



PRIME MINISTER AWARDS 2020

WATER CONSERVATION - INNOVATION (GEN.)

DISTRICT BANDA, U.P.

PRESENTED BY: DR. HEERA LAL (EX. DM, BANDA)

PMA ID : INNO/00178





RESEARCH & STUDY



BANDA WATER STRESS

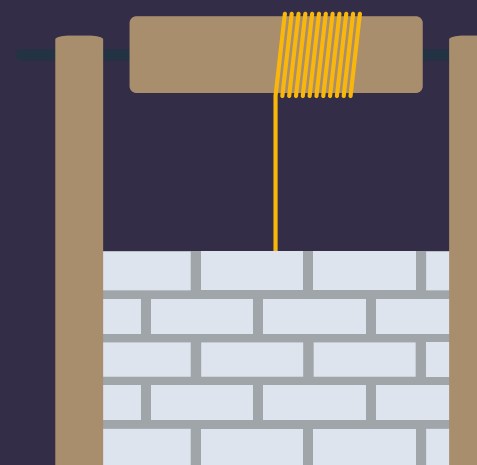


NO WATER IN CAPETOWN

MAJOR CHALLENGES

- DEFEATIST MINDSET
- INADEQUATE RESOURCES
- HIGH RUN-OFF RATE
- LOW RECHARGE RATE

INNOVATIVE APPROACH



DIG/RECHARGE WATER SOURCES



UNIQUE PEOPLE ENGAGEMENT

THE SOLUTION

THE DANGEROUS DISCONNECT



STRATEGIC PARTNERS



Steps to Success

- Inter-departmental
- Jal Choupal + Water Budgeting
- Trench digging
- Rejuvenation of old water resources
- Creation of new ponds
- Rain Water Harvesting
- River Ken, Bage & Yamuna Aarti
- Jal March
- Deep Daan
- Tree Plantation & Bedbandi
- Jal Par Kavita & Mushaira
- Jal Hasya Charcha

IMPLEMENTATION

**BHOOJAL BADHAO.
PEYJAL BACHAO.**



MASS TRENCH DIGGING + JAL
CHOUPALS + WATER BUDGETING

3930 k.l. conserving capacity,
saving 110001 k.l. water annually.



START OF CAMPAIGN + TRAINING

- 2605 trenches built around 2443 hand pumps & wells.
- Conducted in all 471 gram panchayats.
- 34732 direct villagers' participation.



