

Regulator's Training Programme

**Continuous Emission Monitoring System**  
*February 6-10, 2017*

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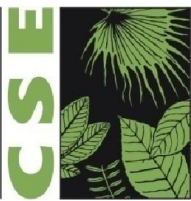
# People act

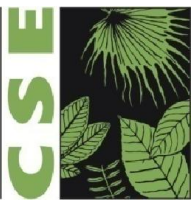
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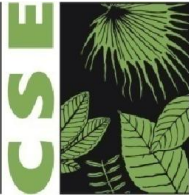
## **‘The peoples e-movement’**

**1972: The Chipko movement in the Himalayas**







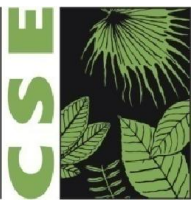


# CSE: Push









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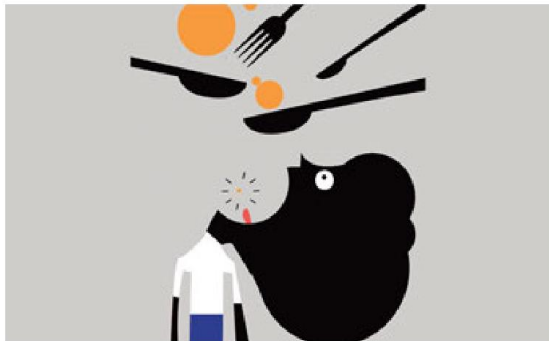
E-Magazine

## The big challenges for Telengana

As the Congress-led United Progressive Alliance meets to decide on the demand for a separate state of Telengana, a look at some of the uphill tasks the new state will face

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Photo: Reuters



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### SPECIALS



#### Defeat for Vedanta as tribals rejects mine plans in Niyamgiri

The overwhelming rejection by Dongria Kondh tribals, of a proposal to mine their sacred lands in Niyamgiri Hills is an unprecedented victory for indigenous rights in the face of business interests. Read this press release by Amnesty International.

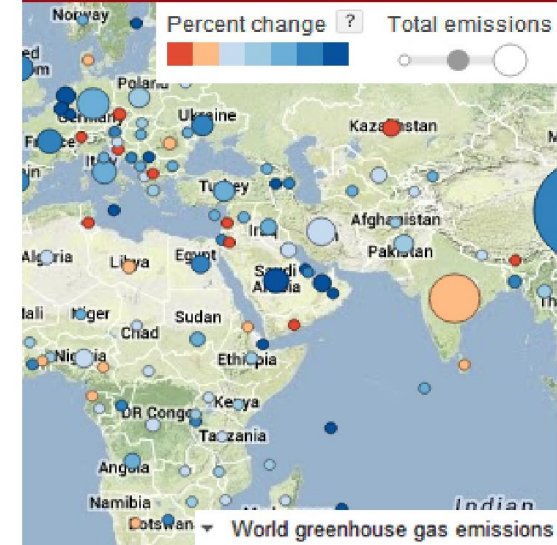
Tags: Vedanta Aluminium, Kalahandi, Mining, Bauxite, Orissa, Dongria Kondh, Tribals

### See Also

- In-court: Supreme Court judgement on Orissa mining Corpn. dated 18/04/2013.
- Report: Lanjigarh development story.
- Report: Vedanta's perspective uncovered
- Document: Expansion of Alumina refinery and power plant at Lanjigarh.
- Report: EIA report for expansion of Alumina refinery from 1 MMTPA to 6 MMTPA...
- Report: Expansion of Alumina Refinery from 1 MTPA to 6 MTPA.
- In-court: Orissa High Court judgement on Vedanta, July 19, 2011.



### WORLD CO2 EMISSION BY COUNTRY

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#### Gujarat Wind Power Policy 2013



Gujarat Chief Minister

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#### The world nuclear industry status report 2013



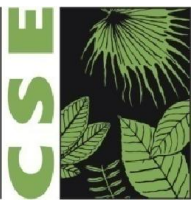
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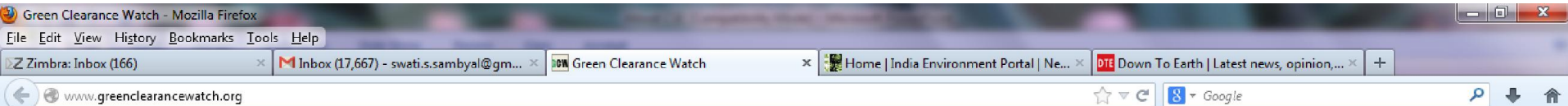
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# Green Clearance Watch



