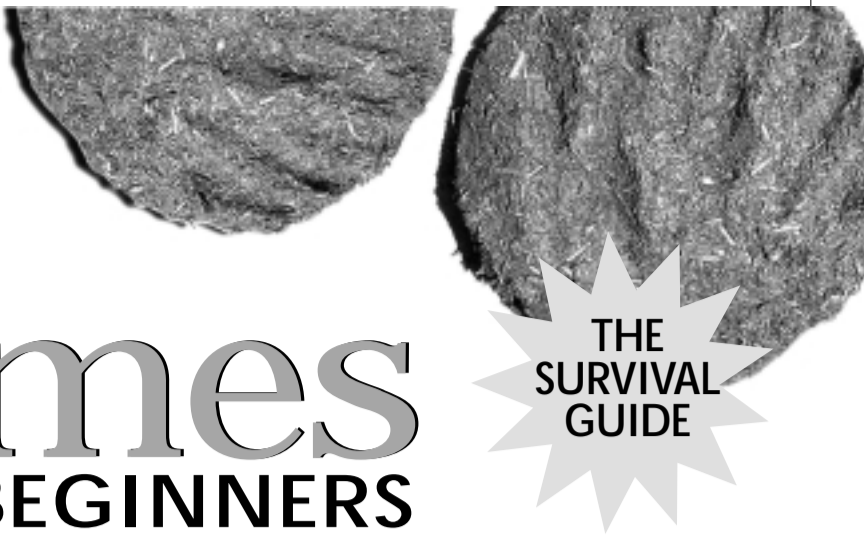


Gobar Times

ENVIRONMENT FOR BEGINNERS



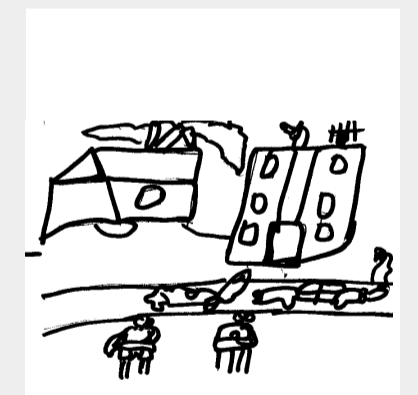
THE SURVIVAL GUIDE

COWPATS

In Calcutta, because of deep borewells, arsenic is getting mixed with the water and making it unfit for drinking. Traditional open wells prevent this. People are realising that traditional is the way to go.



Delhi's air is so polluted that many people are dying because of harmful gases.



Many fishes have died in Yamuna water because of the presence of many toxic and waste materials and very less oxygen.

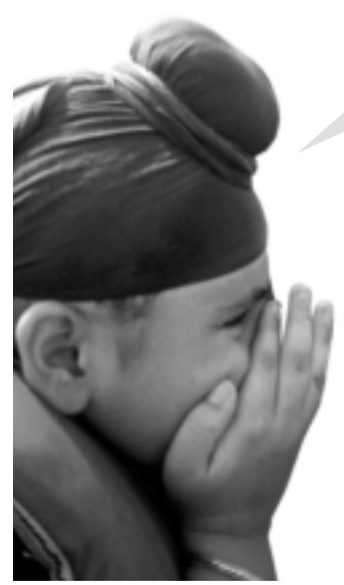


ILLUSTRATIONS: ANMOL



We took a ride down Yamuna. And Chee! Is this what we drink?

Nowadays pollution levels are going too high that some people are even dying due to it. There is not one person who does not create pollution. Everyday the pollution is rising and not many people are doing much about it. People throw wastes on land, water



Eeks! It Stinks!

and pollute the air with harmful gases and compounds. Are fines the answer?

Rivers like Yamuna which were called holy earlier are smelling with toxins. Even if all the garbage is collected in an area it is only some part of it, which is recycled, the rest of it is dumped into rivers,

ponds or dumped in pits formed on the earth's surface.

Nowadays almost everyone has a bike, scooter or a car. All these vehicles smoke. Diesel buses also emit

Kalapani

Our summer holidays were on, and we were all longing to do something special! Gobar Times asked, "Would you do some reporting?" All of us jumped at the idea. Though some of us backed out in between, each one of us put in our efforts into this special edition of Gobar Times. By the way, we named it Kalapani after our visit to Yamuna! It was Yuk!



a lot of pollution. Thus the air is polluted. People move to cities from villages for a 'better' life. Due to increasing urbanisation, waste is also increasing the land pollution. Factories are increasing because we people want more and more! All these factories and industries throw out their waste into our land, water and air.

