



महाराष्ट्र जलसंपत्ती नियामन प्राधिकरण

Maharashtra Water Resources Regulatory Authority (MWRRA)

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

No.MWRRA/2015/Legal/Case No.1 of 2016/158

Date : 29/03/2016

CASE NO. 1of 2016

In the matter of

Releasing Water from Khadakpurna reservoir into Yeldari – Siddheshwar
(Purna Project) reservoir as a part of equitable distribution.

Please find herewith a copy of MWRRA Order dated 29/03/2016 in the matter.

Encl : As above

(Dr. Suresh Kulkarni)
Secretary

Copy for information and necessary action to:

1. Shri. Keshavrao Ingole Patil, *through Adv. Radhakrishna Ingole Patil, Malegaon, Taluka Ardhapur, District Nanded -431750.*
2. Secretary (WRM & CAD), Water Resources Department, Madam Kama Marg, HutatmaRajguruChawk, Mantralaya, Mumbai – 400032.
3. The Executive Director, Vidarbha Irrigation Development Corporation, Sinchan Seva Bhavan, Civil Lines, Nagpur 440 001.
4. The Executive Director, Godavari Marathwada Irrigation Development Corporation, 1st floor, Sinchan Bhavan, Jalna Road, Aurangabad-431 005.
5. Chief Engineer, Water Resources Department, Sinchan Bhavan, Shivaji Nagar, Camp, Amravati – 444 603.
6. Chief Engineer, Water Resources Department, Sinchan Bhavan, Jalna Road, Aurangabad – 431 005.

7. Superintending Engineer, Buldhana Irrigation Project Circle, Sangam Chowk, Tata Ground, Buldhana - 443 402.
8. Superintending Engineer, Nanded Irrigation Circle, Sinchan Bhavan Workshop Road, Nanded - 431 605.
9. Shri. Shenfadrao Ghube Patil, *through Adv. Deepak Patil, Saikrupa, Rajshri Shahu Nagar, Rukhi Kanya Vidyalay Chowk, Buldhana - 443 001.*
10. Shri. Dadarao Bhagavanrao Khade, At Post Garkhed, Taluka Deaulgaonraja, District Buldhana - 443 206.
11. Shri. Jai Kanhaiyalal Rathod, Limbkheda, At Post Dahifal Khandare, Taluka Mantha, District Jalna - 431 504.



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CASE NO. 1 of 2016

In the matter of

Releasing Water from Khadakpurna reservoir into Yeldari - Siddheshwar
(Purna Project) reservoir as a part of equitable distribution.

Shri. Keshavrao Ingole Patil
Through Adv. Radhakrishna Ingole Patil
Malegaon, TalukaArdhapur,
District Nanded -431750.

..... Petitioner

Versus

1. Secretary, (WRM & CAD) Water Resources Department, Madam Kama Marg, Hutatma Rajguru Chawk, Mantralaya, Mumbai - 400032.
2. The Executive Director, Vidarbha Irrigation Development Corporation, Sinchan Seva Bhavan, Civil Lines, Nagpur 440 001.
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7. Superintending Engineer, Nanded Irrigation Circle, Sinchan Bhavan Workshop Road, Nanded - 431 605.

..... Respondents

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ORDER

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

Date: 29th March 2016

Shri. Keshavrao Ingole Patil, Malegaon filed a Petition dated 31/12/2015 through Advocate Radhakrishna Ingole Patil requesting release of water from Khadakpurna reservoir to Yeldari - Siddheswar (Purna Project) reservoir as a part of equitable distribution during 2015. The main prayer of the Petitioner in brief is as follows:

- (iii) There was 89.92 Mm³ (96.26%) of live storage in Khadakpurna reservoir as on 15/10/2015. As per the principle of equitable distribution, 40 Mm³ (44%) release be ordered into the Yeldari - Siddheshwar (Purna Project) reservoir.
- (iv) This release should be ordered as a temporary measure.

On 20/01/2016 the following interventions were received in the matter by the Authority.

- Application dated 19/01/2016, from Shri. Dadarao Khade, Garkhed, Taluka Dewulgaon Raja, District Buldhana.
- Application dated 20/01/2016, from Adv. Deepak Patil on behalf of Shri. Shenfadrao Ghube Patil, At Post Dewulgaon Ghube, Taluka Chikhali, District Buldhana.
- Application dated 20/01/2016, from Shri. Jai Kanhaiyalal Rathod, Limbheda, At Post Dahiphall Khandare, Taluka Mantha, District Jalna.

