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Government of India
Ministry of Water Resources, River Development & Ganga Rejuvenation
National Water Mission

Sub.: MINUTES OF THE SECOND MEETING OF INTER-SECTORAL ADVISORY GROUP FOR NATIONAL WATER MISSION, GOAL-I HELD ON AUGUST 18, 2015 IN NEW DELHI

The Inter-Sectoral Advisory Group (ISAG) has been constituted to advise and provide guidance and review the progress under National Water Mission Goal-I: 'Comprehensive water data base in public domain and assessment of impact of climate change on water resource'. Second meeting of the ISAG was held under the chairmanship of Shri A. B. Pandya, Chairman Central Water Commission on August 18, 2015. List of participants is at Annexure.

At the outset, the Chairman welcomed the committee members and highlighted the need of good quality of data stating that data is most important because if we do not have data we do not have the capacity to address climate change. He also stressed that each organization should generate good amount of data referring to India-WRIS web based GIS platform. Referring to Hydrological Project, the Chairman mentioned that we have been able to post data but the utilization of data is generally poor. He stressed that we must utilize the data to understand the water balance. In this direction, one step is Minor Irrigation Census as well as the Major and Medium project Census. While closing his inaugural address, the Chairman welcomed the Additional Secretary & Mission Director, NWM.

This was followed by a round of introduction of members and other participants. Ministry of Earth Sciences, DST, NRSC (ISRO), Ministry of Agriculture, State Water Resources Departments, MGNREGA, Ministry of Rural Development, Central Water Commission, Ministry of Water Resources River Development & Ganga Rejuvenation were represented in this meeting.

Agenda 1: Status of various items discussed in the First meeting of the Inter-Sectoral Advisory Group for Goal-I

Advisor (Technical), NWM started with the presentation stating that Goal-I of NWM is concerned with the 'Comprehensive water data base in public domain and assessment of impact of climate change on water resource' stating that the ISAG has been constituted to provide guidance and advice to NWM on activities and review the progress made under Goal-I. He informed that First meeting of ISAG was held on 27.12.2011 and started the presentation with the action taken on the decisions of first meeting of ISAG and current status of monitoring stations of CWC and CGWB. Strategy-wise discussions were held with reference to the Action Taken. The Group noted the follow-up actions.

Agenda 2: Review & establishment of network for collection of additional necessary data (Strategy I.1)

Advisor (Technical), NWM presented the status of Strategy I.1 mentioning that 878 HO stations are existing and 800 new stations are proposed out of which 177 have been operationalized by CWC at the end of March, 2015. Upgradation of 100 HO stations has been completed by CWC. The requirement of HO stations is about 2900 as per International Standards.

The Mission Director, NWM observed that establishment of comprehensive data base for surface water, ground water and waste water (following PM's advice in the meeting of the Prime Minister's Council on Climate Change held on 19th January 2015) is a necessary output of Goal-I of NWM. Therefore, it is essential to know the time-frame of its completion, as well as the norm that is followed. He requested Chairman, CWC to inform the parameters of international norm of H.O. Stations and also the plan of CWC to complete all the 2900 H.O. stations as per international norms. Similarly, time frame of CGWB to complete information on underground water as well as aquifer-mapping was required to be made available to NWM. The MD, NWM suggested that we need to associate the Central Pollution Control Board for data and further information on waste water and it would be appropriate if Chairman/CPCB is made a member of ISAG for Goal-I.

