

# **Trash Culture: A Study of Garbage and Youth Culture**



**Green Festivals Initiative  
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Acknowledgements:

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We Feel Responsible - A youth initiative, Chennai



# Green Festivals Initiative

The Green Festival Initiative is a program led by youth to:

- Raise awareness among college students about the environmental and social costs of their cultural festivals;
- Foster a spirit of healthy competition among campuses to make their cultural festivals more eco-friendly, youth-controlled and socially beneficial;
- Create a platform where youth can come together to discuss and understand the politics of corporate globalisation using the real problem of “waste management” during campus festivals as a case in point.

*In January 2005, students from four colleges from Chennai and Vellore came together at the Indian Institute of Technology, Madras, to help IIT students assess the environmental and social costs of IIT’s cultural festival -- Saarang 2005.*

Green Saarang, an initiative by these students, is exploring Saarang from a variety of perspectives. This initiative could well trigger changes that affect multiple aspects of how the festival is conducted and its impact on the environment and youth culture. These aspects include – waste generation, how much money is raised/spent and how, commercialisation and the sponsorship culture, noise, youth culture and youth’s obligations to society. This year, the discussion has just begun and all students who were active in Green Saarang see the “greening” of the festival as a process -- of awareness raising, debate and discussion, and implementing changes -- that will take a few years.

Green Saarang was well received and holds the promise of making Saarang not just the most-happening of college festivals, but also the most environmentally and socially responsible one. Even better, given Saarang’s profile, it could well set a trend for other campus festivals as well.

IIT’s Saarang is merely the first of several campus festivals that will be visited by the Green Festivals Initiative. However, the expectations of IIT and Saarang are far greater than for other festivals for the following reasons:

- Saarang takes place inside IIT, an educational institution located within a notified wild life area.
- Saarang is one of the most popular cultural festivals in India.
- IIT is an engineering institution of repute, and its alumni are often called upon to provide solutions to complex problems that face humanity.

IIT has to its credit a motivated student group, and civic staff, management and faculty that have acknowledged a problem with its wastes. It has begun taking steps to reduce waste, and eliminate problematic waste streams such as plastic packaging.

Students of IIT’s National Service Scheme, and the campus civic agency SWARM were poised to implement Zero Waste Management in the entire campus.



## Culture Cola

College cultural celebrations have caught up with the commercial trend successfully. However, this commercialisation has come at a cost to the environment and youth culture. Even as recently as five years ago, campus festivals were not extravagant, less wasteful of resources, and more reflective of a youth culture where youth are in control. Where once support was sought from small entrepreneurs, students, local businesses and alumni, today's festivals are almost totally sponsored and controlled by multinational corporations.

This “*sponsorship culture*” has brought with it a change in the content and mood of the festival. This change is most noticeable in the quantity and kind of garbage generated at the end of each day's celebration. The pressure to get big-ticket sponsors, and the devil-may-care attitude of using disposable food and beverage packaging, for instance, are common to most college festivals today.

On the one hand, it legitimizes the trashing of the environment in the name of fun. On the other, it teaches nothing to young people about their responsibility towards the environment or towards people and communities that are forced by circumstances to sort through their garbage or live near the dumpsites.

Across campuses, student organisers nowadays exhibit a compulsive need to court corporate sponsors. They are reluctant to impose any conditions on their sponsors, and have no criteria for choosing them. In return for their sponsorship money, sponsors are given a free rein at advertising and marketing their products in any manner that they choose to. The fact that this

Fun, today, seems always linked to selling something – a lifestyle, a cell-phone, an attitude. As a result, youth culture is less visible, or visible only through the lens of a corporate sponsor.

marketing is happening inside an educational institution is not seen as a problem. Fun, today, seems always linked to selling something – a lifestyle, a cell-phone, an attitude. As a result, youth culture is less visible, or visible only through the lens of a corporate sponsor.