WATER HARVESTING

IMPLEMENTATION

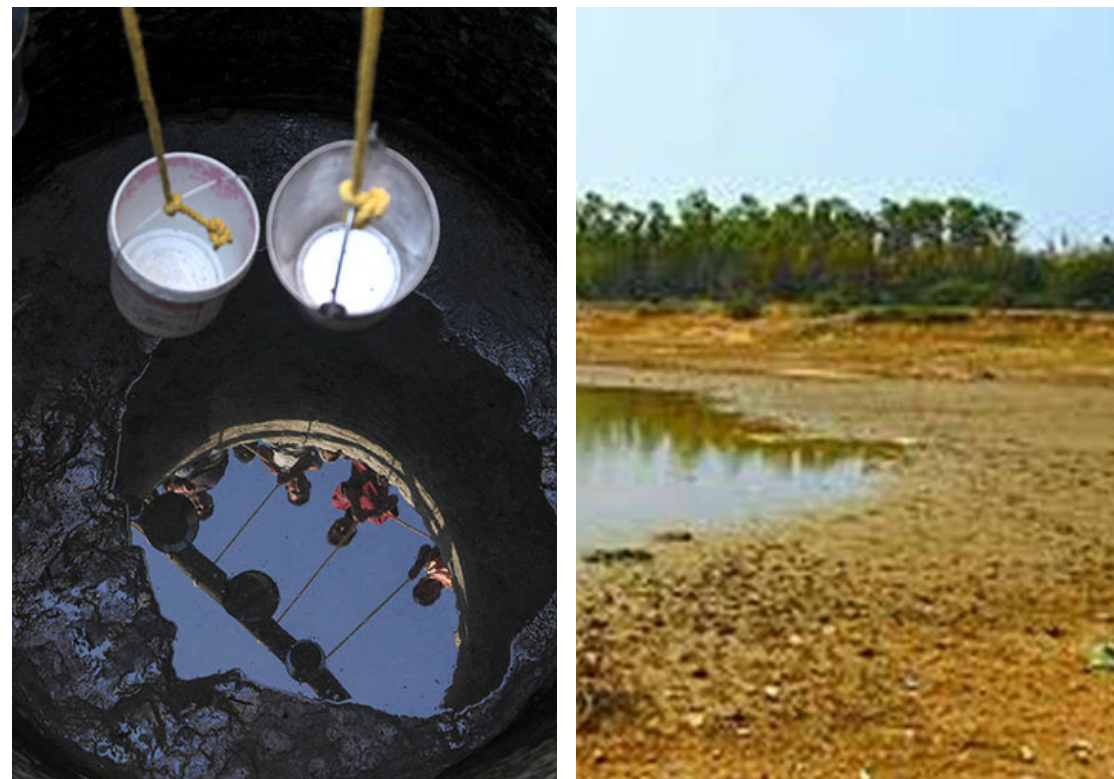
**KUWAAN TAALAB
JIAO ABHIYAAN**

MAY 2019

**REJUVENATION OF PUBLIC & PRIVATE
PONDS + MEDBANDI + DEEP DAAN**



10K+ people participated in the march & **Oath** for 'Water Care' resonated across Banda.



IDENTIFICATION OF DRIED PONDS & WELLS

572 old ponds revived
2233 new ponds created
Medbandi at **1311** locations



JAL MARCH + JAL SURAKSHA + JAL MUSHAIRA

INTERVENTIONS

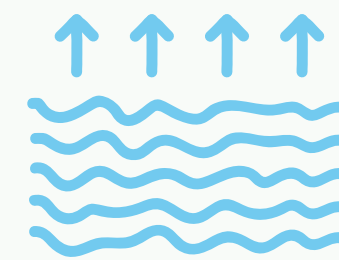
1. Jal choupals in **471** gram panchayats. **34732** villagers benefitted directly; **15 lakh** indirectly.
2. **2605** trenches around **2443** hand pumps & wells.
3. **572** old ponds revived; **2233** new ponds created.
4. **82** rain water conservation structures built.
5. **1536** recharge pits in schools; Medbandi at **1311** locations.
6. Mass awareness program in **130 villages** targeting **6,50,000** villagers located on the banks of rivers **Ken, Yamuna & Bage**.

IMPACT

GROUND WATER LEVEL INCREASE

Badokhar --> **+1.88 m**
 Mahua --> **-0.22 m**
 Kamasin --> **+1.67 m**
 Vissadda --> **-1.30 m**
 Jaspura --> **+2.69 m**
 Tindvaari --> **+2.01 m**
 Nairaini --> **+1.92 m**
 Baberu --> **+2.12 m**

*Data from Minor Irrigation Department.



