

Thar Desert

The **Thar Desert**, also known as the **Great Indian Desert**, is a large arid region in the northwestern part of the Indian subcontinent that covers an area of 200,000 km² (77,000 sq mi) and forms a natural boundary between India and Pakistan. It is the world's 18th largest desert, and the world's 9th largest subtropical desert.

About 85% of the Thar Desert is located within India, with the remaining 15% in Pakistan.^[1] In India, it covers about 170,000 km² (66,000 sq mi), and the remaining 30,000 km² (12,000 sq mi) of the desert is within Pakistan.The Thar desert forms approximately 10% of the total geographic area of India. More than 60% of the desert lies in the state of Rajasthan, and extends into Gujarat, Punjab, and Haryana.^[2] The desert comprises a very dry part, the Marusthali region in the west, and a semidesert region in the east with fewer sand dunes and slightly more precipitation.^[3]

Contents

Geography

- Desertification control
- Protected areas

Biodiversity

- Fauna
- Flora

People

Thar in ancient literature

Desert eco-system

- Agriculture
- Livestock
- Agroforestry
- Ecotourism
- Industry
- Salt water lakes

Water and housing in the desert

Recreation

See also

References

Further reading

External links

Geography

Thar Desert
 Great Indian Desert Desert
 Thar Desert in Rajasthan, India
Nickname: <i>Lavana sagra (salty place)</i>
Countries India (85%), Pakistan (15%)
State India: Rajasthan Haryana Punjab Gujarat Pakistan: Sindh Punjab
Biome Desert
Plant Thorn scrub forest
Animal Chinkara



View of the Thar desert

The Thar Desert extends between the Aravalli Hills in the north-east,^[1] the Great Rann of Kutch along the coast and the alluvial plains of the Indus River in the west and north-west. Most of the desert is covered by huge shifting sand dunes that receive sediments from the alluvial plains and the coast. The sand is highly mobile due to strong winds occurring before the

onset of the monsoon. The Luni River is the only river integrated into the desert.^[4] Rainfall is limited to 100–500 mm (3.9–19.7 in) per year, mostly falling from July to September.^[1]

Salt water lakes within the Thar Desert include the Sambhar, Kuchaman, Didwana in Rajasthan and Kharaghoda in Gujarat. These lakes receive and collect rain water during monsoon and evaporate during the dry season. The salt is derived by the weathering of rocks in the region.^[5]

Lithic tools belonging to the prehistoric Aterian culture of the Maghreb have been discovered in Middle Paleolithic deposits in the Thar Desert.^[6]

Desertification control

The soil of the Thar Desert remains dry for much of the year and is prone to wind erosion. High velocity winds blow soil from the desert, depositing some on neighboring fertile lands, and causing shifting sand dunes within the desert. Sand dunes are stabilised by erecting micro-windbreak barriers with scrub material and subsequent afforestation of the treated dunes with seedlings of shrubs such as phog, senna, castor oil plant and trees such as gum acacia, *Prosopis juliflora* and lebbek tree. The 649 km (403 mi) long Indira Gandhi Canal brings fresh water to the Thar Desert.^[1] It was conceived to halt spreading of the desert to fertile areas.

There are few local tree species suitable for planting in the desert, which are slow growing. Therefore, exotic tree species were introduced for plantation. Many species of Eucalyptus, Acacia, Cassia and other genera from Israel, Australia, US, Russia, Zimbabwe, Chile, Peru and Sudan have been tried in Thar Desert. *Acacia tortilis* has proved to be the most promising species for desert afforestation and the jojoba is another promising species of economic value found suitable for planting in these areas.^[1]

Protected areas

There are several protected areas in the Thar Desert.

