
- Chromosome break: iso-chromatid breaks resulting in terminal deletion and intercalary fragments.
- 5. Ring: intra-chromatid exchange giving rise to a ring like configuration.
- Dicentric: chromatid exchange involving two chromosomes with intact centromeres.
- 7. Exchange: configuration involving inter-chromatid exchanges.
- Miscellanous Aberration: unusual configuration, severely damaged (> 10
  aberrations), endoreduplication (duplicated chromosome lying side by side) and
  chromatid saperation.

### Sister Chromatid Exchanges (SCEs):

Sister chromatid exchanges (SCEs) were evaluated using method of Perry and Wolff (1974). 5 bromo-deoxyuridine (BrdU), 10 µg/ml of culture medium was added 24 hours after setting up of cultures. The cells were harvested after 72 hours of incubation. Metaphase chromosomes were prepared and stained with Hoechst 33258 and 4% Giemsa after 3 days of preparation of slides. The average number of exchanges per metaphase were determined through examination of well spread 25 metaphases for each subject. The result for SCE was statistically analyzed applying student 't' test.

### References:

- Morhead, P.S.; Nowell, P.C.; Millman, W.J. and Hunderford D.A.: Chromosome preparation of leucocytes cultured from human peripheral blood. Exp. Cell Res. 1960, 20, 613-616.
- Perry, P. and Wolff S.: New Giemsa method for differential staining of sister chromatids. Nature: 1974, 251, 156-158.



# Annexure 7 The recommendations of Achyuthan Committee appointed by Government of Kerala.

Date 30-11-2001.

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### DR. A. ACHYUTHAN

U. Sc. Eng., M. S. Ph. O

M.I.S.T.E., F.I.E. (India) Chartered Engineer

113780, ANIOOLYAM, UILLATHIKULAM, CALICUT, KERALA- 673006

Phone: 0495-360393-368389

To,

Dr. H. N. Saiyed

Director, National Inst. of Occupational Health,

Meghaninagar, Ahmedabad, 380 016.

Dear Sir,

Sub: Aerial Spray of Endosulfan in Cashew Plantation.

Ref: Your letter No. .3/4/10(1)14/2001 dated 11th Oct. 2001

As soon as I had received your letter referred to above, I had sent the acknowledgement letter through e-mail. But it was not delivered there. I am enclosing a copy of the letter,

The report was submitted on 22 11 200 I. I am sending you a copy of our Conclusions and Recommendations for your kind information. The detailed report is with the Director of Agriculture, Govt. of Kerala, Vikas Bhavan, Trivandrum 695 032.

Regards,

YoursTruly

Sd/-

Achythan.



### 7. CONCLUSIONS & RECOMMENDATIONS

After a detailed study of the data, and the oral and written statements and site visits, the Committee has arrived at the following conclusions.

- The cashew plantations of PCK Ltd. in Kasaragod District are all located in the
  undulating hilly areas (Refer Plan Annexure 21). The plantations are spread in
  isolated patches and are intertwined with habitations. The topography of the area
  precludes the possibility of aerial spraying observing all the protocols.
- 2. There are a large number of wells inside and just outside the plantations area. Several streams originate there. The water from the plantations (situated on the hills) can run off into the valleys inhabited by local people. The revulets Panathur and Karicheri, which are fed by streams originating from or passing through the area, are tributaries of Chandragiri river, which supplies drinking water to Kasaragod town and several Panchayaths. The surangams, from which the local people draw water, are cut deep into the hills forming the plantations. They are prone to contamination by chemicals applied in the estates. Therefore, the hydrology and morphology of the area are unsuited for aerial spraying.
- 3. The human settlement pattern of the area also makes the plantation area unsuitable for aerial spraying. The adjoining areas are thickly populated. There are large number of houses inside the plantations. There are pockets of human settlement surrounded on 3 sides by the plantations. There are large number of houses and wells inside and just outside the plantations. The local people allow their cattle to freely graze in the plantation area. There are several schools inside and just outside the plantation area.
  - Even the Pesticide Manufacturers and Formulators Association has agreed to the view that the area is not ideal for aerial spraying of pesticides.
- 4. The PCK has not been following the rules prescribed for aerial spraying. This has been reported by the District Collector, all the functionaries of the Panchayaths who deposed before the Committee, the experts and the great majority of general public. There was no effective supervision of spraying and no monitoring of the precautionary measures and the after-effects.

- 5. The same pesticide endosulfan was used continuously from 1981 onwards, in spite of the recommendations of Research organisations rotate the chemicals. The reason given by the PCK is that endosulfan is the most economic pesticide available in the market. Even the possibility of the bugs acquiring immunity to endosulfan due to long exposure has not been considered by the PCK.
- 6. As in the cases of most other pesticides, endosulfan can cause acute toxicity in animals and human beings due to over exposure. That is why strict protocol is prescribed for its use. Though chronic toxicity due to long term exposure has not been convincingly established, it can not be ruled out.
- 7. There are reports of health problems free three Panchayath adjacent to the plantations. There is no direct evidence to attribute these directly to endosulfan pollution, but there is no evidence to completely deny it. Other usual causes like pollution from automobiles and industries are absent here. The only activity that is not normal is the aerial spraying of endosulfan. The pesticide is applied without observing the safety rules. The same chemical is used for 2 decades. Hence at this point of time, there is no evidence to implicate or essonerate endosulfan as the causative factor of the health problems. But, the proof of absence cannot be taken as the absence of proof. In all environmental pollution problems, the onus of responsibility to prove or disprove the cause-effect relaationship should be that of the polluter and not of the general public who are the victims of pollution. Since cashew is an important export item carning revenue to the State and a large number of workers are involved in it, publicity to the pollution from endosulfan spray can prove detrimental to the industry.

On the basis of the investigations and the above conclusions, the Committee recommends the following measures to be adopted.

- Ban aerial spraying of pesticides in all the cashew plantations of PCK Ltd. in Kasaragod District.
- Use of endosulfan in the PCK plantations of Kasaragod District should be frozen for 5 years.

- 3. In the cashew plantations in the Per\( \hat{a}\) Division (which includes Enmakaje Panchayath), a total pesticide holidy should be observed for 5 years. This plantations should be left to the nature during these 5 years. Detailed studies on tea-mosquito bug menace and its relation to the crop productivity should be made during this period.
- In the other plantations of PCK in Kasaragod district, need based ground spraying, (manual or power-operated) of pesticides other than endosulfan may be resorted to, in consultation with research organisations.
- The pesticide management and plant protection of PCK should be scientifically organised.
- 6. Research efforts to evolve integrated pest management (IPM) should be augmented.
- Breeding programme to develop cashew strains resistant to tea-mosquito bug should be undertaken.
- 8. Since the cause of the human health problem could not be deduced conclusively, a detailed investigation involving scientists from all related fields should be conducted to identify the risk factors for the high morbidity in the Padre village and other affected areas. A detailed health survey should be conducted in the Padre village and other areas from which cases of abnormal health problems are reported. The health survey should cover the plantation workers also.
- Since most of the people who complain about health problems are from the poorer sections of the community, the Government should make arrangements to provide special medical care to these persons.
- The Government should take all steps to implement these recommendations are dispel the fears regarding posticide application.

- The right to administration on the rise of pasticides should be in specific. The GranPanchayaths should be given all details, when requested. The apprehensions of the local people regarding the alleged posticide problem should be cleared by awareness programmes conducted through PCK, Agricultural Department and Research Institutions. In every division of the PCK, a committee consisting of the following members should be constituted for monitoring the proper application of periodde.
  - . President / presidents of the concerned Gram Panchayath / Panchayaths
  - .. Agricultural Assistant
  - 3. A representative of the Health Department
  - 1. The Regional Officer of PCK
  - 5. A representatives of the workers of the concerned division of the PCK.

Dr. A. Acl yuthan

Canvar

Sri. L. Sundaresan (Convene.)

Dr. K.P. / ravindan (Member)

Dr. M. Abdul Salam (Member)

Dr. Samuel Mathew

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Dated 22-11-2001 50

(Image)

May 29, 2000

HOME | NEWS | REPORT

has directed the Punjab government to pay an interim relief of Rs 1 lakh to the next of kin of an undertrial who died in police custody in Ferozepur district and

Taking cognizance of a report by the Senior Superintendent of Police (SSP), Ferozepur, on the death of Kartar Singh of Warpoh village on September 30, 1995, Commission chairperson Justice J S Verma, recently directed the state government to pay the compensation within a month and send a compliance report to the NHRC.

NHRC sources said the SSP had indicated in his report 'natural death' in the police lockup the following day. The SSP had ordered a magisterial inquiry.

The inquiry by the sub-divisional magistrate of Ferozepur ruled out police involvement and found that 'the death was probably due to the intake of narcotics drugs or relapse of the same''.

Though no allegations of ili-treatment were received during the inquiry, the post-mortem report revealed that the deceased had sustained body injuries, the sources

The NHRC directed its Director General (Investigation) to ascertain the cause of death and circumstances under which it occurred. The NHRC investigation team found that Kartar, a tempo driver from Zira, had quit his job and returned to his village. He started committing petty thefts to meet expenses for drugs. He was once reprimanded by the village sarbanch. However, he did not reform. On the night of September 28, he was caught committing a theft at a shop.

On a complaint by the shop owner, he was arrested the following day at 1900 hours and taken to the police station at 2300 hours. He was kept in the lock-up, but was found dead on the morning of September 30. According to the investigation team, Kartar was neither beaten nor tortured by police and the injuries on his body in the post-mortem report were mostly abrasions, which were nearly seven days old.

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However, the doctor, on the basis of a chemical examination of the viscera and histopathological report, cited the cause of death as ''boisoning by zinc

phosphate, a pesticide which can cause death in the ordinary course of nature". He felt that the probable time between the consumption of poison and death was less than 24 hours, the sources said.

As these findings and cause of death given by a medical expert belief the seriler version of the state authorities, particularly of the SDM, who cited the cause of death as excessive intake of nercotics drugs, the NHRC probed when and under what circumstances Kerter consumed the poison. A possibility was that he consumed it in the police lock-up or he most probacly consumed it when arrested, having pocketed the insult and humiliation of being held in public view.

Zinc phosphate, used as a rodent pesticide, is such that Kartar must had developed symptoms of poisoning sufficient to attract the attention of the police officials, who arrested him and escorted him to the police station or the guard keeping vigil at the lock-up at the police station, the NHMC said.

''Kartar must have felt various bodily complaints and discomfort/pain and must have cried for help before breathing his last. This either escaped the notice of police officials or they deliberately avoided to arrange requisite medical help under misapprehension/misglvings that they will be held responsible. Mad prompt and adequate medical attention been given Kartar may have survived, '' Justice Verma observed.

He said the circumstances were indicative of negligence by the police to arrange timely medical aid.

The NHPC said the state should compensate his next of kin and initiate a departmental action against erring police officials entrusted with guarding him in police custody, the sources added.

TIMIT

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[Article of the month]

Evidence of pesticide crisis in India

Across India, incidents indicating contamination of the food chain with pesticides is mounting. There have been cases of wild peacocks, grain-eating birds that roem open fields and scrub, dying in batches of un to a dozen.

There has been at least once incident of 12 Sarus cranes, the world's tallest flying bird which feeds in fields and watlands, dying suddenly. And lately, the 'mysterious' deaths of several elephants in Assam has been attributed to pesticides (see report below).

One study on wild fishing eagles in the apparently pristine Corbett wilderness 250 kilometres north-east of New Delhi, snowed the birds had levels of DDT in their systems up to nine times higher than the levels which cause reproduction failure in American bald eagles. India is one of the few countries still using DDT, but only for urban melaria control and not in agricultural fields. The birds must have picked up the pesticide by eating fish from rivers contaminated by water runoff from nearby urban areas.

Here are excerpts from the study by Rishad Naoroji, published in the Journal of the Bombay Natural History Society:

"From 1991 to 1996 the grey headed fishing eagle bred unsuccessfully. Eggs from seven nests monitored during this period did not hatch, while three nests hatched, young ones were either found dead in the nest, or disappeared within a week of hatching. Eggshell fragments which were collected from one nest in April 1991, were deformed. Thinner than normal eggshells, they were analysed in the US by Dr. Robert W. Risebrough of the Bodega Bay Institute, California ...... A number of organochlorine compounds were detected. The parent DDT compound, that is the insecticidal ingredient, p,p'-DDT, constituted 36 % of the DDT compounds measured; the amount of o,p'-DDT, the minor ingredient in the original DDT mixture, was 10% that of p.p'-DDT.

The relatively high amounts of these two compounds indicate recent DDT applications in local or nearby areas; the evident thinning of the shell is most likely an effect of DDE, usually the principal metabolite of DDT in the environment and the compound considered primarily responsible for shell thinning. FCD congeners and dieldrin were detected, but at relatively low levels of shout 68

and 2% respectively, of total DDTs. The dieldrin levels however are significant. Dieldrin, which is highly toxic to birds of prey, has been implicated in the population decline of raptors in Europe and North America....Locally, it is most likely derived from Aldrin."

Perhaps the worst - and most well documented - case by far has involved Endosulfan, an organichlorine pesticide sprayed on cashew plantations in Kerala. For over 20 years villagers in Kasargod district, with some 4,500 hectares of cashew plantations, have been affected by an unusually large number of cancer deaths, neurological disorders and physical and mental impairments.

The Delhi-based Centre for Science and Environment in a study reported Endosulfan levels several times higher than maximum residue limits in vegetables, cow's milk, water and soil and local people have filed a court case to get to the bottom of the issue. Shree Padre, a progressive farmer, journalist and activist based in the areas first noticed deformities in calves in 1981 and began writing about it. Local doctor Y. S. Mohan Kumar wrote in the Kerala Medical Journal in 1997 of the large number of people suffering from diseases of the central nervous system and asked for the intervention of specialists. There was no response.

"We are always being asked to prove the link" Shree Padre says. "What kind of arrogance is this? We cannot prove it, let them disprove it."

Villagers have now formed the Endosulfan Spray Action Committee, but there is still a sense of hopelessness among them because they believe the government is not taking enough action to investigate the issue. The Committee has accused the Plantation Corporation of Kerala of trying to sweep the issue under the carpet and use pressure tactics to disprove links between Endulfan and the health disorders in the community. According to anecdotes from villagers working in the cashew plantations — most of whom are not provided any protective masks or clothing — there has also been

The state of

Endosulfan is an endocrine disrupter and genotoxic, attacking the central nervous system, xidneys, skin and reproductive system. It is banned in many countries including Singapore. In the 190s in the Philippines, the pharmaceutical company Abechst tried to contest a ban on Shoosulfan but lost.

As a result of the flood of publicity on Endosulfan, its use has been curbed in the cashes plentations, but there are moves to replace it with other pesticides. Meanwhile, there is no relief for the villagers affected. In one household two children were born blind, in another a 30 year old woman is only four feet tall with twisted limbs - just two of many cases of what activists are calling a silent killer.

The Kerala episode is not an isolated one. In one case involving the sudden deaths of more than a dozen peacocks in an agricultural area in north India, investigations revealed that farmers had been spraying their fields in the area with insecticides like Chloropyriphos—and Endosulfan.

Pesticide poisoning responsible for pachyderm deaths at Nameri

By Surajit Khaund in the ASSAM TRIBUNE published from Guwahati

GUWAHATI, Sept 14 - The doctors of the State Veterinary Coilege investigating the mysterious death of elephants in the Nameri National Park and the Pakhoi Game Sanctuary, nave confirmed the deaths due to pesticides poisoning.

They have confirmed it after receiving the forensic report in which 'organophosphorous' pesticide (Demecron) has been detected in a sample of an elephant carcass. In view of frequent death of pachyderms during the last month, the State Forest Department had asked the Veterinary College to conduct a detail investigation. Having completed the clinical analysis, the doctors had

sent a sample of a carcass to the Forensic Science Laboratory for detection of chemical compounds.

