

CHALLENGE OF THE BALANCE

August 2014

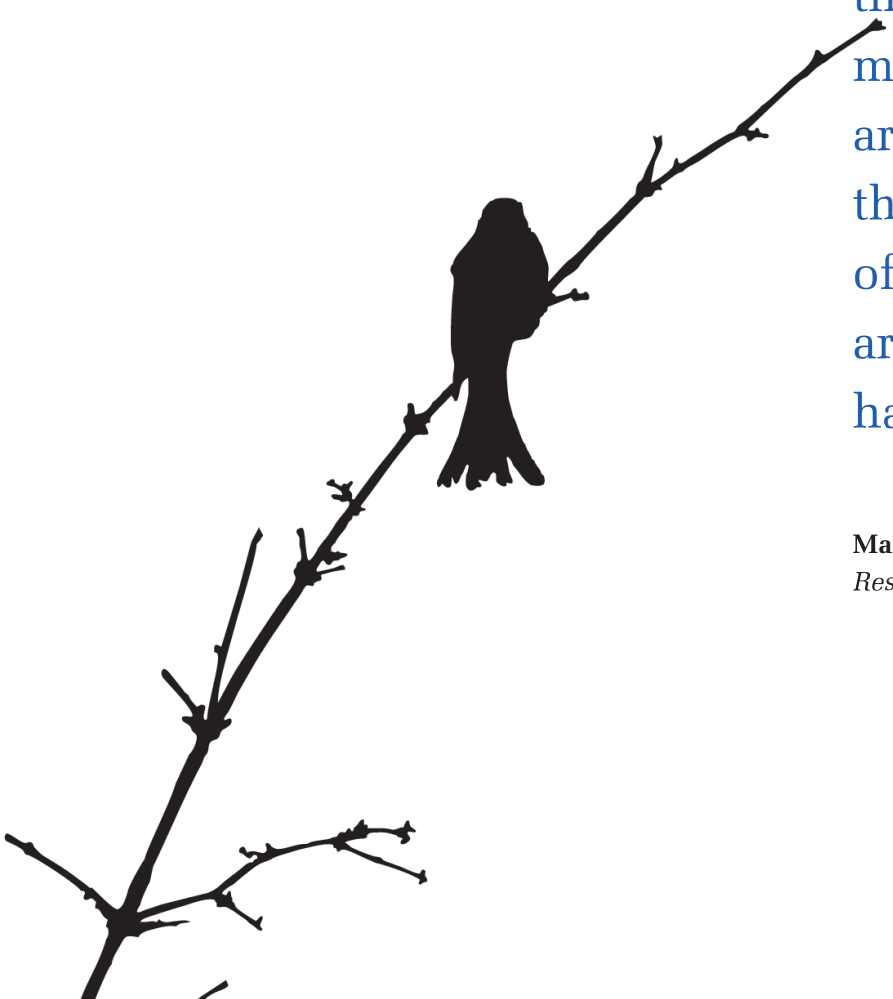
drishtik  ne

— environmental perspectives —

routes to roots

understanding sustainable practices





“When asked if I am pessimistic or optimistic about the future, my answer is always the same: if you look at the science about what is happening on earth and aren't pessimistic, you don't understand the data. But if you meet the people who are working to restore this earth and the lives of the poor, and you aren't optimistic, you haven't got a pulse.”

Martin Keogh, *Hope Beneath Our Feet: Restoring Our Place in the Natural World*

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new perspectives of development

Welcome to our take on how India can pave its own path towards development, as opposed to following the west blindly. It is important to remember that the solutions for the burning issues in one country may not work in another country. In fact, a lot of care is needed while adapting the foreign technology in different cultural and environmental landscape of India. So often we hear stories about technological failures, droughts when pumps fail, and land becoming barren due to the sucking of nutrients by BT cotton.

Most of the stories here revolve around traditional wisdom and the need to go back to the roots. How India can use this wisdom accumulated over thousands of years for attaining sustainability in the future has been questioned repeatedly in the following pages. What India requires is a judicious way of combining local knowledge and local systems with modern techniques to meet out the requirements. There is no easy fix to this problem; it needs to be addressed on several fronts: sanitation, food security and livelihoods are a few areas that we have thrown fresh perspectives on in this magazine.

Aldo Leopold wrote in 'A Sand County Almanac': "We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."

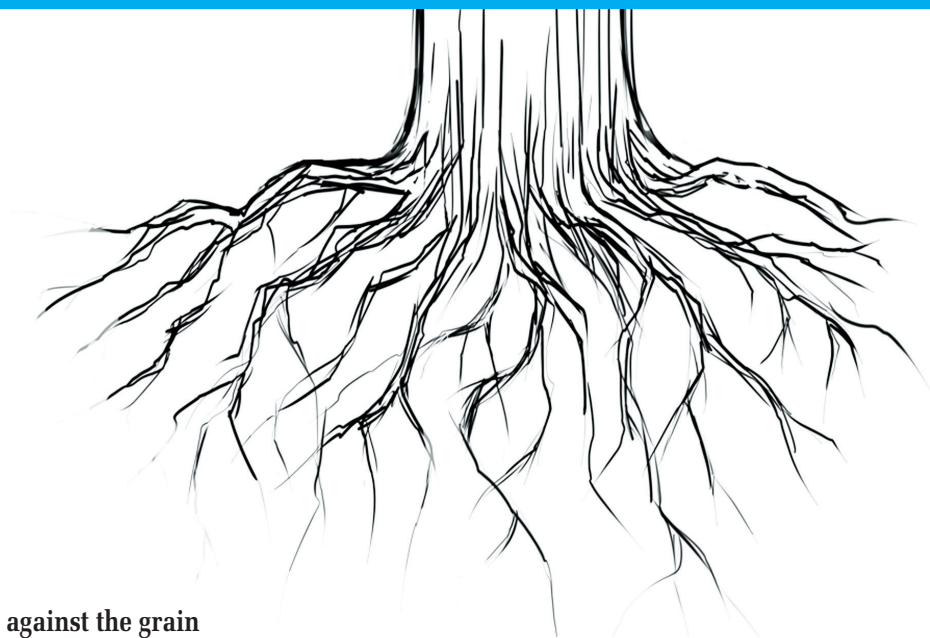
This quote highlights the main issues, the commercialisation of India's natural resources, the difference between the government's view of the resources and those of the local people who live in forests and around water bodies.

Drishtikone means perspectives in Hindi. Therefore, widening our perspectives and giving a broader view of the development debate as a whole, we have amongst us people from various countries including Germany, United Kingdom, Portugal, Spain, Bhutan, India, Nepal and Bangladesh and from vastly different fields ranging from industrial engineering to journalism to sociology. With these backgrounds and experiences, we hope to cast new light on many problems of the developing world and give new perspectives for them.

— Keren Berelson and Garima Vohra

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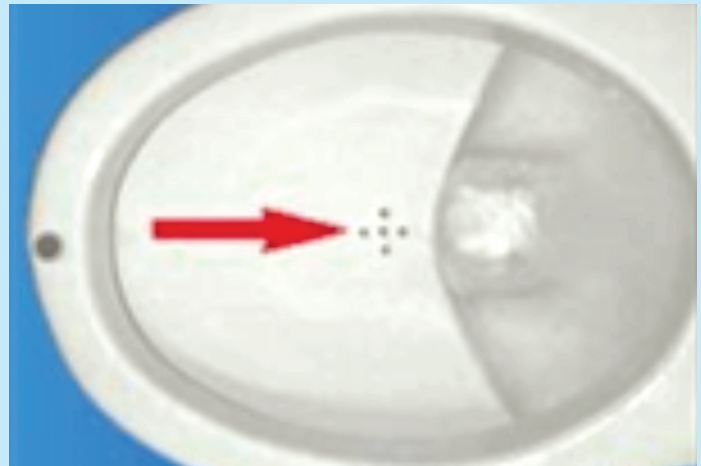
- 6 against the grain**
a migrant woman's journey back to her land
- 8 millets-o-mania**
a look back at traditional grains
- 10 worshipping nature**
indigenous communities' rituals revolving nature
- 11 rethinking sanitation**
dry toilets is the way forward
- 12 not in my backyard**
an interview with a Delhi based waste picker
- 13 silent environmentalists**
inclusion of the informal sector will help the waste pickers and the society at large
- 14 going hand-in-hand**
effective implementation of waste management system
- 15 rush to modernise**
a view on traditional versus modern water harvesting systems
- 16 toonstrip**
a conversation
- 18 mirror mirror on the wall**
a look at what lies behind the beauty of the Udaipur lakes
- 21 something fishy...**
fish recipes from around the globe
- 22 the known evil**
a photo essay on women labourers in soapstone mining in Rajasthan
- 24 linking stakeholders**
public private partnership is necessary for holistic development
- 25 salaam youngistaan**
bridging the gap through non-formal education
- 27 the development debate**
unlearning: to do or not to do
- 28 there and back again**
the chronicles of our field trip
- 30 quizzical**
test your knowledge

that's the way it is

Toilet trends in Germany

KATJA WISCHNIEWSKI

It is an old technology in a new garment. Dry toilets are back in Germany. They are renewed, modernised and are not perceived old-fashioned anymore. They are promoted by the government via the federal environment office and by various Non- Government Organisations like the German Toilet Organisation, as the new technology for eco-friendly sanitation. There are university projects where scholars are researching on sanitation concepts for separate treatment of urine, faeces and greywater (e.g. LIFE-project). It is also being driven as a status symbol for modern eco-friendly lifestyle. These initiatives highlight the desire to



Dry toilets are becoming popular in Germany

connect with nature and be the modern city-living people at the same time. This is simple, low-tech and accessible. Low-tech solutions are taught in the universities and are considered eco-friendly. The benefits of such water saving toilets are spread through social networking sites like Utopia, a website for alternative and eco-friendly lifestyle (www.utopia.de). There are different types of toilets in the market- from vacuum toilets that use less water to waterless urinals. The ECOSAN is a concept for new green technology and green life style. The compost toilets are already found in modern settlements, at alternative music festivals and in summer house settlements.

