



महाराष्ट्र जलसंपत्ती नियमन प्राधिकरण Maharashtra Water Resources Regulatory Authority (MWRRA)

9th Floor, Centre-1, World Trade Centre, Cuffe Parade, Mumbai - 400005. Tel.: 2215 2019 Fax.: 2215 3765 E-mail: mwrta@mwrta.org

No. MWRRA/2015/Legal/Case No.16 of 2015/6

Date : 06/01/2016


CASE NO. 16 of 2015

In the matter of

Releasing Water from upstream dams in the Upper Bhima sub-basin
into Ujjani Reservoir as per Hon. High Court's Bombay's Order
dated 03/12/2015 in WP 11426 /2015 & others

Please find herewith a copy of MWRRA Order dated 06/01/2016 in the
matter.

Encl : As above


(Dr. Suresh Kulkarni)
Secretary

Copy for information and necessary action to:

1. Secretary, (WRM & CAD) Water Resources Department, Madam Kama Marg, Hutatma Rajguru Chawk, Mantralaya, Mumbai - 400032.
2. Executive Director, Maharashtra Krishna Valley Development Corporation, Sinchan Bhavan, Barane Road, Mangalwar Peth, Pune - 11.
3. Chief Engineer, (Specified Project), Water Resources Department, Sinchan Bhavan, Barne Road, Mangalwar Peth, Pune - 411 011.
4. Chief Engineer, Water Resources Dept. Sinchan Bhavan, Barne Road, Mangalwar Peth, Pune - 411 011.
5. Collector, Vidhan Bhavan, New Building, Bund Garden, Pune - 411001.
6. Collector, Main Building, Siddheshwar Peth, Solapur - 413003.
7. Superintending Engineer and Administrator, Command Area Development Authority, Water Resources Department. Opp. Solapur Club, Solapur 413003.
8. Superintending Engineer, Pune Irrigation Circle, Sinchan Bhavan, Barne Road, Mangalwar Peth, Pune - 411 011.

9. Superintending Engineer & Deputy Secretary (CAD), Water Resources Department, Madam Kama Marg, Hutatma Rajguru Chawk, Mantralaya, Mumbai - 400032.
10. Advocate Shakuntala Wadekar, 102, B Wing, Fort Chamber, Hamam Street, Above Stock Exchange Post Office, Mumbai 400 023 for Shri. Suresh Namdev Gore, Member of Legislative Assembly, Khed-Aalandi, Pune and Municipal Councils of Khed, Alandi and Chakan.
11. Adv. Ashok Ravsaheb Pawar, Ravsaheb Nagar, Navhare, Taluka Shirur, District Pune through Advocate Tejas D. Deshmukh, 104, Shrama Safalya, 1st Floor, Above Belmonte Showroom, Navghar Road, Mulund (E), Mumbai - 400 081.
12. Advocate S R Palande, Lawyers Chamber No A-1, District Court Campus, Shivajinagar, Pune 411005.
13. Shri. Bharat Tukaram Bhalke, Member of Legislative Assembly, Pandharpur, District. Solapur 413304 through Adv. S S Aradhya.
14. Shri. Siddeshwar Dadasaheb Varde through Adv. Mahadev Choudhari, Agra Building, Room No. 9, 1st Floor, 121 M G Road, Fort, Mumbai 400023.
15. Shri. Ravindra Rajaram Kandhare, At Post Kondhavale, Taluka Mulshi, District Pune through Advocate Uday Prakash Warunjikar, Office No.30, 3rd Floor, Rohit Chambers, Janmabhumi Marg and Bombay Samachar Marg Junction, Fort, Mumbai - 400 001.
16. Shri. Baburao Pacharne, Member of Legislative Assembly, Shirur, Pune through Adv. Sachin Thorat
17. Shri Dattatray Bharane, Member of Legislative Assembly, Indapur, & others through Adv. P H Gaikwad, C/o Adv. Shri. S. P. Kadam, Prospect Chambers (Annex), Office No 27, 2nd Floor, Opp. Thomos Cook, Dr. D. N. Road, Fort, Mumbai 400 001.
18. Municipal Commissioner, Pune Municipal Corporation, Near Mangla Theatre, Shivajinagar, Pune - 411 005.
19. Municipal Commissioner, Pimpri Chinchwad Municipal Corporation, Mumbai-Pune Road, Pimpri, Pune-411018.
20. Municipal Commissioner, Solapur Municipal Corporation, Indrabhuvan, Ambedkar Chowk, Railway lines, Solapur - 413001.
21. Shri. Rohidas Damodar Undre Patil, through Adv. D R Palande, Lawyers Chamber No A-1, District Court Campus, Shivajinagar, Pune 411005.
22. Dr. D. M. More, 7/1 Pritamnagar, Karve Road, Kothrud, Pune 411029.



महाराष्ट्र जलसंपत्ती नियमन प्राधिकरण

**Maharashtra Water Resources Regulatory Authority
(MWRRA)**

9th Floor, Centre-1, World Trade Centre, Cuffe Parade, Mumbai - 400005. Tel.: 2215 2019 Fax.: 2215 3765 E-mail: mwrta@mwrta.org

CASE NO. 16 of 2015

In the matter of

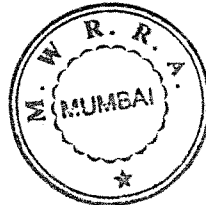
**Releasing Water from upstream dams in the Upper Bhima sub-basin
into Ujjani Reservoir as per Hon. High Court Bombay's Order dated
03/12/2015 in WP 11426 /2015 & others**

1. Shri. Bharat Tukaram Bhalke, MLA, Pandharpur
Through Senior Advocate Ram Apte and Adv. Sarang Aradhye
2. Shri. Siddeshwar Dadasaheb Varade
Through Adv. Mahadev Choudhary,

..... Petitioners

Versus

1. Secretary, (WRM & CAD) Water Resources Department, Madam Kama Marg, Hutatma Rajguru Chawk, Mantralaya, Mumbai - 400032.
2. Executive Director, Maharashtra Krishna Valley Development Corporation, Sinchan Bhavan, Barane Road, Mangalwar Peth, Pune - 11.
3. Chief Engineer, (Specified Project), Water Resources Department, Sinchan Bhavan, Barne Road, Mangalwar Peth, Pune - 411 011.
4. Chief Engineer, Water Resources Dept. Sinchan Bhavan, Barne Road, Mangalwar Peth, Pune - 411 011.
5. Municipal Commissioner, Pune Municipal Corporation, Near Mangla Theatre, Shivajinagar, Pune - 411 005.
6. Municipal Commissioner, Pimpri Chinchwad Municipal Corporation, Mumbai-Pune Road, Pimpri, Pune-411018.
7. Municipal Commissioner, Solapur Municipal Corporation, Indrabhuvan, Ambedkar Chowk, Railway lines, Solapur - 413001.