Student organisers market themselves, their college and other youth – often without the latter's consent – as potential consumers or as targets of advertising campaigns to draw sponsors in. The success of a campus festival is no longer judged by the quality of fun, or the creativity of the youth participants, but by the number and profile of the sponsorships, and the budget of the event.

Green Festivals Initiative conducted an environmental and social audit of Saarang 2005. This study has four components:

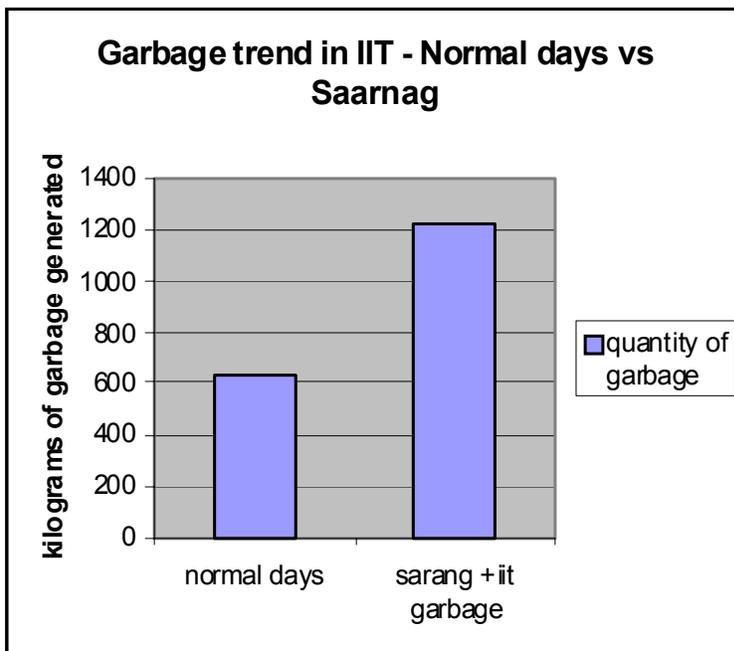
- a) Waste Audit
- b) Water Audit
- c) Material Audit
- d) Analysis of sponsorship culture

The study is an indicative one with a limited sample size. While the study gives a reliable indication of the nature of the problem, it cannot be relied upon for exact quantification (weight or volume) of waste generated.



## The Study:

According to IIT's civic team SWARM, on normal days, IIT generates upto 25 bags of mixed garbage, weighing between 15 and 25 kg, from the departments, staff quarters and hostels. During Saarang, the number of bags increases to 40 or 45 -- about 15 to 20 bags more than normal. All trash collected on campus is brought to Velachery Gate within the campus, and handed over to a contractor who employs four workers to sort through the garbage and recover plastics and paper products that can be recycled. The workers interviewed by the Green Saarang team in January 2005 were hired on a temporary basis. According to the workers, their employer's contract with IIT ended on 28 January, after which they would return to their erstwhile professions. Two of them indicated that they would return to their vocations as masons in the construction industry.



Recovery at Velachery Gate is done with no protective equipment, and is a messy, smelly affair because all garbage – food waste, toxics and plastics/paper – is dumped in the same bin. Workers sort through the mixed garbage to recover paper and plastics.

The trash that remains after recovery is emptied into a 3-ton bin. CES Onyx, a multinational waste management company, transports the bin once in three days to Perungudi. Onyx is contracted by Chennai Municipal Corporation.

In Perungudi, the waste is dumped in a freshwater wetland called Pallikaranai. Pallikaranai is the largest natural rainwater harvesting system in the region, and is home to more than 30 species of fish. At least 26 nesting birds and 6 migratory bird species have been documented here.

At any time during the day, ragpickers – mostly children – can be found rummaging through mounds of burning wastes in the centre of the wetland. Besides harming ragpicker children during a very vulnerable stage of their development, the smoke from the burning garbage poses a serious health hazard for residents living in the vicinity of the wetland.



