

India  
Philanthropy  
Initiative

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Safe, sustainable water for all

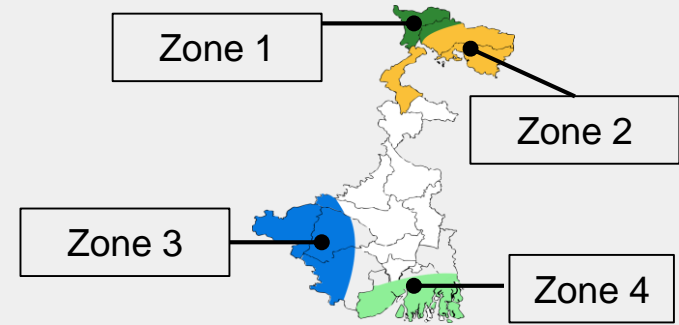
# Ensuring water security in West Bengal

Contextualizing solutions, working  
with the government and mobilizing  
local communities

PRASARI  
Saikat Pal



# Water problems in West Bengal are varied and complex



**Zone 1**  
**The Northern Hills**

A fragile ecosystem adversely impacted by development



**Zone 2**  
**Himalayan Foothill**

Adequate rainfall but poor management of water resources



**Zone 3**  
**Red Laterite**

Lowest rainfall, drought-prone areas



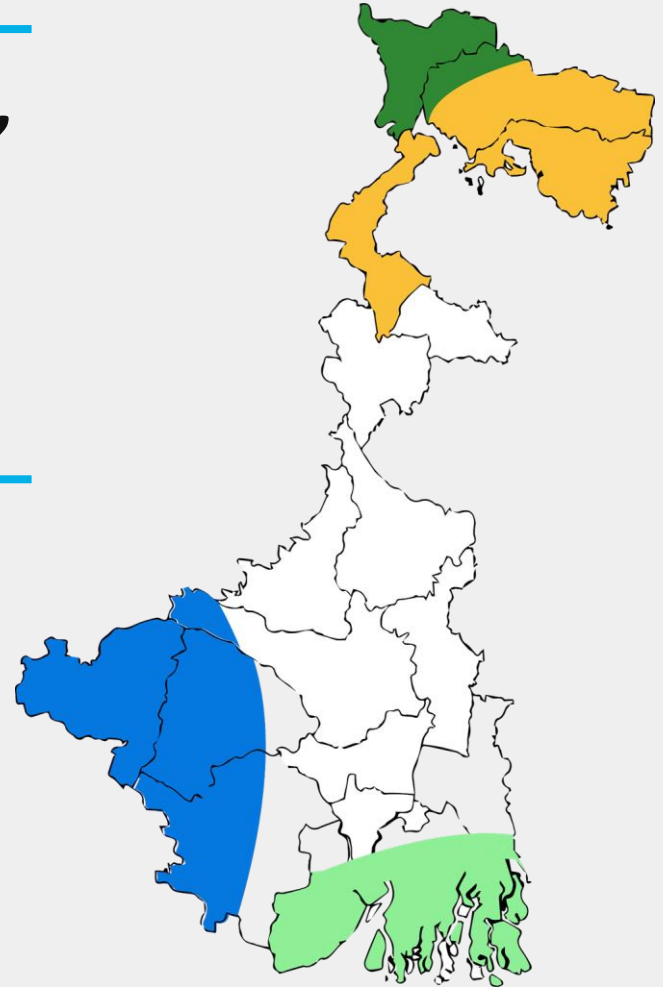
**Zone 4**  
**Coastal Sunderbans**

Water logging in the monsoon and peak salinity in summer

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***Given the level of complexity,  
PRASARI has designed  
contextual and scalable  
solutions for each zone.***

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# 1. A fragile ecosystem adversely impacted by development

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*Over 4400 springs, rapidly drying out*

## *The Challenge*

### **Water Security**

- Springs are the sole source of water for tribal communities
- Current HH water availability is less than 1/6th of recommended WHO limit

