

CENTRE FOR SCIENCE AND ENVIRONMENT



ANIL AGARWAL DIALOGUE 2019

**ANNUAL MEDIA CONCLAVE
ON THE STATE OF INDIA'S
ENVIRONMENT**

TIME UP FOR REINVENTION?

If 2018 was the year of revolt, 2019 should be the year of realisation that we must change the way we do business



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State of Environment

- Good news and bad:
- **Environmental issues are 'hot'** but action is weak; often detrimental. Governments want easy answers to this ever-growing challenge
- **Pollution crisis impact on health is understood in case of toxic air**– but not when it comes to water. Can purify water we drink so, rivers do not matter
- **Garbage disposal is on the agenda but not recycling or reuse.** We sweep and throw where the poor live or in waterbodies



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Status

Big picture

- Forest protection happening but at the cost of poor's livelihoods and rights. Rich lands and poor people continues
- Tension between wildlife and people at the edge of forest growing and will cost. No resolution being discussed
- Agrarian crisis is being exacerbated by freak and extreme weather events
- India's urban growth is in the 'illegal' and dark zones – where there are no basic services and regulations for pollution do not exist

Truths: hitting home



- Air pollution is a great equalizer: rich cannot buy way out of the air pollution crisis – air purifiers will not work
- Airshed is one and has no boundaries – poor will add to toxins if they have no access to clean energy. Rich will pollute with diesel SUVs. Luxury vs survival emissions
- Middle-class environmentalism will not work in India. Cannot say Not-In-My-Backyard (NIMBY) and move pollution to poorer backyards



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Truths:

Not hitting home

- Climate change is here and will impact all. Today the poor (who have not contributed to stock of emissions) are most vulnerable. But emissions are increasing; will hit all
- Donald Trump, Brexit and Yellow Vests (France) are part of the same crisis of unaffordable and unsustainable growth
- Globalization has shifted emissions but not reduced consumption. It has discounted the costs of environment and labour. But now it has created new votaries for globalization. **We want it. Its our ticket to growth**



3-Failures

- **Failure of imagination** – what to do **differently**
- **Failure of knowledge** – **how** to do it and **why**
- **Failure of implementation** – standing behind tough decisions; capacity to deliver change and capacity to enforce regulations



- What do we do?
- Lets take different sectors and see where we stand and where do we go next

STATE OF AIR POLLUTION



Air pollution is responsible for close to 13 per cent of deaths in India and its burden is highest in northern states of Delhi, Punjab, Uttar Pradesh and Haryana. At the same time, more disability-adjusted life-years lost due to lower respiratory infections were triggered by air pollution than by tobacco consumption. In fact, an average Indian will live 1.7 years longer if the country is able to clean its air