Pictures: <http://www.ecosan.at/info/workshops/ecosan-konzepte-in-siedlungen-planung-und-umsetzung-in-deutschland.pdf/view>

Cork : from ancient times to 21st century innovation

INES MACHADO

Cork, a raw material from the cork tree, has been in use in Portugal since the ancient times. On exploring the applications of cork, the Roman civilisation found that its thermal properties were suitable for coating roofs and ceilings. Later, the medieval monks used this natural material for lining the walls of their rooms, for protecting themselves from cold in winters and from heat in summers.



Ecork hotel is an environment friendly project

Nowadays, there are innumerable cork applications. It is worth mentioning that just one hour away from Lisbon, Portugal's capital, the 'Ecork hotel' is clad with cork façades. This environment friendly project includes a spa and a resort complex and utilises the sustainable qualities of cork, using this material as a thermal and acoustic isolator.

Pictures: <http://www.designboom.com/architecture/jose-carlos-cruz-arquitecto-ecork-hotel-evora-portugal-25-08-2014/>



Indira proudly shows off her farm to the visitors

against the grain

Story of two farmers- one has made a comeback from the city and is following the traditional way of farming while the other has shifted to cash crops, in the hope of earning more money and has chosen not to grow food for himself

AMBER ALAM, EDGAR JOSHUA VASANTHAKUMAR

Indira Devi, a 28-year-old woman is a proud owner of 0.5 hectares of land in Patharpadi, a remote village in Kotra block of Udaipur district, Rajasthan.

She says, "I started farming eight years back after inheriting land from my father-in-law. I use only traditional methods for increasing the agriculture produce. It was my decision to migrate from Udaipur to my native village and cultivate land."

She thinks for a moment and adds, "If I had not cultivated this land, I would have lost it all. I have done this all alone. Sometimes my neighbours are envious of my

success but this does not bother me."

With pride in her eyes, Indira announces to the group that she has not taken a single penny from anyone.

On the other hand, Naimchand, another farmer from the same village is dependent on a cash crop like BT Cotton for his livelihood. He is unsure about his earnings and does not grow crops that feed him.

He says, "After BT cotton cultivation, my farmland has dried and every year the crop needs to be shifted to a new patch."

However, it is not the same case with Indira Devi who receives profits from her agricultural produce by sticking to traditional ways of farming. ■



interview

What made you start farming?

I was working as a construction labourer in Udaipur along with my husband, and we struggled to survive on Rs 100 a day. Realising that life would not get any better, I decided to return to my village and farm the small patch of family land.

Which fertilisers do you use?

I use cow dung and urine as fertilisers. These have proved to be cost effective and are highly beneficial in small-scale farming. I also use them for pest control.

Which trees and crops have you planted?

Trees include lime orange, lemon, gooseberry, mango, teak, guava and banana. I also grow lentils, maize and okra. During summers, I cultivate corn, maize and millets and in winters I cultivate tuar, wheat and moong.

How much is the agricultural produce?

I get about five quintals of wheat and lentils, four quintals of corn, two quintals of millets, one quintal of gooseberry and half-a-quintal of amaranth leaf.

417 trees are in Indira's 0.5 hectares farm

15 lime oranges

27 gooseberries

15 lemons

18 mangoes

300 teak

2 guavas

20 papaya

20 bananas



Indira and her husband's ration card

What do you sell?

I sell lime, lemons, gooseberries, wheat, corn, and lentils. Guavas and bananas are for my family and friends.

Who helps you in farming?

For watering my fields, I have a pump bought from my own savings. My brother assists me in the agriculture work.

Please tell us about your earnings?

I earn about Rs. 50,000 each year. Last year, I earned Rs. 20,000 by selling gooseberry alone. I also eat variety of fruits grown on my farm. This increases the nutritional value of my daily diet.

Do you think there should be changes in agricultural practices?

There should be some changes in the farming pattern. The focus should be on multi-cropping. Many farmers are forgetting the traditional ways of farming and are becoming victims of cash crops. Traditional ways have helped me to increase the agricultural produce and earn a handsome return from the sales. ■

millets-o-mania

A look back at traditional grains

BIPASHA MAJUMDER

“WHY do humans have to be told what to eat, whereas all other living beings know their natural diet and follow it?” questions Manoj Prajapat, founder and co-owner of Millets of Mewar, a niche restaurant in Udaipur. Along with a few like-minded friends, he prepares lip smacking food made from millets.

For thousands of years, millets have been the traditional food crop of India. Though it is one of the key subsistence grains, millet cultivation has seen a steady

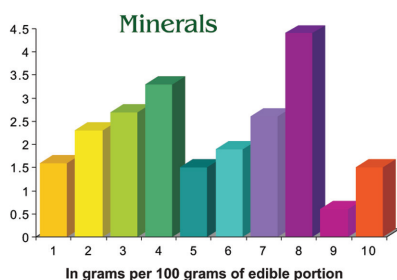
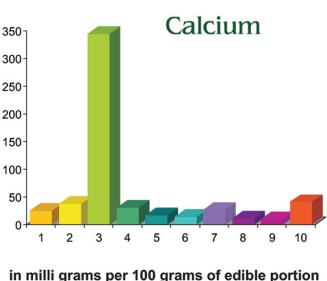
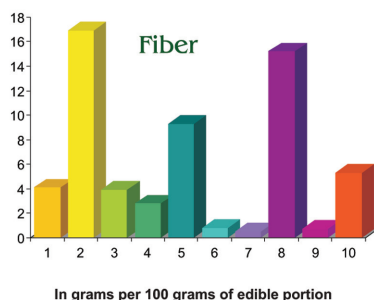
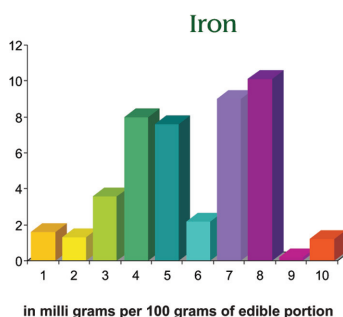
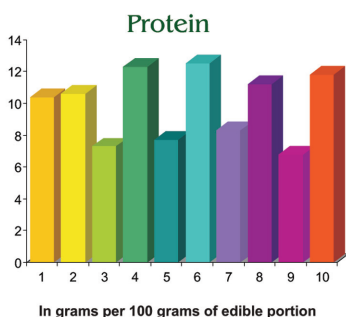
decline in the past few decades.

“We stopped growing kodra (*Paspalum Scrobiculatum*) about 15 years ago. It is a fact that the food prepared from kodra used to keep us cool in the hot weather. Now we grow maize and cotton because our families have grown but our land has not. We have to grow crops that fetch us more money,” informs Hansa Ram, a resident of Patharpadi village in Kotra block, Udaipur district, Rajasthan.

High in major and micro nutrients, especially calcium, iron



Comparative nutrition chart of millets with wheat & rice



Source: www.swaraj.org

and fibre, millets are now being recognised and promoted as ‘superfood’ all across the globe. Millets fall under the genre of grains that can be easily grown in dry regions, in farmlands dependent on rainfall alone and in poor soil conditions. Also, millet cultivation does not require chemical pesticides and they tend to mature within two months, unlike rice that takes six months to harvest.

Kodra is one of the 10 varieties of millets that are still grown in several pockets of Rajasthan for self-consumption and for feeding the livestock.

The Green Revolution in the 1960s pushed more for rice and wheat farming and since then the land area under an entire traditional system of millet farming has reduced to 58 percent.

Farmers in the villages across the Mewar region reflect this changing pattern in agriculture where more cash crops are being grown now. This interest in cash crops is pushing the farmers to take up the cultivation of genetically modified (BT) cotton without adequate knowledge



Clockwise: flex seeds, puffed amaranth, amaranth and ragi flour

of its impact on soil and on their income.

