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भारतसरकार

Government of India

जल संसाधन, नदी विकास एवं गंगा संरक्षण मंत्रालय

Ministry of Water Resources, River Development & Ganga Rejuvenation

नीति एवं योजना अनुभाग Policy and Planning Division

Shram Shakti Bhawan,

Rafi Marg, New Delhi

Dated: 04 May, 2017

Office Memorandum

Sub: Minutes of the meeting on Blueprint for Water Accounting in India held on April 11, 2017 - reg

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A meeting was held on Blueprint for Water Accounting in India under the Chairmanship of Secretary (WR, RD & GR) on April 11, 2017. I am directed to forward the minutes of this meeting for kind information and necessary action.



(Subrata K. Basu)

Under Secretary to the Government of India
T.No.2371 4350

Encl. As above

To
(as per list)



सत्यमेव जयते
Ministry of Water Resources
Government of India

Meeting Minutes

Workshop on Blueprint for Water Accounting in India

April 11, 2017, 10:30 am – 1 pm

Conference Room, Ministry of Labour, Shram Shakti Bhavan, Rafi Marg, New Delhi 110001

I. List of Participants: See Annex

II. Summary of Discussion:

- **Key Priorities:** The water accounting framework is expected to support decision-making on critical issues, as confirmed by the Prime Minister:

- **Water efficiency** in conflict basins of Krishna, Cauvery, Mahanadi
- Enhancement of **economic productivity of water**
- Optimal **design of projects** using data on water availability, flows/ volume etc.
- **Flood control** mechanisms and integrated management of reservoirs
- **Drought management**
- **Water quality** considerations, particularly for Ganga

For relevant demand-side management solutions, **Public-Private Partnership** (PPP) models should be explored to bring in private sector management skills and efficiencies in implementation.

- **Progress on Task Forces:** Key areas of progress on the water efficiency and water quality task forces include:

- **Water Efficiency:**

- Identification of **remote sensing methodologies** for calculation of water use efficiency, availability, allocation, consumption, and economics-driven water use, aligned with UNESCO-IHE's Water Accounting Plus (WA+) system
- First analysis by CWC's POMIO team on development of efficiency indicators for **PMKSY projects**, using District Irrigation Plan (DIP) data
- Identification of satellite-based **hydrological monitoring systems** of IIT-Kharagpur and **remote sensing methodologies** of IIT-Madras for potential application in conflict basins

- **Water Quality:**

- Development of **Ganga water quality dashboards and illustrations** based on real data on pressures and impacts for municipal wastewater
- Analysis on **sewage treatment capacity in 20 smart cities** in India
- Development of **roadmap for monitoring networks and programs** for India, based on EU and TERI experience

- **Key Considerations on Water Efficiency:** Based on the water efficiency task force presentations, the following priorities have been identified:

- In order to analyse irrigation efficiencies, there is a need for **developing reference data and benchmarks** by crop type

- Immediate application of remote sensing data should be on:
 - Priority basins of **Cauvery, Krishna and Mahanadi**
 - **99 key irrigation projects**
 - **95 districts which are irrigation-marginalized**
- A **capacity building program** based on UNESCO-IHE's Water Accounting Plus methodology should be delivered to officials from Central Water Commission, Central Groundwater Board, National Institute of Hydrology, IITs, National Water Development Agency, and potentially some state representatives/ others.
 - Train-the-trainer approach to be adopted
 - Two tracks to be developed for training on (a) data modelling/ generation and (b) Integrated Water Resources Management (IWRM) analysis and application
- **Key Considerations on Water Quality:**
 - **National Mission for Clean Ganga (NMCG) and Central Pollution Control Board (CPCB)** should be closely aligned for provision of data on Ganga pollution
 - Water quality analysis should be expanded to **cover all sites within the Ganga basin** where quality monitoring is currently taking place
 - In addition to municipal wastewater, **industrial wastewater** should also be analysed
 - Monitoring systems and networks should be developed to **analyse pressures** and focus on **critical parameters** at a minimum, with other parameters added based on relevance
- **Project Management Unit (PMU):** For the task forces to be most effective, the PMU is proposed to be established at the earliest to implement the water accounting framework.
 - This will align with National Hydrology Project's (NHP) overall goals and objectives of decision support systems development for water resources planning and management.