12.5%

of total deaths in India in 2017 were caused by air pollution

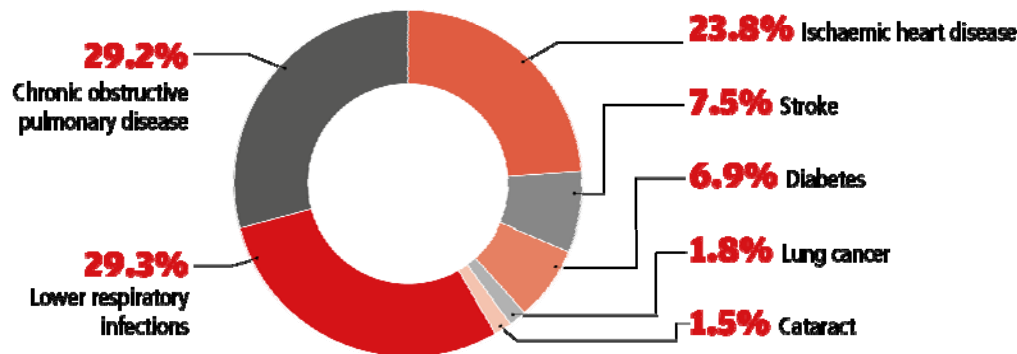
51.4%

of the people who died due to air pollution were younger than 70 years

76.8%

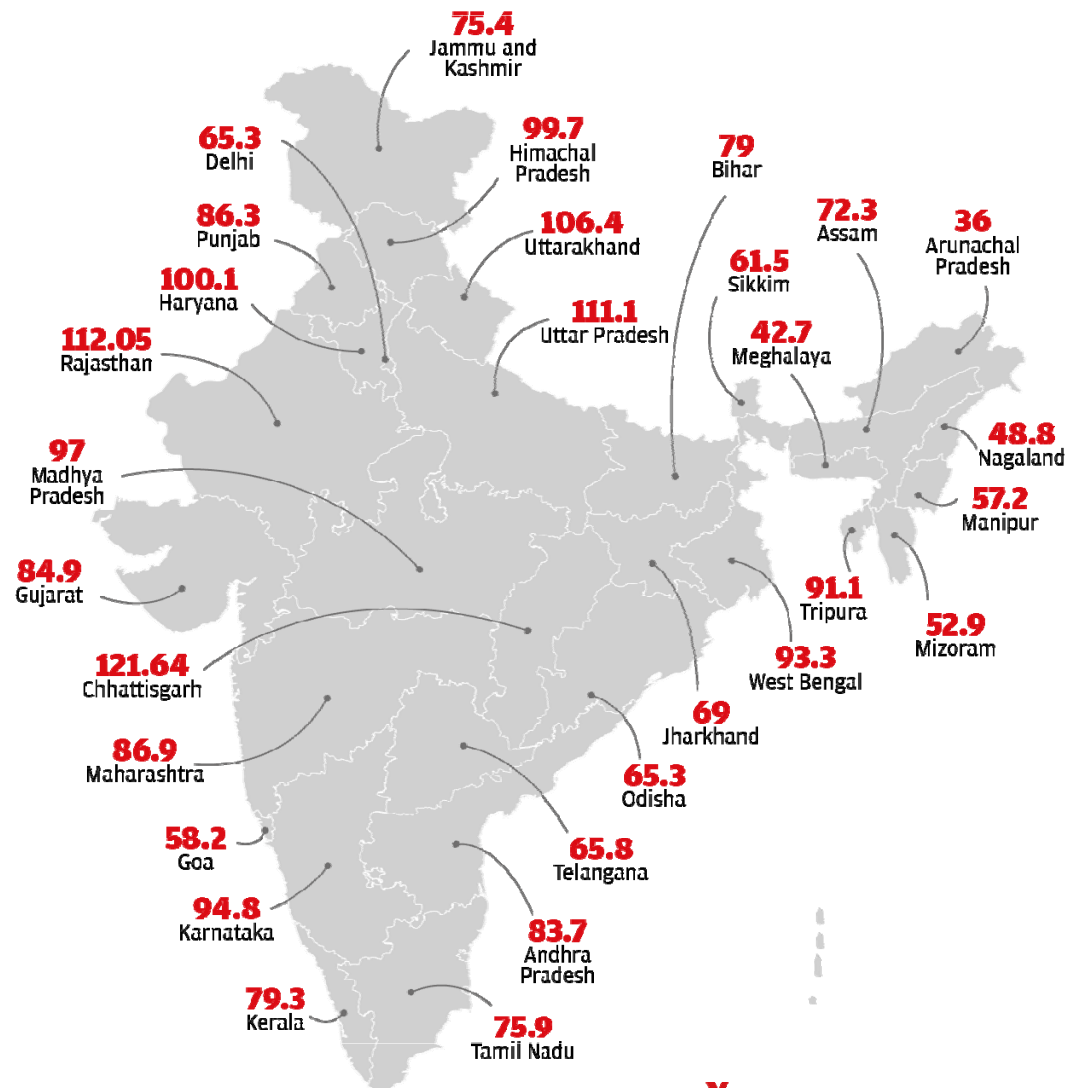
Indians breathe air that is worse than the levels recommended by National Ambient Air Quality Standards

How poor air affects us | Disability-adjusted life-year (DALY) lost is the measurement of the gap between current health status and an ideal situation where the entire population lives to an advanced age, free of disease and disability. The share of diseases triggered by air pollution that caused the loss of DALYs in 2017 were:



THE AIR THAT KILLS

Numbers show horrifying levels of air pollution in the country



Source: *The impact of air pollution on deaths, disease burden, and life expectancy across the states of India: the Global Burden of Disease Study 2017*, Lancet, as accessed on 18 December, 2018

X

Death rate per 100,00 population
attributable to air pollution
Data year: 2017



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Politics of inaction

I am 1%



Everybody wants to blame the other – **we are only 1% of problem.** Dust is favourite. But sources are:

- **Vehicles** – toxic (trucks) and diesel vehicles and/or exploding numbers of 2-wheelers and cars and taxis
- **Industry** – use of **dirty fuels** like pet coke, coal etc and no enforcement of standards
- **Power plants** – coal is burnt without emission control
- **Solid waste burning** – new source/big
- **Dust** – recirculated and coated with toxins
- **Biomass burning** – chulhas of poor women or agricultural residues by farmers

Scale

speed of action



- This year there is some success. In Delhi and surrounding region we see more blue skies. Evidence that air quality has improved. **Not small gain. But not big enough**
- Will go from 'severe' to 'very poor' and 'poor'
- This after shutting last coal power plant (Badarpur); bringing BS 6 fuel; banning pet coke and furnace oil in NCR; coal in Delhi; restraints on truck traffic; shutting construction for up to 10 days...



What now? **Agenda**

- Take tough decisions/transformational
- 1. **In the way we drive** – mobility means moving people not cars. Today less than 15% of Delhi (less than 10% of India) drives. Congestion and pollution. Must plan for different mobility. But has to be affordable for poor. Has to be modern and convenient for rich
- 2. **In the fuel we burn** – clean gas/clean electricity from renewables has to be future option – but at scale
- 3. **In the way we do enforcement** – today agencies are crippled and deterrence does not exist. But worse, as we crack down on legal it all moves to the dark side



