



# Holding Water in the Landscape with Communities in India

*16<sup>th</sup> MAY 2019 Edinburgh*

**MINNI JAIN**

[minni@earthlinksall.com](mailto:minni@earthlinksall.com)

[www.theflowpartnership.org](http://www.theflowpartnership.org)

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**Empowering communities to take action for themselves, is a more long lasting solution to alleviating water stress.**

**“When a drought or flood comes, it doesn't look at whether you are rich or poor. Eventually, it will take everyone in its grip.”**

FLOODS AND DROUGHTS  
ARE TWO SIDES OF THE  
SAME COIN..

THE SOLUTION IS  
***HOLDING WATER*** WHERE  
IT FALLS...

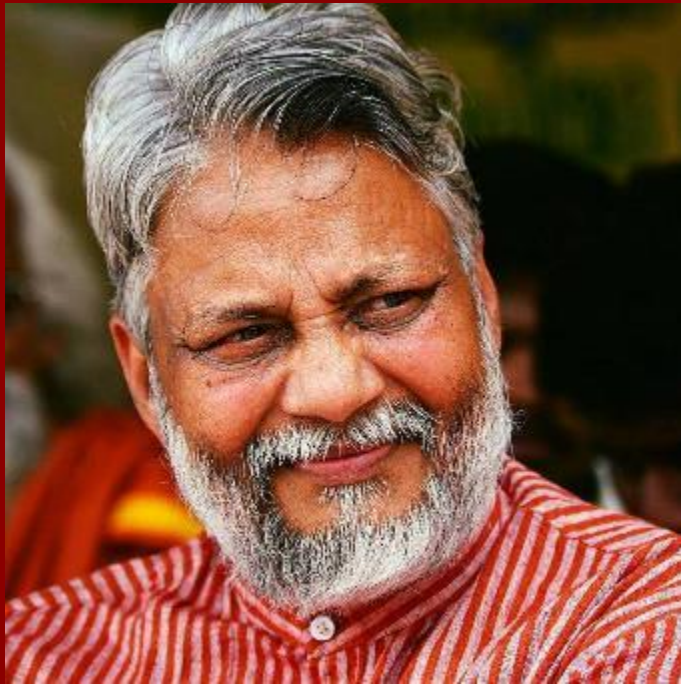


# The Power of People's Engineering : Community Driven De-centralised Water Management



**A quick  
history of  
our work in  
India**

# Rajendra Singh World Water Prize 2015 for this work in Rajasthan- India



Also known as the "Waterman of India", for his pioneering work in community-based water harvesting and water management.

***In 2008, The Guardian named him amongst its list of "50 people who could save the planet."***

Rajendra Singh too was about to go back to Delhi where he had come from, thoroughly dejected that there was nothing he could do. Until he met this man's father...



*That meeting was to change  
the life of that region  
forever...*



# Drawing the map



# Is that ash you're using...?





Ah...I can see it now..



