

Allah SWT says in Surah Al Furqan ayah 53:

وَهُوَ الَّذِي مَرَجَ الْبَحْرَيْنِ هَذَا عَذْبٌ فُرَاتٌ وَهَذَا مِلْحٌ أُجَاجٌ وَجَعَلَ بَيْنَهُمَا بَرْزَخًا وَحِجْرًا مَّحْجُورًا

And it is He Who has let free the two seas; one delicious and sweet, and the other salty and bitter. Between the two He has made a barrier and inviolable obstruction (for them not to mix)

Please explain the scientific fact mentioned in his ayah. What causes the sweet fresh water and the salty water not to mix?

AssalamuAlaikum,

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This is one of the ayat that show us that the Quran is from Allah SWT and that these signs that Allah SWT mentions in the Quran are intended to help us explore and ponder in the creation of Allah so we can increase our Iman in. Allah SWT.

Allah SWT mentions the sea with fresh water and the sea of salty water. Allah SWT set them free to merge, and created a barrier between them that causes them not to mix. When we study the chemical characteristics of salt water and fresh water, we find that salt water is denser than fresh water. One also notices this when trying to swim in fresh water such as a swimming pool and swimming in salt water in the sea, floating is easier in salt water due to its higher density. It is also known from science that less dense liquids tend to not mix with higher density liquids and stays a float above the higher density fluid. And this is the case here. Fresh water does not mix with salty water due the difference in their densities. As a result, when the water of the river merges with the salty water of the sea, Sheikh Zaghlool Al Najjar explains this phenomenon and how the two don't fully mix due to their densities. There are more detailed scientific details involved that deal with the compound of the substances included in salty water and their impact on keeping salty water from mixing with fresh water.