Air Quality Community of Practice - Activities in India

User Engagement Session, Beijing
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Outline

- Examples of Community based efforts for Air Quality in India
- Need for an AQ CoP
- Summary of the activities thus far
- Future work
Example: 6 City Source Apportionment Study

- CPCB Project – prompted by the Auto Fuel Policy
- Bangalore, Mumbai, Delhi, Pune, Kanpur and Chennai
- Common methodology – formulation with assistance from USEPA and DRI
  - NEERI- USEPA Co-operative agreement for Source Apportionment Capacity Building
- IIT Bombay: Development of Source Profiles
  - Need for Local, Region and activity specific profiles
  - PM10
  - PM2.5
  - Combustion and Non-combustion sources
    - 39 elements, 12 ions, EC/OC
- Used by 6 cities (CMB Model)
• **Real Accomplishment**
  - Report to be soon submitted to the parliament
  - 60 people from 7 institutes (TERI, IITK, IITM, NEERI Nagpur, NEERI Mumbai, ARAI and IIT B) worked together with the CPCB for 3 years and built the capacity for air quality management work

• **Real “NON-Accomplishment”**
  - 7 institutes worked together for 3 years and built the capacity, with no FUTURE
  - There is no platform for researchers to continue the work
  - Resolution of source apportionment through PM10 adequate ? Need for PM2.5 based source apportionment ?
  - Potential for societal benefit – but no structure for participants to engage
A Recent Development...

Comprehensive Environmental Assessment of Industrial Clusters
MoEF through CPCB published a report

- Development of methodology for a Comprehensive Environmental Pollution Index (CEPI)
  - Water
  - Air
  - Soil

- Based on the CEPI, 88 Clusters have been declared as critical to very critical
- MoEF through CPCB published a report
  - Development of methodology for a Comprehensive Environmental Pollution Index (CEPI)
    - Water
    - Air
    - Soil
  - Based on the CEPI, 88 Clusters have been declared as critical to very critical
  - All new projects have been banned in these clusters till abatement action plans are developed by the Industry and State Pollution Control Boards
Institutes with past experience invited to adopt 3-4 clusters

CFP for management plan to “reduce” CEPI

Bottlenecks
- Funds and time
- Each State Pollution Control Board asked to submit plan of action
- Industry asked by SPCB’s to submit plans to get their pollution control systems upgraded / added

Indian Environmental Association held a round table in IIT Bombay with members from
- Industry
- Maharashtra Pollution Control Board (MPCB)
- Gujarat State Pollution Control Board (GPCB)
Issues - a shared perspective by some...

- Whose job is it anyway?
  - Government - by and large caught-up in “immediate” issues
  - No resource community, voice or a think tank
  - NGO’s - but do not have the resources (and some times credibility)
  - Researchers and academia
    - Reluctant to step into “non-research/academic” issues
    - Measures of success are not oriented around projects with “societal benefits”

- Ad hoc response to persistent issues - Lack of robust structure or a platform to participate and share air quality research, education and practices
Contextual Stand

- Two devils at the gateway to the “Temple of Truth”
  - Confusion and Paradox
  - Adequate intellectual and technical capability
  - Opportunity for leap-frogging (else better Horses)

“pointing towards an abstraction that we are still to articulate fully”

Inside of IIT Bombay’s thrust towards “Research that Makes a Difference”
Recent Efforts

- **Expanded Communities**
  - Joint IIT Initiative
  - 7 IITs – E2C2 Meet in March
  - Honourable Minister Jairam Ramesh’s role
    - Ganga Basin Management – IITs proposing jointly
    - Solar
    - Clean Coal
    - CO2 Sequestration
  - National Project by 7-IITs together (MoU between MoEF and MHRD)

- **ISRO**
  - well established, and air quality community needs to be able to advantage of the available potential through partnership

- **Climate Change Research Initiative by DST** – need for larger framework
  - 57 Faculty from IIT Bombay alone

- **Biomass based renewable energy efforts** – black carbon
Key Activities of India AQ CoP in 2010

- Held Teleconferences among community members across India and with ESIP AQ Group

- Organized community meetings under the umbrella of Joint-IIT meet and Indian Environment Association (IEA)

- Participated in GEO CFP

- User Engagement Session, Beijing November 1-2

NEAR FUTURE:

- NEERI Workshop on November 23-24 (USEPA)
- IEA & IIT Bombay Conference November 25, 26, 27
Enhancement of Air Quality Decision Process
Future Activities

- Build and connect the air quality community across the Indian subcontinent and GEO AQ CoP

- Define and gather needed AQ data and decision support tools for India and share those through GEOSS
National/Regional, Local Air Quality Analysis

- Establish the usefulness of a multi-scale framework to synergise:
  - Regional and local measurements offering detailed characterization
  - Modelling
  - Satellite remote sensing offering a synoptic view in temporal and spatial domains
Thank you

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