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CGWB has proposed 31000 GWM wells out of which 7652 stations have been established. CGWB was not represented in the meeting and Chairman suggested that in next meeting CGWB should be present. Information can be sought from CGWB in the meanwhile for next meeting. (2)

On the matter of NWM Web Portal, Mission Director, NWM requested all organizations to share their co-ordinates and web sites so that NWM Portal can be linked to all the sites. (3)

The Chairman, CWC clarified that the present 878 HO stations are established for identifying critical locations to assess basin-wise water situation or flood forecasting. 800 new stations proposed in XII Plan are also in the same setup and mix because ultimate aim of monitoring remains same. However, sub-basin wise water resources data is not available with the existing network. He also mentioned that peninsular rivers have more or less stable geometry but in case of hilly region rivers the river flow characteristics are such that the river geometry changes every year and a long time series data is required for such river basins for development of water resources projects. More stations are planned under DWRIS in 12th Five Year Plan but he mentioned that providing the manpower (skilled) is a major constraint. CWC proposed to engage about 2000 people but the engagement of people has not happened due to non-approval of creation of new posts by the Ministry. Outsourcing is also not successful as trained manpower is not available in the market. So internal economizing is done but it cannot continue and the manpower problems need to be addressed by the Government of India. He informed that the rainfall data is measured/ monitored by IMD and raw data is collected for IMD at CWC HO sites. The data validation exercise is done before publishing the same.

The Mission Director, NWM observed that manpower should not be a problem as H.O. stations can be manned by State employees who could be trained by NWM. He further observed that we need to meet global standards and should know how we compare with neighbouring countries, especially China because China had achieved excellence in their Water Resources Management. He further mentioned that the first meeting was held in 2011 and second meeting is being held after 4 years. Stressing the importance of the Goal-I, he stressed the need of holding ISAG meetings at a frequency of at least 3 months time period. CWC may provide information as above before the next meeting. Chairman, CWC stated that CWC will provide a note and mentioned that density of H.O. stations do not have international norms like WMO but flood forecasting and rainfall stations have. (4)

Director (WR), Punjab mentioned that digital water level recorders may be installed near railway/road bridges for H.O. observations since the channels etc. are fixed and measurements may be simpler and easier. Moreover, radar like water level recorders with on line transmission with telemetry may be used.

Chairman informed that CWC is using telemetry since 1997 but it is plagued with problems related to vandalism, theft, reliability and feasibility of data observations. He informed that CWC has established telemetry in Mahanadi and Chambal rivers in 1997 and the telemetry model has been standardized. Now CWC has upgraded 100 number of stations. He also informed about ADCP for flow measurements, but again availability of skilled manpower is necessary after automation for silt measurements and other Water Quality parameters.

Director, MGNREGA, Ministry of Water Resources, River Development & Ganga Rejuvenation enquired whether silt measurement is done at these stations because they need this data. Chairman, CWC informed that the silt data is regularly monitored by CWC and the data is available on India WRIS Portal and specific data can be provided by CWC also.

Principal Secretary, Meghalaya (Shri R.M. Mishra) mentioned that while planning water resources, micro level data is required and NRSA data is of little use due to the scale and resolution. MD, NWM stressed the need of involving the community and states very largely. Irrigation is 80% user of water resources and therefore states' participation and involvement is necessary. Manpower is available with the states and must be used.

Advisor (C&M), NWM mentioned that various organizations like MoS, DST, Min of Agriculture and others have monitoring sites. We should bring all the stations operated by various agencies to same standard and common format and platform. Chairman CWC informed that under NHP this is being done and all state data will be on common platform. The Advisor stated that database of all stations

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may be shared with NWM. On automation issue he suggested that DST can provide technology support under their Knowledge Mission. (5)

Ministry of Earth Sciences representative informed that data from 3700 rain gauge stations, 700 automatic Weather Stations and 1100 automatic rain gauge stations are available on IMD website. Expansion of 500 more weather stations is being taken up. IMD has national data centre at Pune. Metadata is available and data can be provided by IMD. NRSA stressed the need of real-time integration of data and that anywhere in the state rainfall data is measured it should be shared with IMD.

Stressing the importance of data sharing on one platform, MD, NWM suggested that NWIC should be made a central repository of all water flow river data for sharing at common platform.