# Staking the location



# Diggin away the moments that make up a dull day..





# Coming along



Looks an impressive  
intervention.. *WE BUILT IT!!*





# The 'river' in 1985





# The river in 2000 (and today)



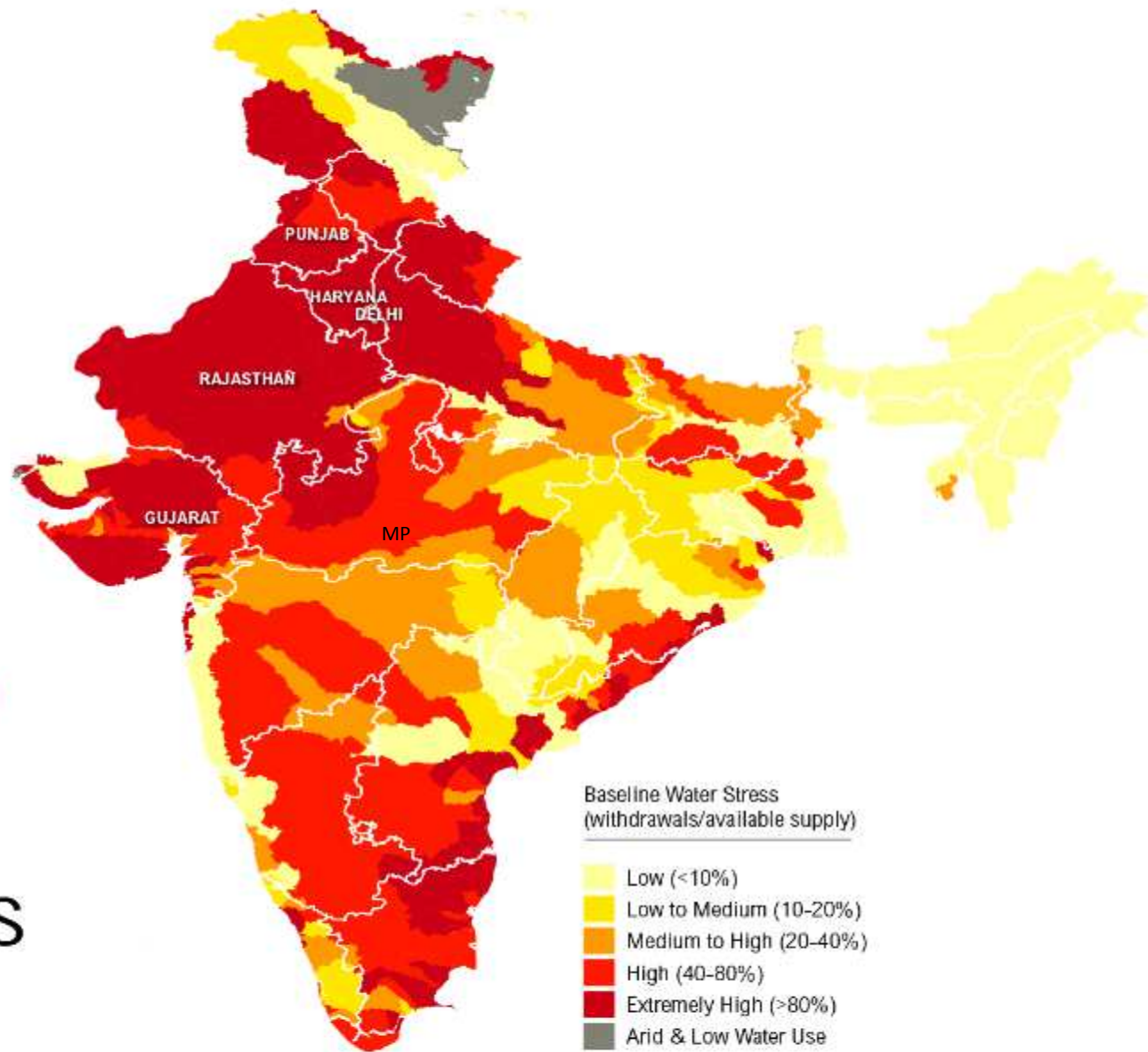
**15,000 Structures have been built  
since then**

**7 rivers have been revived..**

What's happening in Rajasthan in  
2019...?