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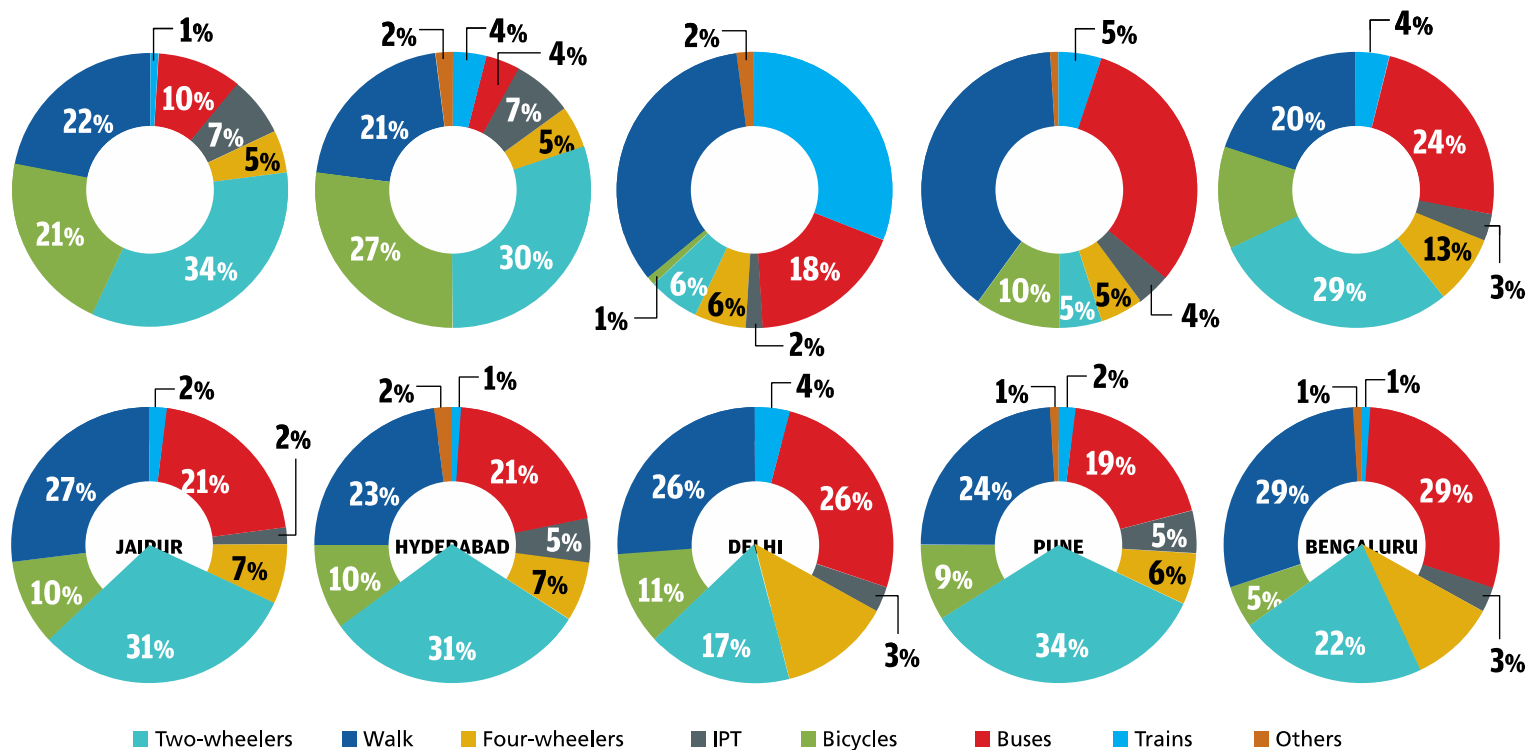
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Failure of imagination...

Car has not replaced...

Car has marginalized bus/ train/
cycle/ walk...

