

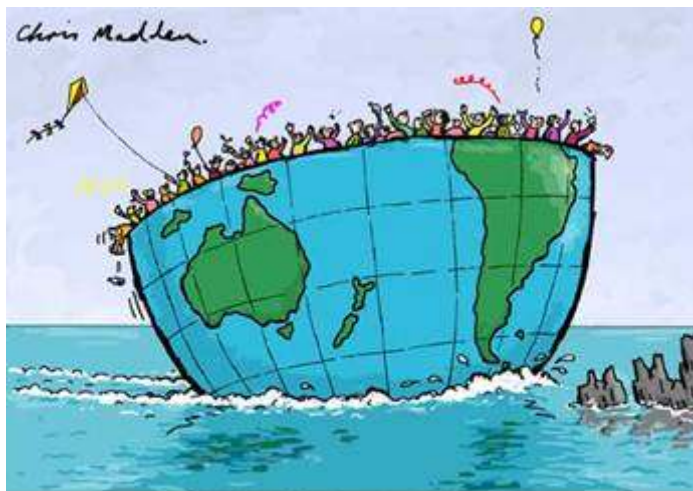


Green Zone

Quarterly Newsletter of VNC
Volume 3 / Year 2006

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THE SHIP OF FOOLS AND THE ROCKS OF
SHORT-TERM ECONOMIC PLANNING

Published by

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Coordinator's note

What are we waiting for?

Rainfall pattern of last two years clearly indicates that there is a major shift in our climate, as there was flood situation in many parts of the 'Desert state, Rajasthan'. Five times flood like situation occurred in a short duration of one month in Khambhat Taluka of central Gujarat. Nearly all rivers overflowed in Gujarat. Summer temperatures are on rise and heat spells are prolonged. Gangotri glacier is receding at the rate of around thirty meters each year. There are similar disturbing reports from all over the world. More than fifteen thousand people died in France, due to excessive heat; there was acute scarcity of fans and Air conditioners in UK. There was sparse rain in rainforest of South America, resulting in water depletion in once a mighty Amazon river. Polar ice sheet is melting at alarming rate. Too much can be said about the change in climate and its fallout. Also Worlds leading scientists are confirming their findings that we must immediately check our emissions of Global warming gasses; else there will be irreversible damage to climatic balance.

Nevertheless, the self proclaimed leader of the world "USA" (accounts for the quarter of the total CO₂ emission) is still 'criminally' continuous to neglect the situation and on the contrary it is promoting increased in consumption of Fossil fuel, supporting oil giant's plans to extract more and more oil, in highly environmentally sensitive areas like Antarctic. Politicians over the world are busy in promoting consumerism, the root cause of nearly all problems weather of environmental, economical, or social. Deforestation is also one of the major contributors to warming.

It is high time we all must wake up from slumbering sleep of development and see the truth; lot is being talked and will be talked but now it is time for action, action from all of us. We must now act locally to impact globally before it's too late, or else our children will never forgive us.

VNC

VNC NEWS

ACT OF KINDNESS

VNC is grateful to the following donors for their considerate contribution:

- ❖ Shri Mehul B Patel, Karamsad.
- ❖ Shri Snehal Patel, G R Polinets, V.U Nagar.
- ❖ Patel & Mehta Chartered Accountants, Anand
- ❖ Shri Jinesh Shah, Gandhidham / Navsari.

VNC is grateful to Shri Duleep Matthai who donated generous amount of Rupees One Lakh for the Corpus fund.

VNC is obliged to the following donors for their thoughtful 'Gifts in Kind'

- ❖ Shri Amit & Madhvi Patel, Design Consortium, Anand.
- ❖ Shri Pranav Parikh, Desktop Creators, Anand.
- ❖ Shri Nikhil Vyas, B&B Polytechnic, V.V.Nagar.
- ❖ Shri Mahendrabhai Patel, Sarvodaya Park, Anand.

DATEWISE EVENTS

Screening of Documentaries related to various subjects on environment was carried out at following institutes and communities, which was followed by significant communications and discussions with the audience.