## Study Methodology

### Waste Audit:

The schedule of waste collection and transfer to Velachery Gate was determined through conversations with SWARM staff. Accurate counts were maintained of the daily total of bags of Central Lecture Theatre (CLT) – Bindas Park, Open Air Theatre (OAT) and street waste. Six bags, two each from CLT–Bindas Park, OAT and the Street, were sampled over six days 21-26 January, 2005. Of the six bags sampled, four bags were weighed.

The sorted trash consisted of:

- a) Coated paper cups – used for coffee and beverages. Barring Pepsi and Nestle, the paper cups were unbranded.
- b) PET bottles – drinking water and soft drinks from Pepsi or Coke.
- c) Tetrapak plates: Imported plates (from Thailand, Philippines and Indonesia) made out of used Tetrapak were universally used by caterers to serve food.

### Saarang's Garbage

Saarang festivities are concentrated in two open air areas – the area in front of the Central Lecture Theatre (CLT) called the *Bindas* Park and the Open Air Theatre – their immediate vicinity, and the class-rooms and lecture halls in CLT.

The Bindas Park is busy day-long. All stalls, sponsor booths and stages, and catering area are located in the park. At least 10 bins were placed throughout the park.

The Open Air Theatre (OAT) sees activity after 6 p.m. when the Pro Shows or Professional Shows begin. Pro Shows are a popular event with youth and other visitors as they feature big-name musicians and bands. Four bins were placed in the OAT.

Another six bins were distributed at various points between OAT and the Bindas Park.

*Members of SWARM – IIT's civic staff – collect garbage from the ground, and periodically empty the trash cans into large sacks. Full sacks are stored and transferred several times daily to the*

- d) Small Plastic cups: for coffee, Arun ice cream.
- e) Plastic bags: Packaging.
- f) Silver Foil: Nestle's packaging for coffee concentrate for use in dispensers.
- g) Plastic spoons and forks: Used by caterers.
- h) "Pizza Corner" cardboard boxes.
- i) Paper.
- j) Food waste.
- k) Leaves and debris.
- l) Miscellaneous wastes.

All the above items were segregated and quantified. The segregated wastes were once again sorted by producer: Nestle, Pepsi, Aquafina, Arun Ice cream etc.

Photo and video documentation was done.

### **Water Audit:**

One water kiosk, run by **Bharathiyar Women's Self Help Group** from IIT campus, were located in the Bindas Park area. The kiosk were introduced by Green Saarang to assess their performance in reducing dependence on water sold in PET bottles. The experiment was extremely successful. The kiosk served water from 20-litre water dispensers. The kiosk-keeper was interviewed at the end of Saarang to get details of water consumption during Saarang.

### **Material Audit:**

One student volunteer travelled the length and breadth of IIT recording the number, size and material of hoardings, banners and corporate publicity displays. Additionally, each stall in the catering and sponsors area was visited and an inventory of material used for packaging, display and decoration was prepared.

The material audit was designed to assess the nature of material used during Saarang with a view to understanding where to recommend more eco-friendly material, and prepare a list of alternative acceptable material prior to next Saarang.

### **Analysis of Sponsorship Culture:**

The pervasiveness of the sponsorship culture was gauged by the visibility of corporate sponsors, an analyses of the Saarang 2005 Sponsorship Brochure, and interviews with Green Saarang volunteers from IIT and non-IIT youth.



## Findings

### Waste Audit

- A total of **91.25 bags** of garbage was collected over six days of Saarang;
- Of this, **67** bags were from CLT - Bindas Park, **14.5** bags from OAT and **9.75** from the street.
- On average, that works out to **15.2** bags per day.
- The weights of bags that were weighed varied from **32 kg to 49 kg** per bag -- or an average bag weight of **39 kg**.
- Daily Saarang trash totals about **600 kg/day**.
- Total Saarang trash is about **3.56 tons**.

IIT's deer and blackbuck population are in particular danger because of the use of plastic. Deer are injured – some reportedly die – because they accidentally ingest plastic cups, bags, and even paper cups, while grazing. Thermocol when burnt can release extremely toxic fumes including phosgene.