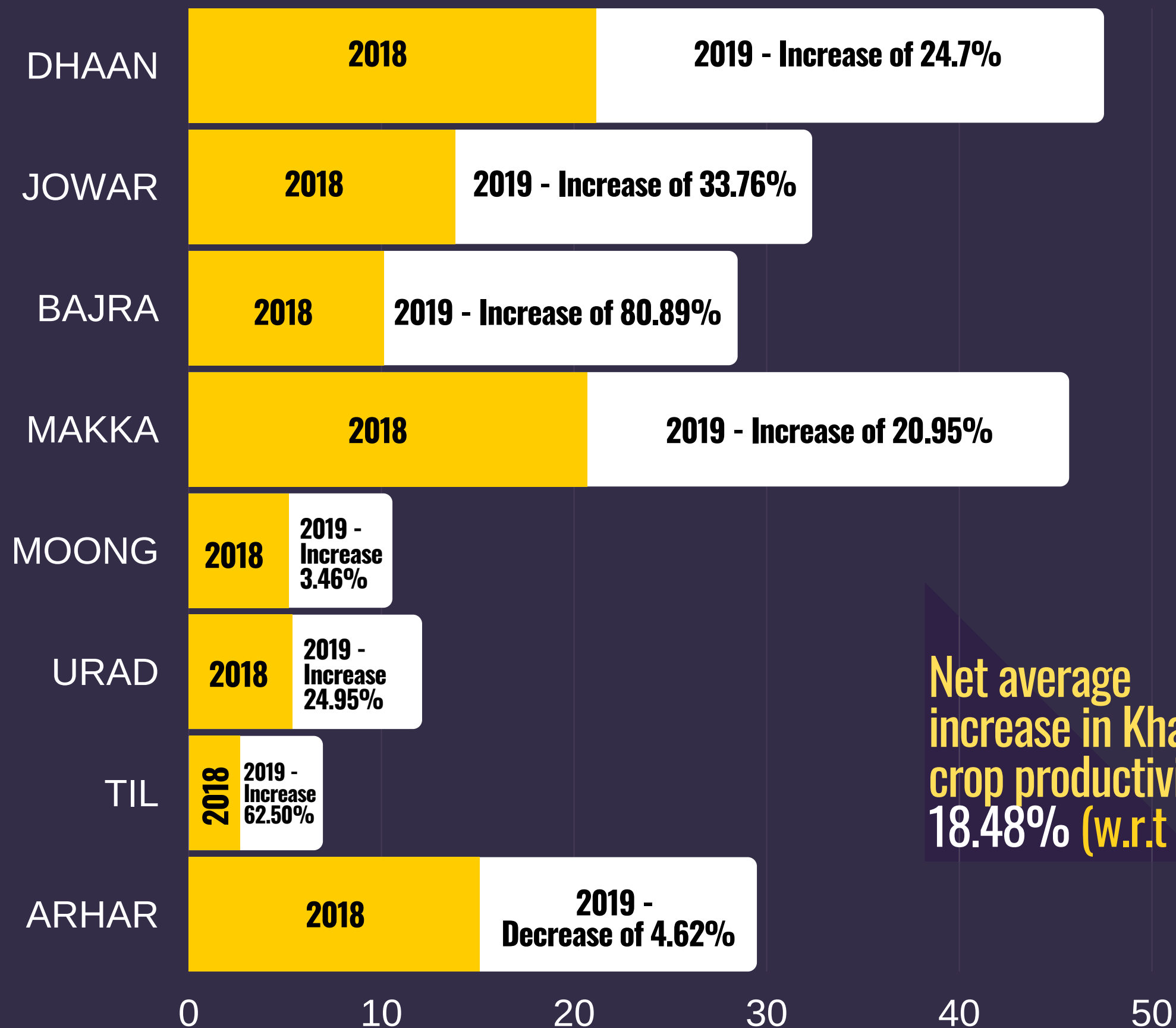
Net average increase in water table - 1.34 m

HIGHLIGHT RESULT

Block Name	2017			2018			2019		
	Pre Monsoon (in metres)	Post Monsoon (in metres)	Difference (in metres)	Pre Monsoon (in metres)	Post Monsoon (in metres)	Difference (in metres)	Pre Monsoon (in metres)	Post Monsoon (in metres)	Difference (in metres)
Jaspura	19.21	19.31	-0.1	20.08	20.48	-0.4	20.89	17.79	3.1
Tindwari	16.48	17.04	-0.56	17.54	17.82	-0.28	18.24	15.81	2.43

It is assumed and expected that after rainy season, ground water level will increase rather than decrease. Ironically, in two blocks Jaspura & Tindwari water level fell-down consecutively in 2017 and 2018 (post monsoon ground-water level decreased as compared to pre-monsoon level). But, our efforts reversed the trend and brought amazing results in 2019. In 2019, we saw a quantum-increase by 3.1m in Jaspura and 2.43m in Tindwari respectively, because we increased recharge potential in our water conservation initiative. This reversal from negative to positive surpassed people's assumptions and expectations.