The forensic test report which was placed yesterday confirmed the presence of 'organophosphorous' pesticide (Demecron) in the sample. Or Apurba Chakraborty, one of the members of the investigating team Told The Assam Tribune that organophosphorous is a highly toxic for animals due to its residual affect. "Nowadays the use of this pesticide has been banned due to toxicity as informed by some agriculture scientists," he said.

Asked how the elephants came into contact with the pesticide, he said "elephants have a strong affinity for liquor and taking advantage of it, they were given country-made liquor mixed with the pesticide by some unscrupious elements."

We however, said that this is an assumption as the authorities are yet to establish the involvement of miscreants. Worried over the death of the pachyderms, he along with the three doctors of the investigating team - Dr PN Mahanta, Dr K Sarma and Dr KK Sarma - suggested initiating stern steps for preservation of elephants. "Siephants depredation is a major problem in the hordering areas of the State due to depletion of forest coverage and hence a pragmatic step is a must." Dr Chakrabottv said.

Meanwhile, the Forest Department has recovered another carcass of an elephant at upper Dikrai in the Nameri National Park leading to the death toil to 10. The intestinal part of the carcass has been sent to the Forensic Science Laboratory for detection of chemical compounds. Highly-placed Forest Department sources who did not wish to be named said that considering the gravity of the problem, all Divisional Forest Officials (DFOs) have been asked to remain vigilant on their respective areas to prevent such incident.

"We have undertaken a scheme of erection of fencing in the Sonitpur district in view of growing elephant depredation,"

they said

PESTICIDE 'TIME BOMB' TICKING IN DEVELOPING WORLD

According to a new study by the United Nations Food and Agricultural Organisation, a toxic 'time bomb' is ticking in Africa and other developing regions, in the form of alarmingly large stocks of deadly, obsolete pesticides, often stored in deteriorating and leaky containers without adequate safequards for people and the environment. Clean-up and disposel efforts are hammered by high

costs.

A new study by the United Nations Food and Agricultural Organisation (FAO) has found that stocks of deadly, obsolete pasticides are five times large than previous estimates and constitute a toxic 'wicking time bomb' in Africa and other developing regions.

The alarming new figures, released 9 May, set the amount of prohibited and outdated pesticides at 100,000 tonnes in Africa and the Middle East, 200,000 tonnes in Asia and 200,000 tonnes in Eastern Europe and the former Soviet Union - often storad in deteriorating and leaky containers without adequate safeguards for people and the environment. According to FAO estimates, stocks of more than 48,000 tonnes of such pesticides have been identified so far in Africa, although the total is likely to climb as more surrey data becomes available.

The stocks include some of the most poisonous compounds ever made, including dieldrin, DDT and chordane. The World Health Organisation (WHO) estimates that more than 1 million people are affected by exposure to pesticides worldwide, causing 20,000 deaths annually.

The lethal legacy of obsolete pesticides is alarming, and urgent action is needed to clean up waste dumps,' noted Mr Alemayshu Woodagensh, an FAO specialist. "These "forgotten stocks" are not only a hezard to people's health, they also contaminate water and soil. Leaking pesticides can poison a very large area, making it unfit for crop production.'

The problem is particularly severs in sub-Sharen Africa, where farmers and government regulators often lack the financial resources and technical capacity to handle pesticides safely and screen out substandard, banned and contaminated compounds. The FAO and WHO estimate that as much as 30% of pesticides sold annually in developing countries - worth 9900 million last year fail to meet international standards and are often mislabelled or entirely summarked.

The scope of the problem is dramatically illustrated in Ethiopia, where some 3,400 tonnes of obsolete pesticides, much of it over 20 years old, is stored in 1,000 sites throughout the country. One of the largest dumps is in the centre of Addis

tonnes of obsolete pesticides in leaking barrels near 40 grain silos.

In the western Ethiopian village of Arjo, FRO researchers found over 5 tonnes of DCT and maisthion in a collapsing barn in the middle of the community - just yards from homes and pastures. Residents have long complained of nausea, respiratory ailments and headaches, and report a strong stench from the unprotected site. The Sthiopian government and the FAO, with funding from the Dutch, Swedish and US governments, have begun a clean-up effort intended to destroy 1,500 tonnes of the pesticides - the largest decontamination effort under way in Africa.

But with the cost of disposal of Africa's obsolete pesticide stock estimated at \$280 million, clean-up efforts have been slow. A preliminary FAO inventory of toxic sites in 39 African countries found that of 48,081 tonnes of chemicals reported, just 2,838 tonnes had been destroyed.

Without the required high-temperature incinerators, African posticides must be shipped to Europe, a costly and hazardous process that has hampered disposal afforts.

Greater involvement by the pesticide

industry, which is dominated by a handful of US, European and Japanese companies, said Mr Wodagench, is indispensable.

'Support from industry is crucial for the disposal of pasticides because aid agencies of donor governments cannot cover all the costs.' The industry is committed to assist in the incineration of obsolete and unstable compounds, he noted, but so far has contributed little.

In the meantime, the FAO, WHO, the UN Environment Programme (UNEF) and the UN Industrial Development Organisation have stepped up efforts to assist African governments identify and respond to the toxic threat. In June 2000, the UNEP held a regional workshop in Dakar, Senegal, on the Rotterdam convention governing the trade in hazardous chemicals and pasticides.

UN agencies are working with many African governments, including Nigeria, Uganda, Semegal and Ethiopia, to develop national action plans for the handling and adoption of environmentally-friendly alternatives to chemical pest control.

On 33 May, 122 countries adopted the Stockholm Convention on Persistent Organic Pollutants, banning 12 of the most dangerous compounds. The Global Environment Facility, managed by the World Bank, UNEP and the UN Development Programme, will finance implementation of the convention.

- Third World Network Features

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adoption of environmentally-friendly alternatives to chemical pest control.

On 23 May, 122 countries adopted the Stockholm Convention on Persistent Organic Pollucants, banning 12 of the most dangerous compounds. The Global Environment Facility, managed by the World Bank, UNEP and the UN Development Frogramme, will finance implementation of the convention.

- Third World Network Features

The above article first appeared in Africa Recovery (Vol. 15 No. 1-2, June 2001), published by the Library and Information Resources Division of the United Nations Department of Public Information, with support from UNDP.

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[Image]

[Image]

### Executive Summary for Profencios

#### Uses

- \* Profenofos is an organophosphate insecticide/miticide.
- \* Used only on cotton (up to 10% of U.S. cotton crop is treated).
- \* Sprayed aerially and by ground equipment up to six times per season.
- About 775 thousand pounds are used annually; 81% of the usage is in the cotton-growing states of Arizona, Texas, Georgia, Mississippi, and Louisiana.
- A major component of existing cotton Integrated Pest Management programs (such as the whitefly and pink bollworm resistance management programs).
- \* Depending on the target pest, alternative insecticides include the synthetic pyrethroids, spinosad, Bt cotton, dicofol, endosulfan with amitraz, methyl parathion and chlorpyrifos.

#### Health Effects

 Profencios can cause cholinesterase inhibition in humans, which at high doses can cause nausea, dizziness, confusion, and at very high exposures (e.g., accidents, major spills), respiratory paralysis and death.

#### Risks

#### Worker Risks are high:

Assuming the use of closed loading/mixing systems (which are not now required), safety margins are estimated to be less than 50 for aerial mixers/loaders and for aerial applicators; generally, safety margins of 100 or less are of concern to the Agency. Safety margins are over 100 for applicators and mixer/loaders using ground mining/leading systems and enclosed tractor cabs.
\* Risks to workers who reenter fields after treatment are high.

Dietary Risks are low for all subpopulations including children.

Aggregate Risks from food and water are low for all subpopulations including children. There are no residential

Risks to Fish are high:

 Thirteen fish kill incidents in Louisiana and Mississippi during 1994-1996 indicate that large-scale fish kills can occur when profenofos is used in.

accordance with current labeling.

### How the Risk Picture May Change

200

- \* In response to the risk assessments, the registrant suggested that they might conduct a new toxicity study to help refine the worker risk assessment. In addition, the registrant recently informed the Agency that they are conducting new studies related to worker exposure. The final phase of the worker exposure studies is expected to be initiated in the botton use season of 2000 and could refine the worker risk assessment.
- \* Worker risk could be reduced by requiring the use of closed loading/mixing systems and enclosed cabs for ground equipment. The registrant informed the Agency that a closed loading system is now commercially available.

Profenofos Documents | OPP Home | EPA Home | Comments Site Map | Search OPP | Search EPA

www.epa.gov/pesticides/op/profenofos/profbrief.htm updated June 16, 1999

### Community Health Cell

From: sichrem <sichrem@satyam.net.in>

To: "CRY" <psu.blr@crymail.org>: "Critical Asian Studies" <tfenton@igc.org>: "CPSW"

<cosw@cal vsnl.net in>; "CPA - Legal Department" <cpalegal@diamond.lanka.net>; "COVA LYD" <a href="https://creativs.net.in>; "Cova" <a href="https://covahyd@sarchamet.in>; "COVA" <a href="https://covahyd@sarcha

<sochara@vsni.com>; "cocoy sardana" <csardana@hotmaii.com>; "Coalition"

snationalCoalition\_cac@hotmail.com>; "CLPTP" <c]ptp@citechco.net>: "Cleveland Richter" ve@free net nez= "CLAP" <ck\_committa@eanchamet in> <clbakhshi@yahoo co in>; <civiroblere@vsnl.com>; "Civil Society Initiatives" <csi@theothermedia.org>; "Citizens Allianoe" <a href="https://climater.org/">https://climater.org/</a>; "Cindy Holanski" <cindyh@libero.lb>; <cli>colo@cilonline.org>; "Cleds" <a href="https://climater.org/">https://climater.org/</a>; "ChRO" <a href="https://climater.org/">https://climater.org/<a href="https://climater.org/">https://climater.org/<a href="https://climater.org/"

Wealth Human Rigths Initative <chriail@da.vsni.net.in>

Sent: Friday. April 09. 2004 2:53 PM

Attach: Invitation for 13 april 04 doc; Invitation for 13 Apr 04 Southern Regional Convention Against

DeathPenalty.doc; Itr to presient of India rg the Mercy petion of 4 rg signatures.doc; Itr to governor of karning the Mercy Petiton of 4 rg signatures.doc

Subject: South India Convention Against Dealth Penalty 13 April 2004

#### Dear friends.

Enclosed is the petition addressed to the Governor of Karnataka and the President of India urging them to grant elemency to the four persons who are facing death sentence, (Date fixed for execution is April 16,2004).

We request you to print out both these forms and take as many signatures as possible and send it to SICHREM before 15th April or you are must welcome to bring them to the convention ( invitation Enclosed). These signatures, along with others collected from all over india will be submitted to the Governor.

Hope you will join hands to save the lives of these four persons. With Regards.

Mathews Philip Executive Director

Bangalore - 560 084.

#### SICHREM

South India Cell for Human Rights Education and Monitoring IF, 36 Anjamappa Complex, Hennur Main Road, SLThomas Town Fost, Lingarisionram.

Telefax: 91 + 80 - 2547 3922 / 2549 2856.

12/4 Dib- Luman ejkti file

16/4

# CAMPAIGN AGAINST DEATH PENALTY

Chairperson: Justice V.R.Krishna iver

### Members of National Committee:

Justice P.Iv.Bhagwati

Justice Rajindar Sachar

Justice Nitoer Sceenivasa Rau

Instice H Suresh

Baba Amte

Dr.V.Mohini Giri

Dr. Asgar Ali Engineer

Prof.C.T.Kurien

indira jaisingh

Anand Paiwardhan

V.R.Lakshminaravanan

Kuldip Nayar

Dr P M Pal

Prof Ighal A Ansari

Pr.K.Balagonal

Prot. Hasan Mansoon

Prof.B.B.Pande

Convenor: K Manoharan South India Regional Convention Against Death Penalty on 13th April 2004.

### Organised by:

Human Rights Cell - Indian Social Institute, Bangatore People's Union for Civil Liberites - PúCL, Tamil Néodu & Pondichery, Karnataka. People's Watch - Madurai Snor Trust - Medurai

Tribals People's Association - Tamii Nadu South India Cell for Human Rights Education & Monitoring - SICHREM

Date: April 9, 2004

Door Sir/Madam

Subject Invitation

We do hope that you are in receipt of the first invitation to the Regional Convention Against Death Penalty taking place on 13th April 2004 at

### Indian Social Institute (ISI)

# 24, Benson Town Road, Bangalore - 46, Telephone: 080-235361896 / 23525960.

The convention will be inaugurated by Mr.Justica.H.G.Balakrishna (Rtd. High Court of Kamalaka) at 10.30 am. Prof.Hasan Mansur, President, PUCL-Kamalaka will be the speakers in the inaugural function. Shrt.H.S.Doraswamy, well known Gandhian and social activist, Shrt.S.G.Vasudev, well known artist, Dr.Markandyan, former Vice-Chancelior Gandhigram Rurai University, Dr.Jusevanandam, President, Tamilinadu Pasumai Iyakkam. Prof.Kalyani. Treasure. Makkal Urmai Koottamaippu, Tamilinadu Pasumai Iyakkam. Prof.Kalyani. Treasure. Makkal Urmai Koottamaippu, Pondicherry, Dr. V. Suresh, General Secretary, PUCL-Tix, Mr.S.Balamurugan, John Secretary, PUCL-Tix, Thylyad Lakehmana Iyar, Victuthalal Poretta Veerargal Songan, Sophet tetuplate pages.

V.P. Gunasekaran, General Secretary, Tamilnadu Pazhangurli Makkal Sangam; Mr. Sukumaran (PUCL-Pondichorry); Fr.Ambroso Pinto S.J., Principal St.Josephs College – Bengalore, Shri. Mukundan Menon, CHRO – Kerale, Prof.Sridhar (Pmfessor Vilaya College – Bangelore); Mrs. Geatha Menon, Sfree Jagnuthi Samithi – Bengalore; Advocate, Balamurugan, PUCL - Tamil Nedu; Mrs.Donna Fernandez, Virnoziana – Bangelore and many other human rights detenders will speak in the Convention

Please note that Mrs.Selva Mary (Wio.Gnaneprekasam), Mrs. Karnala Mary (Wio. Bilevendran), Mrs.Thangammal (wio Mr.Bilevendran) and family members of Simon will be attending the Convention. Please come & show our solidarity with these people.

יפח ח יסי

Sincerely yours,

Hesen Mensur, President PUCL-K, FR.K.Amal - ISI, Human Rights Cell-Bangalore Henn Tiphagne – People's Watch

Mahmood Betche – Soco Trust Adv.Bala Murugan – PUCL-Tamil Nadu

V.P Gunasnekaran, Tamii Nagu - Tribai People's Association

Mathews Philip - SICHREM

For details contact:

# **CAMPAIGN AGAINST DEATH PENALTY**

Chairperson: Justice V.R.Krishna Iver

#### Members of National Committee:

justice P.N. Bhagwan

Inctico Rajindar Sachar

Justice Nitoor Sceenivasa Rau

Instira H Surach

Raha Amte

Dr V Mohini Giri

Dr. Asgar Ali Engineer

Prof C T Kurien

Indira Jaisingh

Anand Patwardhan

V.R.Lakshminarayanan

Kuldin Navar

Dr.K.M.Pal

PTOLIGDAL A. Ansari

LT.K.Balagopal

Prof. Fiasan Mansoon

Prof.B.B.Pande

Convenor: K Manoharan South India Regional Convention Against Death Penalty on 13th April 2004.

