## National Hydrology Project (NHP):

Survey of India is one of the Central Implementation Agencies in the National Hydrology Project (NHP) of Government of India which is intended for setting up of a system for timely and reliable water resources data acquisition, storage, collation and management. The Ministry of Jal Shakti, Department of Water Resources, River Rejuvenation and Ganga Rejuvenation (DoWR, RD&GR) is the Nodal Ministry for implementation of the project

NHP will provide tools/systems for informed decision making through Decision Support Systems (DSS) for water resources assessment, flood management, reservoir operations, drought management, etc. NHP also seeks to build capacity of the State and Central sector organizations in water resources management through the use of Information Systems and adoption of State-of-the-art technologies like Remote Sensing..

Survey of India has been entrusted with the responsibility to generate, prepare and provide various types of Geo-spatial datasets i.e. mapping and preparing the Digital Elevation Model (DEM) of 0.5m, 5m & 10 m for River Basin areas (plain), up to 5 km on both the sides of river and GIS ready data of SOI Topo sheets on 1: 25 K scale.

The Project is to be completed in eight years duration with two phases of four years each. In first phase Ganga, Brahmputra, Mahanadi, Godavari, Gandak, Kosi, Narmada, Satluj etc. river basins will be completed by 2021.Sol has to focus on two core areas as under

### **Component B**: Water Resources Information System (WRIS)

Survey of India provides basic foundation data given as under

- i) National Digital Elevation Model (DEM) for improved flood hazard mapping and other planning purposes,
- ii) Local high resolution surveys (such as LIDAR) for flood prone areas to support flood riskmapping and management action plans

### Component D: Institutions Capacity Enhancement.

Through this Survey of India provides infrastructure and communication equipment, capacity building and extensive training programs. Advance training has been imparted to 68 Officers/ staffs on various courses (i.e. 3D Geo Information from Imagery, Advance Image Analysis & Laser Scanning at ITC Netherland, Summer Course of Geodesy on Geoid Modeling International at Denmark Technical University (DTU) Space, World Bank Procurement procedure at NWA Pune & ASCI Hyderabad, Training at IIM Ahmadabad and training on Control & Detail Survey by using GPS & Total Station, creation of DEM at IISM, Hyderabad.

## **Project Deliverables:**

- DEM of vertical accuracy of 3-5m & 0.5m for flood modeling
- Digital Geo-Database of 1:25K scale
- Creation of Geoid Model of 10 cm accuracy
- Establishment of CORS network

Status: Project is under execution

## F. No. X- 92021/1/2016-NHP/11**F**8 -1258 Government of India Ministry of Water Resources, RD & GR National Hydrology Project

2<sup>nd</sup> Floor, Block-3, CGO Complex, Lodhi Road New Delhi, Dated: 23<sup>rd</sup> June, 2016

#### <u>ORDER</u>

# Sub: Approval of the Cabinet for implementation of National Hydrology Project.

Approval of the President is conveyed for implementation of the National Hydrology Project under the Ministry of Water Resources, River Development and Ganga Rejuvenation with an outlay of Rs. 3679.7674 crore (Rupees three thousand six hundred seventy nine crore seventy six lakh and seventy four thousand only). The total outlay Rs. 3679.7674 crore {Rs.3,640 crore for National Hydrology Project (NHP) and Rs.39.7674 crore for NWIC}, as a Central Sector Scheme, with 100% grant to the State/Central Implementing agencies (IAs) is to be taken up in two stages. The first stage entails an expenditure of Rs 1681.5674 crore. The second stage for the period 2020-21 to 2023-24 has an outlay of Rs 1998.2000 crore. Fifty percent of the amount will come as World Bank loan and the remaining 50% as budgetary support from Government of India for both the Stages.