2.0 The matter was heard by the Authority on 03/02/2016 during which the following parties were present.

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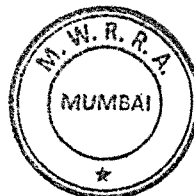
Petitioner	Advocate Radhakrishna Ingole Patil
Intervenors	i) Shri. Dadarao Khade, Garkhed ii) Shri. Shenfadrao Ghube Patil, through Adv. Deepak Patil
Respondents	i) Shri. D. D. Pohekar, Chief Engineer (WR), Water Resources Department, Amravati. ii) Dr. P. K. Pawar, Superintending Engineer, Buldhana Irrigation Project Circle, Buldhana iii) Shri. D. T. Shipne, Executive Engineer, Khadakpurna Project Division, Dewulgaon Raja iv) Shri. N. G. Meshram, Executive Engineer, Purna Irrigation Division, Vasmatnagar

The following points were pleaded by the Petitioner, Intervenors and Respondents :

2.1 Adv. Radhakrishna Ingole Patil on behalf of Petitioner

- i) Due to deficient rains in the monsoon of 2015, storage in Yeldari and Siddheshwar reservoirs on Purna River by 15th October was very low as compared to Khadakpurna reservoir located on the upstream of the same river. The live storages as on 15/10/2015 and their percentages with respect to designed live storages in the three reservoirs were as follows:
 1. Khadakpurna = 93.40 Mm³, (96.27 %)
 2. Yeldari = 809.77 Mm³, (15.15 %)
 3. Siddheshwar = 80.96 Mm³, (11.61 %).
- ii) Yeldari and Siddheshwar dams were constructed much earlier than Khadakpurna. This fact itself warrants the equitable distribution of water in all these three reservoirs as on 15th October of every year.
- iii) As there is no programme of Rabi irrigation in Khadakpurna project, the water stored in the Khadakpurna reservoir be released to Yeldari and Siddheshwar reservoirs as per the principle of equitable distribution. Population dependent on Purna Project (i.e. Yeldari and Siddheshwar storages) for drinking and livestock are suffering even today and it will aggravate further in coming future.

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- iv) Section 12 (6) (c) of the MWRRA Act, 2005 (herein after referred to as the Act) provides for equitable distribution.
- v) Petitioner had earlier made representations for equitable distribution to which no response has been received.
- vi) At least 40 Mm³ water be released from Khadakpurna into Yeldari-Siddheshwar so that, one Rabi rotation in Purna Command (= 57988 ha.) can be catered.

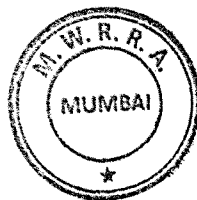
2.2 Shri. Dadarao Khade, Garkhed (Tal. Dewulgaon Raja) (Intervenor)

- i) The Administrative Approval (A.A.) for the Khadakpurna Project was accorded to remove part irrigation backlog of Buldhana district at that time. It would be an injustice if water impounded in the reservoir is let out downstream on the pretext of equitable distribution.
- ii) When Khadakpurna Project was taken up for construction, Vidarbha people were required to fight a case for its construction in courts of law. Letting out its impounded water will be unfair to Vidarbha.
- iii) The percentage of development of irrigation in Buldhana district is comparatively far less than the other districts of the State. By withdrawing Khadakpurna's water meant for irrigation, the situation will be further aggravated.
- iv) Completion of Khadakpurna Project is accomplished prior to the enactment of the MWRRA Act. Hence, the Project does not fall within the purview of that Act.

2.3 Adv. Deepak Patil on behalf of the Intervenor Shri. S. V. Ghube Patil, Dewulgaon Ghube

- i) Only the project affected peoples (PAPs) are the beneficiaries of Khadakpurna Project.
- ii) The Project is sanctioned for backlog area. Its benefits need not be shared with other areas.

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2.4 Shri D.D. Pohekar, Chief Engineer (WR) Amravati.

The year 2015 was a deficit rainfall year. The rainfall was 366 mm as against the annual average of 600 mm in Buldhana district. Therefore, yield in Khadakpurna reservoir is reduced to 32%. If water is released from Khadakpurna to downstream, most of the water will be lost in transit as well as by evaporation. The reason for filling Khadakpurna upto 96% is attributed to sudden and high inflow in one day (i.e. about 0.087 Mm³). Irrigation in Rabi is planned in Khadakpurna command. Already three Rabi rotations have been catered to. The remaining requirement of Rabi irrigation is about 15 Mm³.

