Socio-Economic Status of Workers in the Salt Industry in India

A Report

BOBP

Bay of Bengal Programme
Inter-Governmental Organisation
Chennai - 600 018, India

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Prepared for

The Salt Commissioner's Organisation
Ministry of Commerce and Industry
(Department of Industrial Policy and Promotion)
Government of India

By

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Preface

Salt works begin where civilization ends. This remoteness from mainstream society has meant that salt workers are not only unorganised but also unrecognised — their role in providing society with one of its most basic material ingredients is largely unnoticed.

Unorganised and informal sectors are the most vulnerable constituents of any economic system. Dealing with the problems of workers in these sectors is a challenge in itself. They suffer from exploitation, lack of social security, gender bias, poverty and backwardness. It is essential to identify and recognise these problems and find viable solutions to improve the quality of life of workers in such sectors.

As a contribution to this endeavour, the Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO) has produced this report on the Socio-Economic Status of Workers in the Salt Industry in India. The report is based on the national-level field study conducted by a BOBP-IGO team from September 2004 to December 2005. The study covered seven major salt-producing states — Gujarat, Tamil Nadu, Rajasthan, Andhra Pradesh, Maharashtra, Orissa and West Bengal – which together account for about 99 per cent of India's salt production and employ over a lakh of workers per day.

The report is a comprehensive account of livelihood issues of salt workers *vis-à-vis* the industry. A database CD and a video documentary have also been brought out. These will be available on request.

As is common with unorganised sectors, data on workers in the salt industry is difficult to come by. Our team, assisted by investigators in every state, used several methods – structured and pre-tested questionnaires, interviews, focus group discussions – to obtain reliable socio-economic data on salt works and workers. It has come out with a set of recommendations, which we hope will be useful.

The BOBP has been working with small-scale fisherfolk in countries around the Bay of Bengal for more than a quarter century. It has carried out several hundred surveys and pilot activities in the areas of socio-economics, technology, resources and management. The results have been exhaustively documented. This experience in working with an unorganised group spread over a wide and diverse area has proved useful for planning and executing the present study of salt workers, the first of its kind.

The salt industry in India has come a long way since the time of Chandra Gupta Maurya who first raised revenue through salt taxes. The progress of the industry since independence has been dramatic: salt production has gone up nearly eightfold, from about 19 lakh tonnes in 1947 to 149 lakh tonnes in 2003. Much of the credit for this success goes to the Government of India, particularly the Salt Commissioner's Organisation (SCO), and private enterprises as well.

Mahatma Gandhi gave salt a special place in India's history through the Dandi Salt March and his defiance of unjust tax laws imposed by the British. The Government of India has of late been paying concerted attention to improving the living conditions of salt workers. Several positive measures have been taken up. We hope the issues raised in the present study, and the data and findings presented, will help formulate further welfare measures.

Our study teams met over a thousand salt workers from different part of India. Most of them are paid daily wages for work done. They sacrificed their daily wages to talk to us, in the hope of future well-being. We thank them for their hospitality, courtesy and co-operation.

We are grateful to the SCO for its ready co-operation and its inputs to the study, which have been valuable. We are also grateful to the Department of Industrial Policy and Promotion (DIPP) Government of India, for all the support received during the conduct of the study and subsequently for reviewing the Draft Report. We are particularly thankful to Mr Naresh Chaturvedi, Additional Secretary and Financial Advisor, DIPP and Mr R C Jhamtani, Advisor (Industries & VSE), Planning Commission for their suggestions. We express our gratitude to corporate salt producers, leaseholders and NGOs like SEWA and GANATAR for their help.

Finally, we like to thank our field investigators from different states who did the field work for the study.

We hope this report will stimulate and enhance the livelihoods of salt workers and strengthen their welfare and well-being. Feedback on the report, and suggestions to improve it, are most welcome.

31 March 2006
Chennai, Tamil Nadu

Dr Y S Yadava
Director
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And our family members.

Executive Summary

The Study

The present study is commissioned by the Salt Commissioner's Organisation (SCO), Government of India to the Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO) to unveil the socio-economic status of workers in the salt industry in the country. The study was carried out during September, 2004 to December, 2005 covering one complete production cycle in seven major salt producing states of Gujarat, Tamil Nadu, Rajasthan, Andhra Pradesh, Maharashtra, Orissa and West Bengal. The primary data on the salt workers and the industry was collected through structured questionnaires covering randomly selected 1 073 salt workers. Besides, focus group discussions/ semi-structured interviews with salt workers, leaseholders, SCO officials and NGOs were carried out to arrive at the deductions made in the report. The Annual Reports and other published documents of the SCO and several other concerned institutions/ organisations were referred to for the secondary information documented in this report.

The study provides a benchmark profile on the socio-economic status of salt workers in the country in context of a sustainable livelihood framework and a profile of the salt industry in the country. It also reviews the reach and efficacy of existing Central and State Government schemes implemented for the salt workers. Since welfare of the workers is a positive function of health of the industry, the industry-workers linkages and growth potentials of the industry are also scrutinised. In conclusion a set of recommendations are provided for consideration of the Government and other stakeholders who have a profound bearing on the sustainable growth of the salt industry in India.

The Salt

The history of salt production can be traced back to the don of human civilisation. Salt is an inseparable ingredient, which sustains life on earth. In modern times, salt has about fourteen thousand known uses from food to industry to de-icing. Presently, about 120 nations are actively engaged in salt production. India contributes about 6 percent in global salt production. United States (19 %), China (15 %) and Germany (7 %) are the other major producers. Solar evaporation of seawater and sub-soil brine is the traditional and most widely practiced method of salt production. However, industrialised nations use vacuum evaporation technology that produces purer salt. In India, solar evaporation is the prevailing technique but there is a growing trend of modernisation also.

The Indian salt industry

Immediately after independence in 1947, the Government initiated steps to develop new areas for salt production, which resulted in attainment of self-sufficiency in salt production by the end of the First Five-Year Plan. Presently, about five lakh acres of land is allocated for salt production out of which about 3.22 lakh acres have been developed and utilised till 2004. The country, on an average produces about 150 lakh tonne of salt every year. From an importer of salt, India is now targeting to become a leading exporter of salt.

Salt is an essential commodity and falls under the list of Central subjects as per the Constitution. The Salt Cess Act of 1953 (SCA, 1953) governs the industry. The Act is implemented through the SCO. The SCO collects the cess as per the Act and also looks after production and distribution of salt. Presently, 11 631 units are engaged in production of salt in India. As per the SCA, 1953, these units are classified into four categories based on the area leased out to them under a single lease agreement and their enlistment with the SCO. Units having more than 100 acres of land are classified as category I, units between 10 to 100 acres are classified as category II and units having less than 10 acres under individual lease and co-operative salt works are termed as category III. During 1996, the Government de-licensed production of salt and units whose individual holdings were less than 10 acres were enlisted with the SCO. Such units are classified as category IV or unrecognised units.

Salt production is a seasonal activity. The season occurs in the period between the two consecutive monsoons. The length of the season varies throughout the country and is normally between six to ten months. The major source of salt production in the coastal areas of the country is sea brine, but in Rajasthan

and the Little Rann of Kutch area in Gujarat sub-soil brine is the prime source of salt production. However, since density of sub-soil brine is more than the sea brine there is a growing trend of mixing or replacing sea-brine with sub-soil brine.

Since independence, the industry has grown at about 4 percent per year. Production has increased from 19 lakh tonnes in 1947 to a record 178.79 lakh tonnes in 2002 and 147.61 lakh tonne in 2004. Gujarat produces about 70 percent of salt followed by Tamil Nadu (14%) and Rajasthan (11%). Andhra Pradesh, Maharashtra, Orissa, West Bengal, Karnataka, Himachal Pradesh and Goa contribute the balance. Salt production units in categories IV and I supply the lion's share to the total salt production in the country. However, the industry has it share of problems. Poor infrastructural framework and non-availability of efficient rail network are the major issues affecting the industry. The quality of salt is also an important issue and will be critical to the future growth of the industry. The industry is environment-friendly but growing trends of sub-soil brine abstraction is a potential threat to the stability of the water table and the consequence may not auger well for the industry.

Demand for salt is constituted by: (1) domestic consumption, (2) industrial consumption and (3) export. The current domestic demand is estimated at about 130 lakh tonnes, which comprises 54 lakh tonnes for domestic edible uses and the rest for industrial purposes. In the industrial sector, the chlorine-alkali industry consumes nearly 51 percent of salt.

