

# Godavari Basin Water Resources Draft Final Plan

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The article comments on the Maharashtra government's Department of Water Resources Draft Godavari Basin Water Resources Plan from the perspective of the Vidarbha region.

The author thanks the anonymous referee for making valuable suggestions.

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The water resources department (WRD), Government of Maharashtra has published the *Prarup Masuda Godavari Khore Jala Sampatti Arakhada* (Draft Godavari Basin Water Resources Plan [henceforth “the Plan”]) and made it available to the general public for comments on its website. The Plan is part of the overall transformations being brought about in the state's water sector through the water sector reforms. Under the Maharashtra Water Resources Regulatory Authority Act, 2005, river basin organisations are entrusted with preparing river basin plans. The following comments on the Plan are made with reference to the Vidarbha region, which has long suffered backlogs in terms of irrigation and other development indicators.

The Plan is divided into two parts—the first provides general information,

water resources development and management plans, flood control plans, water quality management plan, groundwater plan, water audits for surface and groundwater, and recommendations for future use for the whole Godavari Basin as well as for each of the 30 sub-basins. The second part provides a series of data-tables regarding completed, under construction, and proposed water projects (major, medium and minor), as also present and future inter-basin water diversions.

## Part I

**Mining:** Vidarbha produces around two-thirds of the total minerals in Maharashtra, and Chandrapur district alone produces around 29% of the total minerals mined (Directorate of Geology and Mining, Maharashtra). Mining activities have massive repercussions on water resources, yet there is no mention of the impact of mining on the surface water and groundwater resources of the region. For instance, Chandrapur district has more than 50 mines for the extraction of coal, limestone, laterite, dolomite, iron ore, quartzites, etc. Additionally, there are around 17 new coal mines proposed in the district.

A majority of these mines operate in the Wardha, Erai, and Penganga sub-basins. Extensive mining in the district has affected the flow, temperature, quality and quantity of water resources, which has not been taken into account in the Plan.

Several mines, including those operated by the Western Coalfields Ltd (wcl), dump their overburdens on the banks of rivers, thereby obstructing the natural drainage of the rivers. The Plan notes that the river Erai is prone to flooding due to excessive rainfall. However, this assessment is only partially true. In 2013, the river Erai flooded Chandrapur city, but the flood situation was exacerbated because the natural drainage of the river was obstructed due to overburden dumps from the Hindustan Lalpeth Colliery. Apart from Erai, the river Wardha is also seriously affected by overburden dumps. The Ballarpur open-cast mines dumps overburden on one bank of the river Wardha and the Dhoptala mines on the opposite bank, creating floods in Ballarpur city.

In August 2013, a committee was set up by the district collector of Chandrapur in Wani area. The wcl had dumped its overburden along a stretch of 2 km close to the banks of river Wardha, failing to maintain a safe distance from the river. At one point, the overburden had collapsed and the debris entered the river. In Majri area, the distance between the river and the overburden dumps was less than 45 metres in several places. In Chandrapur area, the Hindustan Lalpeth opencast mine had dumped its overburden at a distance of 60 metres from the river Erai, and in an area of over 100 metres, the overburden had collapsed into the river. In Ballarpur area, the overburden is located at less than 50 metres from the river Wardha for approximately 1.5 km along the river-bank. At several points, the overburden had collapsed into the river. The Dhoptala opencast mines, located on the opposite bank, too have not kept a safe distance from the river, creating a possibility of debris entering the river from the other side as well. It was found that the wcl had changed the flow of one of the nullahs in the mining area (District Inspection Committee 2013).

Overall, water resources in the region are facing several problems due to mining and overburden disposal, leading to: (i) obstruction in the flow of the river due to overburden dumps; (ii) flow of debris from overburden dumps into the river increasing its levels; (iii) artificial flood-like situations created during monsoons and danger to nearby villages and agricultural fields; (iv) changing the flow of nullahs; and (v) adverse impact on groundwater due to dewatering operations. Given this situation, the Plan should have included the impact of mining in the various sub-basins of Vidarbha.

#### **Water-intensive industrial development:**

More than 130 thermal power plants are proposed in Vidarbha to produce around 86,407 megawatt (mw) (Pinjakari 2012) in addition to the existing ones such as the Koradi Thermal Power Station in Nagpur district and Chandrapur Super Thermal Power Station in Chandrapur district. Environmental studies show that the flows of the rivers Wainganga and Wardha will be severely impaired due to the 71 thermal power plants proposed in these two sub-basins. According to the study, there will be 40% reduction in water in Wardha sub-basin and 16% in Wainganga sub-basin because of the consumptive water use by thermal power plants (Greenpeace 2012: 7).

An assessment of the impact of thermal power plants and other water-intensive industries in the Plan is important for the future of agricultural development of Vidarbha. At present, the region accounts for more than 65% of the total energy generated by thermal power plants in Maharashtra, which comes at a huge cost for the agriculture sector. According to the Vidarbha Statutory Development Board, "the total water requirement for existing and new thermal power generation plants in Vidarbha shall be about 993 Mm<sup>3</sup> thereby depriving irrigation over 1,50,000 to 1,75,000 hectares of land" (vsdb 2009: 32). There has been severe resistance from the farmers of Amravati district against the diversion of water from the Upper Wardha project to Indiabulls Power Plant. Given the irrigation backlog and agricultural

backwardness of the region, it is strange that the Plan allows higher allocation to industries as compared to that allocated for domestic use and irrigation taken together in some water projects. For example, according to the Plan 117.77 million cubic metre (MCM) from Dindora barrage in the Wardha sub-basin is proposed for industrial use, while a mere 23.29 MCM is for agriculture and only 9.13 MCM for domestic supply.

