The other mountains in the province are well wooded, and it is estimated that nearly 4,500,000 acres are under forests. The N.W. portion is occupied by the Famine Steppe—which probably might be irrigated—and by the desert of Kyzyl-kum. The Famine or Hungry Steppe (not to be confounded with another desert of the same name, the Bek-pak-dala, to the W. of Lake Balkash) occupies nearly 5,000,000 acres, covered with loess-like clay. In the spring the steppe offers good pasture-grounds for the Kirghiz, but the grass withers as summer advances. Nearly 1,500,000 acres might, however, be irrigated and rendered available for the cultivation of cotton; indeed a beginning has been made in that direction. The Kyzyl-kum Steppe, 88,000 sq. m., is crossed by rocky hills, reaching an altitude of 3500 ft., and consists in part of saline clays, patches of prairie land and sand. The sand is especially prevalent on the margin, where the moving *barkhans* (crescent-shaped sandhills) invade the Kara-kul oasis of Bokhara. The vegetation is very poor, as a rule; grass and flowers (tulips, *Rheum,* various *Umbelliferae)* only appear for a short time in the spring. The *barkhans* produce nothing except *Haioxylon ammodendron, Poligonum, Halimodendron, Atraphaxis* and other steppe bushes; occasionally *Stipa* grass is seen on the slopes of the sandhills, while *Artemisia·* and *Tarnarix* bushes grow on the more compact sands. Water can only be obtained from wells, sometimes 140 ft. deep. A few Kirghiz are the sole inhabitants, and they are only found in the more hilly parts.

The chief river is the Zarafshan, which, under the name of Mach, rises in the Zarav glacier in the Kok-su mountain group. Navigation is only possible by rafts, from Penjikent downwards. The river is heavily drawn upon for irrigation; and to this it probably owes its name (“ gold-spreading ”) rather than to the gold which is found in small quantities in its sands. Over 80 main canals (*ariks*) water 1200 sq. m. in Samarkand, while 1640 sq. m. are watered in Bokhara by means of over 40 main canals. Beyond Lake Kara-kul it is lost in the sands, before reaching the Amu-darya to which it was formerly tributary. The N.E. of the province is watered by the Syr-darya. One of the lakes, the Tuz-kaneh (40 m. from Jizakh) yields about 1300 tons of salt annually.

The average temperature for the year is 55·4° F. at Samarkand, and 58° at Khojent and Jizakh; but the average temperature for the winter is only 34°, and frosts of 4° and 11° have been experienced at Samarkand and Khojent respectively; on the other hand, the average temperature for July is 79° at Samarkand and 85° at Khojent and Jizakh. The total precipitation (includ- ing snow in winter) is only 6.4 in. at Khojent, 12 in. at Samarkand and 24 in. at Jizakh. The hilly tracts have a healthy climate, but malaria and mosquitoes prevail in the lower regions.

The estimated population in 1906 was 1,090,400. The Uxbegs form two-thirds of the population, and after them the Kirghiz and Tajiks (27%) are the most numerous; Jews, Tatars, Afghans and Hindus are also met with.

In 1898 nearly 1,000,000 acres were irrigated, and about 800,000 acres partly irrigated. The chief crops are wheat, rice and barley. Sorghum, millet, Indian corn, peas, lentils, haricots, flax, hemp, poppy, lucerne, madder, tobacco, melons and mushrooms are also grown. Two crops are often taken from the same piece of land in one season. Cotton is extensively grown, and 21,000 acres are under vineyards. Sericulture prospers, especially in the Khojent district. Live-stock breeding is the chief occupation of the Kirghiz. Weaving, saddlery, boot­making, tanneries, oil works and metal works exist in many villages and towns, while the nomad Kirghiz excel in making felt goods and carpets. There are glass works, cotton-cleaning works, steam flour mills and distilleries. Some coal, sulphur, ammonia and gypsum are obtained. Trade is considerable, the chief exports being rice, raw cotton, raisins, dried fruit, nuts, wine and silk. The Central Asian railway crosses the province from Bokhara to Samarkand and Tashkent. The province is divided into four districts, the chief towns of which, with their populations in 1897, are: Samarkand (*q.v.*), Jizakh (16,041), Kati-kurgan (10,083) and Khojent (30,076).

