



## REVIEW ARTICLE

### THE TRADITION OF SALT MANUFACTURING IN ODISHA DURING THE NINETEENTH CENTURY

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#### ABSTRACT

The best type of salt are manufactured in Odisha. It has a flourishing tradition of salt manufacture during the British period. Its soil, impregnated with the saline particles as far as the spring tides reach during the dry seasons was singularly well fitted for the manufacture of salt. The salt lands in the calciferous tract of Odisha possessed unique natural qualities for salt production. The methods of salt manufacture prevalent in Odisha can be classified under two main processes viz. *panga* and *karkatch*. In the *panga* process salt was obtained by boiling concentrated sea water. The *karkatch* process meant the solar evaporation of sea water. As Odisha is prone to frequent rains and thunderstorms during the manufacturing season. Salt manufactured in the *karkatch* had to be abandoned *panga* process is only suitable for Odisha.

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#### INTRODUCTION

The entire sea coast of Odisha, which included the former undivided districts of Balasore, Cuttack, Puri and Ganjam, did have a flourishing tradition of salt manufacturing. Its extensive saliferous tract, spreading over more than 500 kms long and 16 to 70 kms broad, extended from river Subarnarekha on the north to river Rushukulya in the south. This region included the famous Chilka lake. The entire region was very ideal for salt manufacturing industry. Its soil, impregnated with the saline particles as far as the spring tides reach during the dry seasons was singularly well fitted for the manufacture of salt. The salt lands in the saliferous tract of Odisha possessed unique natural qualities for salt production. Most of these lands that could be utilised as *khalaris* i.e. salt beds were over flowed with sea water during every spring tides twice in a month, thereby impregnated with the saline contents. Such lands, therefore, could never be exhausted of its salt producing capacity. Because of its proximity to the sea and the nature of the soil, this land could not have been utilised for any other purpose. Fine salt manufacture in Odisha had become a sort of cultivation and a natural industry through the ages.<sup>1</sup> A considerable quantity of salt was manufactured along the sea coast of Odisha before the British annexation of the province. A. Sterling observed that the finest salt in the whole of India was produced in that wild inhospitable tract. Salt manufactured in Odisha was a private concern under the coastal chiefs and

zamindars.<sup>2</sup> The methods of salt manufacture prevalent in Odisha can be classified under two main processes viz. *panga* and *karkatch*. In the *panga* process salt was obtained by boiling concentrated sea brine. The produce from this process was known as *panga* salt. The *karkatch* process meant the solar evaporation of sea water producing *karkatch* salt.<sup>3</sup> The *panga* process of manufacture was followed all over the saliferous tracts of this province except some of the *aurungs* i.e. manufacturing centres in the Chilka lake. Since *panga* manufacture was conducted along an extensive coast line, there were local variations of this process.<sup>4</sup> The scrapped soil mixed with grass and root etc. was placed around the periphery of the field to form a sort of embankment for containing salt water flowed into the field to prepare the brine. After preparing a suitable ground it was divided into three equal parts known as the *chatter* lands. This was followed by repeated submersion of the field with saline water from the sea brought into the field through the inlets, cracks and *nullas* on the coast which extended in some places up to three or four miles in land.<sup>5</sup> The *panga* process of salt manufacture was, however, an elaborate process of several stages for obtaining the species of salt. To prepare the field, the entire ground taken for the purpose was cleared of all its vegetations, grass and roots by digging it to a depth of few inches throughout its expanse.<sup>6</sup> This was essential in order to ensure the production of salt, good in quality and bright in colour. The scrapped soil mixed with grass and roots etc. was placed around the periphery of the field to form a sort of embankment for containing salt water flowed into the field to prepare the brine. After preparing a suitable ground, it was divided into three equal parts known as the *chatter* lands. This

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was followed by repeated submersion of the field with saline water from the sea brought into the field through the inlets, cracks and *nullahs* on the coast which extended in some places up to three or four miles in land. At the height of a good tide the *malangis* i.e. men making salt, opened the sluices of the channels to allow the saline water flow on the bed of ground prepared beforehand. This was necessary to impregnate the soil of the *khalari* ground with saline contents. After this, the field was frequently ploughed and dug out during the rains from July to October. Ploughing was followed by making the ground plain by means of a lump crusher called *moye*. The smooth field was then left to the action of the solar rays for five to six days. Exposure of the soil to the sun helped in the evaporation of all moisture that had been absorbed by it along with saline water. After the moisture was drawn out by the sun, the saline components of the impregnated earth were brought up the surface of the soil in the form of small blisters. These were easily convertible to power with the slightest touch. At this stage, the field became ripe for the salt crop and the salt earth was ready to start the next stage.<sup>7</sup>

The next stage of the process was carried out by flooding the salt field again with the saline water of the sea. In course of its passage over the ground the sea water was collected in pits of 4' to 5' deep previously dug on the ground. Each division of the field had one such pit which served as a reservoir for saline water. The pits were kept supplied with sea water during spring tides as a regular feature of the process. Salt water from these reservoirs was subsequently poured into receivers prepared close to the boiling house. It remained in the receivers for twenty-four hours to facilitate precipitation of all impurities. It was then passed through the filtering beds prepared by the *malangis* for further concentration of the saline water. The filters were of a primitive type. They were filled to the brim with salt earth collected in heaps on scraping the salt field and kept ready for the purpose. Salt water was then poured into the filters at intervals to avoid overflowing. It gently percolated through the salt earth in the filter bed thereby getting charged with the saline properties of the latter. The concentrated saline water released from the filter through a vent leading from its false bottom of twigs and straws produced the strong brine. Concentrated brine was now ready for boiling to obtain the salt.<sup>8</sup> In the last stage of this process concentrated brine was carried through the channels to a nearby enclosure made of mats. *Chulahs* or furnaces to boil the brine were prepared in close proximity to the enclosures of mats. The furnaces were made up of oblong pots. In each furnace about 200 such pots were cemented together with mud to form a dome shaped (convex) kiln.<sup>9</sup> All the pots in the kiln were filled with the brine before lighting the fire. The fire place under the kiln was made below the surface of the ground. It was built north-south to ensure the free passage of wind through the fire place. By lighting the fire from below the boiling process gets started. As the brine in the pots got partially evaporated, the *malangi* working at it added more and more brine with a ladle. This went on until the pots called *kondees* were filled up to about three-fourths of it with salt. After four or five hours of boiling all the aqueous contents of the pots get evaporated in the steam, producing salt. Salt, thus formed was taken out with iron ladles and heaped in the open air. The heaps were afterwards thatched with reeds. It remained in this position until sold or removed by the officers of the salt department. In this way the finest salt in the whole of India was produced on the Odisha coast. It was distinguished for its whiteness and purity.<sup>10</sup>

