

**MAHADAYI WATER DISPUTES TRIBUNAL**

**THE REPORT-CUM-DECISION**

**OF**

**THE MAHADAYI WATER DISPUTES TRIBUNAL**

**(Under Section 5(2) of The Inter-State River Water Disputes Act, 1956)**

**IN THE MATTER OF**

**REFERENCE NO. 1 OF 2011 RELATING TO WATER DISPUTES  
OF THE INTER-STATE RIVER MAHADAYI AND THE RIVER  
VALLEY THEREOF**

**BETWEEN**

**THE STATE OF GOA**

**AND**

**THE STATE OF KARNATAKA**

**AND**

**THE STATE OF MAHARASHTRA**

**VOLUME - I**

**(V O L U M E S I - XII)**

**New Delhi**

**14<sup>th</sup> August 2018**

**COMPOSITION OF  
THE MAHADAYI WATER DISPUTES TRIBUNAL**

**CHAIRMAN**

**Justice J.M. Panchal  
(Former Judge, Supreme Court of India)**

**Members**

**Justice Viney Mittal  
(Former Judge, High Court of Madhya Pradesh)**

**Justice P.S. Narayana  
(Former Judge, High Court of Andhra Pradesh)**

## **ASSESSORS**

- 1. Mr. M.E. Haque  
Former Member,  
(Water Planning and Projects)  
Central Water Commission,  
Ministry of Water Resources,  
Government of India**
  
- 2. Mr. Satya Pal Kakran  
Former Member/Chairman  
Central Water Commission,  
Ministry of Water Resources,  
Government of India**

## **EXECUTIVE ENGINEER**

- 1. Mr. Sunil Kumar Sinha  
Former Deputy Director,  
Central Water Commission,  
Ministry of Water Resources,  
Government of India**

## **APPEARANCES**

1. Atmaram N.S. Nadkarni, P.S. Narasimha, Mahesh Sonak, Senior Advocates, Dattaprasad Lawande, Advocate General for the State of Goa, (P. Venugopal, Ms. A. Subhashini, Verenkar Pankaj, N. Laud, V. Madhukar, Rajesh Shivolkar, Ms. Surekha Raman, K. Parameshwar, Nikhil D. Pai, Pradosh Dangui, Ms. Purna Bhandari, Santosh Salvador Rebello, Jai Dehadrai, Ms. Nikita Nadkarni, Ashvek Anil Gosavi, Ashish Krishnanath Kuncoliencar, Anshuman Srivastava, Anjun Bobde, Amogh Prabhu Desai, Ms. Richa Relhan, Ms. Richira Gupta, Ms. Sneha Tendulkar, Ms. Sanyya Pawar, Aurobindo Gomes Pereira, Abhishake Bhardvaj, Ms. Akshaya Ashish Joglekar, Ms. Mayuri Nayyar Chawla), Advocates, for the State of Goa.

2. Fali S. Nariman, Madhusudan R Naik, Ashok Desai, S.S. Javali, Shyam Divan, Ms. Indira Jaisingh, Senior Advocates, Ravi Varma Kumar, S. Vijayshankar, former Advocates General for the State of Karnataka, (Mohan V. Katarki, Brijesh Kalappa, Subash C. Sharma, Maruti B. Zirali, Smt. Anitha Shenoy, Ranvir Singh, Nishanth Patil, Rajadhyax, Ms. Anuradha Bindra, Kashi Vishweshwar), Advocates, for the State of Karnataka.
3. D.M. Nargolkar, Mr. Shamik Ghosal, and Viraj Kadam, Advocates, for the State of Maharashtra.

# **REPORT OF THE MAHADAYI WATER DISPUTES TRIBUNAL**

## **I N D E X**

### **VOLUME – I**

<b><u>Sl. No.</u></b>	<b><u>D E S C R I P T I O N</u></b>	<b><u>PAGE NOS</u></b>
1.	Introduction and Constitution of Tribunal	1 - 6
2.	Order dated 16.10.2012 passed by the Tribunal in I.A. No.2 of 2012 filed by the State of Goa whereby directions were given to the three States to file their respective Statements of Claims alongwith Replies and Rejoinders	6 - 7
3.	Chronological details of the Statement of cases/claims filed by the States of Goa, Maharashtra and Karnataka, along with Replies and Rejoinders.	7- 9
4.	Issues originally framed by the Tribunal vide Order dated 21.8.2013.	9 - 18
5.	Visit of the Tribunal to different sites and the Report dated 12.02.2014 of the Assessors on the visits of the Tribunal.	19 - 46

- |            |  |                |
|------------|--|----------------|
| <b>6.</b>  | <b>Order dated 04.03.2014 passed by the Tribunal in I.A. No. 19 of 2014 filed by the State of Goa for Amendment of Statement of claims and the consequential Pleadings of the Party States.</b>            | <b>46 - 47</b> |
| <b>7.</b>  | <b>Order dated 01.04.2014 passed in I.A. No. 21 of 2014 filed by the State of Maharashtra for Amendment of Statement of Claims and consequential Pleadings of the Party States</b>                         | <b>47 - 48</b> |
| <b>8.</b>  | <b>Order dated 17.04.2014 passed in I.A. No. 1 of 2012 filed by the State of Goa for restraining the State of Karnataka not to actually utilize or divert the water under the Kalasa-Bhandura Project.</b> | <b>49 - 52</b> |
| <b>9.</b>  | <b>Order dated 03.09.2014 passed by the Tribunal pointing out inconsistencies and discrepancies in the Pleadings of the Party States.</b>  | <b>52 - 79</b> |
| <b>10.</b> | <b>Order dated 15.04.2015 passed by the Tribunal in I.A. No. 29 of 2014 permitting the State of Karnataka to withdraw its application for Amendment of its Statement of Claims.</b>                        | <b>79 - 80</b> |

11.	Details of further Amendments of their respective Statement of cases/claims by the three Party States as well as the Replies and Rejoinders thereto.	80 - 83
12.	Order dated 06.05.2015 passed by the Tribunal in I.A. No. 28 of 2014 filed by the State of Goa directing the State of Maharashtra not to undertake, commence the work of gorge portion of Viridi Dam.	84 - 86
13.	Prayers of the State of Goa	86 - 92
14.	Prayers of the State of Karnataka	92 - 95
15.	Prayers of the State of Maharashtra	95 - 99

## **VOLUME – II**

16.	Pleadings of the State of Goa	100 - 341
-----	-------------------------------	-----------

## **VOLUME – III**

17.	Pleadings of the State of Karnataka	342 - 487
18.	Pleadings of the State of Maharashtra	488 - 525
19.	Re-framing/Re-casting of Issues vide Order dated 17.07.2015.	525 - 543

20.	Order dated 27.07.2016 passed by the Tribunal in IAs. No. 60 of 2015 & 66 of 2016 filed by the State of Karnataka rejecting its prayer to permit it to divert 7 tmc of water.	544 - 586
-----	---	-----------

#### **VOLUME – IV**

21.	Details of oral evidence led by the Party States	587 - 593
	• Oral evidence of AW-1 Shri Chetan Pandit for the State of Goa	593 - 698
	• Oral evidence of RW-1 Prof. A.K. Gosain for the State of Karnataka	699 - 756
	• Oral evidence of RW-2 Shri A.K. Bajaj for the State of Karnataka	757 - 803

#### **VOLUME – V**

##### **Details of oral evidence led by the Party States contd...**

	• Oral evidence of MW-1 Shri S.N. Huddar for the State of Maharashtra	804 - 836
	• Oral evidence of AW-2 Shri Paresh Porob for the State of Goa	836 - 856

	• Oral evidence of AW-3 Dr. Shamila Monteiro for the State of Goa	856 - 865
	• Oral evidence of AW-4 Shri Rajendra P. Kerkar for the State of Goa	865 - 877
	• Oral evidence of AW-5 Shri Subrai T. Nadkarni for the State of Goa	877 - 913
	• Oral evidence of RW-3 Shri S.M. Jamdar for the State of Karnataka	914 - 929
	• Oral evidence of RW-4 Shri G.M. Madegowda for the State of Karnataka	929 - 945
	• Oral evidence of MW-2 Shri B.C. Kunjir for the State of Maharashtra	946 - 954
22.	Evaluation of the oral evidence led by the three Party States	954 - 955
	• Findings on conflicting results arrived at by the Experts relating to water availability	955 - 966
	• Principles governing appreciation of the oral evidence given by the witnesses on Hydrology	966 - 970

- Evaluation of oral evidence of AW-1 Shri Chetan Pandit for the State of Goa 971 - 984
- Evaluation of oral evidence of RW-1 Prof. A.K. Gosain for the State of Karnataka 984 - 1016
- Evaluation of oral evidence of RW-2 Shri A.K. Bajaj for the State of Karnataka 1017 - 1030
- Evaluation of oral evidence of MW-1 Shri S.N. Huddar for the State of Maharashtra 1030 - 1039
- Evaluation of oral evidence of AW-2 Shri Paresh Porob for the State of Goa 1040 - 1052

### **VOLUME – VI**

**Evaluation of the oral evidence led by the three Party States contd...**

- Evaluation of oral evidence of AW-3 Dr. Shamila Monteiro for the State of Goa 1053 - 1058
- Evaluation of oral evidence of AW-4 Shri Rajendra P. Kerkar for the State of Goa 1058 - 1066

- Evaluation of oral evidence of AW-5 Shri Subrai T. Nadkarni for the State of Goa 1066 - 1085
- Evaluation of oral evidence of RW-3 Shri S.M. Jamdar for the State of Karnataka 1085 - 1093
- Evaluation of oral evidence of RW-4 Shri G.M. Madegowda for the State of Karnataka 1093 - 1103
- Evaluation of oral evidence of MW-2 Shri B.C. Kunjir for the State of Maharashtra 1103 - 1110

**23. Decision and findings by the Tribunal on important questions.**

- Prejudice 1110 - 1132
- Effect of deletion of paras 28 (iv) and 28 (v) from Goa's complaint dated 09.07.2002. 1132 - 1201
- Findings on whether the Central Water Commission Report of March, 2003 is to be treated as Report of the Central Water Commission. 1201 - 1224

- **Determination of Dependability at which water availability is to be assessed.** **1225 - 1248**
- **Decision relating to mandatory requirements for project implementation.** **1249 - 1290**

### **VOLUME –VII**

**Decision and findings by the Tribunal on important questions contd...**

- **Hydrology and Water Availability** **1291 - 1443**
- **Monthly Rainfall Data for the period from June, 1901 to May, 2013** **1444 - 1500**

### **VOLUME – VIII**

**Decision and findings by the Tribunal on important questions contd...**

- **Daily Rainfall Data for the period from June, 1901 to May, 1940** **1501 - 1735**

## **VOLUME – IX**

**Decision and findings by the Tribunal on important questions contd...**

- Daily Rainfall Data for the period 1736 - 1952  
from June, 1940 to May, 1976**

## **VOLUME – X**

**Decision and findings by the Tribunal on important questions contd...**

- Daily Rainfall Data for the period 1953 - 2175  
from June, 1976 to May, 2013**

## **VOLUME – XI**

**Decision and findings by the Tribunal on important questions contd...**

- Ecology 2176 - 2244**
- Navigation 2245 - 2276**

### **24. Determination of water requirements of the three Party States**

- State of Karnataka 2277 - 2443**

## **VOLUME – XII**

**Determination of water requirements of the three Party States contd...**

- State of Maharashtra 2444 - 2481**
- State of Goa 2481 - 2545**

**25. Decision on issues framed for determination**

- Issues Related to Data Availability and Quality of Data 2546**
- Issues Related to Hydrological Analysis and Methodology for Assessment of Water Availability 2546**
- Issues Related to Dependability for Assessment of Water Availability 2547**
- Issues Related to Water Utilization for various Purposes, Projected Demand of Water by the Respective States, and their Allocations 2547 - 2548**

- **Issues Related to (a) Ecology, Global Warming and its Impact, and (b) Adverse Impact of Development of Water Resources on Ecology etc.** **2548**
- **Issues Related to Navigation** **2548**
- **Issues Related to Effect to Deletion of Para 28(iv) and 28 (v) from Pleadings of the State of Goa** **2549**
- **Issues Related to Need for Prior Consent of Co-basin States for Undertaking Projects/ including Projects for Diversion outside Mahadayi Basin** **2549 - 2550**
- **Issues Related to Sharing of the Water and Benefits out of the Water Allocated of Utilization Outside the Basin** **2550 - 2556**
- **Issues Related to Adverse Impact of the Proposed Projects of the State of Karnataka on Projects of State of Maharashtra** **2556 - 2558**

	• Issues Related to Over-the Year Storage/Carry Over Storage by the Upper Riparian State	2559 - 2562
	• Issues Related to Project-wise Restrictions on Storages etc.	2562 - 2567
26.	Need for Authority/Board for integrated planning and management of Water Resources of Mahadayi Basin	
	• Issues framed for Determination	2568 - 2578
	• Modified Inter-State River Water Disputes Act, 1956	2579 - 2582
	• Recommendations made by Shri Chetan Pandit	2582 - 2585
	• Narmada Control Authority	2585 - 2590
	• Cauvery River Authority (CRA)	2590 - 2592
	• Cauvery Management Board	2593 - 2596
	• Cauvery Water Regulatory Committee	2596 - 2598
	• Establishment of Cauvery Water Management Authority	2598 - 2612

	• Godavari and Krishna River Management Board	2612 - 2615
	• Krishna Waters Decision – Implementation Board	2615 - 2619
	• Bhakra Beas Management Board	2619 - 2621
	• Vansadhara Supervisory Committee	2621 - 2625
	• Hon’ble Supreme Court Judgment on Babhali Barrage Project reported in 1988 (7) SCC, P-303	2625 - 2628
	• Important Activities Essentially Required to be Undertaken for Sustainable Development of Water Resources of Mahadayi Basin	2629 - 2631
	• Constitution of the Authority	2631 - 2640
27.	Equitable apportionment of Waters of Mahadayi River	2641 - 2666
28.	Water Sharing Mechanism	2667 - 2672
29.	Recommendations	
	• Data Observation and Data Bank	2672 - 2679

	• Guidelines for Hydrological Analysis for Assessment of Water Availability and Training for Professionals	2679 - 2686
	• Suggestions for Reviewing the Provisions of the Inter-State River Water Disputes Act, 1956	2686 - 2691
	• Participation of Union Government in the proceedings of the Tribunals	2691 - 2693
30.	Award and Final Decision of the Tribunal	2693 - 2706
31.	Acknowledgment	2706 - 2711

# **REPORT OF THE MAHADAYI WATER DISPUTES TRIBUNAL**

## **S H O R T I N D E X**

### **VOLUME – I**

<b><u>Sl. No.</u></b>	<b><u>D E S C R I P T I O N</u></b>	<b><u>P A G E N O S</u></b>
1.	Introduction and Constitution of Tribunal	1 - 6
2.	Order dated 16.10.2012 passed by the Tribunal in I.A. No.2 of 2012 filed by the State of Goa whereby directions were given to the three States to file their respective Statements of Claims along with Replies and Rejoinders.	6 – 7
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- |            |  |                |
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| <b>8.</b>  | <b>Order dated 17.04.2014 passed in I.A. No. 1 of 2012 filed by the State of Goa for restraining the State of Karnataka not to actually utilize or divert the water under the Kalasa-Bhandura Project.</b> | <b>49 - 52</b> |
| <b>9.</b>  | <b>Order dated 03.09.2014 passed by the Tribunal pointing out inconsistencies and discrepancies in the Pleadings of the Party States.</b>  | <b>52 - 79</b> |
| <b>10.</b> | <b>Order dated 15.04.2015 passed by the Tribunal in I.A. No. 29 of 2014 permitting the State of Karnataka to withdraw its application for Amendment of its Statement of Claims.</b>                        | <b>79 - 80</b> |

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<b>12.</b>	<b>Order dated 06.05.2015 passed in I.A. No. 28 of 2014 filed by the State of Goa directing the State of Maharashtra not to undertake, commence the work of gorge portion of Virdi Dam.</b>	<b>84 - 86</b>
<b>13.</b>	<b>Prayers of State of Goa</b>	<b>86 - 92</b>
<b>14.</b>	<b>Prayers of State of Karnataka</b>	<b>92 - 95</b>
<b>15.</b>	<b>Prayers of State of Maharashtra</b>	<b>95 - 99</b>

## **INTRODUCTION AND CONSTITUTION OF THE TRIBUNAL**

1. The present Tribunal, fully named as Mahadayi Water Disputes Tribunal, (hereinafter, for short called 'The Tribunal'), was constituted by the Government of India, vide a notification dated November 16, 2010, under the provisions of The Inter-State River Water Disputes Act, 1956, (hereinafter referred to as the Act). This Tribunal was constituted to adjudicate Inter-State river water disputes between the three basin States of Goa, Karnataka and Maharashtra, relating to the inter-State river Mahadayi and the river valley thereof.

