The environmentalism of the poor: Lessons for our common future

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The age of environment

Critical concerns. Affect lives. Affect economies

1. **Oil price** is volatile and will increase (not enough oil to share); forcing conservation and new (and old) thinking

2. Last year **food prices** shot up so high that they forced countries to re-think agriculture and food security

3. **Climate change** is on our heads -- increasing intense rainfall, variable and extreme weather events
Defining issues

Crisis but also an opportunity

To re-invent what we mean by economic growth

To change the pathway to progress -- to use inventiveness of science; ingenuity of society to leapfrog to progress without pollution

But how? Possible?
As yet actions have been petty and meaningless. ‘Clean coal, CCS, emission trading or emission gifting?’, biofuels (without reducing use of fuel) energy efficiency, without sufficiency. Not win-win.

Result:

Emissions of the industrialised world have increased, not decreased.
Annex 1: Decreased 3% only because of decrease of economies under transition. Rich have increased.
Between 1990-2005

Agreed to cut 6%

Increased....

Reneged on agreement

Difficult
Need energy transformation. None made.
Cant change but can blame

"RIGHT! NOW CLEAN IT UP!"
Environmentalism of poor

Industrialised world’s (+Australian) movement responded to waste created by economic growth. **After society was rich.** Perfected waste management

Indian (and Southern) movement is when countries are still poor but getting rich. Economic growth costs borne by environment and poor communities.

**People are demanding change.** New ways of growth. New ways of progress
A new geography

Rich lands

Poor people

Re-invent growth
Minerals are found where forests...

- Top 50 mineral bearing districts account for 18% of forests in the country
- Account for bulk of dense closed forests in the country
Minerals are found where water...

- Minerals also where major watersheds found -- watersheds, local streams, rivers -- feeding villages, cities, industries
Minerals, forests, water found where poverty is most intense

Of the 50 top mineral producing districts, 70% fall under the 150 most backwards districts.
Why poor?

- The wealth of mining doesn’t go back to the mining areas
- Mining takes minerals, degrades land, water and forests, does not provide local employment
- Mining displaces people from the existing livelihood but cannot replace it
‘Nature’ of poverty

- If environment is degraded, local water sources dry, forest is cut, poverty is exacerbated.
- People **live** on the environment. Environment is their survival base.
- They are demanding change in the terms of mining contracts and where mining takes place and where it does not.
- In a democracy they will be listened to. But change is difficult. Competition with cheap minerals tough. But will have to be done.
No entry: villages block mining companies entry into their forest

These protest over land and resources will require not just changes in policy, mining regulations but also learning to do more with less

This is the environmentalism of the poor
Searching for new ways: water

Water is not about water
Current paradigm creates islands of prosperity
Water is about building systems to distribute wealth

But cannot have ‘distributed’ management without local control Water is about deepening democracy

Poor communities in India showed how
Changed policy. Changed practice
Learning from traditions

Every region of India had learnt to live with water -- scarcity and plenty

Developed practice for ‘living’ with nature

Enormous diversity, technological sophistication

Lost to **mono-engineering** water management solutions
Trans-Himalayan Region
Jammu and Kashmir (Ladakh)
Lahaul and Spiti
Himachal Pradesh

Zings (Ladakh)
Rooftop water harvesting (Pali)

Thar Desert
Thar Desert

Khadins (Western Rajasthan)
Catch water where it falls
Rainwater harvesting has enormous potential

Sums of rainwater

100 mm rain falling on 1 ha of land means 1 million litres of water.
After five years of drought, agriculture in Jaipur-Tonk district.
100 wells...water at 50 feet...note 5
years of drought...no canal
irrigation...
no government
no government
How?
By painstakingly harvesting every drop of water for past 7-10 years

Key
Village Laporiya.
Green: catchment
Blue: tanks
Rest: agriculture
INDIA’S PARLIAMENT HARVESTS RAINWATER. DO YOU?

WATER WOES
The Parliament House complex uses approximately 570,000 litres of water daily, a requirement met through four tubewells in and around the complex, and through municipal water supply.

In the past three years, the groundwater level here has dropped three metres.

THE SPEAKER’S INITIATIVE
Lok Sabha Speaker Somnath Chatterjee invited the Centre for Science and Environment to provide technical assistance for a rainwater harvesting project at the Parliament House complex. The scheme was designed and implemented by the Central Ground Water Board and the Central Public Works Department.

THE WAY AHEAD
PARLIAMENT COMPLEX AREA: 10.34 hectares.
RAINWATER RECEIVED: 4.33 million litres (equivalent to water requirement for 76 days).

Rainwater is collected through the stormwater drain. It seeps into the ground through 14 recharge wells.