All the garbage the government collects is dumped into landfills.

These are away from the city but they pollute the land and water in that place. This is usually near a village. The villagers are therefore affected by our waste. It is like throwing garbage out of our house into our neighbour's house. Many of the wastes take a long time to decompose especially plastics.

The noise levels are also rising. Nowadays rockets and jets are launched. There are traffic jams in which horns are endlessly heard. Sometimes it's so high that some times people go deaf.

There are many problems with our city but can't we start doing things at our end? Let's plan out our waste and water management programmes and then approach the government. We can't keep waiting for someone else to start!

ABHINAV ANAND

The water we drink comes from here!



The Gobar Times water test

Water can be dangerous for our health if the amount of certain chemicals and minerals exceed certain levels. *Gobar Times* reporters tested water samples from the Yamuna. Here are the results. Ammonia was alarmingly high!

Contamination	Amount	Comments
Ammonia	more than 3 mg/l	Toxic to fishes and plants
Total Iron	0.6 mg/l	Above 1 mg/l not good
Flouride	1 mg/l	Above 1 mg/l harmful
Coliform	Present	Should not be present
Nitrate	50 mg/l	Desirabke is 45mg/l

Note: These tests have been conducted with the help of a water testing kit provided by the Central Pollution Control Board, New Delhi, and the results are approximations.

Interview with Arjun Mishra, Health Officer, Noida

GT Reporters (Suman, Abhinav, Shivani, Simar and Chawli) went to Noida's Health Officer Dr Arjun Mishra and interviewed him.

Gobar Times: When was the Health Authority of NOIDA formed?
Arjun Mishra: 1983

GT: What does your organization do to prevent pollution?
AM: We do not do anything to prevent pollution. We clean NOIDA's garbage everyday.

GT: Do you also clean the drainage system?
AM: No, we do not have enough manpower.

GT: How many people are involved in this organization?
AM: There are 1250 sweepers, supervisors, 4 police officers and one head person.

GT: Where do you dump the garbage you collect?
AM: In pits near Khora village.

GT: Did you start any campaign to stop the throwing of plastic bags on roads?
AM: Yes, we did start in some schools to recycle the poly bags. But soon they stopped bringing polybags. We also stopped our campaign.



Poly Bags

Nowadays, we use plenty of polythene shopping bags. You see your parents carrying their things in polythene bags. But do you know these plastic bags are very harmful to us in different ways? They choke the drains as well as produce harmful gases on burning. In our city more than 250 tonnes of plastic waste come out of each colony everyday. All these waste choke the sewer systems.

In many countries like Italy, a tax is imposed on the manufacturers of polythene bags. This increases the cost of the bags and people stop using them. Something like this should be started in India. Many things that were made of materials like mud and paper like cups and bags are today made of plastic. This also affects the people who were making these things earlier.

In Delhi, many people don't care of all these things. They wrap their children's lunch-boxes in plastic bags. As these wrappers are light in weight, they fly in the wind. Unlike cotton or paper bags they remain undissolved in the soil and stop the rainwater from seeping deep into the earth. This affects the natural growth of greenery and our water.

Nupur

Chi Chi

Water is swirling...now faster...faster. We're not talking about whirlpools in the sea...we're talking about the flush operating. For us it is just a matter of pulling the flush. But have you ever thought where does this go? Now for a moment think if you would have no bathroom what would you do? But that's how most of the people live. Do you know how much it pollutes the water? All the waste that is produced ends up in the Yamuna polluting it even more and more. Have you ever thought how can it be prevented? Do you know the waste that comes from our body can be recycled? This will prevent pollution caused by sewage, return it as nutrients to oil and plants, reduce the need for chemical fertilizer.



Shivani

Harvest your rain drops

You heard it before you hear it everyday. There is a very big problem of water everywhere. More and more water is withdrawn from ground and no recharging is done. If there was 100% of water under the ground level, now 30% is left because no recharging. When we reach such low levels, the quality of water becomes inferior. Water harvesting is the process of collecting rainwater and storing it for direct use or recharging it into ground water.