2. Before touching even the basic contours of the controversy, involved in the present dispute, it would be apt to notice the shadows of the timeline, leading to the crystallization of the 'Disputes'.

3. Controversy over the sharing of the water of the Mahadayi or Mandovi River between the states of Maharashtra, Karnataka and Goa is, perhaps, more than 30 years old, since attempts for negotiations appear to have been initiated by the central government as far back as 1985.

4. The water sharing issue appears to have reached a flashpoint in 2002, when the State Government of Karnataka, decided to implement the inter-connecting canal from Kalasa Nala to Malaprabha river for diversion of waters of Mahadayi basin to Malaprabha basin.

5. In the month of July 2002, the State of Goa made a request to the Government of India, under Section 3 of the Inter-State River Water Disputes Act, 1956, (as amended), for constitution of the Tribunal under the said Act, and refer the disputes for adjudication and decision thereof. It further appears that the issues mentioned in the request made by the State of Goa also included the assessment of available utilisable water resources in the basin at various points, and allocation of this water to the 3 basin States, keeping in view priority of the use of water within basin as also to decide the machinery to implement the decision of the Tribunal etc.

6. Thereafter, efforts appear to have been made by the Government of India to settle the aforesaid disputes amicably. In continuation of this process, Hon'ble Union Minister for Water Resources also convened some inter-State meetings at the level

of Chief Ministers of the States of Goa, Karnataka and Maharashtra. However, when it appeared that the disputing States were not ready to pursue the negotiation process further, the Central Government in the Ministry of Water Resources concluded that the disputes contained in the request of State of Goa of July, 2002 could not be resolved by negotiation and, as such, initiated further action in the matter as per the provisions of Inter-State River Water Disputes Act, 1956 and rules made there under.

Meanwhile the Govt. of Goa filed an Original Suit No. 4 of 2006 in the Hon'ble Supreme Court in Sept., 2006, for setting up of a Water Dispute Tribunal, for adjudication of the aforesaid river water disputes. An interlocutory Application (IA), for stay of construction activities, was also filed by the said State. The said Suit, with the application for interim relief, was listed on a number of occasions before the Hon'ble Supreme Court. During the pendency of the aforesaid proceedings before the Supreme Court, the Government of India considered and approved the proposal of constitution of this Mahadayi Water Disputes Tribunal.

7. Central Government, thereafter, constituted this Mahadayi Water Disputes Tribunal (MWDT), vide a notification dated November 16, 2010 which reads as under:-

“MINISTRY OF WATER RESOURCES  
NOTIFICATION

New Delhi, the 16<sup>th</sup> November, 2010

S.O.2786 (E).-Whereas a request has been received under section 3 of the Inter-State River Water Disputes Act, 1956 (33 of 1956), from the State Government of Goa to refer the water disputes relating to the Inter-State river Mahadayi, and the river valley thereof, to a Tribunal for adjudication;

And whereas, the State of Goa, Karnataka and Maharashtra are the basin States of Mahadayi river and the Central Government is of the opinion that the water disputes relating to the inter-State river Mahadayi, and the river valley thereof cannot be settled by negotiations;

Now, therefore, in exercise of the powers conferred by Section 4 of the said Act, the Central Government hereby constitutes a Water Disputes Tribunal to be called as “the Mahadayi Water Disputes Tribunal”, with its headquarters at New Delhi, for the adjudication of the water disputes relating to the inter-State river Mahadayi, and the river valley thereof, consisting of

the following members nominated in this behalf by the Chief Justice of India, namely:-

1. Hon'ble Mr. Justice J. M. Panchal, - Chairman  
Judge, The Supreme Court of India
2. Hon'ble Mr. Justice Viney Mittal, - Member  
Judge, High Court of Madhya Pradesh
3. Mr. Justice P.S.Narayana, Former - Member  
Judge, High Court of Andhra Pradesh

[F.No.19/4/2010-BM]

DHRUV VIJAI SINGH  
Secy. (WR)''

Further, the Central Government vide a later notification dated November 13, 2014, decided that the effective date of the constitution of this Mahadayi Water Disputes Tribunal would be August 21, 2013, instead of November 16, 2010.

8. Taking cognizance of the aforesaid notification dated November 16, 2010, and the consequential reference dated January 11, 2011, the Supreme Court of India passed an order dated January 20, 2011, in the Original Suit, filed by the State of

Goa, whereby the said Suit was disposed of. The Order dated January 20, 2011, specifically records the following:

"Be that as it may be, since there has been request of the aforesaid three State Governments for referring the Water dispute to the Tribunal, we take the aforesaid Notification on record whereby all the disputes regarding the inter-State River Mahadayi and the River Valley thereof are referred to the aforesaid Tribunal for adjudication and decision. In view of this order, all the issues that have been raised in this Suit could be effectively raised before the aforesaid Tribunal in accordance with law".

**ORDER DATED 16.10.2012 PASSED BY THE TRIBUNAL IN I.A. NO. 2 OF 2012 FILED BY THE STATE OF GOA WHEREBY DIRECTIONS WERE GIVEN TO THE THREE STATES TO FILE THEIR RESPECTIVE STATEMENT OF CLAIMS**

9. The order dated 16/10/2012 passed by the Tribunal in I. A. No. 2 of 2012, indicates that in view of the agreement between the learned Counsels for the parties, the three States were directed to file their respective Statements of Claims on or before December 20, 2012 with the Registrar of the Tribunal. Each Statement, to be filed, was to set-forth as fully as may be necessary for the information of the Tribunal- (a) its case; (b) the facts, the data, documents and other materials, upon which its

case is based; (c) the propositions of law on which it relies; and (d) reliefs sought. It was further clarified in the Order that the parties would be at liberty to set-forth all the facts, materials, data and documents as Annexures to the Statement of Claim. The parties were further directed to file a Statement of Replies on or before February 15, 2013. Rejoinder, if any, was directed to be filed on or before March 1, 2013, dealing with each allegation of facts and the law made in the Statement of Claim as fully as may be necessary, to apprise the Tribunal of the precise dispute between the parties.

**CHRONOLOGICAL DETAILS OF THE STATEMENT OF CASES/CLAIMS FILED BY THE STATES OF GOA, MAHARASHTRA AND KARNATAKA ALONG WITH REPLIES AND REJOINDERS.**

10. Pursuant to the above mentioned directions, the State of Goa filed its Statement of Claim, on 04.02.2013 (Volume 28). In reply to the Statement of Case filed by the State of Goa, the State of Karnataka filed its para-wise reply on March 18, 2013 (Volume 33) and prayed that the claim of State of Goa be rejected.

In reply to the Statement of Case filed by the State of Goa, the State of Maharashtra filed its para-wise reply on March 15, 2013 (Volume 39). The State of Maharashtra denied the claim advanced by the State of Goa and submitted that the State of Goa is not entitled to any relief as prayed for in its Statement of Case. The State of Goa filed its para-wise Rejoinder Affidavit to the reply filed by the State of Karnataka, to the Statement of Case by State of Goa on July 15, 2013 (Volume 44) and denied the contents submitted in the reply of State of Karnataka. The State of Goa also filed its para-wise Rejoinder Affidavit to the reply filed by the State of Maharashtra to the Statement of Case of State of Goa on July 15, 2013 (Volume 45).

11. The initial Statement of Case was filed by the State of Maharashtra on January 2, 2013 (Volume 27). The reply to the same was filed by the State of Goa on May 14, 2013 (Volume 37), whereas the State of Karnataka had filed its reply dated March 18, 2013 (Volume 35).

On receipt of the above mentioned replies, the State of Maharashtra had filed rejoinder dated July 3, 2013 (Volume 41) to the reply filed by the State of Maharashtra. Similarly, another

Rejoinder was filed by the State of Maharashtra on July 3, 2013 (Volume 42) to the reply filed by the State of Karnataka to the Statement of case filed by the State of Maharashtra.

12. State of Karnataka initially had filed Statement of Claims on January 2, 2013 (Volume 10) to which reply was filed by the State of Goa on May 14, 2013 (Volume 38), whereas the State of Maharashtra had filed its reply dated May 15, 2013 (Volume 40).

Thereafter on receipt of replies mentioned above, the State of Karnataka had filed Rejoinder dated July 15, 2013 (Volume 47) to the reply dated May 15, 2013 filed by the State of Maharashtra. Similarly, the State of Karnataka had filed Rejoinder dated July 15, 2013 (Volume 46) to the reply dated May 10, 2013 filed by the State of Goa on May 14, 2013.

**ISSUES ORIGINALLY FRAMED BY THE TRIBUNAL VIDE ORDER DATED 21.08.2013**

13. Thereafter, the learned Counsel for the parties had stated at the Bar that the pleadings in all respects were complete. The Registry had also informed the Tribunal that the

pleadings were complete. As the pleadings were complete, the learned Counsel for the parties urged the Tribunal to frame issues for determination. Having regard to the pleadings of the parties, the following issues were framed for determination vide Order dated August 21, 2013:

1. Whether the basic data and information essentially required for arriving at most reasonable assessment of water availability of the inter-State river Mahadayi are available?
2. Whether the State of Goa proves that as the river Mahadayi flows through three sanctuaries, the State of Karnataka and State of Maharashtra require prior clearance of NBWL in addition to all the statutory and other clearances?
3. Whether it is proved by the State of Goa that Zuari basin is inter-connected with Mahadayi basin through Cumbharjua Canal, which runs in a north-south direction and any diversion of waters from river Mahadayi would affect the navigational channel?
4. Whether the State of Goa proves that the data available at various observation stations, particularly the hydro-meteorological and hydrological observation stations are not reliable and adequate? If not, what are the bare minimum data and information essentially required to be collected for arriving at most reasonable

assessment of water availability of the inter-State river Mahadayi?

5. Whether the State of Goa establishes that after assessing and deducting the available waters of river Mahadayi, for ecological sustenance of the river valley eternally, specifically giving due consideration to the scientifically predicted global warming, sea level increase, increased activity ingress in coastal areas, etc., the shares of all the riparian States should be determined on the basis of remainder water available from river Mahadayi?

6. Whether the State of Goa proves that there was no actual gauging of (a) the river Mahadayi covering the entire basin and at each of the tributaries and (b) rain to assess the complete yield of the river and, therefore, gauge data collected by CWC at Ganjim and Collem sites is unreliable?

7. Whether the State of Goa proves that the water availability assessment of the inter-State river Mahadayi should be 75% of the dependable flow at various points in the basin and at Karnataka's disputed project site?

8. Whether the water availability assessment of the inter-State river Mahadayi should be made at the rate of percentage of more than one suggested by the States?

9. Whether the State of Goa proves that appropriate methods for the purpose of determination of the yield of the river are not employed and traditional

methods of the determination of the yield would not apply in case of Mahadayi?

10. Whether the State of Goa establishes that the equitable share of three co-basin States in the quantity of water available from river Mahadayi should be adjudicated after taking into consideration the long term in-basin needs of the three States for the purpose of domestic water supplies, irrigation, hydro-power generation, navigation, pisciculture and environmental project?

11. Whether the State of Goa establishes that on the basis of the master plan prepared by the Panel of Experts for Mahadayi basin area in the State of Goa, the projected water requirement of the State of Goa, by 2051 AD would be 2674 Mcum?

12. Whether the State of Goa proves that in basin needs be given priority over any contemplated extra basin diversions and whether there is any surplus left for extra basin diversions after adequately providing for long term in basin needs?

13. Whether the State of Goa proves that the State of Karnataka and the State of Maharashtra do not have any right, authority or power to divert the waters of river Mahadayi outside the river basin without the concurrence of State of Goa?

14. Whether it is proved by the State of Goa that no co- basin State can take up any project on an inter-State river without the consent of the riparian States?

15. Whether the State of Goa establishes that specific restraints or restriction be placed on the upstream riparian States with regard to construction and regulation of their projects, during each water year for beneficially using their allocated equitable share of Mandovi river basin waters?

16. Whether the State of Karnataka proves that the water availability assessment of the inter-State river Mahadayi should be 50% of the dependable flow?

17. Whether the State of Karnataka establishes that the total available water for allocation amongst the basin States in the inter-State river Mahadayi and its valley is not less than 220 tmc at 50% dependability or 199.6 tmc at 75% dependability as estimated by the Central Water Commission in its reports of October 2001 and March 2003?

18. Whether the State of Karnataka establishes that the effect of unequivocal withdrawal of the contentions in para 28(iv) and 28(v) of its complaint dated 9.7.2012 vide letter dated 10.1.2007 addressed by the State of Goa to the Secretary, Union Ministry of Water Resources, New Delhi bars the State of Goa from objecting to drinking water needs to the twin cities of Hubli-Dharwad, including villages enroute, etc. (including Kundagol town) from Malaprabha Reservoir?

19. Whether the State of Karnataka establishes that the State of Karnataka is not in a position to meet its Hubli-Dharwad water supply requirements from locally

available water resources as initially contended by the State of Goa and that there are no alternative sources available to the State of Karnataka from which the water supply needs of Hubli-Dharwad could be met?

20. Whether the State of Karnataka proves that it is entitled to utilization of 1.50 tmc of waters of the inter-State river Mahadayi within the Mahadayi basin located in Karnataka for irrigation, drinking purposes and other purposes?

21. Whether the State of Karnataka proves that the assessment of water availability should be made on the basis of water available at Haltar Dam, Kalasa Dam, Kotni Hydro Power Dam, Bail Nadi Dam site, Bhandura Dam site and entire catchment in Karnataka and Ganjim G&D site on main river, Khandepar at Collem G&D site and entire catchment upto mouth of the sea of Goa in the inter-State river Mahadayi and its valley?

22. Whether the State of Karnataka proves that its share in the waters of inter-State river Mahadayi and its valley is not less than 24.15 tmc for consumptive utilization?

23. Whether the State of Karnataka proves that it is entitled to divert out of its own equitable share for consumptive utilization: (a) 7.56 tmc to provide drinking water to Hubli-Dharwad cities under the Kalasa-Bhanduranala projects; (b) 5.527 tmc to Kali basin to augment the flows of Kali for hydro-power generation under Kali Hydro-Electric Project (KHEP); and (c)

remaining water for generation of power under Mahadayi Hydro-Electric Project (MHEP) at Kotni?

24. Whether the State of Karnataka proves that the inhabitants of twin city of Hubli-Dharwad, towns and villages have a right to drinking water from the waters of inter-State river Mahadayi diverted under the Kalasa-Bhanduri project? If so, does not such right have a higher priority over other uses of the waters of the said river?