Prajapat however lists different reasons for this decline and says, “Many people consider millets a poor man’s food. These grains are eaten by the villagers as well as the farm animals, hence there is a perception that millets are not good enough.”

Promotion of wheat and rice through the Public Distribution System (PDS) has resulted in pushing people, especially the village communities away from a highly nutritional and a traditional diet.

Due to its nutritional value, re-focusing on millet farming is being seen as the answer to the problem of malnutrition and chronic under-nourishment. It is also a key solution for the changing agricultural pattern due to climate variation.

“The easiest way to bring millets into mainstream food system is through the PDS as it is an established system. Though millets have been included in the Food Security Act 2013, due to procurement problems, different varieties of this grain are not easily

available. Also, unlike wheat and rice, no minimum support price for millets has been fixed,” says Kumar Sambhav, correspondent, Down To Earth.

While many Non- Government Organisations are advocating for policy changes at different levels, Prajapat and his partners are spreading awareness about millets at the local level through Millets of Mewar. Through weekly cooking

classes, people are learning recipes of simple, yet delicious millet based dishes like millet aloo-tikki, millet kebab and multigrain pizzas.

Thus a relook at our food habits and a simple shift to traditional food grains is the best solution to the problem our country is facing at the moment, because ‘we are, what we eat’. ■

simple millet based recipes

Raw Salad:

- Mix sprouted moong / chana / mot with Add seasonal vegetables like tomato, capsicum, onions, cucumber etc.
- Add salt, black pepper, lemon and honey. Sprinkle puffed amaranth on top.

Millet Energy Drink:

- Fry Raagi flour in ghee until golden brown.
- Add a lot of water.
- Add salt, pepper and honey or jaggery as per taste.
- This drink is good for the immune system but for a start, people who are used to wheat / rice / maida based diet, should take it in small quantities.



worshipping nature

Be it Rajasthan, Odisha or Bhutan people have been worshipping nature when in trouble. But for how long?

RAJESH KUMAR EKKA &
KELZANG WANGCHUK

Rakhi Bauji

It is a festival celebrated by Bhils in Rajasthan. A foot high stone considered to be the guardian angel of the household and the food from growing to harvesting is worshipped.

“The stone is handed down by the ancestors. It provides us, our animals and crops protection from wild animals and crop failures,” says Laxman Lalpongi, Sada Village, Kotra Block.

Adds Nanalal Danorsab of Chawar Ke Kaira village in the same block, “This puja is held when the crops are ready for harvesting.”

TS Sohan of Pallesar village informs, “Without this puja we do not touch the ready to harvest crop, lest misfortune like famine, destruction of crops by insects, disease or other natural disasters strike.”

This ritual is performed under a tree which is the family sacred grove. Puja starts by applying vermilion on the stone and then the cow pat and the incense sticks are lighted. Later some ghee is



People performing karam puja

poured, a coconut is smashed and some fruits from the family orchard are offered. The head of the family chants and prays for the well being of all.

Karam Puja

This festival is celebrated by the tribes in Jharkhand, Odisha, Chhattisgarh, Bihar and Madhya Pradesh. The name Karma is derived from the tree called Karam, deity of wealth and prosperity. This festival falls in the month of August/September. A branch from the Karam tree is cut and brought to the village by dancing villagers. It is then washed with milk and rice beer, locally known as Handia. This branch is then decorated with

colorful flowers and the baskets filled with grains are placed before it.

All worshippers dance for the whole night in praise of the Karam. This festival has been handed down through the centuries and orally passed on by the fore-fathers of the community.

Charbaab Rimdro

Literally charbaab means rain fall and rimdro means puja. Farming in Bhutan depends on rains. When there is no rain and crops are severely affected by drought, farmers seek divine intervention as the last resort. Hundreds of farmers carry the lofty religious scriptures (the holy books) on their backs and burn incense sticks to invoke local deities.

The frequency of performing Charbaab Rimdro has increased in the last few years. Farmers make tormas (cakes made for rituals) and conduct puja for rain at the goenpas (temples). They climb the high mountains and call upon the deity, praying loudly to give them sufficient rainfall for their crops. People believe that the prayers are normally answered by a light shower the next day or on the same day. ■

Monks on way to the mountain to perform Charbaab Rimdro



rethinking sanitation

Community driven sanitation and inclusion of initiatives for urban slums for building their own sanitation system is the key to sustainability

JAMES RUNNALLS

Sustainable sanitation system is more than just a wishful thinking across rural Rajasthan. The ECOSAN toilets are providing safe and eco-friendly sanitation to isolated villages. During a recent meeting, Nan Singh, chairman of Village Development Committee, Danodhar village, Kotra Block, Udaipur district, Rajasthan stressed on the fact that sanitation must be community driven and small amounts of funding and advice are the only inputs required from outside. The question is why do the master plans of major Indian cities lack initiatives for urban slums for building their own sustainable sanitation system. I guess, the reluctance comes from our poor relationship with excreta.

Night soil collection has been historically associated with the lowest caste, leading to preference for western flush systems. However if dry system (waste storage, no flush) is used, human waste can be processed into a valuable

fertiliser, replacing synthetic and chemical alternatives. The argument against these dry systems tends to focus around the removal and the decomposing of the waste. If the waste is decomposed onsite, like the ECOSAN toilets, this negates most of the aspects including foul odour.

Western countries like Germany have begun to take the advantage of waterless systems for providing long term solutions to process the waste generated by the cities. Whereas in a city like Delhi, unprocessed sewage combined with rain water produces a contaminated torrent that drains into Yamuna.

Delhi has increased in population by over 221 percent in the last 20 years, ranking it as the second largest city in the world with around 22 million people. Of this large population, around 50 percent is estimated to be living and often working in informal settlements. It is worth clarifying that all informal settlements are not slums and not all inhabitants of informal settlements are poor.



Vehicles stuck on waterlogged roads

However a common factor to all forms of informal settlement is lack of services. Gaining consistent access to clean water and sanitation continues to be one of the greatest challenges faced by the poor residents of Delhi.

The attempts of the government agencies for solving the ongoing sanitation crisis in Delhi have stuck to a project based approach and the installation of large western waste water treatment plants in different parts of the city. However the infrastructure to remove waste from the city is severely lacking or is subject to large scale leakages.

A rethink of the master plan of Delhi could divert funds away from inefficient large scale projects towards helping informal communities in developing their own waterless sanitation system. By reassessing our relationship with excreta, it will be possible to boost organic farming with a low cost natural fertiliser and improving the quality of water. ■

ECOSAN toilets in village Danodhar



not in my backyard

An interview with Inderjit Maanjhi, a Delhi based waste picker

LINDSAY LEWIS

Talking to Inderjit Maanjhi, a Delhi based waste picker, one hears not only the story of making a living by picking up waste but also the story of the degrading living conditions at the grass roots level. Maanjhi took to rag picking on the streets of Delhi when he moved here as an eight year old boy. After several years of street scrounging, facing regular harassment by the police and being abused by the better off residents of the city for not removing their filth, Maanjhi became the part of the Kachra Kamgar Union. This was surely a step up the ladder. Now, he moves around on a cycle, goes door-to-door for collecting household waste, removes all the valuable (marketable) recyclables and then dumps the rest of the trash in the municipal dustbin. Thus he has the direct access to the waste at its source of generation.

What are the problems faced by the waste pickers? And what are the changes waste pickers are looking forward to?

We would like to witness a change in the mindset of people whose garbage we pick up. Lack of respect affects all the waste pickers. We want recognition for the community service we do on a regular basis. We

also have to negotiate with the sweepers employed by the civic agency and the security guards working in the residential colonies.

On a regular day, I take rubbish to my house for sorting. A few months back, my cousin, also a waste picker was bitten by a snake that was hiding in the rubbish lying in his house for sorting. Storing the rubbish at home poses health risks for us. The unsorted waste ferments in heat and releases toxic fumes. Thus we need space away from where we live.

What are the benefits of being a part of the union?

As a part of the union, the rag pickers feel safe and secure. Many of us have started a savings fund. Earlier, when we needed money, we had to go to a money lender but now, we all contribute a fixed amount every month, which can be used by anyone in need. With this initiative, we have been able to break the vicious cycle of debt that occurs when money is borrowed from a moneylender, who can charge up to 20 percent interest annually.

Coming together has strengthened us as a community and this has reduced police harassment to a great extent. I have a voter identity card now and we are fighting for other rights as well. ■

Inderjit Maanjhi in conversation with Anjore Bhaskar, a waste consultant



silent environmentalists

A common platform and inclusion in the formal sector will help the waste pickers and the society at large

KATJA WISCHNIEWSKI

People rummaging in dustbins is not something uncommon world over, though in some countries it is a sight that is taken for granted, such as here in India. People forced to make a living by sorting rubbish are those at the very edge of the society. Their contribution to recycling is underestimated by the society and the governments.

