**Proceedings of the State Level Consultative Meeting held at MFP Federation Office, Bhopal**

**Preparation of DPR for rejuvenation of river Narmada through forestry interventions**

**Date**: 19.06.2019

**Venue**: M. P. Rajya Laghu Vanoupaj Sahkari Sangh Marvadit,
74-Bungalow
Sports Parisar, Indra Nikunj
Bhopal 462003

**Time**: 11:00 AM to 04:30 AM

A one day stakeholders meeting was held on 19/6/2019 in Bhopal, the state capital of Madhya Pradesh with an objective of bringing together all the stake holders under one platform and to evolve strategies and work plan to be carried out for preparation of Detailed Project Report on Narmada river.

The chief guest for the occasion was Mr. J. K. Mohanty, IFS, Principal Chief Conservator of Forests and Head of Forest Force, Madhya Pradesh Forest Department and Dr. U. Prakasam, IFS, Principal Chief Conservator of Forests (Wildlife) and Chief Wildlife Warden, Madhya Pradesh Forest Department was the Guest of Honour.

The programme started with welcome address by Dr. G. Rajeshwar Rao, ARS, Director, Tropical Forest Research Institute. While formally welcoming the august gathering, Dr. Rao, informed the rationale behind this important meeting with clear emphasis on rejuvenating River Narmada. He requested the stakeholders to actively participate and contribute in fine tuning of various activities involved in preparing the Detailed Project Report.

After a brief introduction by the delegates, a video clip of special report on preparation of DPR for Narmada river reported by IBC24 News Channel was screened to the august gathering. The Chairman for the session Mr. J. K. Mohanty, IFS, PCCF (HoFF), in his introductory remarks informed that the Madhya Pradesh is endowed with Narmada and Tapti, two important river basins of MP. The maximum length of traverse by river Narmada is in Madhya Pradesh right from its origin at Amarkantak to its outfall at Arabian Sea. He observed that in the recent past water flow in Narmada has been progressively declining during summer months in many of the stretches. While attributing Narmada as 'lifeline of

Madhya Pradesh', he mentioned that rejuvenating of Narmada is now an essential aspect that needs to be ingrained in the minds of every citizen of Madhya Pradesh. He mentioned that Forest Department is making commendable efforts by documenting soil and conservation measures in the Working Plan prescriptions of various Divisions such as Dewas Division, Indore Division and many such other divisions adjoining river Narmada. One of the main prescriptions included was the Riparian zone management working circle that targeted areas falling under Narmada river basin. He also suggested that so far as forestry interventions is concerned, besides planting indigenous species, grass species such as vetiver (*Chrysopogon zizanioides*) should be encouraged to arrest soil erosion in the banks of river. He opined that Joint Forest Management Committees (JFMC) have been associated in Forest Management for long time. He urged that the DPR must have some provisions involving JFMC in rejuvenation work. He remembered how there was a mass involvement of people sometime in July 2017 in which nearly six crores of seedlings were planted in a single day across districts in Narmada catchment area. He suggested that TFRI must meet and discuss with Commissioners, Chief Conservator of Forests, officials of Line Department of some of those districts where successful plantations were established. While lauding the initiatives taken up by TFRI, Mr. Mohanty assured that MP Forest Department (MPFD) will provide all the necessary support needed while preparing this important document.

A brochure prepared by TFRI depicting various aspects related to DPR preparation of river Narmada was released by the Honourable guests.

Professor R.J. Rao, Vice Chancellor, Barkatullah University, Bhopal, mentioned that the University has conducted extensive studies on documenting aquatic ecosystem of Morena, Chambal valley and biodiversity of Amarkantak Biosphere Reserve. He urged that both aquatic and terrestrial flora/fauna of most parts of Narmada basin has to be documented as a base line data which would be an essential component while preparing DPR. While extending a warm support and encouragement for the preparation of Narmada DPR, Prof. Rao, assured that the University is always open for such studies and assured that the University research staff would be eagerly associating in various research activities to be carried out during the report preparation. Prof. Rao handed over a copy of a note titled 'Participation Proposal on Rejuvenation of Narmada River' to the Director, TFRI which was duly acknowledged by the Director.

Dr. P. C. Dubey while appreciating the necessity of preparing the DPR, mentioned the august gathering that MPFD has also been involved in preparing a report on Narmada river which can add as supporting documenting during the preparation of DPR. As a first step in supporting this cause, he requested Mr. J. K. Mohanty, PCCF and HoFF to kindly hand over a copy of "Riparian Zone Management and Restoration - Volume 1 and 2" to the Director, TFRI which was accepted with thanks by the Director, TFRI.