India started exporting salt in 1949 to its neighbouring countries. Since then, the country is successful in expanding its export market to USA, China, Japan and some African and European countries. Exports have increased from 1.49 lakh tonnes in 1949 to 22.04 lakh tonnes in 2004. Presently (2004), the country is exporting about 15 percent of its total salt production.

The importance of any industry lies in the product it produces and the employment it provides, especially in backward and remote areas. The salt industry directly employs over one lakh workers per day. During 2004 production season, Gujarat employed about 81 408 workers per day followed by Tamil Nadu (17 811), Rajasthan (16 153), Andhra Pradesh (15 905), Maharashtra (2 609), Orissa (1 254) and West Bengal (235). However, the share of the workers in the welfare generated in the industry will depend on growth and institutional structure of the industry. The salt industry is marked by the presence of a large number of intermediaries at every step from procurement of inputs to sale of products. In the existing organisational structure of the industry, the intermediaries hold more information than the other stakeholders about their area of operation. This has enabled them to partake a considerable chunk of the revenue generated in the industry at the cost of producers and the workers.

The salt worker

In the present study a salt worker is defined as a person who is above 18 years of age and engages directly and physically for most part of the year in salt production activities such as preparation of brine, scrapping, heaping and shifting of salt to platform. He/ she earns major part of his/ her annual income from his/ her direct involvement in salt production. This study has covered workers who are either contracted by the leaseholder and, or his agent and small and marginal (sub) leaseholders, who work on their own plot. Irrespective of state and location, the salt workers are found as the poorest of the poor sections of the rural workers in the country. Though, depending on state of the industry and scope of alternative livelihood their status varies marginally from state to state.

Human capital

Most of the salt workers are from backward classes and minority communities. They constitute 68.59 percent of the total salt workers' population at the national level. In Tamil Nadu, nearly all of the workers are from backward classes followed by Gujarat (85 %) and Rajasthan (80 %). About 20 percent of the workers at the national level are seasonal migrants, which occurs at three levels: (1) inter-village, (2) inter-district and (3) inter-state. Over 90 percent of migrants belong to the first two types where the workers migrate from neighbouring districts of salt production zones to salt production centres during the season. Incidence of seasonal migration is highest in Gujarat (38 %) and Rajasthan (35%). Incidence of migration is virtually nil in West Bengal.

An average salt worker family consists of five members. The largest family size has been observed in Rajasthan (6.87), followed by Orissa (6.10). The population pyramid of the salt worker is pitcher-shaped implying a relatively young population with large future labour pool. About 42 percent of the population is below 18 years and about 56 percent is between 18 to 60 years. Proportion of population starts declining sharply in the old age groups indicating a lower life expectancy. Only about 2 percent of the population is above 60 years of age. Longevity of females is marginally higher than the males. Rajasthan has the youngest population structure. Nearly 50 percent of the population in Rajasthan is below 18 years followed by Gujarat, where about 46 percent of the population is below 18 years. Number of females per thousand males in the salt worker population at the national level is 911. Gujarat (862) has a low sex ratio compared to other salt producing states. Given the larger family size, the dependency ratio is quite high even assuming that both husband and wife are working. Hence, the workers cannot save much. The absence of future security in turn compels a working couple to go in for a larger family, preferably of more than one son, who can act as their pension fund.

Overall literacy level among the salt workers is around 46 percent. Mean year of education is lower among the females as compared to the males. Most of the children study up to middle school after which dropouts are quite common. Educational scenario is comparatively better in West Bengal, Maharashtra, Andhra Pradesh and Tamil Nadu where more than half of the population aged more than six years is literate. Correspondingly, in Gujarat, Rajasthan and Orissa hardly one-third of the population in the same age group is literate.

The workers suffer from eye irritation, back pain and skin ulcers. Hard work, inadequate diet and addiction to tobacco and liquor makes them susceptible to diseases like tuberculosis. The workers perceive themselves and their family members in good health till they do not become bed-ridden. However, concern about health can be seen as rising function of education level. In Gujarat where education level is low, 3 percent of the population is reported in poor health whereas in Tamil Nadu, which has a relatively better educational scenario, 12 percent of population is reported in poor health. Report of chronic health problem is also more in Tamil Nadu (12.2%) than in Gujarat (2.76%). Incidence of child vaccination among the salt worker is still far below the targeted universal coverage. Only about 80 percent of children are partially or completely vaccinated. Rate of vaccination is comparatively better in West Bengal, Andhra Pradesh and Tamil Nadu and pitiable in Gujarat and Rajasthan.

Physical capital

Accessibility to school and health centres is still a problem for the salt workers irrespective of location. Education facility up to primary level is available around 5-kilometre radius of the village. However, for secondary and under graduate level education, facilities are available only at the block and, or at urban centres which are about 10-20 kilometres away. This is a major reason of dropout after the primary level. A similar situation prevails with regard to health infrastructure. On an average, workers have to travel more than 2 hours one-way to reach hospital. In some places the State Government has provided medical vans. The SCO, State Government and NGOs also hold health camps at regular basis. However, sub-optimal functioning of the primary health centres is still a major concern.

The study shows that about 53 percent of the salt workers own a house; where ownership simply means the occupant or any of his/ her family member do not pay any rent in cash or in kind or in service for the occupancy. The house may have been built by the worker, inherited or given under some government scheme. Over four-fifth of the workers in Andhra Pradesh, Rajasthan, Orissa and West Bengal own a house. Whereas in other states about half of the workers own a house. However, the housing condition is far from satisfactory. Nearly 80 percent of the population lives in katcha or semi-pucca houses. Even the housing facility provided by the leaseholder at the work place is mostly in form of katcha houses and tents. Except West Bengal, toilet facility at the dwelling unit is rarely available irrespective of state or location. Only about 16 percent of the population enjoys modern toilet facility at the national level. In Andhra Pradesh and Tamil Nadu, toilet facility is worse than the other salt producing states. About 53 percent of workers at the national level have access to electricity. In Maharashtra and Tamil Nadu electrification is marginally better than the other states.

About 93 percent of the salt worker's population has access to drinkable water. Since the salt workers live mostly in remote areas availability of water is more important than quality of water. Though the water is salty in taste, but in all the surveyed states, majority of workers feel that the water available to them is fair in quality. Major source of drinking water is hand pump, tankers and well, etc. However, the availability of good drinking water remains an issue to be taken up on priority basis, especially in the far-flung salt production sites.

Financial capital

The major concern of the workers is their employment and income situation. The objective of the worker is to earn enough during the season to make up for the slack period. However, very few can meet this target and as a result fall prey to the debt trap. Earning of a worker varies across the states and within the states significantly depending on the market linkage of the location and demand-supply scenario of workforce. Depending on these considerations the wage of a worker varies between Rs 40 to Rs 180 per day. On an average, the daily wages of salt workers in Maharashtra are the highest (Rs 101), followed by Gujarat (Rs 75), Tamil Nadu (Rs 70), Rajasthan (Rs 67), West Bengal (Rs 61), Orissa (Rs 50) and Andhra Pradesh (Rs 49). It is observed that even where the workers are employed on contract (no work no pay basis), they are not given their salary daily. The salary of a worker is deposited with the manager or labour contractor of the unit for the entire season. They are paid a *hafta* or weekly allowance which is adjusted to their accumulated wage at the end of the season. For sub-leaseholders or leaseholders tied to salt merchants, a monthly allowance is provided, which is adjusted from the revenue of the sub-leaseholder at the end of the season.

Most of the salt workers in the country have no access to basic amenities and protective gear like rest shed, sanitation, first aid, gumboot and goggles at the workplace. Only about 12 percent of the workers in the country, majority of them from Gujarat, enjoy most of these facilities. Paid leave and other labour welfare measures as per the labour laws are also non-functional. Only 23 percent of workers from public sector salt works, co-operatives and major private works enjoy paid holidays, maternity leave, etc. Social security measures like group insurance schemes and provident fund are also available to an insignificant portion of the workers.

The workforce composition varies as per the requirements in the production process. Male workers generally dominate the workforce constituting an average of 58 percent of the workforce at the national level. Scrapping workers are mostly males while females engage in carrying of salt. In the Bengali and Oriya communities, women normally do not work in salt works as a social tradition. The women workers generally receive less wage than their male counterparts. In Andhra Pradesh and Tamil Nadu this difference is more conspicuous. According to the leaseholders, women workers work less than male workers. However, no substantial evidence in support of this could be seen in the field.

The workers work between 180 to 300 days in a year depending on the location and monsoon. The average per capita monthly income is around Rs 602. Maharashtra (Rs 704) has highest per capita income among salt producing states, followed by Gujarat (Rs 677). The incidence of poverty is quite high. Around 19 percent of the salt workers population is below poverty line. Rajasthan has the highest percentage (46.85%); followed by West Bengal and Orissa. Both the states share the second place with 36.67 percent salt workers' population below poverty line.