- 04/07/06: P.T.C College, Anand.('*Climate Change*')
- 08/07/06: Go Jo Sharadamandir, V.V.Nagar. ('*Water is Life*')
- 15/07/06: Swaminarayan Vidyapith, ('*Vanishing Vulture*')
- 17/07/06: BSW & MSW College, Anand ('*Water is Life*')
- 20/07/06: Pragati Seva Samaj, Lotia bhagol community, Anand ('*Water is Life*')
- 27/07/06: N.V.Patel College of Pure & Applied Science, V.V.Nagar. . ('*Vanishing Vulture*')
- 10/08/06: Home science College, V.V.Nagar. ('*Effects of Pollution on Children*')
- 19/08/06: Anandalaya School, Anand. ('*Effects of Pollution on Children*' and '*Climate Change*')
- 22/08/06: Home Science School, V.V.Nagar.('*Climate Change*')
- 25/08/06: Angels School, Anand ('*Effects of Pollution on Children*')
- 28/08/06: Home Science School, V.V.Nagar. ('*Documentary on Panchmarhi E E Camp*')
- 30/08/06: Vrajbhoomi School, Anand ('*Effects of Pollution on Children*')
- 30/08/06: Ladies Hostel, S P University, V.V.Nagar. ('*Effects of Pollution on Children*')
- 31/08/06: Kanya Shala, Mogri ('*Water is Life*')
- 01/09/06: Veterinary college, Anand ('*Vanishing Vulture*' and '*Climate Change*')
- 02/09/06: Dept. of Statistics, S P University, V.V.Nagar. ('*Climate Change*')
- 04/09/06: St. Pintos School ('*Climate Change*')

- 13/09/06: Post Graduate Dept. of Business Studies, SP University V.V.Nagar. ('*Effects of Pollution on Children*')
- 14/09/06: Post Graduate Dept. of Mathematics, SP University, ('*Effects of Pollution on Children*')
- 16/09/06: Post Graduate Dept. of Bioscience, SP University. ('*Effects of Pollution on Children*' and '*Climate Change*')
- 18/09/06: Kendriya Vidyalaya, Anand. ('*Effects of pollution on Children*' and '*Ozone layer*')
- 23/09/06: Kendriya Vidyalaya, Anand. ('*Documentary on Panchmarhi camp*')
- 30/09/06: SVIT College, Vasad. ('*Effects of Pollution on Children*' and '*Ozone layer*')

SNAKE SHOWS

Snakes are one of the most feared creatures in India. Since snakes plays a very crucial role in ecology and even in our economy, snakes are most effective controller of rodents and India being an Agricultural country and more than 30% crop being destroyed by rodents. We try to educate populace, importance of snakes, teach them to identify and avoid bites from venomous snakes. All, using live snakes which are rescued from residential areas, at following institutes;

- 04/08/06: Swaminarayan Vidyapith, Valasan.
- 15/08/06: Angels School, Anand.
- 28/08/06: Home Science. V.V.Nagar.
- 29/08/06: Go Jo Sharadamandir School, V.V.Nagar.
- 29/08/06: N V Patel Science College, V.V.Nagar.
- 31/08/06: Ladies Hostel, S P University, V.V.Nagar.
- 02/09/06: Vrajbhoomi School, Waghashi.
- 03/09/06: Veterinary College, Anand.
- 04/09/06: Kasturba Girls School, Anand
- 16/09/06: Kendriya Vidyalaya, Anand.
- 18/09/06: Agriculture University, Anand.
- 29/09/06: Adarsh High School, Napa.
- 07/10/06: M U Patel Technical School, V.V.Nagar.
- 30/10/06: Bharatiya Sanskrit Shibir, Karamsad.

RESCUE AND REHABILITATION

Several snakes, birds, reptiles were rescued and rehabilitated. Many of the rescued birds and snakes were treated for their injuries.

TREE PLANTATION

Total three hundred and twenty two tree saplings were planted and are being taken care. This plantation was coordinated by VNC with patronage of Bhaikaka foundation. Tree guards were provided by Gujarat Co Op Milk Marketing Federation and Municipal Borough V. V. Nagar

TRAILS, TRIPS & OEEP PROGRAMS

13/07/06: Sixty students of 3rd Std from Anandalaya were taken to Hingolghadh for a two day OEEP camp. During the camp they were made to trek through the sanctuary

and were able to have a glimpse of Chinkara and Blue bull (Nilgai). The next day they were taken to the nature education park where they were shown and educated on snakes. They also visited the cactus garden.

10/09/06: a group of around fifteen nature enthusiasts had an eco-walk along the railway track near Lambhvel for **Butterfly walk**. This program was to observe butterflies, their habitat etc. More than twenty eight different species of butterflies were observed, many of them were recorded by VNC for the first time in this region one of them being Indian flash. Many different insects like dragonflies, moths, spiders were photographed along with butterflies.

15/09/06: Fifty seven students of 2nd Std from Anandalaya were taken to Umetta for a single day OEEP camp. They were given basic experience of outdoor living, some information on difference in trees, shrubs, creepers and grasses. They were made to do flyover which they enjoyed very much.