Delhi's waste

Waste pickers are mostly migrants, street children and often homeless. Collecting and selling recyclable materials is their livelihood. Often while comparing their efficiency with technology, they are ridiculed by the society for not clearing its rubbish.

A change in social perception and living conditions of waste pickers can only happen when their voices are heard. In Delhi, there is a union of waste pickers, which has already managed to obtain voters identity cards for each waste picker but the fight for being officially accepted as recognised workers is still going on. Furthermore, the daily wage is low and the living conditions are unhygienic. Top priority of the waste pickers here is to have space to work. Equally important is sufficient health care because many waste pickers suffer from diseases caused by working with the waste on a daily basis.

As the Germans do

Recycling is encouraged by the deposit system in Germany. In this way, collecting bottles with refundable deposits has become an additional source of income and this gives the waste collectors a chance

Bottle deposit system in Germany



Piles of garbage lying on the streets of Tughlakabad, New Delhi

to integrate into social life. However they are still viewed by the society as misfits who cannot rejoin the society. This negative external impression is reinforced by certain political decisions including high tech solar dustbins that incinerate rather than recycle the waste.

The question is what can be done to support recycling and the informal sector. A number of innovative ideas are being tested but the costs are high and the recycling options are limited. At the same time, we are also locking out the ability of waste pickers to remove recyclable rubbish.

Social media is playing an important role by connecting those who have recyclable rubbish with those who collect. This is helping to enforce the idea that recycling is important for the environment and also for connecting people on the outskirts.

Cases so different, yet solutions are similar

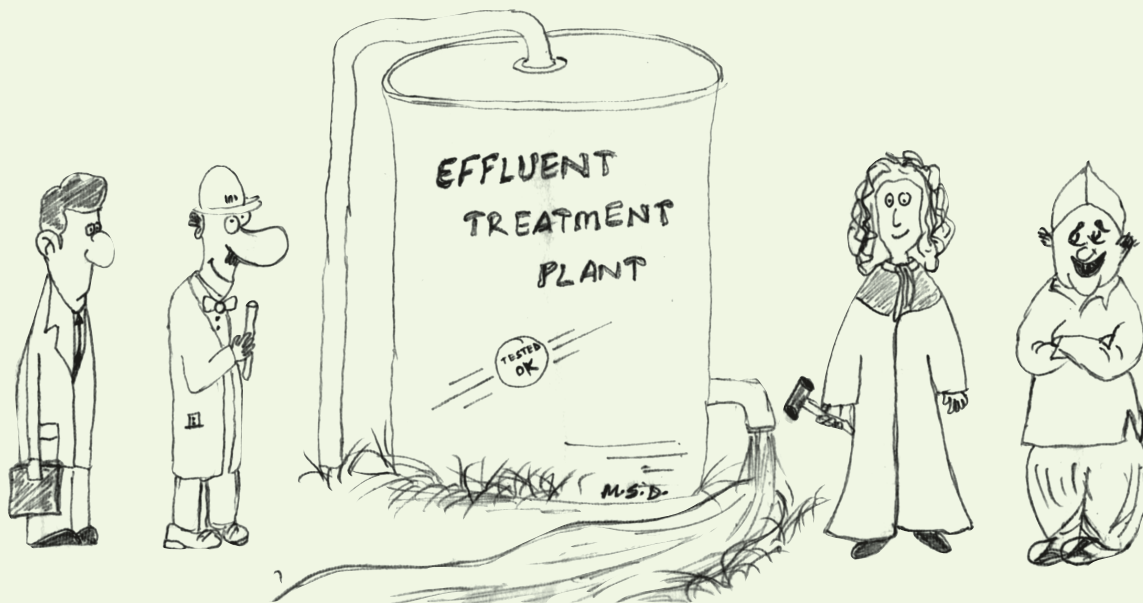
Though in India and Germany, recycling is supported, the reasons for which people search for recyclable waste are different.

In both the countries, waste pickers remain stigmatised even though they do a valuable job for the environment. This group has to face the opposition of political decisions that are mostly pro incineration. Instead of supporting waste-to-energy projects, it would be better to support socially deprived groups or individuals who promote recycling in their own way.

In my opinion, by supporting the waste pickers, India and Germany would indirectly find a socially acceptable path towards sustainable development. ■

going hand-in-hand

Today the challenge of wastewater management in India is monumental



MUNMUN SINHA

In the past few decades, the emphasis has been on treating the waste water before releasing it back into our lakes and rivers. The government has taken a few initiatives including mandatory build-up of Effluent Treatment Plants (ETP) around industries that release wastewater. One needs to question the functioning of these ETP's, considering the fact that they were purposely constructed by the government on the banks of prominent rivers to stop direct release of wastewater. This is no surprise that most of the ETP's constructed in India have become non-functional or have not been in operation to date.

The question is what went wrong and who is responsible. The answer is complicated. It starts with the need to properly segregate the waste. The domestic waste needs to be separated into biodegradable and non-biodegradable waste, something uncommon. It is known that 50 percent of waste comes from the domestic source. Similarly, the industrial waste is made more complex by mixing the release from several industries and then trying to treat it in a Common Effluent Treatment Plant (CETP). Instead, the segregation of waste at source and treatment of substrate specific waste will speed up the treatment process.

The second problem is the regulation of the amount of wastewater that is generated. The treatment of wastewater within a controlled system will use a specific quantity of bacteria which will degrade a limited amount of waste within a prescribed time.

Therefore, in cases where the inflow is in enormous volumes (during monsoons, floods and industrial overflow), the system is doomed to fail because the specific requirements of the microbes are not met due to dilution.

It is a scientific fact that bacteria are substrate-specific. Therefore industry-specific waste needs to be treated with efficient strains, which are often genetically modified in the laboratories and may or may not be stable in the external environment. Hence there is an argument related to the use of such organisms for cleaning waste as no one knows when and what type of harm they may cause to us in future.

The main problem with the operational phase of ETP's in India lies in the lack of proper monitoring system. Since the principle is based on the treatment of wastewater by micro-organisms, the substrate needs to stay in the vessel under regulated conditions and for a specific time period. As we make our raw material complex, the microbes will need more time to simplify the raw material. Thus regular research and monitoring is required for the proper functioning of the whole system.

Looking at the challenges of properly operating a wastewater treatment plant, it is essential that science, technology, law and politics go hand in hand, which means there is a need for an integrated approach. Bridging the gap between scientific research, implementing laws and policy making with that of segregation of the waste material at source is required for making the ETP's function. Slowing down the environmental catastrophe and further degradation of fresh water bodies in India is required. ■



rush to modernise

For centuries, people have developed techniques to harvest water where it falls. Some of these techniques have evolved to serve the needs of the modern world, but in some places the use of traditional methods is still the most successful

INES MACHADO

The power of local wisdom

In Kotra, a village in southern Rajasthan, traditional rainwater harvesting systems are still in use, both for irrigation and drinking.

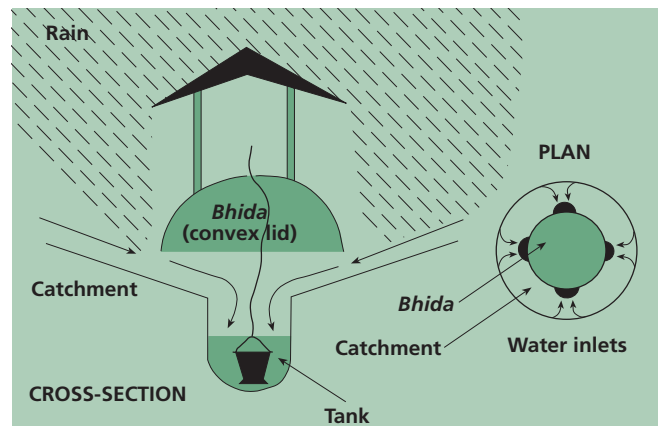
Water is collected and stored during monsoons and is managed through a system of canals and valves so that the water can be provided to the farmers and the villagers for the rest of the year. Once the monsoons end and all the water has been collected, the village committee decides the quantity of water to be given to each farmer. The decision is based on the amount of land each farmer owns. Once everyone agrees and the payments are made, the valves are opened and each farmer can access his allocated water supply.

Effective or not

Although this traditional system seems to be adequate for irrigating fields, it raises concerns about drinking water. Hand pumps linked to the reservoir are available all around the village, however these were found to be spreading diseases leading to repeated gastro-intestinal infections and hence dehydration, one of the major causes of child mortality around the globe. To overcome this problem, the village committee decided to construct a storage tank. The water from the well is pumped into the tank and then chlorine is added to make water safe for drinking. By paying Rs 20 every month, each family has the access to safe drinking water.

Fine balance

Though modernising the water system in Kotra will help in overcoming the current issues related to the cleanliness of drinking water, it has the potential to



Kundis are traditional water harvesting structures in Rajasthan

bring new and unexpected problems. What happens if the motor pump fails? What if chlorine treatment becomes too expensive for the villagers to afford? Making an entire village dependent on modern techniques is a big step that requires full consideration before putting it into practice.