A considerable section of the workers cannot find regular work even during the production season. The situation worsens during prolonged monsoons or flooding. Natural catastrophes like earthquakes and the 26 December 2004 tsunami further compound the problem for the salt workers and majority of them sit idle for a larger part of the season. Lack of alternative employment opportunities is responsible for this. On an average 11 percent of salt workers in the age group 18 to 59 years could not find regular employment in the week preceding survey at national level. Weekly unemployment status is comparatively higher in Rajasthan and Orissa.

Backwardness of the major salt producing areas is a major reason for lack of alternative employment opportunities. At the national level only 23.28 percent of the salt workers have secondary sources of income.

The best scenario prevails in Andhra Pradesh where 81 percent of the salt workers have secondary source of income during the off-season, followed by Orissa (64.23 %). Salt workers in Rajasthan have very hard time to get work during off-season as only 23.84 percent of the population has any secondary source of income.

Natural capital

Access to natural resources is a major parameter in the well being of the salt worker. The workers are exclusively dependent on nature for fuel. Access to land resources is insignificant. Most of the families do not have agriculture land. Even those who have agriculture land, small sizes of the plot make agriculture operation unviable.

Social Capital

Formal trade unions are practically absent from the salt industry, excluding some pockets. In the absence of formal trade unions, community bondage acts as a security measure. While 31.12 percent of the salt workers felt important to organise for their collective benefit a majority (67.86 %) expect that the Government can solve their problems.

Government schemes

At present, Central Government through the SCO is running two labour welfare schemes, the Namak Mazdoor Awaas Yojana and the Children Reward Scheme. Among the State Governments, Gujarat has taken some positive measures to improve the life of salt workers. However, these schemes need larger allocation and their execution also needs improvement.

The Namak Mazdoor Awaas Yojana (NMAY)

The NMAY is aimed at improving the housing condition of the workers. However, in some areas the workers apprehend that the Scheme may benefit outsiders more than the actual salt workers. The study also inferred that the leaseholder has a dominant role in the Scheme, which can be both a positive as well as a negative factor. Selection of sites for construction of houses and construction material are some of the other issues that need to be reviewed and corrected. Since the Scheme is in its infancy stage, some of the feedbacks from this study can add value to its successful implementation in the coming years.

The Children Reward Scheme (CRS)

The CRS is vastly under utilised. The Scheme can provide desirable impetus to improve the educational attainment level of the children of salt workers. Low level of awareness and motivation among the implementers are impeding the implementation of this Scheme to its optimum potential.

State Government policies

Among the State Governments Gujarat has taken some positive steps to improve the quality of life of the salt workers. These include, housing, health and insurance schemes for the salt workers. The State has also undertaken census of salt workers, issuing of identity cards, group insurance and provision of mobile medical van linking salt production areas. However, the full impact of these schemes is still to be seen and a co-ordination between the State and the Central Government in this regard may give the desired results.

Recommendations

The salt industry supports livelihood of about five lakh people (estimated) directly or indirectly. However, due to the seasonal and unorganised nature of the activity and coupled with dearth of information, the salt workers have remained invisible in the national labour welfare scenarios. Policy interventions comprising both short and long-term measures are needed to help the industry to organise itself on modern industrial lines. Such interventions are expected to create more secured jobs and will simultaneously address the motivational and identity problems, which the workers are presently facing.

Paucity of data is a major concern in any policy decision and, therefore, immediate steps should be taken on the census and registration of salt workers. Provision of health inputs to the salt workers is urgently needed to improve their standard of living. Owing to the nature of their job and locational disadvantage of saltpans, the salt worker communities are hardly covered by existing health infrastructure. Indifference of salt workers towards their health has worsened the situation further. However, in view of the closely knitted nature of salt

workers community, a trained health worker from within the community will be effectively positioned to deliver health inputs to the salt workers and also to help them in getting medical attention in the preventive stages. The SCO, in co-ordination with the Health and Family Welfare Department, should consider appointment of young men and women from salt worker communities on contract basis to work as health assistants among the salt workers.

Availability of drinking water has been a major issue in the salt industry. Presently, most of the salt works use tankers to supply drinking water to the workers. In some places, leaseholders pay the entire cost of the drinking water from use at work place to personal use of the salt workers. But, in many places, leaseholders ultimately shift the cost of supply of drinking water on the workers, which further adds to their economic hardships. The existing method of supplying drinking water through tanker may not be cost effective in the long run due to escalating fuel prices and it may result in shifting of user cost wholly or partially on the worker's shoulder. To ensure the supply of quality drinking water on regular basis, construction of pipeline may be a better alternative than tankers in the long run. However, high sunk cost, long gestation period and comparatively higher initial user charges are impediments to run this project on a public-private partnership basis.

To cater to the needs of the larger clusters of marine-based salt workers communities, setting up of reverse osmosis (RO) plants in selected areas could be another option. The energy requirement of these plants can be subsidised by windmills wherever possible. Though, considering the sunk cost and operation and maintenance costs and also requirement of technical skill and manpower for manning the RO plants, it may not be the optimal feasible option. Hence, harvesting of rainwater wherever possible by construction of village producers group can be the best possible choice for supplying drinking water. The project requires relatively low sunk and operation and maintenance costs. The level of technical requirement is also relatively low and the project can be build using locally available materials. This would also be the most environment-friendly option.

To recognise their contributions to the society and to provide them with on-job and post-job income security a Group Insurance Scheme under a single master policy at the national level should be considered for implementation. The Scheme is expected to give the family of the worker necessary support when it is needed most. The SCO is suggested to act as the nodal agency for the Scheme.

The prevailing low level of education amongst the salt workers community is a serious issue. Low demand for education and inadequate and low quality of education are also critical factors. Quality education should be provided at the work sites for the children, which can also catalyse the demand for education. The Government should incorporate NGOs in its effort to promote education among the salt workers. In this regard the CRS need to be revitalized.

Modernisation of the industry assumes importance in the present globalised economy. However, the prime concern is that the process of modernisation should not marginalise the small-scale salt works. On the contrary the modernisation process should provide a level-playing field so that the small-scale salt works can improve their performance and in the process continue to provide employment opportunities to the growing rural population. The prime needs in this respect are standardisation of production techniques and products in line with international standard and realignments of land and lease conditions to promote the growth of the industry and the interest of the workers. The SCO can play an important role in this regard. The relationship of the industry with the SCO is quite strong. The small leaseholders largely depend on the SCO, which can be utilised to promote co-operative movement and in the process protect the interests of small leaseholder and wasteful division of land. The SCO can play a pivotal role in providing both forward and backward linkages to the industry, especially with regard to the transfer of technology, scouting of export markets and arranging finance for the industry.

In this respect specialised salt production zones or 'Salt Parks' can play a pivotal role. Salt Parks can be designed as an institutional arrangement for optimal use of the resources in a collective manner. The salt producers will be provided with necessary physical and credit infrastructure, augmented lease period and other facilities as may be designed by the Government to facilitate and standardise their production in line of

the model salt farm as being established by the SCO. The quality can be ensured through certification from the SCO in collaboration with technical agencies. In turn, the producers will be liable for use of resources on scientific line and for upholding of labour welfare acts. The concept of the salt parks can be initially promoted in some chosen production centres in collaboration with the salt industry. The optimal utilisation of resources and standardisation of product will help in economies of scale and expansion of opportunity in marketing. The concept will lead to the welfare of workers in the form of trickle down effect such as increased wage and employment and improved living conditions due to improvements in physical infrastructure like housing, health and education.

The welfare of the workers is intricately associated with the industry and *vice versa*. However, existing policy measures rather treat them separately. Therefore, synchronization of policies targeted at both workers and the industry is essential to promote the long-term growth of the industry and sustainable livelihood of the workers in the industry.

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National Profile of salt workers

Chapter 1.0 Introduction

1.1 Historical background of the salt industry

The salt has a long and intriguing history. It has shaped civilizations from the very beginning, and its story is a glittering, often surprising part of the history of mankind. A substance so valuable that it served as currency[1], influenced the establishment of trade routes and cities, provoked and financed wars, secured empires, and inspired revolutions[2]. It is not known as to when salt became an article of commerce, but it is certain that it is one of the earliest form of commercial enterprises. Salt is essential for human life, making it a symbol of sanctity from ancient times.