25. Whether it is proved by the State of Karnataka that drinking water has the highest priority among the uses of water as universally accepted and recognized by the National Water Policy and that the right to drinking water is also a fundamental right guaranteed under Article 21 of the Constitution?

26. Whether the State of Karnataka proves that it is entitled to execute the Kalasa-Bhanduri project (Drinking Water Project) and divert 7.56 tmc of water every year of the inter-State river Mahadayi to the Malaprabha river in the Krishna basin and whether the State of Karnataka is justified in diverting waters of the inter-State river Mahadayi and its valley to the Kali river for augmenting the generation of electricity under the existing Kali Hydro Power Project? If so, what extent of diversion is just and reasonable?

27. Whether the State of Karnataka establishes that it has a right to construct a project unilaterally without consent or concurrence of the co-riparian State as held

in the case of *State of Karnataka v. State of Andhra Pradesh* in (2000) 9 SCC 572 at 640?

28. Whether the State of Karnataka proves that the State of Goa has failed to establish that it is or is likely to be affected prejudicially by the diversion of waters of inter-State river Mahadayi and its valley as proposed by Karnataka?

29. Whether the determination of share of Maharashtra State or any other co-basin State as a result of augmentation of waters in Krishna basin (due to transfer of water from river Mahadayi) should be undertaken while examining the claims of co-basin States?

30. Whether the State of Maharashtra or any other States would be entitled to have share from the additional power that would be generated by the State of Karnataka as a result of augmentation of waters in the Kali basin due to diversion of water to Kali Hydro Power Project?

31. Whether the State of Maharashtra proves that water availability assessment should be made on the basis of total availability of water in the Mahadayi river basin?

32. Whether the State of Maharashtra proves that considerable gauge data has been collected by CWC at Ganjim and Collem sites and that gauge data at Anjumen dam existing in State of Goa should be

collaborated with CWC data to determine average annual yield from the entire Mandovi river basin?

33. Whether the State of Maharashtra proves that it is entitled to allocation of 180.00 Mcum water from total yield of river Mahadayi?

34. Whether the State of Maharashtra proves that the State of Karnataka should not be allowed to divert waters outside the basin without the consent of the State of Maharashtra and the State of Goa?

35. Whether the State of Maharashtra proves that the State of Karnataka is not entitled to execute the Kalasa-Bhanduri project (Drinking Water Project) and divert 7.56 tmc of water as claimed by it every year of the inter-State river Mahadayi to the Malaprabha river in the Krishna basin to the prejudice of the existing and contemplated projects of Maharashtra, including the Virdi (Morachi Rai) project?

36. Whether the State of Maharashtra proves that the State of Karnataka is not justified in diverting waters of the inter-State river Mahadayi and its valley to the Kali river for augmenting the generation of electricity under the existing Kali Hydro Power Project?

37. Whether the State of Maharashtra proves that its share in the power should be determined on the basis of the additional power that would be generated by the State of Karnataka as a result of augmentation in the Kali basin due to diversion of waters to Kali Hydro Power Project?

38. Whether project wise restrictions should be placed on the storages and utilization of waters of river Mahadayi?

39. Whether storages of projects of upper riparian States should be determined to meet their allocation?

40. Whether the upper riparian States can construct over the year storages/carry over storages?

41. Whether there should be clear directions for timely and periodic releases from projects in upper reaches to enable the lower riparian State to realize its allocations or designed success rate of its projects, without affecting success rate of the projects/allocation of the upper riparian States?

42. Whether any scheme may be framed for conservation of water over and above the allocated shares of the States by constructing reservoirs wherever possible which may be regulated by a regulatory authority for the benefit of the three riparian States wherever there may be any shortfall?

43. Whether any machinery should be set up to make available and regulate allocation of water to the States concerned or otherwise to implement the decision?

44. What award?

**VISIT OF THE TRIBUNAL TO DIFFERENT SITES AND THE REPORT DATED 12.02.2014 OF THE ASSESSORS ON THE VISITS OF THE TRIBUNAL.**

14. After the framing of the above mentioned issues for determination, the State of Goa had moved I.A. No. 17 of 2013 and prayed the Tribunal to inspect the site of inter-connecting canal of Kalasa-Bhandura project located at Kankumbi, Karnataka, on such dates as be convenient to the Tribunal. The said prayer was accepted and the Tribunal had visited different sites in the three States from December 12, 2013 to December 24, 2013. At the time of inspection of the sites, the two learned Assessors, the then Registrar of MWDT, the then Assistant Registrar of MWDT, PPS to the Chairman, Assistant, MWDT as well as the learned Counsel for all the three States had accompanied the Members of the Tribunal.

15. After the visit of the sites, located in three different States, the learned Assessors had submitted a report dated 12.02.2014 to the Tribunal. The said Report was titled as "REPORT ON THE VISIT OF THE HON'BLE MAHADAYI WATER DISPUTES TRIBUNAL ALONG WITH LEGAL AND TECHNICAL TEAMS OF THE CO-BASIN STATES TO VARIOUS RELATED PROJECTS/SITES

ETC. IN STATES OF GOA, KARNATAKA AND MAHARASHTRA DURING DECEMBER 12-24, 2013". The Report was in two parts. However, in Part II of the Report, technical data, maps etc. are incorporated and, therefore, it is not necessary for the Tribunal at this stage to refer to the said Volume No. II in detail. However, Volume I of the Report is reproduced here for ready reference:

“REPORT ON THE VISIT OF THE HON’BLE MAHADAYI  
WATER DISPUTES TRIBUNAL ALONG WITH LEGAL AND  
TECHNICAL TEAMS OF THREE CO-BASIN STATES TO  
VARIOUS RELATED PROJECTS/SITES ETC.

## 1.0 BACKGROUND

At the request of the Government of Goa and with the concurrence of the co-basin States of Karnataka and Maharashtra, the Hon’ble Mahadayi Water Disputes Tribunal (MWDT) along with the members of the legal and technical teams of the co-basin States of Goa, Karnataka and Maharashtra undertook a visit to various important projects, sites etc. with the objective of getting acquainted with the salient features of the basin and important activities related to development and management of water resources in the basin.

## 2.0 THE PROGRAMME FOR VISIT OF PROJECTS/SITES

The team visited identified projects/sites and participated in specific activities as mentioned hereunder:

- |            |   |   |
|------------|---|---|
| 13.12.2013 | : | a. Visit to Mormugao Port Trust   |
|            | : | b. Visit to Cumberjua Canal   |
| 14.12.2013 | : | a. Visit to “Virdi Large Minor Irrigation Project” under construction by Govt. of Maharashtra |
|            | : | b. Visit to existing “Morlem Lift Irrigation Scheme” in Goa                                   |
| 16.12.2013 | : | a. Visit to Hydrological Observation Station of CWC at Ganjim                                 |
|            | : | b. Visit to existing “Opa Water Works” in Goa   |
|            | : | c. Presentation by Water Resources Department and Forest Department of Govt. of Goa           |
| 17.12.2013 | : | a. Visit to “Mhadei Wildlife Sanctuary”   |
|            | : | b. Visit to existing “Anjunem Dam” in Goa   |
| 18.12.2013 | : | a. Visit to proposed “Haltara Dam” site across Haltara Nala in Karnataka                      |
|            | : | b. Visit to the confluence of Surla Nala and Kalasa Nala                                      |

- : c. Visit to proposed “Kalasa Dam” site across Kalasa Nala in Karnataka
- : d. Visit to “Inter-connecting Canal connecting proposed Kalasa reservoir to Malaprabha river” under construction in Karnataka
- 19.12.2013 : a. Visit to proposed “Bhandura Dam” site across Bahndura Nala in Karnataka
- 20.12.2013 : a. Visit to existing “Kali Power Project” in Karnataka
- 21.12.2013 : a. Visit to existing “Malaprabha Project” in Karnataka
- 23.12.2013 : a. Presentation by Govt. of Karnataka

### 3.0 VISIT TO VARIOUS PROJECTS / SITES AND POINTS EMERGED DURING INTERACTION WITH OFFICIALS.

#### 3.1 Visit to Mormugao Port Trust.

A presentation was made by the Chairman, Mormugao Port Trust. He highlighted salient features of the Mormugao Port including its important role in gross domestic product (GDP) of the State of Goa. During the presentation, he also made a mention about the likely impact of reduction in the flow in the river Mahadayi on the operation of the Mormugao Port and hence on State’s economy. A copy of the presentation made before the Hon’ble Tribunal is at Annexure-I. Thereafter, the Hon’ble Tribunal and other members of the Team

taken around various facilities, particularly the iron ore loading facilities.

During the presentation, the Advocate General, Govt. of Karnataka observed that the statements of the Chairman, Mormugao Port Trust in respect of the activities undertaken or planned by the Govt. of Karnataka were beyond his briefs and that such statements should not be made. It was clarified that the objective of the visit by the Hon'ble Tribunal was to get acquainted with the salient features of the basin and important related activities etc. and that the statements made during the visit would not be taken note of and would not constitute part of the proceedings of the Hon'ble Tribunal unless the same constituted part of the Statement of Case or Statement of Claims made by the respective States.

Based on the contents of the presentation, replies to the queries of the Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and other participants and clarifications made, following important points emerged:-

- a. Many of the information made available during the course of presentation did not constitute part of the Statement of Case or Statement of Claims made by the States before the Hon'ble Tribunal.
- b. No specific studies have been made by Mormugao Port Trust in respect of the minimum quantity of water in river Zuari and river Mandovi that would be

required to address the specific issues highlighted in the presentation made.

- c. Mormugao Port Trust has not undertaken any study related to future fresh water requirements from rivers and also through other conservation measures including rainwater harvesting etc.
- d. Mormugao Port Trust has not made any comprehensive evaluation of likely impacts of water resources development in the entire basin covering all planned developmental activities by all the three co-basin States.
- e. Mormugao Port Trust has neither prepared any proposal to address the specific issues highlighted during the presentation nor taken up the same with the Govt. of India.

### 3.2 Visit to Cumberjua Canal:

Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and the members of the visiting Team started from Panaji Jetty and after moving in the upstream of river Mandovi entered into Cumberjua canal and travelled to a considerable distance. A brief note provided by Govt. of Goa on Cumberjua canal highlighting important features is at Annexure – II. During the travel along the canal, the Team could observe low lying ancient reclaimed land called as Khazan land along the banks of the Cumberjua canal. Members of the visiting Team could also observe crocodile on the bank of the canal.

Based on the information provided by the officials, replies to the queries of the Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and other participants and clarifications made, following important points emerged:-

- a. Cumberjua canal is a natural canal connecting the rivers Mandovi and Zuari in the tidal zone.
- b. Cumberjua canal is used as navigation channel for barges to carry ores during high tides and traffic of empty barges during low tides.
- c. The flow regime of rivers Mandovi and Zuari are impacted by the canal whenever there is increase or decrease in flow in any of the rivers.

### 3.3 Visit to "Virdi Large Minor Irrigation Project" under construction by Govt. of Maharashtra:

Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and the members of the visiting Team were briefed about important features of the "Virdi Large Minor Irrigation Project" which is being implemented by Konkan Irrigation Development Corporation of the Govt. of Maharashtra. The members of the visiting team were also taken at the site of construction of the dam where work was in progress. A copy of the brief note on the project as made available by Govt. of Maharashtra is at Annexure – III.

Based on the information provided by the officials, replies to the queries of the Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and other participants and clarifications made, following important points emerged:-

- a. Although the "Virdi Large Minor Irrigation Project" has reportedly been administratively approved by Govt. of Maharashtra and the project is planned to be completed by the year 2015 for utilization of about 0.52 tmc of water, the mandatory clearances by the Union Ministry of Environment and Forests are still awaited.
- b. Works related to rehabilitation of persons likely to be displaced by the project has not yet been completed.
- c. Govt. of Goa has raised objection to the construction of the project, particularly in view of proposal of Govt. of Maharashtra for diversion of water outside Mahadayi basin through proposed changes in the project features including the height of the dam. Representative of Goa also expressed apprehension that the project would impact the availability of water and result in water crisis at Padoshem Water Treatment Plant and Sankhalim Water Treatment Plant.

#### 3.4 Visit to existing "Morlem Lift Irrigation Scheme" of Govt. of Goa.

Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and the members of the visiting Team were

briefed about important features of the existing “Morlem Lift Irrigation Scheme” of the Govt. of Goa. As per the information provided by the Officials of Govt. of Goa, the scheme was primarily undertaken as part of the rehabilitation of 282 displaced families due to construction of Anjunem dam and the scheme provides drinking water supply as also water for irrigating 282 Ha. of land. Important features of the scheme as provided by the Govt. of Goa are indicated in Annexure – IV.

There were no specific questions from the member of the Visiting Team.

### 3.5 Visit to Hydrological Observation Station of Central Water Commission at Ganjim:

Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and the members of the visiting Team were briefed about the important aspects of gauge and discharge observation at the hydrological observation site of Central Water Commission at Ganjim by the Superintending Engineer of Central Water Commission.

The representative from Goa mentioned about the unreliability of data citing variations in observed discharge for the same observed water levels. The representative from Karnataka indicated that the observations made at the site were reliable.

Based on the information provided by the officials, replies to the queries of the Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and other participants and

clarifications made, following important points emerged:-

- a. Hydrological observation site was established on river Madei in May 1971 near Usgaon and the same was relocated near Ganjim village on the upstream with effect from January 1979 in view of backwater effect of sea waves.
- b. Relatively longer series of more than 42 years of observed water level and discharge data are available for river Mahadayi at the hydrological observation station of Central Water Commission at Ganjim.
- c. As per the information provided by the Superintending Engineer, Central Water Commission, the procedure prescribed in the Bureau of Indian Standard Code 1192 for discharge observation are strictly adhered to at the site.
- d. Neither Central Water Commission nor Water Resources Departments of Govt. of Goa, Govt. of Karnataka and Govt. of Maharashtra have undertaken detailed studies for consistency checks of the observed data at the site.
- e. Two control structures namely barrages, one in the upstream and the other in the downstream of the hydrological observation site at Ganjim have also come up during last 5 to 10 years which call for proper consistency checks and accounting for the diversions from such structure for realistic

assessment of overall availability of water up to the hydrological observation station at Ganjim.

- f. There are two nearby discharge observation sites of Govt. of Goa, one at Khadikei on river Madei in the upstream of Ganjim and other at Paikul on Ragda, a tributary of river Madei.
- g. In addition to above, Govt. of Goa has also established a few more hydrological observation stations under the ongoing Work Bank assisted Hydrology Project.
- h. Hydrological data observed by various Central and State Government agencies and related information have not been shared with each other although sharing of hydrological data and other related data and information are essentially required for carrying out meaningful consistency checks and evaluation of desired characteristics of the available resources.

### 3.6 Visit to existing “Opa Water Works” of Govt. of Goa:

Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and the members of the visiting Team were briefed about important features of the existing “Opa Water Works”. Important features of the “Opa Water Works” as provided by the Govt. of Goa are at Annexure – V.

Based on the information provided by the officials, replies to the queries of the Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and other participants and clarifications made, following important points emerged:

- a. Total water pumped from river Khandepar, a tributary of river Mahadayi at "Opa Water Works" site is only of the order of 114 million litres per day which is equivalent to only about 0.147 tmc per annum.
- b. There is tidal effect in the downstream reach of Opa and hence there is a limitation in use of water from the lower reaches of the river for drinking purposes.
- c. Although there is need for undertaking measures for rainwater harvesting including construction of check dams etc., such measures have not been taken up on large scale due to various factors. Representatives for Govt. of Goa informed that the construction of check dams on large would not be feasible since the land is relatively flatter in the lower reaches.

### 3.7 Presentation by Water Resources Department and Forest Department of Govt. of Goa:

Following presentation were made before the Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and the members of the visiting Team:

- a. "Flowing with Mahadayi" by Water Resources Department, Govt. of Goa.