8. Collector, Vidhan Bhavan, New Building, Bund Garden, Pune - 411001.
9. Collector, Main Building, Siddheshwar Peth, Solapur - 413003.
10. Adv. S R Palande
11. Shri. Baburao Pacharne
12. Adv. Uday Warunjikar on behalf of Shri R.R. Kandhare, Mulshi
13. Adv. Shakuntala Wadekar on behalf of Shri Suresh Gore, MLA (Khed-Alandi) and Municipal Councils of Khed, Alandi and Chakan.
14. Adv. Tejas Deshmukh on behalf of Ashok Raosaheb Pawar
15. Adv. P. H. Gaikwad on behalf of Shri Dattatray Bharane, MLA of Indapur & Others
16. Adv. D. R. Palande on behalf of Shri Rohidas Undre Patil

..... Respondents & Intervenors

ORDER

CORAM : Shri RAVI B.BUDHIRAJA, CHAIRMAN
Smt. CHITKALA ZUTSHI, MEMBER (Economy)

Date: 6th January 2016

An application has been received from Shri. Bharat Tukaram Bhalke, Member of the Legislative Assembly (MLA), Pandharpur, District Solapur vide his letter dated 21/08/2015. He has stated that the situation in the Ujjani reservoir command in Solapur District in the wake of poor rains till August 2015 has led to a drought and there is no drinking water for farmers and livestock. He has sought equitable distribution of water as per MWRRA Act 2005 by way of release of water from dams upstream of Ujjani reservoir and in turn releases into Ujjani Left and Right Bank Canals (ULBC and URBC).

Shri. Siddeshwar Dadasaheb Varade, Solapur through Adv. Mahadev Choudhary, had approached the Hon'ble High Court at Mumbai on the issue



of the release of water from Ujjani dam for the protection of crops by filing PIL No. 144 of 2015 in which the Authority was made Respondent No. 3.

The matter regarding the release of water in the Kharif season was heard and an order was issued on 15/09/2015. The same matter regarding PIL 144 of 2015 was heard in the Hon'ble High Court, Bombay on 16/09/2015 and as per the Order, following observation was noted by the Court,

..... It is further noted that so far as Rabi crop is concerned, the situation will be reviewed at the end of October, 2015.....

Accordingly, the matter was heard on 08/10/ 2015 and Order was issued on 26/10/2015. This order was challenged by Shri. S R Palande by filing Writ Petition No. 11426 of 2015 before the Hon. Bombay High Court (HC). On 03/12/2015, the HC set aside the Authority's order dated 26/10/2015 and remanded both the cases for fresh adjudication and directed for fresh hearing in Case No. 5 and 6 filed by the respective Petitioners. The HC directed the parties to remain present before the MWRRA on 14/12/2015.

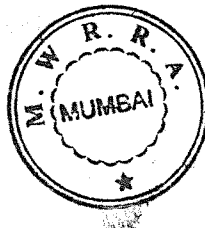
Accordingly, the MWRRA conducted two hearings on 14/12/2015 and 18/12/2015. The following were present during the hearing,

Petitioners

- 1) Shri. Bharat Bhalke, MLA through Adv. Ram Apte and Adv. Sarang Aradhaye
- 2) Shri. Siddeshwar Dadasaheb Varade through Adv. Mahadev Choudhary

Intervenors / Respondents

- 1) Adv. S. R. Palande
- 2) Shri. Baburao Pacharne, MLA (Shirur)
- 3) Adv. Uday Warunjikar on behalf of Shri R.R. Kandhare, Mulshi
- 4) Adv. Shakuntala Wadekar on behalf of Shri Suresh Gore, MLA (Khed-Alandi) and Municipal Councils of Khed, Alandi and Chakan
- 5) Adv. Tejas Deshmukh on behalf of Shri Ashok Raosaheb Pawar
- 6) Adv. P. H. Gaikwad on behalf of Shri Bharane, MLA (Indapur) & others



- 7) Shri. Rohidas Undre Patil through Adv. D. R. Palande
- 8) Shri. R.B. Ghote, ED, MKVDC, Pune through Adv. D. D. Shinde
- 9) Shri. K. M. Shah, CE(SP), Pune
- 10) Shri. A. A. Kapole, SE, PIC, Pune
- 11) Shri. A. A. Dabhade, SE & Admin, CADA, Solapur
- 12) Adv. D. J. Dhanore, on behalf of SMC, Solapur
- 13) Adv. Abhjit Kulkarni on behalf of PMC, Pune
- 14) Shri. Ladkat, EE, PCMC, Pimpri
- 15) Shri. Paranjape, Tata Power Company
- 16) Shri. Pradip Patil, Additional Collector, Pune
- 17) Shri. Vikrant Chavan, Deputy Collector, Pune
- 18) Shri. Pravinkumar Deore, Additional Collector, Solapur
- 19) Shri. S. K. Sabbinwar, DS & SE, WRD, Mumbai

Consultant, Dr. D. M. More

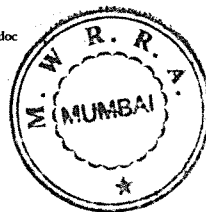
The pleadings and written submissions made by the parties have been heard and gone through. The pleadings are summarized below :-

1. Adv. Ram Apte for Petitioner Shri Bharat Bhalke

- (i) Water was not released for Solapur whereas in Pune area Kharif and Rabi rotations were given.
- (ii) Section 11(c) & 12(6)(c) are meant for equitable distribution. So, water is required to be released, without delay to avoid losses.
- (iii) The storage position of upstream reservoirs as on 11/12/2015 is sufficient, if releases to downstream Ujjani are implemented.

2. Adv. Mahadeo Chaudhary on behalf of Petitioner Shri. Siddeshwar Varade

- (i) Main issue of the hearing is releasing water from upstream of Ujjani to downstream as per the relevant section of the MWRRA Act.



- (ii) Water is required to be released for standing crops as per the Irrigation Department's G.R. dated 10/08/2004.