The Plan has made unequivocal recommendations for imposing a moratorium on sugar factories in certain regions of the state such as Marathwada. For example, the Plan has observed that since the Lendi sub-basin in Marathwada region is "water-deficient," sugar factories should not be promoted in the sub-basin. Even in sub-basins with "average" water availability such as the Pravara sub-basin in western Maharashtra, the Plan has made a recommendation that sugar factories should not be encouraged. It is surprising that while the Plan is unambiguous about discouraging sugar industries in order to conserve freshwater resources of western Maharashtra and Marathwada, it is totally silent about the unsustainable growth of thermal power plants, mines, cement, paper and other such water-intensive industries in Vidarbha, whose cumulative impact on water resources is extremely detrimental. The Plan must make an assessment of the extent to which thermal power stations and other water-intensive industries should be allowed in the various sub-basins. The aim should be to ensure that the water resources of Vidarbha are not destroyed in the name of industrial development.

**Scarcity plans:** The Plan has made efforts to provide comprehensive plans for flood control. However, floods are only one type of natural disaster that people face, the other being scarcity. Though the entire Plan is made using 75% dependability, low precipitation and failed monsoons are becoming a regular occurrence due to climate change. For instance, in the decade between 2001 and 2010, Chandrapur district received less than average rainfall in four years, that is, 2001, 2002, 2003 and 2009.

Low rainfall triggers competition between users, and the WRD adopts ad hoc solutions like drilling borewells, increasing the heights of existing dams etc. For instance, 49 handpumps were frantically installed in 30 days in Jivti block of Chandrapur district during the 2009–10 scarcity. Since the Erai dam provides water for drinking to the Chandrapur city as well as to the Chandrapur Super Thermal Power Station, there was a bitter struggle for the water, and the power plant was ordered to close down several units in order to provide drinking water to the city. The WRD responded by increasing the height of the Erai dam by 0.5 metres. Based on such previous experience, there should be an assessment of how to deal with low rainfall years. Although the Maharashtra Water Resources Regulatory Authority is empowered to determine the priority for water use during scarcity, the Plan could provide the relevant inputs to assist the authority in this regard.

## Part II

Part II of the Plan is crucial because it provides the details about how the water from different projects is going to be allocated over a period of five years or till the next plan is prepared. Given the fact that there is a rising concern about water conflicts around the use of water from various projects, the Plan should have been prepared with utmost precision. However, we find several discrepancies in the data provided for various sub-basins and projects. For instance, the data regarding inter-basin transfers pertaining to Penganga sub-basin states that 2.14 MCM will be imported into this sub-basin (*ayaat*) from the Wardha sub-basin for Manikgarh Cement and a further 2.16 MCM will be imported (*ayaat*) from the same sub-basin for Ultratech Cement. However, in the data regarding inter-basin transfers pertaining to the Wardha sub-basin, it is stated that 2.16 MCM will be imported from Penganga sub-basin for Ultratech Cement and 2.14 will be imported from Penganga sub-basin for Manikgarh Cement. In both cases, the numbers are entered in the import (*ayaat*) column, thereby creating some confusion whether water

will be transferred from the Wardha to Penganga sub-basin or vice versa. The corrections of these figures are important because it changes the total figures in the import/export columns of both sub-basins.

Similarly, while the number recorded for water directly lifted from river Wardha is recorded as zero (*nirank*), information collected from local WRD offices shows that there are several water users who are already drawing water directly from the river Wardha according to agreements entered with the WRD. This includes the Ballarpur Paper Mills, Dhariwal Infrastructure, Fuelco Washeries, ACC Cement, and WCL.

Another major discrepancy is related to the figures for water use from Amalnala project, whose total water use, including irrigation, domestic supply and industry, is assessed at 25.26 MCM.

However, elsewhere it is recorded that around 11.38 MCM is proposed to be diverted from this project to Wardha sub-basin for supply to Hardona and Devada. According to the National Register of Large Dams, the Amalnala Project has a gross storage capacity of 22.70 MCM and an effective storage capacity of 21.20 MCM. This means that the existing use

already exceeds the storage capacity of the reservoir by about 4.06 MCM, and thus an additional 11.38 MCM cannot be diverted.

These few examples of discrepancies in the Plan indicate that the water use for every project and inter-project transfers needs careful reassessment in order to prevent future confusion and conflicts.

## REFERENCES

- Directorate of Geology and Mining, Government of Maharashtra: <http://www.mahadgm.gov.in/InternalPage.aspx?Antispam=BWpRdp6CnMk&MineralInformationID=6&MyAntispam=Fz47XG12apP>, accessed on 14 October 2015.
- Greenpeace (2012): "Coal Power Plants in Vidarbha: A Study of Their Impacts on Water Resources," <http://www.greenpeace.org/india/Global/india/report/summary-of-Wardha-and-Wainganga-reports-English-1.pdf>.
- National Register of Large Dams, Central Water Commission: <http://www.cwc.nic.in/main/downloads/new%20nrdld.pdf>, accessed on 14 October 2015.
- Pinjakari, Vijay (2012): "132 Power Units to Turn Vidarbha into Environmental Graveyard," *Times of India*, 5 June.
- VSDB (2009): *Fifteenth Annul Report, 2008–09*, Vidarbha Statutory Development Board, Nagpur: Government Press.
- Water Resources Department, Government of Maharashtra: [https://wrdd.maharashtra.gov.in/portal/portal/mwrd/15mwrdEmployees/6waterplan/1Godavari;jsessionid=03um2rFdBXc48sYb3Q5J+g\\*\\*](https://wrdd.maharashtra.gov.in/portal/portal/mwrd/15mwrdEmployees/6waterplan/1Godavari;jsessionid=03um2rFdBXc48sYb3Q5J+g**), accessed on 14 October 2015.

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