For years, *kundis* have been successfully used in rural areas around Rajasthan for providing clean drinking water to the inhabitants and enabling them to be totally independent of external factors. These traditional structures are designed to harvest rainwater for drinking. Kundis consist of an underground storage tank with a dome-like cover to prevent water evaporation. Water-inlets are crossed by a mesh that prevents contaminants from entering the well-pit and the sides are covered with lime and ash. These can be constructed with local materials such as wood and can be plastered with mud.

The rush to modernise seems to have prevented people from being objective. Therefore is traditional wisdom and local expertise reliable or is there a need for development? ■



... WHY DON'T YOU COME
TO THE CITY AND LIVE
THE EXTRAVAGANT LIFE
THAT YOU TRULY DESERVE!!

HAHA! OH! GOOD SIR!
MOST PEOPLE IN THE CITY
HAVE COME UP FROM THE
COUNTRY TO MAKE ENOUGH
MONEY TO LEAVE THE CITY
AND LIVE IN THE
COUNTRY!



BUT WHY SIR,
DO YOU THINK
THAT IS ???



MAYBE... BECAUSE OF YOUR
FOOLISH DISREGARD FOR
THE ENVIRONMENT ?!

OH NO SIR! WHENEVER
WE THINK ABOUT THE
ENVIRONMENT, WE FEEL
ABSOLUTELY TERRIBLE ... SO WE
HAVE COME TO A FATEFUL
DECISION... WE HAVE DECIDED
NOT TO THINK
ABOUT IT!



AND WHAT ABOUT
ENERGY CONSERVATION?

OH! THE GOVERNMENT
IS FINALLY DOING SOMETHING
ABOUT IT... THEY ARE NOW
ASKING MOTORISTS TO REMEMBER
TO TURN OFF THEIR WIND-SCREEN
WIPERS WHENEVER THEY
DRIVE UNDER A
BRIDGE!



...AND IT MUST BE
WONDERFUL TO WAKE UP IN THE
MIDDLE OF EVERY MORNING
TO THE SOUNDS OF BIRDS
COUGHING !!

WELL! LOOK AT
THE BRIGHT SIDE....
ATLEAST WE
STILL HAVE SOME
BIRDS!!



WELL THEN SIR!!
I MUST COMMEND YOU
ON YOUR CONTINUING
EFFORT TO MAKE THINGS
AS GOOD AS THEY
USED TO BE!





mirror mirror on the wall

The network of lakes in Udaipur is being beautified for tourism at the cost of the city's very existence

PARAS SHARMA

With an impressive Rajasthani interior and a view out to the Pichola Lake, a well-known restaurant in Udaipur was welcoming to our mixed group of Indians and foreigners. What surprised us was the waiter's fervent insistence on serving only packaged mineral water to the foreigners in the group. In his remark, we saw a different side of Udaipur. On one hand we have a city which is one of the most visited tourist destinations in the world while on the other side, what is not so well known is that the lakes supplying drinking water at times reek of sewage and waste pollution.

Udaipur has a network of more than 100 lakes, which are man-made and built for irrigation in a drought prone region. Pichola Lake, the oldest one in the city was built along with the establishment of Udaipur in 1559 AD by Rana Udai Singh. Other lakes were built subsequently. Therefore historically the lakes have been attached to local peoples' dependence on them for their livelihood. The lakes rely heavily on the amount of rainfall received as there are periodic fluctuations in rainfall every few years. The city survived its longest drought between 1997 and 2005. The surrounding hills and the Ahar river that runs through Udaipur form the catchment area for these lakes. With an increasing demand for water in the city, there is an increase in the pressure on these lakes for water supply, though many city dwellers have started

using borewells. Since the water table is linked to the surroundings, the water bodies form an intricate system underneath the city.

The key issue being faced by the city is the overturn of balance due to the ever growing pollution, which in this age-old water system threatens not only the health of its residents but the very existence of Udaipur.

Dr Anil Mehta, an activist who is associated with the voluntary people's movement, the Jheel Sanrakshan Samiti (JSS) and an expert on water management issues of Udaipur says, "There is a lack of holistic approach towards the management and the conservation of lakes. Siltation or flow of soil particles into the lake has been on a rise as the hills are increasingly getting denuded of its green cover leading to high water run-off during rainfall. Rapid siltation has been taking place over time and is continuously reducing the size of these lakes. Combined with the increasing pollution, the lakes are under threat."

Then there is the question of governance, which is focusing more on the beautification of lakes than the conservation of the surrounding ecology. The state government is in the process of demarcating the boundary of Pichola Lake by excluding the Maximum Water Level Area (the spillover area of the lake when full) and including only the Full Tank Area (the level

national lake conservation plan

The Ministry of Environment and Forests started implementing the National Lake Conservation Plan (NLCP) in 2001 to restore and conserve the urban and semi-urban lakes of the country that were degrading due to waste water discharge.

According to August 2010 data, the NLCP has invested in 58 lakes in the country and sanctioned Rs 882 crores in total. Two of these lakes are in Udaipur- Pichola Lake and Fatehsagar Lake. The NLCP has granted Rs 126 crores to the state for their conservation.

which is equal to its dam height). This new demarcation itself dictates a 30 percent decrease in the size of the lakes. The new cemented boundaries around the lakes will definitely make them a perfect spot for tourists to walk around but it spells doom for the ecology that thrives on the banks of these lakes including space for migratory birds like Siberian Cranes that visit every winter. The reclaimed land from these lakes is earmarked for construction, which



Saroop Sagar: Toxic mix of drinking water and sewerage

will add further pressure on the lakes and the wildlife.

Though Udaipur has many lakes, the quality of potable water here has always been questionable. The reason is simple. The sewer pipelines pass through the lakes that supply drinking water to the city. An investigation led by the volunteers of the JSS found leakages at 56 points in these sewer pipelines that are adding to the contamination of lake water.

Govinda Singh, a resident is aware that the water from Pichola Lake is supplied to the public as drinking water after being treated at Doodh Talai Treatment Plant located within the city.

Adds Mehta, “Since the amount of organic waste is high in lakes, excessive chlorination of water is

required. Thus cancer is on a rise in Udaipur. Another key pollutant is the dust and the run-off from the illegal marble slurry dumping, which has been going on in the upper catchment areas of the lakes. These management inefficiencies highlight the need for municipal bodies to take holistic approach while dealing with the water system of Udaipur.”

Organisations like the JSS and the Mohan Singh Mehta Memorial Trust have been fighting together since 1990s to bring amendments in the state policies pertaining to lake conservation and water management.

Nand Kishor Sharma, JSS member says, “Time-and-again we have been pressurising the central government for increasing the funds for the lake development projects from 50 percent to 70 percent. We had filed a series of litigations against the administration of Udaipur to create a committee that would build a plan to protect the city’s lakes. Eventually the state government was directed to consider the establishment of the Lakes Development Authority (LDA) in Udaipur.”

In 2007, the Rajasthan High Court directed the state government to establish the LDA, to de-silt the lake regularly and create a ‘no construction zone’ around lakes and the catchment areas.

Experts feel that though the Indian judiciary has



played an active role, court decisions take a long time to materialise and often the implementation of laws and policies is equally challenging.

Amidst these challenges, a Public Private Partnership (PPP) project on cleaning up the drainage system leading to Udai Sagar Lake was started by the JSS with the help of local communities and bio-solutions. The technology is known as the Green Bridge Technology (GBT). Within two months, the improvement in the quality of water was evident. A team of experts from the Planning Commission visited the area and confirmed that the project was ‘a big step in the right direction’.

Komal Kothari, chairman of Udaipur Chamber of

Commerce and Industry has been actively involved in this project.

He adds, “PPP is needed for a project that requires engagement of various stakeholders, including the involvement of public.”

Though the GBT has been very effective, it requires the stakeholders to monitor and maintain the treatment system.

Funds is not the problem. In 2006, National Lakes Conservation Project finally recognised Pichola Lake as a priority project and decided to grant Rs 85 crores (Rs 126 crores including funds provided for Fateh Sagar lake) for its conservation.

However the administration mostly focuses on the beautification of Pichola Lake by building bridges and by using the wrong technology for removing water hyacinths and weeds. Residents believe that by focusing only on a few lakes will not provide a long term solution to the city's water problems. They feel



green bridge technology's success

It is a simple and effective drainage treatment system developed by Shruti Eco Research Institute (SERI), Pune. It is based on filtration, biodegradation and bio absorption mechanisms done through the use of microbes and plants.

Udai Sagar Project:

- Capital Cost: 33 lakhs (cost incurred by Udaipur)
- Length of the treatment of the drain: 700 m
- Dissolved oxygen increased from about 0.7 ppm to 6.9 ppm in two months
- The amount of Solid waste controlled 40 – 80 percent after installation.
- Fecal Coliforms: 50 – 100 percent reduction.