- In India:
 - the Desert National Park covers 3,162 km² (1,221 sq mi) and represents the Thar Desert ecosystem;^[7] it includes 44 villages.^[8] Its diverse fauna includes the great Indian bustard (*Chirotis nigriceps*), blackbuck, chinkara, fox, Bengal fox, wolf, and caracal. Seashells and massive fossilized tree trunks in this park record the geological history of the desert;



A NASA satellite image of the Thar Desert, with the India–Pakistan border superimposed



Greening desert with plantations of jojoba at Fatehpur, Shekhawati



Checking of shifting sand dunes through plantations of *Acacia tortilis* near Laxmangarh town

- the Tal Chhapar Sanctuary covers 7 km² (2.7 sq mi) and is an Important Bird Area^[8] It is located in the Churu District, 210 km (130 mi) from Jaipur, in the Shekhawati region. This sanctuary is home to a large population of blackbuck, fox and caracal such as partridge and sand grouse;
- the Sundha Mata Conservation Reserve covers 117.49 km² (45.36 sq mi) and is located in the Jalore District^[9]
- In Pakistan:
 - the Nara Desert Wildlife Sanctuary covers 6,300 km² (2,400 sq mi),^[10]
 - the Rann of Kutch Wildlife Sanctuary



Indira Gandhi Canal flowing in Thar Desert near Sattasar village, Bikaner district, Rajasthan

Biodiversity



Blackbuck male and female

Fauna

Stretches of sand in the desert are interspersed by hillocks and sandy and gravel plains. Due to the diversified habitat and ecosystem, the vegetation, human culture and animal life in this arid region is very rich in contrast to the other deserts of the world. About 23

species of lizard and 25 species of snakes are found here and several of them are endemic to the region.

Some wildlife species, which are fast vanishing in other parts of India, are found in the desert in large numbers such as the blackbuck (*Antelope cervicapra*), chinkara (*Gazella bennettii*) and Indian wild ass (*Equus hemionus khur*) in the Rann of Kutch. They have evolved excellent survival strategies, their size is smaller than other similar animals living in different conditions, and they are mainly nocturnal. There are certain other factors responsible for the survival of these animals in the desert. Due to the lack of water in this region, transformation of the grasslands into cropland has been very slow. The protection provided to them by a local community, the Bishnois, is also a factor. Other mammals of the Thar Desert include a subspecies of red fox (*Vulpes vulpes pusilla*) and the caracal.



Chinkara or 'Indian Gazelle' is found across Thar desert



Peacock on Khejri tree

The region is a haven for 141 species of migratory and resident birds of the desert. One can see eagles, harriers, falcons, buzzards, kestrel and vultures. There are short-toed eagles (*Circetus gallicus*), tawny eagles (*Aquila rapax*), greater spotted eagles (*Aquila clanga*), laggar falcons (*Falco jugger*) and kestrels. There are also a number of reptiles.

The Indian peafowl is a resident breeder in the Thar region. The peacock is designated as the national bird of India and the provincial bird of the Punjab (Pakistan). It can be seen sitting on khejri or pipal trees in villages or Deblina. Bishnois Dharmaguru Jambeshwar was an ecologist.

Flora

The natural vegetation of this dry area is classed as Northwestern thorn scrub forest occurring in small clumps scattered more or less openly.^{[11][12]} Density and size of patches increase from west to east following the increase in rainfall. The natural vegetation of the Thar Desert is composed of the following trees, shrub and herb species.^[13]

- trees and shrubs: Acacia jacquemontii, Balanites roxburghii, Ziziphus zizyphus, Ziziphus nummularia, Calotropis procera, Suaeda fruticosa, Crotalaria burhia, Aerva javanica, Clerodendrum multiflorum, Leptadenia pyrotechnica, Lycium barbarum, Grewia tenax, Commiphora mukul, Euphorbia neriifolia, Cordia sinensis, Maytenus emarginata, Capparis decidua, Mimosa hamata
- herbs and grasses: Ochthochloa compressa, Dactyloctenium scindicum, Cenchrus biflorus, Cenchrus setigerus, Lasiurus scindicus, Cynodon dactylon, Panicum turgidum, Panicum antidotale, Dichanthium annulatum, Sporobolus marginatus, Saccharum spontaneum, Cenchrus ciliaris, Desmostachya bipinnata, Eragrostis species, Eragmopagan species, Phragmites species, Tribulus terrestris, Typha species, Sorghum halepense, Citrullus colocynthis