Organised by:

Human Rights Cell - Indian Social Institute, Bangalore People's Union for Civil Liberties - PUCL, Tamil Nadu & Pendichery,

Karnataka. People's Watch - Madurai

Soco Trust - Madurai Tribais People's Association - Tamii Nadu

South India Cell for Human Rights Education & Monitoring - SICHREM

Date: April 6, 2004

Dear Mr. Doreswamy,

Subject invitation

Human rights organisations all over the world campaign for abolition of death penalty because no human being must be deprived of his / her life in the name of judicial justice.

Right to life has been recognised as the most precious right of all, a right without which no other right can be enjoyed. No one should have the right to deny another's right to life. We should all be committed to the protection of the lives or relieve beings. In such a situation, the state should not be party to such a gross violation of the most basic and fundamental of human rights. The State sets an example to its citizens. Therefore, killing someone does not prevent the common man from doing the same. The death penalty may wall have a hartislisation effect rether than a determent effort.

Amnesty International statistics show that by April 2003, 112 countries have abolished the death penalty in law or practice. More han 3 countries a year on an average have abolished death penalty for all offines in the past decade. Since 1990, more than 35 countries have abolished the doath ponalty in law or, having proviously abolished it for ordinary offines, have gone on to abolish it for all crimes. The Second Optional Protocol to the International Covenant on Civil and Political Rights adopted by the UN General Assembly in 1989, states in its preamble that the abolition of the death penalty contributes to the enhancement of human dightly and progressive development of human rights. The Universal Declaration of Human Rights states, without any reservation that overy person has the right to life, under Article 3.

Again the United Nations Commission on Human Rights in its Resolution of April 1999 appeals that all Covernments should establish a moretorium on executions.

Unfortunately we in India still continue to impose death penalty as a punishment. Right now the four people from Kamadata are facing gallows. They are Mr. GreenePrakecam, Mr. Simon, Mr. Bilevendran and Mr. Madaian aisa Meesekara Madaian.

We should mobilise all support from all comers to appeal to the Governor of Karneteke and The President of incie to save their lives and to commute the death sentence into life impresement. In this context, the abovementioned convention is organised on April 13, 2004, between 10 and 5 pm at Indian Social Institute # 24, Senson Town Road, Bargaloire -40, Telephone: 080-235301899 / 23025900.

Eminent human rights defenders from all four states of south India are expected to participate in this convention.

The family members of the victims also will be there and it will be an opportunity for all of us to express solidarity with them. Please come and participate in large numbers.

### In solidarity

riasan Mansur, President PUCL-K.

FR.K.Amai

ISI. Human Rights Cell-Bangalore

Henri Tinhagne - People's Watch

Mahmood Batcha - Soco Trust

Adv Bala Munican - PUCL-Tamil Nadu

V.P. Gunashekaran, Tamil Nadu Tribal People's Association

Mathews Philip - SICHREM

### For details contact:

- 1. ISI Human Rights Cell @ 080-235361896 / 23525960.
- 2. SICHREM @ 080- 2547 3922 / 25492 856.

### **Contact Address**

Campaign Against Death Penalty, No.10. Thomas Nagar, Little Mount, Saidapet, Chennai – 600 015. Ph. 944 – 2255 35 03 / 044-225 31 03 (o) Fax: 434 – 2235 59 05. Email: http://dx.dvshi.net.in/.nir/pxhyeb.com/ / www.voicesoistrudgleten.org

# STGNATURE CAMPATON AGAINST DEATH PENALTY

т.,

His Excellency The President of India

in criminal appeal No.149-150/2002 before the Supreme Court of India, which is related to the incident of Bomb Blast near Palar river in 1993, which resulted in the death of 22 persons, the Supreme Court confirmed the conviction of the 1ADA designated Court, Mysore and enhanced the punishment to 'Death Penalty' suo motu.

All the four convicts Mr.Bilavendran. Meesakkara Mathaiyan. GianaPrakasam and Simon are hailing from poor agrarian family and they have to look after their dependents. By invoking the power of pardon vested with your Excellency by the constitution, we pray your Excellency to consider the plea to revoke the death penalty imposed against the above said four persons and thereby render justice.

Yours

Name & Address	Signature
	Name & Address



Résumés and Job Opportunities



Affirmative Action in Employment





# Your Résumé is Your Introduction

When you're looking for a job, it's important to make a good impression on a prospective employer. Just how do you actually get such a person interested enough to interview you? One good way is to prepare a résumé—o short summary of your skills, qualifications and experience. A well-prepared résumé will help any potential employer see at a glance what your background is and whether or not you should be interviewed.

### Before Writing Your Résumé

A résumé is the first impression an employer may have of you. So it's worth spending a bit of time to prepare it properly.

Before you begin, ask yourself the following questions, then quickly set down the answers on some scrap paper:

### What type of work do I want to do? (occupational goal)

If you're applying for a specific job, put down its official fitle. If you don't have a particular job in mind, describe the type of work you want to do. Put down whether you want part-time or full-time work and whether or not you'd be willing to move to get such work.

### What education do I have?

Put down the highest grade you passed in school any diplamas or certificates you may have from any technical schools, colleges or universities. List what your main area of study was and any courses you may have taken in the evenings, while working fulltime, etc. that are related to the kind of work you're seeking.

### What jobs have I done? (work experience)

Put down your most recent job first and work back in time from there. For each indicate whether it was a fulltime or part-time job.

If you're just beginning a career or are getting back into the work force after several years' break, list all the jobs as well as any volunteer work. Each job indicates a certain skill you've acquired. Babysitting, supervising a children's playground, hovin paper route, for example, indicate a large degree of responsibility and dependability. Waiting on customers at a snack bar, for example, shows good interpersonal communications skills and the ability to handle a heavy workload effectively. You will be preferred to someone without such

Write a brief description of each job.

# What kinds of work don't I like to do?

Make sure you don't emphasize any type of work in your resume that you don't want to do now. For example, if you don't like filing, don't stress any filing experience you may have. Instead, emphasize those skills you want to develop. If, for example, you like working with people, emphasize experience you have had in the past working with different kinds of people.

# What are my other interests and hobbies?

Your interests and hobbies can show of the rospects of you as a person. Include here any memberships you have in clubs, positions you hold in volunteer organizations, and hobbies you enjoy such as photography, writing, tinkening with machines, carpentry, gordening, etc.

# RESUME Last Name, first name or initial Contact Address and Phone No. \_\_\_\_\_ Contact between: \_\_\_\_ Other phone number: Contact between: Occupational goal: EDUCATION School/University Grade/Degree(s) Major field of study: WORK EXPERIENCE Name of company: Address: Supervisor or Reference: Reason for leaving: INTERESTS AND HORBIES

REFERENCES

Name: \_\_\_\_\_\_ Position: \_\_\_\_

Address: \_\_\_\_\_ Phone number: \_\_\_\_\_

Who can I give as a reference?

Most employers like to check out the details you've given in your résumé. That's why it's a good idea to line up some people who will give good references on your behalf.

Pick out at least three people—a business reference, an education reference, and a character reference. You can either mention them directly in your resume by name or say that references will be supplied on request.

MAKE SURE YOU HAVE THE PERMIS-SION OF ANYONE YOU WANT TO USE AS A REFERENCE—otherwise you might not get a good reference from that person. No one likes to be surprised.

# Include a Covering Letter

Once you have your résumé prepared, think about putting a different covering letter with each copy you drop off to a prospective employer. A covering letter should:

- introduce you as someone interested in either a specific position (give job title) or in a particular type of work with that employer
  - explain why you're interested in working for that employer
  - · briefly sum up the skills you could bring to the employere.g., ability to work well with others, operate a particular kind of equipment, handle a heavy workload, etc.
  - state that a résumé detailing your skills, qualifications and experience is enclosed
  - mention in closing that you would welcome the opportunity to discuss your qualifications and experience IN PERSON.

Having your covering letter typed professionally, check to make sure it's free of typing errors, then SIGN IT and enclose it in an envelope with a copy of your résumé.

### Putting It All Together

A sample résumé is included in this pamphle. It shows one effective way of putting together the information you've already written down into a résume format. There are other ways of assembling a résumé that are equally interesting and effective. The main thing is to keep four points in mind when you're actually putting your finished résumé together:

- keep it brief
- keep it positive
- keep it simple keep it neat

### Keep it brief

Most employers read a lot of résumés, so keep yours brief—two pages is long enough. Leave lots of white space between sections so it's easy to read.

### Keep it simple

Tell it like it is. Outline who you are, what you know, what you have done, what you want to do.

### Keep it positive

Put your best foot forward. Stress your good qualities. Avoid saying anything negative about yourself. Do not include any information about salary—what you made in previous jobs, or what you expect to make in a future one. Save salary discussions for your interview or iob offer.

### Keep it neat

Have your résumé typed. If you can't type it professionally yourself, have a professional typist do it for you. The expense is worth it. You are, after all, creating a first impression on

an employer. A professionally typed résumé shows you're serious about the impression you make.

Check the typed résumé for typing errors and have any errors corrected. (Spelling errors create as bad an impression as a handwritten résumé does.)

Keep your résumé and make CLEAR photocopies from it for prospective employers.

### Deliver In Person If Possible

It's always best to take your résumé and covering letter d'irectly to the employer you want to interest. By delivering them in person, you show how interested you are and you leave a positive impression on a prospective employer. You also become more than just a name at the top of a résumé.

### Keep in Touch

A week or so after you've dropped off your résumé and covering letter, phone to see if the prospective employer hos had a chance to look at your material, and whether or not he or she would like to set up an interview. BEING PERSISTENT SHOWS THAT YOU'RE KEEN, not that you're a pest. So keep in touch until you either get a firm "no, we're not interested" or "we're not hiring at this time" or an interview. Persistence pays off.

### Possible Places to Look for Employment

There are jobs out there! You just have to know where to look. Try the following places:

- Nova Scotia Human Rights Commission
- Canada Employment Centres

- Nova Scotia Civil Service...
- Commission (provincial)
- Municipal Government
   Private employment agencies
- Former employers
   Construction sites
- Industrial parks, factories, plants
   Libraries
- Yellow pages in the telephone
- directory
   Churches
- Service organizations
- Newspaper classified ads.

## For Further Information

Contact the Nova Scotia Human Rights Commission:

## Central Office Lord Nelson Arcade 7th Floor

P.O. Box 2221
Halifax, Nova Scolia B3J 3C4
424-4111, T.D.D./Voice
Fax 424-0596
Regional Offices

#### Regional Offices Provincial Building Prince Street Sydney, Nova Scotia B1P 5L1 563-2140 Fox 563-0501

Basin Place 68 Water Street P.O. Box 1029 Digby, Nova Scotia BOV 1A0 245-4791

176 Archimedes Street P.O. Box 728 New Glasgow, Nova Scotia B2H 2P8 752-3086 Fax 752-7133

Bank of Montreal Building 35 Commercial Street Suite 300 Truro, Nova Scotia B2N 3H8 893-5905

### Editorials

# How policy informs the evidence

"Evidence based" thinking can lead to debased policy making

Education and debate p 222

Who would not want health policy to be based on evidence? "Evidence based medicine" and "evidence based policy" have such reassuring and self evidently desirable qualities that it may seem contrary to question their legitimacy in relation to reducing health inequalities. However, these terms are now so familiar that it is easy to forget the important question about what sort of data provide appropriate evidence for particular types of decisions. The sort of evidence gathered on the benefits of interventions aimed at individuals may not help in guiding policies directed towards reducing health inequalities.

In this week's *BMJ* readers have the opportunity to assess part of the process leading to the recommendations of the Independent Inquiry into Health Inequalities (the Acheson inquiry), <sup>1</sup> established in 1997 to help the government formulate policy to reduce health inequalities. The inquiry established an evaluation group to report on the quality of the evidence it used to reach its conclusions and support its recommendations. <sup>2</sup> This group critiqued submissions to the inquiry, and a list of its own remedies for health inequalities—their "10 steps to health equality"—was released before the Acheson inquiry had itself reported (see box on bmj.com). <sup>3</sup>

The evaluation group appears to have applied evidence based principles to its consideration of ways to reduce inequalities in health. Essentially it wanted evidence from controlled intervention studies, and its main evaluation consisted of checking each recommendation against three earlier reviews (two conducted within an explicit evidence based framework) and the *Cochrane Library*.

The task of the Acheson inquiry was to make recommendations that would reduce inequalities in health, not merely have a positive overall health benefit. For most of the evaluation group's suggested interventions there are no high quality controlled studies showing that they would reduce health inequalities—for example, the evidence that fluoridation of drinking water would reduce inequalities in dental health is scanty. Indeed, some of these interventions could increase inequalities. Smoking cessation may be more successful in advantaged groups. Drugs education in schools may have less impact on those most at risk, because they are more likely to be truants and thus less exposed to it.

On the general question of what sort of evidence is useful to set policy in the public health domain, it is helpful to think back to earlier eras. In the first half of the 19th century there were no "evaluation groups" to point out the lack of evidence from controlled intervention studies showing the health benefits of, for example, stopping children under 9 from working in cotton mills, fencing off dangerous machinery, or

reducing the number of hours children could work to only 10 a day. With an evaluation group, implementation of the Factory Acts could have been resisted. The factory owners were certainly keen on "evidence": the claim that working class children aged 5-10 had lower death rates than middle class children was used to suggest that factory labour was good for the under 10s. §

Clearly the situation is now different, but health inequalities are still large and have increased over the past two decades. <sup>9</sup> Premature death rates are over three and a half times higher in Glasgow Shettleston than in Wokingham. <sup>9</sup> and a remarkable three quarters of premature deaths in Glasgow Shettleston would not occur if it had the mortality rates of Wokingham. It is no surprise that in Glasgow Shettleston child poverty rates are over six times, and unemployment rates over five times, higher than in Wokingham. Clearly the need is for substantial reductions in socioeconomic inequality, which can follow only from the concerted implementation of policies of progressive taxation and substantial income redistribution.

The evaluation group states that randomised trials of income support have been carried out and could, in principle, have examined health outcomes. However, the effects of income redistribution would not be to give a few people a little more money while they remain living in a highly unequal society, but to change the nature of the society. Health is influenced by micro and macro social environments, and societies with high levels of income inequality are characterised by a wide range of social-structural attributes that have a detrimental impact on health.

As Schwartz and Carpenter have pointed out, inappropriately focusing on individual level determinants of health while ignoring more important macrolevel determinants is antamount to obtaining the right answer to the wrong question. One consider the situation of examining risk factors for unemployment. Conventional individual-level studies would probably find that low education, not dressing smartly for interviews, being short, being over 50, or being a member of a minority ethnic group predict being unemployed. Indeed these "risk factors" would probably explain a high percentage of the variance in unemployment. A controlled study finding that counselling on how to dress and behave at job interviews increases success in getting a job could be added to the Cochrane Library. The same risk factors may explain a high percentage of the intra-individual variance in unemployment, both when unemployment is 1% and when it is 14%.

The big difference for the population—and thus for the individual risk of unemployment—is, however, the 14-fold difference in overall levels of unemployment at times when different fiscal policies are being implemented. High variance apparently "explained" by individual-level risk indicators (or markers manipulable in a discrete way within populations) does not mean that they are important determinants of the population level of any outcome. <sup>11</sup> These are, however, precisely the factors that evidence based research focuses on. Despite occasional rhetorical interest in wider determinants of health, evidence based assessments are largely restricted to individualised interventions. The Cochrane Library is unlikely ever to contain systematic reviews or trials of the effects of redistributive national fiscal policies, or of economic investment leading to reductions in unemployment, on health.

The insidious nature of this mismatch between evidence and policy is highlighted by the fact that the evaluation group is, as one would expect of such informed commentators, aware of the problem, while implicitly ignoring it. One of the evaluation group stated when launching the "10 steps to health equity", "Our recommendations are quite medical because those are the sort that tend to have evidence behind them." Health differentials between social groups, or between poor and rich countries, are not primarily generated by medical causes and require solutions at a different level.