MODE OF TRAVEL TO WORK IN MAJOR MILLION PLUS POPULATION INDIAN CITIES



Source: Census 2011

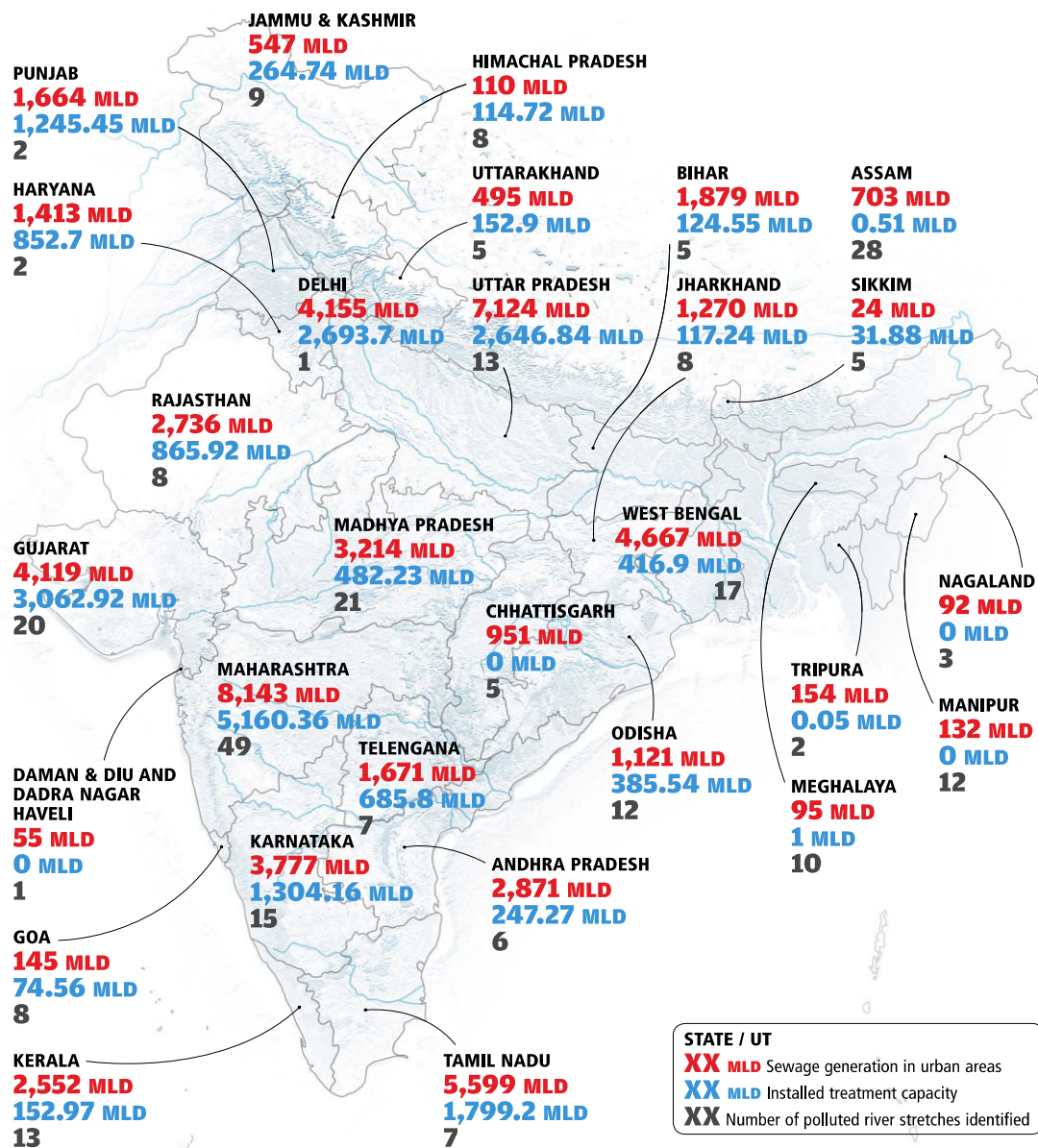


Rivers are dying..

- ...**dead** in many stretches
- Challenge is that many do not have sanitation; then toilet if provided is not connected to underground pipe; if connected then drain is not connected to sewage treatment and if some sewage is treated then it gets mixed with untreated and unconnected sewage of many = **pollution**

Extent of contamination

Spending enormous money, creating awareness and building sewage treatment plants have not helped cleanse India's polluted river stretches. The estimated polluted riverine length is 12,363km, about 5 times the length of Ganga main stem

