

## **ROW team visits Govardhan, Uttar Pradesh**

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On February 20<sup>th</sup>, 2020 Rivers of the World Foundation (ROW) Team, Kolkata (Tushar Kanti Guha and Sucharit Dutta ) visited the Mansi Ganga Kund, a small lake in Govardhan, Uttar Pradesh, India.

### **Purpose**

The primary purpose of the visit was to determine the eco-environmental status of the area with a focus on the water quality of the streams, rivers, and lakes in the area and follow up with efforts to look into potential remediation/improvement of the water quality, environment and health of the local people. The ROW team planned to involve the local people and encourage voluntary participation to restore biological, economic, and cultural wellbeing of the streams, rivers and lakes in the area.

### **I. Introduction**

Govardhan is a small town in Uttar Pradesh with a population of 22,576 according to Indian Census report of 2011. The average literacy rate is 62%, higher than the national average of 59.5%. [1]

Each year Hindus and other people make a pilgrimage to Govardhan, and its sacred Govardhan Hill, from other places in India and various places in the world to offer their puja/respect to Krishna and Radha, key figures in Indian epics. One of these, celebrated at the Govardhan Puja, is about lifting of Govardhan Hill (Giriraj Parvat) to protect the villagers from the flood caused by the Lord of thunder and rain, Indra. One of the most important day in Govardhan is the Parikrama, or hiking around the Govardhan Hill by the devotees on Guru Poornima. This is observed on the day before the full moon night following the festival of lights, or Diwali. The 21 Kilometers long Parikrama of the Govardhan Hill is one of the famous events of this town.

The town also houses Mansi Ganga, a close-ended lake [2]. On the banks of this lake, there are quite a few temples, prominent among them is the Mukharbind temple.

Located in the downtown of Govardhan, Mansi Ganga Kund is an important part of the pilgrimage route of Govardhan Parikrama which starts and ends at this popular pilgrimage site in Govardhan. As per the beliefs, a sacred bath in the water of the Mansi Ganga Kund sanctifies one from all sins. Every year, on the auspicious occasion of Diwali, earthen lamps can be seen floating in the water of this popular kund as a ritual. At present, there is also a temple of Mansi Ganga which is situated in proximity of the Brahma Kund. A few pictures of the Mansi Ganga Kund are below.

### **II. Water Quality and Other Relevant Information from the Site Visits in 2010 and 2020 by the ROW team**

The ROW team conducted site visits to the area in 2010 and 2020 February. During the 2010 visit, ROW team members from US included Subijoy Dutta, Dick Lahn, Ms. Ginny Harris, and Sumit Dutta. Pundit Kunjbehari, professor from the Delhi University provided local support and hospitality at the 'Radha Krishna' Kuthi.



Picture– Team 2010 – L-R : Dick Lahn, Ginny Harris, Subijoy Dutta, Local Panchayat Chief, Sumit Dutta, Pundit Kunjbehari, and a local volunteer

The recent visit in 2020 included the ROW team members from Kolkata, Sucharit Dutta and Tushar Kanti Guha, who gathered relevant information from the area.



Picture– Team 2020 – L-R: Tushar Kanti Guha and Sucharit Dutta



Picture 1 - Mansi Ganga Kund (2020)

Photo: by Sucharit Dutta, Feb 20, 2020





Picture 2 – Mansi Ganga Kund (2010)

Photo by Subijoy Dutta, Feb 9, 2010

The turbidity/clarity of the kund water in 2010 is apparent from the picture 3 below. The wastewater from houses around the kund were discharged into the kund as shown in picture 4 below.