Mr. U. K. Subuddhi, IFS, Madhya Pradesh Forest Development Corporation informed that the Corporation has been growing extensive plantations in 11 project areas and considerable areas adjoining Narmada basin. Mr. Subuddhi assured that some of the relevant basic information needed for the DPR will be provided by the Corporation.

Mr. Pushkar Singh, IFS was of the view that landscape planning is very crucial during the preparation DPR and the Forest Department has already carried out this work in the Green India Mission where superimposing of forest layer with water layer has provided a greater perspective in understanding the extent of forest areas in the Narmada catchment. However, these forest areas are to be ascertained at a micro level in the form of canopy closure extent or as shallow forest, root stock forest. Mr. Pushkar stressed that these can be used for identifying proper criteria and indicators which can be used to assess various steps mentioned in DPR during the process of rejuvenation.

Dr. B. B. Singh, emphasized on water use regulation from the rivers as well as ground water. He stressed that awareness among general public should be created in order to conserve rain water locally. He was of the opinion that, settlement should be near water source points in order to avoid intensive transportation of water. This will help in judicious utilization of water and also economics. He cited an example of Devas near Indore, where it happened that water was brought from Maheswar to Devas in order to full the requirement of Devas population. This resulted in increased cost of land and it caused decline of water in Maheswar.

Mr. R. Sreenivasa Murthy, IFS, Member Secretary, Madhya Pradesh State Biodiversity Board (MPSBB) categorically mentioned that water must essentially be considered as a living resource or habitat than mere water resource alone. He mentioned that around 17 different agencies have been working on various aspects related to Narmada Basin. He stressed that proper budgeting of water has not been properly documented. As Madhya Pradesh is considered to be the 'water capital' of Central India as majority of the water flow to other

parts of the country, various work related to catchment area is still to be carried out and properly documented. He was of the view that catchment areas that are rejuvenated by vegetative means and their impact on restoration of vacant/open area have to be looked into while preparing the DPR. He mentioned that time has now come to form a River and Water Conservation Authority to facilitate and coordinate all the issues pertaining to water resource. He informed that Narmada river has been declared as 'Living Entity'. Mr. Murthy categorically mentioned that instead of using the term plantation models it is better to rename it as restoration model as this would emphasis more on bringing back to what it was earlier rather than merely planting the trees *per se*. However, he emphasized that indigenous species to be given higher priority while considering any restoration models. As MPSBB has been documenting various aspects related to Narmada Basin, Mr. Murthy requested Mr. Mohanty, IFS, PCCF and HoFF to hand over two chapters namely Forest and Water Resource obtained from 'MP Biodiversity Strategy and Action Plan (2018-2030)' to Director, TFRI as it can be useful while preparing the DPR. He assured Director TFRI that all the required support from MPSBB would be provided during the DPR preparation.

Mr. C. K. Patil, Member (Environment and Forest), Narmada Valley Development Authority mentioned that in the recent past utilizing Narmada water in Madhya Pradesh through lift irrigation facilities has increased and thereby many areas are being brought into command area. He was of the opinion that as soon as the rainfall starts, in a short span dams get filled during June-July itself because of fast flowing of water. He cautioned that if the catchment areas are properly functioning in terms of soil and moisture conservation, then the dams are to be filled slowly but steadily at the end of monsoon. He urged that this point is to be taken note as this would provide considerable input in terms of water flow across the river basin.

Dr. R. S. Chaudhary, Principal Scientist, Indian Institute of Soil Science, Bhopal, mentioned that during planning any rejuvenation strategy, it is essential to have basic geological and geographical information about the river and its basin. He expressed his concern by mentioning that 'soil is victim and culprit' by providing an analogy how in the highlands and uplands fertile surface soil gets washed off and the same soil mixes with the flowing water and silts the flowing river or dam. He urged that soil disturbances, factors associated with it and measures to reduce it have to be scientifically dealt in the DPR.

Dr. Rakesh Singh, Senior Scientist, Central Ground Water Board, Bhopal, categorically stated that emphasis should be more on the forest area recharge rather than revenue land

alone. This would also provide necessary information about identifying vulnerable zones for water recharge. He reiterated that repetitive studies can be avoided and stressed that recharge acquifers specially with reference to tributaries has to be documented and empahsised that base flow and E-flow in the revenue villages and forest villages has to be differentiated and scientifically documented. He appreciated the multidisciplinary and co-ordinative approach followed by TFRI while preparing the DPR.

Mr. P. K. Sharma, Chief Engineer, Water Resources Department Madhya Pradesh informed the gathering that extensive work is being carried out by the Department in association with Central Water Commission and NRSA. Some of the essential data pertaining to sediment observation, water harvesting has been documented. A state specific template has been developed based on which data is being obtained from different segments and technical data is being analysed. The preliminary assessment of the data indicates that actual flow of water seems to be higher than what was documented earlier. However, further analysis is in progress and in due course of time the data would be published. Mr. Sharma was glad to inform that the Department would be working in tandem with TFRI during the DPR preparation and also extended all support for this work.