“Water Level Trends at Parliament House Annexe
13.8
15.3
17.3
18
0
48
12
16
20
38718
38749
38777
38808
Depth of Water Table in Meters Below Ground Level (bgl)
SOURCE: CENTRE FOR SCIENCE AND ENVIRONMENT

"I am sure we, being elected representatives of the people, can do our bit in the nation’s efforts to solve the water problem.”

“To manage our water resources for diverse use, we must work with a participatory approach involving not only government agencies but also the common people in the process of planning, designing and execution of all our schemes focussed on water.”

CATCH WATER WHERE IT FALLS
New challenges will demand new solutions for urban water-waste

Cities and industries growing. Need water. Will source from existing users. Increase stress and violence

Cities will source water from further and further away. Use clean water and discharge polluted water. Add to water stress

Cannot afford to waste. Cannot afford not to clean. But cannot afford to clean water in today’s technology

Will have to reinvent water paradigm. Source locally; minimise use; recycle and reuse; new technology for sewage treatment etc..
Reinvent growth pathways

Cannot afford to pollute and clean up. Too expensive

Cannot afford to take small (incremental steps) that get swamped by the speed of change

Need big solutions. Need changes in the way we think about growth

Need inventive solutions to leapfrog
Delhi: air pollution 1990s

The price of wealth

One person dies every hour in Delhi because of air pollution

In 20 years between 1975 to 1995 the GDP more than doubled in India, but...

Vehicular pollution load went up 8 times.

The industrial pollution load went up 4 times.

GDP doubled
1. Smog Inc.

We launched the Right To Clean Air Campaign to see through the smokescreen ....
Look at these black spots on the lung. The unfortunate owner lives in Delhi and has been breathing polluted air. Air full of carbon particles which accumulate in the lungs (black spots). What you can't see is a cocktail of gases and tiny particles, even smaller than carbon that get into our bodies. Actually, you are getting polluted.

Scary? But those cars are so sexy!
Roll down the window of your bullet-proof car, Mr Prime Minister
The security threat is not the gun. It's the air of Delhi

PEOPLES' CHARTER ON CLEAN AIR
FOR AN IMMEDIATE IMPACT

- Reduce diesel on impact
  Diesel emissions contain deadly particulate matter with traces of the strongest carcinogen known to date. Indian diesel is 25% dirtier than the world's best.

- Remove Petrol from Delhi
  India is moving towards unleaded petrol. But the petrol contains too much benzene. Though we are one hundred times less petrol than USA, the total amount of benzene emissions from Indian vehicles is the same as in the US.

- Benzene causes blood cancer and air should have no benzene at all, says WHO. Yet the level of benzene in and around Connaught Place in Delhi is 10 times higher than the European safety limit. If you live in Delhi your chances of getting blood cancer are twice as high as people living in Bangalore, Chennai and Mumbai.

- Stop private diesel cars
  Registration of all diesel private cars should be banned in cities like Delhi. Cheap government diesel means more diesel cars, including luxury models.

- Maximize emission levels
  Manufacturers must inform buyers of the exact emission levels of their vehicles.

- Monitor all polluting vehicles
  Improve air quality assessment. A wide range of pollutants are not monitored till date. Alert people about pollution levels in the city. It is done all over the world.

Register your protest to the Prime Minister today
P.M.O., South Block, New Delhi 110 011
Tel: 301 8939 Fax: 301 8933, 301 9817

Join CSE's Right To Clean Air campaign
Centre for Science and Environment
41, Tughlakabad Institutional Area, New Delhi 110 062
Tel: 698 3394, 698 1124, 698 6399 Fax: 698 5879
Email: cse@cseindia.org Website: www.cseindia.org

One person dies every hour due to air pollution in the city.

In Delhi vehicles are responsible for 70 per cent of the pollution load. Because of the high toxicity of fumes from transport fuel, one out of every 15-18 people living in Delhi is likely to get cancer.

Your government has failed to arrest this deterioration in air quality in Indian cities. Worse still, it contributes to the pollution in a big way by producing low quality fuel in state-owned refineries. Improving fuel quality in a short-term measure which will go a long way. Vehicles using clean fuel will pollute less.

Seeing your government's inability to tackle air pollution, we present you with a people's charter for clean air. This will help to immediately improve the quality of the air we breathe.

Mr Prime Minister, 50 years into Independence, please give us our right to clean air. We hope you will take our concern seriously.

Yours sincerely,
Centre for Science and Environment
November 1, 1998
The question was: what was the development path of air pollution control? Most cities spending; struggling.
A KEY QUESTION

Do we have to go through the same stages of environmental management that the West went through or can we leapfrog?