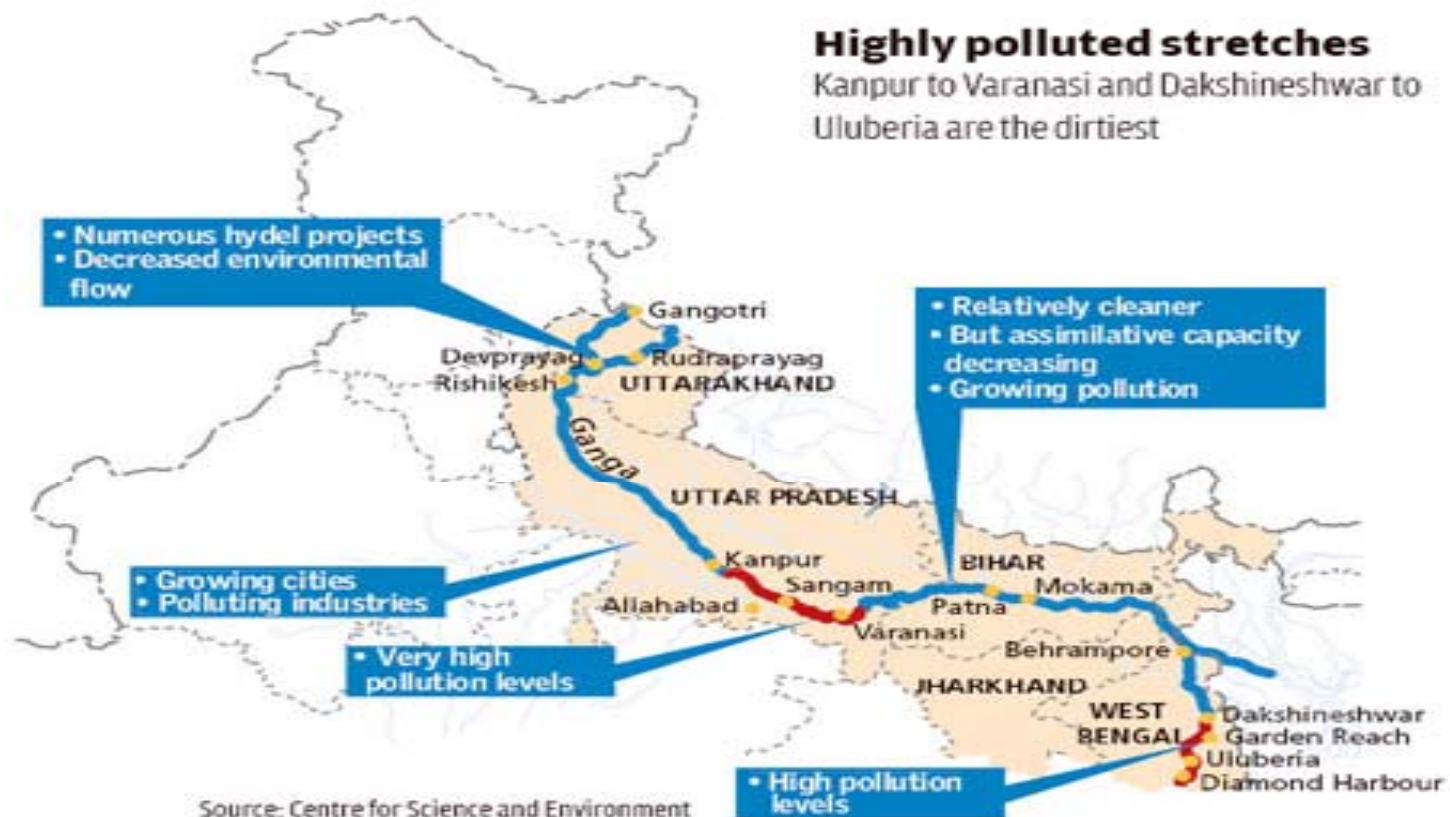




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Ganga cleaning not happening yet. CPCB data clear as yet



Why not? 1

- Hardware approach: sewage treatment plants built but then sewage increases. Cant keep up

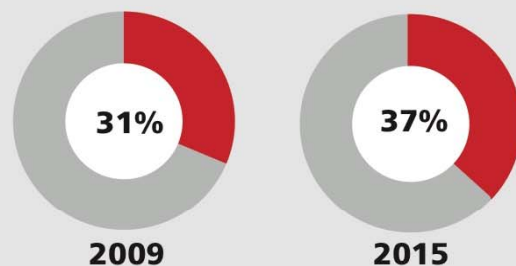
THE OTHER STORIES

SEWAGE GENERATION INCREASED BY 62%, TREATMENT CAPACITY BY 19%

Sewage generated by Class I & II cities (MLD)

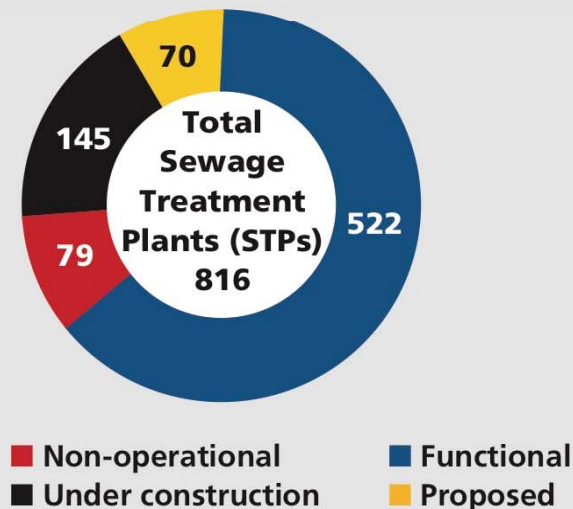


Capacity to treat



Source: State of India's Environment in Figures 2016

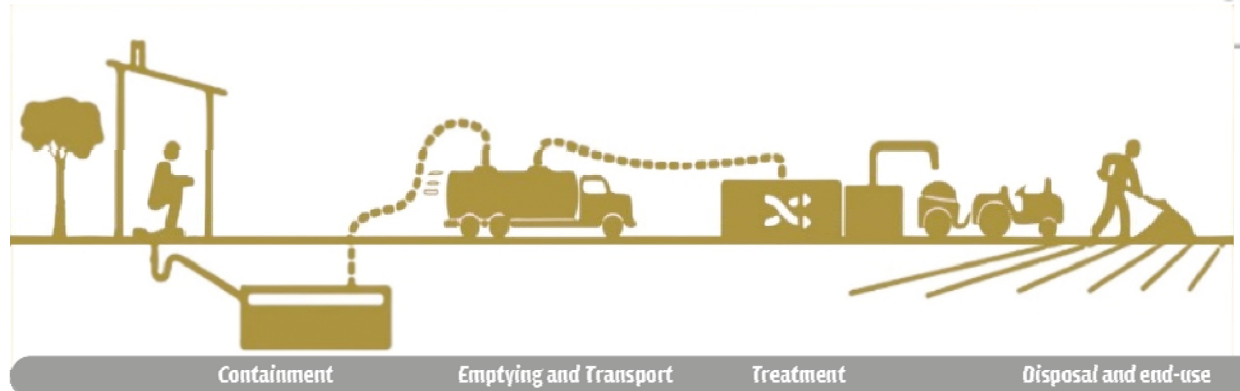
More than one-third facilities not working