21/09/06: Around sixty students of 1st Std from Anandalaya were taken to Umetta for a single day OEEP camp. They were given basic experience of outdoor living, some understanding on difference between domestic pet and wild animals and also about water.

28/10/06: VNC visited to Dakor Gomti Lake to observe and document Turtles. It is suspected that they are being poached and turtle population in this lake is on decline.

GEA, JAPAN DELEGATION VISITS VNC

A delegation from GEA of Japan, comprised of Mr. Kosugi (Parliament Member, and Former Minister for Education, Science, Sports, Culture), Mr. Tabata (Parliament Member), Mr. Yamaguchi (Parliament Member), Mr. Yasumoto (Executive Director, GEA), Mr. Yatsu (Director policy coordination/ evaluation and PR Division Ministry of Environment), Ms. Sato, Ms. Kiriya and Ms. Terasawa, visited Vallabh Vidyanagar to review and appraise the activities of Vidyanagar Nature Club, on 23rd July 2006.

The team was much-admired upon VNC's activities; around 45 volunteers were present and had a fruitful interaction with the delegates. The delegates saw a documentary on activities carried out at VNC's Environmental Camps, also witnessed the snake show. They were curious to know about other relevant topics, and were overwhelmed by looking at VNC's activities and its outcome.

ENVIRONMENT EDUCATION CAMPS

Volunteers of VNC assisted the various Diwali camps and ecotours held at Mt.Abu, Pachmarhi, Goa, Jayalgarh, Kahna-Jabalpur arranged by ANALA OUTDOORS, Ahmedabad. Around one hundred fifty youth participated in these programs, from Charotar region. VNC believes environment has to be experienced and to be enjoyed.

VNC ADVISORY COMMITTEE

As there has been tremendous increase in VNC's activities and also in areas of functioning, there was a need for additional body which can provide guidance and espousal. In August 2006, VNC formed an advisory

committee consisting of five dedicated and outstanding personalities, as subsequent

1. **Shri Dullep Matthai**, Founder trustee of WWF- for nature, India, Member of Honor - WWF-International, Ex. Board member - Wildlife Institute of India, Ex. Member - Indian national committee of IUCN, Ex. Member -Indian Board for Wildlife Govt. of India, Ex. Executive Vice Chairman - National Wastelands Development Board Govt. of India, Ex. Member-National Committee of Environmental Planning & Coordination Govt. of India, Ex. Member - National Committee of Environmental Planning Govt. of India, Ex. Member - National Environmental Advisory Committee Govt. of India, Ex. Vice Chairman & Founding Member, Board of Governors - Indian Institute of Forest Management Ministry of Environmental & Forest, Govt. of India, Ex. "Eminent Environmentalist" Member- National Environmental Council, Govt. of India, Ex. Chairman- Policy & Planning Advisory Committee TRAFFIC India, Founder Member, Board of Governors- Foundation for Ecological Security, New Delhi. These are the few environmental positions held apart from his several professional posts.

2. **Dr. Amrita Patel**, Chairperson of National Dairy Development Board (NDDB), Chairperson- Foundation for Ecological Security & Shri Krishna Medical Hospital, among several awards received by her includes Padma Bhushan (one of the highest national Honour) by the Govt. of India; a reputed environmentalist and animal lover. She is also board member of many other organizations.

3. **Shri Bharat Patel**, Chairperson of 'The Sardar Gunj Mercantile Co-op Bank Ltd', Trustee- Angles Education Society, are few positions held among numerous others, he is leading trader, businessman and also an environmentalist at heart.

4. **Dr. A S Reddy**, a plant taxonomist in Department of Bio-Sciences, Sardar Patel University is well-known for enthusiastic environmental activities

5. **Shri Madhu Menon**, Managing Trustee of Ahmedabad Nature Lovers Association, Mass Communicator by profession, proficient Camp Director of several hundreds of environment education camps held since 1985 till date.

Flora Intro

SAUSAGE TREE

A wide range of tree species comes to our mind when we think of avenue plantations in urban and suburban areas. The moment we try to short list few species among the long listed, confusion naturally arises that to which species the priority should be given. Trees which bear colorful blossoms on one hand and the dense foliage trees on the other hand often compete to enter into such a priority list. The blossom bearing trees may not so good in providing shade on the account of their poor canopy

quality or long duration of deciduous (leafless) condition. On the other hand the best shade providing trees, due to their dense foliage may not look attractive along the streets.

The sausage tree comes here to solve such a confrontation. It bears dense canopy round the year except for a short period (one week) of leaf-shedding. Though the maroon colour flowers are not fragrant, nor are they arranged in dense blooms, they become very conspicuous and attract visitors' attention as they are laxly arranged on long pendulous stalks.



