



AFGHANISTAN XIII. FORESTS AND FORESTRY

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Geographical extension and types of forests. The development of forests is limited in Afghanistan not only by the total quantity of rainfalls (a minimum of 250 mm a year is required for the growth of trees), but also by their seasonal distribution with respect to the vegetative season. In most parts of the central mountains of the Hazarajat, precipitations occur during the cold season, when they are useless, while the vegetative season corresponds with a relatively dry summer, and hence an absence of forests.

The rainforests. So it is mainly in the southeastern and eastern part of the country, which in summer enjoys the earliest approaches of the Indian monsoon, where dense and lasting forest plants can grow. Apart from the monsoons properly speaking, which considerably vary from year to year and can be more or less absent, there are always random precipitations (Rathjens, 1969, 1974) proceeding directly from the layer of clouds and the atmospheric humidity, which is always very high in the afternoon. From the bottom to the top of this southeastern slope, there is a well-defined series of successive strata: 1) A lower, semi-arid level of shrubs, below 1300 meters, has above it a luxuriant combination of *olea cuspidata* (wild olive trees) and *reptonia*



buxifolia. 2) Above 1,300 m there are evergreen oaks, the eastern varieties of Mediterranean forms: *quercus baloot* (up to 2,000-2,300 m); *quercus dilatata* (ca. 2,000-2,400 m); *quercus semicarpifolia* (up to about 2,900m). 3) The level of coniferous forests, covering the westernmost part of the Himalayan forests, starts with *pinus gerardiana*, which from a height of 2,000 m, among the driest exposures, mixes with the *Q. baloot*, which grows in the wettest exposures. Between 2,400 and 2,700 m, when annual precipitations exceed 800 mm, the main trees are cedars (*cedrus deodora*) mixed with *Q. semicarpifolia*. 4) Between 2,900 and 3,300 m, there are nothing but conifers, forming a mixed forest of spruce (*picea smithiana*), fir (*abies webbiana*) and pine (*pinus wallichiana*). 5) The highest limit of forest vegetation consists of a level of junipers (mainly *juniperus semiglobosa*) reaching 3,500 m.

The dry forests. In the rest of the country, where there are no summer monsoons, the vegetation is adapted to a more or less long dry season. Real forests are virtually absent on all the southern slopes of the central mountains, where the rains are insufficient and unevenly distributed. A forest formation appears on the northern slope, where the spring rainfalls grow more plentiful, in the form of a clear forest of junipers. It extends west towards the Elburz ([Alborz](#)) and Khorasan, fringing the highlands while gradually rising westwards, from about 1,400 to 2,900 m in the east up to 1,500 to 3,600 m in the west (mainly *juniperus seravtschanica*). In its lower stratum, it produces pistachio and almond trees (here *pistacia vera*, *amygdalus sp.*), reaching 1,600 to 2,000 m in the central sector and more than 2,000 m in the Hindu-Kush. On the southern and western slope of the central highlands, this formation of pistachio and almond trees (here *pistacia atlantica*) between ca. 1,200 and 1,800 meters) occupies the entire interval between the sub-alpine vegetation of thorn cushions and that of the deserts or semi-deserts to the south and southeast.

deforestation

In fact, the forest formations mentioned above for the most part lead a merely theoretical existence. The country's real surface of forests, located almost entirely in the east and southeast, has been estimated at some 25,000 sq. km only (Fischer, p. 4), that is, less than 4% of the total surface. The deciduous forests have almost completely disappeared. The natural extension of clear juniper forest, more than 95% of which is destroyed, can only be reconstructed with the help of a few witnesses. The groups of pistachio trees on the northern slope of the central mountains have only kept some of their density in the



northwestern province of Bādġis between Qal'a Naw and the high valley of the Košk. Here they still attracted a large number of temporary migrants in the 1970s during the harvest of this wild fruit. Among the wet forests of the east and southeast, the level of holm oaks is also in a state of very advanced deterioration. Only the higher level, consisting of coniferous forests, is as yet relatively well preserved. Due to the dearth of historical texts, it is impossible to describe the stages of this deforestation, as has been done in Iran. It is in any case certain that it started a long time ago. The belt of more or less continuous dry forests that perhaps surrounded the Kabul basin some 2,000 years ago (Rathjens, 1958, p. 260) had already disappeared before the Muslim period, the authors of which do not mention anything about it. The presence of pistachio trees in Bactria, which were still abundant during the period of the Hellenic kingdoms, soon also grew rare. It may be that the degradation of the Q. baloot forest is more recent. Numerous traces of *sophora griffithii* still witness its ancient extension (Neubauer, p. 498).

the exploitation of the southeastern forests; its contemporary development.

