

Salt is an article or commodity which is essential for both humans and animals in their day-to-day lives. Since the earliest times, humans have been conscious of the necessity of salt in their daily lives. Wild animals instinctively search for salt pools or rock salt, i.e. 'saltlicks', often travelling great distances. Man, too, has gone great distances and undergone much hardship to secure a bountiful supply of salt. Thus, demand and supply of salt played and continues to play a vital role in any community, culture and civilization. Salt also acquired the status of money, like other commodity moneys, viz., spices, cowrie shells and so on. The present article focuses on the monetary value of salt and attempts to look at the demand and supply chain of salt in the Indian subcontinent.

In the Indian subcontinent, evidence of salt production can be traced back to the Harappan civilization (Sindhu-Saraswati). Salt would have played, if not a major role, at least a substantial role in the rise and growth of the oldest civilization in India. The Khewra and Khohat mines in the salt range are some of the largest mines located in this region. One is not sure if the salt mines of the Salt Range were being worked during this period or if the Harappans were dependent mostly on the supply of salt from the Gujarat coast. But Harappans were definitely not dependent on long-distance supplies of any basic raw material. Furthermore, the riverine network of this civilization was presumably the lifeline of the trade which took care of the movement of goods like grains, timber, textiles, salt, etc. Excavations at sites such as Lothal also reveal the presence of salt pans and tools used for salt extraction, indicating the significance of salt even in those times. Padri was another important salt production centre of this period.

According to the *Periplus of the Erythraean Sea*, the Rann of Kutch (Gulf of Eirinon) of the Gujarat coast, now a salt marsh, was a broad open arm of the sea, with the eastern branch of the Indus emptying into it (Schoff 1912, 166, 173–74). Silt brought down by the river and formed into great bars washed southward by the violent tides, has now closed the mouth of the Rann almost entirely. Reclus (*Asia III*, 142–45) says that the Rann was probably an open sea until about the fourth century, when a series of violent earthquakes elevated this whole region considerably. He reported ruins at Nagar Patkar, at the north-east corner, indicating a large sea-port trade where old harbor works are observed. The name Eirinon, Rinn or Rann, in fact, is from the Sanskrit *aranya* or *irina*, meaning a waste or swamp (Schoff 1912, 174). The conversion of a navigable bay into a salt desert, and the diversion of the rivers that water edit, must have spelled ruin and starvation to multitudes of its agricultural and seafaring inhabitants, who would have been forced to migrate on a scale in the later centuries.¹ The *Periplus* also mentions the *Malvan/Aurannoboas* (16° 3' N., 73° 28'E) which according to McCrindle is a contraction of *Maha-lavana*, meaning 'saltmarsh', the Greek *Aurannoboas* is perhaps intended for the Sanskrit *Aranya-vaha*, would have a similar meaning (Schoff 1912, 202). It is also a place of considerable importance as good iron ore was found in the neighbourhood. However, salt being a perishable item made it difficult to cite evidences in favour of this so-called salt trade.

Later, one notices that the Phoenician² traders from the Mediterranean established a regular commerce in salt. Salt from the great mines of India apparently was carried to the Mediterranean markets by camel caravans more than 2,000 years ago (Rose 1952, 315). Some of the caravan routes of today presumably can be traced to this so-called trade route. It cannot, however, be said whether the route followed was overland or by sea. Indian commodities were in high demand by all the commercial communities of these regions, especially among the Jews. In the thirty-seventh chapter of Genesis, there is a reference to an Ishmaelite³ from Gilead conducting a caravan of camels loaded with spices, balm and myrrh, which they were going to carry down to Egypt (Genesis 37:25). A passage in the Old Testament bears reference to the involvement of the Arabs merchants dealing in spices procured from India. Further, in 1 Kings chapter, the navy of Hiram⁴ brought gold from 'Ophir' along with plenty of almug trees and precious stones to the *darbar* of King Solomon (1 King 10:11). The almug trees was highly celebrated and appreciated by the king. The precious stones of King Hiram's cargo still lie in the hills to the west of Ajmer, rich in garnets, amethysts, chrysolites, and metals, as well as also in the hills of Gujarat, where agates, mocha stones and carnelians are found below the surface of the soil (Samaddar 1911, 904). The place referred to as Ophir must have been on the Malabar Coast, from where precious stones were periodically sent to King Solomon; in all probability, Indian navigators shipped the goods from the Indus to some part to the south of Bombay, whence they were fetched by the Arabs or Phoenicians (ibid). Even though there is no exact reference to salt trading in the Bible, one may infer from the above scenarios that the Arabs and Phoenicians were one of the earliest commercial agents between India and the Mediterranean, inspiring the two geographical regions to open up more and direct channels for their transport in the following centuries.

