Communities affected near TPP due to water shortage and due to effluent discharge from TPP and its ash ponds: Importance of 2015 Water Norms

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CSE Webinar on Water Use in India’s Coal Power Sector: 26 Aug 2021
Manthan’s 2019 Study of Compliance to Water Norms

- Manthan's Study of 2019 had similar findings as CSE
- We could get info from 75 TPPs from 12 states
- Little seems to have changed as CSE study shows
Status of Compliance to Water Consumption Limits: Number of TPPs

- Complied: 34
- Not-Complied: 22
- Seawater Based: 8
- Status Not Given/Ambiguous: 9
- Plant Closed: 11
- Data Not Available: 0

Status is Self Declared, as submitted by plant to SPCB
Zero Waste Water Discharge

- Status of compliance not available publicly
- Our RTI in 2017 as well as 2020 show that reporting even in Annual Env Statements remains general and without details
- Also shows compliance remains a problem
- No legally binding definition for ZWWD or ZLD
- Leads to many claiming ZWW; implementation and monitoring becomes discretionary
- ZWW has great significance as huge waste water discharges continue esp wrt ash slurry
Name & Address of the Unit:

M/S NTPC Limited
Bongaigaon Thermal Power Project
P.O.: Salakati
Dist.: Kokrajhar (BTAD), Assam
Pin-783369
State:- Assam

Sl. No. 1: Yes, Pollution Control Board of Assam is monitoring the compliance of the notification published in "Gazette of India for Thermal Power Plants". The NTPC located at Salakati was commissioned in 2016.

Sl. No. 2 (a): Water consumption of the unit: 91200 m³/day.
(Industrial cooling, spraying in mine pits or boiler feeds, domestic purpose and processing)

(b). No waste water discharged by the unit.
The treated water is discharged to river. Quantity: 4440 m³/day.
Treated water reused/recycled: 16086 m³/day.

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Many TPPs Located in Water Stressed Zones
TPPs and Water Stress

- 80 operational Coal based TPPs with 84258 MW in DPAP areas and 18 Operational TPPs with 24740 MW DDP areas.
- Water being diverted from resources like irrigation projects that could support farming and other uses.
- Every reduction of 0.5 Cubic meters/MWh of a 1000 MW plant will save to irrigate 700 ha of land; or provide drinking and domestic use water to 68,000 people for an entire year.
- Leading to regular conflicts between farmers, TPPs – Maharashtra, Karnataka, Odisha etc.

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TPPs and Water Stress

- Use of treated sewage not a panacea
- High Costs
- Sewage is not “waste” - Opportunity cost of sewage
- Use in agriculture, return flows

Hence need to keep strict adherence to water use norms
Ash Water Discharge

- One of the most common and polluting discharges from the TPPs.
- Often discharge is intentional and not accidental, but even if accidental, still a violation
- Direct and intentional discharge
- Overflow, leakage and seepage from ash ponds
- Leaking ash pond piping
- Ash pond breaches
Fly ash and other waste laden discharge from Singhaji TPP, Khandwa, MP
Photo: Sehr Raheja, Manthan Adhyayan Kendra
Fly ash leaking from fly ash pipes. North Chennai TPP.

Photo: Shripad Dharmadhikary, Manthan Adhyayan Kendra
Ash laden water in Nala flowing out of Khaparkheda ash pond boundary, and fly ash deposited at bottom of Nala. Photo: Sehr Raheja/Manthan Adhyayan Kendra
Recommendations - Water Use Norms

- Restore the original more stringent norm of 2.5 m3/MWh for plants after 2016
- Set clear, near future deadlines for meeting the norms
- Uniform format for collecting compliance information
- Self reported compliance to be verified by third party
- Compliance status to be collated and in public domain by CPCB (like CEA does for fly ash)
- Ensure strict implementation by taking appropriate actions to incentivise compliance and deter and penalise violations
Recommendations - Zero Waste Water Discharge Norms

- Need to define and prepare guidelines for Zero Waste Water Discharge for Coal TPP
- Bring sea-water base TPPs also under ZLD (except cooling water)
- Ash ponds to be located within the TPP premises – only way to ensure implementation of ZLD for ash
- Clear deadlines, ensure strict implementation
- Regular monitoring, all monitoring and compliance data to be collated and put in public domain
Thank You