(Action: CWC, CGWB, Ministry of Earth Sciences, Department of Science & Technology, NRSC: CWC to co-ordinate)

Agenda 3: Development of water resources information system (Strategy I.2)

Advisor (Technical) informed that EFC has been prepared and is under consideration in MoWR, RD & GR. NWIC will be an autonomous body on the lines of NMCG. The Ministry was requested to provide full information on status of NWIC. SJC (PP) stated that MoWR, RD & GR has proposed NWIC under National Hydrology Project. SJC informed that the note will be sent to NWM. (6)

Advisor (C&M) mentioned that India-WRIS should be made more user-friendly so that stakeholders like farmers may have information what crop he should grow and what is water availability etc. The Industry under Make-in-India programme can use the data with ease. In view of the farmers suicide lately, Mission Director, NWM substantiated that information be made available to farmers. NRSA stated that India-WRIS was principally developed for use by CWC/ State Government offices, Researches, etc. and it will take time to make it really user-friendly. Director (WR), Punjab informed that Kisan Call Centres are doing excellent work in this direction. The farmers may not be able to use the portal but mobile services is available with all.

Agenda 4: Development/implementation of modern technology for measurement of various data (Strategy I.3)

It was earlier proposed that NIH would develop tracer and isotopic methodology for monitoring of various data, particularly for storm surge, tidal hydrology, and salinity & unsteady flow. NIH informed that isotope studies cannot be used for first two items i.e. storm surge and tidal hydrology. Salinity problem can be studied with isotopic methods. A base paper has already been submitted by NIH in this regard. (7)

Agenda 5: Developing inventory of wetland (Strategy I.4)

ISRO and MoEF have the data on wetlands. NRSA (ISRO) informed that water-spread is measured by satellite data analysis for wetland larger than 2 ha and the data is available on BHUVAN database portal. They plan to integrate this data with IndiaWRIS also.

Mission Director, NWM observed that the MoEF & CC database on wetland appears to include only Ramsar Convention wetlands and wetlands identified under National Wetland Conservation Programme. There are many wetlands and water-bodies across the country which are being encroached either for farming or fisheries or for housing or industrial purposes. Therefore, a plan needs to be developed for wetland database development. He suggested that CWC may interact with MoEF & CC to develop a comprehensive database on wetlands. He suggested that a representative of MoEF & CC, preferably the Joint Secretary/Director in-charge of wetlands should be associated as a member of ISAG. (8)

(Action: CWC and MoEF & CC)

Agenda 6: Research and studies on all aspects related to impact of climate change on water resources including quality aspects of water resources with active collaboration of all research organizations working in the area of climate change (Strategy I.5)

Advisor (Technical) informed that out of 21 river basin proposals, 10 have been recommended by INCCC and requested NIH to update. NIH representative stated that the guidelines have been revised and overhead charges will be as per the DST guidelines. 8 projects have been finalized and two from IIT Mumbai and IIT Delhi, New Delhi are awaited and will be finalized in two weeks. Projects have been forwarded to Director (R&D), MoWR, RD & GR. Time frame for completion of downscaling projects is one year and for impact assessment projects is 3 years.

Department of Science & Technology representative mentioned that these study projects be shared with DST. MoES representative mentioned that IITM may also be associated in the research projects.

(Action: NIH, Director, R & D, MoWR, RD & GR)

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Study
Div (R&D)
cc: MoES Secy

Agenda 7: Re-assessment of basin wise water situation (Strategy I.6)

An amount of Rs. 6.44 crores has been sanctioned for the project by CWC. MD, NWM observed that it is informed that last such assessment was done in 1993. NRSC informed that the project is ongoing and will be completed by October, 2016. NRSC is doing Training, Capacity Building of regional offices of CWC where the study will be carried out. Chairman, CWC informed that NRSC have started conducting training to CWC staff. CWC is in the process of procuring hardware and software for the project and regional offices will be involved.

(Action: CWC, NRSC)

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CWC
cc: NRSC
Study report

Agenda 8: Projection of the impact of climate change on water resources (Strategy I.7)

It was mentioned that this item is related to the results obtained under Agenda 6 and Agenda 7 hence no comments required.