During the early historical period, Kautilya mentioned in the *Arthashastra* the superintendent of ocean mines, the *khanyadhyakshah*, should attend to the collection of conch-shells, diamonds, precious stones, pearls, corals, and salt (*kshara*), and also regulate commerce in the above commodities. Manufacture, supply and distribution of salt were undertaken by the central agencies while law and crime management departments would control the private production of salt (Basu Majumdar 2023, 66). It is mentioned in the *Arthashastra* that after the manufacturing process of salt, the superintendent of salt would, in time, collect both the money-rent (*prakraya*) and the quantity of the shares of salt due to the government; and by the sale of salt (thus collected as shares) he would release not only its value (*mulyam*) but also the premium of 5 percent (*vyajim*), both in cash (*rupa*). Taxes were imposed on both imported and domestically produced salt. Of imported salt, termed *agantulavanam*, one-sixth portion (*shadbhaga*) would be paid to the king. The sale of this portion (*bhaga-vibhaga*) would fetch the premia of 5 percent (*vyaji*), or 8 percent (*rupika*) in cash (*rupa*). The purchasers not only had to pay the toll (*shulka*) but also the compensation (*vaidharana*) equivalent to the loss entailed on the king's commerce. Of cloths (*vastra*), quadrupeds, bipeds, threads, cotton, scents, medicines, wood, bamboo, fibres (*valkala*), skins, claypots, grains, oils, sugar (*kshara*), liquor (*madya*) cooked rice, salt, and the like, the superintendent would receive 1/20th or 1/25th as toll. When minerals and other commodities were purchased from mines, a fine of 600 panas was also imposed. Adulteration of grains, oils, alkalis, scents, medicinal articles, and salts, with similar articles of no quality was punished with a fine of 12 *panas*. Men learned in the Vedas, persons engaged in penance, as well as labourers could take with them salt for food; salt and alkalis for purposes other than this were subject to tolls. Salt was also one of the valuable commodities stored (in the fort) in such quantities as could be enjoyed for years and in times of emergency.

Apart from this, salt was also used in the manufacturing process of gold and silver jewellery and ornaments, as mentioned in the *Arthashastra*. Pure and glittering gold, called *tapaniya*, combined with an equal quantity of lead, was heated with rock-salt (*saindhavika*) to melting point under dry cow-dung to form the basis of gold alloys of blue, red, white, yellow (*harita*), parrot and pigeon colours. Pure or impure silver (*tara*), after being heated several times with rock-salt was made to alloy with *suvarna*.

As far as forgery and forgers are concerned, Kautilya also makes an oblique reference to salt. In a passage in the *Arthashastra* where the act of false balances for cheating with weights are concerned (*tulavishama*), we get reference to terms like removal (*apasarana*), dropping (*visravana*), folding (*petaka*), and confounding (*pinka*) of gold mentioned, the use of salt for such activities or mal practice is attested. The goldsmiths adhered to such mal practices to deceive the masses. The texts further mentions that in an ornament or a coin (*sapari-bhandevarupe*), salt was mixed with hard sand (*katusarkara*) and heated on a flame to make it firmly adhere to the ornament or coin. The author mentions that this salt and sand could however be gotten rid of by boiling (*kvathana*).

According to *Arthashastra* salt was a monopoly of the state, but epigraphic evidences to non-digging for salt (*alonakhatakam*, i.e. *alavanakhadakam*) is profound in Satavahana records. This is a reference to exemption from digging the land by the state for manufacture of salt. Thus, this probably is a reference to salt raking in the coastal areas of the Satavahana territory from which the donor was given an exemption (Basu Majumdar 2023: 67). In the subsequent period or dynasties, salt continued to remain under State monopoly, and the government regulated its production and trade. This control allowed empires to generate revenue and maintain stability in the market.