Sausage tree is a native of the tropical West Africa, but it is found introduced in many parts of India. This tree is known all over the world by its universal scientific name, *Kigelia pinnata*. The generic name *kigelia* is derived from "Kigeli-keia" the Mozambique name for this tree and the specific name 'pinnata'

denotes pinnately compound nature of leaves. It belongs to the same family which the calabash tree, described in the earlier issue of this newsletter. Fountain tree (*Spathodia companulala*) and Buch (*Millingtonia hortensis*) are the other common examples of this family. Due to the similarity of fruits, the sausage tree is also known as cucumber tree. In Gujarati it is popular by Tumbadiyo and Gorakh Kakadi; while in Hindi it is called Jhar Phanoos,

This tree grows to 8-15 m tall with round, dense canopy and smooth, pale- brown or ash coloured bark. Though basically a deciduous tree, it remains evergreen throughout the year except for not more than a week in March. The uni-imparipinnate leaves reach up to 25cm long. Each leaf is composed of 6-9 large leaflets; each one reaches to 5-12 cm long. The oblongly elliptic or obovate leaflets are sub-coriaceous.

Flowering starts in February and lasts up to April, but it may sometimes extend up to June. Prominently maroon coloured flowers, each one of 6-7cm across, are arranged in very lax on long pendent racemes and appear like candelabras. They are pollinated by bats. Fruits are large; grow to the extent of 20-30cm long, pale-brown. The sausage or gourd like fruits, either alone or in a group of two to four, also hangs from long cord like stalks.

Being very good foliage tree, hardy and fast growing species and does not create litter problem, the Sausage tree suits well for avenues. It is planted along roads and in gardens; more common on road sides between Bakrol-Vidyanagar-Anand, Sojitra-Palol, Bochasan-Dharmaj etc. The bark is said to be used in rheumatism, dysentery and venereal diseases. Fruits are used for dressing syphilitic

sores; also used as a purgative. Roasted seeds are said to be eaten in times of scarcity. Sausage tree can be easily propagated from seeds.

~Dr. A S Reddy,

Plant taxonomist, Reader in Department of Bio-Sciences, Sardar Patel University. e-mail- asreddy_spu@yahoo.com

Fauna Intro

Whenever there is reference of the **State bird of Gujarat** people give different names ranging from Peacock (infact it is our National Bird) to pigeon and so on, but rarely we get correct answer, right answer being the **Greater Flamingo**, (*Phoenicopterus roseus*) which is known as Moto Hanj and some times as Shurkhab in local language. There are six different species of flamingo. The greater flamingo has the widest distribution of them all.

Habitat: Flamingos are found in wetland habitats; on coastal lagoons, mud flats and inland at large shallow lakes. In Gujarat flamingoes can be seen in large number at Great Runn of kutch, Nalsarovar, and also in costal regions.

Physical features: Flamingos are about size of domestic



goose; standing about 125 cm high. A long-legged, long necked, rosy white stork-like bird, with a heavy pink bill turned down at an angle, (Broken) from about half

its length. Sexes are alike.

Feeding: Flamingos are filter feeders, living off worms, insect larvae, seeds of marsh plants, and organic ooze, algae and tiny crustaceans such as shrimps, molluscs and insect larvae which live in the mud at the bottom of shallow pools. - When feeding, the bill is placed in the water upside down. Water is sucked in through the partly-opened bill, as it is squeezed out again by the tongue, a row of spines or lamellae along the edge of the bill filter out the food particles.

Social behavior: Flamingos are gregarious birds; living in groups called flocks or 'stands' numbering from a few individuals to tens of thousands. Whether feeding or nesting they remain closely packed together. Pairs are monogamous - they stay together for life. Its sound is loud goose-like honk; a constant babbling uttered while feeding in company.

Nesting: Flamingos build their nests from mud. The female lays a single egg which both the male and female incubate. After 28 days the egg hatches. The chick is fed for at least the first three to four weeks entirely by the parents who secrete a creamy pink liquid called 'crop milk'. The chick is born with a straight bill which starts to

curve at about one month and can filter feed properly at two and a half months. Flamingos are fully grown at two years and can live for 30 years.

Some interesting facts

- What appear to be the flamingo's knees are actually its ankles, which bend backward when it sits down.
- In ancient Rome, flamingo tongues were regarded as a delicacy. As recently as 30 years ago, flamingos and their eggs were eaten by people in parts of southern Europe and the Caribbean.

Now would you like to see this marvelous state bird of Gujarat 'flamingo', hardly fifteen minutes away from where you stay in Anand / Vidyanagar? There is a thriving colony of around three to four hundred mature and juvenile flamingos. They congregate in our vicinity throughout the year except in monsoon; many other migratory birds join them in winters. Those who are interested in observing them may contact VNC by e-mail, phone or in person.