3. Adv. D. J. Dhanore on behalf of Solapur M. C., Solapur

- (i) The Ujjani reservoir is the source of water supply to Solapur for 195 MLD of drinking water whereas only 140 MLD is being supplied. As a result there is scarcity of water in the area.
- (ii) For 1 TMC need of drinking water, 20 TMC water is required to be released from Ujjani reservoir to Solapur in Aunj weir.
- (iii) SMC has already prepared 100 MLD water supply scheme from Ujjani to Solapur. DPR of which is submitted to the Government in August 2015. So it cannot be said that the SMC has not taken any steps in planning and implementing piped water supply project.

4. Advocate Shri. S. R. Palande

- (i) Petitioner Shri. Bhalke, MLA's application is for release of water for drinking purposes and not for irrigation.
- (ii) Petitioner, Shri. S. D. Varade has not pleaded before the Authority. There is nothing on record to that effect. In absence of any pleading no relief can be granted.
- (iii) Petitioners are claiming equity. However, during 6 out of last 10 years, dead storage of Ujjani has been utilized which is in fact forbidden as per the State Water Policy.
- (iv) As per Rabi Proclamation issued by the Project Authorities for the Rabi season of 2015, 2.99 TMC water is the Rabbi requirement. Adding conveyance losses the requirement works out to be 3.75 TMC. The Officers admitted that "it will not be practically possible to restrain the unauthorized farmers from taking water from canal and river." In view of this, the requirement rises to 8.70 TMC. In fact no extra water should be released anticipating an unauthorized use.



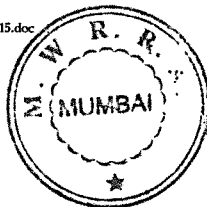
- (v) As on 17.12.2015 storage available in Ujjani reservoir was 9.67 TMC which can be drawn through canal. It was sufficient to meet the Rabi requirement of Ujjani command as per data supplied by MKVDC.
- (vi) Under the pretext of drinking water supply to Solapur city, 5.53 TMC water was released into Bhima River. It was used for irrigation. This is a serious misuse of water.
- (vii) During 2014-15, Ujjani live storage was 100%. However, 13.39 TMC excess water was used from dead storage. This is to be accounted for in the calculations of 2015-16. Any release will cause injustice to the farmers of the upstream projects.
- (viii) The Bhima basin is not only occupied by Ujjani project and the upstream projects in Pune area but also by projects under Kukadi-Ghod complex, Neera Complex etc. If at all "equitable distribution" is to be carried out all these storages from the basin are to be accounted for.
- (ix) In Ujjani reservoir as on 10/10/2015, 71.48 TMC water was available. As such, there is no hydrological drought. Therefore there is no justification for Authority to exercise power under Section 11(c) which comes into play only when hydrological drought is there.

5. Shri. Baburao Pacharne, MLA (Shirur)

- (i) In response to proclamation issued for Rabi Programme - 2015 in Ujjani project, the demand was for 12,000 ha, whereas water proposed to be released was for 1 lakh ha which is absurd.
- (ii) The PAPs of Bhama-Askhed were resettled and rehabilitated in Shirur Taluka and are dependent on its water. Therefore, water from the project should not be diverted to benefit the Ujjani beneficiaries.

6. Adv. Uday Warunjikar on behalf of Shri R.R. Kandhare, Mulshi

- (i) Agreement for releasing water from Mulshi dam into the Mulshi River, between the MKVDC & Tata Power Company (TPC), has been entered into on 28/01/2003. The priorities of water use have since



been changed. Therefore, problem faced by villagers of Mulshi Taluka will have to be considered.

- (ii) The population of Mulshi Taluka is about 2 lakh covering 144 villages. The live stock population is over 3 lakh. The cultivable area in Rabi season is 3739 ha. There are 34 non-irrigation consumers to which permission for lifting water is accorded. The right of original residents of the Taluka, however, must prevail.
- (iii) The distance from Mulshi dam to Ujjani is 275 km. There is no closed pipeline in between. As a result enroute misuse for irrigation or drinking (by villagers) and evaporation is to be considered.
- (iv) Water permissions from Mulshi dam made available to non-irrigation consumers will have to be reviewed in view of the prevailing situation. Use for commercial purpose should not be allowed overriding the priority as it is contrary to the SWP & NWP

7. Adv. Shakuntala Wadekar on behalf of Shri Suresh Gore, MLA(Khed-Alandi) and Municipal Councils of Khed, Alandi and Chakan

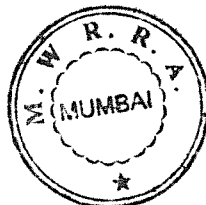
- (i) There are 4 sub-basins in Pune area viz. Bhima, Mutha, Neera & Kukadi. Data only in respect of Bhima sub-basin is brought on record of the Authority. Therefore, only 4 dams from that sub-basin are targeted for proposing release of water to Ujjani by the MWRRA by passing order under section 11(c) which is illegal.
- (ii) The dead and live storage together of Ujjani reservoir is more than combined storages of all the upstream dams in Pune area.
- (iii) Ujjani dead storage capacity can fulfill drinking water need of huge population whereas relatively less population is dependent on it for drinking water.
- (iv) Population dependent on upstream reservoirs is five times more than that dependent on Ujjani reservoir.
- (v) In 2014, Ujjani reservoir was 100 percent filled. As there was sufficient rainfall there was no need for releasing water for Kharif crops. Besides the whole live storage, 13.39 TMC water from dead storage was also utilized by 10/6/2015.



- (vi) As per data supplied by MKVDC, as on 15.10.2015 there was 234 Mm³ water in upstream reservoirs in the Bhima sub-basin. At that time Ujjani was holding back 222 Mm³. It is required to consider the future arrangement of drinking water in upstream storages & Ujjani reservoir before deciding the present case.
- (vii) Diversion of water to Ujjani from upstream dams will entail evaporation losses. Also 70% conveyance losses will be there. In the year of hydrological drought, this is not affordable.
- (viii) There are proposals pending for drinking water requirements in respect of Chakan, Khed & Alandi municipal councils. Hence drinking water requirement of Chaskaman & BhamaAskhed are much more.
- (ix) During 2013-14 & 2014-15 there was huge misuse of water of Ujjani reservoir. A large amount of water from dead storage of Ujjani was used for irrigation without calling demand under proclamation for Kharif, Rabi & Hot whether crops.