SAMARKAND, a city of Russian Central Asia, anciently *Maracanda,* the capital of Sogdiana, then the residence of the Moslem Sāmānid dynasty, and subsequently the capital of the Mongol prince Tamerlane, is now chief town of the province of the same name. It lies 220 m. by rail S.W. of Tashkent, and 156 m. E. of Bokhara, in 39° 39' N. and 66° 45' E., 2260 ft. above the sea, in the fertile valley of the Zarafshan, at the point where it issues from the W. spurs of the Tian-shan before entering the steppes of Bokhara. The Zarafshan now flows 5 m. N. of the city. In 1897 the population numbered 40,000 in the native city, and 15,000 in the new Russian town, inclusive of the military (80% Russians). The total population was 58,194 in 1900, and of these only 23,194 were women.

Maracanda, a great city, was destroyed by Alexander the Great in 329 B.c. It reappears as Samarkand at the time of the conquest by the Arabs, when it was finally reduced by Kotaiba ibn Moslim in a.d. 711-712. Under the Samanids it became a brilliant seat of Arabic civilization, and was so populous that, when besieged by Jenghiz Khan in 1221, it is reported to have been defended by 110,000 men. Destroyed and pillaged by that chieftain, its population was reduced to one-quarter of what it had been. When Timur made it his residence (in 1369) the inhabitants numbered 150,000. The magnificent buildings of the successors of Timur, which still remain, testify to its former wealth. But at the beginning of the 18th century it is reported to have been almost without inhabitants. It fell under Chinese dominion, and subsequently under that of the amir of Bokhara. But no follower of Islam enters it without feeling that he is on holy ground; although the venerated mosques and beautiful colleges are falling into ruins, its influence as a seat of learning has vanished, and its very soil is profaned by infidels. It was not without a desperate struggle that the Mahommedans permitted the Russians to take their holy city.

The present city is quadrangular and is enclosed by a low wall 9 m. long. The citadel is in the W., and to the W. of this the Russians have laid out since 1871 a new town, with broad streets and boulevards radiating from the citadel.

The central part of Samarkand is the Righistan—a square fenced in by the three *madrasahs* (colleges) of Ulug-beg, Shir-dar and Tilla-kari; in its architectural symmetry and beauty this is rivalled only by some of the squares of certain Italian cities. An immense doorway decorates the front of each of these large quadrilateral buildings. A high and deep-pointed porch, reaching almost to the top of the lofty façade, is flanked on each side by a broad quadrilateral pillar of the same height. Two fine columns, profusely decorated, in turn flank these broad pillars. On each side of the high doorway are two lower archways connecting it with two elegant towers, narrowing towards the top and slightly inclined. The whole of the façade and also the interior courts are profusely decorated with enamelled tiles, whose colours— blue, green, pink and golden, but chiefly turquoise-blue—are wrought into the most fascinating designs, in striking harmony with the whole and with each part of the building. Over the interior are bulbed or melon-like domes, perhaps too heavy for the façade. The most renowned of these three madrasahs is that of Ulug-beg, built in 1434 by a grandson of Timur. It is smaller than the others, but it was to its school of mathematics and astronomy that Samarkand owed its renown in the 15th century.

A winding street, running N.E. from the Righistan, leads to a much larger square in which are the college of Bibikhanum on the W., the graves of Timur’s wives on the S. and a bazaar on the E. The college was erected in 1388 by a Chinese wife of Timur. To the N., outside the walls of Samarkand, but close at hand, is the Hazret Shah-Zindeh, the summer-palace of Timur, and near this is the grave of Shah-Zindeh, or, more precisely, Kasim ibn Abbas, a companion of Timur. This was a famous shrine in the 14th century (Ibn Batuta’s *Traυels,* iii. 52); it is believed that the saint will one day rise for the defence of his religion. The Hazret Shah-Zindeh stands on a terrace reached by forty marble steps. The decoration of the interior halls is marvellous. Another street running S.W. from the Righistan leads to the