Advantages:

- In-Situ treatment hence separate land not required
- Relatively inexpensive and cost effective over time
- No electricity, machinery or usage of chemicals
- No skilled manpower required for routine maintenance
- Both domestic and industrial effluents can be treated
- Reduction in heavy metals up to 90 percent



slurry horror

We were curious to see the Chitrakut Nagar marble slurry dumping site. As our bus took a sharp turn to leave the highway, we saw a small board that said 'Marble Slurry Dumping and Plantation Site'. Behind it lay the dumping ground where the slurry was dumped in many embankments filling the catchment area. Just as we were surveying the site, a truck started dumping marble slurry. Within 15 minutes, 18 trucks arrived for dumping the slurry. This amounts to almost 11 million litres of slurry being dumped in an hour.

Almost 90 percent of the marble polishing in India takes place in Rajasthan. While interacting with the truck driver, we found out that there are 60 companies dumping about 60 trucks of marble slurry every day. What is noteworthy is that the dumping is continuing illegally despite the site being officially closed. It is estimated that the restoration of this place would take about 100 years.

that the conservation of catchment areas, management of all water bodies and the development of a river basin plan should also be given equal importance.

All the major cities in India have been struggling with the issues related to water management. For instance, studies have shown that Gurgaon, the hub of corporate India and high end living will have no ground water by the year 2020 as rampant construction and lack of urban planning has led to the destruction of its watershed as well as all the water bodies.

The question for the people of Udaipur is therefore, what kind of city they want? Do they want a beautifully designed city just cut out for the tourists? Or do they want a healthy and sustainable city as designed by their ancestors?

Udaipur should hope it does not find itself on a similar spot like some of the big cities in the country. ■

something fishy...

Cod from Portugal, Hilsa from Bangladesh and Rainbow Trout in Nepal are the three delicacies. All are rich in amino acids, minerals and lipids, especially with many essential and poly-unsaturated fatty acids. They are low in calories and fat but high in protein and selenium, vitamins, omega 3. All this keeps your brain and heart healthy. But overfishing and damming of rivers have seen a decline in their numbers.

INÊS MACHADO from Portugal, PARAS SHARMA from Nepal and EHTESHAMUL HUQ from Bangladesh take us on a culinary trip before Cod, Trout and Hilsa get lost to development.

Codfish Steaks

Need: Cod, potatoes, oil, onions, garlic cloves, flour, butter, milk, cream, salt, pepper, nutmeg, lemon juice.

How to: Boil. Debone and skin the cod. Peel potatoes and boil. Fry the onion and the garlic, and then add the codfish. Add the potatoes. Make sauce with butter, flour, water, milk and cream. Stir the sauce and add the salt, pepper and remove from heat. Mix with codfish and potatoes. You could bake it for a bit too.

Hilsa Bhapa

Need: Hilsa, mustard oil, yellow mustard seed paste, chilies, turmeric, coconut paste.

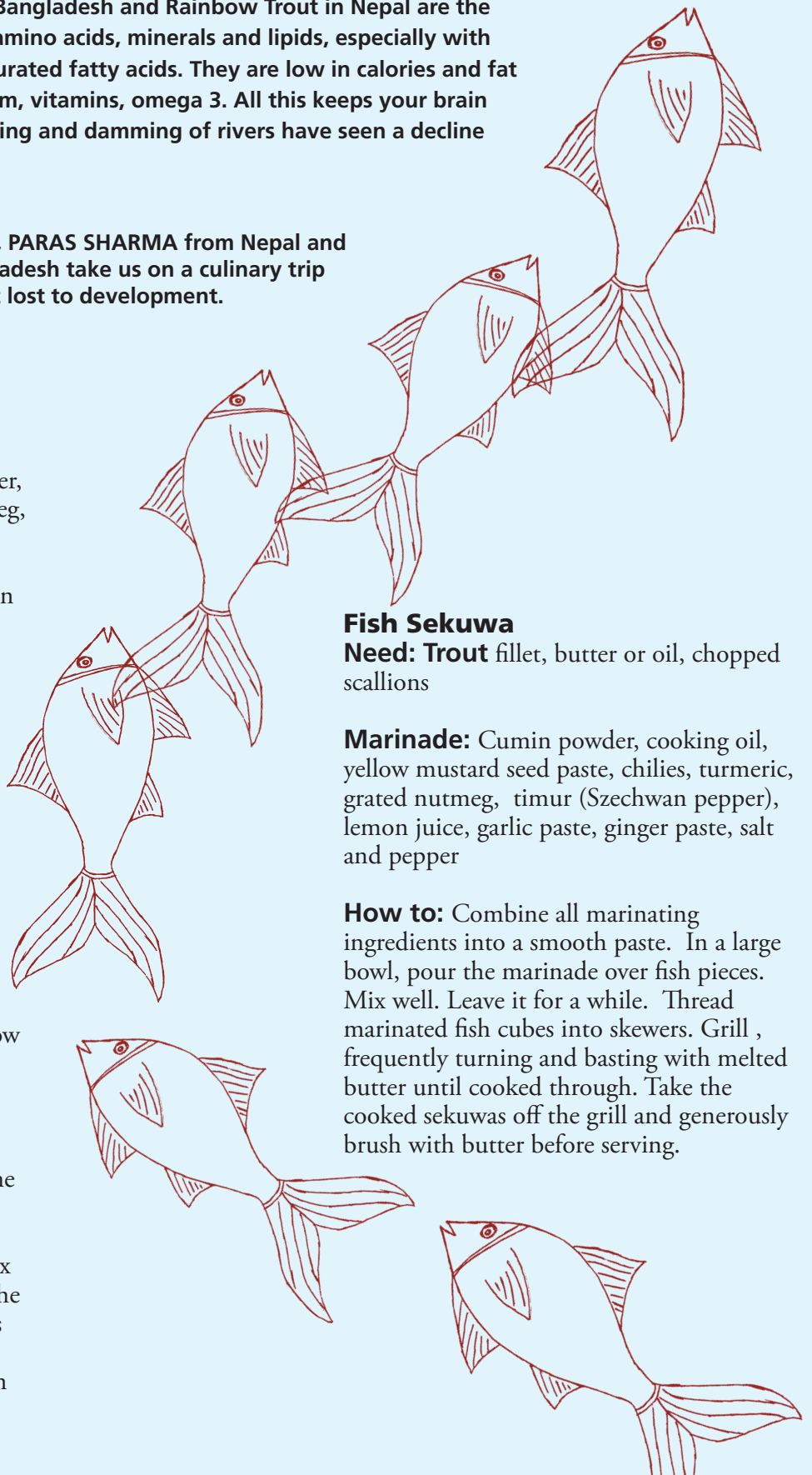
How to: Marinate fish pieces with salt and turmeric. Combine yellow mustard seed paste, chilies, turmeric, coconut paste in a smooth paste. Add salt. Mix with mustard oil. Pour it over the marinated fish so that it reaches all corners. Steam it. Slit a few green chillies and place them on the cooked fish before serving.

Fish Sekuwa

Need: Trout fillet, butter or oil, chopped scallions

Marinade: Cumin powder, cooking oil, yellow mustard seed paste, chilies, turmeric, grated nutmeg, timur (Szechwan pepper), lemon juice, garlic paste, ginger paste, salt and pepper

How to: Combine all marinating ingredients into a smooth paste. In a large bowl, pour the marinade over fish pieces. Mix well. Leave it for a while. Thread marinated fish cubes into skewers. Grill, frequently turning and basting with melted butter until cooked through. Take the cooked sekuwas off the grill and generously brush with butter before serving.





the known evil



Gnawing through the earth

During our recent visit to the mining site at Pipad village in Udaipur, Rajasthan, we witnessed several women from the nearby villages working on the mines like dolomite and soapstone. For the villagers, working in a mine guarantees a steady source of income, whereas farms can be unpredictable.

Rajasthan mines rely heavily on exploiting marginalised communities: 95% of the workforce are dalits or tribals, 37% are women and 15% are children. The mining sector has a system that relies on unfair wages – Rs 60 per day for men, Rs 45 per day for women

Anon 2006, Indian Minerals Yearbook 2005, Indian Bureau of Mines, Nagpur



Local women engaged in manual labour

JUAN JOSE SICOL, EDGAR JOSHUA V

These women workers were chatting and giggling while loading the minerals in the truck, unaware that they are shortening their life by many years. Though the engineers on the site were aware that women should wear gloves and masks, this mandate was not being enforced. Before seeking employment in this mining site, most of these women used to work in fields, look after their children and remain busy with household work.

According to the Background Paper by Mines, Minerals and People for the Indian Women and Mining Seminar, 2003, women working in mines suffer from tuberculosis and several skin diseases. The life expectancy of these women reduces drastically and many of them do not even cross 45.

This mining site is active since 30 years and according to the mining engineers here, dolomite and soapstone can be extracted



for another five decades. Also, every 20 years, the government lease has to be renewed by the private company.