South of river Mahanadi, in the Khurda region of the province, which was far away from the sea but close to the Chilka lake, the method of *panga* manufacture was somewhat different. This was due to the peculiar nature of the saliferous tract of the region where the saline water was collected from pits dug on the ground. All the salt lands of this region were low marshes bordering the Chilka lake. These lands were overflowed with the lake water during the rainy season. *Malangis* of this area did not depend upon the lake water for making salt at any stage of the manufacturing process. They utilized the saline water thrown out of the pits dug on the salt marshes adjoining the springs from the hills.<sup>11</sup> In other words brine springs from the hill ranges of the Khurda region adjoining the lake constituted the source for salt manufacture in this locality. Brine obtained from this source was much stronger than common sea water, not to speak of the water in the lake.

Spring brine was flooded over the *chatter* lands of the salt field for preparing a suitable salt earth which in turn was utilized to produce concentrated brine. Furnaces or *chullahs* used in this case were small and contained only seven large pots. These pots were smeared inside with a rough coat of *chunam* (lime) and plastered outside with earth. They were placed quite close to the fire. Consequently the process of boiling by this method was finished in half the time, although the pots contained three times the quantity of brine than those of the common *kondees* (pots) in the northern process. But the salt of Khurda manufacturing process was liable to excessive wastage. It lost one-fourth of its weight in course of a season. This was probably due to the injurious effects of quick boiling with the pungent and granulating power of the *chunam* smeared inside the pots. The nature of the brine might have been another cause for the wastage. But the *malangis* cared little for this shortcoming and the consequent wastage because, they looked to a good produce for a ready market.<sup>12</sup> Apart from its demerits, this process had the following advantages to its credit. (i) The produce from a given measure of brine was greater here than any other process, (ii) the salt was beautifully white and well granulated; it was firm and dry to the touch and (iii) it enjoyed the advantage of a ready market. The process of manufacture followed in the Khurda region did not find favour with the British authorities who took over the salt affairs of the province in 1804. They found that the *panga* salt of the Khurda region was liable to loss of weight during transit and storage. It did not go well with their intentions of exporting Odisha salt into Bengal. So they contemplated to substitute this process by the *karkatch* method.<sup>13</sup> Permission of the Board of Trade was asked on this question. Attempts were made to induce the *malangis* to relinquish *panga* manufacture in favour of the *karkatch* process. The manufacturers were not prepared to give up the traditional system of manufacture. On grounds of climate, soil and brine the *malangis* insisted to continue the age old practice. Besides, a change over to the *karkatch* process was against the commercial interests of the *malangis*. Hence, they refused to be convinced by the government proposal in this respect. The contemplated change did not materialize.<sup>14</sup> One more local variation in the process of *panga* manufacture was prevalent in some parts of the Chilka lake. This process was similar to the northern process in many respects. But the lake process was a more simplified affair than the northern process. This was due to the natural production of saline efflorescence on the dry bed of the Chilka lake.<sup>15</sup> The efflorescence in this case was used in the preparation of the brine for producing salt.

The manufacturing period in the lake was from December to June. From the beginning of the season in December to the middle of March salt earth called *mothoor matta* was procured from the higher levels of the lake bed.<sup>16</sup> But by the end of March extensive tracts of the Chilka lake got dried up. With this the *malangis* used to shift their sheds to move towards more favourable localities for collection of the saline matter which at this stage was known as *lal matte*. In this region, the salt works of the *malangis* were surrounded with rich saline matter in abundance. The collection and utilization of this earth provided employment to the *malangis*. The *chulahs* in this case were not as high as those of the northern process and contained only forty to seventy pots. Working continuously for seven days the Chilika *chulahs* produced salt at the rate of five to eight *maunds* in twenty-four hours.<sup>17</sup> Thus, *panga* manufacture was prevalent all along the saliferous tract of Odisha from the Subarnarekha on the north to the Chilka in the south. The prominence of *panga* manufacture on the Odisha coast was due to the factors like (i) nature of the soil, (ii) plentiful supply of fuel and (iii) climate affecting the coast. The nature of the soil could produce a good salt earth that was ideally suited for manufacturing salt of a very fine quality. Plentiful supply of fuel from the marshy woods adjoining the manufacturing tracts facilitated the manufacture of *panga* salt by the boiling process.

As regards the climatic factor, the coastal belt of Odisha was exposed to frequent rains and thunderstorms from the Northwest during the manufacturing season.<sup>18</sup> In view of this, salt manufactured in the *khalaris* had to be shielded from the ravages of nature. Under the circumstances, the boiling process was the only suitable process on the Odisha coast. For all these reasons, Odisha was peculiarly suited for *panga* manufacture. It had become a part of the tradition in the economic life of the people, particularly in the saliferous tracts of this province.

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