- Pre-Euro I
- Euro I
- Euro II
- Euro III
- Euro IV

- Poor diesel
- Improved diesel
- Natural gas
- Hydrogen
200,000 vehicles run on CNG -- largest public bus fleet; air impact visible

PM10 at ITO Traffic Intersection
(March 98-Jun 05)

PM10 trend projection
pre Supreme Court directions

PM10 trend March 98- Dec 05, Post Supreme Court directions

Microgramme per cubic metre
Transport related emissions continue to grow worldwide.

We clean fuel and technology, then we drive more, **result same**: local pollution or global pollution.

In Delhi added problem: add 400,000 vehicles each year, cannot get rid of old. Pollution increases.
Efficiency is not the answer; sufficiency.. Can we restrain cars?

In UK, cars became more efficient; emissions increased as people bought more; drove more

Index 1996 =100

- Private car km
- CO₂ emissions from private cars
- Average new car fuel efficiency (litres per 100 km)
- PM₁₀ emissions
Different futures possible

Cars occupy 90 per cent of road space in cities. But cars have not replaced the bus, the bicycle or walking. Cars have only marginalised the bus.

60% use bus
20% use car+2-wheeler
20% cycle
Car takes 80% road space
Equity in road space will drive new policies

Cars occupy 80-90 per cent of road space in cities. But don’t ‘move’ people

Can re-invent mobility by sharing road space equitably?

Is possible. Is happening -- Delhi is ordering 7,000 buses, building bus lanes...difficult but possible
Mother of all challenges: climate change

1. Climate change is **real**; it is already dangerous; heading towards catastrophe

2. Climate change is **urgent**; it needs us to act quickly and drastically -- 50 to 80 per cent reductions over current levels by 2050

3. **But how?** Climate change is linked to economic growth. Can we re-invent growth?
3-climate truths:

1. Is related to **economic growth**. No one has built a low carbon economy (as yet)
2. Is about **sharing** growth between nations and between people. The rich must reduce so that the poor can grow. Create ecological space.
3. Is about **cooperation**. If the rich emitted yesterday, the emerging rich world will do today. Cooperation demands equity and fairness. **It is a pre-requisite for an effective climate agreement.**
Global action: big words and small change
New renewables: small part of world primary energy supply: less than 0.9%

Bulk of renewables is from the cooking stoves of poor women

Our renewables don’t count

Diagram showing energy sources:
- Coal: 25.3%
- Oil: 35%
- Natural gas: 20.6%
- Nuclear: 6.3%
- Non-renewable waste: 0.2%
- Renewables: 12.7%
  - Hydro: 17.4%
  - Biomass: 78.6%

New renewables (Wind, Solar, Tide, Geothermal): 4.1%

Note: Approximate figures
Source: Renewables Information 2007, IEA
Framework for future action

1. Industrialised countries to take deep cuts (30% by 2020) minimum. **US and Australia must join**

2. No delay in action -- shifting deadlines to 2050 not acceptable

3. Emerging rich and rest participate, not by taking legally binding cuts but through a strategy to ‘**avoid**’ future emissions

Create the framework for low-carbon growth strategy
Options exist: re-invent growth. Can avoid pollution

1. Can build “clean” coal power stations
2. Can build distributed power grid, based on renewable
3. Can re-invent mobility to move to public transport..
4. 18% emissions from land use changes. Can protect forests; Can plant new forests..
5. Large numbers of people already renewable – because of poverty

Can leapfrog from being poor to rich without taking fossil route
The framework for action. But..

The South will do what North has done
Will first get rich; add to pollution; then invest in cleaning it up

A low-carbon growth strategy will cost money. The South will need to invest in efficiency, pollution control before it gets rich

This needs change in global framework
Extraordinary crisis, needs extraordinary responses

1. Need to cut emissions by 80% by 2050;
2. Need to peak emissions by 2015 and then cut
3. New (zero-fossil) technologies are not competitive or are limited
4. Will not work without changes in consumption. Have to reduce and have to change the way we do business

Use equity to create the framework for the great energy transition
Historical emissions: Burden of the living

Cumulative CO₂ emissions from fossil fuels, 1902-2004

Source: Carbon dioxide Information Analysis Centre, 2007
Not acceptable

WATCH THOSE CALORIES!

NORTH

CARBON CAKE

SOUTH
Contract and converge

Increase to converge climate justice
Share economic and ecological space for our common future
International and intra-national equity needed

Poor in India provide ecological space, not rich. They under-utilise carbon quota

Need **intra-national per capita equal entitlements** within country

This will provide financial options for poor to leapfrog, invest in technologies for all, not just for few, will not subsidise fossil fuels
Politics for future

Cannot freeze global inequity

Cannot survive climate change – rich or poor

Climate is not just about the failure of the market
It is about our failure to make the markets work for public and common good

It is about politics
Otherwise road to ‘common’ hell