The endemic floral species include Calligonum polygonoides, Prosopis cineraria, Acacia nilotica, Tamarix aphylla, Cenchrus biflorus^[14]

People



Huts in the Thar desert

The Thar Desert is the most widely populated desert in the world, with a population density of 83 people per km².^[8] In India, the inhabitants comprise Hindus, Muslims, and Sikhs. In Pakistan, inhabitants also include both Muslims and Hindus.^[15]

About 40% of the total population of Rajasthan live in the Thar Desert.^[16] The main occupation of the people is agriculture and animal husbandry. A colourful culture rich in tradition prevails in this desert. The people have a great passion for folk music and folk poetry.

Jodhpur, the largest city in the region, lies in the scrub forest zone. Bikaner and Jaisalmer are located in the desert proper. A large irrigation and power project has reclaimed areas of the northern and western desert for agriculture. The small population is mostly pastoral, and hide and wool industries are prominent.

The desert's part in Pakistan also has a rich multifaceted culture, heritage, traditions, folk tales, dances and music due to its inhabitants who belong to different religions, sects and castes.

In the years 1965 and 1971, population exchanges took place in the Thar between India and Pakistan. 3,500 Muslim families shifted from the Indian section of the Thar to Pakistani Thar whilst thousands of Hindus also migrated from Pakistani Thar to the Indian section of the Thar.^{[17][18][19]}

Thar in ancient literature

The Indian epics describe this region as Lavanasagara (salt ocean). The Ramayana mentions Lavanasagara when Rama goes to attack Lanka with the army of vanaras. Rama uses his agneshashtra-amogha to dry up the sea named drumakulya situated north of Lavanasagara. A fresh water source named Pushkar surrounded by Marukantara was created.^[16]

According to Jain cosmology, Jambūdāvīpa is at the centre of Madhyaloka, or the middle part of the universe, where the humans reside. Jambūdāvīpaprajñāpti or the treatise on the island of roseapple tree contains a description of Jambūdāvīpa and life biographies of Ṛṣabha and King Bharata. Jambūdāvīpa continent is surrounded by the ocean Lavanoda (salt ocean).



Prosopis cineraria or Khejri



The great Derawar Fort located within Bahawalpur, Pakistan



A girl from the Gadia Lohars nomadic tribe of Marwar, cooking her food

The Sarasvati River is one of the chief Rigvedic rivers mentioned in ancient Hindu texts. The Nadistuti hymn in the Rigveda mentions the Sarasvati between the Yamuna in the east and the Sutlej in the west, and later Vedic texts like Tandya and Jaiminiya Brahmanas as well as the Mahabharata mention that the Sarasvati dried up in a desert.

Most scholars agree that at least some of the references to the Sarasvati in the Rigveda refer to the Ghaggar-Hakra River, while the Helmand River is often quoted as the locus of the early Rigvedic river. Whether such a transfer of the name has taken place, either from the Helmand to the Ghaggar-Hakra, or conversely from the Ghaggar-Hakra to the Helmand, is a matter of dispute.

There is also a small present-day Sarasvati River (Sarsuti) that joins the Ghaggar

The epic Mahabharata mentions the Kamyaka Forest situated on the western boundary of the Kuru Kingdom (Kuru Proper and Kurujangala), on the banks of the Sarasvati River to the west of the Kurukshetra plain, which contained a lake known as Kamyaka. The Kamyaka forest is mentioned as being situated at the head of the Thar desert,^[16] near Lake Trinavindu. The Pandavas, on their way to exile in the woods, left Pramanakoti on the banks of the Ganges and went towards Kurukshetra, travelling in a western direction and crossing the Yamuna and Drishadvati rivers. They finally reached the banks of the Sarasvati River where they saw the forest of Kamyaka, the favourite haunt of ascetics, situated on a level and wild plain on the banks of the Sarasvati abounding in birds and deer. There the Pandavas lived in an ascetic asylum. It took three days for Pandavas to reach the Kamyaka forest, setting out from Hastinapura, on their chariots.