8. Adv. Tejas Deshmukh on behalf of Ashok Raosaheb Pawar

- (i) If 3 TMC from Chaskaman is released, citizens of Shirur will be deprived of water for drinking and irrigation purposes.
- (ii) In 2014-15 Ujjani was filled 100%. In spite of that, 13.39 TMC excess water was utilized through dead storage illegally.
- (iii) If at all Section 12(6) (c) is to be invoked, MWRRA is required to consider the present needs of upstream reservoirs based upon its population and area under cultivation.
- (iv) If upstream area crops are deprived of second rotation, they will be ruined.
- (v) Ujjani reservoir has sufficient storage whereas in 2015, reservoirs on upstream faced water shortage in view of deficient rains. In Ujjani, there is no shortage of water for drinking and irrigation purposes.
- (vi) The storage of Chaskaman project is 4.96 TMC. It is not practical to release water from Chaskaman.



(vii) In absence of rules to implement the Act (the terms scarcity, distress are defined in the Rules, 2013 which are presently repealed), the Authority has erred by passing the Order.

9. Adv. P.H. Gaikwad on behalf of Shri Bharane, MLA(Indapur) & others

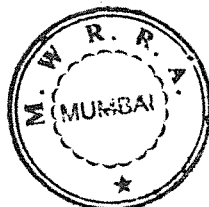
- (i) Water for Solapur Municipal Corporation from Ujjani reservoir be conveyed through a pipeline.
- (ii) There is no provision to use water from dead storage of Ujjani reservoir.
- (iii) No water be released hereafter without the permission of the Authority.
- (iv) Presently there is an acute drinking water shortage in Indapur area (100 tankers are in operation; fodder is short for the cattle)
- (v) Uncalled for loss of water in Ujjani reservoir be curbed.

10. Adv. Abhijit Kulkarni on behalf of PMC, Pune

- (i) PMC draws water from Khadakwasla system. 70% water is catered through pipeline from Khadakwasla to Parvati Water Works (PWW). Balance 30% is drawn through Mutha Right Bank Canal - an open canal. Habitation along the canal causes heavy pollution and also leakages are there. PMC has taken up a project of laying a pipeline from Khadakwasla to PWW. It is in an advanced stage of completion.
- (ii) Institutional water supply for Pune City is required to be accounted for, as it is substantial compared to Pune city's requirement.

11. Shri. R.B. Ghote, ED, MKVDC, Pune

- (i) Ujjani reservoir lifts are having perennial cropping pattern.
- (ii) In Ujjani reservoir, during 2015 monsoon about 25.14 TMC inflow is received. It is a fact that dead storage water was used 4 times out of the last 5 years.



- (iii) Designed water use in TMC of Ujjani reservoir is Kharif 29.38, Rabi 41.54 and Hot Weather 12.36 (total 83.28)
- (iv) The losses sustained in supplying water for drinking to Solapur are about 90%.
- (v) The Solapur Municipal Corporation should give time bound programme of the proposed plan of laying closed pipeline from Ujjani to Solapur for conveying water.
- (vi) A study group to come out with recommendation for different strategies to be adopted in respect of Bhima sub-basin on the line of Godavari Study Group be constituted to facilitate the operation of equitable distribution under the MWRRA Act.

12. Shri Pradip Patil, Additional Collector, Pune

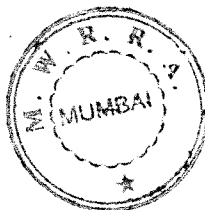
- (i) It will not be practical to release water from Mulshi to Ujjani.
- (ii) Seeing the large service area of four dams viz. Chaskaman, Bhama-Askhed, Andhra, Mulshi, and also the contingent demand of drinking water, scarcity situation likely to be arising in future, it will not be proper to release water therefrom to Ujjani.

13. Shri. Ladkat, EE, PCMC, Pimpri

- (i) Already 15% cut is applied to the drinking water supply in the PCMC area. It is difficult to apply cut to water supply at individual level.
- (ii) The drinking water scenario is likely to be critical beyond May 2016.

14. Shri. Paranjape, M/s Tata Power Company.

At present water level of Mulshi reservoir is below the sill level.



3.0 Issues.

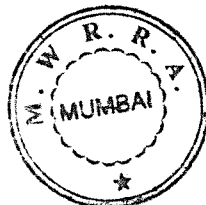
After hearing the parties and after considering the material placed on record, it is seen that the following issues arise for consideration in the present matter:

- i) Whether it will be in consonance with the provisions of the MWRRA Act to release water from projects upstream into the Ujjani reservoir for achieving equitable distribution in the Upper Bhima sub-basin under section 11(c) or 12 (6) (c) of MWRRA Act 2005?
- ii) If yes, what are the principles for the same?
- iii) Whether the Upper Bhima sub-basin should include the Kukadi Complex and Neera Complex in the equitable distribution exercise?
- iv) Whether the 13.39 TMC water used from dead storage of Ujjani reservoir during 2014 - 15 disqualifies downstream users as this year's (2015 - 16)'s inflow has gone into the filling of the dead storage to that extent?
- v) Whether any release is admissible during the year 2015-16?

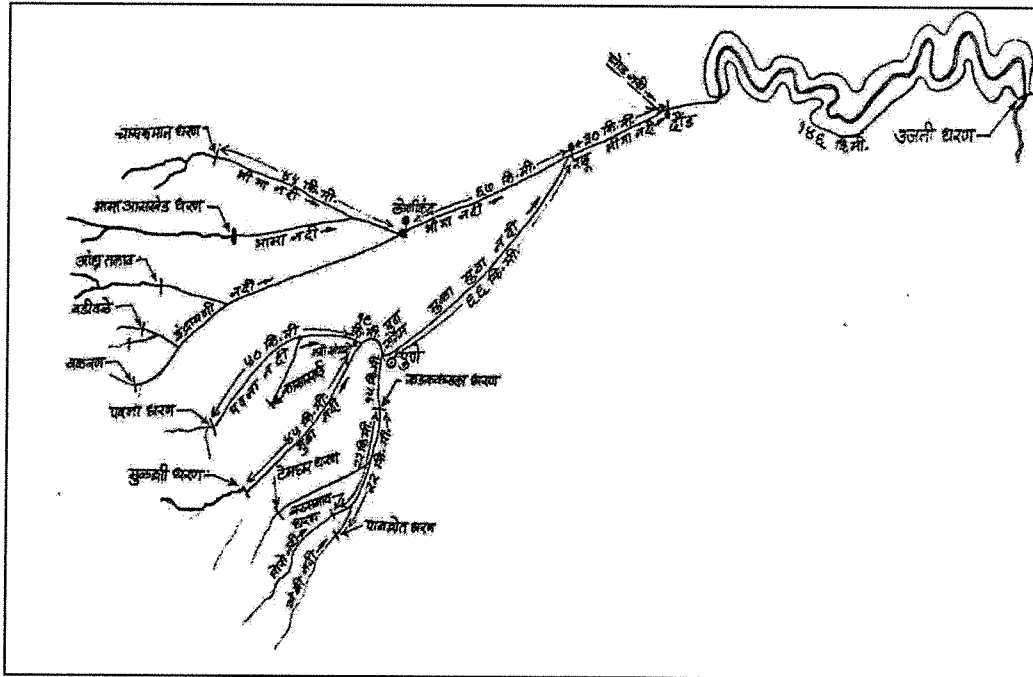
4.0 Before dealing with the questions framed above, it would be useful to give an overview of the situation for a proper appreciation of the matters in question.

