GROUNDWATER RESERVES BEING SUCKED DRY : STUDIES

Indus Basin aquifer among world's most 'overstressed' of water.

Washington : Human activity is leading to the rapid draining of about one-third of the planet's largest groundwater reserves and if it is unclear how much fluid remains in them, two new studies have found.

Consequently, huge sections of the population are using up groundwater without knowing when it will run out, researchers said in findings that will appear in the journal Water Resources Research and were posted online on Tuesday.

Available physical and chemical measurements are simply insufficient, University of California Irvine Professor and Principal Investigator Jay Famiglietti said in a statement.

Given how quickly we are consuming the world's groundwater reserves, we need a coordinated global effort to determine how much is left, added Mr. Famiglietti, who is also the senior water scientist at NASA's Jet Population Laboratory.

Scientists used data from special NASA satellites to measure groundwater losses.

In the first paper, they looked at 37 of Earth's biggest aquifers between 2003 and 2013. Eight of these were classified as "overstressed", meaning they were being sucked dry with almost no natural replacement to offset the usage.

Five other aquifers were determined to be "extremely or highly stressed". Scientists warmed the situation would only worsen with climate change and population growth. The most over burdened aquifers are in the world's driest places, where there is little natural replenishment.

"What happens when a highly stressed aquifer is located in a region with socio-economic or political tensions that can't supplement declining water supplies fast enough"? said Alexandra Richey, the lead author on both studies.

"We're trying to raise red flags now two pinpoint where active management today could protect further lives and livelihoods".

Researchers found that the Arabian Aquifer System, providing water for more than 60 million people, is the world's most overstressed source.

The Indus Basin aquifer of Pakistan and North-Western India is the second-most overstressed and the Murzuk-Djado Basin in Northern Africa is third, scientists said.

In drought-stricken California, the Central Valley aquifer was labeled as "highly stressed".

The second paper concludes that the total remaining volume of the world's useable groundwater is poorly known and huge discrepancies exist in estimated "time to depletion".

"We don't actually know how much is stored in each of these aquifers. Estimates of remaining storage might vary from decades to millennia", Mr. Richey said.

"In a water-scare society, we can no longer tolerate this level of uncertainty, especially since groundwater is disappearing so rapidly".

(Courtesy of Dawn 29-06-2015)