In the Rigveda there is also mention of a river named Aśvanvatī along with the river Drishadvati.^[20] Some scholars consider both the Sarasvati and Aśvanvatī to be the same river.^[16]

Human habitations on the banks of Sarasvati and Drishadvati had shifted to the east and south directions prior to the Mahabharata period. At that time the present day Bikaner and Jodhpur areas were known as Kurujangala and Madrajangala provinces.^[16]

The Desert National Park in Jaisalmer district has a collection of animal fossils and plants 180 million years old.

Desert eco-system

Agriculture

The Thar is one of the most heavily populated desert areas in the world with the main occupations of its inhabitants agriculture and animal husbandry. Agriculture is not a dependable proposition in this area because after the rainy season, at least one third of crops fail. Animal husbandry, trees and grasses, intercropped with vegetables or fruit trees, is the most viable model for arid, drought-prone regions. The region faces frequent droughts. Overgrazing due to high animal populations, wind and water erosion, mining and other industries have resulted in serious land degradation.

Agricultural production is mainly from kharif crops, which are grown in the summer season and seeded in June and July. These are then harvested in September and October and include bajra, pulses such as guar, jowar (*Sorghum vulgare*), maize (*zea mays*), sesame and groundnuts. Over the past few decades the development of irrigation features including canals and tube wells have changed the crop pattern with desert districts in Rajasthan now producing rabi crops including wheat, mustard and cumin seed along with cash crops.^[16]



The position of Thar desert (orange colour) in Iron Age Vedic India.



Course of Sarasvati river through Thar desert



Bajra is the main kharif crop in Thar



Mustard fields in a village of Shri Ganganagar district (Rajasthan, India).

The Thar region of Rajasthan is a major opium production and consumption area. The Indira Gandhi Canal irrigates northwestern Rajasthan while the Government of India has started a centrally sponsored Desert Development Program based on watershed management with the objective of preventing the spread of desert and improving the living conditions of people in the desert.^[16]

Livestock

In the last 15–20 years, the Rajasthan desert has seen many changes, including a manifold increase of both the human and animal population. Animal husbandry has become popular due

to the difficult farming conditions. At present, there are ten times more animals per person in Rajasthan than the national average, and overgrazing is also a factor affecting climatic and drought conditions.

A large number of farmers in Thar desert depend on animal husbandry for their livelihood. Cows, buffalos, sheep, goats, camels, and oxen consists of major cattle population. Barmer district has the highest cattle population out of which sheep and goats are in majority. Some of the best breeds of bullocks such as Kankrej (Santhori) and Nagauri are from desert region.

Thar region of Rajasthan is the biggest wool-producing area in India. Chokla, Marwari, Jaisalmeri, Magra, Malpuri, Sonadi, Nali and Pungal breeds of sheep are found in the region. Of the total wool production in India, 40-50% comes from Rajasthan. The sheep-wool from Rajasthan is considered best for carpet making industry in the world. The wool of Chokla breed of sheep is considered of superior quality. The breeding centres have been developed for Karakul and Merino sheep at Suratgarh, Jaisar and Bikaner. Some important mills for making Woolen thread established in desert area are: Jodhpur Woolen Mill, Jodhpur; Rajasthan Woolen Mill, Bikaner and India Woolen Mill, Bikaner. Bikaner is the biggest *mandi* (market place) of wool in Asia.^[16]

The live stock depends for grazing on common lands in villages. During famine years in the desert the nomadic rebari people move with large herds of sheep and camel to the forested areas of south Rajasthan or nearby states like Madhya Pradesh for grazing the cattle.