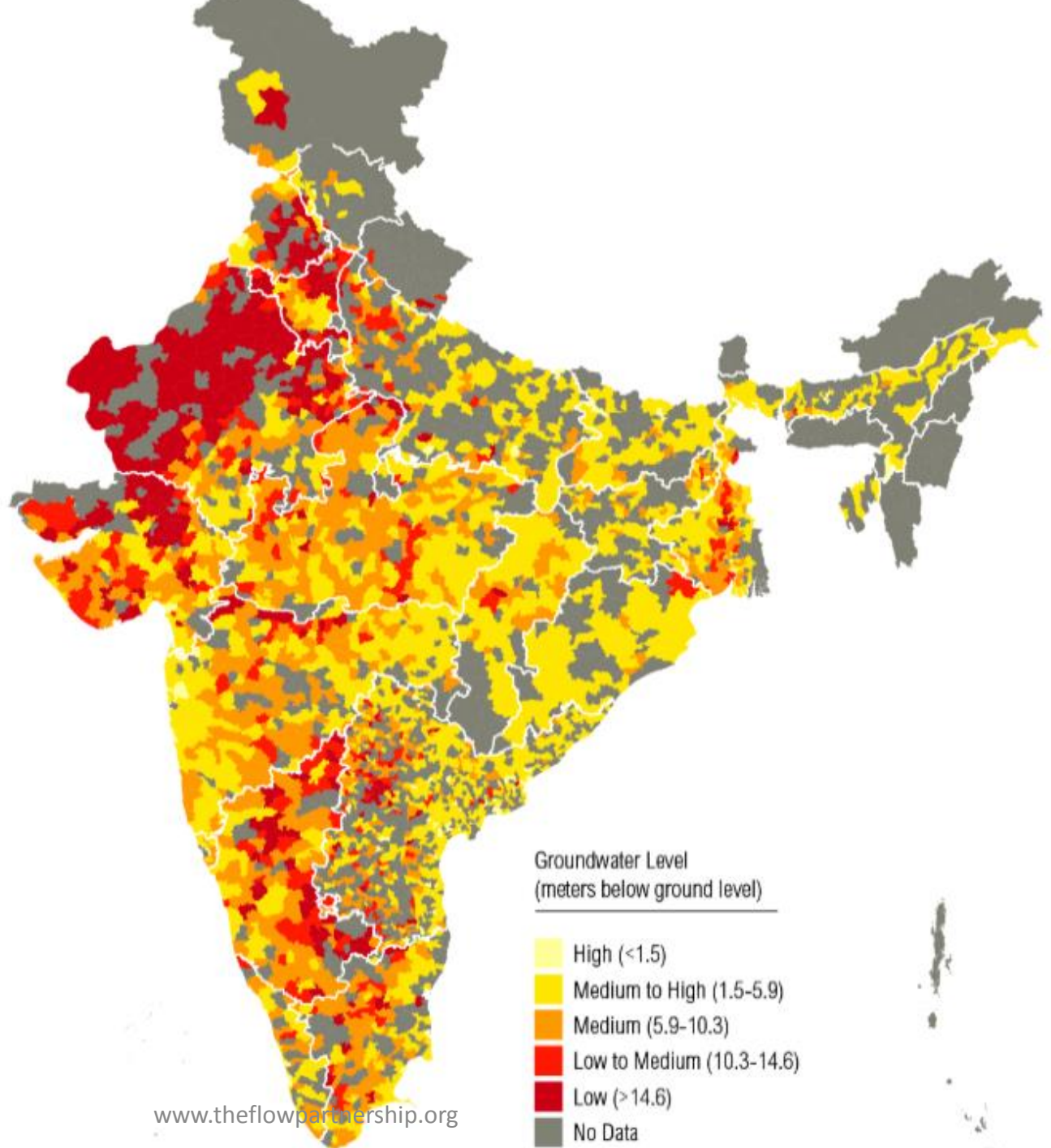


**54%**  
of India  
Faces  
**High to  
Extremely  
High**  
Water Stress



# 54%

of India's  
Ground-  
water  
Wells Are  
Decreasing



# Karauli district in Rajasthan India



100% of the ground water wells here dry – landing them squarely into the map of the future of water



**100% of the people there are  
considered to be living below the  
poverty line**











**HOW DO YOU GO FROM THAT  
ARIDITY...**



TO THIS ..?



# Community Driven Decentralised Water Management























Countless conversations with the local community.... Discussing their woes, what will bring them back, coaxing them to contribute to the process ...

Getting them to unlock the gates to walk the path to a healthy local water cycle again..

















Maharajpura  
says  
YES!



श्रीशमजी

DATE: / /  
PAGE NO.:

आप दिनांक 14-4-2019 को महाराजपुरा साग  
वासी को ने मिलकर तय किया कि हम सब 5 लाख  
रुपये का श्रावणदान एकत्रित करेंगे। संख्या हमें  
10 लाख रुपये की मदद करवाने  
को कार्य होने हैं।

- ① डोंग से पानी लाने की व्यवस्था दोनों बगल से
- ② 5 कुर खजार और 5 कुर पाड की खेती
- ③ पाड की चौड़ाई नीचे से 25 कुर होनी है।

सभी ने मिलकर JCB और LUG की रेर  
तय कि गांधी कोडापुरा के साथ में।  
जिनमे निम्न दर तय की गई