In the later times one may also find evidence of Tibetan salt acquiring the status of money. Before delving into the issue of salt as money it is imperative to discuss briefly the availability and the types of salt in the Indian subcontinent. Basu Majumdar has discussed the manufacturing techniques and economic perspective of salt in early India. There were five techniques prevalent at the time, viz. rock salt from the Indus, salt from Sambhar Lake in Rajasthan, coastal salt, plant salt and black salt (Basu Majumdar 2023, 64–65). In the *Arthashastra* there is mention of the following types of *lavana* or salt, viz. *saindhava*, which is the product of Sindhu; *samudra*, produced from sea water; *bida*; *yavakshara*, *nitre*, and *sauvarchala*, which are the products of the country of Suvarchala; and *udbhedaja*, which is extracted from saline soil. The oldest Chinese treatise on pharmacology and pharmacognosy, *Peng Tzao-Kan-Mu* dates back possibly to around 2700 BCE describe twenty kinds of salt and twenty-seven additional kinds (Bass-Becking 1931, 435).

In China, salt has been listed as one of seven indispensable necessities of everyday human life other than fuel, rice, oil, sauce, vinegar, and tea. The salt monopoly in China was argued to have originated even before the establishment of the first imperial dynasty in 221 BCE (i.e. the Qin dynasty). The exact origin of the salt monopoly in ancient China is not entirely clear and the issue is still a matter of debate among contemporary researchers. It is believed that Emperor Yu of the Hsia dynasty, which flourished during 2200 BCE, levied the first salt tax in the province of Tsing Tau. While some argue that the monopoly can be traced back to as early as the Western Zhou period that flourished during the eighth–eleventh centuries BCE (Xu 2017, 518), others believe that the monopoly originated from the Spring and Autumn and the Warring States periods which flourished during the eighth–fifth centuries BCE and fifth–third centuries BCE, respectively (ibid.) Moreover, a majority of researchers opines that the monopoly was formally introduced and implemented in the

Western Han⁵ period (206 BCE - 9 CE). However, it is clear from the above that Chinese imperials are one of the earliest dynasties to impose the salt tax in ancient time. Ever since then, salt has been considered a vital necessity for survival and thus highly valuable for trade and taxation, providing the central authority, the provinces, the military feudal lords, the in-charge of trade and exchange routes, and the local political unit with a steady source of revenue.

Not only was salt was state monopoly and acted as the major source of revenue for imperials in ancient China, it was a vital component in the complex process of state formation during the first millennium BCE and also played an important role in the unification of China by the Qin dynasty in 221 BCE. For example, in Zhongba⁶ the specialized production of surplus of salt (and possibly salted products), and the trade of these commodities to other regions stimulated contacts between the upper and middle reaches of the Yangzi River (Flad et al. 2005,126–31). The so-called Three Gorges⁷ region remained a relatively peripheral area during the time, but the establishment of trade networks, based in large part on the exchange of surplus salt, brought some elite practices into the region and stimulated the emergence of social differentiation in the area. The elites in nearby polities, such as the Chus, engaged in gift-giving and related practices in attempts to create ever-larger networks of political influence. At the same time, salt from the Three Gorges facilitated the development of more complex economic systems in these same nearby polities by providing a resource that was unavailable elsewhere in the middle reaches of the Yangzi River drainage. Eventually, salt became crucial to the provisioning of armies by expansive states such as Qin and Chu, and the existing networks of salt exchange became catalysts to the incorporation of this area into a unified Chinese empire. Marco Polo also later observed the highly organized salt trade of China. He recorded that the major item of trade on the Yangzi River was salt, shipped upstream from the coast, especially from the city of Hangzhou to the interior cities.

Among the Romans, the salt trade was under State control from the earliest times. In the seventh century BCE, the Romans built a small and shallow pond across the river in Ostia that would hold sea water from the Tyrrhenian Sea. Pliny the Elder (the first century CE writer), mentioned that King Ancus Marcius gave a largess to the people of 6,000 bushels of salt and was the first to construct salt pools (Jones 1963, 433). The sea water was evaporated by the sun, leaving behind salt crystals. The *Via Salaria*, an ancient Roman road that connected Rome to the Adriatic Sea, was also built to transport salt to Rome and to the inside of the peninsula (Moore 1935, 351–52; Jones 1963, 433). The road was named after the Latin word for 'salt' since it was the route by which the Sabines, living nearer the Tyrrhenian Sea, came to fetch salt from the marshes at the mouth of the river Tiber. Livy reports that the Roman censors imposed a new tax in 204 BCE on the annual salt production (*salariaannona*). The price of salt was *sextans*,⁸ that is, one-sixth of a copper *as*, or one-sixtieth of a silver *denarius*. This price was the same throughout Italy but more in town squares and market places, and at other rates in other places. It was widely believed that just one of the two censors devised this tax (Moore 1935, 351–52).