Short News

Amazon Drought July 2006

Some areas of the Amazon headwaters have gone 40 days without any rainfall. A second consecutive season of drought may be about to set in across Brazil's Amazon basin. Drought conditions of last year were the worst in the region for more than 100 years, and the lack of rainfall dried up some Amazon tributaries that are normally more than a mile wide.

There are signs already this season that drought is returning in the Acre region, which borders both Bolivia and Peru. It's the same area where last year's drought emerged, and diminished rivers there are once again giving way to sand banks due to reduced flows.

Acre has already gone 40 days without any rainfall through the entire month of June and the first part of July. Brazil's environment minister, Marina Da Silva, blamed last year's drought conditions on record warm sea temperatures in the Gulf of Mexico and southeastern Atlantic, which also amplified the summer's record Atlantic hurricane season. Ocean temperature patterns are significantly different this year, leaving meteorologists unsure if the world's largest river basin is in for another season of severe drought.

Chameleon Snake

A new species of snake, with the ability to change color at will, has been discovered in a mountainous rain forest in Borneo. The World Wildlife Fund for Nature (WWF) said the newly named Kapuas Mud Snake was collected by a WWF consultant and a German reptile expert in the wetlands along the Kapuas River in West Kalimantan more than a year ago.

The scientists believe this snake might only live in the Kapuas river drainage system. It's believed that since the snake is poisonous, it uses the ability to change color as a disguise to catch prey, rather than to ward off predators. By changing from a light to dark shade, the snake may

also control its temperature by regulating how much sunlight it absorbs. According to Stuart Chapman, WWF's international coordinator of the Heart of Borneo Program the discovery of the 'chameleon' snake exposes one of nature's best kept secrets deep in the Heart of Borneo. Its ability to change color has kept it hidden from science until now.

Trees felled, SVNIT students protest

[12 Oct, 2006 TIMES NEWS NETWORK]

SURAT: Nine per day and 60 in a week, these figures are not the target plan of a manufacturing firm, but they reflect the number of trees cut down by authorities at the Sardar Vallabhbhai National Institute of Technology (SVNIT) in campus. The work has been stopped since Monday, following protests by students and an NGO. However, the institute was planning to cut down 140 trees. The SVNIT campus is spread over 25 acres, covered with trees and gardens. But in the battle between greenery and development, greenery is losing and tens of trees were removed from the campus, in just a week.

After week-long felling of trees, worried students initiated a protest. "Students decided to take help from the Nature Club and protested against the felling. Among the trees that were cut down, many were young, while a few old and unsafe trees have not been touched," says a student, who didn't wish to be quoted. Students were not ready to come out in protest, fearing conflict with the institute. So, help from the Nature Club was taken and later, many students joined hands in protest of the drive. The institute had taken prior permission from the forest department and trees near buildings and roads were marked for felling by the department.

"We requested the forest department to give permission for cutting those trees, which are old and unsafe. Incidents of people getting injured have taken place in the past and there are many trees near roads and buildings," says RA Christian, dean, planning and development.

SC imposes ban on field trials of GM crops

The Supreme Court of India, for the first time, on September 22, 2006, issued an interim verdict banning all field trials of genetically modified (GM) crops in the country and slammed its regulatory mechanism. This means that the Genetic Engineering Approval Committee (GEAC) — the GM regulatory authority under the Union ministry of environment and forests — will not give any further approval to field trials of GM crop until the court delivers its final judgment. The order was issued in response to a public interest petition filed by economist Aruna Rodrigues and other experts.

Members' Contribution

Dark Side of Digital Age

E-Waste means electronic products like computers, entertainment electronics, mobile phones, household electronic appliances and other items that have been discarded by their original users.

All these stuff ends up in landfills or incinerators instead of being recycled. And this means toxic materials like Lead, Cadmium, Mercury, Aluminum, Zinc which are commonly used in these products can contaminate land, water and air. The devices which contain these materials are CRTs, vacuum cleaners, CD-players, mobile phones etc. Among all these, the use of mobile phones is increased very rapidly nowadays. A large variety of hand sets are available in today's market. And in place like Vidyanagar, where there is a trend among students to use latest mobile available in market or to buy a new one after some period has created such pollution in environment in terms of E-waste.