The Bhima (Ujjani) project was Administratively Approved for Rs. 40.51 crore on 20/08/1964. The project envisaged the construction of a dam at Ujjani across the Bhima River in Solapur District to irrigate 1.11 lakh hectares by canal in Solapur District and 8500 hectare by lift in Pune, Solapur and Ahmednagar Districts. The construction of project was started in 1966 and irrigation started in 1978. The project has been accorded a Second Revised Administrative Approval for Rs. 1405.67 crore on 17/01/2004 with an eight monthly cropping pattern and an annual cropped area of 2.60 lakh hectare.

- a) The Upper Bhima Sub-basin consists of a number of major reservoirs among which are: 1) Panshet, 2) Varasgaon, 3) Temghar, 4) Khadakwasla, 5) Pavana, 6) Bhama-Askhed, 7) Chaskaman, and 8) Andhra.

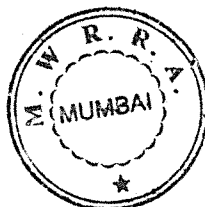


A schematic diagram of the Upper Bhima sub-basin, excluding Ghod sub-basin, which is under consideration for equitable distribution is depicted below.



b) The approximate distances of the dams upstream of the Ujjani and Ujjani Dam are given below;

Sr. No	Name of Dam	River	Distance (km)
1	Varasgaon	Bhose	279
2	Panshet	Ambi	279
3	Temghar	Mutha	294
4	Khadakwasla	Mutha	252
5	Mulshi	Mula	306
6	Pavana	Pavana	310
7	Kasarsai	Kasarsai	376
8	Chaskaman	Bhima	282
9	Andhra	Andhra	303
10	Vadivale	Kundali	336
11	Bhama-Askhed	Bhama	280



- c) The salient features of Ujjani as per the Revised project report (with an eight monthly cropping pattern) are as follows:

Catchment Area	14,856 km ²																				
Submergence	29000 ha																				
No. of villages in submergence	51																				
Rainfall at dam site	500 mm																				
Rainfall in catchment	Max - 4320 mm (Lonavala) Min - 461 mm (Daund)																				
75% dependable yield at dam site	3320 Mm ³																				
Annual Water Use	2359 Mm ³																				
Storage Capacity	Gross - 3320 Mm ³ Live - 1517 Mm ³ Dead - 1803Mm ³																				
Annual Evaporation	453 Mm ³																				
Controlling levels (m)																					
River Bed Level (RBL)	- 458.170																				
Canal Bed Level (CBL)	- 487.200																				
Minimum Draw Down Level (MDDL)	- 491.030																				
Full Reservoir Level (FRL)	- 496.830																				
Maximum Water Level (MWL)	- 497.580																				
Maximum Height (m)	Overflow Section - 56.40 Non- Overflow Section - 39.17																				
Length of Dam	2540 m																				
Canal (km)	LBC - 126 RBC - 112 Brach Canals - 310																				
Command Area (lakh ha)	<table border="1"> <thead> <tr> <th>On Canal</th> <th>ULBC & Br</th> <th>URBC & Br</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>GCA</td> <td>1.33</td> <td>0.72</td> <td>2.05</td> </tr> <tr> <td>CCA</td> <td>1.07</td> <td>0.58</td> <td>1.65</td> </tr> <tr> <td>ICA</td> <td>0.96</td> <td>0.52</td> <td>1.48</td> </tr> <tr> <td colspan="3">On reservoir Lift</td> <td>0.35</td> </tr> </tbody> </table>	On Canal	ULBC & Br	URBC & Br	Total	GCA	1.33	0.72	2.05	CCA	1.07	0.58	1.65	ICA	0.96	0.52	1.48	On reservoir Lift			0.35
On Canal	ULBC & Br	URBC & Br	Total																		
GCA	1.33	0.72	2.05																		
CCA	1.07	0.58	1.65																		
ICA	0.96	0.52	1.48																		
On reservoir Lift			0.35																		
Eight Monthly Annual Cropped Area	2.60 lakh ha																				
Power Generation	12 MW																				

- d) As per the revised approved report of the Bhima Project, the planned water use of Ujjani project is given below:

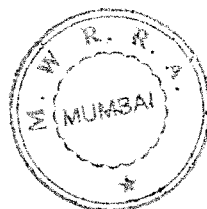


(In Mm³)

Sr. No.	Component	Kharif	Rabi	Hot-weather	Total
1	Ujjani				
	i) Evaporation	99.66	135.90	217.44	453.00
	ii) Non-irrigation use on reservoir	43.88	56.63	50.40	150.91
	iii) Irrigation use on reservoir	49.55	140.15	82.11	271.80
	iv) Canal Irrigation	264.72	645.53	0.00	910.25
	Total - Ujjani	457.82	978.20	349.94	1785.97
2	Bhima Sina Link Canal	63.70	25.48	0.00	89.19
3	Sina Madha LIS	93.72	40.77	0.00	134.49
4	Shirapur Lift Irrigation Scheme	34.82	13.87	0.00	48.70
5	Aashti Lift Irrigation Scheme	15.86	12.46	0.00	28.31
6	Ekrukh Lift Irrigation Scheme	64.55	25.48	0.00	90.03
7	Barshi Lift Irrigation Scheme	52.38	20.95	0.00	73.33
8	Sangola Lift Irrigation Scheme	12.46	44.17	0.00	56.63
9	Dahigaon Lift Irrigation Scheme	36.52	14.72	0.00	51.25
	Total - (2 to 9)	374.01	197.91	0.00	571.92
	Grand Total	831.83	1176.11	349.94	2357.88

e1) The eight monthly cropping pattern for flow irrigation approved by the Agricultural Department on 27/01/1993 is as under;

