The Compounding Crisis of Water Quality

CWC Report on Water Quality Hot Spots says little, hides a lot

On Oct 31, 2011, Union Water Resources Minister released a report *Water Quality Hot-spots in Rivers of India* by the Central water Commission (CWC), in the presence of the Union Minister of state for water resources, Secretary, additional secretary and Joint Secretary, Union Water Resources Ministry. According to the Preface, the report "attempts to provide the water quality scenario of our rivers viz-a-viz BIS and other Standards. The report is based on the average values observed during the last 10 years at CWC monitoring Stations".

Long term water quality reports like these done by national agencies in charge of managing water resources have a great value, in terms of documentation as well as analysis of trends. However, a brief look at the report brings out severe limitations and shortcomings which inherently impair the value or use of this report.

CAG Report of endorses SANDRP

Comptroller Auditor General's Report *Water Pollution in India 2011-12* notes inadequacies on all fronts of water pollution control from legislation to inventorisation of water pollution, its health impacts, implementation of projects like NRCP and NLCP and institutions associated with it. It has criticized MoEF as well as the states for their poor performance on these fronts including under utilization of funds earmarked for pollution control. ***It has slammed the PM lead National River Conservation Authority for failing to monitor the thousands of crores being spent on this project. The PM headed council has not met at all since June 2003. The standing committee has not met since March 2003.***

SANDRP had highlighted this in the cover story of June July 2010 issue DRP see: hwww.sandrp.in/drp/DRP June July 2010.pdf.

On Nov 5, 2011, SANDRP wrote to the CWC chairman with a copy to all the dignitaries present at the report release function (see list above) along the lines of following points. Needless to add, no response from CWC has been released till date, though a confidential source tells us that some CWC officers were concerned about the poor quality of the report as was evident from our letter.

1. While the report gives general background information about water per se (some of which seems to have been copy-pasted from American reports), it fails to provide **specific locations of the 371 sampling sites or depict them on maps.** Rationale for selecting these sites has not been given either. So when the report claims that "The data for water quality is generated for almost all major, medium and minor rivers in India through a network of 371 water quality monitoring stations of CWC", it is impossible to ascertain this or check the water quality at a specific location.

2. The report does not give the **date, month or period of observations, except stating 'monsoon or non monsoon'.** Without these specific details, it is impossible to understand when a specific situation exists. It also makes ascertaining, cross checking and comparing the observations with other time periods and observations of other agencies impossible.

3. According to the foreword, "The report is based on the **average values** observed during the last 10 years at CWC monitoring Stations." If indeed all of the report is based on average values (it seems so since even when the tables in the annexures list the locations that exceed the BIS standard values, it is not stated as to at what date of how many times the locations have exceeded the prescribed limits) than that again reduces the value of the report since it does not provide actual situation at any given point of time. Without these details even these tables are of very limited use. It is imperative to know if it is the average value of the locations listed in the tables have indeed crossed the prescribed values or it is some specific observations that have crossed the prescribed values. Dates on which the observed valued exceeded the prescribed values should have been published. Considering the fact that observations were recorded at frequency of once a month, stating all the relevant dates should have been easy.

4. It is indeed surprising that in many cases, what CWC observations in this report and CWC's river water quality site (www.cwc.gov.in/main/webpages/wq_status.html) has **many gaps,** including the missing observations for the Cauvery and the Southern River Organisation, Lower Ganga Basin Organisation, Mahanadi and Eastern River Organisation, Narmada Basin Organisation, Yamuna basin organization.

As such, the report seems to be giving a picture too good to be true. More seriously, the findings are in contradiction with the known observations given by the other reports like that of the State Pollution Control Boards, Central Pollution Control Board and Ministry of Environment and Forests' National River Conservation Directorate (NRCD). It is clear that the CWC has not compared these observations with these other known observations or tried to look for reason for the discrepancies between CWC observations and those in other reports mentioned above.