INCREASE IN AGRI-PRODUCE DUE TO OUR WATER CONSERVATION INITIATIVE



जल संरक्षण/वर्षा जल संचयन के विशेष अभियान से कृषि क्षेत्र में प्रगति

जिलाधिकारी महोदय बांदा के द्वारा अक्टूबर 2018 से जल संरक्षण /वर्षा जल संचयन पर एक अभियान के अन्तर्गत कार्य किया गया, जिसका कृषि क्षेत्र में खरीफ फसलों में निम्नचत् उत्पादकता में वृद्धि हुई।

क्र० सं०	फसल का नाम	खरीफ वर्ष 2018-19 की उत्पादकता कु०/हे०	खरीफ वर्ष 2019-20 की उत्पादकता कु०/हे०	वृद्धि	वृद्धि प्रतिशत
1	धान	21.13	26.35	5.22	24.70
2	ज्वार	13.83	18.50	4.67	33.76
3	बाजरा	10.13	18.33	8.20	80.89
4	मक्का	20.67	25.00	4.33	20.95
5	मूंग	5.18	5.36	0.18	3.46
6	उर्द	5.37	6.71	1.34	24.95
7	तिल	2.64	4.29	1.65	62.50
8	अरहर	15.08	14.38	-0.70	-4.62

1. धान-धान की फसल में जल संरक्षण /वर्षा जल संचयन से जल स्तर बढ़ने से जल स्रोतों से भरपूर जल मिलने से सिंचन क्षेत्र में वृद्धि होने से उत्पादकता में 24.70 प्रतिशत की वृद्धि हुई।
2. ज्वार एवं बाजरा-ज्वार एवं बाजरा की फसलें अधिकतर राकड भूमियों में होती हैं, जहां पर अधिकतर खेत तालाब खोदे गये जिससे जल संरक्षण /वर्षा जल संचयन से जल स्तर बढ़ने से जल स्रोतों की वृद्धि से सिंचन क्षेत्र में वृद्धि होने से उत्पादकता कमशः 33.76 एवं 80.89 प्रतिशत की वृद्धि हुई।
3. मक्का-मक्का की फसल में जल संरक्षण /वर्षा जल संचयन से जल स्तर बढ़ने से जल स्रोतों से भरपूर जल मिलने से सिंचन क्षेत्र में वृद्धि होने से उत्पादकता में 24.70 प्रतिशत की वृद्धि हुई।
4. मूंग, उर्द- मूंग, उर्द की फसलें अधिकतर राकड भूमियों में कृषकों द्वारा उगायी जाती हैं, जहां पर अधिकतर खेत तालाब खोदे गये जिससे जल संरक्षण /वर्षा जल संचयन से जल स्तर बढ़ने से जल स्रोतों की वृद्धि से सिंचन क्षेत्र में वृद्धि होने से उत्पादकता कमशः 3.46 एवं 24.95 प्रतिशत की वृद्धि हुई।
5. अरहर-अरहर की फसलें अधिकतर राकड भूमियों में कृषकों द्वारा उगायी जाती हैं, जहां पर अधिकतर खेत तालाब खोदे गये जिससे जल संरक्षण /वर्षा जल संचयन से जल स्तर बढ़ने से जल स्रोतों की वृद्धि से सिंचन क्षेत्र में वृद्धि होने से फसलें बहुत ही अच्छी थी, किन्तु फूल आने के बाद वर्षा होने एवं फली छेदक कीट का प्रकोप अधिक होने के कारण उत्पादकता में वृद्धि नहीं हो सकी।