In the later periods salt acquired a very important role among Romans: soldier's wages were paid in salt. In fact, the word 'salary' originates from special salt rations paid to early Roman soldiers, known as '*salarium argentums*' (Lewis and Short 1879, 1618; *Totius Latinitatis Lexicon* 1771, 15; *Encyclopedia Britannica* 1977, 193; Staff 1982). According to the Pliny, salt is also related to magistracies and duty abroad, and that is where we get the word "salaries" (Jones 1963, 433). In one biblical story, mentioned in the Old Testament (Genesis 19:1–29), salt symbolized a lack of fidelity.

The tale of Lot goes like this: when the two angels of the Lord command Lot, his wife and two daughters to flee the sinful city of Sodom without ever looking back, Lot's wife cast a fleeting glance backward (her faith was uncertain) and she was immediately transformed into a pillar of salt. Even though there are many instances that suggest a relation between the salary and salt allowance, no ancient source except Pliny has ever actually uses *salarium* to mean "salt allowance". However, without a doubt, salt must have been a vital part of the day-to-day life of Romans and was a significant strategic resource traded and exchanged widely across the globe.

Furthermore, in ancient Greece, salt was so valuable that the slave trade often involved the exchange of salt for a slave thus giving rise to the expression "not worth his salt" (Staff 1982; first attested in the 1830s).⁹ The nobles, the rulers, and the government needed salt to be available for their army and livestock, not simply to consume but also as a way of paying soldiers for their service, and it is said that a soldier's salary was cut if he was "not worth his salt". In the later period in the Mediterranean, Genoa and Venice were the two powers that not only traded in salt, but fought for supremacy over the trade across the thirteenth to sixteenth centuries (Warren 2015, 6–8). Genoa was positioned in the western Mediterranean and Venice at the head of the Adriatic. Each used its political and military strength to consolidate its local salt trade, and to encroach as far as possible on that of its rival. According to the historian S.A. Adshead, "for the Venetians, salt was not just a commodity, its monopoly is the true foundation of their state".

The Venetians had different methods for maintaining their trading monopoly and as late as 1590 the Venetian were imposing an 81 per cent mark-up on salt sold inland. A special State body called the *Collegio del Sal* was set up to supervise all the activities involving salt production and distribution. On the island of Pag, they would buy up all the salt that was not needed locally. It would then be shipped to Venice, warehoused and sold (at very high prices) to customers. At Muggia and Capodistria, the Venetians were given a fraction (about 10 per cent) of the salt produced (presumably as protection money), but the locals were allowed to sell the other 90 per cent only as long as it was carried overland, effectively limiting its value and the sales area. Typically, Venetian merchants bought salt for 1 ducat a ton, and it cost them about 3 ducats a ton to ship it to Venice. There they received a State subsidy of 8 ducats a ton. The State collected a tax as the salt left Venice, and after shipping to the customer the selling price was roughly 33 ducats a ton (Warren 2015).

Near the end of the 13th century, a tax on salt, called *gabelle*, was implemented. The tax was at its peak during the French Revolution. An obligation known as *sel de devoir*, translated to 'salt of duty', forced citizens above the age of 8 to buy an additional 7 kg of salt per year. By the time Louis XIV ruled the country, it was estimated that this particular tax produced the largest source of revenue for the State. Different regions of France were taxed at different rates, and some were not taxed at all.

Coming to the African continent, the discovery of the salt mines of Taudenni in the twelfth century, 500 miles north of Timbuktu,¹⁰ gave rise to a robust commodity trade that quickly paved a trail connecting Timbuktu with Europe, southern Africa, and Persia (Boissoneault 2015). Merchants in Timbuktu valued salt as highly as books and gold. Since its discovery in the sand dunes of the desert it was in high demand in West Africa. The salt slabs acquired from the mine Taudenni were loaded onto camel caravans headed south towards Timbuktu, travelling nearly two weeks. The salt was then passed to local merchants and distributed down river along the Niger to the river town of Mopti, which was the largest salt market in West Africa. The salt was cut into slabs of 110 cm x 45 cm x 5 cm that weighed 30 kg. Two of the high-quality layers were of sufficient thickness to be split in half, so that 5 slabs could be produced from the three layers. With the trade of Taudenni's prized salt

came the ability to move people, information, and ideas across the Sahara Desert. Subsequently, Timbuktu became a centre of great wealth and Islamic study.