Date (2005)	CLT	OAT	Street	Total no. of bags
21 January	0	3	0	3
22 January	15	2	3	20
23 January	10	2	1.75	13.75
24 January	12	3	2	17
25 January	15	2	1	18
26 January	15	2.5	2	19.5
Total	67	14.5	9.75	91.25

Table 1: Total Number of Garbage Bags by Location

Also, large quantities of thermocol (also referred to as polystyrene or Styrofoam) – originating from the IIT departments – were found strewn around the Velachery garbage sorting area. During the audit, entire herds of deer could be seen rummaging in the trash.

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“The plastic is dumped all along the roads. And there is paper there. When the deer eats the paper, it also swallows the plastic. It then gets stuck in its throat, and it dies. Plastic is a threat to its life,” says K.S. Panneerselvam,

supervisor of IIT's civic team SWARM.

Even disposable cups pose a problem. Attracted by the sweet residues in disposable cups, monkeys and deer often consume the entire container.

Table 2: Categorisation of Saarang Waste (per bag average)

Note: Figures rounded up.

Items	OAT Average number per bag	CLT Average number per bag	Street Average number per bag
Tetrapak Plates		856	34
PET bottles	64	17	73
Pepsi paper cups	809	356	282
Nestle paper cups	93	341	150
Other Paper Cups		104	
Spoons/Forks		640	
Plastic Bags		152	
Small Plastic Cups		59	
Pizza Corner cardboard boxes		16	
Nestle Silver Foil			23



Pepsi and Nestle were the two most visible corporate names in the Saarang trash. More than 63,000 branded Pepsi and Nestle cups were used and thrown by Saarang visitors. Of this, more than half belonged to Pepsi. Nestle was the second largest trash producer in this category.

PET bottles totalled more than 2700, mostly from the OAT. According to students, water was scarce inside the OAT. Barring the Pepsi stalls, that sold Aquafina water at Rs.12 a bottle, there was no water in the theatre. Even these stalls were few and far between. A water kiosk was set up for one day. But because it was located in a dark part of the auditorium, not many knew of its existence

During the audit, it was also observed that organic waste, mixed with small quantities of paper and plastic, from the catering area was being dumped either in a pit or in the Onyx bin.

Table 3: Categorisation of Saarang Waste (All Bags Total)

Items	TOTAL (for all bags)
Plates	57684
PET (Aquafina Pepsi)	2772
Paper cups (Pepsi)	38325
Paper cups (Nestle)	25646
Spoons/Forks	42880
Paper Cups	6935
Plastic Bags	10184
Plastic Cups	3953
Silver Foil (Nestle)	224

## Water Audit

**The self-help group dispensed a total of 3000 litres of water. That represents a saving of 3000 1-litre PET bottles.**

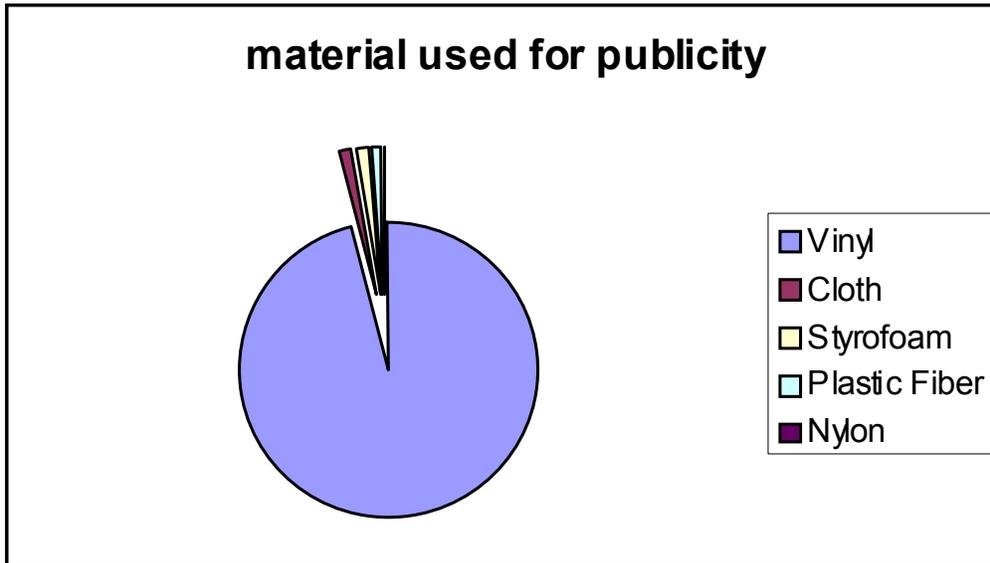
A total of 150 cans were sold at Rs. 1/glass. Each can yielded 70 glasses. Each 20-litre can of water costs Rs.35. Sales throughout Saarang totalled Rs. 10,500. Earnings for the women's group was in the range of Rs. 5,250.

