



KARKEH RIVER

KARKEH RIVER (Rud-e Karkeh), the third longest river in Iran after the rivers [Karun](#) and Safidrud, flowing in the western provinces of the country. It rises from the Zagros mountain range and, flowing for about 755 km in a southwestward direction, reaches the Hur-al-ʿAzim lagoon on the Iran-Iraq border. It corresponds to the upper course of the [Choaspes](#) (no. 1) mentioned in Classical sources (see Weissbach). The name Karkeh is reminiscent of the town Karkā or Karkeh in the district (*kura*) of Susa in Khuzestan, mentioned by early Islamic geographers and described by Moqaddasi (Maqdesi) as a small, pleasant, populous town with gardens and a castle (Eṣṭakri, pp. 88, 89; Moqaddasi, pp. 25, 405, 408). It seems that the river was called so after this town, which once stood on its right bank.

The Karkeh River is a part of the exoreic Persian Gulf drainage system, characterized by five great rivers that discharge their waters from the Zagros Mountains into the Persian Gulf through Khuzestan (q.v.). Draining a total area of approximately 117,000 km², the Karkeh River system is, together with the Karun, among the larger ones. However, genesis, structure, and nomenclature of the Karkeh are complicated, reflecting the equally complicated and highly complex geological, geomorphological, and hydrological environment of its drainage area (Oberlander, 1965, pp. 72-75, esp. pp. 72-73; idem, 1968, p. 207). Embracing a number of hydrological sub-basins such as the Nehāvandrud, the Dinavar, the Gāmāsiāb, the Qarasu, and especially the Kašgānrud as its main tributary, the Karkeh drains a total area of more than 45,800 km² (Beaumont, p. 11). It is only in the lower section of



this vast drainage area that the river is known by its name of Karkeh, that is, after the confluence of the Saymara, the main hydrological unit for the Piš-kuh region, and the Kašgānrud flowing down from Korramābād (q.v.; see Ja'fari, p. 390; Stein, p. 171). Unlike other Zagros streams, the Karkeh does not flow into the Persian Gulf. Instead, it discharges its waters into the basin of Dašt-e Mišān, which is part of the great inland basin stretching from Khuzistan to the lowlands of the Euphrates-Tigris interior delta (Kor al-Howayza). This area consisting of lagoons, marshes, braided channels, and embanked river courses, is subject to severe salinity. Thus the Karkeh is a typical example of highland-lowland interactions in an ecological sense.

This close interrelationship between the Zagros and its western foreland, the Khuzistan plain, is obvious also in regard to climate and the hydrology of the Karkeh River. The drainage area of the Karkeh receives annual precipitation rates of up to 400 mm. Covered with snow for up to five months, the river regime of the Karkeh is therefore characterized, like that of most Zagros streams discharging into the Persian Gulf, by a somewhat delayed flow-off, with its peaks in late spring and early summer being the most important (Beaumont, pp. 11, 14). Yet, both Peter Beaumont (p. 26) and Theodore Oberlander (1965, p. 65) stress the comparatively low water yield of the Karkeh, very probably to be explained by the configuration of the Karkeh basin with its extended alluvial plains and correspondingly high water losses due to evaporation and irrigation. With superimposition of additional, heavy cyclonic rainfall over Khuzistan or the Zagros region, severe flooding of the marshes bordering the Tigris, Dez (see [ĀB-e DEZ](#)), and Karun rivers is a more or less regular event. Annual inundations or waterlogging of many thousand hectares of land, sometimes combined with the flooding of highways and settlements, cause severe damage. An especially vulnerable, flood-prone area is the mouth of the Karkeh in the Dašt-e Mišān with Susangerd as its dominating urban center. Flooding, in combination with high groundwater levels and extremely high evaporation rates in the summer months, contributes to a high salinity of the soils. Soils are halomorphic (solonchak), poorly drained, and contain more or less large quantities of soluble salts and are therefore unsuitable for agricultural use. The vegetation with halophytic and salt-loving species of genera such as *Salsola*, *Suaeda*, and *Plantago* is a hampering factor also for the animal husbandry of the predominantly Arab population of Dašt-e Mišān. Agriculture therefore is difficult and possible only where drainage of the fields and leaching of the soil is appropriately observed (Dewan and Bordbar). In the valleys and basins of the upper course of Karkeh



and its tributaries, in contrast, irrigated agriculture and different forms of mountain nomadism have a long history and have been the economic basis of the Lor population.

Archeological evidence and historical reports suggest that the present Karkeh River regime may have been totally different 5,000 to 6,000 years ago. Especially Robert M. Adams (p. 113) argues that in early historic times “a large part of the drainage from the present Karkheh watershed may have run southeastward along what is now the bed of the Dez River. In addition there are suggestions that some of the minor outwash channels reaching the plain between the Dez and Karun rivers may have carried a larger, or at least less strictly seasonal, flow than they do at present.” In ancient texts the Karkeh was known as Choaspes and described as a tributary to the Tigris (Strabo, 15.3.4), but, in reality, only in its upper course can the Choaspes be identified with the Karkeh; its lower course evidently corresponds to the Karun River. Medieval geographers and historians give contradictory and by no means clear descriptions of the river Karkeh, its origins and sources, and its nomenclature (Schwarz, pp. 304-5, 308-9). Due to its vicinity to the Achaemenid capital of Susa/Šuš, the river has been called on several occasions “the river of Šuš” (Nahr al-Sus). Ebn Kordādbeh (p. 76) and Ebn Rosta (p. 91) refer to it as a tributary of the Karun River (Dojayl), rising in the region of Dinavar. Ḥamd-Allāh Mostawfi (pp. 215, 218; tr., pp. 207, 211) makes it a tributary of the Šaṭṭ-al-‘Arab and locates its source at the Alvand Mountain range ([Alvand Kuh](#)) near [Hamadan](#). It is described in the *Ḥodud al-‘ālam*: “Another river is that of Shūsh which rises in the neighbourhood of Karkha from one of the spurs of the Jibāl mountains and it flows to irrigate the countryside of Shūshtar and Shūsh. It passes between Shūsh and B.dhūshāvur[?], but before reaching the limit of Baṣunnay all of it is used in the fields” (*Ḥodud al-‘ālam*, p. 46; tr., p. 75). Thus it is very likely that the Karkeh river has been a major source of irrigated agriculture for millennia, but also an example of those rivers that do not reach the coasts of the world ocean because of topography or, as in the case of the Karkeh, because of overexploitation due to human interference.



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