In Ethiopia's Danakil Plains, the salt extracted from the salt flats was historically used as a form of currency, often referred to as 'white gold'. People would trade large blocks of salt mined by hand or transport it by camel caravans or mule, making it a valuable commodity in the region (Pankhurst 1962, 213–48). Salt being used in trade was probably first referred to by the Egyptian monk Cosmas Indicopleustes, who learnt of its use as early as 525 CE. Alvarez, a thousand years later in 1520, says that the mineral was used as money throughout the kingdom and under the dominions of the emperor. The Jesuit traveller Almeida, in the seventeenth century, reported that on the Dankali side of the borders of Tigre and Angot, salt blocks were cut into smaller bars of axe. Alvarez describes the pieces thus produced as a span and a half in length, four fingers in width and three in thickness. However, the bars of salt varied considerably in value from locality to locality in direct proportion to the distance from the mines. According to Alvarez, a dram of gold would buy 120 or 130 pieces where they were collected, 5 to 6 less at Corcoro market in Angot, and even less from market to market till, on reaching the court on the borders of Shoa, a mere 6 or 7 pieces could be brought for a dram and only 5 in the rainy season when it was difficult to preserve the salt from moisture (Pankhurst 1962, 213–48). According to Almeida, a dram of gold was worth 80 to 100 pieces of salt at the market nearest to the mines, 50 to 60 in Tigre, 25 to 30 in Dambea, and only 6 to 10 in Enarea when they were in good supply. All this shows that the salt was very cheap where it was obtained while in far-off regions it was said to be almost worth its weight in gold. Furthermore, when the salt bars were broken en route, they lost their value. Such variations were due to the fact that the salt had to be transported over long distances by donkey or mule on difficult mountain roads, often mere tracks, and across rivers during the rains, which were frequently impossible to ford. Also, the loads were subjected to heavy taxation en route. Alvarez reported meeting no fewer than 300 or 400 animals in herds on the roads of Massawa which was sent by the great lords. The animals were laden with salt on a journey each year to procure the wherewithal to pay their expenses at court. The salt caravans were, in fact, an almost permanent feature of the Ethiopian landscape.

In Kaindu (Tibet), as described by Marco Polo, there were tiny cakes of salt pressed with images of the Grand Khan and used as currency or money (Thomas 2004, 201). There were two forms of currency noted in this region: the greater money, which was a gold currency without any stamp of imperial; the second was salt money, called the 'small-money' (ibid.) Kaindu was blessed with abundant salt springs whose brine was boiled in pans to prepare salt cakes. When the salt water was boiled for an hour, it became a kind of paste, which was formed into cakes of the value of 2 pence each. These, which were flat on the lower side, and convex on the upper side, were placed upon hot tiles near a fire, in order to dry and harden. On this, the stamp of the Grand Khan was impressed; this could not be prepared by anyone other than his own officers. Eighty of the cakes were made to pass for a saggio of gold. But when these were carried by the traders amongst the inhabitants of the mountains and other parts little frequented, they obtained a saggio of gold for sixty, fifty, or even forty of the salt cakes.

In the medieval times in the region of Manipur, common salt, called *thum* (Singh and Basa 2013) in the Meitei dialect, produced locally in cake form, was highly valuable and used as a reward from kings for heroic deeds. All the salt wells were considered to be the property of the king and a tax of 1/5th was levied upon the quantity of water drawn from the salt well (Yumkhaibam 2024, 14–15). A

royal official called *Thumjaorungba* was hired to oversee the manufacturing and distribution of salt. Here, the salt was produced not just for the consumption of the inhabitants of the valley, but to be made an article of exchange with the surrounding tribes, who bartered for it with their tobacco, ginger, clothes and cotton. *Loiyam Shinyam*, a 12th-century CE text, outlines how rewards were distributed for capturing a tiger. Among ten hunters, three would receive rewards (Singh and Basa 2013, 4):

- a) The first would receive a parcel of paddy field and *thumnamma* (salt cake) which was equivalent to one hundred plates of common salt.
- b) The second hunter would receive cloth and salt.
- c) The third would receive a portion of salt and cloth.