- b. “Diversion of Kalsa river (Surla) and impact on biodiversity of Surla valley in Madei Wildlife Sanctuary” by Goa Forest Department, Govt. of Goa.

Copies of the presentations are at Annexures – VI and VII respectively. A brief Note titled “Surla River Diversion Project and its after effect in relation to Madei Wildlife Sanctuary” provided by the Goa Forest Department is at Annexure – VIII.

### 3.8 Visit to “Mhadei Wildlife Sanctuary”:

A brief note provided by Govt. of Goa on Mahadayi Wildlife Sanctuary highlighting important features of the Mahadayi Wildlife Sanctuary is at Annexure – IX. Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and the members of the visiting Team could see important features such as waterfalls, diverse nature of flora etc. from two different locations.

The natural beauty of the surroundings were highly appreciated by all the visitors. There were no specific questions during the visit.

### 3.9 Visit to existing “Anjunem Dam” of Govt. of Goa:

Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and the members of the visiting Team were briefed about important features of the existing “Anjunem Dam”. Important features of the dam as provided by the Govt. of Goa are at Annexure – X.

Based on the information provided by the officials, replies to the queries of the Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and other participants and clarifications made, following important points emerged:-

- a. Anjunem is the largest water resources development project in Goa with gross storage capacity of 44.83 million cubic meters (about 1.58 tmc). The right bank main canal and left bank main canal have capacity of 1.60 cubic meters per second and 1.03 cubic meters per second respectively and total command is 2100 hectares.
- b. In view of relatively lesser water flow during the period from December to May, Govt. of Goa has proposed a new dam at Ponsule in the upstream reach of the river and the reservoir created behind the proposed dam is planned to serve as balancing reservoir as well and increase the water utilization from Anjunem.

3.10 Visit to (a) "Haltara Dam" site proposed by the Govt. of Karnataka across Haltara Nala, (b) Confluence of Surla Nala and Kalasa Nala and (c) "Kalasa Dam" site proposed by the Govt. of Karnataka across Kalasa Nala:

During their visit to the (a) proposed "Haltara Dam" site across Haltara Nala, (b) confluence of Surla Nala and Kalasa Nala and (c) proposed "Kalasa Dam" site across Kalasa Nala, Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and the members of the visiting Team were briefed about important features of the

proposals in respect of two dams and the overall proposal related to diversion of water from Mahadayi basin to Malaprabha reservoir. Brief notes provided by Govt. of Karnataka in this regard are at Annexure – XI.

Based on the information provided by the officials, replies to the queries of the Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and other participants and clarifications made, following important points emerged:

- a. Mandatory clearances of Ministry of Environment and Forests have not been accorded in respect of the two proposed dams namely Haltara dam and Kalasa dam.
- b. Observed stream flow data are not available at the two proposed dam sites (namely Haltara dam site and Kalasa dam site) and the yield at the two sites have been assessed by using Inglis formula (an empirical formula).
- c. With construction of proposed 5.5 kilometre long interconnecting canal (connecting Haltara reservoir with Kalasa reservoir), the canal would transfer 0.56 tmc of water from Haltara reservoir and 0.85 tmc from part of Surla catchment (i.e., total of 1.41 tmc) to Kalasa reservoir. This quantity of water along with 2.15 tmc of water from Kalasa reservoir i.e., total of 3.56 tmc of water is proposed to be transferred to Malaprabha reservoir through another interconnecting canal connecting Kalasa reservoir to Malaprabha river.

- d. Proposed diversion of 0.56 tmc of water of Haltara Nala catchment, 0.85 tmc from part of Surla Nala catchment, and 2.15 tmc from Kalasa Nala catchment would definitely result in reduction in flow in the downstream reaches of the respective Nalas and subsequently in the rivers where these Nalas join.
- e. Likely impact of reduction in flows (in the eventuality of construction of Haltara dam, Kalasa dam, Interconnecting canal (connecting Haltara reservoir with Kalasa reservoir), and Interconnecting canal connecting Kalasa reservoir to Malaprabha river have not been critically examined particularly from the viewpoint of impact on wildlife sanctuary located in the downstream reaches of these Nalas both in Karnataka and Goa.

3.11 Visit to “Inter-connecting Canal connecting proposed Kalasa reservoir to river Malaprabha” under construction by the Govt. of Karnataka:

During their visit to the “Inter-connecting Canal connecting proposed Kalasa reservoir to river Malaprabha” which is under construction by the Government of Karnataka, Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and the members of the visiting Team were briefed about important features of the works under construction and were taken around some of the locations where constructions were in progress. Replying to a specific query of the representative of Govt. of Goa, the Advocate General of Govt. of Karnataka informed that the Govt. of Karnataka

is fully competent of taking up the construction works of the “Inter-connecting Canal connecting proposed Kalasa reservoir to river Malaprabha” A brief note highlighting important features and the status of progress of works as provided by Govt. of Karnataka is at Annexure – XII.

Based on the information provided by the officials, replies to the queries of the Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and other participants and clarifications made, following important points emerged:

- a. The use of canal for diversion of 3.56 tmc (0.56 tmc of water of Haltara Nala catchment, 0.85 tmc from part of Surla Nala catchment, and 2.15 tmc from Kalasa Nala catchment) of water would be possible only after the construction of the proposed Haltara dam, the proposed Kalasa dam and the proposed interconnecting canal (connecting Haltara reservoir with Kalasa reservoir). Necessary mandatory clearances in respect of all these components of Kalasa-Bhanduri Project are still awaited. It was informed by the representative of Govt. of Karnataka during the visit that the proposal for seeking clearances would be considered by the competent authorities only after the award by the Hon’ble Tribunal. Thus the “Inter-connecting Canal connecting proposed Kalasa reservoir to river Malaprabha” would remain unused even after completion of all works unless the other components namely proposed Haltara dam, the proposed Kalasa dam and the proposed interconnecting canal (connecting Haltara reservoir with Kalasa reservoir)

are accorded mandatory clearances by the competent authorities and the works are completed.

- b. The representative of Karnataka also reported that in case of “flood”, some water would automatically get diverted to the Canal from Kalasa Nala beyond a specified water level in Kalasa Nala. Specific level beyond which water would automatically get diverted and the quantum of water through such diversion could not be ascertained in the absence of requisite detailed drawings and related information at the site. The scenario of automatic diversion of water beyond a specified level would lead to a situation of defiance of interim orders of the Hon’ble Tribunal that the State of Karnataka would not actually utilize the waters or divert the waters under Kalasa Bhanduri Project until further orders.
- c. The representatives from Govt. of Karnataka could also not satisfactorily clarify as why the works have been undertaken for this component i.e., “Inter-connecting Canal connecting proposed Kalasa reservoir to river Malaprabha” alone without prior clearances of other components, particularly in view of the fact that the canal by itself would remain unused even after its completion since its utilization is fully dependent on other components which are not yet cleared.
- d. The representatives from Govt. of Karnataka could also not clarify as why the works have been undertaken on a relatively faster pace when the canal is likely to remain unused in near future.

- e. It was informed that the concurrence of Central Water Commission for the design of “Inter-connecting Canal connecting proposed Kalasa reservoir to river Malaprabha” has not been obtained although in the letter dated 30.4.2002 of the Ministry of Water Resources conveying the in-principle clearance for diversion of 7.56 tmc of water from Madei basin to Malaprabha for meeting drinking water requirements of Hubli / Dharwad (which was later placed in abeyance vide letter dated 19.9.2002 of the Ministry of Water Resources), it is, inter-alia, mentioned that “Government of Karnataka will furnish all required design details to enable the CWC to satisfy itself that Karnataka does not develop technical capability for diversion of more water (than as mentioned in para ‘a’ above) at a later stage”.
- f. It was observed that there are variations in the specifications (as reported in Annexure 63 of the Statement of Claims of Karnataka and that in the information provided during the visit) and the deviations are reportedly not approved by the competent authorities and concurred-in by Central Water Commission.
- g. The reason for relatively very large variations in the dimensions of the canal particularly in respect of cut & cover sections from one reach to other were not satisfactorily explained.
- h. The present scenario of relatively faster pace of construction despite the fact that Canal would not be

utilised even after its completion in near future, could lead to a situation of fait accompli.

- i. Govt. of Karnataka has to fully satisfy in respect of: (i) necessity; (ii) planning; (iii) design; clearance and approval by designated agencies; (iv) financial implications; and (v) legal aspects.

### 3.12 Visit to “Bhandura Dam” site proposed by the Govt. of Karnataka across Bahndura Nala:

During their visit to the proposed “Bhandura dam” site, Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and the members of the visiting Team were briefed about the proposal and the alignment of the proposed dam was shown. A brief note highlighting salient features as provided by Govt. of Karnataka is at Annexure – XIII.

Based on the information provided by the officials, replies to the queries of the Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and other participants and clarifications made, following important points emerged.

- a. The proposed location of the Bhandura dam is located in deep forest and is close to wildlife sanctuary.
- b. At present, there are no good roads etc., particularly for the movement of heavy machinery required for construction of proposed dam. The construction of

dam and related activities would impact the wildlife sanctuary.

- c. Mandatory clearances of the Union Ministry of Environment and Forests have not been accorded so far.
- d. The project has been primarily envisaged to divert 4 tmc of water to existing Malaprabha reservoir to be used for drinking purposes. However, it is mentioned at Page 4 of the detailed project report (DPR) at Annexure – 65 of the Statement of Claims of Karnataka that the average annual yield from the catchment up to the dam site is estimated to be only 3.03 tmc (85.9 Mm<sup>3</sup>) and the 75% dependable yield has been estimated to be 2.4 tmc (66.7 Mm<sup>3</sup>). Obviously, the envisaged diversion of 4.0 tmc of water to Malaprabha reservoir from Bhandura Nala does not appear to be feasible. The project authorities or representatives of the Govt. of Karnataka present during the visit could not clarify on this important issue of inconsistency in the data.

### 3.13 Visit to existing “Kali Power Project” of Karnataka Power Corporation Limited:

During their visit to the existing Supa dam of the “Kalinadi Hydro-electric Project”. Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and the members of the visiting Team were briefed about the salient features of the project. Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and the members of the visiting Team were also informed about the proposal for

diversion of 5.27 tmc of water of various tributaries of Mahadayi to augment the flows of Kalinadi for increased hydro-power generation under Kalinadi Hydro-electric Project. A brief note highlighting salient features of the project as provided by Govt. of Karnataka is at Annexure – XIV.

Based on the information provided by the officials, replies to the queries of the Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and other participants and clarifications made, following important points emerged:-

- a. The drawings shown at the site did not present the overall plan regarding proposed diversion from different locations of various tributaries of river Mahadayi. This could have been done through a self-contained comprehensive drawing showing all the proposals in an integrated matter.
- b. The project authorities informed about reduction in water availability in the reservoir resulting in less than envisaged generation of hydropower. However, the data presented at the site indicated that the highest value of the yield was in the year 1994 and the next highest value was in the year 2006 followed by that in the year 2011 and 2005, suggesting the absence of any trend for reduction in water availability.
- c. The project authorities could not explain the reason for relatively higher estimate of the yield for the project at the time of planning of the project which

has virtually resulted in underutilization of the created facilities.

- d. None of the proposed projects on the tributaries of river Mahadayi for the purpose of diversion of 5.27 tmc of water to augment the flows of Kalinadi for increased hydro-power generation under Kalinadi Hydro-electric Project have been accorded mandatory clearances from the Union Ministry of Environment and Forests.
- e. The project authorities or the representatives of the Govt. of Karnataka did not clarify as how higher priority could be accorded for utilization of water for the purpose of hydro-power generation.

### 3.14 Visit to existing “Malaprabha Project” of Govt. of Karnataka:

During their visit to the existing “Malaprabha Project”, Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and the members of the visiting Team were briefed about the salient features of the project. A brief note highlighting salient features of the project as provided by Govt. of Karnataka is at Annexure – XV.

Based on the information provided by the officials, replies to the queries of the Hon’ble Chairman, MWDT, Hon’ble Members of MWDT and other participants and clarifications made, following important points emerged:-

- a. Project authorities informed that the water availability at the Malaprabha reservoir has now been assessed as 27.0 tmc against the earlier estimate of 44 tmc. This means either the initial assessment was wrong or in the later years there was reduction in the rainfall resulting in lower yield. This has not been explained.
- b. It is also not explained whether the factors responsible for erroneous initial water assessment or reduction in assessed water availability at a later date would also be applicable in case of Mahadayi basin and that whether these factors have been taken in to account while assessing the water availability at various points in different tributaries in Mahadayi basin.
- c. It was noted from the information provided by the project authorities during the visit that the revised detailed project report (DPR) of Malaprabha project prepared in the year 2012 envisages only 0.216 tmc for drinking water supply purposes and not 7.56 tmc projected as the drinking water requirement for Hubli-Dharwad and en-route villages.
- d. It has also not been explained as why priority for drinking water has been ignored while preparing the revised detailed project report (DPR) of Malaprabha project. This more so in view of the emphasis of the Govt. of Karnataka on drinking water being a right under Article 21.

### 3.15 Presentation by Govt. of Karnataka:

A presentation covering (a) various aspect of drinking water related issues of Hubli-Dharwads and reroute villages, (b) proposed Diversion Schemes from Mahdayi basin to Kali basin, and (c) proposed Mahdayi Hydro-electric Project was made by Govt. of Karnataka before the Hon'ble Chairman, MWDT, Hon'ble Members of MWDT and the members of the visiting Team.

A copy of the presentation is at Annexure-XVI.

#### 4.0 MEETINGS WITH DELEGATIONS FROM PUBLIC:

During the visit to various Projects/Sites, a number of delegations representing various section of the Society expressed their desire to meet the Hon'ble Tribunal. Hon'ble Chairman, Mahadayi Water Disputes Tribunal and Hon'ble Member of the Mahadayi Water Disputes Tribunal met the delegations in the presence of the Legal Teams of the three co-basin States, namely Goa, Karnataka and Maharashtra at Belgaum on 19th December 2013, at Malaprabha and Hubli on 21st December 2013. Hon'ble Chairman, Mahadayi Water Disputes Tribunal and Hon'ble Member of the Mahadayi Water Disputes Tribunal gave a patient hearing to all the delegations. It was however, made very clear to all the delegations that as per laid down procedure, the proceedings of the Hon'ble Tribunal would be based strictly on the pleadings made by the three States namely Goa, Karnataka and Maharashtra. The members of all the Delegations were advised that if they desired some of their views to be considered during the proceedings of the Hon'ble Tribunal, they get such views

included in the pleadings made by the Learned Counsels of the party States.

#### 5.0 CONCLUDING REMARKS OF THE HON'BLE CHAIRMAN:

After completion of the last programme i.e., meeting with the officials of Government of Karnataka on 23rd December 2013, where members of the legal and technical teams of all the three States were present, Hon'ble Chairman, Mahadayi Water Disputes Tribunal concluded as under:-

“At the request of the Government of Goa and with the concurrence of the co-basin States of Karnataka and Maharashtra, we undertook this visit with the objective of getting acquainted with the salient features of the basin and important activities related to development and management of water resources in the basin.

This visit has definitely helped us in better understanding of the important features of the basin. I am confident that the learned Members of the legal and technical teams are now better equipped to address the issues.

I would like to share with you some of the common observations which emerged during visit to various sites etc. in Goa, Karnataka and Maharashtra.

Some important facts about basin features as also about water related points were highlighted by experts. But it emerged that many of the facts are

neither included in the statement of case or statement of claims of the States nor adequately elaborated.

Another very important point relates to inconsistency in information and data. This was apparent at almost all the sites which were visited in Goa, Maharashtra and Karnataka.