59 रु. शोली भराई

2300 रु. छपरे - चलाई

700 रु. छपरे JCB से फैलाई

तां 20-4-2019 से काम करना तय किया गया।  
तां 20-8-15 घर

हर 5 दिन में 40 हजार रु. की डीपल को  
दिये जायेंगे।

श्रीशमजी देवेन्द्रसिंह

श्रीशमजी देवेन्द्रसिंह लखनसिंह लखनसिंह

कोपलजी लखनसिंह लखनसिंह लखनसिंह

पुनर्गठित श्रीशमजी देवेन्द्रसिंह लखनसिंह लखनसिंह

नन्दू देवेन्द्रसिंह लखनसिंह लखनसिंह

देवेन्द्रसिंह लखनसिंह लखनसिंह

THE KEY THAT  
UNLOCKS THE  
ACTION

AND THE WORK BEGINS IMMEDIATELY...





**THE FIRST DIG IS DONE BY THE  
COMMUNITY USING A SIMPLE SPADE**



And then the digger moves in.. If they want to complete the work before the onset of the monsoon rains and HOLD THE WATER AS IT FALLS *THAT SAME YEAR....*







































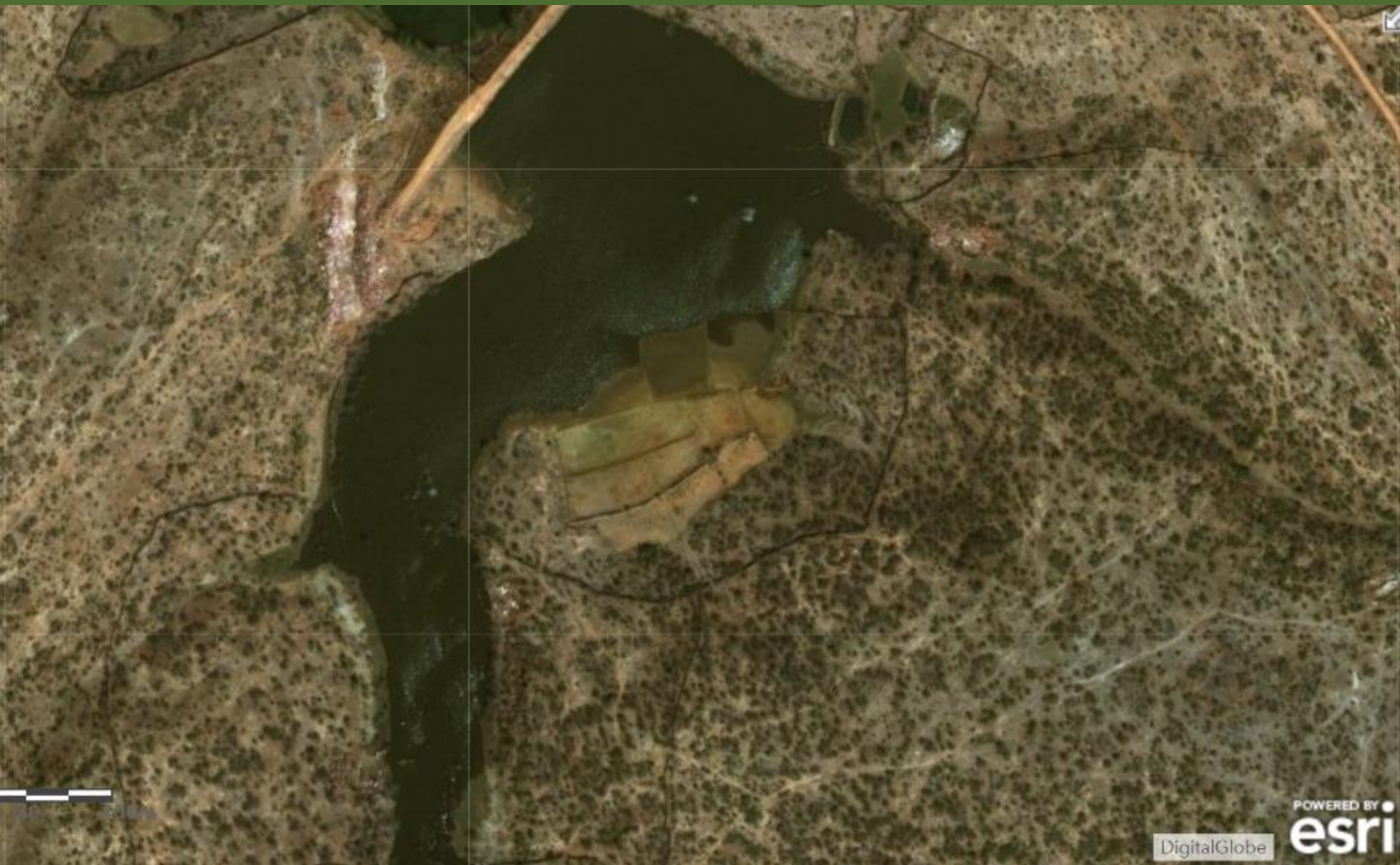


**Proud to  
take you  
on a tour  
of the  
JOHAD  
we built...**



## Works on scale...

75 structures have been built in Karauli..  
If we were to help the villagers of the region revive the entire region and bring all the rivers and rivulets to life it would take less than five years at the rate of 70 structures a year – and of course some funds to help the process happen...



# Satellite images of BOODKHEDA

[www.theflowpartnership.org](http://www.theflowpartnership.org)





0.2 0.4km

[www.theflowpartnership.org](http://www.theflowpartnership.org)