All the methods of salt production that are in use today interestingly have been seen in the records that are supposed to be thousands of years old. There are some 14 000 commercial applications for salt ranging from use in pulp-and-paper production to explosives. Principal modern uses of salt are in the chlor-alkali industry, de-icing and human consumption. It is also used in pharmaceuticals; there are numerous refined saline solutions that are used in medicine. It is also used in textiles, papermaking, and many other industries. There are many types of salt besides sodium chloride – potassium chloride is used for fertilizers and magnesium chloride in metal making. Use of sodium chloride for food has become one of the less-important commercial aspects of the modern global salt market.

Salt manufacturing had been in India from time immemorial and history recalls the role of salt very vividly. The Maurya king, Chandragupta, who ruled India from much of 324 to 301 BC, imposed taxes on salt. In the *Arthasastra*, a treatise on governance, composed by his chief minister, Kautalya, mention is made of a special officer, the *lavananadhyaksa*, who was responsible for salt. Licenses for manufacture were issued, for a fee, or in exchange for one-sixth of the output[3]. Tax was imposed on imported salt as well. The tax on salt was about 25 percent in total. Taxes of this magnitude, or less, seem to have been imposed over most of India until the arrival of the British on the Indian soil.

In western part of Punjab (the portion now in Pakistan) rock salt had been know for long time. Alexander the great noticed that Indian mountains contained rock salt[4]. For centuries salt manufacturers in India along the seacoast in Madras, Bengal, Bombay and the Little Rann of Kutch had been manufacturing salt. Northwest frontier province (now in Pakistan), the Punjab (a portion also in Pakistan), Delhi, the United Province, Central Province, Ajmer, etc. got their salt either by lixiviating of salt earth or from the salt range mines and quarries or from Sambhar, Puchbadra, Bharatpur and Sultapur salt works. The Mohammedan rulers raised revenue from salt in form of transit duties. Sikh rulers also farmed out the mines in Punjab to persons of eminence on contract. Due to transport difficulties salt did not go very far from the region. Their methods were unsystematic and unscientific. The output in those days was about 6 lakh maunds[5] only[6].

Sindh region, now in Pakistan had natural salt deposits. Salt was also found as natural source in Thar and Parkar in the Little Rann of Kutch. Saline tracts were also found in Madras. Salt in the area was

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[1] *The ancient Greeks could buy a slave in exchange for salt and Roman soldiers were paid their salary in salt.*

[2] *Stern salt tax in France was one of the reasons for French revolution of 1789-1799 and Mahatma Gandhi's Dandi March against unjust salt act of British Government provoked the spirit of independence throughout India.*

[3] *The Great Hedge of India by Roy Moxham, Harper Collins, India, 2001.*

[4] *"The Salt Industry in India" by S C Aggarwal (p. no. 2).*

[5] *A unit of weight varying in different countries of Asia from 11.2 to 37.4 kilograms (24.8 to 82.6 pounds) avoirdupois, the latter being the official maund in India. However, in India this unit of weight is no longer in general use.*

[6] *"The Salt Industry in India" by S C Aggarwal (p. no. 24).*

manufactured by solar evaporation and boiling. Spontaneous salt was available in swamps in Madras region, which was mainly used for human consumption. Edible salt was also extracted from the manufacture of saltpetre[7] , which was carried out free for many years. In Mysore, earth salt manufacture was a recognised industry, which continued for a long time.

The erstwhile Bombay region, Little Rann of Kutch, Gujarat, Kathiawar, Dharangadhara and other states had numerous salt works. Sea salt was also manufactured but methods were rather crude. There were salt works in Daman and Goa. Formerly, salt was manufactured in Assam from brine wells. For example, in 1809, the springs of Jorhat and Sadiya in upper Assam were said to have yielded 1 00 000 maunds. In Cachar, Manipur and some hill tracts, isolated localities were famous because of their salt wells. The hill tribes in these localities used to boil the brine to get salt. In olden days people in Uttar Pradesh used to get their supply of salt by lixiviating salt earth. In Bengal, salt was mainly produced by boiling sea brine. There was also a small tax on salt in Bengal under the Mughals – 5 percent for Hindus, 2.5 percent for Muslims – levied as it passed up the River Ganges to the interior areas. In addition, some inland rulers levied a small toll on salt, and other goods, as they entered their territory. The overall tax burden on salt was minor, and not a hardship. But with the British it was to be different[8].

A. Salt Industry during the British Period (Pre-Independence)

The East India Company (EIC) after defeating the Nawab of Bengal in 1756 acquired land in and around Bengal province on which there were salt works. As a form of compensation for the war the Company doubled the ground rent. In 1765, Robert Clive established the 'Exclusive Company'. This was a private company and was given a total monopoly to make what profit it could, on salt and other items. For the first time salt, an essential item of diet was to be significantly taxed. The poor as well as the rich were affected. The following excerpts[9] provide a glimpse into the pre-independence scenario of the salt industry in India.

"All production of salt, other than for the Exclusive Company, was prohibited. Contracts were given to deliver salt to depots. Merchants then had to buy all their requirements from these depots, before selling them to markets/ traders where they could best make a profit. Even in 1770 when famine had hit Bengal, the Company collected salt tax in full on the salt that was consumed. However, many could not afford to buy salt. The supply of salt was also severely disrupted in the famine by the death of a large number of salt workers. The free, but taxed manufacture and trade in salt continued until 1772 when Warren Hastings took over the company affairs and came with a new system for administration of salt affairs. In 1780, Hastings brought the whole process of salt manufacture and taxation under direct government control. He devised a system that, fundamentally unaltered, was to last until the British left.

The salt-producing areas were put under a Comptroller and divided into Agencies. Each Agency was put under the control of an Agent, a government officer. They were salaried, but also received a commission of ten percent on the profit obtained by the government. The *malangis*, now self-employed again, delivered the salt to the Agents at an agreed price. The Agents then sold the salt to wholesalers at a price decided by the government. The price was fixed at Rupees two a *maund*. As the *malangis* received from 0.5 to 0.9 Rupees for their salt, the 'tax' was 1.1 to 1.5 Rupees a *maund*. In its first year *i.e.* 1781-82, the salt revenue was Rupees 2 960 130. By 1784-85, the revenue had risen to a huge amount of Rupees 6 257 470 and the Company became largely dependent on its income from salt.

When Lord Cornwallis took over as Governor-General, he saw another way to increase income. It had become the habit of the wholesalers to take advantage of their sub-monopoly and force up the price of salt. In 1788, instead of fixing the price in advance, the Company took to selling to the wholesalers by auction. This had the effect of hugely increasing the tax to Rupees 3.25 a *maund*. It remained around this extraordinary level until 1879.

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[7] *Nitre, potassium nitrate KNO3, more commonly known as saltpetre, is formed in warm climates by bacterial action during the decomposition of excreta and vegetable refuses.*

[8] *The Great Hedge of India by Roy Moxham, Harper Collins, India 2001*

[9] *Excerpt from The Great Hedge of India by Roy Moxham, Harper Collins, India 2001*

In thirty years, therefore, the Company had forced up a sporadically collected minor tax into one that was ruthlessly collected at a punitive rate. The wholesale price of salt increased from Rupees 1.25 to about Rupees 4 a *maund*. To this wholesale price, of course, the profit of the retailer and the cost of transport had to be added. All this occurred at a time when famine and unemployment swept Bengal; when hugely increased land rents were extorted by the Company; and when an agricultural labourer's wage were, if he were employed, Rupees1 or 2 a month.

There was argument as to whether Indian cattle or sheep needed salt. The size of an average family was another point of contention. However, at the lower end of the scale, it is reasonable to assume that a small family, of two adults and three children, needed at least half a *maund* of salt, 41 pounds a year. Half a *maund* of salt, in 1788, retailed for Rupees 2 or more – two months' income for many families.

The situation continued for many years and agrees with the evidence given to a Parliamentary Select Committee of 1836 by Dr John Crawford of the Bengal Medical Service. Dr Crawford said, "I estimate that the cost of salt to the rural labourer, *i.e.*, to the great mass of the people of Bengal, for a family, as being equal to about two months' wages, *i.e.*, 1/6th of the whole annual earnings". Many other families, following the disasters that had beset the country, were totally without money. In some years the situation was even worse, for until 1836 when the auction system was changed, sub-monopolies caused periodic escalations in price. 'In 1823, for example,' Crawford records, 'in many parts of the country the price raised to Rupees 12 a *maund* for adulterated salt.' At that price, half a maund of salt would have cost half a year's wages!"