It also emerged that in many cases, the information were not fully substantiated through facts, authentic information etc. such as detailed plan including contour plan, detailed drawings and construction drawings wherever applicable.

I am confident that the members of the legal and technical teams will take all necessary measures to ensure that the information and data are consistent and that these are duly substantiated through authentic sources, proper studies and related documents. This will help all of us in better appreciation of the issues.

I take this opportunity to thank all the participants particularly the organisers from the three States for making the visit very informative and comfortable.

Sd/-  
(M.E. HAQUE)  
Assessor  
12.02.2014

Sd/-  
(S.K. SENGUPTA)  
Assessor  
12.02.2014"

A copy of the Report prepared by the two learned Assessors and submitted before the learned Registrar of the Tribunal was taken on the record of the case and a copy of the said Report was given to each State. This is evident from the order dated 04.03.2014 passed in I.A. No. 1/2012.

**ORDER DATED 04.03.2014 PASSED BY THE TRIBUNAL IN I.A. NO. 19 OF 2014 FILED BY THE STATE OF GOA FOR AMENDMENT OF STATEMENT OF CLAIM AND THE CONSEQUENTIAL PLEADINGS OF THE PARTY STATES**

16. After filing the Statement of Case on 04.02.2013, the State of Goa had moved an application i.e. I.A.No.19/2014, seeking permission of the Tribunal to amend its Statement of Case dated 04.02.2013, in terms of the Schedule annexed to the said application along with the annexures thereto and to carry out consequential amendments to all the papers and proceedings. The said application was allowed by the Tribunal vide Order dated 04.03.2014. Further consequential directions were also issued by the said Order.

Pursuant to the liberty granted by the Tribunal vide Order dated 04.03.2014 passed in I.A.No.19 of 2014, the State of Goa

submitted Amended Statement of Case on 07.03.2014. In reply to the amended Statement of case filed by State of Goa, the State of Maharashtra filed its para-wise reply on March 25, 2014 (Volume 68). In reply to the amended Statement of Case filed by the State of Goa, the State of Karnataka also filed its para-wise reply on March 27, 2014 (Volume 70) and denied the claim of the State of Goa in the amended Statement of Case. The State of Goa filed its Rejoinder Affidavit dated April 16, 2014 (Volume 77) to the reply filed by the State of Karnataka to the amended Statement of Case of the State of Goa. Similarly, the State of Goa filed Rejoinder Affidavit dated March 29, 2014 filed on March 31, 2014 (Volume 73B) to the reply filed by the State of Maharashtra to the amended Statement of Case filed by the State of Goa.

**ORDER DATED 01.04.2014 PASSED BY THE TRIBUNAL IN I.A. NO. 21 OF 2014 FILED BY THE STATE OF MAHARASHTRA FOR AMENDMENT OF THE STATEMENT OF CLAIM AND CONSEQUENTIAL PLEADINGS OF THE PARTY STATES.**

17. The State of Maharashtra had originally filed its Statement of Claim dated 02.01.2013. Thereafter, the State of Maharashtra had moved an application i.e. I.A. No. 21/2014, seeking permission of the Tribunal to permit the State of

Maharashtra to amend its Statement of Claim. The said application was allowed by the Tribunal vide Order dated 01.04.2014 and the State of Maharashtra was permitted to amend its Statement of Case as mentioned in "Schedule A" to the application. Further consequential directions were also given by the Tribunal.

Pursuant to the above stated permission, granted by the Tribunal, the State of Maharashtra had filed its Amended Statement of Claim on 02.04.2014 (Volume 74). The reply by the State of Goa was filed to the same on April 16, 2014 (Volume 76), whereas reply on behalf of the State of Karnataka was filed on May 7, 2014 (Volume 80), to the amended Statement of Case filed by the State of Maharashtra.

State of Maharashtra had thereafter filed Rejoinder dated September 5, 2014 (Volume 89) to the reply filed by the State of Goa to the amended Statement of Case filed by the State of Maharashtra. Similarly, the State of Maharashtra had filed Rejoinder on September 5, 2014 (Volume 90) to the reply filed by the State of Karnataka to the amended Statement of Case filed by the State of Maharashtra.

**ORDER DATED 17.04.2014 PASSED BY THE TRIBUNAL IN I.A. NO.1 OF 2012 FILED BY THE STATE OF GOA FOR RESTRAINING THE STATE OF KARNATAKA NOT TO ACTUALLY UTILISE OR DIVERT THE WATER UNDER THE KALASA-BHANDURA PROJECT**

18. The State of Goa had filed I. A. No. 1 of 2012 with a prayer to restrain the State of Karnataka from proceeding with any planning, construction and water regulation of any projects in the Mahadayi River Basin involving trans-basin diversion of waters until the inter-State disputes were adjudicated by the Tribunal.

On 16<sup>th</sup> October, 2012 following Order was passed by the Tribunal:

**"O R D E R**

*On instructions, Mr. F.S.Nariman, learned Senior Counsel for the State of Karnataka states as follows:*

*"That the State of Karnataka will not actually utilize the waters or divert the waters under the Kalasa Bhanduri Project until the next date of hearing. This statement is without prejudice to all rights and contentions of the State of Karnataka".*

*The above statement made on behalf of the State of Karnataka is accepted by the learned Counsel for the*

*State of Goa on instructions from Mr. S.T.Nadkarni, Chief Engineer, WRD, State of Goa. State of Goa accepts the above statement made on behalf of State of Karnataka without prejudice to the rights and contentions of State of Goa.*

*In view of the above statement made at the Bar, I.A. No. 1 of 2012 is adjourned to March 19, 2013.”*

On 17<sup>th</sup> April, 2014 I.A.No. 1 of 2012 was taken up for further hearing and after hearing the parties, following Order was passed:

“8. In view of the consensus arrived at between the parties, the following directions are issued:

- i) The State of Karnataka is hereby directed that it shall not actually utilize the water or divert the waters under Kalasa-Bhanduri Project till the disputes arising between the three States are finally adjudicated by this Tribunal;
- ii) In order to ensure that the water from Mahadayi basin does not get automatically diverted to Malaprabha basin through the inter-connecting canal, which has been partly constructed by the State of Karnataka, the State of Karnataka is directed to plug both the vents of the cut and cover section of the reach within Mahadayi basin of the inter-connecting canal with a brick masonry embankment, on or before 31.5.2014;

- iii) The State of Karnataka is directed to fill up the excavation made along the ridge line (the line separating the Mahadayi and Malaprabha basins) for the purpose of construction of canal, as per the agreed design and specification, to restore the ridge line as was existing prior to the construction of inter-connecting canal, on or before 31.5.2014;
- iv) The State of Karnataka is directed to complete the work of cross drainage for the existing roads/State highway along with the above mentioned works of plugging to avoid likely flooding/pondage, on or before 31.5.2014; and
- v) In order to monitor the works to be undertaken by the State of Karnataka, a team comprising of (a) the Superintending Engineer, in-charge of the works from Government of Karnataka, (b) an officer of the rank of Superintending Engineer to be nominated by the State of Goa and (c) an officer in the rank of Superintending Engineer to be nominated by the Government of Maharashtra is directed to be constituted immediately and latest by 30.4.2014. The so constituted team shall monitor the works to be undertaken by the State of Karnataka pursuant to the above mentioned directions. The team so constituted is directed to submit an interim report on the progress of works by 15.5.2014 and a final report on the completion of the works by the first week of June 2014 to the Registrar, Mahadayi Water Disputes Tribunal.

9. Over and above the directions issued by this order, no further directions are sought for by the State of Goa. Hence, subject to the above-mentioned directions, I.A. No. 1 of 2012 stands finally disposed of.”

**ORDER DATED 03.09.2014 PASSED BY THE TRIBUNAL POINTING OUT INCONSISTENCIES AND DISCREPANCIES IN THE PLEADINGS OF THE PARTY STATES**

19. On perusal of the respective pleadings of the three-party States, and the data available on the record and also on account of the facts assimilated from a site visit conducted by the Chairman and Members of the Tribunal, along with Assessors, some glaring inconsistencies and discrepancies were noticed.

In these circumstances, detailed notes mentioning those inconsistencies and discrepancies were prepared and handed over to all the concerned parties by this Tribunal. A detailed Order was passed on September 3, 2014. It would be appropriate to reproduce the said Order dated 03.09.2014, which reads as under:-

### “O R D E R

1. Today, during the course of hearing of the matter, the Tribunal has handed over copies of the “Brief Note on Inconsistencies in Data/Information related to Water Availability and Water Requirements projected by the States of Goa, Karnataka and Maharashtra through the Statements of Case/Statement of Claims and Related Documents” to the learned counsel appearing in the matter. Even copies of the draft order, which the Tribunal proposes to pass on the basis of the Brief Note, were also handed over to the learned counsel appearing in the matter. The Brief Note reads as under:

- 1. Two basic inputs essentially required during the course of decision making process of judicious allocation of share of waters among the various stakeholders and for different purposes are: (a) water availability assessed at various locations; and (b) water requirements for meeting the present and future demands of water for various purposes. In addition, information related to prioritization of water use keeping in view the socio-/economic profile of the areas are also considered necessary. Though the legal issues are undoubtedly very important but rational assessment of water availability and water requirements for various purposes on a sound and accepted principles remain basic inputs.*
- 2. The statements of case / statement of claims, written statements and rejoinders submitted by the three co-basin States along with the related documents*

*provide some information relating to these two basic inputs, the examination of the documents provided by the three States indicates that in many cases, the information provided by the respective States are not consistent and in some cases are contradictory. Some inconsistencies were also observed by the Tribunal during the visit to various projects / sites etc. in the States of Goa, Karnataka and Maharashtra in December 2013 which are indicated in the report on the visit. Obviously, inconsistent informations cannot be the basis of meaningful arguments during the process of arriving at reasonable assessment of the available water resources and judicious allocation of share of waters among the various stakeholders and for different purposes.*

3. *Without going into the merits of the facts as provided through data and informations included in the documents filed by respective State Governments and without comparing the data / information provided by one State with that of other States at this stage, some specific cases of inconsistencies in data / information appearing in the documents are cited as under.*
4. *In Para 72, page 49-50 of the Statement of Case of Goa, it has been mentioned “that total 75% yield from the whole of Goa Region of Mandovi / Madei Basin is 86.80 TMCft. (2460 MCM)”. It has further been indicated in the same Para that “the total availability of water resources for developmental purpose could be only 54 TMCft (1531 MCM)”. The total projected*

*demand of water by the year 2051 has been reported by Goa as 2674 MCM in Para 189 on page 145 of the Statement of Case of Goa. The projection of demand of 2674 Mm<sup>3</sup> against the utilizable available water of 1531 Mm<sup>3</sup>, in itself appears to be quite illogical. Following pertinent inconsistencies/ contradictions are also observed from the Statement of Case and related document submitted by Goa.*

- a. Goa has raised serious objections on the hydrological data observed at Ganjim on river Mahadayi and Colem on river Khandepar (a tributary of river Mahadayi) which has been used by Central Water Commission (CWC) as well as National Water Development Agency (NWDA) for assessment of water availability. The issue of unreliability of data observed at Ganjim was also raised by Goa during the visit of the Tribunal to various projects / sites in the State of Goa, Karnataka and Maharashtra in December 2013. However, the Tribunal noted that neither Central Water Commission nor Water Resources Departments of Government of Goa, Government Karnataka and Government of Maharashtra undertook detailed studies for consistency checks of the observed data at the site. Any conclusion about reliability or otherwise of observed hydrological data without proper consistency checks would not be appropriate.*
- b. In its Statement of Case, Goa has also adversely commented on the assessment of water availability by National Water Development Agency (NWDA). Goa has mentioned in Para 178,*

page 130 that “these NWDA’s water resources assessments are now revealed to be based on erroneous assumption of basic hydrological data such as rainfall, river discharge data.....”. Goa, on the other hand, appointed a “Panel of Experts” for preparation of Master Plan for the long term needs of water potential of Mahadayi river basin in Goa and has referred to the report of the “Panel of Experts” time and again. It is, however, noted that the studies of the “Panel of Experts” relating to water availability are primarily based on the findings of the technical study of NWDA as can be observed from Para 179, page 130 of the Statement of Case of Goa. This presents a contradictory situation.

- c. Goa has not agreed with the results of the studies of Central Water Commission regarding the assessment of water availability and has stated in Para 30, page 33 of “Reply by the State of Goa to Statement of Claims filed by the State of Karnataka before Mahadayi Water Dispute Tribunal” that “..... Goa will submit its case of quantification of useful and reliable yield available in Mandovi Basin before this Hon’ble Tribunal for its perusal and decision in due course.” Further, in the Amended Statement of Case filed by Goa on 7.3.2014, it has been mentioned at Para 18D, page 15-16 that “it is therefore submitted that with the advances in environmental and hydrological sciences, the State of Goa is in the process of undertaking more detailed studies and individual DPRs (Detailed Project Reports) relating to the aforesaid Irrigation Schemes in order to arrive at revised quantum of

long term water requirements". However, Goa has not indicated any timeframe for completion of detailed studies and individual DPRs. Therefore, at present, the projected demand of 2674 Mm<sup>3</sup> of water for various purposes by Goa cannot be treated as final projection.

d. Inconsistencies are noticed even in respect of some basic facts of administrative nature. For example, in Para 72, page 49 of the Statement of Case filed by Goa, it is mentioned that "to study the Karnataka proposals about diversion of water from Madei Basin to Malaprabha River, Panel of Experts (PoE) was appointed by Govt. of Goa on 14<sup>th</sup> February 2000". The report of the PoE appointed on 14<sup>th</sup> February 2000 has not been filed by Goa. However, "Master Plan for Madei / Mandovi River Basin – A Report by Panel of Experts" has been submitted and findings of the same have been referred to time and again. Examination of the report of PoE (filed by Goa) indicates that PoE was constituted vide Irrigation Department letter No. 61-1/98-99-CE-IRRG-EO/24 dated 24.4.1998 and that the PoE submitted its report in 1999. Such inconsistencies indicate casual approach in furnishing information.