One source of the scientific innovation that was institutionalised within the Cochrane Collaboration was a powerful critique of a complacent and uncritical form of health care delivery. <sup>12</sup> The establishment of the evidence based medicine movement is a remarkable achievement with an unquestionably favourable influence on the probability that individuals will receive health care that benefits them and be protected from interventions that harm them. It would be ironic, and inconsistent with Cochrane's radical instincts, if the inappropriate applications of those ideas were to provide a complacent barrier to implementing those measures necessary to redress health inequalities.

George Davey Smith, professor of clinical epidemiology. Shah Ebrahim, professor of epidemiology of ageing. Stephen Frankel, professor of epidemiology and public health.

Department of Social Medicine, University of Bristol, Bristol BS8 2PR

### Footnotes

A box listing the evaluation group's remedies to health inequalities appears on the BMJ's website

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HUMAN RIGHTS GROUPS AND PEOPLE'S MOVEMENTS CONDEMN POLICE FIRING IN NAGAPATTINAM

We, the undersigned, strongly condemn the act of police firing at the traditional fisherpeople at Nagapattinam, Tamilnadu on 27th September 1993 in which 2 people, Pakrisamy (45 years) and Balasubrahmanian (32 years) died on the spot and many seriously injured. according to the information that reached us, the traditional fisherpeople were demonstrating in Nagapattinam town to protest the increasing incidents of cold blooded murders executed by the Indian as well as Sri Lankan Navy personnel while they go fishing in the sea. The immediate incident that forced the fisherpeople to come in thousands in the streets of Nagapattinam was the death of three fishermen at the hands of Sri Lankan Navy

Eye witnesses report that no higher official other than the Police Inspector Mr. Ramachandran was present at Anna Statue where police resorted to multiple rounds of firing at the hapless fisherpeople. No warning in any form was given before the police employed the murderous act of indiscriminate firing causing injuries to people in head and chest.

The police firing at around 2.00 p.m. was preceded by organised attack on the fisherpeople by the dominant caste Kallar Community using deadly weapons, since 10.00 a.m. in the morning. People believe that town Secretary of AIADNK, Mr.Chandra Mohan was behind this attack against the fisherpeople. Kallar Community members from other places like Madurai, were brought in to cow down the resurgent fisherpeople community. We are forced to suspect that political, administrative and caste interests worked in tandem in Nagapattinam to the detriment of the traditional fisherpeople who were demanding their civil, democratic and economic rights.

In this context, we demand that:

- a judicial enquiry be ordered to ascertain the facts leading to the partisan firing by the police forces,
- the victims be adequately compensated and the culprits punished,
- every step be taken to protect the interests of the fisherpeople, especially in the context of the high caste violence unleashed on them,
- immediate steps be taken by both Indian and Sri Lankan governments to ensure that security interests do not hamper the basic rights of the fisherpeople from earning their livelihood from the sea.

We appeal to the people of India and Srī Lanka to mobilise mass action and public opinion in favour of the rights of the fisherpeople.

This Statement is acceded to by:

Medha Patkar, Narmada Bachao Andolan

The Other Media

Thomas Kocherry, National Fishworkers Forum

Inder Mohan, Indian Peoples Human Rights Commission

D.Thankappan, Kamani Employees Union

Sucharita, Purogami Mahila Sangathan

Rajni Kothari Dinesh Mohan

Tapan Bose,

Sumanto Bannerjee

Anuradha Chinoy

Brahamdev Sharma, Bharat Jan Andolan

Pradeep Prabhu, Kashtakari Sanghatna

Place: New Delhi. - Date: 29/9/1993.

### Main identity

From: "awhrci" <awhrci@sifv.com>

To: "CIVIDEP" <cividepindia@hotmail.com>; "Community Health Cell" <sochara@vsnl.com> Sent:

Thursday, October 02, 2003 2:31 PM

Attach: AWHRC.vcf; pamphlet.doc

Subject: Protest Police Brutality Against the Poor

#### Dear Friends

Two days back, our attention was brought to a case of gruesome police brutality at the Frazer Town Police Station on a poor couple based on unfounded suspicion of stealing. The couple was inhumanly beated and abused by the police officials (Kindly see attachment for case details). The story of Poornima and Rejan is one that speaks of the absolute vulnerability of the poor, the prejudiced arrogance of the powerful; the total unaccountability of State power.

We held a press conference regarding the same yesterday (1 October 2003) at the Press Club. We will be protesting outside the Frazer Town Police Station today(2 October 2003). We will be gathering at the Cox Town Circle at 4.30pm, and walking towards the Police Station at 5pm. This action will last till around 6pm.

Warm Wishes.

Rima Aranha

For Joint Action Committee: SICHREM, Bangalore Cruhakarmikana Sangha, Women's Voice, Karnataka Domestic Workers Union, Vimochana, CIEDS and others

Phone No: 080-5492781/82/83

Lib-Human Rights to

# **Protest Police Brutality Against The Poor**

Even as the Indian Nation celebrates October 2 as Gandhi Jayanthi, his restless spirit it seems, continues to mourn for it's people, the poorest, the most vulnerable. The story of Poornima is one that speaks of the absolute vulnerability of the poor; the prejudiced arrogance of the powerful; the total unaccountability of State power.

### The incident:

Poomima, a 32 year old woman, living in Cox Town was working as a domestic maid in the house of Mrs. Sarada who lives in No.37, MEG Officers Colony, Banaswadi Road. On September 28, when she went for work she was accused of stealing Sarada's diamond ear rings. When Poomima denied taking them, Sarada brought home her relatives who subjected her yet again to aunother round of abuse and questioning. They threatened to bring in the police who finally came to their house in the afternoon at 12 pm.

#### The inhuman violence:

The two constables from the l'razer Town police station came into the house of the owner and without any preliminary enquiry, slapped her repeatedly till her nose bled and took her to the police station. The concerned police officer then proceeded to abuse her verbally and physically—even slapping his wireless telephone on her breasts. He then dragged Poornima to her house that was thoroughly searched and finding nothing there, brought her back to the police station along with her husband Rajan. Poornima was then handed over to the women constables who subjected her to further humiliations, indignities and torrure. They stripped her naked, made her expose her private parts in search of the ear rings and continued to beat her. Meantime Rajan too who had been beaten thoroughly to the point of his hand being broken, was in the process of receiving the Aeroplane Treatment when the police received a phone call at 7 pm that changed the course of events.

#### The mindless injustice:

Both Poornima and Rajan were immediately given back their clothes and asked to come out. They were told that they were free and that they should not reveal to anybody about what had happened inside the police station. The constable even very kindly offered them Rs. 200, told them to cook biryani and have a drink to forget the whole incident, which they refused. To add further insult to injury, Sarada very compassionately gave them Rs. 20 a tube of ointment and offered employment to Rajan.

The phone call that brought about this transformation was apparently from Sarada to say that the missing ear rings had been taken to Malaysia by her daughter who had forgotten to tell them before she left!

An act of forgetting that triggered a chain of violence and humiliation for Poornima and Rajan that they will never forget. Poornima's wounds and Rajan's hand that was fractured might heal, but their spirit that were sought to be broken by Sarada, her family and the police only because they are poor and vulnerable might be fractured forever.

# The Demands: Such acts of inhumanity, bias and brutality cannot go unquestioned and unpunished. While deeply ingrained social prejudices plague the poor, it is well known that the institutions of law and order and justice too are weighed against them. We, as people

seeking to condemn the unaccountability of the law and order machinery and humanise a power hungry society that is getting increasingly intolerant towards those who are powerless, demand the following:

	Immediate suspension of the guilty police personnel
	Public Enquiry with participation of concerned citizens into the incident
	A public apology and compensation to be given by Sarada and her family Poornima and Rajan
the	An immediate circular to be issued by the Commissioner of Police to all police stations that third degree methods of questioning will not be used any investigation
	No arrests to be made until investigation warrants it.
	Register an FIR against the employers for giving a false complaint
	Setting up a monitoring cell to monitor violations of NHRC's guidelines on arrest, detention and interoggation in police stations.

Joint Action Committee

SICIIREM, Bangalore Gruhakarmikara Sangha, Womens Voice, Karnataka Domestic Workers Union, Vimochana, CIEDS and other NGOs.

### Main Identity

Consumer Rights Commission of Pakistan (CRCP" <crcp@comsats.net.pk>: "Consumer

Mg3ncm73jW0naGTFfDsqNPHTwSE@yahoogroups.com>: <confirm-s2-

YPMNg =2u6oCdj3FE69sJK2goxi-huright=vsni.com@yahoogroups.co.in>: <confirm-invite-QtCmiKiS\_JvVV3cu3bAkvkvQmyc-nuright=vsni.com@yzhoogroups.co.in>; "Community Health Cell" <sochara@ysn'.com>: <communication@wsfindia.org>; "Commonweelth Human

Rights Initiative (CHRI)" <chrial@nda.vsnl.net.in>; "Committee for Workers International" <cwi@worldsoc.co.uk>; "Comet Media Foundation" <cmf@bom5.vsnl.net.in>

Friday, December 05, 2003 5:31 PM

Subject an invitation

# ALL ARE INVITED

Over the past few years, there has been in increase in the number of refugees facing persecution in their native lands pouring into India from Bangladesh, Iraq, Afghanistan,

Inviting lawvers, faculties, legals professionals and students to a workshop on Refugee Law. This workshop seeks to bring about awareness regarding refugees, the law relating

# Programme for the Workshop on Refugee Law

Time	Session	Speaker
9:00	Registration of participants	
9:30	Introduction	Adv. Aparna Bhat (S.C.)
9:45	Definition of Refugee, Principles governing the Refugee Convention  Discussion	Adv. Aparna Bhat (S.C.)
11:00	Tea Break	
11:15	Case studies and group discussion on definition of refugee	
12:30	Experiences in court	Adv. Ryan/ Adv. Rebecca
1:00	Lunch	
2:00	Screening of a film	
2:30	Development of Refugee Law in India	Adv. Colin Gonsalves (S.C.) Adv. Aparna Bhat (S.C.)
3:30	Tea Break	
3:45	Refugee law - Practice and Procedure	Adv. Rvan/ Adv. Rebecca
4:30	Durable solutions/ Naturalisation	Adv. Apama Bhat (S.C.) Saud
5:30	Conclusion	

Lib La Ple Xavier's College, Near Came Hospital, Mumbai 1 Venue: Conference Room No. 22, 2nd Floor, Xavier's Institute of Management, St

12/8/03

For details / registration contact Rebecca / Lalit at 23436692 / 23439651

# INDIA CENTRE

FOR HUMAN RIGHTS AND LAW

DOCUMENTATION • TRAINING • MONITORING • CAMPAIGNS • LEGAL-AID • INVESTIGATIONS

4<sup>th</sup> Floor, CVOD Jain High School, 84, Samuel street, Dongri, Mumbai, 400 009. INDIA Tut. 491-22-23436892/23439951 Fax. +91-22-23433993 E-mail.

#### Main Identity

From: ramidas raci sramdas raci@holmali.com>

<astrivini sharath@notmail.com>: <psnoaloresolidarity@vahoogroups.com>: «bscharry@mailbox.syr.edu»: <dinanaraju42@yahoo.co.in»: <jeeves@vsnl.com»;
</p>

kemaan@radiffmail.com>; <meara\_c@vanl.net>; <radhar4@yahoo.com>;

<puclbir@yahoogroups.com>

Tuesday, December 30, 2003 6:51 AM

fbangaloresolidanty) FW. [PUCL] Digest Number 282 Subject:

> Date: Fri. 26 Dec 2003 11:58:42 -0000

From: "jagtarkhalsa"

>--- In sikhagenda3@vahoogroups.com, UNITED SIKHS

>SUBJECT: SUPPORT THE RIGHT TO TURBAN, PLEASE SIGN THE PETITION >(http://www.PetitionOnline.com/sikh5555/petition.html)

>Press Release:23/12/2003:UNITED SIKHS, a Sikh organisation working >for the betterment of 25 million Sikhs globally, deeply regrets >French President Jacques Chirac s call for legislation to ban the >wearing of religious articles of faith in public schools and to

>This exclusionary law will ban Sikhs from wearing their distinctive >Turbans in addition to banning Islamic head coverings, Jewish >skullcaps and oversized Christian crosses in public schools and

>The global Sikh community urges President Chirac to reconsider his >decision as it violates fundamental human rights including freedom of >religion and the right to education. Wearing a Turban is not an >optional but mandatory requirement of the Sikh faith. Such >legislation will deny approximately 7,000 Sikhs residing in France >their fundamental right to practise the Sikh faith.

>Sikhs have contributed valiantly to the French aspirations of >Liberty, Equality and Fraternity, during the First and Second World >8 infantry regiments during World War 1. The major battles during >World War 1 in France in which Sikhs fought valiantly were: Ypres, La >Basse¥- Neuve, Chapelle, Festubert, Loos, Givenchy and Somme. Their >bravery and actions have been globally recognised

>A remarkable French postcard dated Sept 1914 heralding the arrival of

CHC lib - Poch / Human Right

Matth. The leading soldier is seen holding the French frieolour in his left hand. (Courtesy: Paramjit Singh, Co-author, Warrier State, London, B. Torgin, 1990).

The Stasi commission, which recommended the ban, consulted all semmunities on this issue but did not consult the 7,000 members of the French Sikh community before making its recommendations, said a submayed Gurdial Singh, a French Sikh community leader, who has lived.

>in France for 23 years.

> The 7.0% Sikhs of France are law abiding citizens and our children >are second generation proud French nationals, he added

The Sikh Turban is not a hat which we can take off when we are at school or at work. It is an insult to a Sikh to ask him to take off his Turban, he said.

Our children's education is at stake here as we cannot compromise on
 this issue. Our children wear long unshorn hair which needs to be
 covered with a Turban, he added.

He said that even though some schools had in the past years objected to the wearing of the Turban. Slikh Community leaders had always successfully appealed to the discretion of the school authorities to fallow the wearing of Turbans.

>

 But after the ban is imposed the school authorities will not have a >discretion in the matter, he said.

>Karmvir Singh, 19 year old son of Gurdial Singh, experienced the >brunt of this proposed law when he was rejected by 5 French >universities in Oct on grounds that he wore a Turban

> They told me that they were prepared to offer me a place but only if >I took off my Turban. Karmvir Singh said.

>Ironically Karmvir Singh had in the past successfully helped many >young Sikh school children to gain admission in schools which had >initially objected to the Turbans.

> But now my education plans have suffered a serious setback because >ine universities acted in anticipation of the government s plans to >ban the wearing of religious articles at educational institutions; >ho said.

 I was planning to do a degree in commercial studies and then go on >to study computer engineering, he said.

>Karmvir Singh's school-going brothers have been told by their >schools that they will have to leave.

12/31/03

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>of people of all religions. The strangth of its secularity should not
Diegnardised United SikelS fears that the new law will be a throw-
>different religions plagued many nations before World War II.
>UNITED SIKHS has launched a global education campaign for people of
>all faiths and nations to appeal to President Chirac, the French
>religious leaders to allow good-sense to prevail.
>Spiritual expression promotes greater harmony through inter-religious
>understanding, UNITED SIKHS urges the global community to take action
>message to the President of France and the French Parliament that
>banning religious expression will not be in the human interest.
>Please support the right to religious freedom by signing the petition
>at http://www.PetitionOnline.com/sikh5555/petition.html
>For more information on Sikits and the Great War in France, please
>http://www.unitedsikhs.org/us-cu/sacred/france/Sikhs/in France.htm.
>Three Centuries of the Sikh Military Tradition. A Madra and P Singh
>London, IB Tauris, 1999)
>Petition TRY, at : http://www.PetitionOnline.com/sikin5555 petition.html
>
>tackforce@u.
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10/21/02

Page 4 of 7

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>North America: Tel: 1-646-338-5996

>North America: Fax: 1-810-885-4264

>Email: unitedsikhs-na@u...

