



# Groundwater Aquifer Rejuvenation Demonstration Pilot Project for Balochistan

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## Snapshot

|                 |                       |
|-----------------|-----------------------|
| Project site    | Balochistan, Pakistan |
| Cost            | US\$ 49,850           |
| Status          | Completed             |
| Approval date   | April 2005            |
| Completion date | April 2007            |
| Category        | Basin                 |
| ADB officer     | Safdar Parvez         |
| Partner         | IUCN Pakistan         |

## Report card

Completed in April 2007, this PDA

- Installed recharge structures (boreholes and infiltration galleries) in two dams; downstream of the Murghi Kotal Dam and upstream of the Dargai Dam to increase recharge for increased flow in "karezes" and water levels in open wells
- Constructed a leaky structure at the upstream side of Dargai dam to delay the flow of water and filter it before releasing it into the recharge systems.
- Conducted meetings with villagers and other stakeholders to explain the interventions, the proposed technologies, and their needed collaboration for maintaining the project structures

Read the [final report](#).

## Description

Pakistan's desert climate means temperature can be as high as 40° Celsius and annual rainfall is low, causing surface water bodies to evaporate rapidly. In the past, groundwater was tapped through the traditional "karez," a system of wells that draw from the water table. Today, however, the country's groundwater resources are fast depleting.

Initially, delay action dams (DADs), which allow deep percolation through the reservoirs' beds, served as solutions to restoring groundwater resources. However, studies show that high content of fine clay brought by runoff gets deposited and rapidly seals the beds. Consequently, the dams now act as mere evaporation ponds with little to no recharge through the beds. The need to control the situation, at the same time ensure that investments in DADs do not go to waste, is now urgent.

## Expected outcomes

- Increased recharge in shallow aquifer system resulting in increased flow in "karezes" and water levels in open wells
- Increased understanding of recharge mechanism and technology among policy makers, planners and engineering community

## Related

- [More on water and sanitation](#)
- [Pakistan and ADB](#)
- [Pilot and Demonstration Activities](#)
- [Final Report \(April 2007\)](#)
- [Midterm Report \(June 2006\)](#)
- [Inception Report \(July 2005\)](#)
- [Proposal \(May 2005\)](#)

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Sourced from <https://www.adb.org//results/water-pda-groundwater-aquifer-rejuvenation-demonstration-pilot-project-balochistan>