Sr. No.	Season / Crop	Percentage
I	Two Seasonals - Chillies	3
II	Kharif Seasonals	
	1 Jowar (High Yielding)	5
	2 Bajra	10
	3 Groundnut	50
	4 Maze	5
	5 Vegetables	2
	6 Sunflower	7
	7 Tur	5
	8 Pulses & Green Manure (U.I.)	15



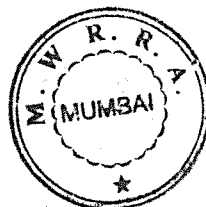
	Sub-total	99
III	Rabi Seasonals	
	1 Wheat	10
	2 Jowar (High yielding)	45
	3 Gram	2
	4 Safflower / Sunflower	5
	5 Vegetables	3
	Sub-total	65
Total		167
Irrigation Intensity = 167 - 15		152

e2) The cropping pattern of the lifts irrigation schemes on the Ujjani reservoir is as under:

Crop	Crop pattern for ICA in percentage			
	24602 ha	9392 ha	880 ha	9 ha
(A) Perennial Sugarcane	15	-	-	-
(B) Kharif seasonals				
Jowar	25	25	-	25
Bajra	7	7	100	7
Groundnut	-	15	-	-
Maize	7	7	-	7
Vegetable	2	2	-	2
(C) Rabi seasonal				
Wheat	15	15	} 50	15
Jowar	40	40		40
Gram	5	5		5
Safflower	2	2		2
Vegetable	2	2		2
(D) Two seasonal				
L.S. Cotton	9.50	-	-	-
Chillies	2	-	-	-
(E) Hot weather				
Groundnut	15	-	-	-
Total	146.50	120	150	105

5.0 With the above background information, we proceed to analyze the issues as follows:

5.1 Whether it will be in consonance with the provisions of the MWRRA Act to release water from projects upstream into the Ujjani reservoir for achieving equitable distribution in the Upper Bhima sub-basin under section 11(c) or 12 (6) (c) of MWRRA Act 2005?



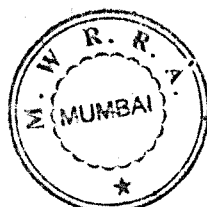
5.1.1 The provisions of section 12(6) (c) of MWRRA Act 2005 require the Quota to be fixed at the basin-level, sub-basin level or project level. On the other hand, section 11(c) is an independent provision for determining the priority of equitable distribution of water during periods of scarcity, and is separate from the function of fixation of the Quota under Section 12 (6)(c). However, the Quota can only be fixed once the conditions of delineation and formation of Water User Associations (WUAs) are fulfilled. In the case of Ujjani, these conditions are not fulfilled. Therefore, the provisions of section 12(6)(c) are not attracted in the present case.

5.1.2 We are of the view that the equitable distribution of water sought by the present Petitioners is covered under Section 11 (c) of the MWRRA Act 2005. Section 11 (c) requires the devising of a mechanism by which equitable distribution of available water in the Upper Bhima sub-basin (up to Ujjani dam) could be achieved during period of scarcity.

Though direction is being given for equitable distribution under Section 11 (c), it would be necessary in the long run to delineate Ujjani Project in a time bound manner with the formation of WUAs under the MMISF Act 2005.

5.2 If yes, what are the principles for the same?

The Maharashtra Water Resources Regulatory Authority (Allocation and Monitoring of Entitlements, Disputes and Appeals and Other matters) Rules, 2013 have been repealed by the State Government vide Official Gazette Notification dated 18/02/2014. As a result, the provisions in the said Rules of "Equitable Distribution of Water during water scarcity" as well as the definition of "water scarcity" or "distress" cannot be applied. In such circumstances, we would like to rely on the definition of "hydrological drought" i.e. shortages in water availability for meeting minimum normal and specified needs, as per the Manual for Drought Management by the Government of India. Hydrological drought is defined as a deficiency in surface and sub-surface water supply leading to a lack of water for normal and specific needs [minimum drinking (80%), food crop requirement, & minimum industrial use (80%) (which creates employment)]. To meet such



requirement, this specific need can be met by proportionately reduced provision for the Rabi area that is consistent with the approved cropping pattern. As per the approved cropping pattern, water requirement for the Rabi season is 978.20 (Total Ujjani) + 25.48 (Bhima Sina Link Canal) + 40.77 (Sina Madha LIS) = 1044.45 Mm³ for the completed component of the project.

However, we feel that there must be sufficient water available in the upstream projects before water therefrom can be released downstream. The basic drinking water needs (at least to the extent of 80%) and committed industrial use (at least to the extent of 80%) of the upstream area must first be met.

While planning a water resources project, the utilization of water from dead storage for any purpose is not envisaged. Using water from dead storage in Ujjani Project for irrigation purpose and by way of lifting from backwater is therefore not allowed.

The equitable distribution has to be resorted to at the end of monsoon so that the river carrier system is in a saturated condition and less susceptible to water losses. Some conveyance losses in the system are bound to take place. The conveyance losses are to be shared equitably by both upstream and lower reservoirs. The conveyance losses in the system are assumed approximately to be 25%. Also, if the actual difference between the percentage of live storage in the upstream reservoirs and the lower reservoir is less than 15, it is not advisable to release water from upstream to downstream reservoir.

The onset of scarcity or hydrological drought in a year could be said to have occurred in the Upper Bhima sub-basin if the live storage on 15 October of that year (of the terminal reservoir viz. Ujjani) falls below 60% of the designed live storage. The derivation of 60% cut off limit is given in Annex of this Order. In other words, if the storage position at the Ujjani project at the end of first fortnight of October is above or equal to 60% of the planned live storage, then during that year, the question of releasing water from the upstream storages does not arise.

5.3 Whether the Upper Bhima sub-basin should include the Kukadi Complex and Neera Complex in the equitable distribution exercise?

Neera River is the main river of Neera Complex. It joins the Bhima River downstream of Ujjani reservoir. In case of Kukadi Complex, the main River is



Ghod. Though it joins Bhima River on the upstream of Ujjani reservoir, the geographical configuration of the sub-basin of Ghod is such that it is convenient hydrologically to treat it as an independent sub-basin within the Upper Bhima sub-basin.