Take an example, 70% of drinking water supply of Delhi comes from the former river turned drain known as Yamuna. Of this, 50% leaks out on way to the water treatment plant. To get more pure water from your ground, you can catch the rain water. You can do water harvesting. Rainwater harvesting is not too much costly. If you want to use rainwater harvesting, it will cost from Rs 3000 to 30000, for 300 sq mts.

In BPCL housing complex also, a rainwater harvesting project has started. CSE office has a rainwater harvesting system. Rashtrapati Bhawan in New Delhi also got rainwater harvesting. It was started by president, K.R. Narayanan. Everyone has to use rain water harvesting to save water to save life.

In places with frequent rainfall like Mizoram and Kerala, rain water is stored for ready use in containers above or below ground. In places like Delhi and Rajasthan where there is rainfall only during one month of monsoon, rain water is charged into soil for withdrawal later (ground water recharging).

Simar and Kiranpreet



LIFE ON THE YAMUNA

There is a whole world on the sand bars in the Yamuna. Many families live there, grow crops, sell them to us, and shift when waters in the Yamuna rise. Gobar Times reporters spoke to these people and found out about their lives.

FAMILY 1:

Gobar Times: Which vegetables do you grow?
Parveen Begam: Cucumber, Melon, Bitter gourd, Water Melon, Tori, Kakdi, Gheeya, Bhutta and Sitafal etc

GT: Where do you shift when the floods come?
Parveen Begam: We shift to the nearby bridge.

GT: How do you earn your living?
Parveen Begam: We sell vegetables

GT: What is the period for cultivation and harvesting?
Parveen Begam: We start planting during Diwali and sell from Holi till the time it is completely ripe. For eight months in a year.

FAMILY 2:

GT: What is your income?
Anna: Rs 10,000 to 30,000 in a year

GT: How many members in your family?
Anna: Six

GT: Is this your land?
Anna: No. It is government's.

GT: How much do you pay?
Anna: We pay Rs 600 per bigha and as we have 5 bighas, we pay Rs 3000 per year.

FAMILY 3

GT: How many members do you have?
Aslam: We have four members in our family.

Waste not Want not

A person produces approximately a ton of waste during a period of 10 years or so. It is left to you to imagine what a great amount of waste is produced by the whole world's population of about 60 crore billions! Have you ever spared a moment to ponder that where does such a huge amount of garbage go to?

What's waste, you are asking? Why? The next time you are on road look around and you will get the answer. The mounds of polythenes, rotting vegetables and people's shit lying near the pavements are waste. Plastics and other synthetic materials lie around. Sometimes animals tend to chew dangerous substances and choke on them resulting in their death. Metallic refuse lying around may hurt us by physically piercing our feet.

As you know, a large of part of garbage consists of toxic materials, which affect the air, water and consequently us. One major solution to all these problems is recycling. Plastic is a very harmful substance. It is better if we use biodegradable materials as they decompose easily. Kitchen waste should be utilised for making compost by the vermicompost method. Plastic bags and containers can be used for storage purposes. Few people actually have adapted these ways of disposal. A majority of the population find it more convenient to dump waste into water bodies or to burn it.

The sector - 12 Block Y and Z of Noida is no different. It boasts of mounds of rubbish and pigs and dogs straying about. The NOIDA Authority has done nothing about it. The stench which comes from the rubbish has become unbearable. The gutter in sector 56 (outside the BPCL colony) contains contaminated water with plastic bags floating on top. This is a clear picture of water pollution. Moreover, it attracts mosquitoes and other insects, hence exposing the people to diseases like diarrhea etc. The factories around Sector 1 is said to take precautions about disposing the waste properly. Where?

Prachi

THERE'S NO WATER RUNNING OUT OF MY TAPS

India has more than 250 million city dwellers even though the rate of urbanization is among the lowest in the world. Rural urban migration to cities will further increase the proportion to more than 50% of the total population by 2020.

As surface water sources fail to meet rising demands, ground water reserves are tapped, often to unsustainable levels. Almost all cities depending on ground water are faced with the rapid depletion of their water tables. In addition to quantity, problems are faced of water quality. Overextraction

of ground water in Chennai has led to salinity intrusion in coastal aquifers. In Calcutta, it has led to arsenic contamination.

Water Crisis in Delhi

The city of Delhi is almost perpetually in the grip of water crisis during dry season when serious water shortages afflict the city. A large number of residents depend on groundwater to augment the municipal supply.



