

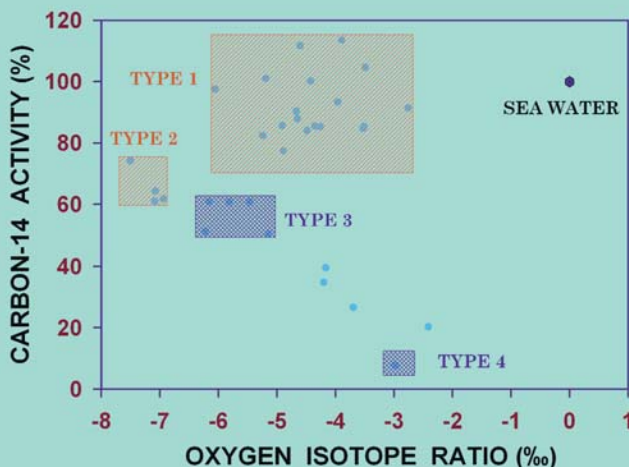


Mitigation Strategies for Arsenic Contamination

A major public health crisis affecting millions of people has erupted in Bangladesh from exposure to arsenic through drinking water. One of the mitigation strategies is the development of deep groundwater as an alternative source of arsenic-free drinking water. Isotopic "fingerprints" of shallow



and deep groundwater were developed to determine the source and renewability of groundwater in the different aquifers. The isotopic information was critical in guiding Bangladesh policy of deep aquifer exploitation and is presently being used in a World Bank project for arsenic-free rural water supply.



Type 1: Arsenic-bearing Shallow (depth <70 m),
Replenished by rain & flood waters, Modern in age.

Type 2: Arsenic-bearing, Higher salinity, shallow,
Recharge from river water, Modern in age.

Type 3: Arsenic-free, Deeper (depth ~150m),
Low salinity, Several thousand years old.

Type 4: Arsenic-free, Deep (depth ~300 m),
Old (~20000 years)