

THE/NUDGE Prize


  
DCM SHRIRAM
   
FOUNDATION

# A Race Against Time to Solve India's Water Crisis

Office of the  
Principal Scientific Advisor  
to the Government of India

In the early decades after independence, India depended on foreign food-aid due to domestic shortages, a distant memory for a young nation that grew up after the Green Revolution in the early 1970s. Although we still struggle to address hunger, it is not due to a lack of food production, as evidenced by overflowing government granaries.

Sadly, we achieved food security by trading in water security, a resource even more essential for the survival of 1.3 billion people. India is now facing a looming crisis as we deplete groundwater and other freshwater sources, 78% of which is consumed by agriculture. Despite this, farmers too are struggling with low incomes, regularly featuring in the news for record numbers of suicides, and protests.

Governments, civil society and market players have all tried to solve the water crisis, and although there are some encouraging results, the problem can never be solved until we address the issues of smallholder farmers with less than 2 hectares of land, who make up around 86% of farm households. Ignoring their challenges and needs is a recipe for disaster, a story that has already played out in national media as we try and fail every year to stop stubble burning that chokes the national capital. The majority of them grow water-intensive cash crops such as rice, wheat, sugarcane and cotton, which have an assured market. Many attempts have been made to transition them to less water-guzzling

crops such as millets, but there are powerful and complicated incentives at play, from Minimum Support Prices (MSPs) for traditional crops to low market demand for new ones, making it infeasible for them to change practices, without choosing to starve themselves.

Recognising this, DCM Shriram Foundation and The/Nudge Prize has launched the DCM Shriram AgWater Challenge, a **startup contest with a prize purse of INR 2.6 crores**, which will be awarded to an organisation that comes up with a tech solution that is water use efficient, affordable and profitable for small farmers, and scalable, criteria selected after a detailed study by PwC.

Unless all these parameters are met, especially making sure that the cost is less than 20% of cultivation cost, and profitability increases of at least 40-50%, the solution will not be adopted by farmers. Contestants in the challenge have to achieve these goals, and also demonstrate results in over 5000 hectares.

The challenge, launched in June 2023 in partnership with the office of the Principal Scientific Advisor to the Government of India, received 134 applicants, out of which 16 organisations were shortlisted after rigorous evaluations. Unlike traditional startup contests, the challenge is meant to jump-start the

entire ecosystem. All contestants will get access to mentorship and exposure to investors and partners, even if not everyone will get the allocated prize. The pool of leading Agtech organisations has also helped to propagate different business models and technologies, such as irrigation as a service to keep costs and returns predictable, biotechnology solutions to improve productivity and efficiency, and satellite imaging and AI/ML analytics to provide precise advice that leads to improved yield and water use efficiency.

Contestants are already working across 13 major states and reaching over 2 lakh farmers, but the task at hand isn't easy. DCM Shriram Foundation and The/Nudge are essentially trying to reshape market and technological forces, along with changing human behaviour rooted in long traditions, in a country that is still trying to reconcile its civilisational history with the promise of the future.

As the challenge progresses towards its conclusion in 2024, contestants are racing against another deadline, with the Northwestern region of India projected to become water-scarce by 2025. Given the urgency of the situation, the DCM Shriram AgWater Challenge and contestants need to catalyse a movement that pulls India back from the brink.

We might no longer have the luxury of treating innovation as a choice.