5. Karnataka in the Statement of Claims has mentioned in Para 9.3, page 76-77 about estimation of water availability by Central Water Commission in 2003 and has mentioned that "CWC estimated the yield of Mahadayi basin as 6234 Mcum (220 tmc) at 50% dependability and 5652 Mcum (199.6 tmc) at 75% dependability". In Para 16.14, page 124 of the

*Statement of Claims, it is specifically mentioned that “... the yield study of the CWC of March 2003: is binding on Goa and in the facts and circumstances of the present case, it has to be taken as the basis for the determination of the shares of the riparian States in the waters of the Mahadayi river”. It has been further mentioned by Karnataka in Para 9.6, page 79 of the Statement of Claims that on the basis of the methodology adopted by CWC in its Report of 2003 and the data for the period 1965-66 to 1999-2000, the 75% dependable flow and 50% dependable flow generated from the catchment of river Mahadayi and its tributaries in Karnataka works out to be 1250 Mm<sup>3</sup> (44.15 tmc) and 1489 Mm<sup>3</sup> (52.60 tmc) respectively. It has also been mentioned in the same Para that “the WRDO of Karnataka has also assessed the yield on the proportionate catchment area basis of the gross yield at Ganjim, for the period from 1979-80 to 2010-11. According to the study of WRDO of Karnataka, the yield at 75% dependability and 50% dependability is 43.87 tmc and 50.13 tmc respectively”. Karnataka has projected its share in the waters of inter-State river Mahadayi and its valley as 24.15 tmc. In this regard, some important related information are as under.*

*a. Karnataka has mentioned in the Statement of Claims that water availability of 5652 Mm<sup>3</sup> as assessed by Central Water Commission may be accepted by the Tribunal. However, in Para 4.5.1, page 4-19 of Annexure 8, volume I (NEERI report of 1997) of Statement of Claims of Karnataka, it is mentioned that “The annual average runoff from the Mandovi and Zuari basins as estimated by the CPCB is 16000 and 11000 Mcum respectively”.*

*Further, it is mentioned on page 242, Annexure – 57 (of Statement of Case of Karnataka) that the average annual yield from Mahadayi basin in Karnataka is shown as 1470.37 Mm<sup>3</sup>. However, in Para 3.4.2, page 3-6 of Annexure 8, volume I, it is mentioned that “the total yield from the Mahadayi river basin in Karnataka is 1082 Mcum.....”. Mentioning of such highly varying figures without cross checking the details included in different document is not at all acceptable.*

- b. In Para 11.3, page 89-90 of the Statement of Claims, it is mentioned that “... on a fresh planning, Karnataka proposes to (i) utilize 7.56 tmc for diversion under Kalasa Bhanduri (ii) utilize 1.5 tmc for irrigation, drinking purposes and other purposes within the Mahdayi basin (iii) divert 5.527 tmc to Kalinadi to augment the flows for power generation under the KHEP and (iv) account remaining water under the MHEP for power generation, at present”. It has been further mentioned in Para 13.10, page 103 of the Statement of Claims of Karnataka that “the urgent need of meeting the drinking water requirement of Hubli-Dharwad twin cities, enroute villages, etc., has been the singular reason for starting the construction of Kalasa Bhanduri project for diversion of 7.56 tmc of water to Malaprabha river to augment its inflows”. However, on page 19 of the Modified Detailed Project Report of Malaprabha Project (Annexure – 4 to the Reply on behalf of the State of Karnataka to the Statement of the Case filed by the State of Goa), the allocation for domestic water supply as per revised*

project report from Malaprabha has been indicated as 15.59 LPCD which is equivalent to 0.201 tmc of water per year. The Modified Detailed Project Report of Malaprabha Project on page 19, also mentions about 0.015 tmc of water as revised allocation for industrial water supply. The total of 0.201 for drinking water supply and 0.015 for industrial water supply works out to be 0.216 tmc which has been indicated at page 17. The same figure has been shown as water supply in the brochure titled "A Note on Malaprabha Project" made available during the visit of the Hon'ble Tribunal to the Malaprabha Project during December 2013. Further, at page 135 of the Modified Detailed Project Report of Malaprabha Project, it is mentioned that "the requirement of Drinking water supply of 90 Mcft monthly for Twin cities of Hubli-Dharwad has been provided from the year 1982-83". Since there is a reference of the year 1982-83 from which the requirement of drinking water supply for twin cities of Hubli-Dharwad has been provided, it may be assumed that the quantum of 90 million cubic feet per month i.e., about 1.08 tmc per annum is already being supplied for Hubli-Dharwad from Malaprabha Project. However, there is lack of clarity as it is further indicated in the same Para at page 135 that "this requirement is however not accounted for utilization under Malaprabha Project". It is also stated in the same Para on page 135 that "thus drinking water requirement for Twin cities of Hubli-Dharwad which is lifted directly from reservoir as duly considered for utilization under

*Malaprabha Project". The related Para from the Modified Detailed Project Report of Malaprabha Project is reproduced as under.*

*"The requirement of Drinking water supply for 90 MCft monthly for Twin cities of Hubli-Dharwad has been provided from the year 1982-83. Thus under Col. No. 7 of working table issues for irrigation and drinking is shown as 25340 MCft annually (24260 for irrigation + 1080 MCft (90 MCft x12 months)). As regards to issues for water other requirements on the downstream of dam under Col. No. 8 is actual yearly issues during the year 1973-74 to 2005-06. This requirement is however not accounted for utilization under Malaprabha Project. Thus drinking water requirement for Twin cities of Hubli-Dharwad which is lifted directly from reservoir as duly considered for utilization under Malaprabha Project."*

*Further, it is observed from the Working Table on pages 141 to 173 of the Annexure – 4 to the Reply on behalf of the State of Karnataka to the Statement of the Case filed by the State of Goa, that at least 2828 million cubic feet (about 2.83 tmc) of water is earmarked for "Water supply for Drinking and other purposes on the downstream of the dam", which, perhaps, is in addition to 1080 million cubic feet (about 1.08 tmc) lifted directly from reservoir to be used for drinking water for twin cities of Hubli-Dharwad. This also needs to be*

clarified, particularly in view of the fact that withdrawal of 1080 million cubic feet of water for twin city of Hubli-Dharwad has not been specifically reflected in the “Working Table of Malaprabha Project”. There is also a mention of existing use of considerable quantum of water from Malaprabha dam for the domestic water supply for Hubli-Dharwad in Annexure – 61 of the Statement of Claims on behalf of the State of Karnataka. It is stated in the Table-2 (History of Bulk Water Supply Schemes to Hubli-Dharwad) on page 10 of the Annexure – 61 (Report on Drinking Water Demand of Hubli-Dharwad, En-route villages, etc., from Malaprabha reservoir) of the Statement of Claims on behalf of the State of Karnataka that Bulk Water Supply is being made from Malaprabha Dam for Hubli-Dharwad since 1983. It appears that 153.80 million liters of water per day is currently being supplied from Malaprabha dam which is equivalent to about 56.14 million cubic meters or 1.98 tmc. Obviously, the above statements and related information in respect of existing utilization for drinking water purposes and additional projected demand present varying figures which need clarification.

- c. In Para 13.2, page 92 of the Statement of Claims of Karnataka, it is mentioned that “the Kalasa Banduri project for diversion of 7.56 tmc consists of diversion of 3.56 tmc under Kalasa Nala diversion and diversion of 4 tmc under Bhandura Nala to augment the flows of Malaprabha rivers.....”.

However, in Para 5, page 4 of the Annexure 65 [Revised Detailed Project Report (Bhandura DPR – 2012) of Bhandura Nala Diversion Scheme prepared in 2012] of the Statement of Claims of Karnataka, it is mentioned that “the average annual yield as per the above formulae are 85.9 Mcum, 76.7 Mcum and 79.5 Mcum respectively. The 75% dependable yield, as per KPCL formulae is 66.7 Mcum (2.40 TMC). The same is adopted for studies”. The maximum estimate of average annual yield reported above is 85.9 Mcum which is equal to 3.03 tmc. Obviously the envisaged diversion of 4 tmc of water to Malaprabha project from Bhandura Nala does not appear to be feasible in view of the information included in the above mentioned report. Such inconsistencies in results of the analysis / information included in various documents are definitely not acceptable.

- d. As per Annexure – 73 of the Statement of Claims of Karnataka, Government of Karnataka envisages use of about 1.00 tmc for irrigation purposes in Mahadayi basin. However, it is mentioned at page 2 of Annexure – 68 (Volume-I) of Statement of Claims of Karnataka that “the topography is hilly with forest cover suitable for power development only”. The two Annexures of the Statement of Claims of Karnataka present conflicting statements.
- e. Annexure – 69 of the Statement of Claims of Karnataka includes detailed project report (DPR) in respect of Palna diversion scheme and Katla diversion scheme and pre-feasibility report (PFR) in respect of Diggi (Mara Nala and Bondeli) diversion

scheme and Viranjole (Pasal Nala 1 and Pasal Nala 2) diversion scheme. Analyses of the information included in the reports indicate that runoff factor (i.e. average annual yield / average annual rainfall in the catchment) is 0.51 for Viranjole diversion schemes, 0.67 for Palna and Katla diversion schemes and 0.80 for Diggi diversion schemes. From the information included in Annexure – 68 of the Statement of Claims of Karnataka, it is stated that the runoff factors for Kotni dam project and Bail Nadi diversion scheme are 0.89 and 0.97 which are very high and unusual. Relevant information are summarized in Table – 1. Such high variations in runoff factors for schemes in the same sub-basin and with similar rainfall patterns are unusual and may not be acceptable.

- f. It is also observed that there are inconsistencies even in some basic data. For example, different values of total catchment area of the Mahadayi basin including that of its tributaries in the State of Karnataka have been mentioned in different documents. Different figures of the catchment area of river Mahadayi and its tributaries in Karnataka stated in different documents are 375 km<sup>2</sup> in Para 8.2, page 73 of Statement of Claims of Karnataka, 375.11 km<sup>2</sup> in Para 4.1, page 4-1 of Annexure 8 (NEERI report of 1997 Volume I), 400.16 km<sup>2</sup> in Para 1.1.3 of Annexure 73, 412 km<sup>2</sup> in Karnataka's letter dated 30.3.2002 as quoted by Goa at Annexure 102 of Statement of Case of Goa, and 455 km<sup>2</sup> on page 6, Annexure 3 (Minutes of the discussions held on 2.7.1992) of the Statement of

*Claims of Karnataka. This is undoubtedly an unacceptable situation.*

6. Maharashtra has indicated in Para 2.4, page 18 of the Statement of Case that “the comparison with adjoining basin studied by Maharashtra Water and Irrigation Commission given vide para 1.4.2 reveals the Maharashtra’s estimate of availability in Madovi basin as 5770 M.Cum. Based on this estimate proportionate yield from Maharashtra territory on average annual basis will be 218 M.Cum”. Maharashtra has not projected the specific value of yield of catchment area of Mandovi / Mahadayi river basin in Maharashtra at 75% dependability. Against the projection of 218 Mm<sup>3</sup> of average annual yield from catchment area of Mandovi / Mahadayi in Maharashtra, total water requirement of 180 Mm<sup>3</sup> has been projected in Para 3.5.2, page 25 of the Statement of Case. In this regard, some important facts stated are as under.

- a. In Para 2.5, page 18 of the Statement of Case filed by Maharashtra on 2.1.2013, it is mentioned that “the detailed hydrology is under study by the Chief Engineer, Planning and Hydrology, Nashik and on getting the report the same will be submitted to the Hon’ble Tribunal”. Maharashtra has filed Amended Statement of Case on 2. 4.2014. Para 2.5, page 15 of the Amended Statement of Case also mentions that “the detailed hydrology is under study by the Chief Engineer, Planning and Hydrology, Nashik and on getting the report the same will be submitted to the Hon’ble Tribunal”. It is apparent that the studies

undertaken which were reported under progress in January 2013 by Government of Maharashtra have not been completed so far. Further, Maharashtra has not indicated any time frame for completion of the studies even in the Amended Statement of Case filed on 2.4.2014.

- b. The projection of the water requirement of 180 Mm<sup>3</sup> includes irrigation needs of Maharashtra, drinking water needs in parts of Mandovi river basin, drinking water needs in adjoining uncommanded area of Tilari basin, industrial water needs in part of Mandovi river basin, industrial water needs in adjoining uncommanded area of Tilari basin, provision for future development and evaporation losses at the rate of 10%. The projection of water demand without properly assessing the water availability at different dependability i.e., 75% dependability (for irrigation purposes) and 100% dependability (for drinking water purposes) cannot be considered appropriate.

7. In addition, some general deficiencies in the pleadings of the parties, are noticed as under:

- a. Apparently, both Goa and Maharashtra have referred to the same report i.e., the report of the Task Force to prepare the economic development plan for Goa State under the chairmanship of Dr. Swaminathan constituted by the Planning Commission in May 1981. However, two different figures of the average water availability from the basin have been quoted. In the Statement of Case of Goa, it is mentioned in Para 177, page 128-129 that "... They assessed the average

annual yield of the entire Mahadayi River basin (i.e. including water resources generated but neither conservable useable quantity from the estuarine lower reaches) as 3580 MCM (126 tmc).” On the other hand, Maharashtra has quoted the average water availability as 4455 Mm<sup>3</sup> in Para 2.2.1, page 15-16 of Statement of Case of Maharashtra wherein, it is stated that “... In their published report in 1982 the Central Water Commission estimated the average annual yield of Mandovi Basin, including the yield from the basin areas lying in Maharashtra and Karnataka as 4455 Mm<sup>3</sup>”. Interestingly, copy of the report referred to in Statement of Cases has not been filed by any of the two States.

- b. All the three co-basin States have highlighted the highly varying hydro-meteorological characteristics and physiographic features from lower reaches to upper reaches of the basin. In its Statement of Case, Goa has mentioned in Para 180, page 136 that “Both Karnataka’s & Maharashtra’s portion of the Mahadayi river basin areas are in the initial and head reaches of the river in the rugged areas of Western Ghats. Comparatively, the rainfall in these head reaches of Mahadayi River and its tributaries are much higher than in the middle and coastal reaches of the basin in Goa State. The rugged areas in head reaches of Mahadayi basin in Karnataka and Maharashtra State have thick forest and scant area for irrigation and sparse population. ...”.

Maharashtra in Para 1.1.6, page 6 of Statement of Case has observed that “... the stream or the river originating in the State of Maharashtra and

*Karnataka have fairly steep slopes as most of the rivers originate in the Sahyadri hill ranges and rivers originating in the State of Goa have fairly flatter gradient indicating that they are draining comparatively plateau area". Agro-climatic variations have also been highlighted in details in Para 1.2.4, page 8-9 of Statement of Case of Maharashtra.*

*Specific observations about the physiographical features of Mahadayi basin and its hydro-meteorological characteristics are indicated in Annexure 8 (NEERI report of 1997 Volume I) of Statement of Claims of Karnataka. In Para 4.2.1, page 4-1 of Annexure 8 of Statement of Claims of Karnataka, it is mentioned that the Mahadayi (Mandovi) basin is bounded on the north by Chapora basin, on the north-east by Kalinadi basin, on the south by Zuari basin and on the west by the Arabian Sea and that the Mahadayi basin can be broadly divided into three distinct sub-regions namely (i) regions with undulating up-lands and hills, (ii) the coastal plains, and (iii) the intermediate or transitory regions. It is further stated in Para 4.3.2, page 4-15 of Annexure 8 of Statement of Claims of Karnataka that "...the bulk of the total annual rainfall occurs during the monsoon season i.e. from June to October. The distribution of rainfall is largely influenced by the topography of the area".*

*Such variations in physiographic features of the basin and hydro-meteorological characteristics of the region, which are duly recognized by all three States,*

are bound to impact the process of runoff formation. However, it appears that these feature have not been duly reflected in the process for assessment of yield from the basin at different points in the reports by any of the States.

8. From above, it is apparent that many of the information's provided by the States through various documents are inconsistent and / or incomplete. Obviously, information made available by the party States in its present form cannot be made the basis of meaningful determination of arriving at reasonable assessment of the available water resources and judicious allocation of share of waters among the various stakeholders and for different purposes.

**TABLE-1: SALIENT FEATURES OF PROJECTS PROPOSED BY KARNATAKA IN MAHADAYI BASIN FOR HYDROPOWER DEVELOPMENT**

Sl. No.	Project	Catchment Area (km <sup>2</sup> )	Average Rainfall (mm)	Average yield		RO factor	Reference and Remarks (if any)
				Mm <sup>3</sup>	tmc		
Projects for diversion of water to Kali Nadi for hydropower development							
1.	Palna	6.40	6394	27.30	0.96	0.67	Page ii of DPR of Katla & Palna Diversion Scheme, Annexure – 69 of Statement of Claims of Karnataka
2.	Katla	16.10	6394	68.70	2.43	0.67	

3.	Diggi dam - Mara Nala	5.20	6000	25.00	0.88	0.80	Page 1 of PFR of Diggi Diversion Scheme, Annexure – 69
4.	Diggi dam– Bondeli	10.40	6000	49.92	1.76	0.80	
5.	Viranjole dam – Pasal Nala 1	6.20	6000	19.00	0.67	0.51	
6.	Viranjole dam – Pasal Nala 2	3.30	6000	10.00	0.35	0.51	
Projects for hydropower development in Mahadayi basin							
7.	Kotni dam	92.15	4947	405.23	14.31	0.89	Pages 4 to 6 of DPR of Mahadayi Hydro-electric Project, Annexure – 68 (Volume-I) of Statement of claims of Karnataka
8.	Pansheer Nala diversion	6.50	-	27.69	0.98	-	
9.	Murudhuhaul Nala diversion	3.3	-	19.95	0.70	-	
10.	Bail Nadi diversion	31.90	5800	178.86	6.32	0.97	
11.	Andher Nala diversion	4.80	-	27.67	0.98	-	
12.	Irti dam	18.70	-	82.94	2.93	-	

2. This Tribunal has been constituted in exercise of the powers conferred by Sub-section (1) of SECTION 5 of the Inter-State River Water Disputes Act 1956 (33 of 1956). Therefore, the Tribunal will have to go by the provisions of the said Act.