The Maharashtra Water and Irrigation Commission in its Report (1999) proposed a scheme of 25 sub-basins covering the entire State. The subdivisions of Krishna basin lend the Neera complex an independent identity, as a sub-basin in itself. Moreover, the Krishna Water Dispute Tribunal (II) has considered Kukadi complex and Neera Complex as independent sub-basins within the Bhima (main) sub-basin for the purpose of analyzing the water use.

5.4 Whether the 13.39 TMC water used from dead storage of Ujjani reservoir during 2014 - 15 disqualifies downstream users as this year (2015 - 16)'s inflow has gone into filling the dead storage to that extent?

(A) Inflow received in Ujjani Reservoir till 15/10/2015 during 2015-16	
i 9/6/2015 to 30/6/2015.....	7.49 TMC
ii 1/7/2015 to 14/10/2015	24.49 TMC
Total (A) 31.98 TMC	

(B) Whether equitable distribution is called for during 2015-16?

a) Total water used from backwater including evaporation loss during 01/06/2015 to 30/06/2015	1.78 TMC
b) Kharif use including evaporation losses from Ujjani Reservoir (01/07/2015 to 15/10/2015)	9.30 TMC
c) Total (a + b)	11.08 TMC
d) Water that should have been available in live storage as on 15/10/2015... [31.98 - 11.08]	20.90 TMC*
e) Design live storage of Ujjani Reservoir	53.58 TMC
f) Percentage [20.90 / 53.58 x 100]	39.00%

* However, actual water available in live storage as on 15/10/2015 is 7.82 TMC. Therefore 20.90 - 7.82 = 13.08 TMC water went into dead storage due to unauthorized use during 2014-15.

The storage position (water that should have been available) on 15/10/2015 in Ujjani reservoir did not cross the cut off limit of 60% during the year 2015-



16, even after assuming that the water unauthorisedly used was available. Hence equitable distribution is warranted.

5.5 Whether any release is admissible during the year 2015-16?

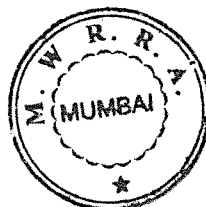
With the background set down in 5.4 above, release from upstream dams into Ujjani reservoir is admissible during 2015-16.

6.0 The information as received from SE, PIC, Pune and SE & Admin, CADA, Solapur for the storage position as on 15/10/2015 for the projects in Pune district, Ujjani project in Solapur and requirement for drinking water from the Municipal Commissioners (PMC and PCMC), Collector, Pune is shown in Table below. While analyzing the drinking water requirement, it was restricted to the approved norms.

(All Mm³)

Storage	Design live storage	Live storage as on 15.10.15	Kharif use (2015)		Drinking & committed industrial water requirement dependent on storage/ canal from 1.10.15 to 15.7.16		Total evaporation loss (1.10.15 to 15.7.16)	Conveyance loss, if any (1.10.15 to 15.7.16)	Water use [Col 4a+4b+5 +6]	Balance storage [Col. 2(b)-7]	Total Rabi requirement as per project planning
			Non-Irrigation	Irrigation	Drinking	Industrial					
1	2(a)	2(b)	3(a)	3(b)	4(a)	4(b)	5	6	7	8	9
Bhama Askhed	217.13	215.58	1.81	0.39	5.68	0.88	13.56	66.80	86.91	128.67	80.27
Kasarsai	16.06	15.16	0.07	4.52	0.22	0.03	1.39	3.88	5.52	9.64	13.77
Andra	82.75	82.75	0.67	6.87	2.78	3.36	6.13	19.56	31.83	50.92	7.18
Vadivale	30.39	30.39	1.34	14.29	4.20	0.69	4.34	17.75	26.99	3.40	12.73
Khadak-wasla Complex	825.66	457.98	91.43	116.11	271.00	11.48	64.58	139.14	486.20	-28.22	259.57
Pawana	240.97	195.19	73.72	11.23	176.03	25.53	19.06	17.19	237.81	-42.62	16.99
Chaskaman (Including Kalmodi)	257.17	211.37	1.68	55.22	4.52	0.00	15.53	79.07	99.12	112.25	159.40
Total	1670.13	1208.42	170.73	208.63	464.43	41.97	124.59	343.39	974.38	234.05	549.91
Ujjani	1517.19	221.55	99.40	81.40	98.20	16.50	260.64	625.50	1000.84	-779.29	811.276

Total Rabi requirement excluding evaporation losses as indicated in the document submitted by the Government in WRD through SE, KWDT, Pune to the KWDT - II, New Delhi in October 2006 is considered in column No 9 in the above Table.

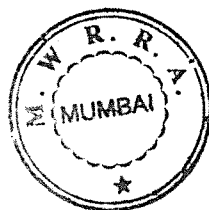


As per approved cropping pattern, water requirement for full Rabi requirement is 811.276 Mm³ (excluding evaporation losses) for the completed portion [vide Column No 9 in the above table]. For two rotations water requirement is about 324.51 Mm³. However, as on 15th October 2015, water available in the live storage was 221.55 Mm³, which was deficit/short to meet two Rabi rotations in the Ujjani command as per the approved cropping pattern. In light of this fact, equitable distribution was required to overcome this situation of hydrological drought which is in consonance with the concept of scarcity.

7.0 However, while issuing this Order, the actual position now will have to be considered. The storage position as on 15/10/2015 and as on 31/12/2015 is given below in respect of the two dams upstream of Ujjani where the impounded water was above spillway crest.

Name of Dam	Live Storage as on 15/10/2015			Live Storage as on 31/12/2015			Water use (15/10/2015 to 31/12/2015)				Evaporation loss	Total (Col.4 + Col.5)	Balance Storage that should be on 31/12/2015 (ie.Col.2 --Col.6)
	Below spillway crest	Above spillway crest	Total	Below spillway crest	Above spillway crest	Total	Drinking	Industrial	Irrigation	Total			
1	2a	2b	2	3a	3b	3	4a	4b	4c	4	5	6	7
Bhama Askhed	147.21	68.37	215.58	147.21	61.51	208.72	0.88	0.17	2.82	3.87	2.99	6.86	208.72
Chaskaman including Kalmodi	139.58	71.79	211.37	123.97	20.70	144.67	0.34	0.00	62.88	63.22	3.48	66.70	144.67
Aandhra	82.75	0.00	82.75	72.44	0.00	72.44	0.42	0.78	8.69	9.89	0.42	10.31	72.44
Total	369.54	140.16	509.7	343.62	82.21	425.83	1.64	0.95	74.39	76.98	6.89	83.87	425.83

In October, 140 Mm³ water was available, but now the available quantity is 82 Mm³, above spillway crest. Considering the requirement downstream, in October, all of 140 Mm³ would have been released. However that is not possible today. The maximum which can be released is 82 Mm³ (Vide Column 3b). Considering conveyance losses of 33%, about 55 Mm³ is likely to reach Ujjani.