#### 2. Budget allocation:

The Scheme of National Hydrology Project envisages a provision of Rs. 3679.7674 crore for (i) Water Resources Data Acquisition System; (ii) Water Resources Information System; (iii) Water Resources Operation and Planning; (iv) Institutional Capacity Building; and (v) National Water Informatics Centre (NWIC). The component-wise, stage-wise details of distribution are given below:

	Activities	Outl (Rs. in C		Total (Rs. in Crore)
		Stage-I	Stage-II	
Component-A	Water Resources Data Acquisition	617	970	1587
Component-B	Water Resources Information System	250	269	519
Component-C	Water Resources Operation and Planning	211	396	607
Component-D	Institutions Capacity Enhancement	544	347	891
	Contingency	19.8	16.2	36
NWIC	National water Informatics Centre (NWIC	39.7674	-	39.7674
	Total	1681.5674	1998.2	3679.7674

2.1 Detailed component-wise, stage-wise yearly financial outlays is given in Annexure I.

2.2 Detailed State/Central Implementing Agency's Component wise break-up is given in Annexure II.

2.3 Allocations may change based on progress, necessity and utilization of funds by the Implementing Agencies during the course of project implementation.

2.4 Budget allocation is in conformity with the Cabinet note and Annexure referred therein.

#### 3. Implementation Plan:

3.1 All the State and Central organizations under the Project will be known as Implementing Agencies (IAs).

3.2 The IAs will be required to submit their Annual Work Plan (AWP) and Annual Procurement Plan (APP) for the year 2016-17 latest by 31.07.2016. The AWP and APP for subsequent year is required to be submitted by 31<sup>st</sup> December.

3.3 The IAs would be required to submit their final PIPs along with the write-up latest by 30.06.2016. The Template for the PIPs has already been sent to all the IAs.

3.4 The IAs may initiate activities, e.g. preparation of Bid documents, floating of bids, etc. so as to meet the readiness criteria suggested by DEA which stipulates that 30% of the Bids should be ready for award at the time of signing of the Agreement with the World Bank. This para may be read with Para 9 of this G.O.

#### 4. Creation of NPMU/PMUs:

4.1 The National Project Monitoring Unit (NPMU) in the Ministry of Water Resources, RD&GR would be assisted by a Technical Assistance & Management Consultancy (TAMC) for technical and management aspects, including assistance on procurement, MIS etc. and shall also provide support to all the IAs.

4.2 The NPMU would be assisted by Auditing Consultants to carry out independent audit of the State and Central Implementing Agencies w.r.t. to the expenditure incurred and the activities taken up under NHP.

4.3 The State and Central Implementing Agencies (IAs) would be required to have a dedicated Project Monitoring Unit (PMU). The constitution of the same along with their contact details may be furnished to NPMU latest by 15.07.2016.

#### 5. Role of MoWR, RD&GR in NHP.

a. Technical and Management Support (through TAMC/CWC/CGWB)

- i. Finalisation of specifications and Terms of reference of consultancies, Preparation and evaluation of bids etc.
- ii. Evaluation of activities etc.
- iii. Technical support on project implementation

*b.* Training program through NIH/NWA/RGI

- i. Training program development in all the aspects of project along with academia and R&D institutes across India.
- ii. Provide trainings
- *c*. MIS for project monitoring (financial and physical)
- d. Financial Consultancy for auditing
- e. MoUs with National and International organizations
- *f*. National Water Informatics Centre with
  - i. Accessibility to real time and integrated River Basin information (nearly 100 layers) including high resolution DEM, ET, Weather forecast, historical database.
  - ii. Software and support for development of State-WRIS.

- iii. Such an organisation is to be created as per IRDA Act, 1956
- iv. Sharing of data through NWIC / CWC's Earth Receiving Station
- g. CWC's and CGWB's Web-based Database management system
  - i. with cloud storage hence no financial burden to States
  - ii. Provision of linkage with States' Data Centres
- h. Regional River Basin modeling Tools through CWC :
  - i. Flood forecasting and early warning system coupled with weather forecast
  - ii. Water Resources Assessment at River basin scale.