Barring the water kiosk, Pepsi's Aquafina was the only brand of water available at Saarang. It was sold at Rs.12 for a 1-litre bottle.

## Material Audit

Saarang 2005 had 16,459.5 square feet of banners by 23 organisations. Vinyl or PVC (Poly Vinyl Chloride) was the most popular material at 15,826 square feet of banner space. Just three companies – Hutch, Sunsilk and Nokia accounted for more than 14400 square feet, or 91 percent of total vinyl used in displays. PVC is a poison plastic whose production, usage and disposal is associated with the release of some of the most toxic chemicals known to science, including dioxins and furans.

In order of popularity, polystyrene (*aka* thermocol, Styrofoam), cloth and plastic fibre rank among other publicity material of choice.



In the various stalls around CLT - Bindas Park, PVC was popular as material for banners, table spreads and menu cards. Other plastic items include laminated menu cards, spoons and forks, straws, stirrers, and cups.

Plastics, in general, are only downcycled and not recycled. Unlike recycling, as with steel, where the process can yield steel of virgin quality, downcycling yields poorer quality product at the end of the process. Recyclable material can be processed any number of times. Downcyclable material become unusable as a feedstock for material recreation after a few cycles. Both recycling and downcycling can be hazardous depending upon the material.

Coated paper cups, not plastic, were predominantly used by caterers and beverage vendors. Plain paper cups are preferable to coated paper cups. Depending upon the material of the coating, coated cups tend to release more toxins during recycling.

### **Analysis of Sponsorship Culture**

Sponsorship figures for Saarang 2005 were not available at time of writing. However, sources place it well in excess of Rs. 50 lakhs, and in the neighbourhood of Rs. 85 lakhs this year. This is a testimony to the ability of the student management to raise funds. The "Sarang Sponsorship Brochure" discloses the students' strategy for attracting high donors. Neither the brochure nor the fund-raising strategy seem to espouse any screening of sponsors, though.

The brochure sells Saarang as an attractive event for advertisers, and also highlights the importance accorded to sponsors by the Saarang student management. A lot of emphasis seems to have been placed on pacifying sponsors, catering to their needs, and luring them with incentives such as “high recall value” and “maximum visibility.”

The result of this, some IIT students point out, is that cultural events that were earlier centrepieces of the program have been pushed to the periphery, with sponsor stalls and loud music taking centres stage. “The focus was on the events last year. This year we see only these juke boxes. . . to some extent [events have] been pushed into the background,; you don’t see the event schedule anywhere, and you have to search for which events to attend. Mostly, people just hang around the area near catering, and dance to the music and just go off, and just attend pro-shows at night. That’s the idea of Saarang that’s coming. I actually don’t agree. It shouldn’t be like this,” one IIT student agonises.

Another IITian agrees. “Nobody says IIT Madras. People say Nokia. People say Hutch. They’re selling Saarang to these people. And I feel very bad about it. . Saarang and sponsors don’t go well together. And I think they should separate as much as possible.” Meanwhile, other students are categorical that Saarang cannot happen without big-name sponsors.