The British had a royal monopoly on the manufacture of salt in India. East India Company implemented the salt tax that affected every body in colonial India. The Company extracted these monies directly or through their princely proxies by taxing salt, a necessity of life. There were severe penalties on violations in the Penal sections of the Salt Act (dated 1882). Some penalties are reproduced below:

- *any person convicted of an offence under section 9, shall be punished with imprisonment for a term which may extend to six months.*
- *all contraband salt, and every vessel, animal or conveyance used in carrying contraband salt shall be liable to confiscation.*
- *any salt-revenue officer guilty of cowardice shall on conviction before a magistrate be punished with imprisonment which may extend to three months.*

The salt tax and the hedge continued for nearly two centuries, barely abating even during plagues, floods and droughts. This led to Mahatma Gandhi's famous 1930 march to a seaside saltpan to scoop up salt in defiance of the British.

The chief reason behind Gandhiji's Salt March was the seemingly senseless policy of Britain to protect its salt industry by forcing Indians to purchase salt imported from Cheshire. The great 1930-1931 campaign against the British did not produce constitutional change, but it demonstrated that ordinary Indians had the power to drive events.

Tax resistance, product boycotts, and resignations stretched the twin sinews of government – money and personnel. On a few occasions — in Peshawar at the end of April, in parts of Gujarat for most of 1930 – civil disobedience showed the British what it would be like if they could no longer take for granted the reliability of Indians who staffed colonial government and law enforcement. And the British could not be certain that bush fires that started in these areas would not jump to other parts of the subcontinent. The costs of containing the campaign were high enough to move the Viceroy to negotiate an end to the conflict, on terms that failed to satisfy all his colleagues.

And more than a century of unjust taxation and suppression of the Indian salt industry for the benefit of England's salt producers handed Mahatma Gandhi an opportunity to attract widespread support for independence movement by defying the British salt laws. Mahatma Gandhi's Salt Satyagraha ignited the nation's struggle for freedom but even that did not get the tax cancelled. It began to taper off, and was abolished on February 29, 1947, just six months before independence.

B. Post-Independence

In 1947, salt became tax-free for the first time after two centuries of fierce tax. The country was still importing salt for its domestic requirement at the time of independence. Due to pragmatic policies of the Government, the country achieved sufficiency in 1953 and since then it has never resorted to import of salt. Despite many natural calamities in the salt producing areas like earthquake, cyclone and tsunami, the salt industry has shown resilience and has been continuously flourishing.

The Salt Cess Act, 1953 was introduced and came into force on 2nd January 1954. This Act was promulgated by the Government to provide for the levy and collection of cess on salt for the purpose of raising funds to meet the expenses incurred on the salt organisation maintained by Government and on the measures taken by Government in connection with the manufacture, supply and distribution of salt. Subsequently in 1996, the Central Excise and Salt Act, 1944 was amended to remove the license system in the salt industry. Further, with the 2001 amendment in Salt Cess Rules, 1964 self-removal procedure (SRP) was introduced instead of permit system for payment of cess. The export of salt was covered under the Quality Control and Export Inspection Act, 1963 and under this Act the Salt Commissioner's Organisation (SCO) was declared as an inspecting agency for issuing export worthy certificates. Salt was declared as an item of food under Essential Commodities Act, 1955.

Since independence the Government has appointed many committees for development of the salt industry. Some of the important ones responsible for the reorganisation of the industry are: The Patel Committee - 1947, The Salt Expert Committee -1948, The Manubhai Committee -1958, The High Level Salt Enquiry Committee -1980, etc.

From a shackled industry, which had to resort to imports to meet domestic demand, the Indian salt industry has come a long way. Today, India is the fourth largest salt producer in the world after USA, China and Germany with 14.8 million tonnes production in 2003, dropping from the record-breaking production of 17.8 million tonnes[10] in 2002. Already there are indications of a new record being created in the current fiscal year with the SCO pegging production estimates at a whopping 16-18 million tonnes. This is undoubtedly an achievement in itself considering the time span of about half a century that it took to traverse.

Presently, Indian salt industry gives employment to about 1 00 000 labourers directly and covers about 5 lakh acres of area. Sea salt constitutes 70 percent of the total production in the country. Salt manufacturing activities are carried out in the states of Gujarat, Tamil Nadu, Andhra Pradesh, Maharashtra, Orissa, West Bengal, Karnataka, Goa and the inland state of Rajasthan. Gujarat is the major salt producing state in the country (contributing to about 70% of total salt production), followed by Tamil Nadu (14%) and Rajasthan (11%).

1.2 Global overview of the salt industry

World resources of salt are practically unlimited and the salt content in the oceans is virtually inexhaustible. Almost every country in the world has salt deposits. Earth's 5.9 billion inhabitants uses salt. World annual salt production has increased over the past century from 10 million tonnes to over 210 million tonnes today.

Nearly 120 nations have salt producing facilities ranging from primitive solar evaporation to advanced, multi-stage evaporation in salt refineries. The method of producing salt has also changed. From previously small units (mines or coastal salinas), salt is today mainly produced in huge industrial plants and mines or in mechanised salinas of several thousand hectares. Some big salinas produce one million tonnes of salt per year. Thus, salt has become a globally cheap and banal product.

The United States and Canada are upstarts, though the United States has been an important salt producer for more than 150 years. China has always been a leader, as is India (when it was not being manipulated by British salt interests). But the fact that France and Britain have fallen to eighth and ninth place is a historic shift, since for many centuries these two countries were global leaders. The Mediterranean, which was a

[10] *Annual Report 2003-2004 (Annexure 4.1) – Salt Department, Ministry of Commerce and Industry, Government of India.*

major salt centre from ancient times until a few hundred years ago, has considerably faded in the world salt position.

In the mid-1800s, salt's value as an important raw material for the chemical industry was established when the Solvay process in Belgium converted salt to synthetic soda ash. Today, salt is the largest mineral feedstock consumed by the world chemical industry. World production of salt in 2003 stood at 223 million tonnes, falling slightly from the record level of 225.5 million tonnes in 2002, but supply continues to exceed demand by an estimated 10 million tonnes. North America is the biggest producer, manufacturing more than one-quarter of the world's salt. Most of the markets for salt are mature, especially those of North America and Western Europe, and growth in world output has averaged no more than 1.5 percent per annum since 1994. Growth rates are not expected to increase in the coming five years and hence output should reach around 244 million tonnes in 2009. World production figures are given in Table 1.2.1 and a graphic presentation in Figure 1.2.1.

Table 1.2.1 World salt production

Year	Production (million metric tonnes)
1990	171.87
1991	191
1992	184
1993	178.1
1994	190
1995	199
1996	204
1997	207
1998	201.2
1999	211.9
2000	214
2001	225
2002	225.5
2003	223

Source: US Geological Survey Mineral Commodity Summaries, January 2003

It was in 1614 that the American salt industry started off when Jamestown colonists on Smith's Island, Vancouver, established the first non-native solar salt works. Of the United States' total salt production, nearly half, that is, 21.1 million tonnes is in the form of brine produced by captive brine wells supplying to the chloralkali chemical companies of the US. The remaining 20 million tonnes is in the form of "dry salt" produced using three main technologies – solar evaporation of seawater or saline lake water, solution mining and vacuum pan evaporation and the conventional deep shaft (rock salt) mining.

Currently, the US salt industry operates some 48 salt production plants with major production sites in Louisiana, Ohio, New York, Kansas, Michigan, Utah and California. Also within the vicinity, the Canadian salt industry produces another 13.43 million tonnes from major rock salt mines in Ontario, Quebec and New Brunswick and from the vacuum pan refineries in Alberta, Saskatchewan, Ontario and Nova Scotia. In Canada, nearly three-fourth of the production is rock salt, which is primarily used for highway de-icing.

In Latin America, Mexico accounts for 8.4 million tonnes of salt, most of which comes from the world's largest solar facility in Guerrero Negro in Baja California.

After the United States, China is the second largest salt producer in the world with an annual production of about 32 million tonnes followed by Germany, India, and Canada. The United States is also the world's largest salt consumer and the industry earns more than $1 billion a year.