**Zone 1**  
**The Northern hills**



# Water security in the Northern hills

*~ Valley to valley approach to spring rejuvenation*



Barefoot  
hydrogeologists  
Dharasevaks and  
Dharasevikas,  
local volunteers  
from within the  
community

FORwater

Demystification of  
the science, an e-  
learning platform  
for the community



Working with the  
community

Jharnadhara

Working effectively  
with the Government

All Program Costs covered by the Government



# Dharasevak, Ignasus Tigga

Trained by PRASARI in 2016, Ignasus mobilized the villagers to undertake activities for rejuvenating "Deopani"- a drying spring in Jalpaiguri, and **increased the spring discharge to 3 times, in 3 years.**

MGNREGA funded the recharge and Ignasus continued leveraging support from the Govt. to install the **solar pumping and water distribution systems** from the spring, for his villagers.

## 2. Adequate rainfall but poor management of water resources

*Wells at the foothills have begun drying up*

### *The Challenge*

#### **Water Recharge**

- Poor Management of resources in critical recharge areas
- Impacting highly marginal, tribal tea garden workers
- Nov-Mar women forced to que up for well water at 2 AM

Zone 2

Himalayan Foothills



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# Water management through cluster based recharge & rejuvenation; Doorstep pipe- water supply system

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*~ Valley to ridge and the next valley approach*

*Water User  
Associations*

*Community  
+  
Dharsevaks*

*Gram  
Panchayats*



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## 3. Lowest rainfall, drought prone areas

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*Most water bodies are seasonal in nature*

### *The Challenge*

#### **Water conservation and cropping patterns**

- High run-off & top-soil loss
- Rice cropped region
- Marginalized tribal communities with low education levels

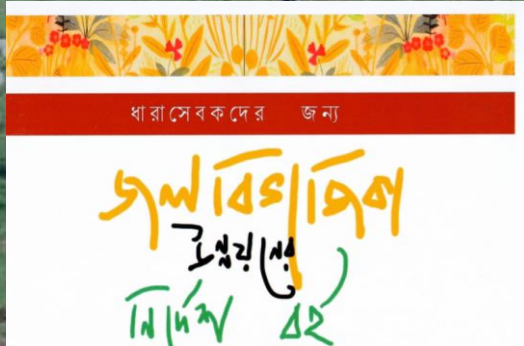
**Zone 3**  
**Red Laterite**



# Identifying recharge and discharge zones using static well level data

UsharMukti

*"Today's wage for tomorrow's livelihoods"*



Dharasewak Manual

## 4. Region of highest complexity

*Water logging in monsoon and peak salinity in summer*

### *The Challenge*

#### **Dual challenge of salinity and water logging**

- Salinity and inundation problems
- Very limited drainage facility
- Limited potential for solutions

**Zone 4**  
**Coastal Sundervans**





# Combating salinity and water logging in the delta

## The 5 Square Model

*~ Valley to ridge approach*





Image © 2019 CNES / Airbus

Google Earth

22°13'11.94" N 88°45'49.89" E elev 6 m eye alt 982 m

# Our Impact

## The Northern hills

19055 HH reached  
40% to 200% additional water supply  
690 rejuvenated springs

## Himalayan foothills

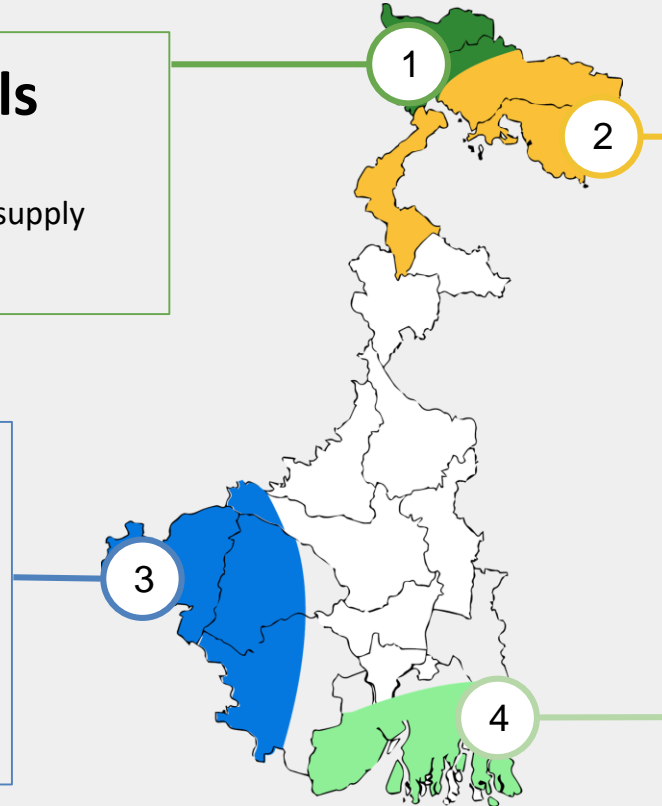
8000 HH reached  
40 WUAs  
64 DPRs  
144 Water sources for rejuvenation