> Asia: Tel: 00-91- 9815673242

>Email: unitedsikhs-asia:@u...
```

>www.unitedsikhs.org

>Europe: Fax: 0044 (0)871 4335655

>Our Mission:
>To transform underprivileged and minority communities and individuals vinto informed and vibrant members of society through civic,
>educational and personal development programs, by fostering active

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>organisations to establish and nurture meaningful projects and
harmony, understanding and reciprocity in our villages, towns and
>UNITED SIKHS is a coalition of organisations and individuals, who
>share a common vision based on the beijef that there is no greater
>our philosophy is an unwavering commitment to civic service and
>Accordingly, UNITED SIKHS has sought to fulfill its mission not only
>by informing, educating and uplifting fellow beings but also by
>that the promises and benefits of democracy are realized by all.
>We at UNITED SIKHS believe that the development of enlightened and
>progressive societies can be made possible by socially conscious
>groups of people who make a commitment to develop and direct human
>potential. Our work, efforts and achievements stand as a testament to
>our faith in this vision.
>Mossage: 2
> From: Robit Prajapati & Trupti Shah
>Subject: Best Bakery Judgement
>Date: 27-12-2003
> If these are the hard facts, then what other outcome could have been
>The High Court of Gujarat has dismissed the half-hearted demand of the
>Government of Gujarat for retrial in the Best Bakery case. The High Court
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12/31/03

Page 5 of 7

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>of Gujarai has confirmed the order of the trial court of Vadodara. This >should not really come as a surprise it we take into consideration the way >in which the Government of Gujarai has filed, amended, argued and pleaded >the case even after Supreme Court intervention. Here is a case where the >main intention of the petitioner, the Government of Gujarai, was and is to >get the case defeated. It will be very tough fight to get justice in this >and other such cases. It will be interesting to read the whole judgment, >because to arrive at the conclusion it has, the judgment will have analysed >the role of the Government of Gujarai. A striking aspect of the case is >that not only was the lawyer for the accused- Mr. Rajendra Trivedi- a BJP >Councillor, but the lawyer representing the Government's case was also >representing the case of BJP Government. If these are the hard facts, then >what other out come could have been expected?
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>Raikumar Hans
>Human Rights Activist of Gujarat
>Robit Prajapati - Truoti Shah
>Phone No. PARYAYARAN SURAKSHA SAMITI (O) + 91-265-2412499 (R) 2320399
>Email No: (1) rt manay a sancharnet in (2) rohit trupti a vahoo.com
>Message: 3
> Date: Wed, 24 Dec 2003 23:08:16 ±0530
> From: "dn:
>Subject: Supreme Court's decision - seminar
>---- Original Message
>> Equality Unity Socialism
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12/31/03

Page 6 of 7

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>> ALL INDIA
>> MARULA SANSKRIFIK SANGATHAN
>> (Vadodara Unit)
>> 16:126, G.H.B. COLONY, AKOT ROAD, VADODARA - 390 020.
>> Date: 24:12.2663.
>> All India Mahila Sanskrutik Sangathan (All India
>> M.S.S.) has organized a discussion in the Department
>> of Political Science Seminar Room, M.S. University,
>> Baroda on the Supreme Courfs division bench verdict
>> empowering police to arrest women at any time and also
>> in the absence of lady police
>>
>> Professors, Advocates, students women from various
>> section of society and social activists took part in
>> the discussion. Dr. Purvi Pokhriyai and Dr. Archana
>> Andhariya while initiating the discussion sealt with
>> the local prospective of the laste. Shit Kiri Bhau,
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>> President PUCL, Baroda described this judgement as >> blatant violation of human right and said that the >> nowadays are ing anti-people indeements which is

> the democratic righe and values. Comrade

> Meenakshi Joshi of Mahila Sanskrutik Sangathan said

> that this judgement has posed a threat to the security

> of women and expressed worry regarding the increasing

> cases of molestation and rape in the police custody

> which is supposed to be the safest place. She appealed

> to all the participant that a movement has to be

> initiated to pressurize Supreme Court to withdraw this

> judgement. Dr. J.S. Bandakwala expressed his worry

> that this judgement will be misused in the villages

> mainly and said that milliant movement has to be

> generated to force the government to cuact a permanent

> law to secure womens safety.

>> Dr. A.K. Rakshit, Advocate Bhatt, Dr. Stidha Pandya,

> Dr Aruna Baxi, Bharat Mehta and many others student

> took part in the discussion. It was decided to

> continue and strengthen All India level signature

> tempalgin and to take awareness programme in Baroda.

>> News by Bharati Parmar

12/31/03

Page 7 of 7

> For access to archives or to change membership options go to:
http://groups.yahoo.com/group/PUCL/To contact the PUCL, send an email to:
> mational@pucl.org
> Website: http://www.pucl.org
> //shoot/ Groups Links
> To visit your group on the web, go to:
> http://groups.yahoo.com/group/PUCL/
> To unsubscribe from this group, send an email to:
> PUCL-unsubscribe@yahoogroups com
> Your use of Yahoo! Groups is subject to:
> http://docs.yahoo.com/info terms:
>

## Subject: Fw: NHRC directs review by Karnataka Chief Secretary on Human Rights Violations in BMIC Public Hearings

Date: The 18 Dec 2001 21:39:41 +0530

From: "Thelma & Ravi Narayan" <tnarayan@vsnl.com>

To: <sochara@vsnl.com>

---- Original Message From: Environment Support Group <esg@bgl.vsnl.net.in> To: <tnarayan@vsnl.com> Sent: Thursday, October 04, 2001 3:17 PM Subject: NHRC directs review by Karnataka Chief Secretary on Human Rights Violations in BMIC Public Hearings

- > Dear Friends,
- > India's Mational Human Rights Commission has issued a directive to the Karnataka
- > Chief Secretary to take "appropriate" action on human rights violations during
- > the Environmental Public Hearings held as part of the clearance process of
- > Bangalore Mysore Infrastructure Corridor Project. The project is presently estimated
- > to cost over Rs. 4,000 crores or approx. US\$ 1 billion, and involves the construction
- > of five major cities and an Expressway between Bangalore and Mysore cities.
- > You will recall, that during July 2000 there was widespread condemnation of the
- > Karnataka Government's selective and brutal arrests of citizens and
- representatives > of civil society groups who demanded access to social, environmental and techno-economic
- > information on this massive project in order that the Hearings held were meaningful
- > exercises. ESG initiated a letter campaign to the Chief Minister of Karnataka
- > and as a result of the combined pressure Mr. Krishna assured that an enquiry
- > into the incident would be conducted. The enquiry was never initiated however,
- > and we then appealed to the National Human Rights Commission (NHRC). The present
- > directive is a result of this process.
- > The Indian Ministry of Environment and Forests appeared convinced that the Hearings
- > had not been held fairly. Aware of the NHRC review underway, it had even publicly
- > acknowledged that it would perhaps not accord environmental clearance to
- $q_{p}(N) > project$  under the circumstances. The Ministry however, did an volte face on
  - > this commitment and during August this year extended a conditional 12/12

TN/CMF/RRP/RKN

12/19/01 12:45 PM

1:of 7

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environmental
'> Clearance to the project. Curiously the clearance applied only to the
> component, a small part of the BMIC Project. The Ministry thus shirked its
responsibility
> in reviewing the wider impacts such as displacement from over 170 villages
> the widespread environmental impacts of the townships proposed.
> Frontcally the attack on citizens participating in Statutory Public
> was at a time when the Karnataka Government was projecting itself as an
adminstration
 > that values transparency and was even holding consultations towards
 legislating
 > the Right to Information Act. If there was an opportunity to demonstrate
 > State's intentions of ensuring transparency in decision making, it was in
 conceding
 > the just demand of citizens across Bangalore, Mandya and Mysore districts
 > access information on the project. Having thus failed, the Government
 stands
 > exposed as regards its sincere commitment to ensuring transparency.
 > The NHRC directive now provides both the State and Central Governments an
 opportunity
 > to support fair and full discussion on this Project by holding the
 Statutory
 > Public Hearings again. Not only would this help set right the grave
 wrongs committed.
 > but would even demonstrated the Government's true commitment to ensuring
 transparency
 > in decision making. Our appeal to the Chief Secretary of Karnataka in
 this regard,
 > along with a Press Release on the matter, is enclosed.
 > Meanwhile the campaign demanding the BMIC Project be scrapped, led by the
 Karnataka
 > Vimochana Ranga initiated BMIC Virodhi Okkoota (BMIC Opposition
 Federation).
 > is gaining momentum. To demonstrate wide public support to this demand, a
 "Bundh"
 > (Public Strike) of Mandya city has been called on 6th October to protest
 against
 > the continuing support of the Government to this highly controversial and
 questionable
 > project.
 > Your continuing support and interest in this campaign is highly valued by
 > and we thank you for your cooperation and support.
 > Best regards
 > Leo F. Saldanha
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12/19/01 12:45 PM

2 of 7

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> Coordinator
> Environment Support Group
> PS: More details about the Project, its impacts and the ongoing Campaign
against
> the BMIC project please visit:
<http://www.indiatogether.org/campaigns/bmic>.
> PRESS RELEASE
> MHRC directs Karnataka Chief Secretary to take action on human rights
> during Fabile Hearings on BMIC Project
> The National Human Rights Commission has directed the Chief Secretary of
+ha
> Government of Karnataka to "look into the grievance" of human rights
> in the conduct of the Environmental Public Hearings held during June-July
2000
> for the Bangalore Mysore Infrastructure Corridor Project (BMIC). It has
> directed that the Chief Secretary "take such action as is appropriate in
> circumstances" and report back to the Commission within four weeks of
receiving
> the order. NHRC's decision was on the basis of a complaint filed by the
undersigned
> against the brutal attack initiated by the State Government against
citizens
> demanding transparency in the conduct of the Public Hearings for the BMIC
project.
> It may be recalled that the Government had initially held public hearings
> March 2000 on the BMIC project as required per the Environment Frotection
> but adjourned them with the assurance that citizens' demand for access to
BMIC
> project information would be met prior to holding hearings again.
Subsequently
> however, it proceeded to conduct the Hearings during June-July in
Bangalore,
> Mandya and Musore, but without keeping its commitment of sharing
information.
> When citizens rightfully demanded that the commitment be met or the
Hearings
> be postponed, the District Commissioners chairing the Hearings ordered
selective
> arrests of those demanding transparency. The police conducted these
arrests
> in a brutal manner vitiating completely the climate of participatory
debate that
> the Hearings were meant for. The undersigned was a victim of this
reprehensible
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3 of 7

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> action and raised the issue with NHRC in a formal complaint.
> The present decision of NHRC provides the State Government an opportunity
> set right a great wrong committed against the public interest, more
particularly
> the project affected communities. The BMIC project directly affects over
> villages and could potentially displace over 200,000 people according to
> estimates. Because of the extraordinary secrecy surrounding the project,
there
> has never been a validation of the claims to the project's wider public
benefits.
> Latest details are available on the website:
www.indiatogether.org/campaigns/bmic
> We have written to the Chief Secretary suggesting that per NHRC's
> the Public Hearings held as the basis of according clearances to the BMIC
project
> should be considered null and void and that consequently, all statutory
> accorded thus far should be termed void as well. The Chief Secretary has
> been requested to ensure compliance with the Chief Minister's 11th July
> assurance that an enquiry by the Divisional Commissioner would be
initiated
> into the actions of the Deputy Commissioners who ordered the highly
questionable
> arrests. This commitment has not been met as vet.
> Leo F. Saldanha
> Coordinator
> Environment Support Group
> Enclosed copy of NHRC Direction
> Case No. 93/10/2000-2002
> National Human Rights Commission (Law Division)
> Sardar Patel Bhavan
> Sansad Marg
> New Delhi 110 001
> Dated: 13/08/2001
> To:
> The Chief Secretary
> Government of Karnataka
> Bangalore
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4:of 7

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> Sub: Complaint from
> Sh. Leo F. saldanha
> Coordinator, Environment Support Group
> S-3 Rajashree Apts., 18/57, 1st Main Road
> SRK Cardens, Bangalore, Karnataka
> Sir,
> The Complaint, above mentioned, was placed before the Commission on
02/00/2001.
> Upon pursuing the complaint, the Commission directed as follows:
> Let the complaint be transmitted to the Chief Secretary, Government of
Karnataka,
> to look into the grievance and take such action as is appropriate in the
circumstances.
> Action taken be reported to the Commission in four weeks.
> 2. Accordingly, I am forwarding herewith a copy of the complaint for
taking appropriate
> action in the matter as per the directions of the Commission. It is
requested
> that an action taken report be sent to the Commission within 4 weeks from
> date of receipt of this letter.
> Yours faithfully,
> Assistant Registrar (Law)
> Encls: As above
> CC to:
> The Secretary (Law and Order) Govt. of Karnataka, Bangalore
> Sh. Leo F. Saldanha Coordinator Environment Support Group
> ENclosed Copy of Letter To Chief Secretary
> The Chief Secretary
> Government of Karnataka
> Vidhana Soudha
> Bangalore 560 001
> 25 September, 2001
> Reg.: NHRC direction in Case No. 93/10/2001-2002 regarding Human Right
violations
> in the conduct of the Environmental Public Hearings held as part of the
> for the Bangalore Mysore Infrastructure Corridor Project (BMIC)
> Dear Madam,
```

5:of 7 12/19/01 12:53 PM

- > We have received a copy of the NHRC letter dated 13/24 August 2001
- > to you, intimating NHRC's directions that you would "look into the grievance"
- > based on our complaint lodged as above, and "take such action as is appropriate
- > in the circumstances". It has also been stated that an "action taken" report
- > would have to be submitted to NHRC within a period of 4 weeks from receipt of
- > the said letter.
- > Towards ensuring healthy public participation and transparency in decision making.
- > and building public confidence in the rule of law, we would be most
- $\gt$  you would consider the following suggestions for initiating appropriate action.
- > 1. The NHRC's direction acknowledges the merit of our grievance, more fully detailed
- > in the complaint A most appropriate action to correct this gross injustice would
- > involve holding fresh Public Hearings on the project. In our opinion, therefore,
- > earlier Public Hearings are to be considered null and void and this would render
- > all clearances accorded to the project void as well.
- > To ensure meaningful participation of the public, it is imperative that such
- > hearings be held only after fully sharing public domain information on the said > project.
- > 2. In this regard we would also like to recall that on 11 July 2000, Chief Minister
- > Shri. S. M. Krishna had ordered that the Divisional Commissioner conduct an enquiry
- > into the manner in which the Public Hearings were "held". This action was ordered
- > as a result of widespread condemnation of the human rights abuse. To the
- > of our understanding, no action has been initiated in this regard till now.
- > We feel that ensuring compliance with the Chief Minister's directions and making
- > the cutcome of the enquiry public would partially fulfill the expectations
- > the NHRC as regards the "appropriate action" to be taken. Such a step would also
- > guarantee that human rights violations would not recur in the future in Statutory  $% \left\{ 1\right\} =\left\{ 1\right\}$
- > Public Hearings.
- > We do hope you will affect these actions at the earliest and ensure that the
- > carriage of justice is not compromised.

> Thanking you,

> Yours truly,

> Leo F. Saldanha > Coordinator > Environment Support Group

> Environment Support Group (R)
> S-4, Kajashree Apts., Ist Main, SKK Gardens
> Bannerohatta Road, Javanadar
> Bangalora 560 041. TWDTA
> Tolofam: 91-80-6341977 Fax: 91-80-6723926 (FP)
> Email: esg\$bgl.vsnl.net.in

19/12

7. of 7

From: "The Other Media" <admin@del3.vsnl.net.in>

To: "Thomson Foundation" < Enquiries@ThomFound.org>,

"Thomas Griffiths" <thornas.griffiths@phonetics.oxford.ac.uk>,

"Thomas George (Dr.)" <mounts@blr.vsnl.net.in>,

"Thelma Narayan (Dr.)" <sochara@blr.vsnl.net.in>,

"Thekho (NPMHR Manipur)" <nphmr@manipurnet.com>,

"The Week" <editor@the-week.com>, "The News (Pakistan)" <thenews@comsats.net.pk>,

"The Aspen Institute" < justice@aspeninst.org>, "The Asian Age" < letters@asianage.co.in>,

"Thaung Htun Dr. (NCGUG)" <thhtun@attglobal.net>.