Dolomite and soapstone is used for making toothpastes, bathing soaps, detergents, paints, acrylic sheets and medicines, hence one can imagine the high demand of these two minerals in the market. Around 15 to 20 trucks are loaded and dispatched everyday

and each truck carries 15 tonnes of mineral. It is supplied to Jaipur, Udaipur, Gujarat and Mumbai.

This mining activity does not only hamper the health of the workers but it has also degraded the nearby Aravalli Range. The holes dug up in the ground deteriorate the quality of groundwater and play an important role in lowering the level of the water table. ■

linking stakeholders

The involvement of the community in accepting or rejecting the public projects has paved a way for holistic development

KATJA WISCHNIEWSKI

Development is effective only when the communities are involved in the development process. This reportage portrays the integration of technological and social development that I experienced during my visit to Udaipur, Rajasthan.

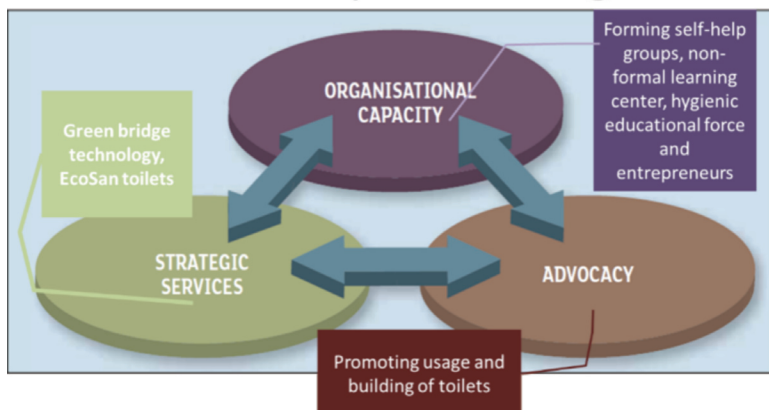
Every Sunday morning, two groups of around 50 volunteers come together and clean the lakes in Udaipur. They collect waste, remove algae from the water surface and recover dead bodies of animals. The Jheel Sanrakshan Samiti (JSS) and the Mohan Singh Mehta Memorial Trust (MSMMT) organise these walks. Their mission is to bring the citizens together for spreading awareness within the community about voluntarism and social change.

“Besides walks, each month the MSMMT organises dialogues on lakes and citizenship. We create open forums for discussing historic, social, educational and environmental issues relevant to the region and related to governance,” says Nand Kishore Sharma, member, MSMMT.



Hazubai talking to a member of the self-help group

The Development Triangle



For encouraging villagers to participate in the construction of the Green Bridge on Ahar river, several meetings were organised in temples for interacting with the residents. This is an example of community participation that has brought life back to the rivers and made people realise their social responsibility.

Kotra block in Udaipur has many examples of Public Private Partnership. Seva Mandir, a Non-Government Organisation is educating villagers about health and hygiene. It is also trying to convince them to use toilets instead of sticking to open defecation. “Prior to toilets, we used to feel embarrassed while defecating in open but now we feel safe as our privacy

is assured,” says Geeta, a villager.

The villagers were not forced to follow the diktat; instead they were given the choice to choose between dry and wet toilets. The villagers chose the ECOSAN toilets.

In addition, projects like non-formal education centres, self help groups and balwadis in the same block have helped the villagers in choosing the kind of development they want.

“During a village meeting, when the parents were asked to list their key requirements, they all voted for education for their children. This was a motivation to start non-formal centres in the block. There are many advantages of having local teachers.

They are highly motivated and have an expertise in local dialect,” says Feroze, education volunteer, Seva Mandir.

Adds Hazubai, “Self-help group has provided us economic and social independence. The trust amongst the villagers has grown and they communicate freely now. We are no more dependent on bank loans.”

Such living examples of community participation show a way towards development. Participation prevents communities from accepting solutions that harm their social, environmental and economic welfare. They are less vulnerable for unreflective decisions. ■

salaam youngistaan

The lost generation finally has a bridge to cross the gap

AMBER ALAM, MUNMUN
SINHA, LINDSAY LEWIS

“I leave school at 12 noon to work in a shop while my friends are still in school. I realise how much I am missing out on,” says Talib Khan, aged 16. He is no longer one of the ‘lost generation’ of India’s children – lost to education through poverty, the need to earn a living or other factors beyond control.

Talking to three non-formal educators from urban and rural India, we found that they all felt the need to nurture India’s future generation.

Mehtab Hussain saw the need to make education available to the children who were either not registered in formal education centres or those who had dropped out for various reasons. Last year he founded Samiksha Siksha Sanstha (SSS) in a slum in Tigri, Delhi. Here, eight volunteers teach children of mixed age groups in

two rooms. The students do not notice the discomfort as learning is what they are here for and their dreams are finally becoming a reality as they have a chance to return to mainstream education once the missing gap in their education is filled.

Mehtab explains, “Children are mainly from migrant families who work as daily wage workers. Parents pay a token fee for each

child. This varies and depends on the paying capacity of the parents. The SSS, the parents and the children are bound by a contract, making all three stakeholders work towards a single goal of mainstreaming the child towards formal education.

Speaking of the challenges, Mehtab adds, “Improvisation and dedication are the necessary skills for the teachers. We volunteer for different reasons but we want all the children to progress and have a better future.”

Continuing our journey from Delhi to rural Rajasthan, we meet Samiullah Khan (Feroz). Working for Seva Mandir, Feroz, a law graduate has opted to work for community up-liftment instead of the private sector.

“The low salary and rural living is challenging at times but I am happy,” he adds.

At Seva Mandir, teachers teach in Hindi, English and the

The work by Mehtab, Feroz and Asha will ensure the growth of a generation that is lost but is full of dreams and can play an important role in the development of India



Mehtab teaching in his non-formal education centre in Delhi

Voices of the Youth



Mehtab (25 Years):

"I wanted to do something for society. A group of my friends agreed to

volunteer to teach slum children. We continued as volunteers and now teach more than 250 children. I feel proud when children progress."



Asha (21 years):

"After being motivated by friends and relatives, I decided to take

up the responsibility of Balwadi. It gives me immense pleasure and pride to see the progress of children."



Samiullah Khan (Feroz) (32 Years):

"Though I worked in private company, I did not like the

table-top work culture. I wanted to do something for the people and the community. I am helping the government to fulfill its function and I am satisfied now."

local dialect. The interactive teaching plan allows the teachers to share local and indigenous knowledge about plants and their medicinal values, local crops, birds, animals and folklore.

Part of Feroz's work involves creating awareness about the education of girls among the villagers, who are now more inclined to send their children to school. Many live far from these non-formal education centres and have to walk long distances. Children, especially girls are also expected to work on the family farmland after school. Though Feroz has witnessed a change in the thought process of the villagers, he feels that at this point it is important for the government to recognise non-formal education system and offer accreditation.



Children outside Balwadi in Dhanodhar village in Kotra Block, Rajasthan

Next day we meet Asha in Dhanodhar village. She is running an informal preschool centre set up by her community. Balwadi caters to children who are too young to attend school and reside within the village.

Set up by the Village Development Committee last year, Balwadi offers a safe place for children and provides them a platform for learning while their mothers tend the fields or work on different projects. This involvement of parents in Balwadi has had a positive impact on the lives of the children and the elders.

Asha studied until class V and is happy to take on the challenge of running the first Balwadi within the village.

She informs, "It makes me happy to see children progressing and I dream of them leading a better life".

As Anil Agarwal, founder and director of the Center For Science And Environment once said, "It is important they (the children) begin to understand how human beings and human societies interact with their environment for their survival and their growth, how these human-nature interactions become a part of a society's culture and why it is important to rationalise our relationship with our environment." (Gobar Times).

The work by Mehtab, Feroz and Asha will ensure the growth of a generation that is lost but is full of dreams and can play an important role in the development of India. ■

the development debate

Shikshantar is an applied research institute that defines itself as an 'unlearning center'. The focus is on understanding education as organic learning societies, redefine the definition of development and therefore understand the problems that India faces today. With the debate on development, here are the two viewpoints

KATJA WISCHNIEWSKI

Development is a word that clearly draws a line between the ones who are developed and those who are not. The problem is that our understanding of development is western-centric where the emphasis is on the increase of the Gross Domestic Product (GDP) while the welfare is ignored. But what does the GDP tell us about the quality of life, when it only counts the money people earn or about the environmental degradation, when it only counts productivity? How would the state of development change when we look at the environmental footprint per person? If we change this mindset, there will be a paradigm shift in the way countries are considered 'developed' or 'developing'.

On seeing the photographs of the tribals, the majority of people from the western countries spot poverty because they see lack of buildings, education, infrastructure and income in their lives. What do we know about conservation of forests, biodiversity or water management? I am dependent on water infrastructure for my drinking water, my food comes from exports and my clothes are made in China, India and Bangladesh. I am unable to provide water for myself, though I have studied about water resources. The poverty line is defined too often as an amount of money people have to live on per day.