Saarang reportedly raised more than Rs.80 lakhs in sponsorship. Greening Saarang, and putting youth back in control vis-à-vis corporate sponsors, requires a reassessment of Saarang’s positioning and how it is conducted. Today, many youth in IIT feel it is impossible to even impose conditions on

Just as Pepsi and Nestle were the most visible corporate names in Saarang’s trash, Nokia, Hutch and Sunsilk Shampoo were the most visible in terms of noise pollution – They ran the loudest juke boxes. The noise was loudest in the vicinity of the CLT-Bindas Park area because the music was loud. Considering the fact that IIT is an educational institution in the midst of a forest, the volume of music should be strictly regulated.

corporate sponsors or stall operators. Such lack of choice is a sign that the student administration and the student community are really not in control of their own cultural festival.

At present, Saarang has no criteria for choosing sponsors, and no screening is done to ensure that corporate sponsors have a good environmental and human rights track record.

# Road Map to Green Saarang



The following is a roadmap for gradual change to a Green Saarang.

**1. Reassess budget. Be transparent:** Evaluate Saarang 2005's budget to identify areas where costs can be cut, saved, or where money has been spent inefficiently. Also, identify the income sources with a view to evaluating other ways of raising money. Conduct all finance related activities with utmost transparency and accountability. An independent auditor can be appointed just for tracking the budget and expenses. All income and expenses must be published.

**2. Develop sponsorship and fundraising guidelines:**

- Focus on collecting small contributions from many, instead of large contributions from a handful. That ensures that there is mutual accountability between your supporters and you.
- Large corporations and MNCs may be easy sponsors, but many of them are environmental and human rights violators. Develop criteria to screen institutional supporters to ensure that they meet the highest standards of environmental and human rights compliance.
- Increase the involvement of IIT alumni, the staff and their contribution to the festival.
- Organise creative fund-raising events and schemes involving youth to reduce dependence on corporate sponsors.
- Fix a ceiling for the fund raising to avoid handling unnecessarily huge budgets.

**3. Reduce Noise:** Given that IIT is in a notified wildlife area, it would be advisable to keep noise in public and open spaces down. If OAT is the only option for a night-time concert, ensure at least that noise during the rest of the day, say from the CLT - Bindas Park, is kept to a minimum.

**4. Promote segregation:** Food waste and kitchen waste needs to be separated from the non-degradable wastes. The caterers need to put their kitchen waste devoid of plastics or degradables in a separate bin. This waste can be composted. If plates, cups and spoons/forks made of natural material are used, these can be disposed of in the compost pile along with food waste.

**5. Regulate material use:**

- Reduce the number of banners advertising sponsors, and restrict it to the main Saarang area instead of spreading it around the campus. Require sponsors to use cardboard, cloth, jute or other non-synthetic material for banners and props. Vinyl and thermocol should be banned.
- Catering: Eliminate the use of plastics, and reduce the use of disposable paper products such as cups to the extent possible. Explore options for replacing spoons, forks, plates, cups, straws and stirrers with natural material or paper.
- Stall accessories: Replace plastic stall or sales accessories such as

# Road Map to Green Saarang

- menu cards, props and table cloth with natural material or paper.
- Giveaways: Require sponsors and stall operators to use non-glossy paper for publicity brochures, and to avoid plastic giveaway items.
- Reduce paper use: Donate one-sided paper to women's self-help groups that manufacture products using such paper. Alternatively, rework used and one-sided paper into products for sale during Saarang fundraisers. Recycle other paper.
- Buy local: To the extent possible, source your products from local artisans, crafts-persons and self-help groups. Paper products cups, plates and spoons made of different natural material are available locally.

**6. Enforce Extended Producer Responsibility:** Producers have a responsibility to manage the environmental fate of their products and packaging throughout their entire lifecycle, including after disposal. Companies that sell beverages in unsustainable material such as plastic or aluminium should be required to ensure that these material are separately collected and handled by them in a manner that does not damage the environment or human health.