## Red laterite zone

INR 2500 Crores in funding allocated by the Govt.  
INR 100 Crore/year allocated by the Govt. for 2 River Basins  
2000 Micro watersheds

## Coastal Sunderbans

50% reduction in salinity and no submergence in the treated catchments



# Our Plans for Scale

## The Northern Hills

- Reach out to all **4400 springs**
- Convergence between Govt. Depts. for 'Geo-spatial database enabled decision support system'
- INR 10.5 crore in development support costs would **leverage of INR 238 Crores of Govt. funding**

## Himalayan Foothills

- Reach out to **100000 Households** of three districts depending on wells, with their rejuvenation programme

## Red Laterite Zone

- Hydrology based watershed management in **37 micro watersheds** to set a model for the State

## Coastal Sunderbans

- Replicate the model across entire **19 Blocks**
- Consortium of 6 CSOs
- INR 12 Crores in Development support costs would **leverage INR 1036 crores of Govt. funding**

# Scaling through stronger research & evidence

## The Northern hills

Safe and judicious management of springs

10 NE states of Indian Himalayan Region

1

## Himalayan foothills

Well rejuvenation methodologies and recharge solutions where the tea garden is the recharge area

Entire plantation area in the Himalayan foothills

2

## Red laterite zone

Ground water hydrology for watershed planning-across the central India plateau

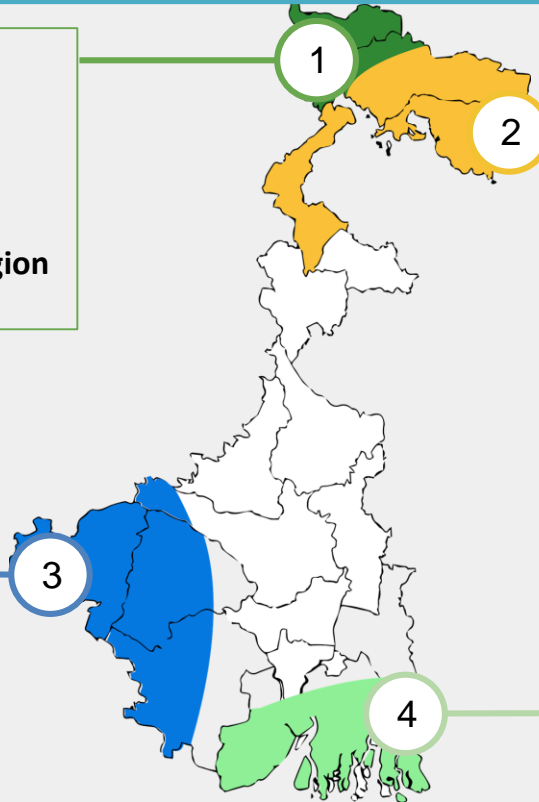
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## Coastal Sunderbans

Identifying solutions for managing saline catchments and aquifers

Across the Indian coastal zone

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# Partner with us

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**Water Security for  
Communities**

**Unlocking  
Government Capital  
for Program Costs**

**Research &  
Evidence Building  
for Scale**



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## CONTACT US TO KNOW MORE

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