

## Sugarcane plantation in dry and arid belt of central Maharashtra, India



### **Activity: Comprehensive assessment for policy changes and practical solutions to avoid over use of water due to the problem of excessive plantation of sugarcane in dry and arid belt of central Maharashtra**

India Water Partnership (IWP) in association with West Zone Water Partnership (Gomukh Trust for Environment and Sustainable Development) prepared first draft of the research paper 'Droughts and Sugar Industry in Maharashtra - Are we Learning from History?' in March 2016. The Paper reflects issues of paradoxical location of Sugar Factories, the over exploitation of Water Resources in Maharashtra due to irrigation practices for growing sugarcane; inter-state comparison in terms of sugarcane production, quality and financial aspects, cropping patterns in the drought prone areas, policy failures and the role of Maharashtra Water Resources Department and Maharashtra Water Resources Regulatory Authority.

### **The research study by IWP**

With the above background, in 2016 IWP with collaboration of Gomukh is carrying out a research study with a comprehensive assessment targeting possible policy changes and to find practical solutions to avoid over usage of water as a result of excessive plantation of sugarcane in dry and arid belt of central Maharashtra. The information and data gathered within April and May by the Research Team is briefly given below.

Maharashtra is currently reeling under severe drought from the past few years. The deficit in rainfall across the state is about 35.5 percent while in the Marathwada region, it is about 48 percent. Nearly 19,424 villages in ten districts, namely, Aurangabad, Jalna, Parbhani, Nanded, Hingoli, Beed, Latur, Osmanabad, Buldhana and Amravati are severely affected with the ongoing drought.

In Maharashtra, it is not unusual to spot villages surrounded by lush, green sugarcane fields but having no drinking water. Local populations have to face drastic water cuts and have to rely on water tankers for drinking and domestic water supply, while sugarcane fields continue to guzzle enormous quantities of water.

In April the team visited Sugar Commissionerate and the Federation of Cooperative Sugar Factories at Sakhar Sankul and the Vasantdada Sugar Institute (VSI) at Manjri, Pune and met with the senior officials for obtaining information for the study. The joint Director (Development) and Head of the Statistics Division at Sugar Commissionerate provided valuable inputs on the current situation; the challenges faced by sugarcane farmers and the water requirement for sugarcane.

The Study Team was provided with information on farmers' trainings and research conducted on water use efficiency for sugarcane, by the Head of Statistics Division and the Librarian at Vasantdada Sugar Institute. Further the Team obtained data on economics of sugarcane, environmental effects and experiences with drip irrigation, from the Library.

In May, the first visit was made to the farms in and closer to Wai Village in Satara district, Maharashtra. The team interacted with farmers who grow sugarcane as well as other crops - largely vegetables, flowers and pulses, and observed the irrigation methods that are being used for cultivation. Most of the farmers are using drip irrigation while a few are using mixed irrigation techniques - a combination of drip and flood irrigation. Despite being located on the banks of the Krishna River and in the catchment area of Dhom Dam, very few farmers use flood irrigation. The next group of farmers informed the study team that they do not grow sugarcane, but only grow strawberries and cut flowers in greenhouses.

According to the Farmers, the prevailing infrastructure facilities and better market prices in comparison to sugarcane encouraged them to shift from growing sugarcane and to move to crop diversification.

The Study Team visited Kisanveer Satara SSK Limited which has two units, in Bhuij and near Pratapgad in Satara District, Maharashtra which are temporary closed for maintenance. In Bhuij, the Study Team could meet with the officials from the Cane Development and Production Section. According to Mr Gaikwad from Cane Development Section, the total sugarcane crushed this season reduced from the average 1.5-1.6 (in a good monsoonal year) to 1.1 million metric tons due to the drought. Apart from the sugar production, the factory produces 22 MW bioelectricity of which the factory uses 7 MW and sells the surplus to Maharashtra State Electricity Board.

While discussing the two goals; reduction in loss of sugar content while cane processing, i.e. improvement in recovery rate and maximising energy conservation Mr Ghatge said, water conservation is not considered as a priority in the factory because they have access to abundant water. The factory does not have records on the total water requirement for the whole process of sugar production. However, the factory is aiming at maximising the usage of internally generated water (recycled) for reducing dependency on external water resources.

**The survey is ongoing and the activities planned for the coming months are;**

- Visits to sugarcane fields and sugar factory in other areas (especially those in water-scarce regions).
- Drafting a paper on the reasons behind strong preference for sugarcane to its alternatives which are both economically as well as environmentally viable.
- Organise a one-day seminar for around 30 Experts on sugarcane, agriculture, water, irrigation, environment etc. in Pune.

*A statement by Prof Vijay Paranjpye, Chairman, Gomukh Environmental Trust for Sustainable Development, which articulates the key policy that has emerged from the study and possible precautionary measures which the Government of Maharashtra could have taken to ameliorate the imminent situation.*

By October to November 2015, the deficit in the rainfall in Maharashtra made it clear that a severe drought was looming large on the horizon. At that time, the relevant government departments which play a role in managing water resources should have hurriedly taken concrete actions to mitigate the crisis and ensure water availability for fulfilling at least drinking and domestic needs of the population up till the end of June 2016. However, despite drought conditions, a very large proportion of the total irrigation/storage water was unjustifiably used for sugarcane cultivation. Many parts of Maharashtra, especially in Marathwada, are indeed drought prone, but the skewed policies and allotment of resources in favour of sugarcane and the resultant extensive cultivation of sugarcane in such water-stressed areas play an enormous role in artificially aggravating the water scarcity and droughts created by the deficit in rainfall in the region.

The prima facie conclusion of our study is that even with the deficit in rainfall, there need not have been a drinking and domestic water scarcity as experienced in Marathwada. Though there is minimum can do about deficit in rainfall, the legislators or bureaucrats certainly have no rational excuse for consigning thousands of villages to an abject scarcity of drinking and domestic water supply.

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