#### 6. Roles of States & Central Implementing Agencies (IAs) in NHP.

The IAs need to work in close coordination with MoWR, RD&GR and central agencies to derive maximum benefits through, but not limited to, the following:

- a. Design of hydro-met network
- b. States' Data integration and improving accessibility through NWIC.
- c. River Basin Models for flood forecasting, flash floods and inundation in the affected areas in greater details
- d. Improved assessment of their basin wise water resources.
- e. Timely submission of financial and physical progress reports through MIS.
- f. Timely submission of their annual procurement plans, annual work plans
- g. Timely preparation of bids and procurement of respective goods, works, consultancies etc.
- h. Timely submission of Audited utilization Certificates by CAG Approved Auditors.

#### 7 MIS/Reporting System:

Progress of actions to implement the decision of the Cabinet has to be included in Ministry's Monthly summary. The Implementing agencies are advised to submit their Monthly progress report, Expenditure, Bill, Voucher etc. through the MIS System soon to be in place for NHP. This requisite reports may be sent to NPMU in the Ministry of Water Resources, RD&GR every month till such time the MIS is in place.

#### 8. Fund Flow Mechanism:

The fund flow mechanism for the National Hydrology Project will be informed separately. In the meantime, as the grants to the States cannot be transferred to the States' Treasury, the Implementing Agencies are requested to open a separate Savings Bank Account in a Scheduled Bank for the NHP and notify the same to NPMU, MoWR, RD&GR.

#### 9. Procurement Procedure:

The IAs need to follow the World Bank Procurement Guidelines. The IAs may initiate the preparation of the tender Documents on the same lines. However, only either of the following options may be considered, viz.

a) The supplier shall supply the equipment and also carry out the O&M services and ensure seamless data communication to the State and Central servers. The contractor shall be paid 40% of the cost at the time of successful commissioning and the balance 60% of the cost together with O&M and data communication over the balance 6 years.

b) The supply of equipment plus the O&M including data communication on six years lease by the supplier. The State government shall pay the monthly/quarterly/yearly lease rental. After six years, the supplier shall transfer the equipment at Rs.1/- to the Government which may assign the O&M contract to the same party.

The standard tender documents provided under NHP have already included the first option. The detailed mechanism for procurement (Procurement manual) under the National Hydrology Project will be informed separately. However, only one of the options mentioned above may be considered.

**10.** All the States & Central Implementing Agencies, should endeavour to install atleast any 10 nos. of Hydromet equipment (e.g. Rain Gauge, Automatic Weather Stations, DWLRS etc) in the School/College/Panchayat/Community Halls premises for public awareness.

**11.** This issues with the concurrence of the Integrated Finance Division, MoWR, RD&GR conveyed vide FTS dated 17/6/2016.

**12.** The Government Order for National Water Informatics Centre (NWIC) will be issued separately.

23/06/2016

(Ashok Gupta) Director (HP) Tele-fax No. 011-24363417

То

- 1) Chief Secretaries of State Governments (as per List –I)
- 2) Heads of Central Organisations (as per List-II)
- 3) Principal Secretaries of State Implementing Agencies (as per List-III)
- 4) Project Coordinators/Nodal Officers of State and Central Oranisations (List-IV)
- 5) Joint Secretary, Cabinet Secretariat, Rashtrapathi Bhawan, New Delhi w.r.t. letter No. 16/CM/2016 dated 07.04.2016.
- 6) Joint Secretary, PMO, South Block, New Delhi (Kind Attn. Ms. Debashree Mukherjee)
- 7) Joint Secretary (PFII), Department of Expenditure, New Delhi.
- 8) Joint Secretary (Personnel), Department of Expenditure, New Delhi.
- Joint Secretary (MI), Department of Economic Affairs, Ministry of Finance, North Block, New Delhi
- 10) Principal Advisor (WR), NITI Aayog, New Delhi.
- 11)Director (Finance), MoWR, RD & GR, New Delhi.
- 12) Chief Controller of Accounts, MoWR, RD & GR, Shastri Bhawan, New Delhi.
- 13)Pay & Accounts Officer (Sectt.), MoWR, RD & GR, Shastri Bhawan, New Delhi.
- 14) Finance Desk/B&T/GA Section, MoWR, RD & GR/ Guard file.
- 15)Task Team Leader (Dr. Anju Gaur), World Bank, Kasturba Gandhi Marg, Hindustan Times Building, New Delhi (with the request to upload the order on website).