Picture 3 – Water clarity of Mansi Ganga Kund Photo: Subijoy Dutta, Feb 9, 2010



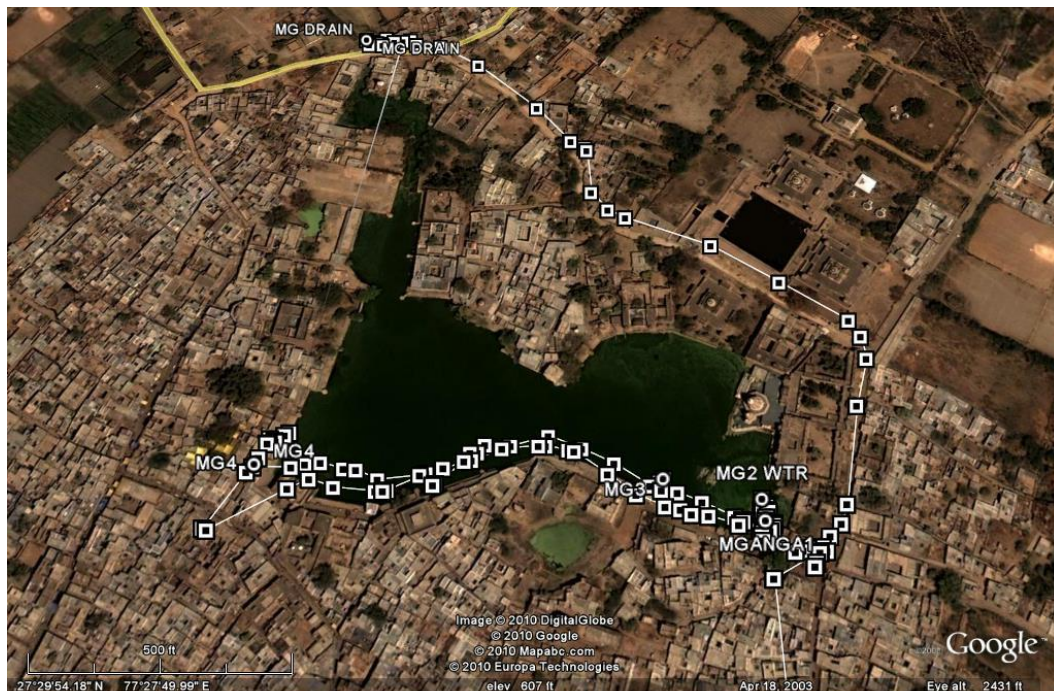
Picture 4 – Household discharges through pipes (2010) Photo: Subijoy Dutta, Feb 9, 2010



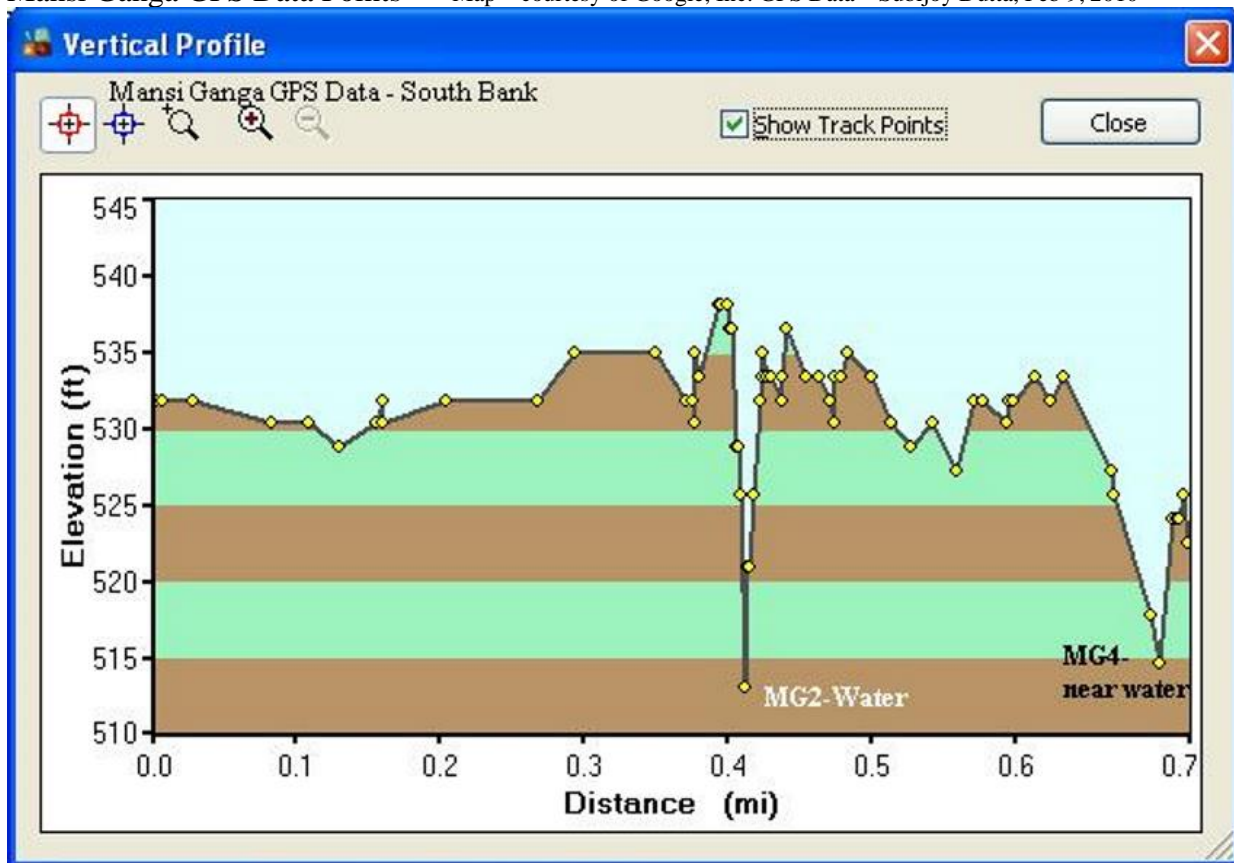
Picture 5 – Discharges through pipes (2018) Photos: N.D. Lima - 2018, courtesy Google, Inc.