3. SECTIONS 9(1), 9(2) and 9A of the Inter-State River Water Disputes Act read as under:

*“9(1). The Tribunal shall have the same powers as are vested in a Civil Court under the Code of Civil Procedure, 1908, in respect of the following matters, namely:-*

- (a) .....
- (b) .....
- (ba) *requisitioning of any data, as may be required by it.*
- (c) .....

*(2) The Tribunal may require any State Government to carry out, or permit to be carried out, such surveys and investigation as may be considered necessary for the adjudication of any water dispute pending before it.*

XX XX	XX XX	XX XX
XX XX	XX XX	XX XX

*9A. (1) The Central Government shall maintain a data bank and information system at the national level for each river basin which shall include data regarding water resources, land, agriculture, and matters relating thereto, as the Central Government may prescribe from time to time. The State Government shall supply the data to the Central Government or to an agency appointed by the Central Government for the purpose, as and when required.*

*(2) The Central Government shall have powers to verify the data supplied by the State Government, and appoint any person or persons for the purpose and take such measures as it may consider necessary. The person or persons so appointed shall have the powers to summon such records and information from the concerned State Government as are considered necessary to discharge their functions under this section."*

4. In view of the important issues highlighted in the “Brief Note on Inconsistencies in Data/Information related to Water Availability and Water Requirements projected by the States of Goa, Karnataka and Maharashtra through the Statements of Case/Statement of Claims and Related Documents” (“Brief Note”, for short), which have been brought to the notice of the learned counsels representing the three States and in view of the consensus about some data/information in various documents being inconsistent and/or incomplete, the Tribunal proposes to exercise the powers conferred on it by SECTIONS 9(1)(ba), 9(2) and 9A of the Act and give directions to the three party States as well as the Central Government, with a view to secure required material, data as well as carry out surveys and investigations and to produce relevant data before it to enable the Tribunal to decide the two basic inputs essentially required during the course of decision making process of judicious allocation of share of waters among the various stake holders, which have been highlighted in the “Brief Note”.

- (1) The State of Goa is directed to submit its case of quantification of useful and reliable yield available in Mandovi Basin before the Tribunal for its perusal and decision in due course, on or before 2.12.2014.
- (2) The State of Goa is directed to complete the process already undertaken by it for more detailed studies and preparing individual Details Project Reports (DPRs) relating to the irrigation schemes in order to arrive at revised quantum of long term water requirements, on or before 2.12.2014.

- (3) The State of Goa is directed to produce before this Tribunal the hydrological data in its possession, on or before 2.12.2014.
- (4) The State of Goa is directed to undertake detailed analysis with a view to checking the consistency of data and file reports based on those findings, on or before 2.12.2014.
- (5) The State of Goa is directed to inspect all the documents produced by the State of Karnataka before the Krishna Water Disputes Tribunal on or before 2.12.2014 and commit firmly whether it proposes to rely upon the documents produced before the Krishna Water Disputes Tribunal or not. Failure on the part of the State of Goa will forfeit its right to inspect the documents produced before the Krishna Water Disputes Tribunal and to rely upon the same before this Tribunal.
- (6) The State of Goa is directed to compare the physiographical features of the basin and hydro-meteorological characteristics of the region with the data given by the State of Karnataka and the State of Maharashtra and state before this Tribunal about the correct assessment of yield from the basin at different points with due consideration to the physiographical features and hydro-matereological characteristics of the region, on or before 2.12.2014.
- (7) The State of Goa is directed to produce before the Tribunal the report of the Task Force to prepare the

economic development plan for the State of Goa under the Chairmanship of Dr. Swaminathan constituted by the Planning Commission in May 1981, on or before 2.12.2014.

- (8) The State of Karnataka is directed to commit firmly before this Tribunal its case about water availability after cross checking the details which have been pointed out in the "Brief Note", on or before 2.12.2014.
- (9) The State of Karnataka is directed to state its case clearly before the Tribunal as to how much water it proposes to utilize for diversion under Kalasa Bhanduri as well as for irrigation, drinking purposes and other purposes within the Mahadayi Basin and proposes to divert how much quantity of water to Kalinadi to augment the flows for power generation under the KHEP and also how much quantity of water is available at present under the MHEP for power generation, on or before 2.12.2014.
- (10) The State of Karnataka is directed to submit before the Tribunal as to what is the exact requirement of drinking water for the twin cities of Hubli-Dharwad, in view of the inconsistencies which have been pointed out in detail in the "Brief Note", on or before 2.12.2014.
- (11) The State of Karnataka is directed to produce data before this Tribunal as to on what basis the water availability from Malaprabha river was assessed and on what basis same was revised later on, on or before 2.12.2014.

- (12) The State of Karnataka is directed to commit firmly before this Tribunal as to whether 2828 million cubic feet of water earmarked for water supply for drinking and other purposes on the downstream of the dam is or is not in addition to 1080 million cubic feet lifted directly from reservoir to be used for drinking purposes for twin cities of Hubli-Dharwad, on or before 2.12.2014.
- (13) The State of Karnataka is directed to state before the Tribunal as to whether the Kalasa-Bhanduri Project for diversion of 7.56 tmc consists of diversion of 3.56 tmc under Kalasa Nala diversion and diversion of 4 tmc under Bhanduri Nala to augment the flows of Malaprabha river or the diversion of 4 tmc of water to Malaprabha Project from Bhanduri Nala is not feasible at all in view of the contents of the revised detailed project report of Bhanduri Nala Diversion Scheme prepared in 2012, on or before 2.12.2014.
- (14) The State of Karnataka is directed to produce before this Tribunal the data/information, including the observed hydrological data in its possession, on or before 2.12.2014.
- (15) The State of Karnataka is directed to undertake a detailed analysis with a view to checking the consistency data and file reports on findings of the analysis, on or before 2.12.2014.

- (16) The State of Karnataka is directed to compare the physiographical features of the basin and hydro-meteorological characteristics of the region with the data given by the State of Goa and the State of Maharashtra and state before this Tribunal about the correct assessment of yield from the basin at different points with due consideration to the physiographical features and hydro-meteorological characteristics of the region, on or before 2.12.2014.
- (17) The State of Maharashtra is directed to complete the detailed hydrological study undertaken by the Chief Engineer, Planning and Hydrology, Nashik as early as possible and produce report of the same before the Tribunal, on or before 2.12.2014.
- (18) The State of Maharashtra is directed to commit firmly before the Tribunal the water availability at different dependability i.e. 75% to be used for planning for irrigation purposes and 100% dependability to be used for planning for drinking purposes, on or before 2.12.2014.
- (19) The State of Maharashtra is directed to produce before the Tribunal the report of the Task Force, for the purpose of preparation of the economic development plan under the Chairmanship of Dr. Swaminathan constituted by the Planning Commission in May 1981, which it has utilized for projection of water availability and compare the same with the observations of the State of Goa and assess the average annual yield of the entire Mahadayi River Basin by the State of Goa and

state before the Tribunal as to what is its stand about the average availability of water from Mahadayi Basin, on or before 2.12.2014.

(20) The State of Maharashtra is directed to compare the physiographical features of the basin and hydro-meteorological characteristics of the region with the data given by the State of Goa and the State of Karnataka and state before this Tribunal about the correct assessment of yield from the basin with due consideration to the physiographical features and hydro-matereological characteristics at different points, on or before 2.12.2014.

(21) The State of Maharashtra is directed to produce before the Tribunal the hydrological data in its possession, on or before 2.12.2014.

6. The Tribunal is informed by the learned counsel for the parties that the duties contemplated by SECTION 9A of the Act are being performed by the Central Water Commission, which is an attached office of the Ministry of Water Resources of the Central Government. Therefore, the following directions are issued to the Central Water Commission:

(22) The Central Water Commission is directed to furnish all available data/information relating to planning and development of water resources of Mahadayi River Basin, particularly the discharge data from the hydrological observation stations of Central Water

Commission on River Mahadayi and its tributaries to the three co-basin States viz. State of Goa, State of Karnataka and the State of Maharashtra, on or before 2.12.2014.

- (23) The Central Water Commission is directed to undertake a detailed analysis with a view to checking consistency of data and file report on findings of the analysis before this Tribunal on or before 2.12.2014.
- (24) The issues in the matter arising for adjudication were determined on the basis that the pleadings were complete. However, the Tribunal finds that two States out of three States which are before it have amended their respective Statement of Cases, to which replies have been filed and rejoinders are also filed. Today, one application is moved by the State of Karnataka seeking permission of the Tribunal to amend its pleadings. If that application is allowed, the respondents will seek time to file replies and the State of Karnataka may file rejoinder to the replies. Thus the Tribunal has not reached the stage of completion of pleadings. The directions given if complied with would result into further amendment of the pleadings of the parties. Further, the amendments of the pleadings of the parties would necessarily result into amendment of the issues already raised for determination. Therefore, it is clarified that if any of the States fails to comply with the directions given by the present order, the Tribunal will be left with no option but to draw adverse inference against the State concerned, as may be permissible under the law. It is also made clear that failure to comply with the directions would forfeit the right of the

State concerned to produce data and/or rely upon the information, studies undertaken, inspection of the documents to be taken, etc. and thereafter, the Tribunal will not look into such evidence at all, even if produced at later stage by any of the States.

6. List the matter for further hearing on 9.12.2014. Though the matter is adjourned to 9.12.2014, the States concerned must be ready with necessary applications for the amendment of their respective Statements of Case/Claims, etc. on the basis of the data/information, which would be available to the State concerned pursuant to the directions given today by this order, so that the applications for amendment of the pleadings, if any, be taken up for consideration on 9.12.2014.”

**ORDER DATED 15.04.2015 PASSED BY THE TRIBUNAL IN I.A. NO. 29 OF 2014 PERMITTING THE STATE OF KARNATAKA TO WITHDRAW ITS APPLICATION FOR AMENDMENT OF ITS STATEMENT OF CLAIM**

20. Meanwhile, State of Karnataka had filed I. A. No. 29/2014 seeking permission of the Tribunal to permit it to amend its Statement of Claim. By Order dated 03.09.2014 the said application was adjourned. I. A. No. 29/2014 was, thereafter, taken up for hearing on 11.02.2015 and in view of the request of the learned Counsel for the State of Karnataka, the said application was adjourned to 15.04.2015. On 15.04.2015, I. A.

No. 29/2014, filed by the State of Karnataka, seeking permission of the Tribunal to permit it to amend its Statement of Case was withdrawn. The said application was, accordingly, disposed of.

**DETAILS OF FURTHER AMENDMENTS OF THEIR RESPECTIVE STATEMENT OF CASES/CLAIMS BY THE THREE PARTY-STATES AS WELL AS THE REPLIES AND REJOINDERS THERETO.**

21. The issues in the matter arising for adjudication were determined on the basis that the pleadings were complete. However, the Tribunal found that the two States out of the three States which are before the Tribunal, had amended their respective Statement of cases to which replies were also filed and Rejoinders were also filed. On September 3, 2014, one application was moved by the State of Karnataka seeking permission of the Tribunal to amend its pleadings. It was felt that if that application was allowed, the respondents would seek time to file replies and the State of Karnataka would seek time to file rejoinder to the replies. It was noticed that the Tribunal had not reached the stage of completion of the pleadings. The directions given on September 3, 2014, if complied with, would have resulted into further amendments of the pleadings of the parties. Further, the amendments of the pleadings of the parties would

necessarily result into amendments of the issues already raised for determination. Therefore, it was clarified that if any of the States failed to comply with the directions given by the Tribunal vide Order dated September 3, 2014, the Tribunal would be left with no option but to draw adverse inference against the State concerned as would be permissible under the Law. It was made clear to the States that failure to comply with the directions would forfeit the right of the State concerned to produce data and/or rely upon the information, the study undertaken, inspection of the documents to be taken etc., and that thereafter, the Tribunal would not look into such evidence even if it was produced at a later stage by any of the States.

22. Pursuant to the above mentioned detailed Order, State of Goa further amended its Statement of Case on April 23, 2015 (Volume 131). The State of Karnataka filed its para-wise reply dated May 25, 2015 (Volume 138), to the said further amended Statement of Case of State of Goa. Similarly, the State of Maharashtra filed its reply dated April 29, 2015 (Volume 133) to the said further amended Statement of Case filed by the State of Goa on April 23, 2015.

On receipt of the above mentioned replies, the State of Goa filed Rejoinder dated June 30, 2015 to the reply filed by the State of Karnataka on May 25, 2015 (Volume 150). The State of Goa also filed Rejoinder dated June 30, 2015 (Volume 148) to the additional reply filed by the State of Maharashtra on May 11, 2015.

23. After passing of detailed Order dated September 3, 2014, which is referred to earlier, the State of Karnataka filed its amended Statement of Claims on April 20, 2015 (Volume 129). The State of Goa filed its reply dated May 5, 2015 (Volume 134) to the said amended Statement of Claims filed by the State of Karnataka on April, 20, 2015, whereas the State of Maharashtra filed reply dated April 29, 2015 (Volume 133) to the said amended Statement of Claims of the State of Karnataka.

After receipt of the above mentioned replies from the State of Goa and the State of Maharashtra, the State of Karnataka filed full Rejoinder dated June 23, 2015 (Volume 144), which was filed on June 24, 2015, to the replies dated May 14, 2013 and May 5, 2015, filed by the State of Goa, to the Statements of Claims of the State of Karnataka dated January 2, 2013, and April 17, 2015,

respectively. The State of Karnataka also filed Rejoinder dated June 23, 2015, which was filed on June 24, 2015 (Volume 142) to the reply dated April 29, 2015, filed by the State of Maharashtra, to the amended Statement of Claims of State of Karnataka.

24. Again, the State of Maharashtra had filed further amended Statement of Case dated April 20, 2015 (Volume 127), to which additional reply was filed by the State of Goa on May 5, 2015 (Volume 135). The State of Karnataka had also filed reply dated June 12, 2015 (Volume 140), to the further amended Statement of Case filed by the State of Maharashtra on April 20, 2015.

On receipt of the above mentioned replies, the State of Maharashtra had filed additional Rejoinder dated June 29, 2015 (Volume 146), to the additional reply filed by the State of Goa, to the further amended Statement of Case of Maharashtra. Similarly, the State of Maharashtra had filed Rejoinder dated June 29, 2015 (Volume 145), to the reply filed by the State of Karnataka, to the further amended Statement of Case filed by the State of Maharashtra.