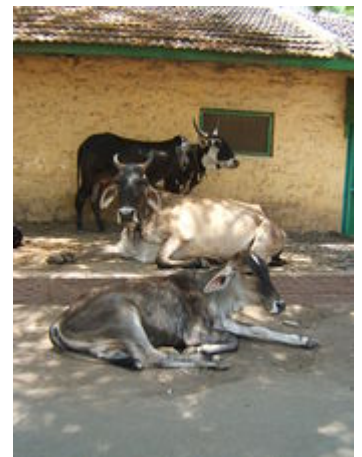
The importance of animal husbandry can be understood from the organization of large number of cattle fairs in the region. Cattle fairs are normally named after the folk-deities. Some of major cattle fairs held are Ramdevji cattle fair at Manasar in Nagaur district, Tejaji cattle fair at Parbatsar in Nagaur district, Baldeo cattle fair at Merta city in Nagaur district, Mallinath cattle fair at Tilwara in Barmer district. Live stock is very important to the Thar desert people.



Due to severe weather conditions, there are few highways in the Thar desert. Shown here is a road in Tharparkar District of Sindh, Pakistan.



Camel ride in the Thar desert near Jaisalmer, India.



Cows in Thar Desert

Agroforestry

Forestry has an important part to play in the amelioration of the conditions in semi-arid and arid lands. If properly planned, forestry can make an important contribution to the general welfare of the people living in desert areas. The living standard of the people in the desert is low. They can not afford other fuels like gas, kerosene etc. Fire wood is their main fuel, of the total consumption of wood about 75 percent is firewood. The forest cover in desert is low. Rajasthan has a forest area of 31150 km². which is about 9% of the geographical area. The forest area is mainly in southern districts of Rajasthan like Udaipur and Chittorgarh. The minimum forest area is in Churu district only 80 km². Thus the forest is insufficient to fulfill the needs of firewood and grazing in desert districts. This diverts the much needed cattledung from the field to the hearth. This in turn results into the decrease in agricultural production. Agroforestry model is best suited to the people of desert. Some Institutes have done good work in Agroforestry

The scientists of Central Arid Zone Research Institute (CAZRI), have successfully developed and improved dozens of traditional and non-traditional crops/fruits, such as Ber trees (like plums) that produce much larger fruits than before (lemon-size) and can thrive with minimal rainfall. These trees have become a profitable option for farmers. One example from a case study of horticulture showed that in situation of budding in 35 plants of Ber and Guar (Gola, Seb & Mundia variety developed in CAZRI), using only one hectare of land, yielded 10,000 kg. of Ber and 250 kg. of Guar, which translates into double or even triple profit.^[21]

Arid Forest Research Institute (AFRI) situated at Jodhpur is another national level institute in the region. It is one of the institutes of the Indian Council of Forestry Research and Education (ICFRE) working under the Ministry of Environment & Forests, Govt. of India. The Objective of the Institute is to carry out scientific research in forestry in order to provide technologies to increase the vegetative cover and to conserve the biodiversity in the hot arid and semi arid region of Rajasthan, Gujarat and Dadara & Nagar Haveli union territory

The most important tree species in terms of providing a livelihood in Thar desert communities *Brosopis cineraria*

Prosopis cineraria provides wood of construction class. It is used for house-building, chiefly as rafters, posts scantlings, doors and windows, and for well construction water pipes, upright posts of Persian wheels, agricultural implements and shafts, spokes, fellows and yoke of carts. It can also be used for small turning work and tool-handles. Container manufacturing is another important wood-based industry, which depends heavily on desert-grown trees.

Prosopis cineraria is much valued as a fodder tree. The trees are heavily lopped particularly during winter months when no other green fodder is available in the dry tracts. There is a popular saying that death will not visit a man, even at the time of a famine, if he has a *Prosopis cineraria*, a goat and a camel, since the three together are some what said to sustain a man even under the most trying condition. The forage yield per tree varies a great deal. On an average, the yield of green forage from a full grown tree is expected to be about 60 kg with complete lopping having only the central leading shoot, 30 kg when the lower two third crown is lopped and 20 kg when the lower one third crown is lopped. The leaves are of high nutritive value. Feeding of the leaves during winter when no other green fodder is generally available in rain-fed areas is thus profitable. The pods have a sweetish pulp and are also used as fodder for livestock.

