



BAND “DAM”

BAND “dam.” *General remarks.* The word means something that factually or figuratively binds, ties, or restricts (cf. Av. *banda-* “bond,” Eng. *bond*). In geographical nomenclature it is applied to ranges (mainly in Afghanistan, e.g., Band-e Torkestān), passes (*darband*) and, above all, old dams and barrages built to store or divert water for irrigational use and urban consumption (the term for a modern dam is *sadd*).

The word *band* passed from Persian into Turkish (modern spelling *bent*). In particular it is applied to the reservoirs in the forest of Belgrade, north of Istanbul, which were built in Byzantine times to store water for the city and were renovated and extended in the 16th century.

Dam construction techniques were developed in early phases of the history of the lands of Iranian civilization: weirs under the Achaemenids, weirs with sluice gates under the Sasanians. Construction of arched dams began in the Mongol period (ca. 1250-1350), e.g., the Kebār dam 25 km south of Qom, the Koreyt dam 28 km west of the oasis of that name which lies 18 km south of Ṭabas, and the Kalāt-e Nāderī dam in the mountains of Khorasan. The word *band* also appears in many names of villages, referring to preserved or vanished dams, and of places close by.

Exploration and cataloguing of dam remains is still far from complete; those more or less adequately described are listed below by region:

Fārs. It appears, in the present state of our knowledge, that the earliest big



dams were built on the Kor river and its tributaries, which water the Marvdašt (Persepolis) plain, the old homeland of the Achaemenids. (1) Situated above the river's entry into the plain are the probably Sasanian remains of the Band-e Doḡtar, or Sang-e Doḡtar, and downstream therefrom the almost certainly Achaemenid remains of the Band-e Borīdān. These served to irrigate the districts of Kāmfirūz and Rāmjerd. The Band-e Borīdān is mentioned by Ebn al-Balkī (p. 151) under the name Band-e Rāmjerd; it was an ancient structure and after its restoration in the 6th/12th century by the *atābak* Faḡr-al-Dawla Čāvlī (Čawlī) it acquired the name Faḡrestān and was the principal dam in this sector; in the Mongol period it again fell into ruin, and in the Safavid period it appears to have been only temporarily repaired. In the 13th/19th century it was replaced by a new structure named Band-e Nāṣerī after the reigning Nāṣer-al-Dīn Shah. The modern Dorūdzan dam (Sadd-e Dāryūš-e Kabīr) is located not far from this site. (2) Below the confluence of the Kor and the Polvār, the district of Korbāl is irrigated by means of a series of barrages named, in descending order, [Band-e Amīr](#), Band-e Fayzābād, Band-e Tilakān (or Band-e Maymūn), Band-e Mavān, Band-e Ḥasanābād, and Band-e Jahānābād. Medieval sources credit the Buyid ruler ‘Azod-al-Dawla (r. 338-72/949-83) with the construction of the Band-e Amīr. The Band-e Fayzābād, however, is undoubtedly the oldest (Achaemenid and Sasanian); it must be identical with the Band-e Qaṣṣār (dam of the fullers) which was once repaired by the *atābak* Čawlī (Ebn al-Balkī, p. 152). Since he only knew of the Band-e Amīr, the Band-e Qaṣṣār, and the Band-e Rāmjerd, it can be inferred that the other dams are more recent (probably Safavid or Zand). (3) On the Māyen, a left-bank tributary of the Kor, about 5 km upstream from the confluence, an old dam named the Band-e Ḥājī Mo’adḡden is intact and still in use. It commands a canal which in March, 1971, had a flow of 1.5 m³ per second and now irrigates 400 hectares. Vestiges of a much bigger canal are visible. G. Kortum (p. 117) holds that this was another work of ‘Azod-al-Dawla, undertaken initially to supply water for the city of Eṣṭaḡr, later abandoned, and again brought into use in a quite recent period. Another noteworthy weir in Fārs, probably of pre-Islamic origin, is [Band-e Bahman](#) across the river Qara Āḡaj.