"Thangavel Subbu" < THANGAVELSUBBU@hotmail.com>.

"TEST1" <nobel.convocado.2000@wanadoo.fr>,

"Terre des Hommes (George)" <tdhgip@pn2.vsnl.net.in>

CIVIL SOCIETY MEETING ON <?xml:namespace prefix = o ns = "urn:schemas-microsoft-com:office:office" /> HUMAN RIGHTS, JUSTICE AND THE NAGA PEACE PROCESS KOHIWA, MARCH 18-19, 2001

> Contact Address: New Delhi 110 016 E-mail admin@del3.vsnl.net.in

Members representing a cross section of the civil society groups from the Indian sub-continent visited Naga areas (March 14-17, 2001) and participated in a two day convention in Kohima (March 18th & 19th). The meet ended by adopting the "Kohima Declaration" and a two point Resolution. All together 133 participants representing the various Naga social organisation and concerned individuals along with the friends from Jammu & Kashmir and Punjab, Assam, Manipur, Delhi, West Bengal, Andhra Pradesh, Maharashtra, Jharkhand (U.P.), took part in the discussions and deliberations.

We are enclosing herewith a copy of the Kohima Declaration and Resolution adopted at the above

This visit was very historic in the sense that it was for the first time in the last 53 years that a huge delegation representing the Indian civil society had gone to listen, hear and understand the Naga people with genuine concern and respect. This is in sharp contrast to the experience that has been encountered so far with people from the sub continent that have predominantly been members of the Indian Armed Forces, the Indian Bureaucracy and the Indian business community.

The delegation from Indian Sub-continent toured various parts of the Naga homeland. Some of the Maga areas covered during the exposure were - Tamenglong, Senapati, Ukhrul, Chandel, Mokokchung, Zunheboto, Wokha, Pfutsero, Khonoma, Jotsoma, Dimapur and Kohima Village and met a cross section of the Naga people to learn first hand the actual condition operating in the Naga areas.

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order the Boxeler mentioned on pp 2 for Rs 150 000 for 2/5/01

The delegation comprised of people representing various mass based organizations, Human Rights organizations, Students, a retired Judge, Lawyers, Journalists, Professors, a Former member of Parliament, Women's Rights Activists and NGCs.

As a Symbolic act of recognizing the Naga struggle, the delegation visited the memorial of AZ Phizo and had a moment of silence and laid flowerial wreath as a sign of respect. Surender Mohan, a former member of Parliament shared a few words on behalf of the delegation expressing and remembering Phizo as a spokes person of the Naga aspirations and the sacrifices he made for the Naga people. He also paid respect to all activists of the Naga Resistance Movement who laid their lives for the justice, freedom and peace of the people.

The two day Convention at Kohima deliberated on the following topics: Violation of Rights and Response of the Naga civil Society, Impact of 50 years of Democratic polity of Nagas and their life and Culture; and the Nagas relation with other communities. The participants also formed into various workgroups under the following themes: Human Rights violations, Civil strift and Women, Civil strift and Youtn, Conflict situation and Media, Nagas and other communities, Naga culture and democracy, and Cease-fire and Peace process.

The second day of the people to people Dialogue was focused on Panel Discussions on three main themes.

- 1. State's (Nagaland State as well as Indian State) position on the Naga issue.
- 2. Civil Society's position on the Naga issue.
- 3. Current status of the Cease-fire and the possibilities of peace.

The participants had critical reflection on the various aspect of long drawn Indo-Naga conflict and concluded with a two point resolution and a Kohima Declaration, copies of which are enclosed herewith for your kind information and perusal.

We are sharing this declaration with you for your information as well as to seek your continued support for this initiative. If you want to be part of this kindly sign the resolution and send it back to us with your name and address.

We have come out with a Dossier "Nega resistance and the peace process" prepared as an initial reading material for individuals who want to be part of this campaign. If you need a copy of this Dossier, kindly write to us so that we can post it to you. However, this would cost you around Rs. 150/- including postal charges from within India. For outside India it will be US\$10/-.

Kind regards.

Yours sincerely

E. Deenadayalan

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#### CIVIL SOCIETY MEETING ON HUMAN RIGHTS, JUSTICE AND THE NAGA PEACE PROCESS KOHIMA, MARCH 18-19, 2001

# KOHIMA DECLARATION

The Kohima Declaration adopted on March 19<sup>th</sup> 2001 by the civil society groups from Nagalim and the Indian Sub-continent.

We, the members of the civil society, convinced that the overwhelming desire of the Naga people is to live in dignity and freedom which have been denied to them for over 53 years, and mindful of the imperative need for a peacefully negotiated solution reiterate the following:

The partial cease-fire which has lasted for over three and a half years is a cause for concern because:

- a) Political dialogue has yet to start.
- b) The Armed Forces Special Powers Act and other draconian laws continue to be in operation.
- c) Organisations with which negotiations are to be held have been banned and warrants of arrest issued against their leaders.
  - d) Violations of basic rights of people carry on.
  - e) A campaign of calumny has been unleashed against Naga civil society groups,

Furthermore, corruption of civilian and security apparatus have reached endemic proportions and paralysed all development.

# We therefore demand :

- a) The withdrawal of Armed Forces Special Powers Act, National Security Act, Nagaland Security Regulation. 1962. Assam Maintenance of Public order, 1963, Unlawful Activities Prevention Act and other such draconian laws and democratic rights of people be restored;
- b) Government of India must ensure withdrawal of all cases against the members of the Naga National Movement:
- c) Ceasefire be honoured in letter and spirit between the two parties namely the Government of India and NSCN (IM) and role of the civil administration be fully established: and
- 1) The Government of India without further delay fulfill its commitment to hold unconditional talks at the highest level.

Mindful of the anxieties and fears that have been stoked by several quarters, deliberately misinterpreting the terms of the ceasefire, we feel that these apprehensions need to be addressed in order to ensure that divisions are not created between the Nagas and their neighbours to thwart the peace process.

While appreciating the ongoing efforts made by the Naga people and their organizations, we urge them to carry on the dialogue with all neighbouring communities for resolution of all issues that concern them, in the spirit of mutual respect and peaceful co-existence.

We also believe that due recognition must be given and acknowledgement made to the women and youth for their contribution to the Naga people's struggle for peace and justice.

Finally we affirm the need to build a wider peace constituency in order that the civil society can play its pivotal role in promoting just and democratic peace.





# **Problematic Pragmatism**

The Ruggie Report 2008: Background, Analysis and Perspectives<sup>1</sup>

June 2008

### Summary

In June 2008, John Ruggie, Special Representative of the UN Secretary-General for business and human rights, is to present his "Protect, Respect and Remedy: a Framework for Business and Human Rights" report to the UN Human Rights Council. The report marks a further interim result of the United Nations debate on the responsibility and accountability of transnational corporations, which has now been in progress on for many years.

The report forms the preliminary conclusion of a three-year research and consultation process that Harvard professor Ruggie had been commissioned to conduct by the UN Secretary-General and had commenced in July 2005. The Special Representative was appointed on recommendation of the then UN Commission on Human Rights, which had turned down a proposal on binding UN Norms on the Responsibility of Transnational Corporations and Other Business Enterprises with Regard to Human Rights in the same year. Ruggie's mission was less ambitious. In particular, he was supposed "(...) to identify and clarify standards of corporate responsibility and accountability for transnational corporations and other business enterprises with regard to human rights," and "(...) to elaborate on the role of States in effectively regulating and adjudicating the role of transnational corporations and other business enterprises with regard to human rights, including through international cooperation," and the property of the

John Ruggie's report identifies grave deficits in the current human rights regime that represent an obstacle to protection to individuals and communities against corporate-related human rights violations. He notes "escalating charges of corporate-related human rights abuses" regarding this as "the canary in the coal mine, signalling that all is not well"."

The Ruggie Report regards the "governance gaps created by globalization" as the **root** causes of the "business and human rights predicament". "These governance gaps provide the permissive environment for wrongful acts by companies of all kind without adequate sanctioning and reparation." Ruggie sees the fundamental challenge as identifying "how to narrow and ultimately bridge the gaps in relation to human rights"?

Nevertheless, the Report does not **respond** to the global governance gaps it notes with global governance solutions. Instead, it is limited to what its author deems politically achievable. This above all includes incremental steps towards observing human rights at

<sup>&</sup>lt;sup>1</sup> This paper was written by Jens Martens, Global Policy Forum, and edited by Elisabeth Strohscheidt, Misereor.

<sup>2</sup> E/CN.4/RES/2005/69 of the 20th April 2005.

<sup>&</sup>lt;sup>3</sup> UN Doc. A/HRC/8/5 of the 7<sup>th</sup> April 2008, para. 2.

<sup>4</sup> Ibid.

<sup>&</sup>lt;sup>5</sup> Ibid., para. 3

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

national level, especially in Bilateral Investment Treaties (BITs) and in export promoting via Export Credit Agencies (ECAs). Ruggie is in favour of strengthening judicial capacities to hear complaints and enforce remedies against corporations. He recommends the corporations themselves to observe "due diligence" regarding respect for human rights and gives some practical recommendations in this context.8

However, Ruggie categorically rejects the UN Norms or any other global legal instrument to establish the human rights duties of corporations. Neither does the report address calls by human rights organisations for a UN special procedure (e.g., independent expert or group of experts) on business and human rights or a proposed International Advisory Centre offering governments of developing countries legal support vis-à-vis transnational corporations.

Thus Ruggie's report falls way short of the expectations of civil society organisations. With his "principled pragmatism" approach, Ruggie formulates what he feels is politically feasible given the forces that be in society but does not state what would be desirable and necessary to protect human rights.

The report that John Ruggie is to present to the Human Rights Council in June 2008 has a long history. As early as the mid-1990ies, the then Sub-Commission on Prevention of Discrimination and Protection of Human Rights9, which at the time was a subsidiary body of the UN Human Rights Commission, had commissioned three reports on Transnational Corporations (TNCs) and human rights. 10 These reports stressed the need to create an international legal framework for TNCs. For example, the 1996 report states:

"A new comprehensive set of rules should represent standards of conduct for TNCs and set out economic and social duties for them with a view to maximizing their contribution to economic and social development. "11

This basic consideration prompted the Sub-Commission to appoint a working group to address in more detail the working methods and activities of TNCs in 1999. Already at its first session in August 1999, this working group announced that it would develop a "code of conduct for TNCs based on the human rights standards". 12 After a consultation process lasting almost four years and involving enterprises, industrial associations, civil society organisations, trade unions and institutions of the UN system, the working group submitted its draft version of "Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights" in 2003. 13 On the 13<sup>th</sup> August 2003, the Sub-Commission approved by consent the draft version and transmitted it to the UN Commission on Human Rights.

At its 2004 Session, this draft version of binding standards for enterprises was given a cool response by the Commission. It explicitly stressed that this document "has not been requested by the Commission and, as a draft proposal, has no legal standing".14 Instead of adopting the norms, it commissioned the Office of the High Commissioner for Human Rights to compile a further report on the topic. In 2005, the Office submitted a comprehensive report following a transparent consultation process involving all stakeholders. This report still

<sup>8</sup> Ibid., paras 60-64

<sup>&</sup>lt;sup>9</sup> ECOSOC renamed it as the Sub-Commission on the Promotion and Protection of Human Rights in 1999. <sup>10</sup> UN Doc. E/CN.4/Sub.2/1995/11 of the 24<sup>th</sup> July 1995, E/CN.4/Sub.2/1996/12 of the 2<sup>nd</sup> July 1996 and E/CN.4/Sub.2/1998/6 of the 10th June 1998.

<sup>&</sup>lt;sup>12</sup> E/CN.4/Sub.2/1996/12 of the 2<sup>nd</sup> July 1996, para. 74. <sup>12</sup> E/CN.4/Sub.2/1999/9 of the 12<sup>th</sup> August 1999, para. 32.

<sup>&</sup>lt;sup>13</sup> E/CN.4/Sub.2/2003/12/Rev.2 of the 26<sup>th</sup> August 2003.

E/CN.4/DEC/2004/116 of the 20th April 2004.

refers to the UN Norms as one of several instruments deemed important regarding corporate responsibility that require further assessment.  $^{15}$ 

However, the resolution on the topic of "Human Rights and transnational corporations and other business enterprises" of the Human Rights Commission 2005 completely ignored the norms, effectively hushing them up. <sup>16</sup> Instead, it called on the UN Secretary-General to appoint a special representative on the issue of human rights and transnational corporations and other business enterprises for an initial period of two years. The Special Representative was to be given the following mandate:

- "(a) To identify and clarify standards of corporate responsibility and accountability for transnational corporations and other business enterprises with regard to human rights;
- (b) To elaborate on the role of States in effectively regulating and adjudicating the role of transnational corporations and other business enterprises with regard to human rights, including through international cooperation;
- (c) To research and clarify the implications for transnational corporations and other business enterprises of concepts such as "complicity" and "sphere of influence";
- (d) To develop materials and methodologies for undertaking human rights impact assessments of the activities of transnational corporations and other business enterprises;
- (e) To compile a compendium of best practices of States and transnational corporations and other business enterprises ...<sup>M7</sup>

The resolution was adopted with 49 votes in favour, three against, and one abstention. <sup>18</sup> The USA rejected it arguing that the resolution "takes a negative tone towards international and national business, treating them as potential problems rather than the overwhelmingly positive forces for economic development and human rights that they are. <sup>19</sup> The USA would reject any resolution not explicitly clarifying that it "was not intended to further the cause of norms or a code of conduct for TNCs. <sup>20</sup> The USA's unequivocal declaration to reject any binding international standards being set that were critical of business also gave a clear signal to the address of the future Special Representative.

On the 28th July 2005, the then UN Secretary-General Kofi Annan met the request by the Human Rights Commission and appointed his confidant of many years' standing John Ruggie as Special Representative for business and human rights. Ruggie, a US American, had been Assistant Secretary-General and Chief Advisor for strategic planning to United Nations Secretary-General Kofi Annan from 1997 to 2001. He is regarded as one of the spiritual fathers of the Global Compact and a champion of a global governance concept based on cooperation with business rather than on its global regulation. Thus the appointment of Ruggie also meant setting a political course.<sup>47</sup>

In his **first** Interim Report, in 2006, Ruggie distances himself in unusually harsh terms from the proposed UN Norms. In his words, "...) the Norms exercise became engulfed by its own doctrinal excess. Even leaving aside the highly contentious though largely symbolic proposal to monitor firms and provide for reparation payments to victims, its exaggerated legal claims

<sup>18</sup> Votes against: Australia, South Africa and USA, abstentions: Burkina Faso.

<sup>15</sup> E/CN.4/2005/91 of the 15th February 2005

<sup>16</sup> E/CN.4/RES/2005/69 of the 20th April 2005.

<sup>17</sup> Ibid., para. 1.

<sup>&</sup>lt;sup>19</sup> Statement of US Delegate Leonard Leo at the Commission on Human Rights on item 17 "Transnational Corporations", April 20<sup>th</sup>, 2005.