Copy for kind information to:

- 1) PS to Hon'ble Minister (WR, RD & GR)
- 2) PS to Hon'ble Minister of State (WR, RD & GR)
- 3) Sr. PPS to Secretary (WR,RD&GR), MoWR, RD & GR
- 4) PPS to SS (WR,RD&GR), MoWR, RD & GR
- 5) PS to JS (A& GW), MoWR, RD & GR
- 6) PS to JS&FA, MoWR, RD & GR

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Component-wise & year-wise Financial Outlay of the National Hydrology Project\*\*

(Rs. in Crore)

All Figures in Rs Crores	Canital /			Stage 1					Stage 2			
	Revenue			c		Phase 1		1			Phase 2	Grand
Component		Year 1	Year 2	Year 3	Year 4	Total	Year 5	Year 6	Year 7	Year 8	Total	Total
		(2016-17)	(2017-18)	(2018-19)	(2019-20)		(2020-21)	(2020-21) (2021-22) (2022-23) (2023-24)	(2022-23)	(2023-24)		
NHP					3							
A1: Hydromet Observation	Capital	40	72	72	252	436	295	280	06	42	707	1143
A2: Automated System Operation and Data	-											
	Capital	7	8	8	3	26	3	H	ц	<u>حر</u>	6	32
A3: Hydro Informatics Centers	Capital	15	40	40	. 60	155	08	90	70	17	257	412
A : Water Resources Data Acquisition System		62	120	120	315	617	378	371	161	60	970	1587
<b>B1: National Water Resources Information</b>												
System	Revenue	ы	50	50	08	185	70	08	50	25	225	410
gional Water Resources Information		ı	1	1	2	,	i	i				
System	Revenue	5	15	15	30	65	15	15	10	4	44	109
B: Water Resources Information System		10	65	65	110	250	85	95	60	29	269	519
C1: Analytical and DSS tools	Revenue	9	20	20	06	139	06	95	55	40	280	419
C2: Purpose Driven Studies	Revenue	2	15	15	20	52	41	41	11	7	100	152
C3: Knwoledge Products and Dissemination	Revenue	2	5.5	5.5	7	20	7	4	4	1	16	36
C: Water Resources Operation and Planning		13	40.5	40.5	117	211	138	140	70	48	396	607
D1: Water Resources Knowledge Centers	Capital	10	15	15	33	73	25	25	12	7	69	142
D2: Professional Development	Revenue	15	45	45	46	151	30	25	10	7	72	223
D3: Project Management and Technical												
	Revenue	30	20	20	20	.90	15	15	7	7	44	134
D4: Operational Cost	Revenue	40	55	55	08	230	50	50	40	22	162	392
D: Institutions Capacity Enhancement		95	135	135	179	544	120	115	69	43	347	891

	TUTOPEO	TONION	200.00	121.00	00.127	721.00 1681.5674 721.00 721.00 300.00 100.00 100.00 100.00	721.00	360.50	199.8714 380.3960 360.50	199.8714		Grand Total
2679 7674	1008 20	100 00	360.00	100	2							
01.1011						39.7674			19.8714 19.896	19.8714	1.2	Total (NWIC)
20 7674								-				Outers (in aver, manpower, consuming see
						22.4674			10.3714 12.096	10.3714	Revenue	other (travel mannower consultancy etc.
											POLINICATION CONTRACT	Equipment & imagenes etc.
						17.3			7.8	9.5	Canital	
												INANT
												NIMIT
												( )
	2000	TOT	000	171	171	1042	177.	360.5	360.5	180		Total (NHP)
3640	1998	180	260	104	104	4/40						Contingency
36	16.2					19.8						