These phones have become the most problematic components of the waste stream because they contain a large number of hazardous substances which can pollute the air when burned in incinerators and leach into soil and drinking water when buried in landfills. Many of these toxic substances — including antimony, arsenic, beryllium, cadmium, copper, lead, nickel, and zinc — belong to a category of chemicals known as persistent toxins, which linger in the environment for long periods without breaking down. Some of them, including the metals lead and cadmium — also tend to accumulate in the tissues of plants and animals and be found up to dangerous level even when released in small amount. These persistent, bioaccumulative toxins (PBTs) have been associated with cancer and a range of reproductive, neurological, and developmental disorders. They pose a particular threat to children, whose developing systems are especially vulnerable to toxic assault. Most of the persistent toxins and PBTs contained in cell phones are in the printed wiring board and liquid-crystal display. The PBT of greatest concern in cell phones is lead, a heavy metal recognized as a problem material throughout the world. Lead is a suspected carcinogen, has adverse effects on the central nervous system, immune system, and kidneys, and has been linked to developmental abnormalities. Its main application in cell phones and other electronic products is in the solder used to attach components to each other and to the printed wiring board. Numerous efforts are under way to find alternatives to lead solder that do not compromise the performance of electronic products. Another hazardous constituent of cell phones is brominated flame retardants, which are added to plastics to reduce the risk of fire. They are used primarily in the phones' printed wiring boards, cables, and plastic housings. Research indicates that some brominated flame retardants can be persistent, bioaccumulative, and toxic, while the impacts of others are still being evaluated. Two categories of flame retardant — polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) — have been associated with cancer and disruption of the immune and endocrine systems. In addition, some of these substances can form dioxins and furans, a group of highly toxic and persistent by-products of combustion, when products that contain them are incinerated or recycled. The rechargeable batteries that power cell phones also contain a number of highly toxic substances. Through the mid-1990s, the most commonly used power source in cell phones was nickel-cadmium batteries (Ni-Cds). Cadmium is a PBT and probable human carcinogen

that can cause lung, liver, and kidney damage and is toxic to wildlife. Because of its toxicity, cadmium is banned from electronic products under the EU's RoHS Directive. Lithium-ion and nickel-metal hydride batteries are increasingly replacing Ni-Cds in cell phones, but these contain cobalt, zinc, and copper — all heavy metals that can be toxic to plants, wildlife, and human beings. It is important to note that recycling does not mean that it is safe ending of a product's life but can have its own environmental impacts, including the release of toxic chemicals into air, surface water, and public sewage systems as a result of the recycling process.

Also E-Waste is valuable in both ways as sources for secondary raw materials and hazardous if not treated properly for its disposals. At last it can be concluded that "THE FRUITS OF OUR HIGH-TECH REVOLUTION ARE PURE POISON IF THESE PRODUCTS ARE IMPROPERLY DISPOSED OF AT THE END OF THEIR USEFUL LIFE". So let us make our self Eco-Friendly.

~Parin Gajjar;

T Y B.Sc (Instrumentation), NVPAS

Climate Change : Timeline

1827: French polymath Jean-Baptiste Fourier predicts an atmospheric effect keeping the Earth warmer than it would otherwise be.

1890s: Swedish scientist Svante Arrhenius and an American, P C Chamberlain, both scientists realise that the burning of fossil fuels could lead to global warming.

1890s to 1940: Average surface air temperatures increase by about 0.25 °C. Some scientists see the American Dust Bowl as a sign of the greenhouse effect at work.

1940 to 1970: Worldwide cooling of 0.2°C. Scientific interest in greenhouse effect wanes. Some climatologists predict a new ice age.

1957: US oceanographer Roger Revelle warns that humanity about greenhouse gases. Colleague David Keeling sets up first continuous monitoring of CO₂ levels in the atmosphere. Keeling soon finds a regular year-on-year rise.

1970s: Series of studies by the US Department of Energy increases concerns about future global warming.

1979: First World Climate Conference adopts climate change as major issue and calls on governments "to foresee and prevent potential man-made changes in climate."

1985: First major international conference on the greenhouse, warns that greenhouse gases will cause a rise of global mean temperature this could cause sea levels to rise by up to one meter. The conference also reports that gases other than CO₂, such as methane, ozone, CFCs and nitrous oxide, also contribute to warming.

1987: Warmest year since records began. The 1980s turn out to be the hottest decade on record, with seven of the eight warmest years recorded up to 1990. Even the coldest years in the 1980s were warmer than the warmest years of the 1880s.

1988: Global warming attracts worldwide headlines. Scientists in Toronto calls for 20% cuts in global CO₂ emissions by the year 2005. UN sets up the

Intergovernmental Panel on Climate Change (IPCC).
1990: IPCC finds that the planet has warmed by 0.5°C in the past century. This provides scientific clout for UN negotiations for a climate convention.