2 We don't know how India 'shits'

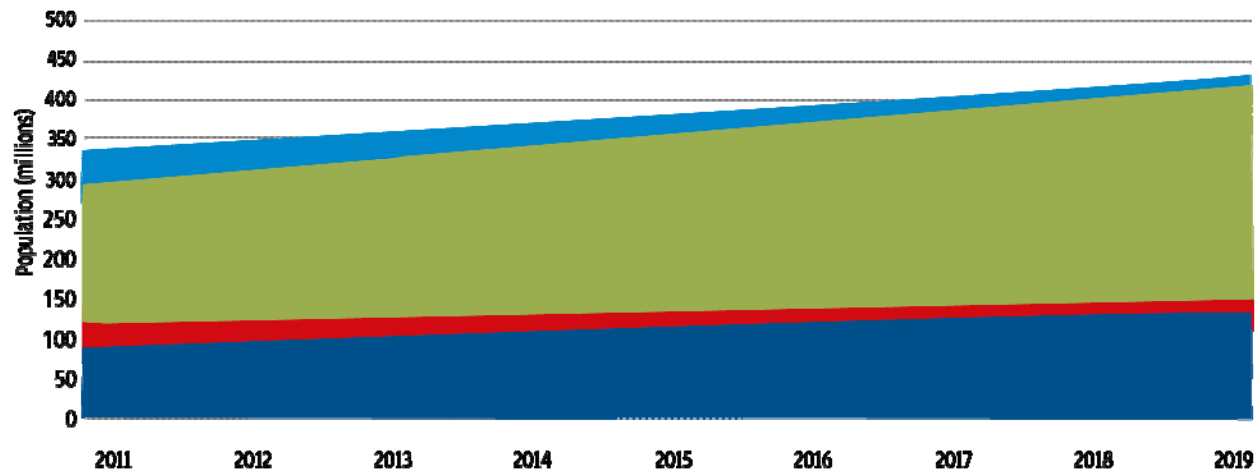
SANITATION CHAIN IN URBAN INDIA

Rate of open defecation has reduced from 12.7 per cent in 2011 to 2.8 per cent in 2018



Definition	Containment	Emptying and Transport	Treatment	Disposal and end-use
	An on-site sanitation system, such as septic tank	Removal and transportation of faecal waste from the containment using vacuum trucks	Process of converting faecal sludge into a product that is safe for end-use at faecal sludge treatment plant	Disposal and utilisation of the output. This is the manure

By 2018, open defecation was practised by only 2.8 per cent urban population. This shift has been largely achieved by the construction of on-site sanitation systems



Sources: Census 2011, SBM Dashboard

● Open defecation ● On site ● Direct to drain ● Sewered



Shit-flow diagrams (SFD)

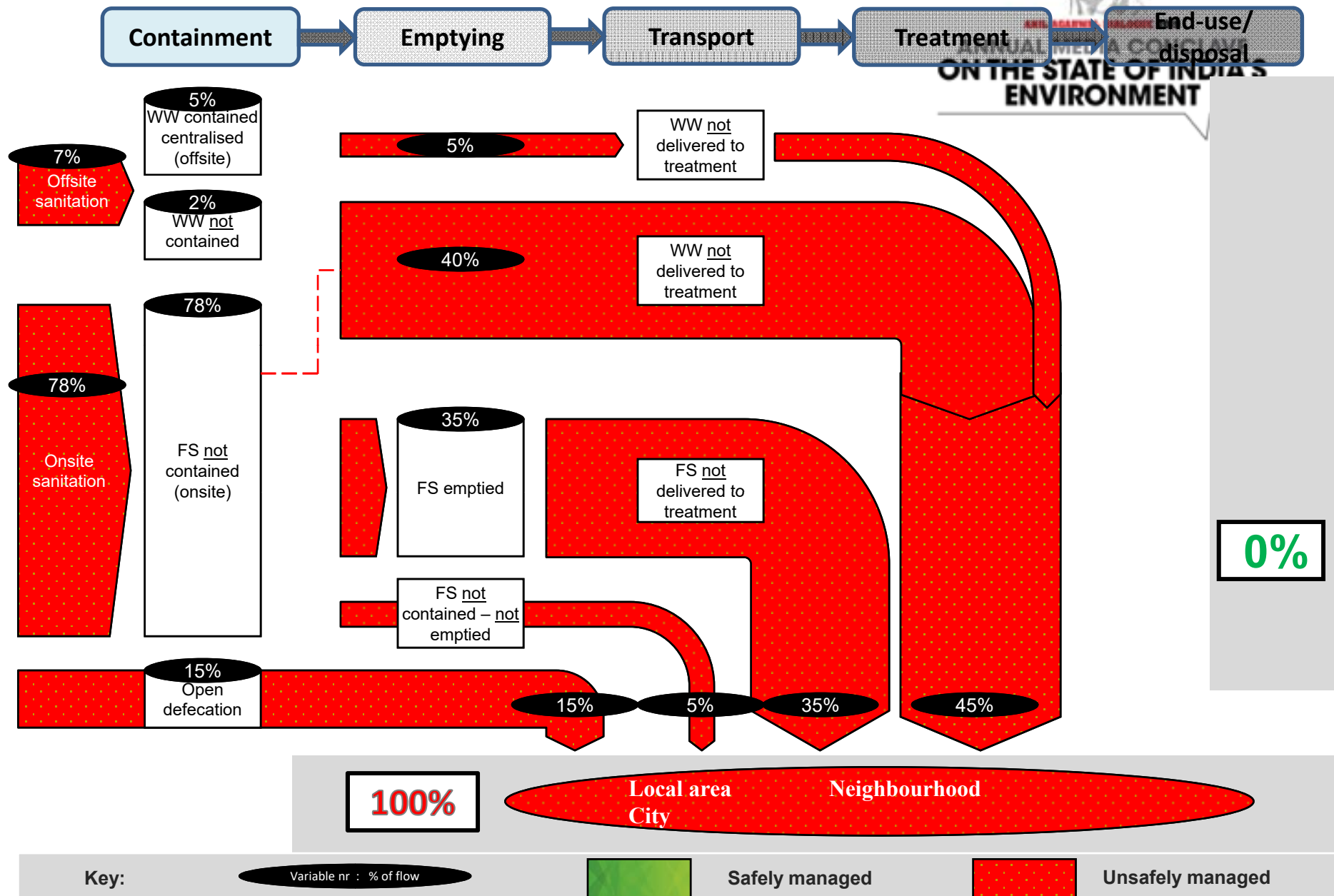
- All cities; **majority of people** use “on-site” treatment systems
- Septic systems; now often just deep containers in the ground that are cleaned; waste is ‘dumped’ in rivers; rivers; open areas. Pollution grows
- No regulations for this
- **Not considered part of ‘sanitation’ reality**