One may assess from the above statement that the salt was an exclusive and highly coveted item in Manipur and this is because Manipur lies far away from the zone of production of salt; thus, its non-availability and rarity along with its demand as a day-to-day commodity of usages made it exclusive or high priced.

Though this evidence comes from Manipur, this phenomenon was not limited to the state alone; rather, similar conditions would have prevailed across North-east India. The non-availability of salt in this region led the people there to produce kind of plant potash, otherwise known as *audvidhalavana* in texts. Such a salt was produced in Arunachal Pradesh by the Apatanis. There are several researches on this type of salt; the present author has also attempted an ethno-archaeological study of the production of the same.

As far as the main source of supply was concerned, the salt pans of south-eastern Tibet and the lakes of the northern plateau were the main source of salt for the 'Extended Eastern Himalayas'¹¹ and north India in the pre-modern period (Lazcano 2022, 70–103). The salt from South-eastern Tibet reached these regions after passing through several hands, increasing the final price of the salt. The extreme scarcity of salt in these regions possibly made this product the most valuable commodity for trade. Vegetables, sugar, barley, corn and wheat were exchanged for salt. On the other hand, in many parts of Tibet, especially in the eastern and south-eastern regions, there were no conditions for cereal cultivation, so the only way to obtain cereals was through exchange of salt. Salt from the lakes was transported along with other livestock products loaded on yaks, sheep or camels to the agricultural areas, where it was exchanged for the coveted grain. Diverse people from all corners of the southern fringe of Tibet appeared at these trade fairs, exchanging merchandise, ideas, news, dialects, religious forms, and ways of life.

In Tibet, the Drokpas and Bhotias were the two groups responsible for the exchange of goods at the border passes.¹² The salt tax was paid at Ruthok or Purang on the routes to Ladakh, Kinnaur or Humla (North India), or along the banks of the Yarlung Tsangpo (Brahmaputra in India). Salt tax-collecting officials (*tsasho*) were stationed at the ferry crossing and collected tax from groups who would necessarily have to cross the river to reach the Himalayan buttresses. Tibetan texts mention contacts between Tibetans and the tribes of Arunachal Pradesh along the northern border of present-day Arunachal Pradesh from the beginning of the fifteenth century. In Arunachal Pradesh, Tibetan salt reached the Mishmi Hills (the eastern strip of the state) and this was consumed by almost all the tribes. In the Mishmi Hills, Tibetan and Chinese traders and small groups of Mishmis crossed the passes of the Upper Dibang basin or the border of the Lohit River, exchanging salt, Tibetan swords, coarse woolen cloaks, copper pots for the famous medicinal plant *mishmee-teeta*, musk, bear skins and other jungle products (Lazcano 2022, 74).

The villages of southern Tibet were also an obligatory crossing point in the 'Ancient Tea Horse Road' (7th century CE). Thus, the circulation of commodities on the trade network of China, Yunnan, Tibet and the Himalayan borders can at least be dated back to the seventh–eighth centuries CE and even further. The Ancient Tea Horse Road, as described by Gary Sigley, was an important conduit for commercial activity, including tea, salt, medicinal products, and luxury goods and cultural exchange, especially between Tibet and south-west China. It was another important entry point for Buddhism into China in addition to the more well-known Silk Road. All these activities on the crossroads of Tibet, south-China and eastern India suggests that till very recent times, salt played a valuable role as a medium of exchange for several other products.