(डॉ० प्रमोद कुमार)
जिला कृषि अधिकारी
बांदा

1	धान	51760	51864	48968	102019	109689	123734	19.71	21.13	26.35
2	ज्वार	23715	22519	22404	38262	31138	41439	16.13	13.83	18.50
3	बाजरा	3251	3588	3268	6092	3633	5889	18.74	10.13	18.33
4	मक्का	9	2	2	20	4	5	22.22	20.67	25.00
5	ज्वार	21	21	21	13	16	15	6.19	7.62	7.14
6	मूंग	2777	2251	3887	1083	1166	2083	3.90	5.18	5.36
7	उर्द	3374	4870	4941	2001	2615	3315	5.93	5.37	6.71
8	अरहर	17753	17753	17067	26774	26774	24549	15.08	15.08	14.38
9	सोयाबीन	22	30	28	17	27	14	7.73	9.00	5.00
10	तिल	11085	11546	13705	4556	3048	5879	4.11	2.64	4.29
11	मूंगफली	403	854	660	656	1063	801	16.28	12.45	12.14
	खरीफ योग/औसत	114170	115296	112941	181493	179073	207823	15.90	15.53	18.40

(डॉ० प्रमोद कुमार)
जिला कृषि अधिकारी
बांदा

FEW SUCCESS STORIES

VILLAGE GHARODA, TEHSIL ATTARA



- Water table increased by 2.5m.
- Dhaan plantation increased from 150 beegha to 1300 beegha.
- Gehun plantation increased from 400-500 beegha to 1400 beegha.
- Mass reverse-migration due to better agricultural prospects; boosts local economy.
- Sowing of multiple crops a year now possible.
- Vegetable & fruits farming now possible due to increased water level.

GOVT. SCHOOLS OF BANDA



- 1536 rain-water harvesting structures built in all government schools.
- Idea to build responsible citizens of tomorrow.
- Approaching students had multiplier effect as the message reached the entire family and the whole neighborhood.

VILLAGE MAHUE, TEHSIL BANDA



- No drying up of ground water and ponds.
- Drinking water crisis reduced manifold.
- Approx. 20ft water level has increased in reported areas.
- Increase in agricultural activities and corresponding produce.
- Black deers had deserted the block due to lack of drinking water. They have now started
- visiting again due to abundance of water.
- Overall lifestyle has improved and mindset has shifted towards more scientific management of water.