Prosopis cineraria is most important top feed species providing nutritious and highly palatable green as well as dry fodder, which is readily eaten by camels, cattle, sheep and goats, constituting a major feed requirement of desert livestock. Locally it is called Loong. Pods are locally called sangar or sangri. The dried pods locally called Kho-Kha are eaten. Dried pods also form rich animal feed, which is liked by all livestock. Green pods also form rich animal feed, which is liked by drying the young boiled pods. They are also used as famine food and known even to prehistoric man. Even the bark, having an astringent bitter taste, was reportedly eaten during the severe famine of 1899 and 1939. Pod yield is nearly 1.4 quintals of pods/ha with a variation of 10.7% in dry locations.



Lopping of Khejri tree for fodder and fuel in Harsawa village

Prosopis cineraria wood is reported to contain high calorific value and provide high quality fuel wood. The lopped branches are good as fencing material. Its roots also encourage nitrogen fixation, which produces higher crop yields.

Tecomella undulata is one more tree species, locally known as **Rohida**, which is found in Thar Desert regions of northwest and western India. It is another important medium-sized tree of great use in Agroforestry, that produces quality timber and is the main source of timber amongst the indigenous tree species of desert regions. The trade name of the tree species is **Desert teak** or **Marwar teak**.

Tecomella undulata is mainly used as a source of timber. Its wood is strong, tough and durable. It takes a fine finish. Heartwood contains quinoid. The wood is excellent for firewood and charcoal. Cattle and goats eat leaves of the tree. Camels, goats and sheep consume flowers and pods.

Tecomella undulata plays an important role in the ecology. It acts as a soil-binding tree by spreading a network of lateral roots on the top surface of the soil. It also acts as a windbreak and helps in stabilizing shifting sand dunes. It is considered as the home of birds and provides shelter for other desert wildlife. Shade of tree crown is shelter for the cattle, goats and sheep during summer days.

Tecomella undulata has medicinal properties as well. The bark obtained from the stem is used as a remedy for syphilis. It is also used in curing urinary disorders, enlargement of spleen, gonorrhoea, leucoderma and liver diseases. Seeds are used against abscess.



Tecomella undulata tree in the village of Harsawa

Ecotourism

Desert safaris on camels have become increasingly popular around Jaisalmer. Domestic and international tourists frequent the desert seeking adventure on camels for anything from a day to several days. This ecotourism industry ranges from cheaper backpacker treks to plush Arabian night style campsites replete with banquets and cultural performances. During the treks tourists are able to view the fragile and beautiful ecosystem of the Thar desert. This form of tourism provides income to many operators and camel owners in Jaisalmer as well as employment for many camel trekkers in the desert villages nearby. People from various parts of the world come to see the Pushkar ka Mela (Pushkar Fair) and oases.



Sunrise in the desert

Industry

Rajasthan is pre-eminent in quarrying and mining in India. The Taj Mahal was built with white marble mined from Makrana in Nagaur district. The state is the second largest source of cement in India. It has rich salt deposits at Sambhar. Jodhpur sandstone is mostly used in monuments, important buildings, residential buildings, and such. This stone is termed "chittar patthar". Jodhpur has also got mines of red stone locally known as *ghatu patthar* used in construction. Sandstone is found in Jodhpur and Nagaur districts. Jalore is biggest centre of granite processing units.^[16]

Lignite coal deposits are there at places Giral, Kapuradi, Jalipa, Bhadka in Barmer district; Plana, Gudha, Bithnok, Barsinghpur, Mandla Charan, Raneri Hadla in Bikaner district and Kasnau, Merta, Lunsar etc., in Nagaur district. Lignite based Thermal power plant has been established at Giral in Barmer district. Jindal group is working on 1080 Megawatt power project in private sector at village Bhadaresh in Barmer district. "Neyeli Lignite Barsinghpur Project" is in progress to establish two thermal power units of capacity 125 megawatts each at Barsinghpur in Bikaner district. Reliance Energy is working on establishing power generation through underground gasification technique in Barmer district with an outlay of about 30 billion rupees.^[16]