**ORDER DATED 06.05.2015 PASSED BY THE TRIBUNAL IN I.A. NO. 28 OF 2014 FILED BY THE STATE OF GOA DIRECTING THE STATE OF MAHARASHTRA NOT TO UNDERTAKE, COMMENCE THE WORK OF GORGE PORTION OF VIRDI DAM.**

25. The State of Goa had filed I.A.No. 28 of 2014 on June, 6, 2014, and claimed following reliefs:-

“a) Pass an order restraining the State of Maharashtra from proceeding with any planning, construction and water regulation of any projects in the Mandovi River Basin including its tributaries involving trans-basin diversion of waters until the inter-State disputes are adjudicated by this Hon’ble Tribunal; and

b) That the Tribunal be pleased to declare that the works undertaken by the State of Maharashtra in relation to the Virdi Large Minor Irrigation Project including the canals and dams built to divert the waters of River Mhadei and its tributaries is illegal and this Tribunal be further pleased to direct the State of Maharashtra not to go ahead with any work and to maintain complete status quo till the matter is resolved by this Hon’ble Tribunal.

c) That this Tribunal be pleased to pass an Order of Mandatory Injunction directing the State of Maharashtra to freeze their present upstream use at

the declared levels and undertake not to permit any intervention that amounts to upstream use of the waters of River Mhadei;

d) That this Hon'ble Tribunal be pleased to pass an Order commanding the state of Maharashtra to divulge the complete information regarding the Virdi Large Minor Irrigation Project including the present plan of change of the site and size of the said Project;

e) Pass such further orders as this Hon'ble Tribunal may deem fit and proper in the circumstances of the case."

The said application was taken up for final disposal on May 06, 2015 and the following Order was passed:

"5. In view of the undertaking given by the learned counsel for the State of Maharashtra, it is directed that the State of Maharashtra shall not undertake/commence the work of filling of the gorge portion of Virdi Dam at Kattika Nallah until the final adjudication of the disputes by this Tribunal. As the State of Maharashtra has voluntarily decided not to proceed with the components of Virdi Project that were required for the trans-basin diversion of water to Tillari Basin until the adjudication of the controversy by this Tribunal, it is hereby directed that the State of Maharashtra shall not undertake any works that would enable the State of Maharashtra to

divert the water of Mahadayi outside the basin of the said river till the adjudication of the disputes by this Tribunal.

6. The instant application – I.A. No. 28 of 2014 – accordingly stands finally disposed of.”

26. The reliefs sought by the three party States in their respective Statement of Claims/Amended Statement of Claims/Further Amended Statement of Claims, are detailed in the following paragraphs.

### **PRAYERS OF THE STATE OF GOA**

27. In para 225 of the Statement of Case filed by the State of Goa on February 4, 2013 (Volume 28), the following prayers have been claimed: -

“225. In the light of the aforesaid facts and circumstances, the State of Goa prays for the following reliefs: -

### **P R A Y E R S**

(A) That this Hon’ble Tribunal be please to declare that the State of Karnataka and the State of Maharashtra does not have any right, authority or power to divert the waters

of River Mahadayi outside the River Basin, without the concurrence of the State of Goa.

(B) That this Hon'ble Tribunal be pleased to direct the State of Karnataka and State of Maharashtra by way of a Permanent Injunction to forthwith stop implementation/construction of all or any Projects in the Mahadayi Main Basin/upon Mahadayi River, including, but not restricted to the Kalsa-Haltar Project; Bhandura Project and any other Project involving trans- basin transfer of waters, i.e. transfer of waters outside the Mahadayi River basin;

(C) Without prejudice to the prayer clauses (A) and (B) above and in the alternative,

(i) That this Hon'ble Tribunal be pleased to determine the true and correct principles applicable for equitable use of waters from the Mahadayi River basin/Mahadayi River and issue appropriate directions in that regard;

(ii) That this Hon'ble Tribunal be pleased to determine the share of all the riparian States on the remainder waters of Mahadayi River, if any available, after assessing and deducting the same from the available waters of Mahadayi River, the water requirement of ecological sustenance of the River valley eternally, specifically giving' due consideration of the scientifically predicted global warming, sea level Increase, increased salinity ingress in coastal areas, etc.;

(D) That this Hon'ble Tribunal be pleased to make such orders as to the costs as it appears to be just and proper."

28. In para 225 of the amended Statement of Case filed by the State of Goa on March 7, 2014 (Volume 65), the following prayers have been claimed:

“225. In the light of the aforesaid facts and circumstances, the State of Goa prayed for the following reliefs:-

#### P R A Y E R S

(A) That this Hon’ble Tribunal be pleased to declare that the State of Karnataka and the State of Maharashtra does not have any right, authority or power to divert the waters of River Mahadayi outside the River Basin, without the concurrence of the State of Goa.

(B) That this Hon’ble Tribunal be pleased to direct the State of Karnataka and State of Maharashtra by way of a Permanent Injunction to forthwith stop implementation/construction of all or any Projects in the Mahadayi Main Basin/upon Mahadayi River, including, but not restricted to the Kalsa-Haltar Project; Bhandura Project and any other Project involving trans-basin transfer of waters, i.e. transfer of waters outside the Mahadayi River basin.

(B1) That this Hon’ble Tribunal be pleased to declare that the works undertaken by the State of Karnataka in relation to the Kalasa Bandura Project including the canals and dams built to divert the waters of River Mhadei is illegal and this

Tribunal be further pleased to direct demolition of the said canals.

(B2) That this Hon'ble Tribunal be pleased to pass an Order of Mandatory Injunction directing the State of Karnataka and State of Maharashtra to freeze their present upstream use at the declared levels and undertake not to permit any intervention that amounts to upstream use of the waters of River Mhadei;

(C) Without prejudice to the prayer clauses (A),(B)(B1) and (B2) above and in the alternative,

(i) That this Hon'ble Tribunal be pleased to determine the true and correct principles applicable for equitable use of waters from the Mahadayi River basin/ Mahadayi River and Issue appropriate directions in that regard;

(ii) That this Hon'ble Tribunal be pleased to determine the share of all the riparian States on the remainder waters of Mahadayi River, if any available, after assessing and deducting the same from the available waters of Mahadayi River, the water requirement of ecological sustenance of the River valley eternally, specifically giving due consideration of the scientifically predicted global warming, sea level increase, increased salinity ingress in coastal areas, etc.;

(iii) That this Hon'ble Tribunal be pleased to direct the State of Karnataka and State of Maharashtra to declare their present upstream use including use by Rainwater Harvesting and such use may be counted against the share of State of Karnataka and State of Maharashtra.

(D) That this Hon'ble Tribunal be pleased to make such orders as to the costs as it appears to be just and proper."

29. In para 225 of the amended Statement of the Case filed on March 24, 2015 (Volume 131), the State of Goa has claimed the following reliefs:-

"225. In the light of the aforesaid facts and circumstances, the State of Goa has claimed for the following reliefs:-

#### P R A Y E R S

(A) That this Hon'ble Tribunal be please to declare that the State of Karnataka and the State of Maharashtra does not have any right, authority or power to divert the waters of River Mahadayi outside the River Basin, without the concurrence of the State of Goa.

(B) That this Hon'ble Tribunal be pleased to direct the State of Karnataka and State of Maharashtra by way of a Permanent Injunction to forthwith stop implementation/construction of all or any Projects in the Mahadayi Main Basin/upon Mahadayi River, including, but not restricted to the Kalsa-Haltar Project; Bhandura Project and any other Project involving trans-basin transfer of waters, i.e. transfer of waters outside the Mahadayi River basin;

(B2) That this Hon'ble Tribunal be pleased to declare that the works undertaken by the State of Karnataka in relation to the Kalasa Bhandura Project including the canals and

dams built to divert the waters of River Mhadei is illegal and this Tribunal be further pleased to direct demolition of the said canals.

(B3) That this Hon'ble Tribunal be pleased to pass an Order of Mandatory Injunction directing the State of Karnataka and State of Maharashtra to freeze their present upstream use at the declared levels and undertake not to permit any intervention that amounts to upstream use of the waters of River Mhadei;

(C) Without prejudice to the prayer clauses (A) and (B) above and in the alternative,

(i) That this Hon'ble Tribunal be pleased to determine the true and correct principles applicable for equitable use of waters from the Mahadayi River basin/Mahadayi River and issue appropriate directions in that regard;

(ii) That this Hon'ble Tribunal be pleased to determine the share of all the riparian States on the remainder waters of Mahadayi River, if any available, after assessing and deducting the same from the available waters of Mahadayi River, the water requirement of ecological sustenance of the River valley eternally, specifically scientifically predicted global warming, sea level increase, increased salinity ingress in coastal areas, etc.;

(iii) That this Hon'ble Tribunal be pleased to direct the State of Karnataka and State of Maharashtra to declare their present upstream use including use by Rainwater Harvesting and such use may be counted against the share of State of Karnataka and State of Maharashtra.

(D) That this Hon'ble Tribunal be pleased to make such orders as to the costs as it appears to be just and proper."

**PRAYERS OF THE STATE OF KARNATAKA**

30. In CHAPTER V RELIEF of Statement of Claims filed by the State of Karnataka on January 2, 2013 (Volume 10), the following reliefs have been claimed:-

"17.1 Under the above circumstances, and having regard to the requirements of justice and equality, the State of Karnataka humbly prays before this Hon'ble Tribunal to:

- (i) Hold that Karnataka's share in the waters of inter-State river Mahadayi and its valley is not less than 24.15 tmc for consumptive utilisation;
- (ii) Hold that Karnataka is entitled to divert out of its own equitable share for consumptive utilisation;
  - (a) 7.56 tmc to provide drinking water to Hubli-Dharwad cities under the Kalasa-Bhandura nala projects;
  - (b) 5.527 tmc to Kali basin to augment the flows of Kali for hydro-power generation under Kali Hydro-Electric Project (KHEP);

(c) Remaining water for generation of power under Mahadayi Hydro-Electric Project (MHEP) at Kotni; and

(iii) Hold that Goa has failed to establish that it is or is likely to be affected prejudicially by the diversion of waters of inter-State river Mahadayi and its valley as proposed by Karnataka.”

31. In CHAPTER, RELIEF of the amended Statement of Claims filed by the State of Karnataka on April 20, 2015 (Volume 129), the following prayers have been claimed:-

“17.1 Under the above circumstances, and having regard to the requirements of justice and equality, the State of Karnataka humbly prays before this Hon’ble Tribunal to:

(i) Hold that Karnataka’s share in the waters of inter State river Mahadayi and its valley is not less than 24.15 tmc for consumptive utilisation;

(ii) Hold that Karnataka is entitled to divert out of its own equitable share for consumptive utilisation:

(a) 7.56 tmc to provide drinking water to Hubli-Dharwad cities under the Kalasa-Bhandura nala projects;

- (b) 5.527 tmc to Kali basin to augment the flows of Kali for hydro-power generation under Kali Hydro-Electric Project (KHEP);
  - (c) Remaining water for generation of power under Mahadayi Hydro-Electric Project (MHEP) at Kotni; and
- (iii) Hold that Goa has failed to establish that it is or is likely to be affected prejudicially by the diversion of waters of inter-State river Mahadayi and its valley as proposed by Karnataka.
  - (iv) Allocate 1.5 tmc for irrigation, drinking purposes and other purposes within the Mahadayi basin of Karnataka.
  - (v) Declare that the surplus water available in Mahadayi basin at the proposed Kotni dam site is 7 tmc at 75% dependability.
  - (vi) allocate 7 tmc of surplus water available in Mahadayi basin at the proposed Kotni dam site for utilisation in Malaprabha basin under the following three projects/schemes:
    - a. 3.00 tmc of water is to be utilized for protective irrigation in the DPAP area of Ramdurga, Soundatti and Bailhongal Talukas by Lift Schemes.
    - b. 2.00 tmc of water is to be utilized for drinking water and irrigation by recharge of ground Water in the

DPAP areas of Ramdurga, Soundatti and Bailhongal Talukas.

- c. 2.00 tmc of water is to be utilized for areas in Malaprabha Command, which are not getting adequate water as planned.

(vii) Pass any other Order or Orders as this Hon'ble Tribunal deems fit in the interest of justice and equity."

### **PRAYERS OF THE STATE OF MAHARASHTRA**

32. In CHAPTER 6 of Statement of Case filed by the State of Maharashtra on January 2, 2013 (Volume 27), the following prayers have been sought:-

"The State of Maharashtra having set out its case in Chapters 1 to 5 prays:

- (a) That this Hon'ble Tribunal be pleased to determine the total availability of waters in the Mandovi River basin and further decide at what dependability (75% or average) it should be distributed between the parties.
- (b) That this Hon'ble Tribunal be pleased to determine the share of each State on equitable appointment of water of the Inter State River Mandovi.

- (c) That this Hon'ble Tribunal be pleased to allocate 180.00 Mcum water to the State of Maharashtra.
- (d) That this Hon'ble Tribunal be pleased to determine the share of Maharashtra State as a result of augmentation of waters in Krishna basin in accordance with the KWDT Award.
- (e) That this Hon'ble Tribunal be pleased to determine the share of Maharashtra State in the additional power that would be generated by the State of Karnataka as a result of augmentation in the Kali basin due to diversion of water to Kali Hydro Power Project.
- (f) That this Hon'ble Tribunal may make such order as to costs as it may appear to be just and proper."

33. In Chapter 6 of the amended Statement of Case filed by the State of Maharashtra on April 2, 2014 (Volume 74), the following prayers have been claimed:

"The State of Maharashtra having set out its case in Chapters 1 to 5 prays:

- a) That this Hon'ble Tribunal be pleased to determine the total availability of waters in the Mandovi River basin and further decide at what dependability (75%

or average) it should be distributed between the parties.

- b) That this Hon'ble Tribunal be pleased to determine the share of each State on equitable apportionment of water of the Inter State River Mandovi.
- c) That this Hon'ble Tribunal be pleased to allocate 180.00 Mcum water to the State of Maharashtra.
- d) That this Hon'ble Tribunal be pleased to determine the share of Maharashtra State as a result of augmentation of waters in Krishna basin in accordance with the KWDT Award.
- e) That this Hon'ble Tribunal be pleased to determine the share of Maharashtra State in the additional power that would be generated by the State of Karnataka as a result of augmentation in the Kali basin due to diversion of water to Kali Hydro Power Project.
- (ea) That in the event of trans-basin diversion being allowed to the State of Karnataka, this Hon'ble Tribunal may be pleased to direct the State of Karnataka to maintain minimum flows in Haltara nalla in the post monsoon period so that the sustenance of the inhabitants, flora and fauna in the State of Maharashtra is not jeopardized.
- f) That this Hon'ble Tribunal may make such order as to costs as it may appear to be just and proper.

34. In Chapter 6 of the further amended Statement of Case filed by the State of Maharashtra on April 20, 2015 (Volume 127), the State of Maharashtra has sought the following reliefs:-

- a) That this Hon'ble Tribunal be pleased to determine the total availability of waters in the Mandovi River basin and further decide at what dependability (75% or average) it should be distributed between the parties.
- b) That this Hon'ble Tribunal be pleased to determine the share of each State on equitable apportionment of water of the Inter State River Mandovi.
- c) That this Hon'ble Tribunal be pleased to allocate 180.00 Mcum water to the State of Maharashtra.
- d) That this Hon'ble Tribunal be pleased to determine the share of Maharashtra State as a result of augmentation of waters in Krishna basin in accordance with the KWDT Award.
- e) That this Hon'ble Tribunal be pleased to determine the share of Maharashtra State in the additional power that would be generated by the State of Karnataka as a result of augmentation in the Kali basin due to diversion of water to Kali Hydro Power Project.
- (ea) That in the event of trans-basin diversion being allowed to the State of Karnataka, this Hon'ble Tribunal may

be pleased to direct the State of Karnataka to maintain minimum flows in Haltara nalla in the post monsoon period so that the sustenance of the inhabitants, flora and fauna in the State of Maharashtra is not jeopardized.

- (f) That this Hon'ble Tribunal may make such order as to costs as it may appear to be just.

35. In order to understand the scope, ambit, extent, sphere and limits of the prayers claimed by the three party States, it would be relevant to notice their pleadings in details.