Dr. Omprakash M.B., Professor, Indian Institute of Forest Management, Bhopal, opined that it is essential to first look into the aspect of reviving the tributaries as most of the tributaries are drying now. Proper documentation of water pollution and water fetched by farmers is essential as it provides a basic data about water flow. He was of the view that status of socio economic conditions of people in and around Narmada basin has to be documented as this can provide an indirect estimation of water utilisation other than from the stored water. He mentioned that most of the rivulets of Narmada are considered in class C with reference to pollution and therefore pollution foot print of Narmada has to be addressed as a long term perspective. Dr. Omprakash concluded that rejuvenation of Narmada should have twin objectives of not only reviving it but also reducing the pollutions entering the river.

Dr. Vinita Vipat, Chief Scientific Officer from The Environmental Planning & Coordination Organisation (EPCO) being a premier organization in the field of environment related matters in Madhya Pradesh has documented the biodiversity of Amarkantak and Pachmari area. Being a nodal agency for education, it has been successful in penetrating more than 12,000 school children through training master trainers and sensitizing the teachers and students

about the Narmada river. Dr. Vinita stressed that they would be primarily pitch in their support especially in the aspects related to education and sensitising the people with reference to DPR.

Dr. Kumar Gaurav, Assistant Professor and a geomorphologist from Indian Institute of Science Education and Research, Bhopal suggested that it is essential to document how geo-morphology along the Naramda basin is changing over a period of time, and suggested that they would like to be partners for such studies during the course of DPR preparation.

Dr. S. Sarkar from Directorate of Geological Survey of India, Bhopal mentioned that documentation of geological information of Narmada basin was started in 1895. He was of the view that river aggregation and destruction areas have to be properly differentiated and documented. He firmly assured that GSI would be an integral part in the DPR preparation.

Sh. C. Behera, IFS and Nodal Officer for the project gave a detailed presentation on the role of forests in conserving river, he also dealt on some basic aspects of river hydrology and its riverscape. He explained the DPR activities, its methodology, legal framework of riverscape management, and role of various agencies and stakeholders. He addressed the participants about their role in preparation of the DPR, how the processing of data sharing and analysis will take place, how the data formats will be circulated to concerned forest divisions and the role of DFOs in it. Mr. Behera stressed the importance of National Water Policy in the current scenario with reference to water resources and their management in India. He also emphasised the importance of the legal frameworks warranting the conservation and protection of rivers in India.

There was an extensive exchange of ideas and discussions regarding the riverscape of 2-5 kilometer limit and three landscapes mentioned during the presentation.
Dr. Ombir Singh, Retired Scientist, FRI, Dehradun and Consultant was of the opinion that in case of Ganga, five landscapes were considered and awareness creation among people was also an integral part. Mr. Behra informed that suitable distance would be arrived regarding the kilometre limit as it may not be ideal to compare Ganga with Narmada as Narmada is basically ground water flowing and accordingly planning and procedure would change suiting the needs of the river. It was agreed that some of the limits pertaining to riverscape landscapes are to be dynamic depending on the nature of the river considered for the study.

Most of the participants opined that the riverscape limit must be depending upon watershed and water flow as well as the disturbances and hydrological factors of the watershed. It was also emphasised that historical factors and active flood zones should be also considered while deciding the limits of riverscape.

Dr. Dinesh Kumar, Scientist- G, FRI, Dehra Dun, presented in detail various aspects related to rejuvenation of Yamuna river. He mentioned that about 40 % of the Yamuna river basin falls in the state of Madhya Pradesh. Dr. Dinesh requested extensive support of Forest Officers specially in the areas of Betwa and Ken tributaries. He also mentioned that there are two other tributaries viz. Sindh and Chambal which also traverse in parts of MP. He also discussed about various plantation models, characterisation and cost norms which are to be the essential component of Yamuna DPR.

Dr. Yogeshwar Mishra, Scientist-F and Nodal Officer for River Mahanadi from Institute of Forest Productivity, Ranchi gave a talk on Preparation of Detailed Project Report (DPR) for Rejuvenation of Mahanadi River. While detailing about the geological and geographical aspects of Mahanadi, Dr. Mishra informed that only 0.11% of river basin area falls in the state of Madhya Pradesh. He explained in detail the five data proforma that will be sent to the field officers for data collection, and requested for support of concerned Forest Divisions while gathering the required field attributes.