1992: Climate Change Convention, signed by 154 nations in Rio, agrees to prevent "dangerous" warming from greenhouse gases and sets initial target of reducing emissions from industrialised countries to 1990 levels by the year 2000.

1994: The Alliance of Small Island States - fear they will disappear beneath the waves as sea levels rise - adopt a demand for 20% cuts in emissions by the year 2005.

1995: The hottest year recorded to date. Industrialised nations agree on the need to negotiate real cuts in their emissions, to be concluded by the end of 1997.

1997: Kyoto Protocol agrees legally binding emissions cuts for industrialised nations, averaging 5.4%, to be met by 2010. The meeting also adopts a series of flexibility measures, allowing countries to meet their targets partly by trading emissions permits, establishing carbon sinks such as forests to soak up emissions, and by investing in other countries. The precise rules are left for further negotiations. Meanwhile, the US government says it will not ratify the agreement unless it sees evidence of "meaningful participation" in reducing emissions from developing countries.

1998: Follow-up negotiations in Buenos Aires fail to resolve disputes over the Kyoto "rule book", but agree on a deadline for resolution by the end of 2000. 1998 is the hottest year in the hottest decade of the hottest century of the millennium.

2000: the world could warm by 6°C within a century. A series of major floods around the world reinforce public concerns that global warming is raising the risk of extreme weather events. But in November, crunch talks held in The Hague to finalise the "Kyoto rule book" fail to reach agreement after EU and US fall out. Decisions postponed until at least May 2001.

2001: The new US president, George W Bush, renounces the Kyoto Protocol because he believes it will damage the US economy. Analysts say that loopholes have pegged agreed cuts in emissions from rich-nation signatories to less than a third of the original Kyoto promise. Signatory nations urged to ratify the protocol in their national legislatures in time for it to come into force before the end of 2002.

2002: Parliaments in the European Union, Japan and others ratify Kyoto. But the protocol's complicated rules require ratification by nations responsible for 55% of industrialised country emissions, before it can come into force. After Australia joins the US in reneging on the deal, Russia is left to make or break the treaty, but hesitates. Meanwhile, the world experiences the second hottest year on record.

2003: Globally it is the third hottest year on record, but Europe experiences the hottest summer of last 500 years, with an estimated 30,000 fatalities. Extreme weather costs an estimated record of \$60 billion this year. 2003 also sees acceleration in the rate of accumulation of greenhouse gases.

2005: Second warmest year on record. Linking of warming to a record US hurricane season, accelerated

melting of Arctic sea ice and Siberian permafrost, and apparent disruption of the global ocean current that warms Europe. The Kyoto Protocol comes into force. In December, Kyoto signatories agree to discuss emissions targets for the second compliance period beyond 2012, while countries without targets, including the US and China, agree to a "non-binding dialogue" on their future roles in curbing emissions.

~Anirudh Vasava;

T Y B.Sc (Environment Science), NVPAS



Tit Bits

- ❖ SNAILS have 14175 teeth laid along 135 rows on their tongue.
- ❖ A BUTTERFLY has 12,000 eye lenses.
- ❖ DOLPHINS sleep with 1 eye open.
- ❖ A BLUE WHALE can eat as much as 3 tonnes of food everyday, but at the same time can live without food for 6 months.
- ❖ The EARTH has over 12,00,000 species of animals, 3,00,000 species of plants & 1,00,000 other species.
- ❖ The fierce dinosaur, TRYNOSAURS which had sixty long & sharp teeth, used to attack & eat other dinosaurs.
- ❖ CASSOWARY is one of the dangerous BIRDS that can kill a man or animal by tearing off with its dagger like claw.
- ❖ The SWAN has over 25,000 feathers in its body.
- ❖ OSTRICH eats pebbles to help digestion by grinding up the ingested food.
- ❖ POLAR BEAR can look clumsy & slow but during chase on ice, can reach 25 miles / hr of speed.
- ❖ KIWIS are the only birds, which hunt by using sense of smell.
- ❖ ELEPHANT teeth can weigh as much as 9 pounds.
- ❖ OWL is the only bird, which can rotate its head to 270 degrees.