Mansi Ganga GPS Data Points - Map – courtesy of Google, Inc. GPS Data – Subijoy Dutta, Feb 9, 2010



Mansi Ganga Elevation plot of the GPS location (2010)

### Water Quality Test Results for the Mansi Ganga Kund (Feb 20, 2020) –

Total Dissolved Solids (TDS) - 2014 ppm (mg/l)  
Conductivity - 4034  $\mu$ Siemens/cm or ( $\mu$ S/cm).

### Water Sampling near Vrindaban - Yamuna bypass Bridge:

**Location:** 27° 33' 48.79409999"N 77° 42' 7.24259999"E



### Water Quality Test Results for the Yamuna River (above location) in Vrindaban area (Feb 19, 2020) –

Total Dissolved Solids (TDS) - 694 ppm (mg/l)  
Conductivity - 1380  $\mu$ S/cm

### III. Observation and Analysis of the Site Data

From the visual observations during the site visits in 2010 and 2020, it is apparent that the Mansi Ganga water quality has not improved during the last decade. During conversations with the local people and others who visited the site during the past decade it is apparent that the local authorities made some attempts to improve the quality of the kund water, but the recent test results show very high levels of total dissolved solids (TDS) in the Mansi Ganga Kund. The wastewater discharge pipes from the buildings around the kund are still visible at certain areas and from the pollutant level of kund water quality it is apparent that wastewater discharges from most of the buildings are still continuing to pollute the kund.



#### IV. Conclusions and Recommendations

Upon reviewing the above information, the ROW team draws the following conclusions for the Mansi Ganga Kund and other kunds in the Govardhan area.

- The waters of the Mansi Ganga Kund is not safe for bathing, or ingesting by local people.
- The Kund water is getting domestic wastewater and other discharges from households around the kund.
- The water quality of the kund is degrading and may pose serious health issues for people interacting regularly with the water from the kund.

The ROW team recommends the following.

- The local authorities should make an effort to improve the water quality of the kund.
- The authorities should begin such effort without delay to protect human health and the local environment.
- The people of Govardhan area needs to arrange for developing a comprehensive remediation plan for the Mansi Ganga Kund and other kunds in the area. Such plan should include a general watershed analysis to develop remedial options for the kunds.
- An awareness program focusing on the direct relationship between water quality and environment on the health of the local people should begin early covering residents from all parts of the Govardhan town including the temple priests.
- A short awareness briefing should be provided to the visiting devotees and monks.

Please send any questions or comments about this report to [rowfoundation@gmail.com](mailto:rowfoundation@gmail.com) .

#### V. References:

1. "[Govardhana \(Mathura in Uttar Pradesh\)](http://www.citypopulation.de/php/india-uttarpradesh.php?cityid=0941410000)". *City Population*. Retrieved 7 April 2017.
2. Wikipedia details on Govardhan - <https://en.wikipedia.org/wiki/Govardhan>