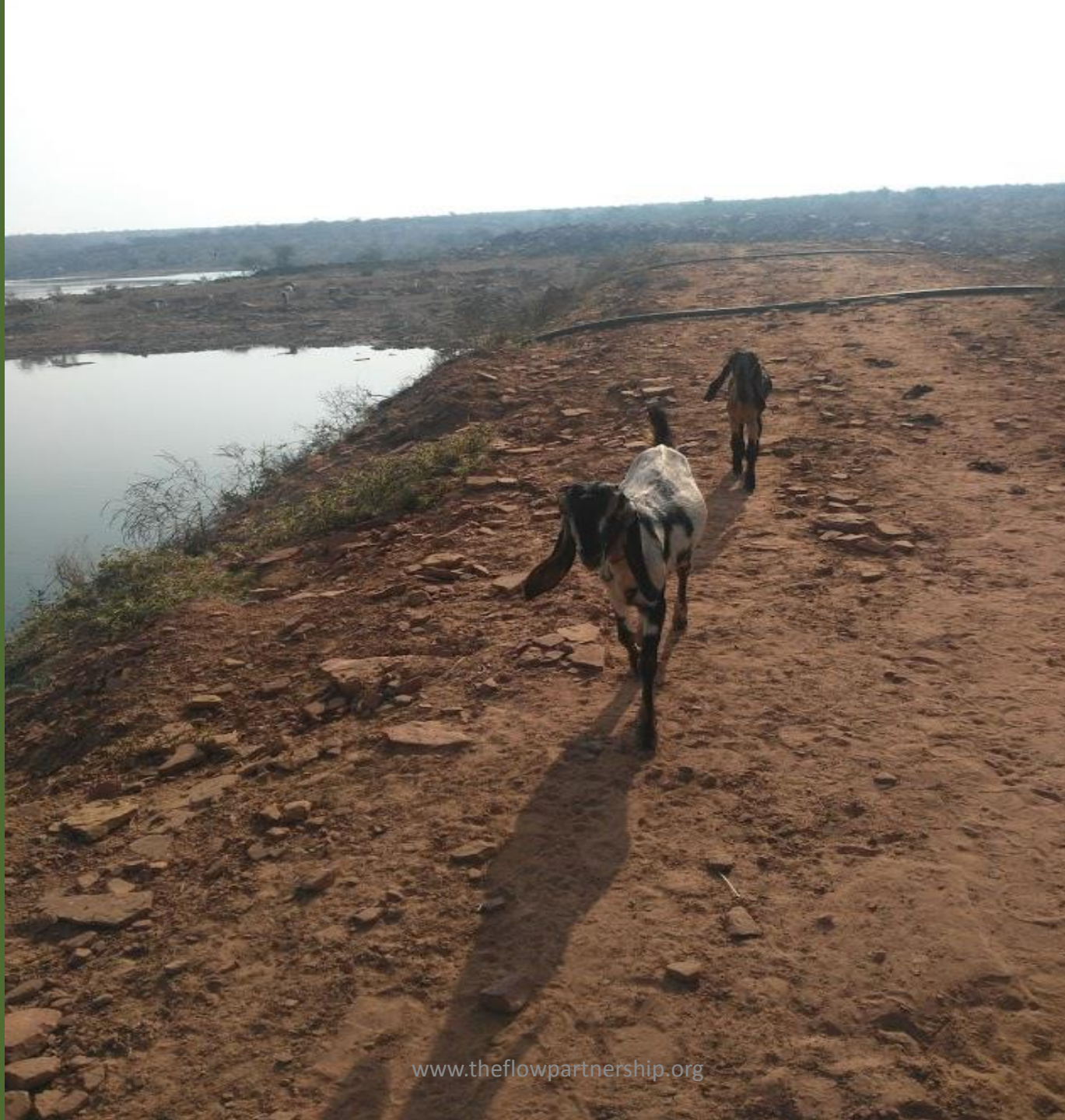


**Boodkheda : built by these villagers 3 years ago...**













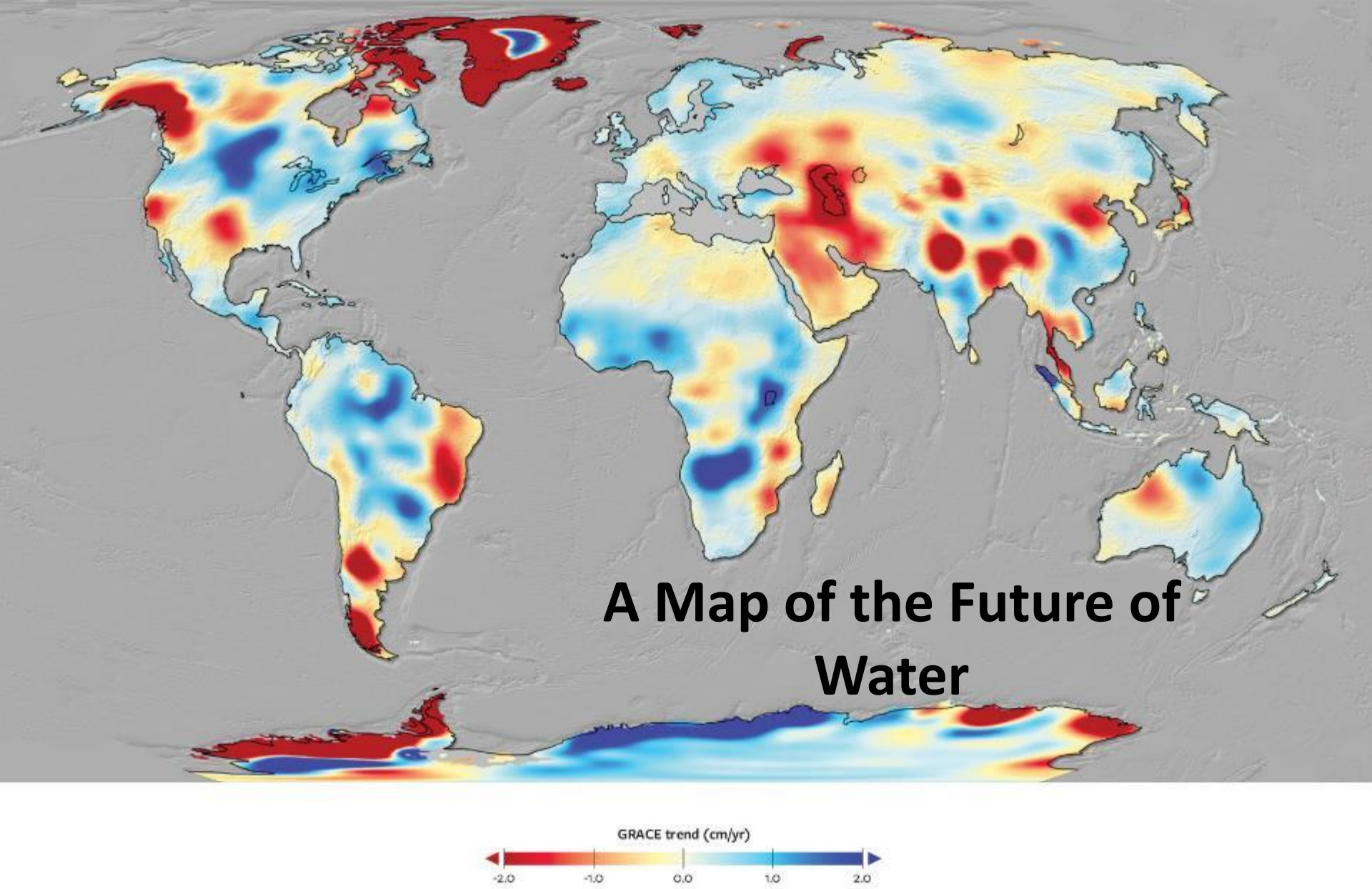


# **Amplifying this work**

## **Going from Local to Global**

- Local wisdom is the key
- Work with what communities already know and trusting their wisdom
- Communities own their project
- Science in service of the community/not community in service of science
- Collaborating with local NGO's and the local government





*Jay Famiglietti ED of the Global Institute of Water Recovery Uni of Saskatchewan from Gravity Recovery and Climate Experiment – NASA 2017 data*

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# A GLOBAL WATER SCHOOL

**WORKING GLOBALLY  
with  
COMMUNITIES LOCALLY**



- \* CATCHMENT HEALTH
- \* REVIVAL METHODS
- \* FLOODS /DROUGHTS
- \* CASE STUDIES
- \* MODELLING
- \* SATELLITE DATA

***Access to the tools and methods in the  
Water School will ALWAYS be free***