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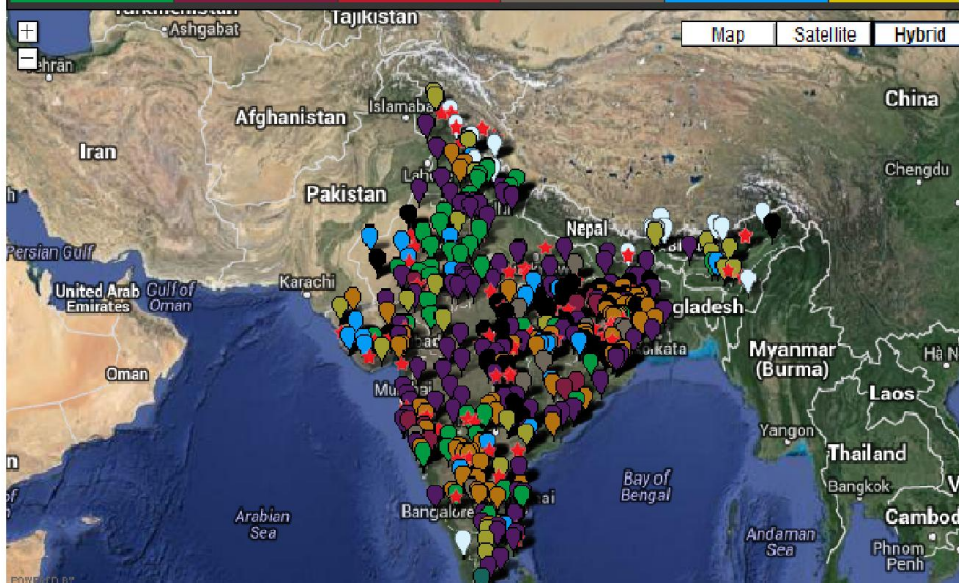
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Green Clearance Watch is a public information system to track environmental and forest clearance of industrial and development projects in key sectors from April 2007 till date

### Main Sectors

★ Recent Public Hearings

THERMAL POWER PLANT CEMENT IRON & STEEL NUCLEAR POWER PLANT COAL MINING HYDROPOWER  
OTHER MINERALS BAUXITE MINING COAL WASHERY IRON ORE MINING LIMESTONE MINING PORT



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To Date:

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### SEARCH HELP

- Search in any combination to obtain important data and information
- Click on companies to get a list of their projects granted environmental clearance across sectors
- Click on an industrial sector to obtain information like capacity cleared, state-wise distribution, land requirement, etc.