\*\* Intra-allocation may change based on necessity and utilization of funds by the Implementing Agencies

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## Annexure- II

State/Central Implementing Agency's Component wise break-up

				Comp	onent wise	
S.No.	Implementing Agency	Tentative	А	B	C	D
		Allocations		-		2
	STATES					
1	Andhra Pradesh (GW)	80.00	48.00	4.00	12.00	16.00
2	Andhra Pradesh (SW)	80.00	48.00	4.00	12.00	16.00
3	Assam	47.00	28.20	2.35	7.05	9.40
4	Bihar (GW)	30.00	18.00	1.50	4.50	6.00
5	Bihar (SW)	105.00	63.00	5.25	15.75	21.00
6	Chattishgarh SW	48.00	28.80	2.40	7.20	9.60
7	Chattishgarh GW	32.00	19.20	1.60	4.80	6.40
8	Goa	68.00	40.80	3.40	10.20	13.60
9	Gujarat (GW)	31.00	18.60	1.55	4.65	6.20
10	Gujarat (SW)	70.00	42.00	3.50	10.50	14.00
11	Haryana (SW)	50.00	30.00	2.50	7.50	10.00
12	Himachal Pradesh	70.00	42.00	3.50	10.50	14.00
13	Jharkhand	60.00	36.00	3.00	9.00	12.00
14	Karnataka (SW)	110.00	66.00	5.50	16.50	22.00
15	Kerala (GW)	40.00	24.00	2.00	6.00	8.00
16	Kerala (SW)	42.00	25.20	2.10	6.30	8.40
17	Madhya Pradesh	90.00	54.00	4.50	13.50	18.00
18	Maharashtra (GW)	36.00	21.60	1.80	5.40	7.20
19	Maharashtra (SW)	150.00	90.00	7.50	22.50	30.00
20	Manipur	25.00	15.00	1.25	3.75	5.00
21	Meghalaya	25.00	15.00	1.25	3.75	5.00
22	Mizoram	31.00	18.60	1.55	4.65	6.20
23	Nagaland	28.00	16.80	1.40	4.20	5.60
24	Odisha (GW)	55.00	33.00	2.75	8.25	11.00
25	Odisha (SW)	60.00	36.00	3.00	9.00	12.00
26	Punjab	74.00	44.40	3.70	11.10	14.80
27	Rajasthan	128.00	76.80	6.40	19.20	25.60
28	Sikkim	25.00	15.00	1.25	3.75	5.00
29	Tamil Nadu	100.00	60.00	5.00	15.00	20.00
30	Telangana (GW)	70.00	42.00	3.50	10.50	14.00
31	Telangana (SW)	97.00	58.20	4.85	14.55	19.40
32	Tripura	25.00	15.00	1.25	3.75	5.00
33	Uttar Pradesh(GW)	50.00	30.00	2.50	7.50	10.00
34	Uttar Pradesh (SW)	121.00	72.60	6.05	18.15	24.20
35	Uttarkhand	75.00	45.00	3.75	11.25	15.00
36	West Bengal (GW)	50.00	30.00	2.50	7.50	10.00
37	West Bengal (SW)	100.00	60.00	5.00	15.00	20.00
	UTs					
1	Delhi	5.00	3.00	0.25	0.75	1.00
2	Puducherry	20.00	12.00	1.00	3.00	4.00

(2)