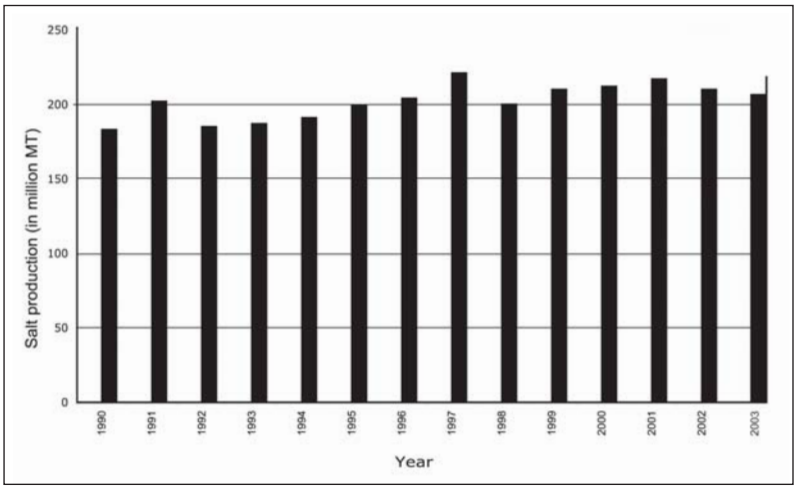

Figure 1.2.1 World production of salt - 1990 to 2003

A. Global trade in Salt

Salt is a bulky, low value commodity, which tends to be consumed near to where it is produced. This may be the reason that only 18 percent of world production was traded internationally

in 2003. Mexico and Australia accounted for 41 percent of all salt traded in 2003; the main destinations for exports from these two producers are Japan and other countries in East and Southeast Asia. Despite high levels of demand from Southeast Asia, Australian margins were eroded in 2004 by the rise of the Australian dollar, increasing freight costs and costs of demurrage in congested Chinese ports.

In common with many other parts of the chemical sector, the salt industry has been going through a period of rationalisation and restructuring during the past few years. The European salt companies, now wholly owned by Kali und Salz (K+S) are the most recent amalgamation. The transformation of IMC Global's salt business into Compass Minerals International was finally completed in December 2003, leaving seven companies outside China controlling almost one third of the global production.

B. Salt consumption (Demand)[11]

Salt was for long mostly used for preserving food. It is now a product of high economic and strategic value. There are four principle end uses for salt. The manufacture of chlorine and caustic soda in the chlor-alkali industry, which is driven mainly by the demand for chlorine in PVC[12] production, accounts for 37 percent of the market total, while use in the manufacture of synthetic soda ash accounts for 19 percent. A further 21 percent of the total demand takes the form of edible salt for human consumption. Approximately, 10 percent is used as de-icing salt, although this does not follow a predictable pattern as it is affected by the severity of winters in the northern hemisphere. Production of salt by leading countries is shown in Figure 1.2.2 (also refer Table 1.2.2).

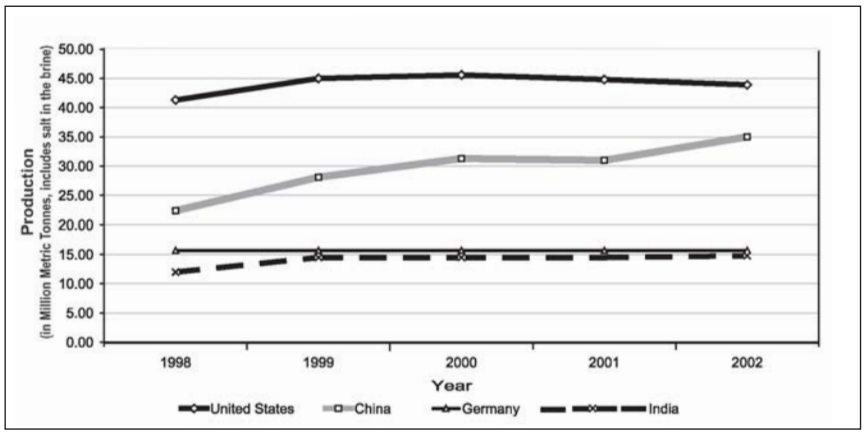

Figure 1.2.2 Production of salt by leading countries during 1998-2002

End use patterns are very similar among developed nations, where the chemical industry is dominant, while in lesser-developed countries food and agriculture tend to be more important applications. While the economic downturn of 2001 and 2002 has restricted the growth of the salt industry in many regions, demand for downstream products in Southeast Asia, in particular PVC, has shown relatively strong growth and consequently salt demand here has grown at a rate faster than the world average. Salt consumption in food has risen by 1.4 percent per annum in the past 28 years and will continue to rise in line with world population growth, with proportionately more being consumed in developing countries.

World salt consumption increased to an estimated 200- 212 million tonnes in 2004 and is rising chiefly in response to increasing demand in the countries of Southeast Asia and other developing nations. The salt markets in developed regions like North America and Western Europe are mature and are expanding at a rate little below the average growth of the world economy. The main consuming regions are North America and Asia and the Middle East, each accounting for 30-35 percent of the total, and Western Europe (21%).

In the immediate future, salt consumption is estimated to increase by 2-3 percent per annum but this is dependent on continued demand for salt from the chlor-alkali sector, and predictable demand for de-icing on roads. Much of the growth will be in East and South East Asia, and the balance salt consumption will gradually shift away from the mature markets of Western Europe and North America to the growing markets

[11] *The Economics of Salt by Roskill, 10th Edition.*

[12] *PVC is a common thermoplastic resin, used in a wide variety of manufactured products, including rainwear, garden hoses, phonograph records and floor tiles.*

in the Asia Pacific region. The recent trend in rationalisation and consolidation is likely to continue, with further potential for consolidation still existing throughout Europe and possibly in Australia.

There are no economic substitutes or alternates for salt. Calcium chloride and calcium magnesium acetate, hydrochloric acid and potassium chloride can be substituted for salt in de-icing, certain chemical processes and food flavoring, but at a higher cost.

C. The future of the salt industry

It is difficult to forecast the future of the salt industry because of the unpredictable fate of many of its end-use sectors. The sluggish demand and high dependence on weather have prompted many specialists to assume that salt has no great future in many parts of the world like Western Europe. Present capacities of plants producing crystallised salt far exceed the declining needs of the market and, even if the environmental issue regarding the use of chlorine in pulp bleaching has been inflated, the tide will not be turned. A significant gap of 10 million tonnes continues to exist between demand and supply of world salt.

Once a pulp mill switches bleaching technologies, the demand for chlorine - and consequently salt will inevitably decline. Furthermore, the use of wet salt or salt slurries for de-icing highways reduces overall salt consumption in winter. If, by chance, the health of the salt industry is restored by renewed demand, it is likely that better operation of existing installations will meet the increased need and that overcapacity will still remain a matter of concern.

Table 1.2.2 Country- wise production of salt
(in million metric tonnes, includes salt in brine)

Country	*2002*	*2001*	*2000*	*1999*	*1998*	*1997*	*1996*	*1995*	*1994*	*1993*	*1992*	*1991*	*1990*
USA	43.90	44.80	45.60	45.00	41.30	41.50	42.30	42.20	39.80	39.30	36.10	36.40	37.00
China	35.00	31.00	31.30	28.10	22.40	30.80	29.00	29.80	29.70	29.50	28.10	24.10	20.00
Germany	15.70	15.70	15.70	15.70	15.70	15.80	15.90	15.20	10.50	12.70	12.70	14.90	15.70
India	14.80	14.50	14.50	14.50	12.00	14.30	14.50	12.50	9.50	9.50	9.50	9.50	9.50
Canada	13.00	12.50	11.90	12.70	13.30	13.30	12.20	11.00	11.70	10.90	11.20	12.00	11.30
Australia	10.00	9.50	8.80	10.00	8.90	8.80	7.90	8.10	7.70	7.70	7.70	7.80	7.23
Mexico	8.70	8.90	8.90	8.20	8.40	7.90	8.50	7.70	7.50	7.50	7.40	7.50	7.14
France	7.10	7.00	7.00	7.00	7.00	7.10	7.90	7.50	7.50	7.00	6.10	6.50	6.61
Brazil	7.00	6.00	6.00	6.90	6.50	6.50	5.40	5.80	6.00	6.20	5.30	4.90	5.37
UK	5.80	5.80	5.80	5.80	6.60	6.60	6.60	6.70	7.00	6.80	6.10	6.80	6.43
All Others	64.50	69.30	58.50	58.00	59.10	54.40	53.80	52.50	53.10	41.00	53.80	60.60	45.59

Source: Salt Institute, US Geological Survey Mineral Commodity Summaries, January 2003

1.3 National overview of the salt industry

Salt falls under the list of Central subjects in the Constitution of India and appears as Item No. 58 of the Union List of the 7th Schedule. Salt is declared as an item of food under Essential Commodities Act, 1955.

The Salt Cess Act of 1953 is the governing legislation for the industry. The Act is implemented through the SCO. As per the Act, salt works have been classified into four categories. Salt works having more than 100 acre under one lease contract and recognised by the SCO are classified as category I. Salt works having area between 10 to 100 acre under one lease contract and recognised by the SCOs are classified as category II. Salt works having area less than 10 acre under one lease contract are classified as category III. Government collects a cess of Rs. 3.50 per tonne of salt from category I and Rs.1.75 per tonne from category II salt works. Salt works in category III are exempted from payment of cess. Formally, these three categories are also termed as recognised sector.