# CSE's Global Presence

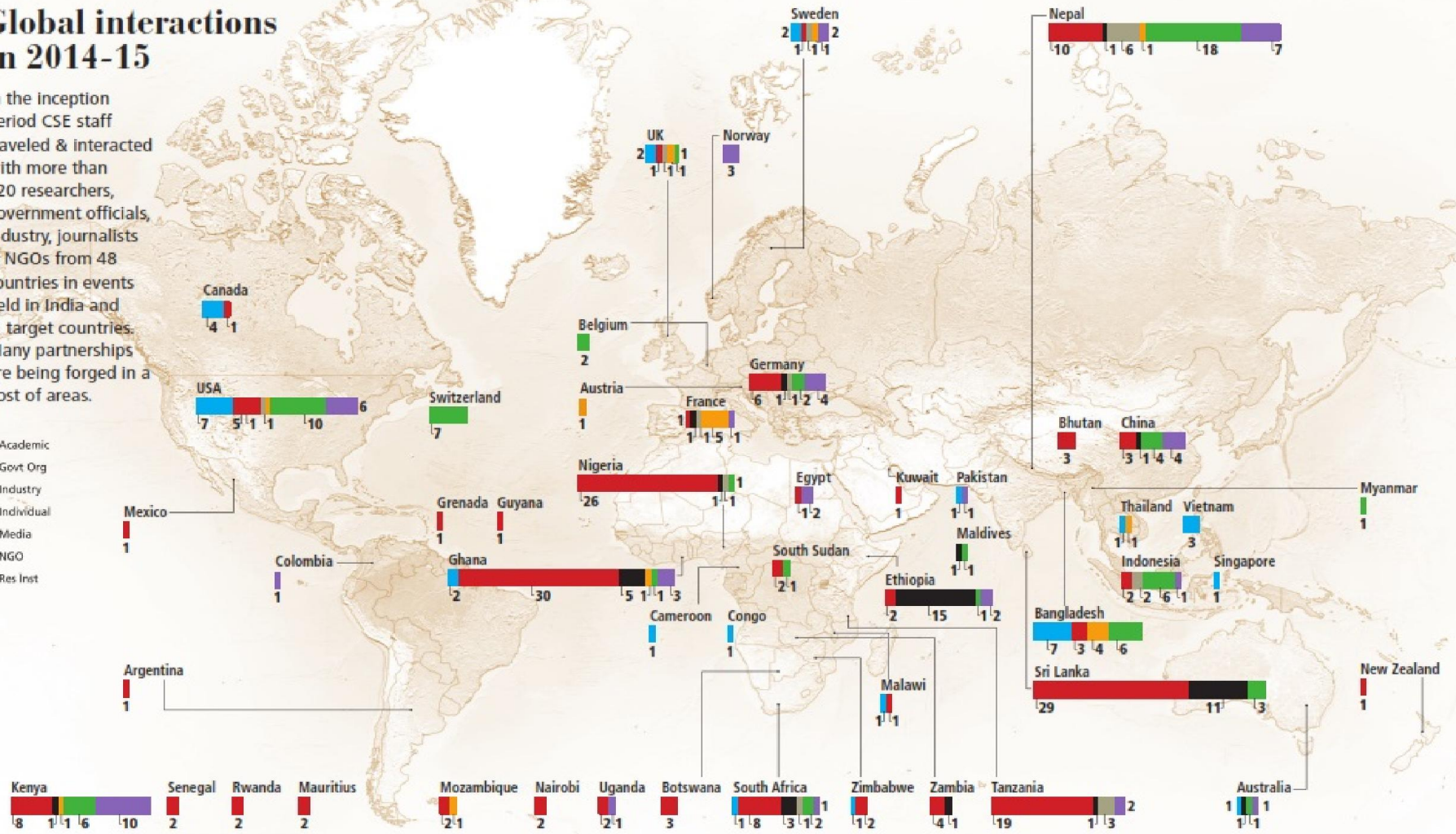


# Global Interactions (2014 – 15)

## Global interactions in 2014-15

In the inception period CSE staff traveled & interacted with more than 420 researchers, government officials, industry, journalists & NGOs from 48 countries in events held in India and in target countries. Many partnerships are being forged in a host of areas.

- Academic
- Govt Org
- Industry
- Individual
- Media
- NGO
- Res Inst







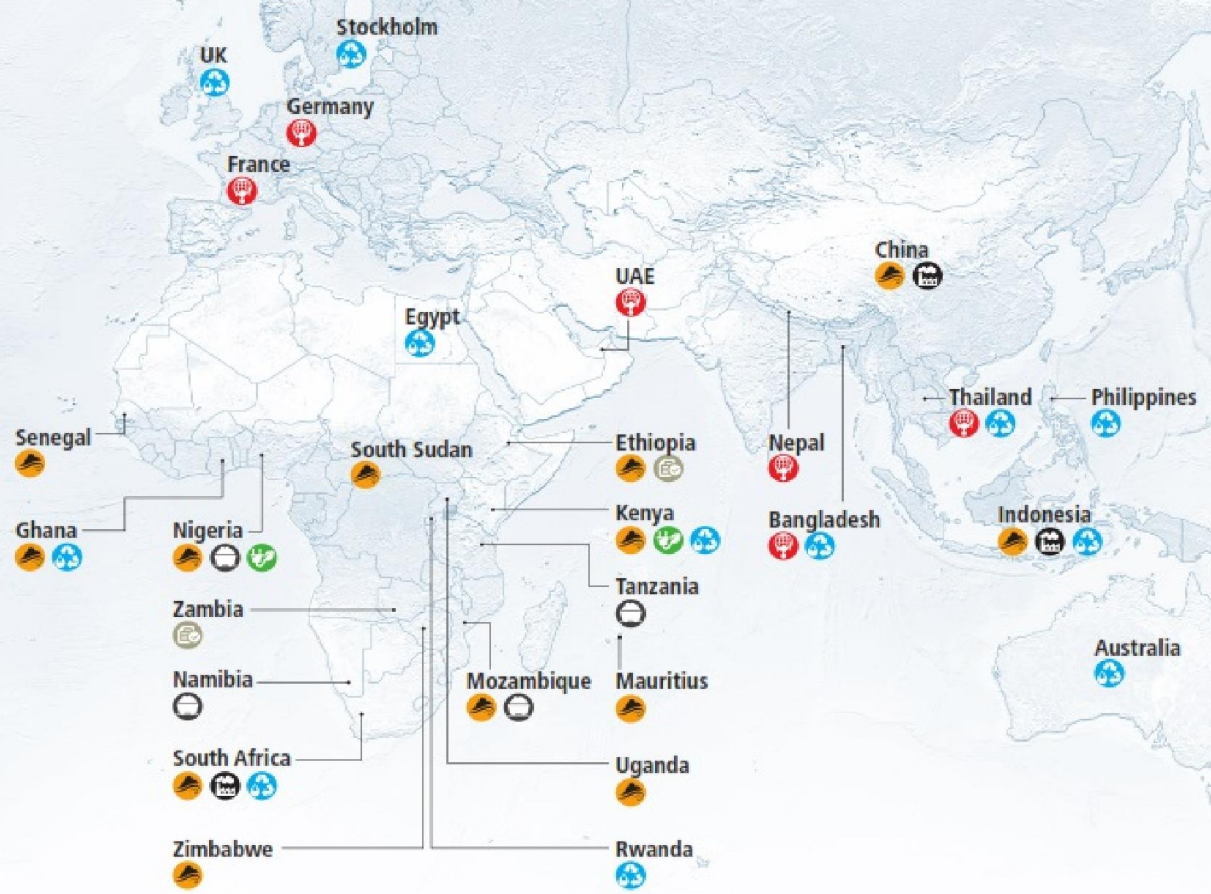
# Global Engagements (2015 – 16)