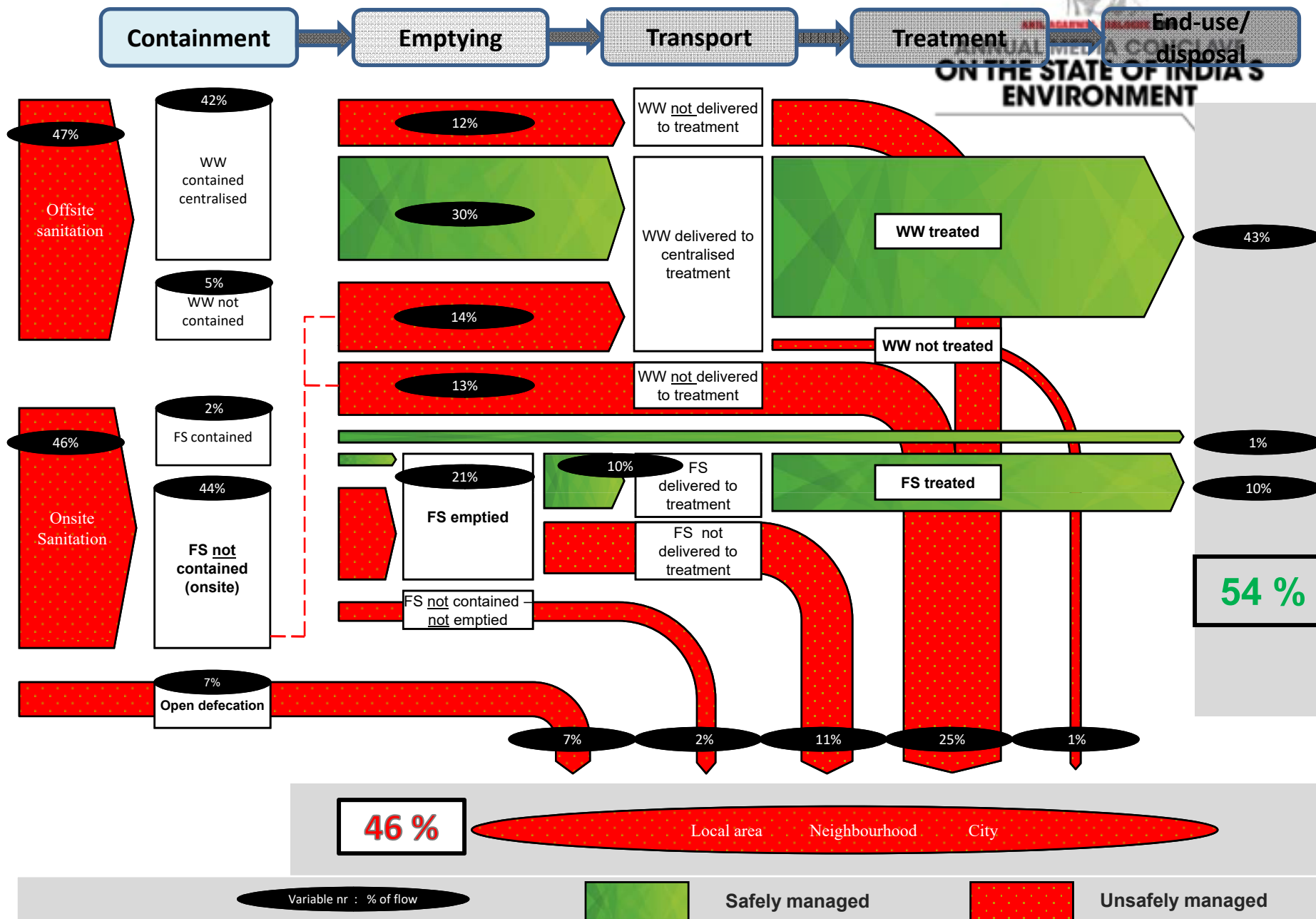
Srikakulam- 31 July 2015

Desk based

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Status: Final







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Re-invent sewage systems

- If India can jump-skip-leapfrog the landline-grid route in connectivity in telephones and energy access then why not in sanitation?
- **Build around 'on-site' septic tanks.**
- **Accept them**
- **Regulate them**
- **Transport the sewage**
- **Treat it and recycle it for use in agriculture**
- **Improve the nitrogen-cycle. Take and put back on land**

Imagination, knowledge and implementation



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Change? Where will it come?