The written submission of CE, Amravati provided the following water planning of Khadakpurna project:-

(in Mm³)

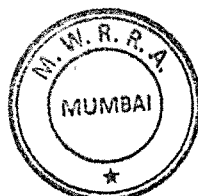
Live Storage as on 16.1.2016	33.67
Reservation of drinking water up to 15/7/2016	(-) 5.50
Estimated evaporation loss (16/1/2016 to 15/7/2016)	(-) 16.97
Balance Storage	11.20
Balance requirement of Rabi season on the project.	15.00
Storage capacity of 5 K.T. weirs between Khadakpurna and Yeldari dams (67 km.)	(-) 6.56
Estimated water retention by sand in the riverbed between Khadakpurna and Yeldari	(-) 4.00
Transit losses between Khadakpurna and Yeldari	(-) 8.60

3.0 Issues

After hearing the parties and 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 Act to release water from Khadakpurna project into the Purna (Yeldari & Siddheshwar) Project for achieving equitable distribution in the Purna sub-basin under section 11(c) or 12 (6) (c) of the Act?
- ii) If yes, what are the principles that govern the same?

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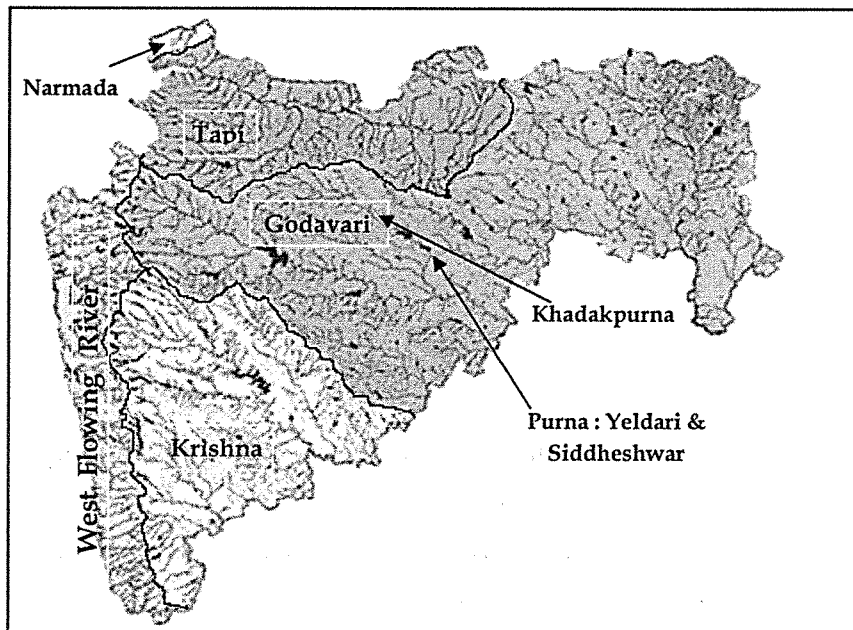


iii) Whether any release is admissible during the year 2015-16?

4.0 Analysis of the Issues

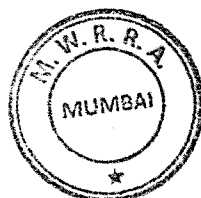
4.1 Maharashtra State is geographically divided into 5 river basins, namely the Godavari, Krishna, Tapi, Narmada and the West flowing rivers of Konkan. A river basin is a natural hydrological unit within the territorial limits of which all activities relating to water are interdependent. A Sub-basin is a hydrologic sub-unit of a river basin within the State.

A map showing locations of Khadakpurna & Purna - Yeldari & Siddheshwar project is as below:



The Purna River is the major tributary of the Godavari River which makes Purna sub-basin of the Godavari basin. The Purna River rises in the Ajintha Hills at Gautala in Kannad Taluka of Aurangabad District at about RL 731 m and it meets Godavari River near Sangam in Purna Taluka of Parbhani District. Its tributaries are the Khelna, Sukhna, Girja and Dhamna. The origins of all these rivers are located in assured rainfall region. The length of the Purna River upto its confluence with Godavari River is 402 km. This sub-basin has an area of about 17,252 square kilometer and is spread over Aurangabad, Jalna, Parbhani, Buldhana and Akola districts. The Purna sub-basin encompasses 3 major projects on Purna River viz. Khadakpurna Project, Yeldari Project & Siddheshwar Project. The Khadakpurna dam is on upstream

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of Yeldari dam which is upstream of Siddheshwar. The Khadakpurna & Siddheshwar projects are irrigation projects whereas Yeldari is a hydro-electric project.

4.2 Khadakpurna Project: As per the information submitted through letter dated 20/01/2016 by Superintending Engineer, Buldhana Irrigation Project Circle Buldhana, total storage capacity of Khadakpurna is 160.605 Mm³ with live storage as 93.404 Mm³. The annual water use as per project report is shown in Table 1.