There is large storage of good quality petroleum in Jaisalmer and Barmer districts. The main places with deposits of petroleum are Baghewal, Kalrewal, and Tawariwal in Jaisalmer district and Gudha Malani area in Barmer district. Barmer district has started petroleum production on commercial scale.^[16] Barmer district is in the news due to its large oil basin. The British exploration company Cairn Energy started production of oil on a large scale. Mangala, Bhagyam and Aishwariya are the major oil fields in the district. This is India's biggest oil discovery in 22 years. This promises to transform the local economy, which has long suffered from the harshness of the desert.

The Government of India initiated departmental exploration for oil in 1955-56 in the Jaisalmer area,^[22] Oil India Limited's discovered natural gas in 1988 in the Jaisalmer basin.^[23] Also known for their fine leather messenger bags made from wild camels native to the area.

The Thar desert seems an ideal place for generation of electricity from wind power. According to an estimate Rajasthan state has got a potential of 5500 Megawatt wind power generation as such it is in the priority of the state govt. Rajasthan State Power Corporation has established its first wind power-based power plant at Amarsagar in Jaisalmer district. Some leading companies in the field are working on establishing wind mills in Barmer, Jaisalmer and Bikaner districts. Solar energy also has a great potential in this region as most of the days during a year are cloud free. Solar energy based plant has been established at Bhaleri in Churu district to convert hard water into drinking water^[16]

Salt water lakes

There are a number of salt water lakes in Thar desert. These are Sambhar, Pachpadra, Tal Chhapar, Falaudi and Lunkaransar where Sodium chloride salt is produced from salt water. The Didwana lake produces Sodium Sulphate salt. Ancient Archaeological evidences of habitations have been recovered from Sambhar and Didwana lakes which shows their antiquity and historical importance.^[16]

Water and housing in the desert



Johads are common water sources

Water scarcity plays an important role in shaping life in all parts of Thar. Natural (tobas) or man-made (johads), both types of small, intermittent ponds, are often the only source of water for animals and humans in the true desert areas. The lack of a constant water supply causes much of the local population to live as nomads. Most human settlements are found near the two seasonal streams of the Karon-Jhar hills. Potable groundwater is also rare in the Thar desert. Supplies are often sour due to dissolved minerals, and are only available deep underground. Wells that successfully bear sweet water attract nearby settlement, but are difficult to dig, possibly claiming the lives of the well-diggers.

According to 1980 housing census in Pakistan, there were 241,326 housing units of one or two very small rooms. The degree of crowding was six persons per housing unit and three persons per room. For most of the housing units (approximately 76 per cent), the main construction material of outer walls is unbaked bricks whereas wood is used in 10 per cent and baked bricks or stones with mud bonding in 8 per cent housing units. A large number of families still live in jhugis or huts which are housing units formed with straws and thin wood-sticks. These jhugis are susceptible to damage from the occasional high winds. But the poverty leaves no other option to these jhugiwalas (people living in jhugis).

The river Luni is the only natural water source that drains inside a lake in the desert. It originates in the Pushkar valley of the Aravalli Range, near Ajmer and ends in the marshy lands of Rann of Kutch in Gujarat, after travelling a distance of 530 km. The Luni flows through part of Ajmer, Barmer, Jalor, Jodhpur, Nagaur, Pali, and Sirohi districts and Mithavirana Vav Radhanpur region of Banaskantha North Gujarat. Its major tributaries are the Sukri, Mithri, Bandi, Khari, Jawai, Guhiya and Sagi from the left, and the Jojari River from the right.