- **From dissent**

- NIMBY of the poor

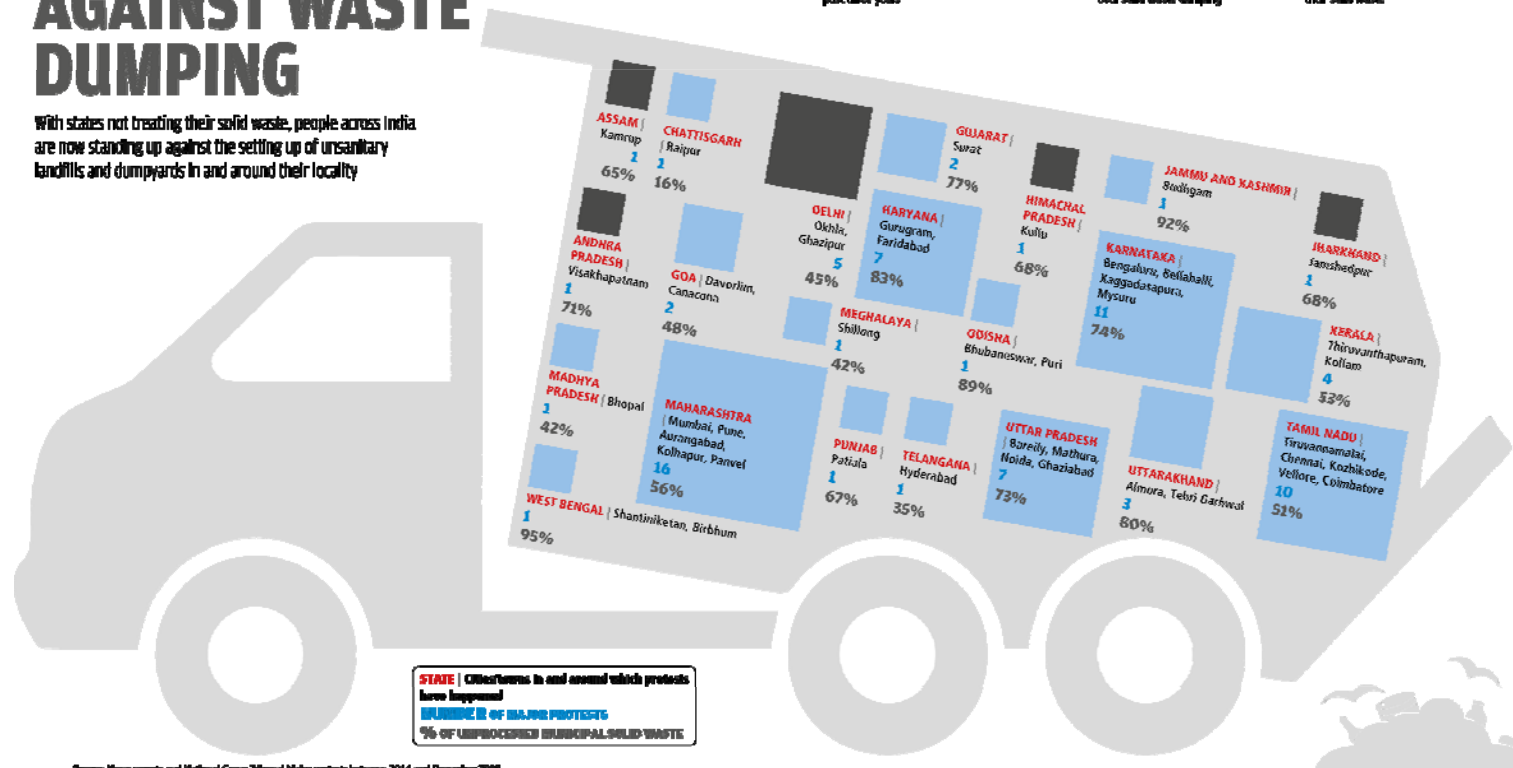
- When poor say no change will happen...

...where will the rich city/person's waste go?

Where will they mine their coal? How will they safeguard their tiger

With states not treating their solid waste, people across India are now standing up against the setting up of unsanitary landfills and dumpyards in and around their locality

of the 22 states process less than 50 per cent of their solid waste

Source: News reports and National Green Tribunal Major protests between 2014 and December 2016
% of unprocessed municipal solid waste data from Swachh Bharat Mission-Urban



Agenda

- **Dissent needs informed, critical public opinion about developments outside our circles**
- We have closed our circles of knowledge
- Intolerance growing
- State-market-consuming class has become one; rest of the people outside. But matter



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Change?

- **Links, knowledge and real choices**
- Air pollution outrage is because monitoring is happening – 50 stations; on phone
- So, health impact will be driver for change cooking fuel or toilets
- But people also need options – real and affordable for switch to be made/refill of LPG cylinders/buses and cycle lanes/water and waste management in toilets/organic markets that pay the price to farmers and at rate consumers can afford



Change????

- **Enforcement..implementation..delivery**
- Needs institutional capacity
- Needs credibility/independence
- Needs power to take strong deterrent actions and this needs systems that do not add to transactional costs (corruption)



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Environmental(ist) Agenda

- Push the envelope of change (hard)
- Track and report so that the truth is not hidden
- Look and stand behind solutions – cannot allow inaction to take over. Need imagination
- Ensure that the politics of environment are not neutered. Need values

- **Bottomline:**

Cannot be sustainable if not inclusive