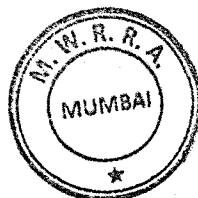
Table 1

Seasons	Water Use in Mm ³				
	Irrigation	Drinking	Industry	Evaporation	Total
Kharif	25.36	1.59	1.03	10.74	38.72
Rabi	49.63	1.59	1.03	0.44	61.70
Hot Weather	0.00	1.59	1.03	11.59	14.21
Total	74.99	4.77	3.10	31.77	114.63

As per the approved cropping pattern, the projected irrigation potential is 24,864 ha (Kharif = 8910 ha, Rabi = 12432 ha, Two seasonals = 3522 ha) while the potential created is hardly 16,290 ha (Kharif = 5845 ha, Rabi = 8145 ha, Two seasonals = 2300 ha). The live storage as on 15/10/2015 was 89.92 Mm³ (96.26%)

4.3 Purna : Yeldari & Siddheshwar Project: The Purna Project comprises two dams viz. Yeldari & Siddheshwar. Yeldari is the main dam with gross storage capacity of 934.44 Mm³ and live storage as 809.77 Mm³. The water is mainly used for hydro-power generation (15 MW installed capacity). After power generation, the water is stored 65 km further downstream in the Siddheshwar pick-up weir, having gross storage capacity of 250.85 Mm³ and live storage as 80.96 Mm³. The water from the Siddheshwar dam is used for irrigation (Kharif = 256.80 Mm³, Rabi = 282.40 Mm³ & Hot Weather = 262.10 Mm³). The total irrigation as per the latest approved cropping pattern is 57,988 ha (Kharif = 14,787 ha, Rabi = 23,197 ha, Two seasonals = 13337 ha, Hot Weather = 3769 ha, and Perennials = 2899 ha). The live Storage in Yeldari and

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Siddheshwar reservoir as on 15/10/2015 was 122.642 Mm³ (15.15%) & 9.639 Mm³ (11.61%) respectively.

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

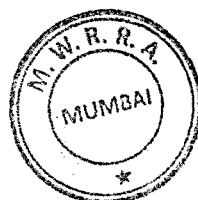
5.1 Whether it will be in consonance with the provisions of the Act to release water from Khadakpurna project into the Purna Project (Yeldari & Siddheshwar) for achieving an equitable distribution in the Purna sub-basin under section 11(c) or 12 (6) (c) of the Act?

The provisions of section 12(6) (c) of the Act 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 Purna - (Yeldari & Siddheshwar Project), these conditions are not fulfilled. Therefore, the provisions of section 12(6) (c) are not attracted in the present case. We are of the view that the equitable distribution of water sought by the present Petitioner could be considered under Section 11 (c) of the Act 2005.

5.2 If yes, what are the principles that govern 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 a circumstance, we would like to rely on the definition of "hydrological drought" i.e. shortages in water availability for meeting minimum normal and specific 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, &

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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 for Siddheshwar project is 282.40 Mm³.

However, we feel that there must be sufficient water available in the upstream project before release to downstream reservoir(s) can be considered. The basic drinking water needs (at least to the extent of 80%) and committed industrial use (at least to the extent of 80%) and two Rabi rotations of the upstream project must first be met.

The equitable distribution has to be resorted to at the end of October 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 to be 25% (See table under para 2.4). 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.

To sustain Rabi crops, atleast two rotations are required to be given. In a situation where enough water for two rotations is not available in the downstream project but can be released from Khadakpurna, then equitable distribution will be called for.

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

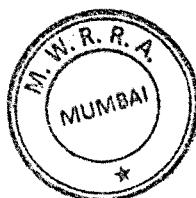
The capacity of Khadakpurna, Yeldari & Siddheshwar alongwith the position as on 15/02/2016 are shown in Table 2 below:

Table 2

(All in Mm³)

Name of Dam	Designed Live Storage	Live Storage as on 15/10/2015	Live Storage as on 26/02/2016
Khadakpurna	93.40	89.92 (96.27%)	15.00 (16.06%)
Yeldari	809.77	122.64 (15.15%)	45.00 (5.56%)
Siddheshwar	80.96	9.40 (11.61%)	0.00 (0.00%)

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It will be seen from the Table 2 that the live storage capacity of Khadakpurna is 93.40 Mm³ whereas the requirement for each Rabi rotation of Siddheshwar command is 282.40 / 4 = 70.60 Mm³. Even if the live storage of Khadakpurna (15.00 Mm³) were to be released, then after transmission losses, only an insignificant quantity of water will reach Yeldari & Siddheshwar reservoirs which will not be enough to cater to even one Rabi rotation. Therefore equitable distribution as prayed for by the Petitioner is not feasible in this year.

8.0 DETERMINATIONS

In the light of the above analysis, we come to the conclusion that no equitable distribution is recommended in this matter for this year. The available live storage in Yeldari reservoir (45.00 Mm³) will eventually flow down to Siddheshwar reservoir after hydro-power generation. This amount of water will be adequate to meet the drinking water requirement of the Siddheshwar reservoir. In addition, water from dead storage can also be used for drinking purpose, this year being a bad rainfall year.

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

