Supplementary File-3. δ18O and δ2H values in karstic groundwater resources in the studied stations across the Zagros region.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Row | station | Zone | n. | x | y | δ18O (‰VSMOW) | | | | δ2H (‰VSMOW) | | | | References |
| Min | Max | Mean | Std. | Min | Max | Mean | Std. |
| 1 | Bibi talkhoun | SZ | 6 | 32.07 | 49.61 | -5.8 | -4.6 | -5.2 | 0.4 | -29.1 | -13.8 | -22.5 | 6.6 | (Kalantari and Mohamadi Behzad, 2013) |
| 2 | keyno | SZ | 9 | 32.58 | 49.51 | -6.9 | -5.0 | -5.8 | 0.6 | -33.8 | -20.1 | -25.7 | 3.6 | (Chitsazan et al., 2015) |
| 3 | Orumieh-Oshnavieh | WZ | 13 | 37.03 | 45.09 | -10.5 | -7.8 | -9.7 | 0.8 | -67.1 | -60.0 | -64.3 | 2.4 | (Heydarizad, 2018) |
| 4 | Kangan | WZ | 12 | 27.83 | 52.06 | -5.6 | -3.2 | -4.1 | 0.9 | -22.4 | -12.9 | -19.1 | 4.9 | (Bagheri et al., 2014; Mohebi, 2012) |
| 5 | bushehr-Ahram | SZ | 7 | 28.88 | 51.27 | -4.6 | -2.5 | -3.4 | 0.7 | -19.9 | -10.0 | -16.0 | 3.5 | (Karimi and Moore, 2008) |
| 6 | Hormozgan | SZ | 11 | 28.30 | 55.90 | -5.4 | -3.4 | -4.5 | 0.6 | -25.8 | -18.7 | -22.9 | 2.2 | (Rezeai et al., 1998) |
| 7 | Ilam-dare shahr | WZ | 19 | 33.13 | 47.37 | -6.8 | -4.5 | -5.8 | 0.5 | -35.0 | -24.0 | -30.6 | 3.3 | (Masjedi et al., 1995) |
| 8 | Tang bijar | WZ | 5 | 33.69 | 45.87 | -6.3 | -3.9 | -4.6 | 1.0 | -28.3 | -16.0 | -19.4 | 5.1 | (Rafighdoust et al., 2015) |
| 9 | Lorestan-Aleshtar | WZ | 8 | 33.86 | 48.26 | -7.8 | -6.6 | -7.3 | 0.4 | -42.0 | -33.3 | -38.1 | 2.9 | (Ahmadipour, 2003) |
| 10 | Havsan | WZ | 12 | 34.54 | 45.76 | -6.3 | 4.1 | -5.0 | 0.7 | -35.2 | -25.9 | -29.3 | 3.2 | (Khalaj Amirhosseini, 2011) |
| 11 | Poleh Dokhtar | WZ | 14 | 33.15 | 47.71 | -3.9 | -3.1 | -3.6 | 0.6 | -22.1 | -13.6 | -18.2 | 3.1 | (Ahmadipour, 2003; Mohebi, 2012) |
| 12 | Alvand | WZ | 9 | 34.51 | 45.57 | -7.3 | -6.0 | -6.4 | 0.5 | -38.3 | -30.7 | -33.8 | 2.4 | (Karimi et al., 2005) |
| 13 | Maharloo | SZ | 162 | 29.46 | 52.80 | -26.0 | -0.6 | -5.9 | 3.3 | -42.9 | -15.2 | -32.1 | 4.9 | (Rezaei, 1993) |
| 14 | Darab | SZ | 48 | 28.75 | 54.54 | -5.8 | -4.0 | -5.0 | 0.4 | -27.9 | -15.2 | -23.2 | 3.1 | (Heydarizad, 2018) |
| 15 | Bushehr (Shahpor) | SZ | 39 | 29.47 | 51.14 | -5.7 | 9.7 | -3.4 | 2.5 | 22.6 | 53.7 | -9.9 | 12.3 | (Rezaei et al., 1998) |
| 16 | Kazerun | SZ | 39 | 29.61 | 51.65 | -6.1 | -1.0 | -4.4 | 1.1 | -27.4 | 2.1 | -17.4 | 5.8 | (Rezaei et al., 1998) |
| 17 | Arjan | SZ | 22 | 29.66 | 51.98 | -6.0 | -2.0 | -4.3 | 1.2 | -29.8 | -4.8 | -17.7 | 6.8 | (Rezaei et al., 1998) |
| 18 | Bakhtegan | SZ | 24 | 29.36 | 53.83 | -7.1 | -4.4 | -6.3 | 0.5 | -40.1 | -23.9 | -33.7 | 3.8 | (Niroomand and Pakzad, 1997) |
| 19 | Khersan dam | WZ | 24 | 31.24 | 50.97 | -7.2 | -4.9 | -6.2 | 0.6 | -37.0 | -24.8 | -31.5 | 3.4 | (Mohammadi et al., 2007) |
| 20 | Erbil-Iraq | WZ | 40 | 36.27 | 44.07 | -7.8 | -5.5 | -6.9 | 0.6 | -42.1 | -30.3 | -37.5 | 2.8 | (Seeyan and Merkel, 2014) |
| 21 | Sarpol Zahab | WZ | 18 | 34.46 | 45.86 | -6.8 | -3.9 | -6.0 | 0.7 | -36.2 | -21.7 | -32.3 | 3.7 | (Mohammadzadeh & Amiri, 2019) |
| 22 | Ravansar | WZ | 13 | 34.71 | 46.65 | -8.1 | -5.6 | -6.8 | 0.8 | -46.2 | -26.2 | -36.7 | 5.6 | (Mohammadzadeh & Eskandari, 2018) |
| 23 | Paveh | WZ | 12 | 35.04 | 46.35 | -7.5 | -6.3 | -7.0 | 0.4 | -40.5 | -33.6 | -37.2 | 2.0 | (Mohammadzadeh & Eskandari, 2018) |
| 24 | Javanrud | WZ | 6 | 34.80 | 46.48 | -7.5 | -7.0 | -7.2 | 0.2 | -38.5 | -35.0 | -36.8 | 1.3 | (Mohammadzadeh & Eskandari, 2018) |
| 25 | Behbahan | SZ | 22 | 30.59 | 50.24 | -5.3 | -2.3 | -3.7 | 0.9 | -16.7 | -5.1 | -10.9 | 4.2 | (Daneshian et al., 2020) |

n. stands for the number of samples St.d. stands for the standard deviation

SZ stands for south Zagros WZ stands for west Zagros