III. Next Steps:

1. **Water Efficiency Task Force Actions:**
 - Concept note for capacity building on remote sensing applications to be developed by Wim Bastiaanssen, UNESCO-IHE, in collaboration with IWMI
 - Training program to be delivered by UNESCO-IHE, with contributions from IWMI, to train the first set of officials from relevant agencies (e.g. CWC, NIH, IITs etc.) prior to the next workshop
2. **Water Quality Task Force Actions:**
 - Ganga water quality dashboards to be refined with CPCB data (by Birgit Vogel, IEWP and 2030WRG; Anshuman, TERI; and Martina, GIZ)
 - Industrial wastewater data to be added in addition to municipal wastewater data
3. **PMU:** Ministry of Water Resources, River Development and Ganga Rejuvenation (MOWR) to operationalize the PMU at the earliest through recruitment of PMU Director/ Coordinator and external experts.
4. **Next Workshop:** The next workshop is scheduled for **May 27, 10 am to 1 pm**, to be followed by lunch and informal discussions.

Annex – List of Participants (in alphabetical order)

	Organization	Name of Individual	Title
CHAIR	Ministry of Water Resources	Dr. Amarjit Singh	Secretary
1	2030WRG	Bastiaan Mohrmann	Co-Head, Asia and Middle East
2	2030WRG	Rochi Khemka	Regional Coordinator, Asia
3	2030WRG	Anil Sinha	Senior Advisor
4	2030WRG	Annelieke Laninga	Hindon Coordinator
5	ATREE	Durba Biswas	Fellow (Assistant Professor)
6	Australian High Commission	Caroline Mills	First Secretary
7	Central Water Commission	S. Masood Husain	Member (WP&P)
8	Central Water Commission	R.K. Pachauri	Chief Engineer, EMO
9	Central Water Commission	Ravi Shankar	Chief Engineer, P&D
10	Central Water Commission	R.K. Sinha	Chief Engineer, PO&MI
11	Central Water Commission	Dr. Naresh Kumar	Chief Engineer
12	Central Water Commission	Dr. R. Sankhua	Director, Basin Planning
13	Central Water Commission	Yogesh Paithankar	Director, Remote Sensing
14	Central Water Commission	Ram Jeet Singh	Director, RD-2
15	Central Water Commission	Alok Paul Kalsi	Deputy Director, Remote Sensing
16	Columbia Water Center/ CIPT	ParishaBudhiraja	Research Associate
17	EU	Henriette Faergemann	Counselor, Environment, Energy and Climate Change
18	GIZ	Martina Burkard	Director
19	GIZ	Satya Ghosh	Technical Expert, Ganga
20	Hungarian Embassy	Zsolt Pakozdy	Commercial Counsellor
21	IEWP	Birgit Vogel	Water Expert
22	IIT Kharagpur	C. Chatterjee	Professor
23	IIT Kharagpur	Rajendra Singh	Professor
24	IIT Madras	B.S. Murty	Professor
25	India Water Partnership/ WAPCOS	Dr. Veena Khanduri	Country Coordinator
26	ISRO/ CWC	Vineeta Sharma	Research Scientist
27	ISRO/ CWC	Niteen Kumar Bankar	Research Scientist
28	IWMI	Alok Sikka	India Representative
29	IWMI	UpaliAmarasinghe	Senior Researcher
30	IWMI	Dr. Bharat Sharma	Scientist Emeritus, Water Resources
31	IWMI	GirirajAmarnath	Senior Scientist
32	Madras Institute of Development Studies	L. Venkatachalam	Professor
33	National Institute of Hydrology	Sharad Jain	Scientist 'G' and Head, Water Resources Systems Division
34	National Institute of Hydrology	Dr. R.D. Singh	Director
35	National Institute of Hydrology	Dr. P.K. Singh	Scientist 'C'
36	National Mission for Clean Ganga	D.P. Mathuria	ED
37	NHP	N.K. Manglik	Director
38	TERI	Anshuman	Associate Director
39	UNESCO-IHE	Wim Bastiaanssen	Professor
40	WWF-India	Suresh Babu	Director, River Basins & Water Policy