For example, many rivers in the Ganga basin, including Yamuna, Gomati, Damodar and others are known to be highly polluted particularly close to the urban and industrial locations, as reported by the CPCB, PCBs and NRCD among others. But strangely, the only place these rivers figure in CWC report are in tables listing locations that exceeded the prescribed Biological Oxygen Demand (BOD) and (Dissolved Oxygen). This is misleading, to say the least. In many rivers like the Mula Mutha Rivers near Pune, the DO has been much lower than 5 mg/l and BOD much higher than 3 mg/l on many occasions, but the report does not mention this. Similarly, many rivers like Mithi are immensely polluted, with very high BOD (69 mg/l), but it does not find any mention (see: http://mpcb.gov.in/images/pdf/annualreport0405b.pdf). This does not make for a representative report.

5. The CWC report does not include findings of the basic parameters mentioned in the Uniform Protocol on Water Quality Monitoring Order, 2005. For example, in case of heavy metals, only Arsenic is reported, while Uniform Protocol recommends minimum inclusion of Cadmium (Cd), Mercury (Hg), Zinc (Zn), Chromium (Cr), Lead (Pb) Nickel (Ni), Iron (Fe). This information is directly related to health issues and is hence very crucial. Nor does it include information on micro pollutants like pesticides.

6. No attempts have been made at comparing and analysing results from different agencies and drawing trends, which would help in understanding the causes of pollution. This is an important function of a report like this. It does not mention the recent efforts in the same direction like the National water Quality Monitoring Program 2010, by CPCB, involving 2000 stations.

7. One clear indicator of rivers with good water quality is the existence of **good biodiversity**, including fisheries in the river. The report makes no mention of this at all.

8. One of the major reasons for the sad state of rivers in India is that they have **no freshwater** as all the water in the rivers are being stored or diverted by the dams, barrages and hydropower projects, leaving no water for the downstream rivers.

There is no policy or law in India that requires that water be released downstream of such locations for the various social, environmental, economic and other services that the river provides. The Central Water Commission and Ministry of Water Resources that CWC is part of has not done any effort to make this possible, even though the National Water Policy speaks about it.

The reports states in the preface that "Rivers are our lifeline and we all have the responsibility of preserving it, to make our development and consequently quality of life sustainable." What effort is CWC doing to ensure that these lifelines exist as lifelines?

9. One would expect that such reports and the fact that CWC has been monitoring river water quality for several decades would mean that the findings of the report would be used as inputs into other aspects of CWC/ MWR work, including ensuring that rivers have freshwater flows when they give clearances to the projects. There is no evidence that this is happening.

Delhi HC issues Contempt notice to Delhi Govt The Delhi High Court has issued contempt of court notices to the Delhi Government, the Delhi Development Authority and the Municipal Corporation of Delhi asking them to explain why contempt proceedings should not be initiated against them for their failure to build enclosures along the Yamuna in the Capital for immersion of idols and religious material to control pollution. The Government had in an affidavit in 2007 informed the Court that it had chalked out a plan in association with the DDA and the civic body to build 13 enclosures along the river for immersion of idols and thereafter release the water after treating it. However, the contempt petition states that the Government instead of constructing the enclosures as promised to the Court had been promoting immersion of religious material into the river at the festival time by providing access to vehicles carrying idols for immersion into the river by various religious organisations. (The Hindu 261111)

Lucknow court issues warrants against Mathura Municipal officers for Yamuna pollution A special court in Lucknow has issued non bailable warrants against the Chairman, CEO and Engineer of Mathura Municipal Corporation for letting untreated waste pollute the river Yamuna. This stretch of the river is under the Yamuna Action Plan. It is indeed a shame that public authorities need to be hauled up by the courts to ensure that infrastructure created using foreign loans actually work. (Yamuna Jiye Abhiyan, 071211)

Notices, warrants by PCB against Kolhapur Corporation The Pollution Control Boards have been filing cases against many municipal corporations for releasing untreated sewage into rivers. In Kolhapur, the Maharashtra PCB has reportedly sent 3 notices, issued warrants and even cut electrical supply of the Kolhapur Municipal Corporation for not treating sewage. Incidentally Kolhapur MC and Panchganga River have been funded under the National River Conservation Program. (www.mpcb.org)

Maharashtra PCB report highlights water quality crisis in metros The report *Water Quality Status of Water bodies in Maharashtra for 2007-09* brings out some disturbing realities. It states nearly 50% sampling locations exceed A II class standards 50% of the time, while at 17% of locations, these standards are exceeded at all times. The report compiled data and analysis from various sources like the National Water Quality Monitoring Program, State Water Quality Monitoring Program and the Hydrology Project. Samples for all major and minor rivers, seafronts and creeks and groundwater of Maharashtra were collected from various locations through organizations of the state and center. According to the report, 'Water quality data for three years during the period 2007-2009 for 59 rivers, monitored at 248 locations, 33 coastal water and about 3500 groundwater stations in 35 districts of Maharashtra have been analyzed.