<sup>&</sup>lt;sup>21</sup> John Ruggie works as Special Representative in an honorary capacity. Ruggie's main profession is that of Evron and Jeane Kirkpatrick Professor of International Affairs and director of the Kennedy School's Mossavar-Rahmani Center for Business and Government at Harvard University. The Center's most important programmes include the Corporate Social Responsibility Initiative. It is financed by 11 large-scale enterprises, among them Chevron, Coca-Cola, General Motors, Microsoft and Shell as well as the United Nations Industrial Development Organization (UNIDO) (cf. www.hks.haryar.deu/im-rcbo/CSRI/index.html).

and conceptual ambiguities created confusion and doubt even among many mainstream international lawyers and other impartial observers. "22

Ruggie criticises the norms claiming that they "(...) take existing State-based human rights instruments and simply assert that many of their provisions now are binding on corporations as well. But that assertion itself has little authoritative basis in international law - hard, soft or otherwise. 123

Additionally, he is critical of the UN Norms because of their "(...) imprecision in allocating human rights responsibilities to States and corporations".24

His conclusion: "(...) the divisive debate over the Norms obscures rather than illuminates promising areas of consensus and cooperation among business, civil society, governments and international institutions with respect to human rights".25 Thus Ruggie once again emphasised his approach based on a consensus and co-operation with business, with which he himself restricted his political scope for action regarding the subsequent surveys and consultations far more than his mandate prescribed.

Ruggie required more time than originally provided for to complete his final report, so that he only submitted a second interim report in 2007 and requested that the now existing Human Rights Council extend his mandate by a further year.

The second Ruggie Report is conceived as a mapping exercise, describing the existing international standards, instruments and the current trends in the field of corporate responsibility and accountability. 26 Its scope ranges from the Human Rights Treaties, stressing the principle of the state duty to protect, through "soft law" instruments such as the OECD Guidelines for Multinational Enterprises to various forms of corporate selfregulation.

"By far the most consequential legal development" is seen by Ruggie in "the gradual extension of liability to companies for international crimes, under domestic jurisdiction but reflecting international standards".<sup>27</sup> The most striking example of this is the US American Alien Tort Claims Act (ATCA). It enables businesses to be taken to court in the USA for violations of human rights in third countries. Ruggie expects such legal action to be taken against companies more frequently in future: "The risk environment for companies is expanding slowly but steadily, as are remedial options for victims. 48 Elsewhere, with a view to companies, he speaks of the "(...) greater risk of their facing allegations of 'complicity' (...)".29

Ruggie attaches special importance to the soft-law approaches: "(...) while States have been unwilling to adopt binding international human rights standards for corporations, together with business and civil society they have drawn on some of these instruments in establishing soft law standards and initiatives. It seems likely, therefore, that these instruments will play a key role in any future development of defining corporate responsibility for human rights. '80 As an example, he particularly stresses the OECD Guidelines, the Extractive Industries Transparency Initiative (EITI) and the Kimberley Process.

According to his own statements, the second Ruggie Report was based on two dozen research papers, five multi-stakeholder consultations, four legal expert workshops and several visits by Ruggie to companies in developing countries. The results of all these

<sup>22</sup> E/CN.4/2006/97, para. 59.

<sup>23</sup> Ibid., para. 60.

<sup>24</sup> Ibid., para. 66. 25 Ibid., para. 69.

<sup>&</sup>lt;sup>26</sup> A/HRC/4/35 of the 19th February 2007.

<sup>27</sup> Ibid., para. 84.

<sup>28</sup> Ibid., para. 27.

<sup>&</sup>lt;sup>29</sup> Ibid., para. 30. 30 Ibid., para. 44.

activities are documented not only in the Report itself but also in four Addenda and a companion report on the topic of human rights impact assessments. 31 Given this effort, the result turned out to be modest, for its substance did not go beyond earlier reports and research exercises of the IIN.

Thus expectations focused on the third and (for the time being) final report of the Special Representative. In a joint letter to John Ruggie, more than 200 civil society organisations formulated four priority tasks that Ruggie was supposed to fulfil with his third report:

- help to deepen the focus by the UN on actual situations relating to human rights and business, especially with regard to the perspective of victims so as to illustrate the scope and nature of abuses:
- analyze the factors driving the failure of states to adequately discharge their duty to protect the human rights of individuals, communities and indigenous peoples;
- assess the inherent limitation of voluntary initiatives, in order to avoid an overreliance on such initiatives: and
- help to spread awareness of the compelling need for global standards on business and human rights to be outlined in a UN declaration or similar instrument adopted by member states.32

However, Ruggie's reply to this letter already dampened expectations. He referred to the restricted scope of his mandate and announced that he would not submit any report "that limits itself to solutions that may - or may not - materialize a quarter century hence".33

In his third report, John Ruggie above all intends to work out the conceptual frame for the future political discourse on business and human rights. For he feels that so far, the business and human rights agenda has been "hampered because it has not been framed in a way that fully reflects the complexities and dynamics of globalization and provides governments and other social actors with effective guidance".34

The frame that Ruggie proposes comprises three core principles:

- The State duty to protect against human rights abuses by business.<sup>35</sup>
- The corporate responsibility to respect human rights.
- The effective access to remedies.

Thus Ruggie makes a basic and explicit distinction between the comprehensive duties of the states regarding human rights and the limited responsibility of business enterprises to respect human rights. In doing so, he is again distancing himself from the approach of the UN Norms, which, while recognising the primary responsibility of states to protect human rights, formulate a much wider definition of corporate responsibility by noting that:

"Within their respective sphere of activity and influence, transnational corporations and other business enterprises have the obligation to promote, secure the fulfilment of, respect, ensure respect of and protect human rights (...). "86

<sup>31</sup> A/HRC/4/35/Add.1-4 of the 8th, 13th, 15th and 28th February 2007 and A/HRC/4/74 of the 5th February 2007. 32 Letter to Professor John Ruggie, 25th October 2007 (final version).

<sup>33</sup> Letter of John Ruggie to Julieta Rossi, Director, ESCR-Net, 15th October 2007.

<sup>34</sup> A/HRC/8/5, para. 10.

<sup>35</sup> Ruggie explicitly points out that "duty to protect is well established in international law and must not be confused with the concept of the 'responsibility to protect' in the humanitarian intervention debate". (H/HRC/8/5, footnote 5).

At the same time, Ruggie acknowledges that "state regulation proscribing certain corporate conduct will have little impact without accompanying mechanisms to investigate, punish and redress abuses". 37

## Priority fields of action for governments

For Ruggie, one of the core issues is how the generally accepted state duty to protect human rights can be translated into concrete policy measures of governments vis-à-vis companies. Here, he refers to a number of political issues that can be addressed at national and international level, such as:

- Fostering Sustainability Reporting: Governments can take advantage of and support market pressure on companies by promoting sustainability reporting of companies or prescribing it as a binding requirement. This also includes reporting on compliance with human rights and social standards. This applies in particular to public or state-owned enterprises. As an example, the Ruggle Report cites Sweden, which demands that its state-owned enterprises submit sustainability reports applying the Guidelines of the Global Reporting Initiative. <sup>20</sup> In this manner, Ruggle argues, stakeholders are in a better position to compare rights-related performance of companies. However, the Ruggle Report does not mention that the market pressure he is relying on above all urges enterprises to cut costs and increase profits in order to be able to compete with their rivals. Thus there is an inherent conflict of aims between the protection of human rights and maximising profits that cannot be resolved by the markets.
- Human Rights obligations in investment treaties: The Ruggie Report is correct
  in noting incoherence between state policies to promote investment and the
  protection of human rights. Thus the thousands of Bilateral Investment Treaties
  (BITs) primarily serve the purpose of protecting investors. However, owing to the
  binding complaints and arbitration procedures, they considerably restrict the
  readiness of governments to raise environmental, social and human rights standards.
   For if the latter increase the production costs of companies, they can be interpreted
  as the expropriation of future profits and entail corresponding compensation
  demands.

Similar arguments apply to agreements between host governments and companies, which not rarely contain the commitment of governments to freeze the existing legal framework to cover the entire period of the agreement, which may be up to 50 years. Thus extending environmental and social standards can result in the investor claiming for damage, especially in developing countries. A survey conducted together for the Special Representative and the International Finance Corporation (IFC) shows that the agreements between companies and governments of non-OECD countries "constrain the host State's regulatory power significantly more than those signed with OECD countries (...)".<sup>38</sup>

The consequences that Ruggie draws from these deficiencies remain vague, however. He confines himself to demanding more transparency in the arbitration procedures and recommends that together with companies and institutions promoting investment, governments "should work towards developing better means to balance investors' interests and the need of host States to discharge their human rights obligations". Thus he is asking for trouble by placing the business interests of investors on the same level as that of the human rights duties of states – instead of clearly giving human rights precedence over economic interests. Ruggie makes no

<sup>&</sup>lt;sup>6</sup> E/CN.4/Sub.2/2003/12/Rev.2, para. 1.

<sup>37</sup> A/HRC/8/5, para. 82.

<sup>35</sup> Ibid., para. 30.

<sup>&</sup>lt;sup>30</sup> Ibid., para. 36. The survey, titled "Stabilization clauses and human rights", is available at <u>www.reports-and-materials.org/Stabilization-Clauses-and-Human-Rights-11-Mar-2008.pdf</u>

Ibid., para. 38.

mention of further reaching proposals to establish human rights clauses in investment agreements or the detailed draft drawn up by the International Institute for Sustainable Development (IISD) for a Model International Agreement on Investment for Sustainable Development.<sup>41</sup>

- Linking ECAs to human rights: One aspect that Ruggie proposes to motivate governments and enterprises to gain greater respect for human rights is the guarantees of Export Credit Agencies, ECAs. So far, however, only few ECAs have considered human rights aspects in awarding guarantees. But ECAs ought to "(...) require clients to perform adequate due diligence on their potential human rights impact." This would enable them "(...) to flag up where serious human rights concerns would require greater oversight and possibly indicate where State support should not proceed or continue." Nevertheless, here too, the Report fails to mention any concrete recommendations for action.
- Revision of OECD Guidelines: The only international instrument in the area of CSR mentioned explicitly in the Ruggie Report is the OECD Guidelines for Multinational Enterprises. Here, he clearly complains that in their human rights provisions, the Guidelines "not only lack specificity, but in key respects have fallen behind the voluntary standards of many companies and business organizations". For this reason, he is in favour of reviewing the Guidelines without making any proposal on what the revised Guidelines should look like in terms of their contents.
- Use of Security Council sanctions: In conflict regions in which the rule of law is not guaranteed, violations of human rights can be punished only insufficiently. In order to directly call companies to responsibility in these regions, the Ruggie Report points to the options for sanctions that the UN Security Council has. Its direct sanctions vis-à-vis individual companies have shown "a restraining effect" in the DR Congo, Sierra Leone and Liberia. In this context, Ruggie refers to a report of the UN Secretary-General recommending that in future, better use be made of sanctions vis-à-vis companies. 60

#### The Specific Responsibility of Corporations

Regarding the issue of direct responsibilities that companies have to protect human rights, Ruggie repeats his basic criticism of the UN Norms and explicitly assumes a counter-position. In his words, the norms would have defined a "limited list of rights linked to imprecise and expansive responsibilities". Instead, he calls for a definition of "the specific responsibilities of companies with regard to all rights". In reality however, the UN Norms are by no means restricted to a limited number of rights but are based on a very comprehensive human rights approach. They merely combine these rights in 23 norms that are of particular relevance to the area of corporate activities.

He demonstrates that there is no point in limiting the responsibility of business to certain rights by referring to an examination of 320 cases of human rights violations that companies

<sup>&</sup>lt;sup>41</sup> Cf. Mann, Howard et al. (2005): IISD Model International Agreement on Investment for Sustainable Development. Winnipeg: IISD (<a href="https://www.iisd.org/pdf/2005/investment\_model-int\_agreement.pdf">https://www.iisd.org/pdf/2005/investment\_model-int\_agreement.pdf</a>).
<sup>42</sup> AJHRC/B/S, para. 40.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid., para. 46.

<sup>45</sup> Ibid., para. 48.

<sup>&</sup>lt;sup>46</sup> Cf. the UN Secretary-General's Report S/2008/18 of the 14<sup>th</sup> January 2008, paras. 16-18 and 64 (d), stating there that "The use of sanctions could be broadened to apply not only to beligerent States but also to non-state actors. In the regard, the Security Council should continue the debate it held in June 2007 on natural resources and conflict, examining options such as the use of sanctions, monitoring and reporting to increase transparency in the nilterioral private sector."

<sup>47</sup> A/HRC/8/5, para. 51.

<sup>48</sup> Ibid.

were involved in from 2005-2007. 49 Ruggie maintains that this examination shows that "there are few if any internationally recognized rights business cannot impact".50

In order to define the specific responsibility of companies, Ruggie introduces the concent of "due diligence" in his report. In his words, this concept describes "the steps a company must take to become aware of, prevent and address adverse human rights impacts". 51 A human rights due diligence process ought to comprise the following four elements in a company:

- · A corporate human rights policy that can act as a guideline for the different fields of action of a company.
- The systematic conducting of human rights impact assessments.
- The integration of human rights policy in all areas of the company.
- . Monitoring and auditing processes in order to check the implementation of the human rights policy.

The substantive content of a company human rights policy ought to be formed, "at a minimum", by the international bill of human rights and the ILO core conventions. 53

Responding to the issue of how the due diligence process for the area of human rights could be established in a company, Ruggie points to "comparable processes" which "are typically already embedded in companies because in many countries they are legally required to have information and control systems in place to assess and manage financial and related risks".54 But Ruggie fails to recommend precisely such a comparable legal requirement for the area of human rights. Instead, he once again merely refers to industry and multi-stakeholder initiatives that ought to serve to "promote sharing of information, improvement of tools, and standardization of metrics".55 It comes as no surprise that in Ruggie's view, it is above all the Global Compact that "is well-positioned to play such a role".56

By dispensing with any legal provisions, Ruggie's concept of "due diligence" remains purely appellative and only addresses those companies that voluntarily subject themselves to this process, whereas his appeal has no effect precisely for the "black sheeps" among companies.

### Sphere of influence and complicity

The Special Representative gives special focus to the terms "sphere of influence" and "complicity", thus fulfilling the mission of the Human Rights Commission which, in its description of his mandate in 2005, explicitly demanded that he "research and clarify the implications" of these concepts for companies. However, rather than clarifying them, the Report tends to qualify these terms. 57

In Ruggie's words, the term "sphere of influence" was used as a "spatial metaphor" in the Global Compact. 58 The spheres are described as concentric circles around a company, with a company's influence as well as responsibility decreasing from the inner (employees,

<sup>49</sup> The "Survey of Scope and Patterns of Alleged Corporate-Related Human Rights Abuse" will be published as an Addendum to the third Ruggie Report, cf. A/HRC/8/5/Add.2.

A/HRC/8/5, para. 52.

<sup>51</sup> Ibid., para. 56.

<sup>52</sup> Cf. on this topic the special Report A/HRC/4/74 of the 5th February 2007.

<sup>53</sup> A/HRC/8/5, para. 58.

<sup>54</sup> Ibid., para. 56.

<sup>55</sup> Ibid., para. 64.

<sup>57</sup> Titled "Clarifying the concepts of 'sphere of influence' and 'complicity", a special Companion Report on these topics is to be published by the Special Representative in 2008, cf. A/HRC/8/16.

A/HRC/8/5, para. 66.

shareholders) to the outer circles (suppliers, state institutions, etc.). Ruggie thinks that the term is still useful as a metaphor but not "as a basis for attributing legal obligations to companies".59

However, at the same time, he also thinks that the picture of concentric circles is misleading, for "it is not proximity that determines whether or not a human rights impact falls within the responsibility to respect, but rather the company's web of activities and relationships".60 Thus however, he is not questioning the fact that the influence of companies on human rights reaches beyond one's own company but rather the interpretation of sphere of influence formed by the Global Compact itself.