This only brings out the importance of timely release for equitable distribution, in the month of October. Due to unavoidable reasons, that has not been possible this year. As a result, this Authority is now not in a position to ensure an equitable distribution as envisaged under the Act.

It is also worth noting that the Authority has not had the benefit of any rules framed under the Act, so as to define 'scarcity', 'distress' and the procedure for equitable distribution. We urge the State Government to expedite the framing of appropriate rules on a priority basis.

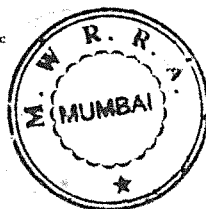
8.0 DETERMINATIONS:

In the light of above, the following directions are given:

- (a) As mentioned in Para 7.0, release of 82 Mm³ is directed from upstream dams in the Upper Bhima sub-basin into Ujjani reservoir.
- (b) If any reservoir on the upstream side is short of water to meet its own drinking water need and committed industrial use, no release of water from that reservoir is to be made.
- (c) It must be ensured that there is no drawal of water from the dead storage for irrigation purpose from the Ujjani reservoir.
- (d) It should be ensured that needles of the K T weirs shall not obstruct the releases made under this Order.
- (e) The Solapur Municipal Corporation should take positive steps to implement the piped water supply project from Ujjani to Solapur city in a time bound manner so that huge wastage of water during conveyance to the Takali (Aunj) weir can be prevented.

The State Government should also provide adequate funds for implementing the project. In spite of the persuasion on the part of SMC and MKVDC, not much progress has so far been made in the matter.

- (f) In order to utilize the surface water efficiently, the Government should carry out the delineation of Ujjani command within two years' time and promote the formation of WUAs under the MMISF Act, 2005 facilitating the allotment of water quota to each WUA, thus enabling them to plan their crops within the allotted Quota. As the MMISF Act has come into



force in the year 2005 and delineation has not yet been done for the command of Ujjani, the Government can make use of the provision of Section 1 (3) of MMISF Act, 2005 and give different dates for implementation of different provisions of the said Act. This will help in overcoming the budgetary constraints, if any, in the implementation of the rehabilitation work as per Section 22 (1) of the MMISF Act, 2005.

- (g) The Executive Director, Maharashtra Krishna Valley Development Corporation, Pune should implement this order immediately. Collector, Pune should provide the Executive Director with required assistance.
- (h) The WRD had constituted Godavari Study Group in January 2013 to recommend regulating procedure for integrated operation of reservoirs in the Upper Godavari sub-basin to carry out equitable distribution of water in that sub-basin during scarcity or hydrological drought year. On similar lines, a study group be set up to come out with recommendations for regulation of reservoirs in the Upper Bhima sub-basin so as to carry out equitable distribution in an integrated manner whenever required. A similar exercise is required to be undertaken urgently for the other basins in the State.
- (i) Water in Mulshi storage being below sill level, may be utilized only for drinking purpose, if necessary, as per Collector, Pune's directions.
- (j) The Pune Municipal Corporation should ensure that laying pipeline between Khadakwasla to Parvati Water Works be completed by March 2016 as agreed. This measure will help to cut down the conveyance losses.

With the above findings and directions, the petitions and the applications stand disposed of.

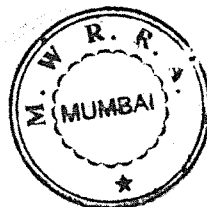
Sd/-

(Ravi B. Budhiraja)
Chairman

Sd/-

(Chitkala Zutshi)
Member (Economy)


(Dr. Suresh Kulkarni)
Secretary



ANNEX

Basis for Cut off Limit for "Equitable Distribution" under scarcity condition
Bhima Sub-basin (Ujjani Project)

Based on figures/ data furnished by SE, CADA, Solapur

(in Mm³)

Sr. No.	Particulars	Quantum
1.	Drinking use in Kharif 2015	99.40
2.	Requirement of drinking during Rabi and Hot Weather (1.10.2015 to 15.07.2016)	98.20
3.	Requirement for committed industrial use during Rabi and Hot Weather (1.10.2015 to 15.07.2016)	16.50
4.	Committed industrial use during Kharif 2015 [25% of (3) above]	4.13
5.	Total evaporation loss (1.10.2015 to 15.07.2016)	260.64
6.	Evaporation loss during Kharif [25% of (5)above]	65.16
7.	Requirement of two Rabi rotations in the command of Ujjani project	417.78*
8.	Backwater irrigation (requirement of 2 Rabi rotations)	70.09**
	Minimum requirement of water to mitigate the distress	1031.90

* Total Rabi requirement of completed components of Ujjani project (Mm³)

(i) Total Ujjani	978.20
(ii) Bhima - Sina link canal	25.48
(iii) Sina - Madha LIS	40.77
Total	1044.45

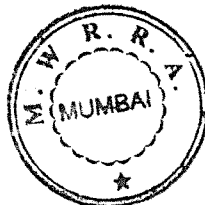
Proportionate reduced requirement of Rabi under distress
= 1044.45 x 0.40 = 417.78 Mm³

** Water use for individual lift irrigation on Ujjani backwater = 140.18 Mm³

Proportionate reduced requirement of Rabi under distress
= 140.18 x 0.50 = 70.09 Mm³

Design live storage of Ujjani reservoir is = 1517.19 Mm³

Percentage of cut off limit of requirement = 1031.90/ 1517 = 68%



e.

However for meeting the requirements under the hydrological drought condition of minimum normal and specific needs (viz. 80% Drinking, 80% Committed Industrial Use and Food crop requirement from the consideration of bare minimum livelihood) of the sub-basin, we prescribe the cut off limit as 60 % of design live storage of Ujjani. In case the water availability in Ujjani reservoir as on 15 October of the year exceeds this, there would be no necessity to carry out "Equitable Distribution" during that year.

This limit will be applicable in case of Bhima Sub-basin and will be pertinent to Ujjani project for carrying out "Equitable Distribution" under Section 11(c) of the MWRRA Act, 2005.

#####