The salt works whose individual holdings are less than 10 acres are classified as category IV (erstwhile non-licensed sector) and they are enlisted with SCO.

The area under salt production in 2003 was estimated as 3.12 lakh acres of which 87 percent lies in recognised sector and 13 percent in the unrecognised sector. The total production of salt in 2003 was estimated as 148.82 lakh tonnes, of which 73 percent was produced in the recognised sector and 27 percent in the unrecognised sector.

Salt production in India is carried out in private as well as co-operative and Government sectors. Private sector plays a dominant role contributing over 95 percent of the salt production, while the public sector contributes about 2-3 percent. The co-operative sector (which is included under the private sector) contributes about 8 percent to the total salt production.

In 2003, 3 319 units were engaged in salt production, of which 1 989 units were in category III, 695 units in category I and 635 units in category II. The number of units in unrecognised sector is estimated as 7 028.

Salt production is a seasonal activity. The season occurs in the period between the two consecutive monsoons. The length of the season varies throughout the country and is normally between six to ten months. In this respect, salt production is contrary to agriculture where a good season is related with good monsoon. In the case of salt, good production season goes with delayed or insufficient monsoon. The major source of salt production in the coastal areas of the country is sea brine, but in Rajasthan and the Little Rann of Kutch area in Gujarat sub-soil brine is the source of salt production.

In India, the salt produced domestically is used mainly for (1) domestic consumption, (2) industrial consumption and (3) export. Presently, 33 percent of the total salt produced is utilised for domestic consumption, which includes human and animal consumption. The industrial sector, mainly the chlorine-alkali industry consumes nearly 51 percent of salt and about 15 percent of total salt produced is exported.

In general, the salt production and distribution is carried out in the following stages:

In the first stage, sub-contractors are allotted land by the leaseholders at a fixed rate per tonne basis. The sub-contractor then hires labour and carries out the production activity. His margin depends on the cost of production and the pre-specified rate at which he sells salt to the leaseholder. In another variety of sub-leasing, the actual leaseholder auctions the land and the profit margin of the sub-contractor depends on the difference between values of his sale and the cost, which comprises the cost of production and the bid amount paid to the actual leaseholder.

The second stage involves the processing of salt. Most of the salt producers do not process salt. Only the big producer-trader, including the corporate houses, carry out the processing activity. The price per tonne of unprocessed salt is determined by these processing houses for most of the salt producers act as a price taker in this market. The role of the SCO also starts mainly at this stage as it monitors the quality of salt and its price.

The third and the final stage deals with the marketing and distribution of salt. As salt is a necessary commodity and cannot be stored for a long time, its distribution has to be carried out quickly. However, the distribution network is not a market-oriented network. It is more or less an *ex ante* planning of the SCO (and the Railway) along with the producers and the traders.

The present study covered all the major salt producing states and the visits were undertaken in the following sequence: (1) Rajasthan, (2) Gujarat, (3) Andhra Pradesh, (4) Maharashtra, (5) Orissa, (6) West Bengal and (7) Tamil Nadu. The areas for the study were selected on the basis of production, area under production and number of workers employed in the industry. Among themselves the above states produced 148.5 lakh metric tonne of salt against the national production of 148.8 lakh metric tonne in 2003, which is over 99 percent.

A. The salt worker

For the purpose of the study, a salt worker is defined as the person who is above 18 years of age and is directly and physically involved in the production of salt and invests major portion of his/ her time in production of salt or considers salt as his/her primary activity/vocation. A salt worker is a person who takes active participation in all or one of following activities. The nature of his/ her contract with the leaseholder

is generally as wage labourer or as sub-leaseholder. He/ she may also be a leaseholder provided that whatever might be the status, he/ she has to participate in one or all of the following activities:
(1) preparation of pan, (2) scrapping, (3) heaping and (4) shifting of salt from saltpan to platform.

The other important stakeholders in the salt industry are labour contractor, loading worker and leaseholder. The salt workers defined above have been considered as the primary stakeholders in the study.

B. Methods of salt production in India

The word 'salt' generally refers to 'common salt' or Sodium Chloride [NaCl]. Sodium (Na) is a highly unstable metal that can burst into flame and chlorine (Cl) is a poisonous gas. But the two combine to give sodium chloride or salt that is physiologically absolutely necessary for human life. Chemically, it is 60.66 percent chlorine and 39.34 percent sodium. In India, a country known for its geological diversity, salt is produced from diversified sources – seawater to mining of salt deposits using diversified techniques, *viz.*, the traditional or solar evaporation method and modern methods like vacuum evaporation. Production of salt from the seawater or sea brine, as it is commonly known in the salt production terminologies, is the dominant method of salt production in India.

I. Solar Salt

Salt has been manufactured by solar evaporation from seawater and from inland underground or lake brines since time immemorial. The extraction of salt from seawater consists of progressive evaporation of brine in large open ponds using solar heat and wind. As the brine evaporates, its concentration rises and the constituent salts crystallize in a set order. During this process, the sodium chloride fraction is separated from the brine over a fixed concentration range in a series of flat rectangular ponds and deposits as a uniform crust.

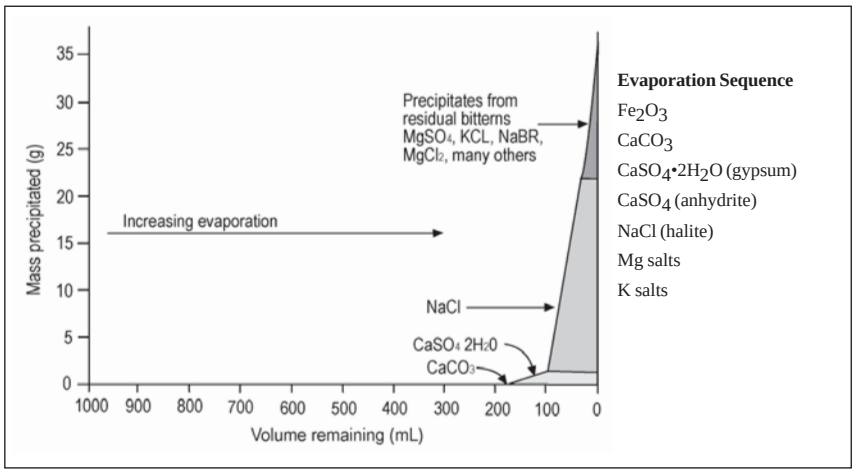

Figure 1.3.1 Evaporation of seawater[13]

This salt is 'harvested' by a variety of processes ranging from simple hand labour to the use of mechanised equipment to scrape the salt and transfer it for storage. The principal salts that crystallize from seawater along with sodium chloride are the chlorides and sulphates of magnesium, calcium and potassium. The harvested salt in the form of wet crystals can be washed with saturated brine to remove insoluble matter like sand and clay as well as the soluble impurities. It is then allowed to drain and dry in the sun and crushed to a coarse or fine powder as required. The required additives are added at this point before the salt is packed for sale. Crude salt produced in a properly designed salt works has a purity of 90-95 percent NaCl, 1 percent calcium salts and 1-2 percent magnesium salts and 5-8 percent water. If the salt is washed and dried its purity can be improved up to 99 percent. Figure 1.3.1 shows the isolation of sodium chloride and other salt from seawater as a result of progressive evaporation of seawater in saltpans.

In most developing countries, solar salt manufacture is undertaken along coastlines or lakeshores as a semi-agricultural operation. The smaller units often operate with a minimum of organisation and little or no quality control. The small fields are scattered along the coast or lakeshores and do not lend themselves to regulation by the Government. Very often, precise figures regarding their location, extent of holdings and production statistics are not available. The producers have limited financial means and lack access to technical or financial assistance.

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[13] *Adopted from: "gill.tamug.tamu.edu/MARS615/Extraction%20of%20Useful%20Substances%20from%20the%20Sea%20(2003).pdf"*

II. Mined Salt

Solid rock deposits of salt occur at depths ranging from a few hundred meters to more than a thousand meters. However, in India, rock salt is produced in a very small scale in Himachal Pradesh. The country till date is mainly an importer of rock salt. Rock salt is produced using following methods:

Where the deposits are fairly shallow, dry mining method is preferred. This consists of sinking a shaft into the ground down to the salt layer and then blasting and removing the salt by the room and pillar method leaving a layer of salt above and below connected by pillars at regular intervals.

Where the deposit is very deep, solution mining is used. By this method, fresh water is injected at high pressure though a pipe into the salt layer where it dissolves the salt and forms a cavity. The saturated brine then travels through a concentric pipe upwards to the surface where it is treated and evaporated in vacuum pans to yield a high purity product.