[www.theflowpartnership.org](http://www.theflowpartnership.org)



*The Water School will bring back the wisdom in the unspoken partnership between people and their water cycle*

**The GLOBAL KEY**



Inbox (1,478) - pfranses@gmail.com x P7310347.jpg - Google Maps x +



https://www.google.co.uk/maps/@27.2503659,76.2516484,44545m/data=!3m1!1e3!4m2!6m1!1s1UB... Q ☆

Apps ar a FreeAgent : Contacts

Water School x

## Sarsa Catchment

Path  
Name P7310347.jpg  
DateTime 2018:07:31 10:18:49  
Direction 260



Viratnagar  
विराटनगर

Sirska  
सिर्सका

Mala Khara  
माला खेरा

Dubbi  
दुब्बी

Rajgarh  
राजगढ़

Sakat  
सकत

Baswa  
बासवा

Karnawa  
कर्नावा

Birkari  
बिरकारी

Kanikhor  
कनिकोर












Google



Imagery ©2019 Landsat / Copernicus, Map data ©2019 Google United Kingdom Terms Send feedback 5 km

11:31  
15/04/2019





# INTERACTIVE CASE STUDIES AND CATCHMENT STRUCTURES AND METHODS




 Details
  Add ▾
  Edit
  Basemap
  Analysis
  ▾
  Share
  ▾
  Directions
 


Mahārājpurā, Rajasthan, IND
 


← Living Atlas ▾


71 layers








New England City and Town Area Divisions





by [Federal\\_User\\_Community](#)


Updated: 03/05/2019

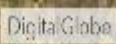



Ottawa  
Toronto  
New York





Imagery of villages and Lake Sagar Maasalpur - ESRI





# ALL YOU WANT TO KNOW IN ONE GLANCE

[www.theflowpartnership.org](http://www.theflowpartnership.org)





long range weather forecasts, crop  
choice etc via satellites and mobile  
network links

# THE WATER SCHOOL IS A WORK IN PROGRESS ..



## BUILD IT WITH US..

ARUP

theflowpartnership

partnership.org











5 Metric  
Tonnes of  
Wheat!!!



Grown in  
1.25  
hectares  
of land



With no  
fertilisers

**One grain of wheat usually produces 8 or more heads with over 40 seeds per head.**

**This was 34 heads per grain with about 55 seeds per head!!!**



Thank you  
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