## **7. Water and Beverages:**

- Ban the sale of water in disposable packaging, including PET bottles.
- Increase the number of water kiosks using reusable cups run by women's self help groups, or unemployed youth from within IIT campus.
- Encourage women's self help groups and/or unemployed youth to sell healthy beverages such as fruit juice in reusable and coconut water.
- Ensure that free and clean water is available as well. This is the first tenet of good hospitality.

**8. Energy/Water audit:** Conduct a comprehensive energy and water audit during Saarang 2006. Explore and implement energy- and water-saving measures, and clean energy interventions. IIT can make this an experimental initiative; mentors of sustainable development model of economy suggest this as a thing of the future.

**9. Green Saarang Team:** Set up a Green Saarang Team with powers which would allow it to draw out the guidelines and enforce the same.

**10. Reduce Vehicular Traffic:** Restrict the vehicular traffic inside campus and block traffic to areas where animal crossings are frequent.

**Many companies, like Pepsi Co., Coca Cola and Nestle, have controversial track records. Many villages in India – from Mehdiganj and Sathariya in Uttar Pradesh to Plachimada in Kerala -- are currently pitched in battle against Pepsi and Coke bottling plants for access to scarce groundwater resources.**

**In the 1990s, empty PET Pepsi containers from its professed “recycling” program in California in Manali, near Chennai. Even while it was dumping US waste in Chennai, Pepsi was exporting PET bottles manufactured in India to the US.**

**Nestle too faces its own battles with communities in North America over access to freshwater, or by coffee consumers and growers angered by Nestle’s trade practices that allegedly harm the interests of coffee growers.**

**Hindustan Lever Limited, maker of Sunsilk, is in a pitched battle to avoid liabilities in Kodaikanal. The company stands accused of exposing workers and communities to mercury and mercury wastes, and of having misrepresented information and fabricated data to minimise liability.**

## Fact Sheet

### *Plastic*

In addition to creating safety problems during production, many chemical additives that give plastic products desirable performance properties also have negative environmental and human health effects. People are exposed to these chemicals not only during manufacturing, but also while using plastic packages. Some chemicals, such as phthalates migrate from the plastic packaging to the foods they contain. Examples of plastics contaminating food have been reported with most plastic types, including styrene from Polystyrene, plasticizers and stabilisers from PVC, antioxidants from Polyethylene, and acetaldehyde/formaldehyde from PET.

Source: Robert Edwards and Rachel Kellett, “Life in Plastic.” OIB, Goa. 2000.

Plastic	Common Uses	Health Impact
Polyvinyl Chloride (#3PVC)	Food packaging Plastic wrap Containers for toiletries, cosmetics floor tiles Pacifiers and toys Pipes and auto upholstery	PVC is a poison-plastic whose manufacture, usage and disposal are associated with the releases of deadly toxins, including dioxins, furans and phthalates. Dioxins and furans are known carcinogens. They can cause birth defects, genetic abnormalities, immune system suppression, skin diseases such as chloracne, and reproductive/sexual disorders.  Phthalates and dioxins can disrupt the endocrine system.
Polystyrene	Also known as thermocol or Styrofoam. Food containers Disposable plates, cups and cutlery Packaging for electronic machinery Building insulation Ice buckets	Polystyrene's production involves the use of known (benzene) and suspected (styrene and 1,3 butadiene) human carcinogens. Polystyrene poses significant fire hazards. For example, it played an important role in starting the Dusseldorf Airport fire in 1996. Styrenes and PAHs will be formed when PS is burnt, and hydrogen chloride and dioxins are released if brominated or chlorinated flame-retardants are present.
Polyethylene (#1PET)	Water and soda bottles, carpet fibre, chewing gum, coffee stirrers, drinking glasses, food containers and wrappers, heat sealed plastic packaging, kitchenware, plastic bags, squeeze bottles, toys.	Burning of polyethylene releases formaldehyde and acetaldehyde, both suspected carcinogens. Ethylene, the raw material, is extremely volatile and explosive.
Polyethylene terephthalate (PET)	Water bottles Containers	PET often contains additives (upto 30 %), such as UV stabilisers, pigments and flame retardants. In the production of PET, a number of substances are used which can cause irritation to the eyes and respiratory tract. Heavy metals are often used as catalyst during production and end up in the environment.
Polyurethane (PU)	Insulation Foam products like shoe soles, carpet underlay	PU's production consumes about 11 percent of the world-wide chlorine production, using chlorine as an intermediate. It uses several hazardous intermediates that generate numerous toxic by-products, including phosgene, isocyanates, toluene, diamines. The burning of PU releases isocyanates, hydrogen cyanide, Polycyclic Aromatic Hydrocarbons, dioxins.