Notes

- 1 The 'Great Migration' from the Rann of Kutch to Java in the sixth and seventh centuries CE.
- 2 Phoenicians were a prominent civilization along the eastern Mediterranean coast, primarily remembered as adept sailors and cunning merchants, emigrated between 3000 and 2500 BCE, from the shores of the Persian Gulf to the narrow Mediterranean coast of Syria.
- 3 Ishmaelites were a descendant of Ishmael, the son of Abraham and Hagar, and are often associated with the Arab peoples and the desert regions of the Arabian Peninsula
- 4 Navy of Hiram' refers to the fleet of ships belonging to Hiram, King of Tyre (modern-day Lebanon), who was a Phoenician ruler and an ally of the Israelite kings David and Solomon.
- 5 Han Dynasty time period: 206 BCE–220 CE (Western Han: 206 BCE–9 CE; Eastern Han: 25 CE–220 CE)
- 6 Zhongba was the ancient salt-production site in south-western China—an erstwhile part of the Tibet Autonomous Region.
- 7 The Three Gorges are three adjacent and sequential [gorges](#) along the middle reaches of the [Yangtze River](#) path of China, comprising the [Qutang](#), the [Wu](#), and the [Xiling](#) gorges. They span 193 miles, beginning at [Baidi City](#) of [Chongqing](#) in the west and ending at Nanjing Pass, at [Yichang City](#), [Hubei Province](#), in the east. Between these are the Fengjie and [Wu Mountains](#) of Chongqing, as well as Badong, Zigui, and Yichang of Hubei Province.
- 8 A *sextans* was one-ninety-sixth of a *denarius*.
- 9 [Etymonline.com](#), a proper historical source needs to be corroborated to prove the phrase 'worth his salt'.
- 10 Timbuktu is considered a gateway to the Sahara Desert, and key location for the exchange of goods connecting North African salt mines with the gold-rich regions of West Africa.
- 11 'Extended Eastern Himalayas', the term was coined by Stuart Blackburn and Toni Huber, includes Sikkim and Bhutan, present-day Arunachal Pradesh, the Burmese region of Hkakabo Razi, north-western Yunnan province, and the strip of Tibetan territory contiguous to the north of all of them.
- 12 Bhotias are culturally and linguistically Tibetan groups living on the Indian, Nepalese or Bhutanese side of the border. They have historically acted as intermediaries with the peoples further south, and it was they who brought the salt to Kashmir and the Himalayan midlands.

References

- Bass-Becking, L.G.M. 1931. Historical Notes on Salt and Salt-Manufacture. *The Scientific Monthly* 32 (5): 434–46.
- Basu Majumdar, Susmita. 2020. In and Out of the Interaction Spheres: Exploring Money in the Bay of Bengal Network. *Journal of Bengal Art* 25: 481–98.
- . 2023. Salt in Early India: A Socioeconomic Appraisal. *Economic History of Bengal*: 64–79.
- Bibitha, B. and T.V Sreeni. 2025. Comparative Analysis of Romaka Lavana and Vida Lavana Prepared by Two Different Methods Using Xrd and Edax. *International Journal of Ayurveda and Pharma Research* 13: 33–38.
- [Boissoneault](#), L. 2015. The Golden Age of Timbuktu. <https://daily.jstor.org/golden-age-timbuktu/>
- Bulian F, et al. 2024. Bronze Age to Roman Period Salt Production in the Coastal Areas of Peninsular Italy: Palaeo environments, Production Methods and Archaeological Evidence. *Quaternary Science Reviews*.
- Chakrabarti, D.K. Internal Trade Indus Civilization. *Southeast Asian Studies*: 202–06.
- . External Trade Indus Civilization. *South Asian Studies*: 207–11.
- Encyclopedia Britannica* 16. 1977.
- Flad, R, et al. 2005. Archaeological and Chemical Evidence for Early Salt Production in China. *The Proceedings of the National Academy of Sciences* 102(35): 12618–12622.
- Egidio, [F. and F. Jacopo](#). 1771. *Totius latinitatis lexicon*, Padua: Manfrè Press.