AWARDS & RECOGNITION



22 CRORE
ADDITIONAL
FUND



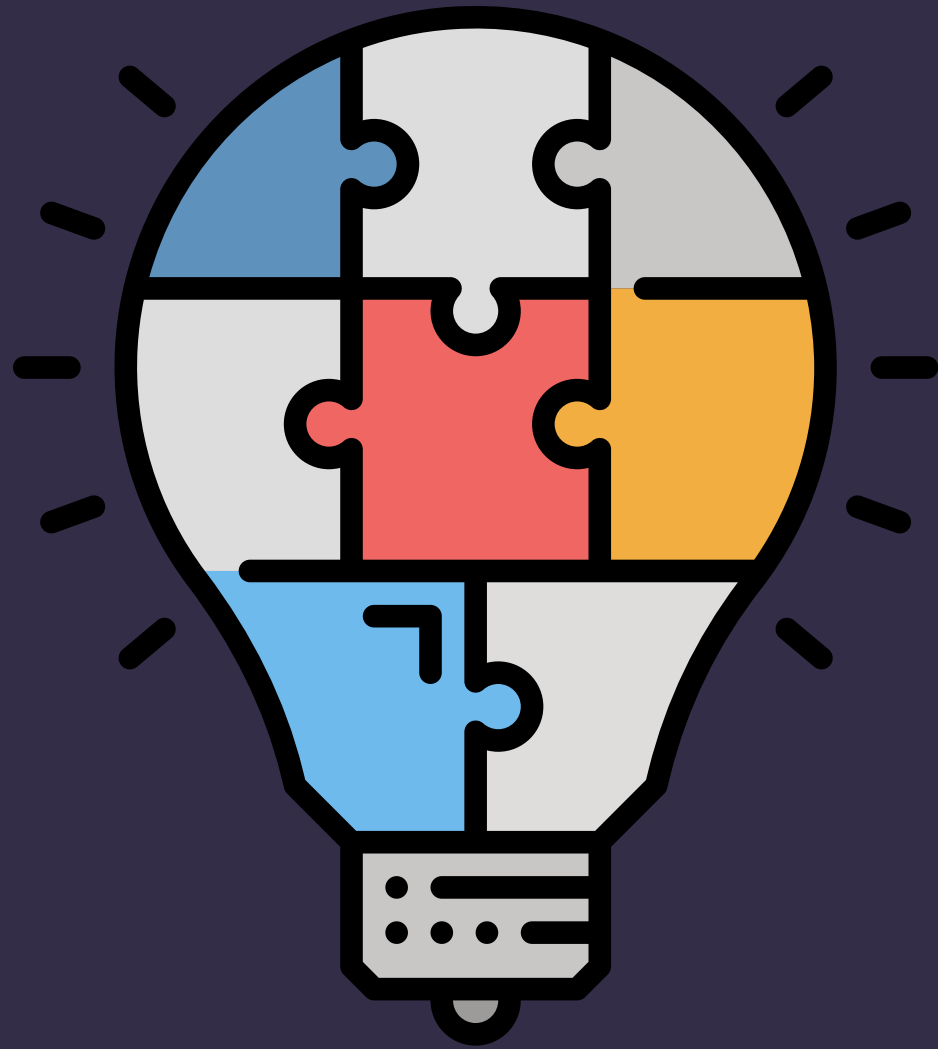
SANCTIONED BY
MINOR IRRIGATION
DEPT.



PHYSICALLY AUDITED & ENCOURAGED BY:

- Sh. U P Singh - Sec. Jal Shakti Ministry, GoI
- Sh. Mahendra Modi (Consultant to GoUP - Urban Development) Known as 'Jal Guru'
- Sh. L Venkateshwarlu - Then CEO, U.P
- Sh. S R Bhoosreddy - Addl. Ch. Sec. GoUP
- SKOCH (Leading think-tank on socio-economic issues & inclusive growth)

INNOVATIONS



MESSAGING

Reconnecting with natural water bodies - a fresh approach.

PROJECT DESIGN

The project was designed in a community-collaboration format.

LOW-OR-NO-COST MODEL

Implementation encouraged 'Shram-Daan' and resource pooling.

WATER BUDGETING

First time in U.P., concept of Water Budgeting was introduced.

ACCOUNTABILITY

Our approach was to make people responsible & accountable for reducing water crisis.

PEOPLE ENGAGEMENT

Mass participation through innovative people engagement.



MINDSET

Bridging the people-administration gap.

RESOURCES

Strategic pooling of resources in a channelised manner.

BASIC KNOWLEDGE

Revisiting childhood life experiences to explore optimum solutions.

APPROACH

Don't limit your challenges. challenge your limits.

MULTIPLE ROLES

Officially I was the DM. Unofficially, I played multiple roles.

HIERARCHY DIVIDE

Valuing ideas & hard work. Not designations.

THE HUMAN TOUCH

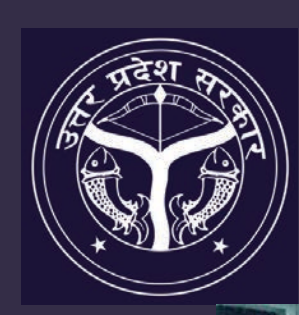
This was not an administrative campaign. It was a people's movement.

 **DIFFERENTIATORS:** We developed both - Software (Water Governance) & Hardware (Water Management) of water bodies.

WATER GOVERNANCE

WATER MANAGEMENT

CREATING A GLO-CAL MODEL



जल ही जीवन
मेरा एक छोटा सा प्रयास

धन्यवाद

हीरा लाल
निवर्तमान जिलाधिकारी, बांदा