The term "complicity" is established more strongly legally, especially in the area of international criminal jurisdiction. The Ruggie Report stresses that "the number of domestic jurisdictions in which charges for international crimes can be brought against corporations is increasing, and companies may also incur non-criminal liability for complicity in human rights abuses" 6

But even if a company cannot be directly held to account as an accomplice of human rights violations, there is a danger of high reputation costs if the company is deemed guilty in the eves of the public, Ruggie claims that it is "not possible to specify definitive tests for what constitutes complicity in any given context".62 But in order to avoid complicity, companies should in all circumstances employ the above-described due diligence process, especially the human rights impact assessments, also taking into consideration the relationships with external actors.

# Ruggie's opposition against a binding treaty

John Ruggie has repeatedly stressed that he rejects any legally binding instrument to regulate companies at global level. In an article written for Ethical Corporation in May 2008, he refers to three reasons for this:63

- 1. Treaty-making can be "painfully slow".
- 2. A treaty-making process "risks undermining effective shorter-term measures to raise business standards (...)".
- 3. Serious questions remain "about how treaty obligations would be enforced".

None of the three statements is particularly convincing as an argument against global regulations for companies, for they all apply to most instruments of international law. If governments had acted in accordance with Ruggie's logic, there would be neither a Covenant on Civil and Political Rights nor a Covenant on Economic, Social and Cultural Rights. For their negotiation and ratification processes also made "painfully slow" progress. The negotiations on climate protection give an example that short-term measures of likeminded governments are perfectly conceivable in spite of obstacles during negotiations at global level, for example regarding the promotion of renewable energies. And that problems occur in enforcing conventions would also be an argument against many of the ILO conventions - without their rationale being seriously disputed for this reason.

So it would be perfectly feasible to start a treaty-making process now, while simultaneously taking shorter-term practical steps. But even with such a strategy, Ruggie sees four "serious risks":

<sup>59</sup> Ibid.

<sup>60</sup> Ibid., para. 71.

<sup>&</sup>lt;sup>61</sup> Ibid., para. 74.

<sup>62</sup> Ibid., para. 76.

<sup>63</sup> John Ruggie: Business and human rights – Treaty road not travelled. 6 May 2008. (www.ethicalcorp.com/content.asp?contentid=5887)

- Governments "may invoke the fact of treaty negotiation as a pretext for not taking other significant steps, including changing national laws (...)."
- The limited capacities of governments, NGOs and companies would be tied down by a treaty-making process, thus making them unavailable for "practical and urgently needed innovations".
- A treaty agreed on a consensus among governments would only reflect the lowest common denominator and "would not match the highest voluntary standards today".
- Pressure from NGO campaigns on companies "to perform at the highest voluntary level" would be less effective if the latter could appeal to lower international standards.

These arguments are speculative, too, and can easily be neutralised by counter-arguments.

- Ad 1: Governments regularly argue that they are unable to introduce higher standards and more stringent national laws unitaterally precisely because this would put them at a locational disadvantage. One particularly obvious example in this respect is corporate taxation.
- Ad 2: All experiences with international negotiations have shown that relatively few experts are involved in the negotiating processes proper. This does not tie down capacities to a significant degree. But at the same time, with an international negotiating process, a discursive forum can be created via which public awareness can be raised and political pressure can be created. Here too, the climate negotiations are a good example.
- Ad 3: If international negotiating processes are initially driven by a coalition of like-minded governments and NGOs, as was the case, for example, with the Anti-personnel Mines Convention or the preparations for the founding of the International Criminal Court, the result by no means needs to represent the smallest common denominator, which is determined by some governments intent on blocking the process. But at the same time, in the case of globally agreed conventions, too, there is the option of a sub-group of likeminded governments to go beyond the minimum consensus with the aid of Optional Protocols.

Ad 4: Civil society organisations will by no means be deterred from calling on companies and governments to meet further-reaching commitments in their campaigns by the existence of international agreements at low level. Thus the existence of the core labour standards of the ILO by no means represents an obstacle to trade unions to fighting for more far-reaching rights at national level vis-à-vis companies. And neither the insufficient Framework Convention on Climate Change nor the Kyoto Protocol have prevented environmental groups from calling oil companies and automobile corporations to account for the detrimental effects that their products have on the climate.

Finally, Ruggie's argument that there are no realistic enforcement instruments for a possible treaty and that it would therefore rapidly lose legitimacy is hardly convincing either. He is probably right in claiming that the enforcement of global corporate rules would not yield any value added if it was restricted to the existing legal instruments in the home or host states of the companies. Also, the option of an international court for companies really is hardly conceivable for the foreseeable future (although this was also thought of the realisation of an International Criminal Court just two decades ago). And the notion of elevating the Treaty Body of a global corporate convention to the status of a supervisory body for the 77,000 Transnational Corporations and committing them to report to this Treaty Body is not only unrealistic but is not seriously being advocated by anyone.

In contrast, the arbitration procedures along the lines of WTO and the international investment agreements would present perfectly feasible models. They show that enforcement instruments can indeed be employed efficiently and in an unbureaucratic

manner provided that there is corresponding political will. Ruggie, however, does not mention this option at all.

In the third part of his Report, he at least describes the current range of complaints and damage compensation instruments in the field of human rights and concedes that "yet this patchwork of mechanisms remains incomplete and flawed".64 Ruggie's conclusion is that "It must be improved in its parts and as a whole".

#### Mechanisms to investigate, punish and redress

The most important part of the Ruggie Report deals with the options that victims of corporate human rights violations have to complain and obtain compensation for damages sustained. Here the Report distinguishes between State-based judicial and non-judicial mechanisms and non-State mechanisms.

The Report complains that "judicial mechanisms are often under-equipped to provide effective remedies for victims of corporate abuse". 65 At least, it notes, progress is slowly being made, for instance regarding extraterritorial complaint options. One example is the Alien Tort Claims Act already described in the 2007 Report, on the basis of which companies were brought to court in the USA in more than 40 cases since 1993 to account for human rights violations committed outside the USA. However, there is still considerable scope for improvements. Ruggie's demand:

"States should strengthen judicial capacity to hear complaints and enforce remedies against all corporations operating or based in their territory, while also protecting against frivolous claims. States should address obstacles to access justice, including for foreign plaintiffs especially where alleged abuses reach the level of widespread and systematic human rights violations. '66

Among the State-based non-judicial mechanisms, the Report above all highlights two dealing with grievances relating to human rights violations. At national level, they are the National Human Rights Institutes (NHRI). They deal in different manners and with different intensity with grievances vis-à-vis companies. 67 Ruggie holds that "the actual and potential importance of these institutions cannot be overstated".68

At international level, complaints of corporate human rights violations may in particular be addressed to the National Contact Points (NCPs) of the OECD Guidelines for Multinational Enterprises. The Report regards the NCPs as "potentially an important vehicle for providing remedy".69 But it also notes that they have "too often failed to meet this potential". Above all, "the housing of some NCPs primarily or wholly within government departments tasked with promoting business, trade and investment raises questions about conflicts of interest"70 In order to avoid this, the NCPs would have to be turned into independent institutions. The Report refers to the commendable example of The Netherlands, where the NCP consists of an independent four-person multi-stakeholder group. The Report does not address a number of further deficits that the OECD complaints procedure has and that have again and again been criticised by NGOs and trade unions. This includes restricting the complaints procedure to investment cases and the lack of effective sanctioning and compensating instruments.

The Report also regards complaints mechanisms as indispensable for companies and multistakeholder or industry initiatives. It notes: "An effective grievance mechanism is part of the

70 Ibid.

<sup>64</sup> A/HRC/8/5, para. 87.

<sup>65</sup> Ibid., para. 88.

<sup>66</sup> Ibid., para. 91.

<sup>67</sup> Cf. here the special survey "Business and Human Rights: A Survey of NHRI Practices", to be published together with OHCHR in 2008.

<sup>68</sup> A/HRC/8/5, para. 97.

<sup>&</sup>lt;sup>69</sup> Ibid., para. 98.

corporate responsibility to respect. "71 At the same time it addresses the warning to multistakeholder initiatives that "in the absence of an effective grievance mechanism, the credibility of such initiatives and institutions may be questioned. "72 The Report formulates six minimum requirements for such complaints mechanisms:73

- Legitimate: Clear, transparent an sufficiently independent governance structures;
- 2. Accessible: Information on the mechanism must be publicized to those who may wish to access it:
- 3. Predictable: A clear and known procedure with a time frame;
- 4. Equitable: Fair and equitable terms for all parties engaged;
- 5. Rights-compatible: Outcomes and remedies must accord with internationally recognized human rights standards;
- 6. Transparent: Sufficient transparency of process and outcome.

The Ruggie Report does not cite examples of companies or multi-stakeholder initiatives that already fulfil these criteria.

Instead, it notes that in the current "patchwork of grievance mechanisms (...) considerable numbers of individuals whose human rights are impacted by corporations, lack access to any functioning mechanism that could provide remedy".74 This is not only due to a lack of information but also to the "(...) limitations in the competence and coverage of existing mechanisms".75

In response to these deficits, the Report cites the proposals for the creation of a "global ombudsman function that could receive and handle complaints". Although this represents the only substantial innovation in the entire Report of the Special Representative, he above all refers to the problems that the creation of such an institution would entail and is unable to wholeheartedly support such a notion.

And yet it is this proposal that the international lobbying associations of business, the International Organisation of Employers (IOE), the International Chamber of Commerce (ICC) and the Business and Industry Advisory Committee to the OECD (BIAC), have reacted to very sensitively in their preliminary commentary on the Ruggie Report. Whereas they give a mainly positive assessment of the other passages of the Report, they declare: "We do. however, have serious reservations about the idea of establishing a global ombudsman function as part of the business and human rights mandate. There are no convincing arguments that establishing an international ombudsman - even if it were practical and possible - would do anything to address the lack of access to effective and impartial judicial mechanisms at the national and local levels that the Special Representative mentions."7 They are thus indicating that governments will have to reckon with considerable resistance on the part of business if they go beyond the existing mechanisms and voluntary arrangements in combating corporate violation of human rights.

<sup>&</sup>lt;sup>71</sup> Ibid., para. 93.

<sup>72</sup> Ibid., para. 100.

<sup>73</sup> Ibid., para. 92. 74 Ibid., 102.

<sup>75</sup> Ibid., para. 103.

<sup>76</sup> Ibid.

<sup>77</sup> Joint initial views of the International Organisation of Employers (IOE), the International Chamber of Commerce (ICC) and the Business and Industry Advisory Committee to the OECD (BIAC) to the Eighth Session of the Human Rights Council on the third report of the Special Representative of the UN Secretary-General on Business and Human Rights, May 2008. (www.reports-and-materials.org/Letter-IOE-ICC-BIAC-re-Ruggie-report-May-2008.pdf)

### Conclusion and next steps

In its first sentence, the Ruggie Report notes: "The international community is still in the early stages of adapting the human rights regime to provide more effective protection to individuals and communities against corporate-related human rights harm." <sup>48</sup>

It is just as right in doing so as it is in identifying a wide governance gap preventing adequate sanctioning and reparation of corporate human rights violations.

However, Ruggie's self-restriction to solutions which he deems feasible and politically expedient in the short term prevents him from addressing the gap he notes with adequate governance solutions.

Not only does his explicit distinction between the "State duty to protect" and the "corporate responsibility to respect" restrict the <a href="extent">extent</a> of corporate duties, but it also limits the <a href="degree">degree</a> of their commitments. For in legal terms, "responsibility" is much weaker than "duty". Thus the Report does not go beyond a description of the current status quo. Innovative ideas to develop international law vis-à-vis companies will be sought in vain.

At least the Special Representative has had a wealth of material developed in his three years in office so far that has enriched the discourse on business and human rights and requires further evaluating. This includes, for example, the above-mentioned "Survey of Scope and Patterns of Alleged Corporate-Related Human Rights Abuse". On the patterns of Alleged Corporate Related Human Rights Abuse".

In addition, the Ruggie Report refers to some issues to be addressed by reforms, which, developed consistently, could indeed bring about some progress. Among the following ten steps, the first seven immediately take up the recommendations of the Ruggie Report, while the last three go beyond them, filling in the blanks in this report.

- Sustainability Reporting: Governments ought to foster independently verified sustainability reporting following the Guidelines of the Global Reporting Initiative – up to mandatory sustainability reports, especially for State-owned enterprises and sovereign wealth funds.
- 2. Bilateral Investment Treaties (BITs): The interests of human rights have to be given more consideration in BITs in future. An initial step would be to establish human rights, as well as environmental and social clauses and duty of disclosure, for governments and enterprises in all newly negotiated bilateral and regional investment agreements.
- 3. Linking ECAs to human rights: Human rights ought to be taken more strongly into account in granting government guarantees for export credits. This includes mandatory human rights impact assessments ahead of awarding the guarantees as well as the withdrawal of a guarantee if a company supported is proven to have been involved in the violation of human rights.
- 4. Revision of the OECD Guidelines: The OECD ought to introduce a process on the revision and tightening of Guidelines for Multinational Enterprises, especially in the field of human rights. At the same time, the National Contact Points ought to be reorganised and set up as independent institutions outside the ministries of economics.
- 5. Use of Security Council sanctions: The instrument of Security Council sanctions vis-à-vis individual enterprises implicated in human rights violations in conflict regions ought to be made better use of. Here however, care has to be taken that the Veto Powers do not exempt companies from their own countries from prosecution.

80 A/HRC/8/5/Add.2.

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<sup>78</sup> A/HRC/8/5, para. 1.

<sup>&</sup>lt;sup>70</sup> Cf. here the complete "List of documents prepared by and submitted to SRSG on Business and Human Rights" as of 1 May 2008 (www.reports-and-materials.org/Special-Rep-documents-list-1-May-2008.pdf). All documents are available on the excellent website www.business-inumaniphls.org.

- **6. Strengthening national complaints mechanisms:** Judicial and non-judicial complaints procedures vis-à-vis companies ought to be extended. This includes adopting laws along the lines of the US American Alien Tort Claims Act as well as extending the mandate and capacities of the National Human Rights Institutions (NHRI) in order to handle grievances related to the human rights performance of corporations effectively.
- 7. Creation of a global Ombudsperson function: The Terms of Reference for a global ombudsperson who can receive and handle complaints against individual enterprises complementary to legal recourse at national and international level ought to be developed.
- 8. Special Procedure on business and human rights: The UN Human Rights Council should adopt a mandate for a UN special procedure (e.g., independent expert or group of experts) on business and human rights. This procedure should have a remit to research and analyze patterns of corporate human rights abuses with reference to real situations, to conduct field visits, to receive individual communications from victims of human rights abuses and human rights defenders working on their behalf, to issue recommendations to states and companies and to contribute to conceptual development within this field.
- 9. Creation of an International Advisory Centre: In order to support Governments of developing countries in their negotiations with transnational investors, an International Advisory Centre (similar to the one proposed under the former UN Centre for Transnational Corporations) could be established through the UN to provide legal advice in contract negotiations with TNCs, especially on Host Government Agreements.
- 10. Steps towards a framework agreement on corporate accountability: Any journey, as long as it may be, always begins with the first step. Governments ought to take this first step and commence preparations for an international legal instrument to establish duties of corporations. With such a process, a discursive forum could be created that could promote debate on the responsibilities of Transnational Corporations under the conditions of globalisation. It could bring together the still often separately held discourses on corporate accountability in the areas of human rights, environmental and consumer protection, labour, combating corruption and taxation.

A consensus among all member states of the United Nations is not required to this end. Following the example set by the Anti-personnel Mines Convention and the run-up process to the International Criminal Court, a pacesetter coalition of like-minded governments and non-state actors could initially be formed to take the first steps.

At the end of his Report, John Ruggie correctly notes that the United Nations "must lead intellectually and by setting expectations and aspirations". However, this role demands farsightedness, and therefore far more than merely restricting oneself to what is feasible in the short term and to what is politically praamatic.

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<sup>81</sup> A/HRC/8/5, para. 107.