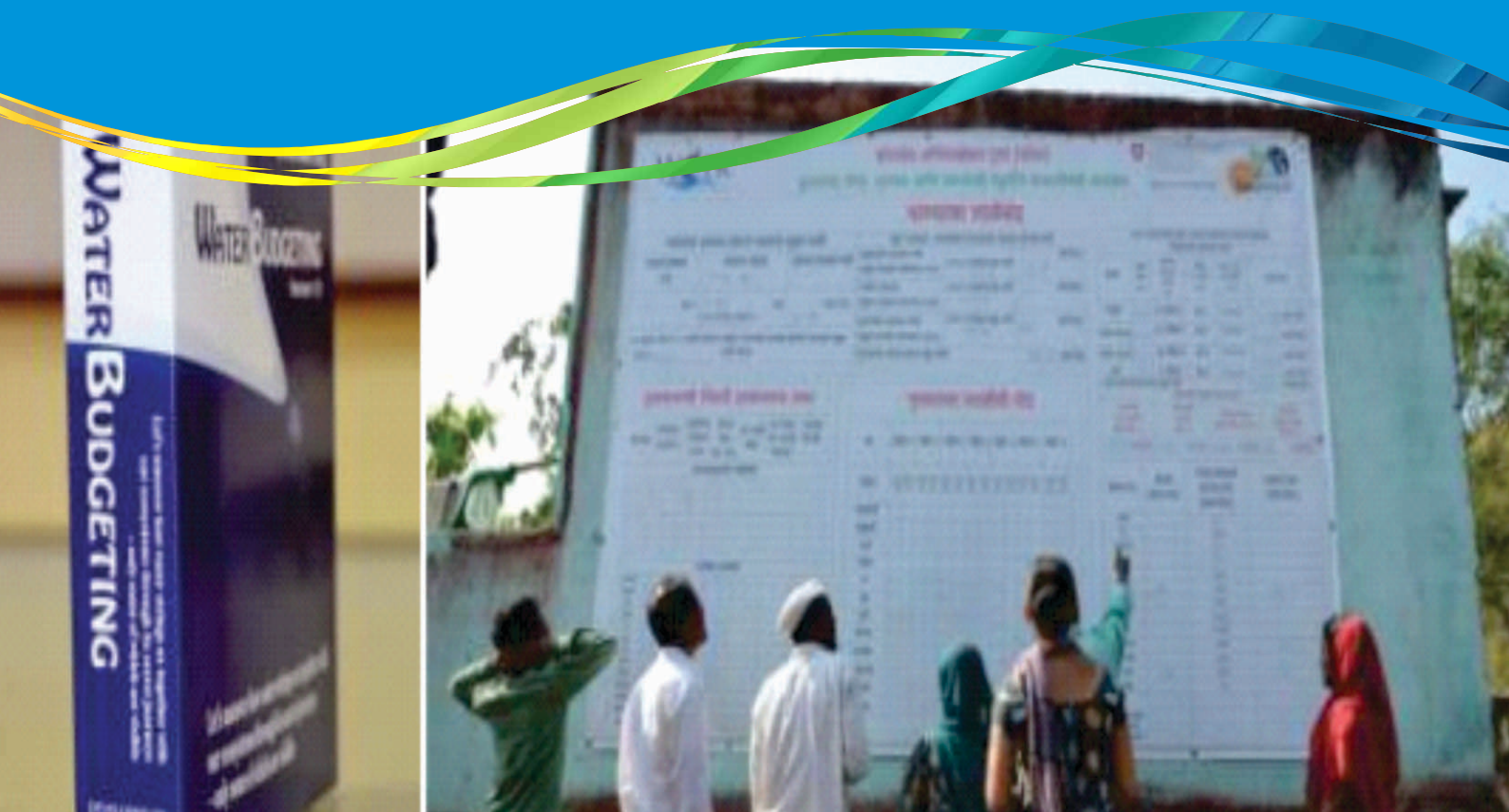


# WATER BUDGETING



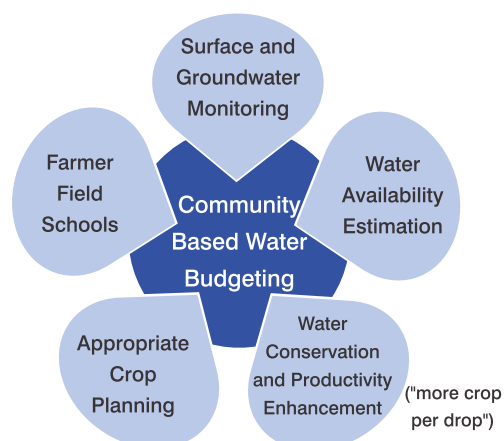
In the stir of climate change and persistent rainfall aberrations, water becomes limiting especially in semi-arid regions. Even where watershed development successfully augments water stocks, conditions of water scarcity can persist. This is particularly so in cash crop based agrarian economies which draw heavily from groundwater reserves for irrigation.

Community enforced Water Budgeting (WB) may be seen as an effective approach to address problems pertaining to water scarcity and has developed a “How-To” Methodology, a tool on WB and an interactive IT-enabled “Water Budgeting Game” that simulates scenarios resulting from different water use demands and cropping patterns in given rainfall.

## Participatory Water Budgeting: An Overview:

WB Methodology as practiced by WOTR, a partner of NABARD in sustainable Development is geared towards instilling in understanding of how water flows in a watershed, its judicious use and long term availability; following the principles of equity and water requirements for all uses.

People are made aware of the hydrological cycle and their dependencies on it. They quantify their annual water through a component-wise analysis using the tool and game. Rainfall data is provided by Automated Weather Stations (AWSs) installed in villages.



Since semi-arid regions depend on groundwater in the post monsoons, communities were capacitated to monitor their groundwater levels using a water level indicator. Bi-monthly data collected captures the groundwater fluctuation and is publicly displayed. Based on this information, crop plans are made (prior to the rabi sowing, taking care to secure sufficient water for livestock and domestic purposes in summer). Efficient irrigation methods (drips, sprinklers, micro-irrigation systems) are being adopted.



Using the WB approach community irrigation system has been introduced in 8 tribal villages of Mandla district, Madhya Pradesh. Their livelihood had been dependent on a single crop during kharif. A total of 60 irrigation systems each consisting of a set of 5 sprinklers, a motor, and pipes have been given to groups of 3 farmers each, giving them access to nearby streams/canals/wells. They are now able to provide crop saving irrigation to kharif crops in absence of timely rainfall, and to take short duration rabi crops. Over 180 families have been benefitted directly and have doubled their gross annual income. The average area under cultivation has increased by 48% and crop production by 82% (cereals and pulses) in this project area.



WB helps in combating water scarcity. It reduces chances of rabi crop failure. It thus increases productivity while contributing to securing sustainability of water resources.

क्र.सं.	विकासक नाम	प्र.सिंचन क्षेत्र (हेक्.)	सिंचन लागत (₹)	प्रति हेक्. उत्पन्न (₹)
1	सुखराज	0.50	1000	2000
2	विजय	0.50	1000	2000
3	मनोहर	0.50	1000	2000
4	रमेश	0.50	1000	2000
5	अनिल	0.50	1000	2000
6	विजय	0.50	1000	2000
7	मनोहर	0.50	1000	2000
8	रमेश	0.50	1000	2000
9	अनिल	0.50	1000	2000
10	विजय	0.50	1000	2000



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