The Ghaggar is another intermittent river in India, flowing during the monsoon rains. It originates in the Shivalik Hills of Himachal Pradesh and flows through Punjab and Haryana to Rajasthan; just southwest of Sirsa, Haryana and by the side of talwara jheel in Rajasthan, this seasonal river feeds two irrigation canals that extend into Rajasthan. It terminates in Hanumangarh district^[16]

The Rajasthan Canal system is the major irrigation scheme of the Thar Desert and is conceived to reclaim it and also to check spreading of the desert to fertile areas. It is world's largest irrigation which is being extended in an attempt to make the desert arable.^[24] It runs south-southwest in Punjab and Haryana but mainly in Rajasthan for a total of 650 kilometers and ends near Jaisalmer, in Rajasthan. After the construction of the Indira Gandhi Canal, irrigation facilities were available over an area of 6770 km² in Jaisalmer district and 37 km² in Barmer district. Irrigation had already been provided in an area of 3670 km² in Jaisalmer district. The canal has transformed the barren deserts of this district into rich and lush fields. Crops of mustard, cotton, and wheat now flourish in this semi-arid western region replacing the sand there previously

Besides providing water for agriculture, the canal will supply drinking water to hundreds of people in far-flung areas. As the second stage of work on the canal progresses rapidly there is hope that it will enhance the living standards of the people of the state.



Tanks for drinking water

Recreation



Desert tribes near Jaisalmer India

Thar Desert provides the recreational value in terms of desert festivals organized every year. Rajasthan desert festivals are celebrated with great zest and zeal. This festival is held once a year during winters. Dressed in brilliantly hued costumes, the people of the desert dance and sing haunting ballads of valor, romance and tragedy. The fair has snake charmers, puppeteers, acrobats and folk performers. Camels, of course, play a stellar role in this festival, where the rich and colorful folk culture of Rajasthan can be seen.

Camels are an integral part of the desert life and the camel events during the Desert Festival confirm this fact. Special efforts go into dressing the animal for entering the spectacular competition of the best-dressed camel. Other interesting competitions on

the fringes are the moustache and turban tying competitions, which not only demonstrate a glorious tradition but also inspire its preservation. Both the turban and the moustache have been centuries old symbols of honor in Rajasthan.

Evenings are meant for the main shows of music and dance. Continuing till late into the night, the number of spectators swells up each night and the grand finale, on the full moon night, takes place by silvery sand dunes.

See also

- Arid Forest Research Institute
- Aridification
- Arid Lands Information Network
- Cholistan Desert
- Cyclone Phet– tracked directly over the desert
- Deforestation
- Geography of India
- List of deserts by area
- Marwar
- Pokhran

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Amar Sagar, near Jaisalmer

15. Raza, Hassan (5 March 2012). "Mithi: Where a Hindu fasts and a Muslim does not slaughter cows"(<http://www.dawn.com/news/1167315>) *Dawn*. "A Muslim resident of Thar shared his account by saying: "In our village, Hindus and Muslims have been living together for decades and there has not been a single day when I have seen a religious conflict. No loud speaker is used for Azaan at the time when Hindus are worshiping in their temple, and no bells are rung when it is time for namaz. Nobody eats in public when it is Ramazan and Holi is played by every member of the village." I had always heard stories about interfaith harmony from Sindh but it was so much more amazing to see it firsthand. The love and brotherhood that exists between the Hindus and Muslims of Mithi is a perfect example of pluralism and the tolerant Sufi culture of Sindh."
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20. aśmanvatī rīyate saṃ rabhadvamut tiṣṭhata pra taratāsakhāyā | atrā jahāma ye asannaśevā śivān vayamuttare mābhi vājān || (RV:10.53.8)
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External links

-  [Thar Desert](#) travel guide from Wikivoyage
- "[Thar Desert](#)". *Terrestrial Ecoregions* World Wildlife Fund.
- [Dharssi.org.uk](#), Photos of the Thar desert
- [Avgustin.net](#), Photos of the Thar desert in Pakistan side
- [MIT.gov](#), आयणो राजस्थान

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