

Gramin Vikas Vigyan Samiti (GRAVIS) — Science in the Desert, Dignity in the Drought

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The Thar Desert in western Rajasthan is India's most water-stressed landscape. Average annual rainfall in Barmer and Jaisalmer districts runs below 250 millimetres. Groundwater is saline or absent. Fluoride contamination affects large areas. For the pastoral and agricultural communities who live here — Bishnoi, Meghwal, and OBC farming and herding families — water, health, and livelihood are not separate development sectors. They are the same problem.

Gramin Vikas Vigyan Samiti — GRAVIS, meaning "Village Development Science Organisation" — was founded in 1983 in Jodhpur, Rajasthan, by Dr. N.C. Saxena and a group of scientists and activists who believed that science appropriately applied could change the conditions of India's most resource-deprived communities. Forty-two years later, GRAVIS operates across the most drought-prone districts of Rajasthan and extends its learning to other arid-zone states.

Who They Are

GRAVIS works in the remote areas of Rajasthan — particularly Barmer, Jaisalmer, Jodhpur, Jalore, Pali, Nagaur, Churu, and Bikaner — with a cumulative reach across their history of over 1.5 million beneficiaries. Their work spans four interconnected domains: water and sanitation, health, livelihoods and rural development, and DRR (Disaster Risk Reduction). The interconnection is not bureaucratic convenience — it

reflects the actual conditions of desert communities where a water intervention creates a health outcome, and a livelihood intervention determines whether a family can maintain a WASH infrastructure.

Their founding discipline — applied science for community development — is visible in their approach to all four domains. Their water interventions use traditional Rajasthani water harvesting systems (johads, nadi, tanka) that have been used for centuries but have been underinvested by modern government. Their health interventions are based on a community health worker model trained and supervised by GRAVIS medical professionals.

The Aarogyaseva Mobile Medical Programme

GRAVIS's Aarogyaseva programme deploys mobile medical units that bring primary healthcare to communities where the nearest PHC is hours away. The programme provides: basic diagnostics and treatment, maternal and child health services, nutrition assessment and supplementation, eye care (GRAVIS has documented cataract surgery camps reaching thousands of patients), and health education.

For communities in Barmer and Jaisalmer — where mobile connectivity, road connectivity, and health facility density are all at India's lowest quartile — the Aarogyaseva unit is not a supplement to primary health care. It is primary health care. The programme has documented over 2.5 million medical consultations across its operational history.

Traditional Water Harvesting Revived

GRAVIS's water conservation programme has constructed and rejuvenated over 2,000 traditional water harvesting structures across desert Rajasthan — johads (village ponds), tanks (taankas), and kunds (underground cisterns) — benefitting over 500 villages. These structures work with the desert's rainfall pattern (rare but intense) rather than against it, capturing runoff from summer storms and storing it for year-round use.

The programme is simultaneously conservation, livelihood, and women's empowerment work: women are the primary water-carriers in desert communities, and reduced water collection distances directly translate into time freed for education, enterprise, and care. GRAVIS documents that tanka construction has reduced average women's daily water collection time by two to three hours in programme villages.

Disaster Risk Reduction in the Drought Cycle

The Thar's drought cycle is not a natural disaster — it is a predictable pattern that becomes a disaster only when communities lack the preparedness infrastructure to manage it. GRAVIS's DRR programme builds community-level drought preparedness: grain banks for food security during lean months, fodder banks for livestock survival during feed scarcity, and migration management support for families who move seasonally with their herds.

Their 2023-24 programme documentation includes community fodder banks stocked before the monsoon failure season, village grain bank protocols activated by gram sabha decision rather than waiting for government declaration, and community migration tracking that connects migrant families to health and welfare services at destination.

Why This Matters for Odisha

GRAVIS's conditions — remote communities, absent health infrastructure, water scarcity, high agricultural vulnerability — mirror those of Odisha's KBK belt more than any other Indian civil society organisation's operational context. Their mobile health unit model is directly applicable to Malkangiri and Koraput's interior blocks. Their community water harvesting approach, adapted to a different rainfall pattern, is applicable to Odisha's dry-season water scarcity in the same districts. For Odisha NGOs working in the most remote tribal health and water contexts, GRAVIS is the evidence reference.

Contact and Further Reading

Website: gravis.org.in | **Contact:** Jodhpur, Rajasthan

Key evidence:

- GRAVIS website: gravis.org.in — Aarogyaseva programme, traditional water harvesting, DRR
- CSRBox GRAVIS profile: 1.5 million beneficiaries, 2,000 water structures, 500 villages
- Give.do GRAVIS profile: Aarogyaseva medical consultations, community health worker programme

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