TEASE YOUR MIND

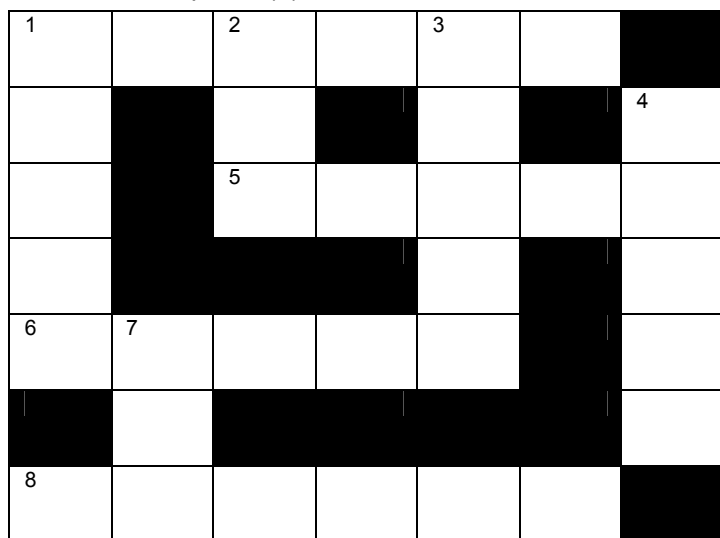
ACROSS:

1. This area is very important to counter the greenhouse effect as it gives out a great deal of oxygen and takes in carbon dioxide. (6)
5. Due to the depletion of this layer in the upper part of the atmosphere (the stratosphere) the greenhouse effect has occurred.(5)
6. There are two types of energy, renewable and _____renewable.(3)
8. The greenhouse effect has led to _____warming.(6)

DOWN:

1. It is the Chloro floro carbon used in the refridgerators.(5)
2. The world's largest environment summit which adopted the famous Agenda21 declaration was held in 1992 in ___De Jenerio.(3)

3. This is released into the atmosphere by industries, households using fire wood etc.(5)
4. This planet in our solar system is said to have the runaway greenhouse effect. (5)
7. It is a non renewable source of energy used to run vehicles and is emitting large amounts of harmful gases into the atmosphere.(3)



QUOTE

“We abuse land because we regard it as a commodity belonging to us. When we see land as a commodity to which we belong, we may begin to use it with love and respect.”

~ **Aldo Leopold**, (1887-1948) was a renowned scientist and scholar, exceptional teacher, philosopher, and gifted writer also considered the father of wildlife ecology.



Take Action

What 'YOU' can do to prevent Climate Change

The largest emitters of CO₂ is the power industry, it accounts for about 21% of total emissions. Therefore there is an urgent need to cut down on emissions from electricity generation. Reducing electricity consumption does not require us to sacrifice any basic living comforts – it's both easy and chic. We will need to practice energy efficiency!

What you can do

You as an individual consumer and a concerned citizen can do your role in reducing dangerous carbon emissions, conserving energy and preventing climate change

Energy efficiency begins from your house. If you want to there are hundred things that you can do not only to help yourself but also to help the environment. These range from simple, free adjustments to major, long-term investments. We hope to give you a few tips on what you

can do to reduce your consumption and **in the process help fight climate change.**

Free - Things That Cost Nothing and Save Cash

- Turn off lights when you are not using it.
- Turn down water heater thermostat to 50°C.
- Use energy-saving settings on air conditioners, washing machines, dishwashers, and refrigerators.
- Don't waste water, hot or cold, inside or outside your home.
- Clean your refrigerator's condenser coils once a year.
- Air-dry your clothes as much as possible. It will cost you nothing.
- Repair leaky faucets and toilets (5 percent of water "use" is leakage) more water you use more you have to pump.
- Close drapes (and windows) during sunny summer days and after sunset in the winter.
- Running washing machines, microwaves, and other electric appliances outside of peak hours. This will be helpful if everyone does this and reduce peak demand and thus load shedding

Measure with some expenses

- Install a water-saving showerhead.
- Install water-efficient faucet heads for your kitchen and bathroom sinks.
- Install a programmable thermostat.
- Clean or change the air filter on air conditioning units in the summer.
- Install water heater wrap.
- Insulate the exposed sections of hot and cold water pipes.
- Replace incandescent bulbs with compact fluorescent light (CFL) bulbs.

A CFL USES FOUR TIMES LESS ENERGY, AND LAST EIGHT TIMES LONGER

THE USE OF ONE CFL INSTEAD OF A STANDARD BULB AVOIDS THE BURNING OF 500 KGS OF CARBON EMITTING COAL, THE CREATION OF 150 KGS OF FLY ASH AND THE REDUCTION OF ABOUT 227 KG CARBON DIOXIDE IN A YEAR.



APPEAL

Commitment to any cause requires adequate resources to fulfill it. And when cause happens to be our fragile environment, the material, financial and moral support becomes all the more important. Vidyanagar Nature Club would sincerely appreciate and acknowledge any help towards its activities. Your concern shall certainly boost up VNC's moral.



GEA, JAPAN DELEGATION VISITS VNC



SNAKE SHOW



OEEP PROGRAMS



TALKS ON ENVIRONMENT AT SCHOOLS