Agenda 9: Nomination of new member States/UT's on rotation basis

Five group members from states, viz. i) Principal Secretary, Dept. of Irrigation, Govt. of Punjab; ii) Principal Secretary, Dept. of Water Resources, Govt. of Madhya Pradesh; iii) Principal Secretary, Dept. of Water Resources, Govt. of Bihar; iv) Commissioner & Secretary, Dept. of Irrigation, Govt. of Meghalaya; v) Principal Secretary, Dept. of Irrigation, Govt. of Tamil Nadu have completed their term of three years from the date of Constitution of ISAG for Goal-I. It is suggested to include the States of Haryana, Andhra Pradesh, Jharkhand, Karnataka and Assam as new member States.

The meeting ended with vote of thanks to the Chair.

**SECOND MEETING OF INTER-SECTORAL ADVISORY GROUP FOR
NATIONAL WATER MISSION GOAL-I HELD ON AUGUST 18, 2015
AT NEW DELHI**

Ministry of Water Resources, River Development & Ganga Rejuvenation/CWC/NIH

1. Shri A. B. Pandya, Chairman, CWC - **In Chair**
2. Shri Nikhilesh Jha, AS & Mission Director, NWM
3. Dr. M. Satyanarayana, Advisor (C&M), NWM
4. Shri Joginder Singh, Advisor (Technical), NWM
5. Shri M.P. Singh, CE (P&D), CWC
6. Shri S.K. Sharma, SJC(PP), MoWR, RD &GR
7. Shri D.P. Mathuria, Director, CWC
8. Shri R. Giridhar, Deputy Director, CWC (RS Dte)
9. Shri J. K. Bassin, Consultant, NWM
10. Shri Shashi Kumar, Young Professional, NWM
11. Dr. Sanjay K. Jain, Scientist 'F', NIH, Roorkee
12. Shri P.K. Agarwal, Scientist 'B', NIH, Roorkee

Central Ministries

13. Dr. Vijay Kumar, Scientist 'F', Min. of Earth Sciences
14. Dr. Sanjay Bajpai, Scientist 'F', Dept. of Science & Tech.
15. Dr. V.V. Rao, Director, Gr. Director, Water Resources, NRSC, ISRO, Dept. of Space, Hyderabad.
16. Shri G.N. Sharma, Irrigation & Soil Engg. Expert, MGNREGA Div., Ministry of Rural Development
17. Shri A.K. Sumbly, DS(MGNREGA), Ministry of Rural Development.
18. Shri R.A.S. Patel, Asst. Commissioner (NRM), Ministry of Agriculture

State Governments

19. Shri R.M. Mishra, Principal Secretary, Government of Meghalaya
20. Shri R.K. Garg, Chief Engineer, Water Resources, Govt. of Punjab
21. Shri P.S. Bhogal, Director, Water Resources, Govt. of Punjab
22. Shri Vinod Kumar, OSD, MBDA, Meghalaya House

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14.	Principal Secretary Department of Irrigation Govt of Tamil Nadu Chennai-600 009.
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17.	Director National Institute of Hydrology Jalvigyan Bhawan Rookee-247 667

Note: * The members from States and UTs at Serial Nos. 11 to 15 above have completed the term of membership. New members States/UTs may be identified as replacement. (Refer Agenda Item 9).

No. M-11011/1/2013-NWM
Government of India
Ministry of Water Resources, River Development & Ganga Rejuvenation
National Water Mission

List of Email addresses for communicating the Minutes of Meeting of ISAG Goal-I, National Water Mission held on 18th August 2015 at New Delhi

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5.	Joint Secretary, MGNREGA, Ministry of Rural Development Krishi Bhavan, Dr. Rajendra Prasad Road, New Delhi - 110001
6.	Joint Secretary, Ministry of Agriculture Krishi Bhavan, New Delhi-110001
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11.	Principal Secretary, Department of Irrigation, Govt of Punjab, Chandigarh-160 001.