

- ***IMPERIAL CANAL BUILDING IN INDIA :  
THE STORY OF UPPER GANGA CANAL***

*(NOTE: Prepared the summary of the meeting proceedings in English - the dialogue was in Hindi and had to be translated appropriately for taking down the proceedings.)*

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The dialogue was coordinated by the following:

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### **Background**

Irrigation is a very important aspect in agriculture, and has been practiced since ancient times in India. The process of irrigation and water management implies not only the diversion of water to the fields, but also the construction of structures for the storage of water and for hindering the natural flow of water.

The Upper Ganga Canal System is the largest perennial and oldest irrigation system in India. The Ganga canal offtakes from the right bank of river Ganga at Haridwar (presently in the state of Uttarakhand). The last branches of this system – Kanpur and Itawa branches outfall in river Ganga and Yamuna in district Kanpur. This canal provides irrigation facility to the districts of Haridwar, Saharanpur, Muzaffarnagar, Meerut, Ghaziabad, etc.

- **Kaptan Singh (*Former Chief Engineer, UP Irrigation Department*)**
  - The *understanding* of the irrigation in India was ideal when the British came to India, but British had *good methods* of irrigation.
  - Sudarshan Dam was the first dam to be built in India by Chandragupta Maurya.
  - Even during the medieval times, Indians knew about the canal system, but they never encouraged this because of social and environmental values, but British took this initiative of canal building only for generating revenue.
- **Manoj Mishra (*Yamuna Jiye Abhiyan*)**
  - He mentioned that Kaptan Singh is not merely an engineer, but his contribution in this field is much more than that.

- In 2010, SPWD and others have already released a report on Western Yamuna Canal area. It is among the oldest major projects in the basin.
  - What did we lose – what did we gain – we have to analyze. If we make a comparison – what will be the balance – can we recover what we lost. Even the little that we gained, we are losing.
  - We must first understand ‘Maa Ganga’.
  - 1994: An agreement was signed by Madan Lal Khurana (MoU between Uttar Pradesh, Haryana, Rajasthan, Himachal Pradesh and National Capital Territory of Delhi regarding allocation of surface flow of Yamuna)
  - Tajewala barrage has been made into a dam
  - The water that has been taken out in the name of the farmers has not been given to farmers - it has been given to industry.
  - Business as usual scenario – this is feeding unsustainable dreams
- **Dr. (Mrs.) Tripta Wahi (*Retd. - Professor of History, University of Delhi*)**
    - It is important to understand laws of nature
    - Himalayas is the world’s youngest mountain. It is fully sedimented. The rocks on both sides are being eroded. Detritus is carried down the rivers. The river cannot form its flow route in this geographical situation.
    - Inundation of canals – they get filled with water and we can draw out that water.
    - Before the Britishers were here, the Mughals from Central Asia brought a lot of technology, but we need to understand that why Mughals had not constructed permanent structures like a barrage or dam. This is because the Mughals thought it would not be appropriate after experimenting at some places. The British did this with high level of risk only to generate revenues.
    - The different regional river systems have their own significance.
- **Shrikrishna (*Professor of History, Indira Gandhi University, Mirpur, Rewari -Haryana*)**
    - The British rulers thought that the settled agriculture is a better system
    - Balance of trade – a lot of agricultural produce was exported to UK and Europe, and not much was imported to India during the colonial period.
    - Triple Canal System – on the Chenab and Jhelum is one of the best examples of irrigation in the world.
    - Water distribution system – There was an unequal distribution system introduced by the Britishers – the water was given to industry and not to farmers. Revenue was generated from them according to the quantity of water they received for irrigation
    - ? ‘Rajbaha’ system - The agricultural land in the village is irrigated by a canal, or ‘Rajbaha’.
    - Irrigation should be equitable, and for sustainability
- **Prof. Vikram Soni**
    - India has shortage of surface water and ground water
    - By selling agricultural land, one gets more money than from the return on agriculture.
- **Sunil Dubey (*Independent Consultant working on water issues in Uttarakhand*)**

- The Himalayan mountains are porous and all the water percolates and collects inside the base of the mountains – these are the natural dams.
  - Water behaves in a flux
  - Today even the Saraswati River is flowing in Rajasthan. The snow-trout fish (predominantly found in the Himalayan region) has been found in Rajasthan; but the surface of the river is closed – subterranean.
  - It is the lifeline of Almora town.
  - We need a water revolution for the non-glacial fed rivers
  - The upstream canals feed the main canals
  - We need to interlink all the aspects with ecological values
  - Nature is now being controlled by humans
- **Ramesh Sharma (*Gandhian Thinker – On History and Tradition of Cultural Relationship of People with Ganga-Yamuna*)**
    - Rivers are being neglected and not being given their due importance. We should maintain the traditional culture that that we have built in our relationship with our rivers (*Sabhiyata jo bachi hai hamare nadi mein*).
    - Nizamuddin bridge is made by eunuchs. They used to beg for money, and used the money for construction of the bridge because they loved the rivers and have a relationship with the rivers.
    - The fairs of the past days were related to rivers. Our relationship with the rivers is now broken.
  - **Deshpal (*A Farmer*)**
    - We should take into consideration all issues – in complete totality. We hold meetings only in bits and pieces – there is no connect.
    - We have a lot of natural dams under our hills – which we are ignoring and instead constructing artificial dams
    - What are we using our rivers for - meeting the demand for industry, navigation, agriculture.

**Points raised by various participants/observations made:**

- Underground water table is depleting
- Research on historical systemic changes needed
- Everybody wants profitability
- Reference was made to Swaminathan’s ‘State of Hunger’
- We need to improve our technology for agriculture
- In certain areas we do have water, but 3 ft. below the surface there is a layer of chemicals which is partitioning off the supply from the water which is flowing at the lower level
- We can conserve ground water only if we have the right technique
- Every year, the production of all crops is decreasing of all the farmers