If the mountain forests of the east and southeast have remained in relatively good condition, this is not only because of more favorable natural circumstances (more abundant precipitations). We must particularly take into account their distance from the country's large urban centers, those main sources of destruction which, from Kabul to Herat via Ghazni and Kandahar, or on the foothills of Bactria, have always been mainly located on the ridges of the mountain's central axis. An important part must also be attributed to cultural factors in the ways of using and destroying the forests. In this regard, the attitudes of the two groups of populations living in the southeastern forest regions, the Pashtus and the Kāfers (Nurestānis), are very different from one another (Fischer, pp. 50-70). The Kāfers are forest people living in the glades of high-altitude forests, in large villages huddled up like a refuge. Having always lived in the forest, they developed a true "civilization of wood" (log houses, a very advanced art of furniture, carpentry, statuettes of wooden idols, the use of wood in numerous elements of the landscape such as irrigation channels and furrows, bridges, etc.). Aware of the usefulness of the forest, they soon learnt how to deal with this indispensable element of their lifestyle. The Pashtus, on the other hand, are essentially people of the steppe, of deforested lowlands, living at most at the edge of the forest, and rarely on heights. The use of wood was traditionally very limited among them (their houses almost always have flat roofs). They have an unfriendly attitude towards the forest



and cannot deal with it. The “forest” Pashtus who, especially from the 17th and 18th centuries on, settled in the wooded valleys of the southern slope of the Hindu-Kush, north of the Jalālābād basin, did not differ in this respect from the Pashtus of the steppe.

It was through them, in any case, that the commercial exploitation of the forest must have started, probably from the 18th century on and in any case from the first half of the 19th century, when it was recorded in the early British sources. There being no market in Afghanistan properly speaking, and communications still being very difficult to establish, the only possible outlet consisted of the lowlands of the Indus basin, through floating on the rapids running down from the Hindu-Kush and the Sefid Kuh, towards Jalālābād and Pešāvar. This commerce was greatly expanded from the mid 19th century on, with the greater demand due to the advance of British colonization in India and the appearance of the first railways. The exploitation of forests was organized in India since 1864 for the railway crosspieces. In 1882 the railway went as far as Pešāvar. A further boost to the exploitation of the Afghan forest was provided by the partition of British India in 1947, depriving western Pakistan of a considerable part of its supply of wood.

The Afghan market only started up timidly in the early 20th century towards Kabul, at first for firewood and charcoal, and later for timber soon after World War I, with the birth of the first factories (furniture, matches). In the 1960s (Fischer), 85% of the wood from the southern slope of the Hindu-Kush, which was only marketed in the Pashtu countries, was sent to Pakistan (as yet exclusively by floating it on the waters of the Kabul and Konar rivers), and only 15% was sent to Afghanistan (by camels and already to an appreciable extent by trucks). In the south, the wood from the northern slope of the Sefid Kuh went entirely to Pakistan, and that from the western slope of the latter mountain and the more southern chains (Ohnak and Jadrān mountains) was partly sent to Afghanistan. Floating, which was done on the Kuram in the 19th century, had more or less stopped, since the existing forest massifs were by then too far from the river, so that the traffic was almost exclusively carried out by camels or trucks. The nomads wintering in Pakistan played an important part in this trade, with active smuggling. On the whole, the volume of felling for timber was evaluated at 400,000 cubic meters a year (three fifths for Pakistan), the production of firewood at 180,000 tons and that of charcoal at 50,000 tons (for the Afghan market alone in the two latter cases). The damage done to the oak forest rapidly continued for the manufacture of



charcoal. The first signs of commercial exploitation appeared at this period in the so far preserved Nurestān forest, into which Tajik merchants began to penetrate. Not until the 1960s did the first protective measures begin, with German technical assistance from 1965-67, and attempts by the central government to seriously limit exports to Pakistan, though impeded by difficulties to control smuggling.

On the whole, the Afghan forest of the southeast and east of the country presents a type of evolution very similar to that of Iran's Caspian forest: namely that of an important expanse of forest which had remained relatively well preserved until contemporary times due to its marginal situation with respect to the country's main urban and civilized centers and which was first exploited from outside (British India and Russia, respectively), before being connected to the internal market and rapidly deteriorating in contemporary times.

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