Dr. Ratnaker Jauhari, IFS and Nodal Officer for River Godavari from Institute of Forest Biodiversity, Hyderabad gave a presentation on Wainganga and Wardha tributaries of Godavari River in the state of Madhya Pradesh. He sought the attention of Divisional Forest Officers from Balaghat (North and South) Division and Seoni South Division because river Wainganga originates in Mahadeo Hills in Mundara near village Gopalganj in Seoni and after joining the Wardha River, the united stream, which is known as Pranahitha River, empties into Godavari River at Kaleshwaram, Telangana. He also wanted to have a core group meeting with the concerned DFOs for discussing the provisions for data collection and sharing which was held subsequently.

The meeting concluded with a general appreciation and unanimous agreement by all the stake holders to be actively involved during the preparation of DPR proposed by TFRI. The

delegates hoped equivocally that the DPR would not only rejuvenate Narmada, but also revive Narmada along with its past glory.

The meeting ended with vote of thanks given by Dr. S. Saravanan, Scientist-F, TFRI.

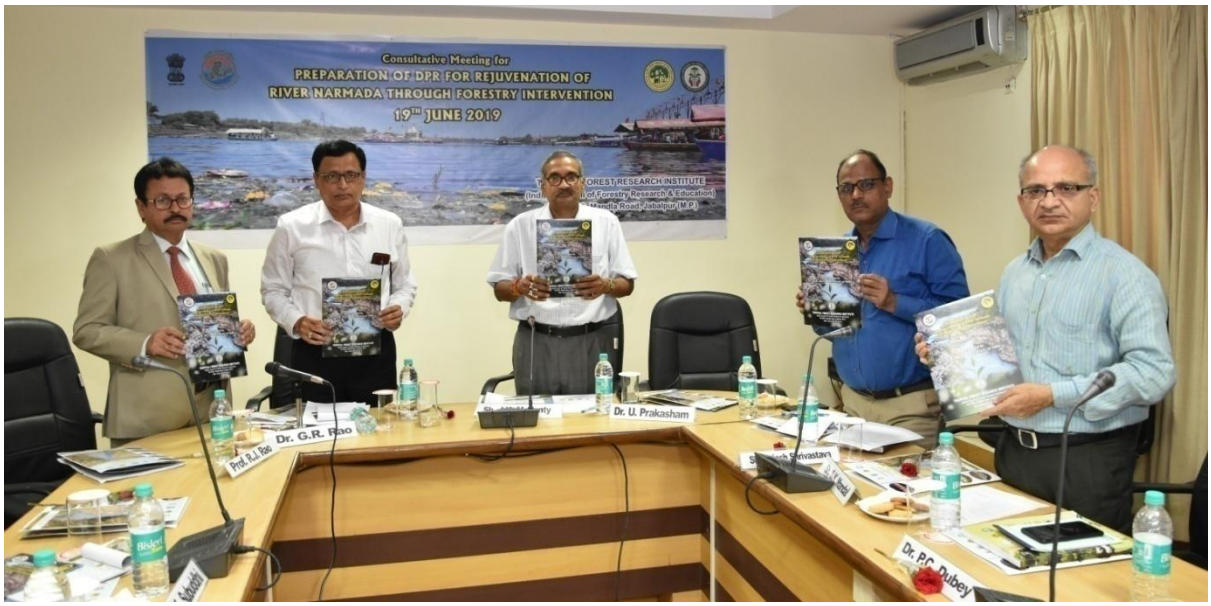
Chaturbhuja Behera, IFS
Nodal Officer, River-Narmada

No.-- Date:

For information copy to
1. All participants /HoDs, TFRI
2. PS to the Director for information of the Director

## Annexure I: Photographs

**View of State level Consultative meeting held at Bhopal on 19/06/2019**




**Release of brochure by the Chief guest Mr. J.K. Mohanty, IFS, PCCF (HoFF), MPFD**

**List of participants in the meeting held on 19.6.19 at Bhopal**

**External:**

| S. No. | Name and Address | Mobile No. and Email |
|---|---|---|
| | **External experts** | |
| 1 | Mr. J.K. Mohanty, IFS, PCCF (HoFF), MPFD | |
| 2 | Dr. U. Prakasham, IFS, PCCF (Wildlife) and Chief Wildlife Warden, MPFD | |
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| 11 | S.K.S. Tiwari<br>D.F.O. North Balaghat | 9424790101 |
| 12 | Mr. C.K. Patil<br>Member Environment & Forest , NVDA, Bhopal | 9424790071 |
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| | | |
|---|---|---|
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| 37 | Mr. K.K. Singh, Assistant Director<br>M.P. Tourism Bhopal | 9429628186 |
| 38 | Mr. S. S. Rajput | |
| 39 | Mr. Bhupendra Singh, Hitvada News Paper | |

**Internal:**

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