	CENTRAL AGENCIES					
1	Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR,RD & GR)	210.00	10.00	30.00	0.00	170.00
2	Central Water Commission(CWC)	275.00	35.00	35.00	155.00	50.00
3	Central Ground Water Board (CGWB)	85.00	17.00	23.00	35.00	10.00
4	National Institute of Hydrology (NIH)	85.00	10.75	0.00	25.50	48.25
5	Central Water & Power Research Station (CWPRS)	60.00	10.00	0.00	2.00	48.00
6	Central Pollution Control Board (CPCB)	26.00	22.00	1.00	0.00	3.00
7	India Meteorological Department (IMD)	0.00	0.00	0.00	0.00	0.00
8	Survey of India (SOI)	300.00	0.00	250.00	0.00	50.00
9	National Remote Sensing Agency(NRSA)	80.00	0.00	55.00	10.00	15.00
10	Bhakra Beas Management Board (BBMB)	30.00	10.00	2.00	12.00	6.00
11	Damodar Valley Corporation (DVC)	50.00	30.00	2.50	7.50	10.00
	Contingency	36.00				
	NWIC					
1	National water Information centre	39.7674				
	TOTAL	3679.7674	1587	519	607	89

## List of Chief Secretaries, National Hydrology Project

- 1. Shri S.P.Tucker, Chief Secretary, Government of Andhra Pradesh, Secretariat, Hyderabad-500022.
- 2. Shri Vinod Kr. Pipersenia, Chief Secretary, Government of Assam, Assam Sachivalaya, Block C, 3rd Floor, Dispur, Guwahati-781006
- 3. Shri Anjani Kr. Singh, Chief Secretary, Government of Bihar, Old Secretariat, Patna-800015
- 4. Sh. Vivek Kumar Dhand, Chief Secretary, Government of Chhattisgarh, DKS Bhawan, Mantralaya, Raipur-492001
- 5. Shri R. K. Srivastava, Chief Secretary, Govt. of Goa, Secretariat, Panaji-403521.
- 6. Shri G.R. Aloria, Chief Secretary, Government of Gujarat, New Sachivalaya, Gandhingar-382010
- 7. Sh. D.S. Dhesi, Chief Secretary, Government of Haryana, Harayana, Civil Secretariat, Chandigarh-160009
- 8. Sh. P. Mitra, Chief Secretary, Government of Himachal Pradesh, Secretariat, Shimla- 171002
- 9. Ms. Rajbala Verma, Chief Secretary, Government of Jharkhand, Secretariat, Ranchi-834002
- 10. Shri Arvind Jadhav, Chief Secretary, Government of Karnataka, 3rd Floor, R. No. 320, Vidhan Sauda, Secretariat, Bangalore-560001
- 11. Sh. P.K. Mohanty, Chief Secretary, Government of Kerala, Secretariat, Thiruvananthapuram-695001
- 12. Shri Anthony Desa, Chief Secretary, Government of Madhya Pradesh, Mantralaya, Vallabh Bhawan, Bhopal-462004
- 13. Shri Swadheen S. Kshatriya, Chief Secretary, Government of Maharashtra, Mantralaya, Mumbai-400032.
- 14. Sh .O. Navakishore Singh, Chief Secretary, Government of Manipur, Manipur Secretariat, Imphal-790001