Manish Jain, founder of Shikshantar says, "Why we do not question more about how we can live with less money? The question of development focuses on our ability of being a good consumer." But does consumption makes us really happy or is it just the economic setting which is built on economic growth and makes us feel unsatisfied?

The current popular policy of education is like a monoculture field with a shift to cash crops. We should re-learn to face each other again, ask each other for help, trust and connect with each other.

Our social structures have to be re-developed.

As the singer Amanda Palmer said, "When you connect with each other, people will help you."

Jain summed it up by recommending: slow down, scale down and learn to listen to yourself.

JAMES RUNNALLS

Only a few weeks ago, while waiting to take off from London Heathrow for Delhi, the ongoing development debate was not at the foreground of my mind. In the small building of a grass roots organisation called Shikshantar, my decidedly western view on world development was to be put to inquisition. Discussing it with someone who holds a different and thoroughly considered view is always enlightening and the convictions held by Manish Jain, founder of Shikshantar

certainly fall into this category. Jain questioned the GDP, growth, healthcare, commercialisation and a variety of other factors all of which fall under the banner of development. He highlighted the inherent failures of developing in a western centric fashion, forgetting the traditional knowledge that has supported families for generations.

It was the first time I was forced to take an

outsider's perspective of western society and while I was convinced that change was essential to have a hope of sustainability, the discussion skirted (or was skilfully diverted away from) how change could be enacted, leaving a gaping hole in the methodology. He promoted a slow down, scale down, silence and listening approach which lacked any tangible incentives beyond a future goal, leaving me sceptical about the possibility of a change in attitudes towards a simpler basic way of life.

Though I will fly home with more questions than answers, this interaction did motivate me to strive towards sustainability and not accept the homogeneous solutions, which cause more harm than good in the name of development. ■





Juan and Rajesh
at a government
school

there and back again

KEREN BERELSON

Day 1: 18th of August

My first train ride in India, how to describe it in one word: bumpy, I suppose. We staggered off weary-eyed and went to a lecture on the migration patterns of rural Indians who are eager to lead a modern western life. Afterwards we went to the wonderful City Palace (a must see at Udaipur), words cannot describe this wonderful historical monument.

Day 2: 19th of August

Learn to question, that's the overriding philosophy of Shikhshantar, an unlearning centre for alternative education, after we tried to defend our views we drove to the Kotra block of Udaipur: which is one of the poorest blocks in India. This journey was particularly bizarre as compared to every patch of countryside in Europe, it was full of large mammals (people, cows, goats, etc.).



Edgar priming a
cannon at the
city palace



Soapstone
mining: stripping
the earth bare





Greenery in the Kotra block of Rajasthan



Women waiting to fill water

Day 3: **20th of August**

Kotra, what to say, it's completely different from the city at least: a whole other world. We explored numerous different villages within the block, taken expertly around by Seva Mandir, a Non-Government Organisation (NGO). Among the many interesting aspects that we looked at were; the ECOSAN toilets, a women's self-help group and a government school.

Day 4: **21st of August**

On the way back from Kotra, we popped into a swelling soapstone mine, which had a lot of activities going on as they ate the earth. Lunch was devoured at 'Millets of Mewar', a restaurant which serves cuisine made out of local millets; the expert cooks were trained at Shikhshantar, which we revisited after going to the local ayurvedic therapist who enriched our knowledge by providing a glimpse of all the commonly available medicinal plants. It was interesting to know that almost all the plants could be grown at home.

Day 5: **22nd of August**

Slurry, specifically marble slurry is being dumped upstream of Udaipur and polluting its water supply. Standing at the site, we saw 18 trucks come and gorge forth their poisonous goo. Later, we visited a site where the green bridge technique was being applied to clean the polluted water, setting a perfect example of a public private participation scheme.

Day 6: **23rd of August**

Our journey started with a long drive to visit ARTH, another NGO. At the centre, we had a glimpse of the work being carried out by the organisation. It provides basic health facilities to pregnant women and children. It gave us a different outlook of rural India where finding the minimum health care seems to be a big challenge. After having lunch, we came back to the hotel and prepared ourselves for the arduous journey back to Delhi, with mixed thoughts about the coming sleepless nights while finalising the magazine. ■



The group walking on part of the greenbridge



Marble slurry being poured into a lake



Part of the health center



Challenge of the Balance is a month long course to give international participants a first-hand experience of southern perspectives concerning the environment-development debate. This interdisciplinary course is structured around environment and development issues. For this summer school we have collaborated with Engineers Without Borders (EWB) United Kingdom and EWB chapters in South Asia as well.

Course includes classroom lectures, local field excursions and project work. Field trips serve to illustrate innovations and eco-restoration efforts that communities undertake for managing their natural resource base.



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New Delhi – 110062

Team Challenge of the Balance August 2014

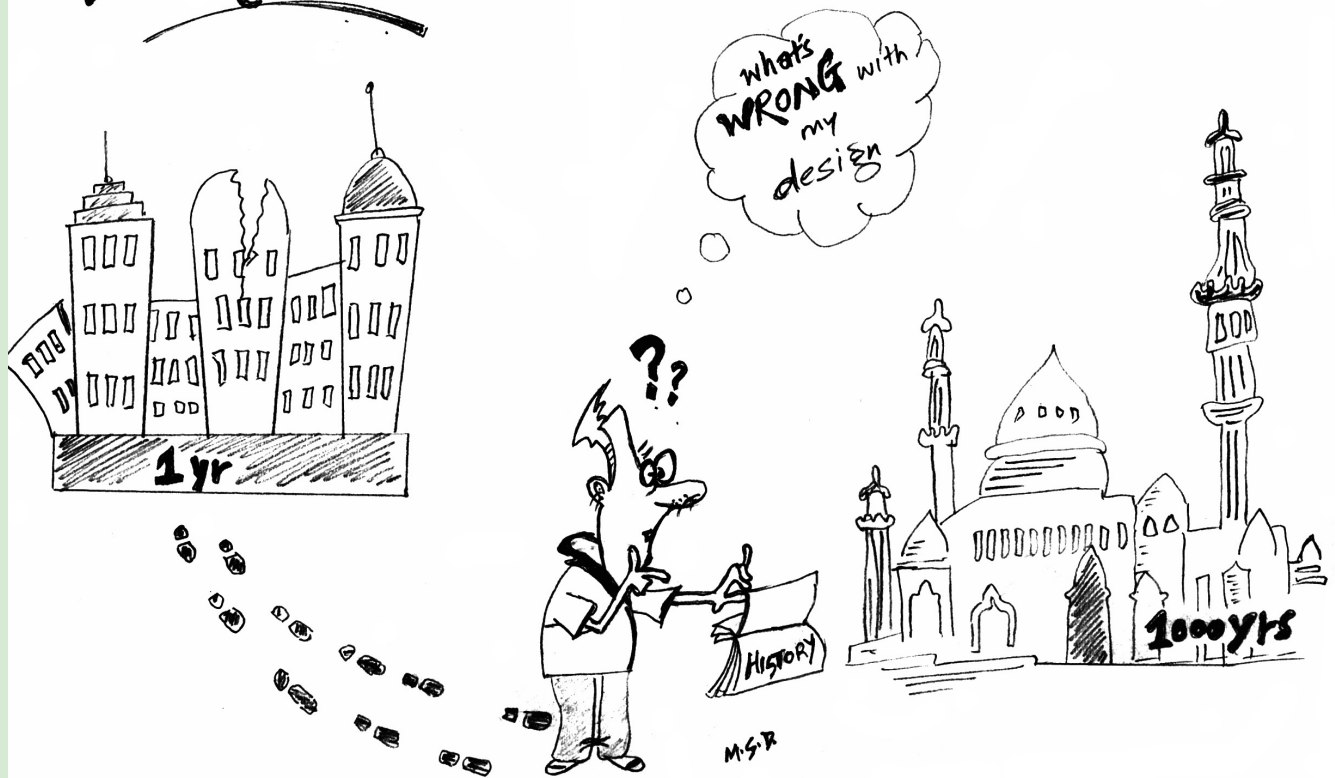
TRAINING VENUE

Anil Agarwal Environment Training Institute
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Fax: +91 (011) 29955879

BACK-STEP



“Mastery of yourself, regardless of where you find yourself” — Gaurav Shorey

“Sustainability and environment must not sacrifice social issues such as poverty”

— Sucharita Sen

“There is no concept in India of nature without people and that is the way it has always been, NOT because of over-population” — Aditya Batra

“Societies change as they move from rural to urban living, without concern or understanding of environmental issues” — Suresh Rohilla

“The keystone holds everything together, with arches to support it, that are still standing after hundreds of years – reflecting the richness of ancient architecture”

— Jaya Aiyer

“To see how civil a society is, look at how they treat their women, children, elderly and fauna and flora” — Gaurav Shorey

“India needs to look back at its unsung heroes to find ways of providing water that technology can't” — Jaya Aiyer

“Indians have learnt one thing from the British; how to draft legislation”

— Shibani Ghosh