## PROGRAMME

- Clean air and clean diesel**  
Ethiopia, Nigeria, Kenya, South Sudan, Ghana, Uganda, Senegal, Mozambique, South Africa, Zimbabwe, Mauritius, China, Indonesia
- Industry and environment**  
*Thermal power plant*  
Indonesia, South Africa, China
- Mining and EIA**  
Tanzania, Mozambique, Nigeria, Namibia
- Compliance**  
Ethiopia, Zambia
- Renewable energy**  
Nigeria, Kenya
- Climate change**  
Germany, France, Thailand, UAE, Bangladesh, Nepal
- Water management**  
Rwanda, Ghana, Kenya, South Africa, Egypt, Indonesia, Thailand, Philippines, Australia, UK, Stockholm, Bangladesh

## Global engagements for 2015-16

CSE teams will directly engage in activities and/or conduct programmes in 26 countries spread across Africa, Asia, and selectively, in Europe and Australia.



# Thanks



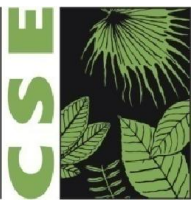


CENTRE FOR SCIENCE AND ENVIRONMENT



# **CEMS: Implementation in India**





# Why do we need ?

- **Incessant problem of environmental regime in emerging economies:**
  - ✓ Weak pollution norms,
  - ✓ Missing- standardised monitoring practices,
  - ✓ Transparency,
  - ✓ Standardized market (like emission trading)
- **Accurate and credible pollution monitoring and reporting is crucial both for- compliance enforcement and process optimization/control. CEMS can be instrumental. Potential to bring new era of environmental regulation.**



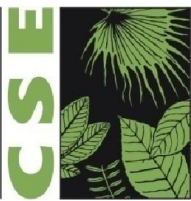
# What do we have ?

- **A pilot scale PM ETS (2011) - Gujarat, Maharashtra and Tamil Nadu. Guidelines for PM CEMS for pilot scale ETS - Nov, 2013**
- **CPCB's direction for installation of CEMS – Feb, 2014**
  - ✓ 17 categories of industries (2764), CETPs (192), Common bio-medical treatment facility (198), Common hazardous waste treatment facilities (26), Municipal solid waste treatment facilities and
  - ✓ Other industries mandated by CPCB/SPCBs/PCCs
- Guideline for effluent continuous monitoring – Nov, 2014
- Draft notification by MoEF&CC on CEMS- April, 2015. **On hold.**
- **Deadline was 30/6/2015. By March 2016, nearly 80% of 17 categories industries have already installed or in process. Closure notices sent to around 500 units**



# Challenges Ahead

- **Lack clarity on suitable technology selection. Multiple CEMS technology in market and all claims suitability.**
- **System for device certification or performance check need to be developed. It is important for performance assurance.**
- **Guidelines and protocols for technology selection, installation, performance check, data reporting are to be prepared.**
- **Independent lab shall carry calibration and verification of device. Third party lab empanelment system yet to be set-up.**
- **Compliance check mechanism for CEMS is required. Conventional compliance check system used in manual monitoring can't be used with CEMS.**
- **Infrastructure development is required.**
- **CAPACITY BUILDING IS MUST for all: Regulator, Industry, Vendor and service providers**



# Recent improvements

**Approach towards pollution monitoring & reporting has changed which is important. Long way to go ahead.....**

## **CSE is playing crucial role**

- Working closely with MoEF and CPCB
- CSE carried a number of conferences/ meetings/ round tables with stakeholders
- Formed a CEMS experts committee
- Carrying survey of status of CEMS implementation
- Developing CEMS guidelines & Protocols in consultation with experts from Europe
- Capacity building through trainings and exposure visits