Monthly water quality data for selected physico-chemical parameters viz. pH, DO BOD, Ammonical Nitrogen and Nitrates for the years 2007-09 was compared with the Maharashtra Pollution Control Board Water Quality standards of class A-II for best designated usage.

Percent exceedence of these parameters with respect to the standards show that at **140 locations out of 248 monitoring sites, the values exceeded the stipulated standard 50% of the times.** At 103 other locations, the parameters exceeded the stipulated standard 75% of the time. **At 43 locations, the parameters exceeded the stipulated standard all of the time.**

Rivers with locations where the BOD values exceed the standards 100% of the time are Bhima, Damanganga, Godavari, Indrayani, Kolar, Krishna, Mithi, Mula, Mutha, Pawana, Pedhi, Purna, Tapi, Ulhas, Vaitarna, Wenna and Wainganga.

The Allahabad High Court order closure of tanneries in Kanpur The HC made this order stating that the Chromium based tanneries are contributing to pollution in Ganga in an unprecedented manner. Hearing a PIL on abatement of pollution in the river Ganga, a division bench passed the direction after the reports by the Central Pollution Control Board and the UPPCB revealed the chromium level in the water of the river Ganga was **248 mg/litre, against a permissible level of only 2 mg/litre, more than 100 times the permissible limit**. There are nearly 100 listed tanneries operating in Kanpur. The court also took strong note of the lack of interest being shown by the state government's Urban Development department and the Uttar Pradesh Jal Nigam in the matter. (http://www.indianexpress.com/news/hc-orders-shutdown-of-kanpur-tanneries-for-polluting-ganga/854272/0

Disturbingly, of the 30 monitoring stations singled out for 'Very bad' Water Quality Indices, 17 are from Pune District (15 from Pune and Pimpri-Chinchwad Municipal Corporation limits).

However, like the CWC report, this report also deals with average values and hence very high outliers can get ignored. The water quality of most Seafronts and Creeks of Maharashtra has been found to be poor. Percent exceedence of BOD at all 29 beaches and seafronts are 100%. In case of groundwater, Nitrate pollution is becoming more prevalent and serious. The studies carried-out by Groundwater survey and development agency and Central Ground water Board during the period 2007-2009 reveal that **87 Talukas in 21 districts have shown nitrate levels above desirable limits, 100% of the time.**

CAGs Performance Audit of Water Pollution in India The Report of the Comptroller and Auditor General of India for the year ended March 2011 about results of the Performance Audit of Water Pollution in India is one embarrassing document for the MoEF, MoWR and PCBs. The audit looked at nearly all facets and issues related to water pollution and its control mechanisms set up in India, from causes of water pollution, to its impacts to institutions and policies that affect the issue, to allocation, disbursement and utilization of funds allocated for control and mitigation of water pollution in 140 projects across 24 polluted stretches of rivers, 22 lakes and 116 blocks across 25 States of India.

The audit concludes, though not surprisingly, that: MoEF and member states did not undertake comprehensive inventorisation of water sources including rivers, tanks, aquifers etc and water pollution (as is clear from the Report on Water Quality Hot Spots), current programs and institutional set up to manage these was inadequate, important issues like links of pollution with health and ecosystems have not been well studied, no program to assess and control ground water pollution exists, Programs like NRCP and NLCP, despite costing a lot have not resulted in any significant results.

CAG has come down hard on NRCP and NLCP stating that these projects leave much to be desired. There has been no system behind selection of a particular lake of river for the program, there have been several shortcomings with the DPRs and funds utilized. In conclusion, the report states that 'programmes for control of pollution have not succeeded in reducing pollution levels in ground water and surface water and restoring water quality.' The Mechanism set up by MoEF with CAG to take follow up steps does not inspire confidence as it does not attempt to serious deficit of democracy in governance of water pollution. Today there is no role for local communities the worst affected ones by the pollution, have no role in pollution control mechanism and that needs to be addressed.