- 15. Sh. K.S. Kropha, Chief Secretary, Government of Meghalaya, Meghalaya Civil Secretariat, Shillong-793001
- 16. Shri Lalmalsawma, Chief Secretary, Government of Mizoram, Block C, Civil Secretariat, Aizwal- 796001
- 17. Shri Pankaj Kumar, Chief Secretary, Government of Nagaland, Nagaland Civil Secretariat, Kohima-790001
- 18. Shri Aditya Prasad Padhi, Chief Secretary, Government of Orissa, Secretariat, Bhubaneshwar- 751001
- 19. Shri Sarvesh Kaushal, Chief Secretary, Government of Punjab, Punjab , Secretariat, Chandigarh-160017
- 20. Shri C.S. Rajan, Chief Secretary, Government of Rajasthan, Secretariat, Jaipur-302001
- 21. Shri Alok Kr. Shrivastava, Chief Secretary, Government of Sikkim, Secretariat, Gangtok- 737101
- 22. Shri K. Gnanadesikan, Chief Secretary, Government of Tamil Nadu, Secretariat, Chennai-600009
- 23. Dr. Rajiv Sharma, Chief Secretary, Government of Telengana, Secretariat, Hyderabad-500022.
- 24. Shri Yash Pal Singh, Chief Secretary, Government of Tripura, Civil Secretariat, Agaratala-799001
- 25. Shri Alok Ranjan, Chief Secretary, Government of Uttar Pradesh, Secretariat, Lucknow-226001
- 26. Shri Shatrughna Singh, Chief Secretary, Government of Uttarakhand, 4, Subhash Road, Secretariat, Dehradun-248001
- 27. Shri Basudev Banerjee, Government of West Bengal, Secretariat, Writers Building, Kolkata-700001
- 28. Shri Kewal Kr. Sharma, Chief Secretary, Govt of NCT Delhi, Delhi Secretariat, I.P. Estate, New Delhi- 110002
- 29. Shri Manoj Parida, Chief Secretary, Puducherry Administration, Chief Secretariat, 1 Beach Road, U.T. of Puducherry, Puducherry-605001.

## List of Head of Central Agencies, National Hydrology Project

- 1. Sh. G.S. Jha, Chairman, Central Water Commission, Room No.313(S), Sewa Bhawan, R.K. Puram, New Delhi-110066
- 2. Sh. K.B. Biswas, Chairman, Central Ground Water Board, NH-IV, Faridabad, Haryana-121004.
- 3. Dr. L.S. Rathore, Director General, India Meteorological Department, Mausam, Bhawan, Lodhi Road, New Delhi-110003.
- 4. Sh. R.D. Singh, Director, National Institute of Hydrology, Jal Vigyan Bhawan, Roorkee-247667
- 5. Dr. M.K. Sinha, Director, CWPRS, P.O. Khadakwasla R.S., Pune 411024, Maharashtra
- 6. Sh. A.K. Mehta, Chairman, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Shahdara, Delhi110032.
- 7. Sh. S.K. Sharma, Chairman, Bhakhra Beas Management Board, Sector- 19-B, Madhya Marg, Chandigarh-160019.
- 8. Dr. V.K. Dadhwal, Director, NRSC, Deptt. of Space, Hal Campus, Bala Nagar, Hyderabad 500625
- 9. Sh. Rajendra Mani Tripathi, The Surveyor General of India, Hathibarkala Estate, P.B. No.37, Dehradun, Uttarakhand, PIN-248001
- 10. Sh. A.W.K. Langstieh, Chairman, Damodar Valley Corporation, DVC Towers, VIP Road, Kolkata-700054

## List - III

#### List of Principal Secretaries of States, National Hydrology Project

- 1. Sh. Aditya Nath Das, Principal Secretary(in charge), Irrigation & CAD Deptt, Govt. of Andhra Pradesh, AP Secretariat, Hyderabad-500022.
- 2. Sh. Shashi Bhusan Kumar, Secretary, Water Resources Deptt., Govt. of Andhra Pradesh, AP Secretariat, Hyderabad-500022.
- 3. Sh.R.T. Jindal, Addnl. Chief Secretary, Water Resources Department, Govt. of Assam, Assam omplex, Dispur, Guwahati, Assam 781 006
- 4. Sh.Arun Kumar Singh, Principal Secretary, Water Resources Deptt., Govt. of Bihar, Sinchai Bhavan, Patna 800 015
- 5. Sh.Tripurari Sharan, Principal Secretary, Department of Minor Irrigation., Govt. of Bihar, Vikas Bhavan, Patna 800 015
- 6. Sh. Ganesh Shankar Mishra, Secretary, Deptt. of water Resources, Government of Chhattisgarh, Mantralaya, Mahanadi Bhawan, Raipur-49,
- 7. Sh. R.K. Shrivastava, Principal Secretary (WR), Govt. of Goa, Secretariat, Porvorim-403501.
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