Although the average water consumption in Delhi is estimated at 240 litres per capita, the figure is not indicative of an adequate supply to every resident since the water supply in Delhi is far from being uniformly distributed.

There are about 3 lakh borewells in Delhi, of which 2 lakh are illegal. These are all taking out precious ground water. Bottled water companies are also taking out ground water. There are plenty of water thefts too and loss due to leakage.

- Abhinav

Tree of Life

They are one of the cheapest and most effective ways to bring about widespread improvement in the environment and the quality of life of an area. Even in the over-concreted land and water shortage of a megapolis like Delhi, plants and trees play a huge role in regulating air quality and temperature. We have not yet started to speak of the rest of the benefits of green cover: fruits, birds, butterflies, the beauty and tranquility they bring. So why don't we start planting trees? - Pradeep



Washing our hands in dirty waters

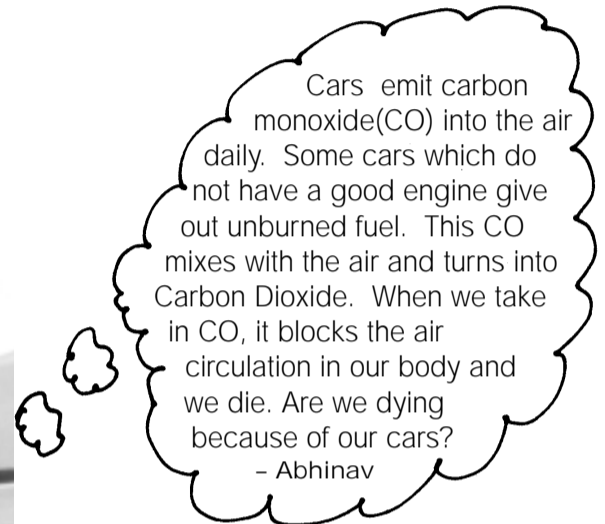
Water pollution has become a serious problem in many countries. Industrial waste in water can easily be seen, but there are many other less obvious sources of pollution. The three main sources of pollution are

1. industrial waste
2. sewage from cities, towns etc.
3. agricultural chemicals

It is very easy to pollute but have you ever tried to purify what you have polluted? Here are some dangers which pollution cause.

1. Water spread by human and animal waste can spread cholera, fever, dysentery, fever and other diseases.
2. The careless release of toxins and waste dumps in water is seriously threatening the ground water supplies.

Scientists are concerned that even a small quantity of these toxins in our drinking water will have harmful effects over many years.



ECO QUEEZ

- 1) What creature is instrumental in pollinating aspidistra?
- 2) How many eyes does a bee have?
- 3) What does an elephant do when it senses danger?
- 4) What other mammal besides us can distinguish colour?
- 5) How many female stick insects are there to one male?
- 6) How many litres of water can an African elephant hold in its trunk?

- Answers:**
- 1) Aspidistras are pollinated by small snail
 - 2) Five eyes
 - 3) Raises the trunk
 - 4) Monkey
 - 5) Five thousand
 - 6) Six litres

The Participants

- Abhinav Anand, class VIII, Somerville School, Noida
 Chavvi, class VII, Delhi Public School, Noida
 Shivani, class VII, Ryan International
 Prachi, class VIII, Vishwa Bharti School, Noida
 Nupur, class VIII, Central School, Noida
 Pradeep, class XII, Somerville School, Noida
 Supreet, class VIII, Vishwa Bharti School, Noida
 Simarpreet, class XII, Khalsa College, Amritsar
 Jasmeet Singh, Sri guruharkishan School, Amritsar
 Karanpreet, class IV, Vishwa Bharti School, Noida
 Kiranpreet, class IV, St Francis School, Noida
 Anmol Behl, class V, Kalka Public School, New Delhi

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BPCL HOUSING COMPLEX, NOIDA

BPCL complex is located in sector 56 of NOIDA. It houses six buildings. There are around 500 residents.

The green grassy lawns are very well maintained. We also have areas for football, basketball, table tennis and badminton. A very beautiful gym is also there. Both young and old come here and exercise.

Rainwater harvesting structures are being set up and we already have a vermicomposting system for amnaging our waste.

I am highly satisfied and enjoy living in it.

Kiran Preet

Water is precious, do not waste it.