Kūzestān. Several large dams were built as a result of Šāpūr I's victory over the Roman emperor Valerian in a.d. 260. According to the traditional account, the captive Romans were put to work on building bridges over the Karka, Kārūn, and Dez rivers, which would provide better communication with the newly reconquered western provinces. The idea then came up that these huge



bridges might be made to serve also as irrigation barrages by means of sluice gates. The bridge-barrage known as the Band-e Qayşar (i.e., Valerian's bridge), or Šādorvān-e Tostar, on the Kārūn above Šūštar was originally 550 m long, but since its final rupture in 1885 only 28 arches on the left bank and 7 on the right bank now remain. It is not wholly straight, because rock ledges in the river were used as foundations for the piers. Two other Sasanian barrages are to be seen near Šūštar on a diversion canal dug in the Sasanian period, known today as the Āb-e Gargar and mentioned in medieval texts under the name Mašroqān; these are the Band-e Gargar and, some way upstream, the Band-e Mīān, also called Band-e Moḥammad-ʿAlī Mīrzā because it was restored in the 19th century by a son of Faṭḥ-ʿAlī Shah with that name. At the point 40 km downstream from Šūštar where the Āb-e Gargar rejoins the Kārūn, ruins of another barrage, the Band-e Qīr (bitumen dam), still stand.

The mountains south of Kāšān. Remains of several dams built to supply the town and district with water can still be seen. Among them are the Band-e Kavār, the Band-e Feṛʿawnī, the Band-e Qamşar and the Band-e Qohrūd, the biggest, which was a gravity dam made of rubble; the last three are described as being very old (ʿAbd-al-Raḥīm Kalāntar Żarrābī [Sohayl Kāšānī, *Tārīk-e Kāšān*, ed. Ī. Afšār, 2nd ed., Tehran, 1341 Š./1962, pp. 20, 26, 60-62; Comte de Sercey, *La Perse en 1839-1840*, Paris, 1928, pp. 229-30; Goblot, 1973, p. 16).

The Ġaznī district in Afghanistan. Within a radius of two or three dozen km from Ġaznī there are three important dams which were built early in the 4th/11th century at the sultan Maḥmūd's behest to supply the town and its rural outskirts with water and have recently been rebuilt or restored. (1) The Band-e Solţān (sometimes named Band-e Maḥmūdī in literary texts), a curved gravity dam 23 km north of Ġaznī, restored in the second quarter of the 10th/16th century by command of Bābor (*Bābor-nāma*, tr. A. S. Beveridge, London, 1922, p. 219), was still in working order in 1836 (G. T. Vigne, *A Personal Narrative of a Visit to Ghazni, Kabul and Afghanistan . . .*, 2nd ed., London, 1843, p. 138). In the years 1910-20 a new dam was built from the same footing on the east bank but on a line slightly downstream from that of the old one. Its capacity is 20 million m³. For a time it was officially renamed Band-e Serāj after a title of the amir Ḥabīb-Allāh, and in recent publications it is sometimes designated Band-e Ġaznī, but among the people it continues to be known as the Band-e Solţān. (2) The Band-e Zanaqān in the valley of the same name 20 km northeast of Ġaznī, already ruined in the 10th/16th century (*Bābor-nāma*, loc. cit.), reconstructed between 1935 and 1957. It provides water



for irrigation in the intramontane Keyvān plain. (3) The Band-e Sardeh on the middle course of the Jelga river 37 km southeast of Ġaznī, still in use in Bābor’s time but in ruins in 1839 (J. S. Broadfoot, “Reports on Parts of the Ghilzi Country . . .,” *Royal Geographical Society, Supplementary Papers* 1, 1885, pp. 346-47). Between 1961 and 1967 it was rebuilt with Soviet aid on an overly ambitious scale. Having a designed capacity of 164 million m³, it ought in principle to irrigate more than 17,000 hectares, but the inflow from the river proved to be less than expected, and the ancillary work made slow progress.

The Helmand basin. (1) The name Band-e Tīmūr is given to an irrigated area about 15 km long on the left bank of the [Arġandāb](#) some 30 km downstream from its confluence with the Tarnak, but no trace of a barrage remains (L. W. Adamec, ed., *Historical and Political Gazetteer of Afghanistan V*, p. 86). (2) The Band-e Kūhak or Band-e Sīstān at the head of the Helmand delta in the Sīstān plain is a simple diversion barrage constructed of makeshift materials (*ibid.*, p. 126).

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