## ***Aerated Drinks (Coke and Pepsi):***

**Samuel S. Epstein MD**

**The Safe Shopper's Bible : A Consumer's Guide to Nontoxic Household Products**

"More than a dozen animal tests over the last thirty years have demonstrated the carcinogenic effects of saccharin in the bladder and other sites, particularly female reproductive organs, and in some instances at doses as low as the equivalent of one to two bottles of diet soda daily."

**William Duffy**

**The doctor speaking in these dialogs is, Dr. McCay, the nutritionist at the Naval Medical Research Institute.**

"I was amazed to learn," he testified, "that the beverage contained substantial amounts of phosphoric acid. . . . At the Naval Medical Research Institute, we put human teeth in a cola beverage and found they softened and started to dissolve within a short period. The acidity of cola beverages ... is about the same as vinegar. The sugar content masks the acidity, and children little realize they are drinking this strange mixture of phosphoric acid, sugar, caffeine, coloring, and flavoring matter."

**James A Howenstine M.D.**

**A Physician's Guide to Natural Health Products That Work**

"Soft drinks also contain large quantities of phosphorus, which when excreted pulls calcium out of the bones. Heavy users of soft drinks will have osteoporosis along with damaged arteries."

## Annexure 1

The Hoarding Audit assessed the total amount of advertising space used and the material used.

Quantification in square feet, various materials used by sponsors for promotion

Advertiser	Vinyl	Cloth	Styrofoam	Plastic Fiber	Nylon
Accurum	104				
All India Travel Agency	176				
Aquafina				6	
Arun		60			
Castrol	96				
Cry		1			
Dew	100				
Hutch	7763		245.5		
Marry Brown	150				
Microsoft	60				
Nokia	1008.5	32		136	
Pepsi	5			18	
Pizza Corner	50	22			
Radio Mirchi	180				
Red Bull					Umbrella
Saarang	100	30			3
SBI	300				
SS Music	40				
Sunsilk	5655				
Tangerine	24				
TCS		80			
Tech.Food . Com	15				

## Annexure 2

The Waste Audit shows the product wise break up of the various samples taken during the

Date	No.of samples	Items	OAT	CLT	Street
23/1/05	1 bag - CLT	Plates		1161	
	1 bag - OAT	PET	100	24	
		Pepsi	647	392	
		Nestle	70	386	
		Spoons/Forks		680	
		Paper Cups		207	
		Plastic Bags		304	
24/1/05	1 bag (33kgs)	Pepsi (12kgs)	970		
		PET	27		
		Nestle	115		
		Misc waste (paper, plastic, tetra)	18kgs		
25/1/05	1bag (42kgs)	Pepsi			305
		Nestle			139
		PET(4kgs)			66
		Misc Waste			30.5kgs + (1.5 debris)
26/1/05	1 bag CLT (49kgs)	Pepsi		319	259
	1 bag Street (32kgs)	Nestle		296	160
		PET		10	80
		Spoons and Forks		600	
		Pizza Corner		32	
		Plates		551	68
		Plastic Cups		118	
		Nestle Silver Foil		46	46



**For more details contact**

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