- Gogoi, B.K and R.K. Sarmah. 2013. Geochemical Characteristics of Shale of Disang Group, Tirap District, Arunachal Pradesh. *International Journal of Scientific & Technology Research* 2: 186–92.
- Geological Survey of India, Arunachal Pradesh. 2010. Geology and Mineral Resources of Arunachal Pradesh. *GSI Report: Miscellaneous Publication* 30 (4).
- Geological Survey of India. 2011. 'Geology and Mineral Resources of Manipur, Mizoram, Nagaland and Tripura. *GSI Report*.
- Guo J. et al. 2019. Occurrence and Hydrochemical Characteristics of Saline and Salty Springs in the Sichuan Basin of China. *Geofluids*: 1–16.
- Konwar, P. 2021. 'Polity, Policy, and the Economy of Salt in Manipur circa 1826–1947. *Economic & Political Weekly* 56(23): 50–55.
- Lazcano, S. 2022. The Salt Trips in Tibet and the Himalayas: Extraction and Trade in Pre-modern Times. *Revue d'Etudes Tibetaines* 65: 70–103.
- Leonard, A. 2020. When the Patriarchy Came for the Salt Goddess. <https://andrewleonard.substack.com/p/when-the-patriarchy-came-for-the>
- Lewis Charlton, T. and C. Short. 1879. *A Latin Dictionary*. London: Oxford University Press.
- Liu, F.D. 1998. 'Literature on Industry and Commerce (Gong Shang Zhi Du Zhi). *Journal of Chinese Culture*: 61–62.
- Livy. 1935. *The History of Rome*. Tr. F.D. Moore. London: Harvard University Press, 1935.
- Murphy, N. 2019. Not Worth His Salt. <https://scttx.com/articles/not-worth-his-salt-neal-murphy#:~:text=February%20%2C%202019%20%2D%20Has%20anyone.is%20a%20very%20cheap%20mineral>
- Nongmaithem, H. 2019. Salt Brines of Manipur: The Source of Meitei Thum. https://epao.net/epSubPageExtractor.asp?src=education.Science_and_Technology.Salt_brines_of_Manipur_The_source_of_Meitei_Thum_By_Herojit_Nongmaithem
- Pankhurst, R. 1962. Primitive Money in Ethiopia. *Journal des Africanistes*: 213–48.
- Pliny. 1963. *Natural History*. Tr. W.H.S. Jones. London: Harvard University Press.
- Reclus, Elisee. 1891. *The Earth and Its Inhabitants. Asia*. Ed. A.H. Keane. Vol. III, New York: D. Appleton and Company.
- Rose, F.P. 1952. Primitive Salt Works. *The Arkansas Historical Quarterly* 11(4): 315–26.
- Saikia, R.R and N. Amin. 2019. A Study on the Salt Production of Ancient Assam. Project Report, *International Journal of Health Sciences* 54(4): 485–96.
- Saikia, R.R et al. 2024. 'Physico-chemical Parameters of Traditional Salt Producing Springs of Ancient Assam, Northeast India. *Indian Journal of Traditional Knowledge* 23 (2): 119–27.
- Samaddar, J.N. and F.R. Hist. 1911. Ancient India's Commercial Relations. *Journal of Royal Society of Arts* 59(3063): 903–09.
- Sands, T. and C.P Higby. 1949. France and the Salt Tax. *The Historian, Spring* 11(2): 145–65.
- Sarma, R. 2017. The Story of Tapyo: The Alkaline Salt Substitute of the Apatanis of Arunachal Pradesh, India. *Cultural, Agricultural, Food and Environment, the Journal of Culture and Agriculture* 39:58–62.
- Schoff, W.H. tr. 1912. *The Periplus of The Erythrean Sea: Travel and Trade in the Indian Ocean by a Merchant of the First Century*. New York, London, Bombay and Calcutta: Longmans, Green, and Co.
- Shamasastri, R., tr. 1951. *Kautilīya's Arthaśāstra*. 4th edition. Mysore: Mysore Press.
- Singh, N.S. and K.K. Basa. 2013. Traditional Salt Making among the Meiteis of Manipur: A Study on Intangible Cultural Heritage. *Internet Archive*.
- Singh, N.R. 2002. Salt, Economy and Politics in East Arunachal Pradesh during c. 1200 – 1945. *Proceedings of North East India History Association*: 139–51.
- Staff, Time. 1982. A Brief History of Salt. <https://time.com/3957460/a-brief-history-of-salt/>
- Tante, C. 2021. Indigenous Salt Production among the Nocte and Tutsa Tribes of Tirap District, Arunachal Pradesh. *Skylines of Anthropology*: 58–71.
- The Holy Scriptures of the Old Testament*. 1903. Berlin: British & Foreign Bible Society.
- Thomas, W. 2004. *The Travels of Marco Polo, the Venetian*. Montana: Kessinger Publishing.
- Warren, J. 2015. 'Salt's Uses Across Human History'.
- Xu, Y. 2017. The State Salt Monopoly in China: Ancient Origins and Modern Implications. *Studies in The History of Tax Law* 8: 513–37.
- Yumkhaibam, A. 2024. An Exploration of Meitei Thum: Its Cultural Significance, Production, and Contemporary Relevance. M.A. Dissertation, Department of History, Manipur University.

Ms. Bullo Opi, Ph.D. research scholar, Department of Ancient Indian History and Culture, University of Calcutta, is pursuing her research in frontier studies of Indo-China, China-Southeast Asia, and Indo-Southeast Asia. Her research interests include trade and exchange, cross-border and cross-cultural transactions between the regions of eastern India, southern China, and Southeast Asian countries from the earliest times to the early medieval period. bullopi@gmail.com