III. Vacuum Salt

As the name implies, vacuum salt is common salt, manufactured by evaporating sea brine in steam-heated vacuum evaporators. It can be dissolved very quickly due to its fine crystalline structure and is more freely available in salting-out processes. Presently, in India two companies *viz.* Tata Chemical and Nirma are using this method. In this method water is evaporated from purified brine using multiple-effect or vapour recompression evaporators. Multiple-effect systems typically contain three or four forced circulation evaporating vessels connected together in series. Steam from boilers supplies the heat for evaporators and is fed from one evaporator to the next to increase energy efficiency in the multiple effect system. Vapour recompression forced-circulation evaporators consist of a crystalliser, compressor and vapour scrubber. Feed brine enters the crystalliser vessel where salt is precipitated. Vapour is withdrawn, scrubbed and compressed for reuse in the heater. Recompression evaporators are more energy efficient than multiple effect evaporators, but require higher energy inputs in terms of electrical power. The development of single stage compressors has significantly reduced costs. Ultimately, weak brine from either process is recycled to the solution-mined cavern. Crystallized salt is produced as slurry, which is dewatered first by centrifuging or vacuum drying and then passed through kiln, or fluidised-bed dryers to further reduce the moisture contents.

1.4 Objective of the study and terms of reference

The objective of the study is to make a thorough assessment of the working conditions and socio-economic status of salt workers in the country. The study is expected to evolve concrete recommendations and guidelines, which can have long-term bearing on the livelihood security, vulnerability reduction, health security, childcare, food and nutrition security, children's education, shelter and asset building of the salt workers in India. The study will also lay down the benchmark information on the socio-economic profile of salt workers in India for the twenty- first century.

The BOBP-IGO has undertaken the study as per the following Terms of Reference:

The study would entail a socio-economic survey of the salt workers in the major salt producing states (Rajasthan, Gujarat, Maharashtra, Tamil Nadu, Andhra Pradesh, Orissa and West Bengal) through a structured questionnaire, followed by detailed interactions with a selected sample of salt workers in the above-referred states following the established methodologies of participatory rural appraisal (PRA).

Besides coverage of the standard socio-economic parameters, the study will also focus on the issues of migratory labour in salt works, employment conditions, etc.

The BOBP-IGO will have detailed discussions with the concerned Ministries/ Departments in the Government of India (*e.g.* Ministry of Labour, SCO); State Governments (*e.g.* Department of Labour); Salt Manufacturer's Association (s) and Non-Governmental Organisations working with the salt workers to obtain their viewpoints/ suggestions.

The relevant Central Sector and Centrally Sponsored Schemes and the concerned schemes implemented through the State budgetary support will be perused to suggest optimisation of the resources and if possible convergence/ dovetailing of programmes and financial assistance so as to increase their effectiveness and timeliness in reaching the end users.

Existing linkages with the concerned Departments/ Ministries in the Central and State Governments will be reviewed to recommend more productive and fruitful coordination and a focused approach to address the issues of salt workers in the country.

The details of the methodology adopted for conducting the study are provided in Appendix I.

1.5 The National Workshop

The salient findings and recommendations of the BOBP-IGO study and a 24-minute documentary film (*75 Years after Dandi – India's Salt Workers Look for their Place in the Sun*) were presented in a National Workshop organised by the BOBP-IGO in association with the Salt Commissioner's Organisation at Mahatma Gandhi Labour Institute, Ahmedabad on 17 February 2006. Sixty-one participants representing the concerned Ministries/ Departments of the Central/ State Governments, Salt Industry and Social and Non-Governmental Organisations attend the Workshop. Suggestions made by the participants have been incorporated in this report. The Proceeding of the Workshop is enclosed as Appendix II of the report.

Chapter 2.0 The Salt Industry of India

2.1 Introduction

The present chapter deals with the institutional structure of the salt industry in India. Institutional structure of an industry is the outcome of vertical and horizontal markets and non-market relations that exist within an industry. Importance of this underlying structure rests on the fact that it decides the distribution of benefits among the participant in the said industrial activity. The present chapter unfolds itself in the following manner:

Section 2.2 gives a snapshot of the ongoing trends in the salt industry and its various components. Section 2.3 analyses the issues relevant to the industry and section 2.4 provides facts about the salt workers in the country. The subsequent section 2.5 describes the underlying theoretical structure adopted for this study. Section 2.6 gives an overview of the organisational structure of the salt industry and how the workers are linked with the industry. Finally, section 2.7 provides a summary of the chapter.

2.2 The salt industry in India[1]

The importance of salt industry lies on (1) the product it produces and (2) the employment it provides in agriculturally backward and remote areas. The annual production of salt in 2004 is estimated at 147.61 lakh tonnes. The current (2004) domestic consumption of salt is estimated at 130.70 lakh tonnes, of which, 54.14 lakh tonnes is for edible use (human and cattle consumption) and 76.56 lakh tonnes for industrial uses. About 22 lakh tonnes salt is also exported. Caustic soda and chloride-alkali industries are the major consumers of salt in the country. Apart from that, tanneries and polish industry also consume large quantities of salt each year.

During the last five decades, production of salt in India has increased nearly eight folds from 19.32 lakh tonnes in 1947 to 148.82 lakh tonnes in 2003 and to 147.61 lakh tonnes in 2004. In the same reference period, population of India has increased over three folds, from 30 crores to 100 crores. The per capita availability of salt has also increased from 7.69 kilogram per annum in 1951 to 13.88 kilogram[2] per year in 2001. However, the growth path of salt industry is not smooth, but a zigzag one. Production of salt is highly sensitive to environmental and market conditions. Depending on these factors, production of salt also varies widely between two consecutive years.

Trends in salt production

The growth of salt industry in India can be broadly classified into two sub-groups: First, a period of steady growth from 1947 to 1975 and thereafter from 1976 to 2004 a period of rapid but volatile growth (Figure 2.2.1).

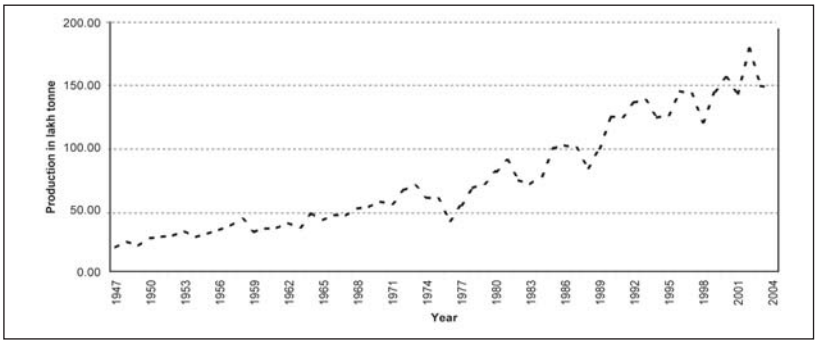

Figure 2.2.1 Growth of salt production in India

Production of salt increased rapidly after the country became independent. From 1947 to 1950, salt production recorded a cumulative annual growth rate (CAGR) of 8.78 percent per annum. Much of this phenomenal

[1] *Information used in this section of the Report is drawn from the Annual Reports of the Salt Commissioner's Organisation, 1990-91 to 2004-05.*

[2] *The minimum recommended dietary requirement of salt for human body is around 0.5 gram per day or 0.18 kilogram per year. Thus, for India the minimum recommended requirement of salt for only human consumption alone is around 20 lakh tonnes per annum. However, the average consumption of salt in India is about 10 gram/ day or about 4 kilogram per year. Thus, the minimum requirement is estimated at about 45 lakh tonnes per year.*

growth can be attributed to aggressive government policies and development of new areas for salt production. However, as the rate of inclusion of new areas under salt slowed down, the rate of growth also dropped. Between 1960 and 1969, salt production grew at a rate of 4.74 percent per year. Overall between 1947 and 1975, the production maintained a steady growth of 3.88 percent per annum.

In the second phase, 1976-2004, more emphasis was laid on productivity of land thereby improving the methods of production. During this period, the industry exhibited a rapid growth of 3.96 percent per year, although the year-to-year variation in production also increased during this period.

A part of the volatility in production is contributed by nature. However, this change in the growth trajectory may also be due to the following reasons: (1) error in data reporting, (2) growth of large companies and (3) supply/ demand mis-match. As supply increases rapidly and exceeds the demand for salt, firms cut back their production to finish the inventories (Figure 2.2.2).

We have assumed the demand for salt as the sum of total transported salt for domestic consumption by rail, road or sea and export. As it is evident from figure 2.2.2, during 1988 (and recently in 2004), demand for salt exceeded supply. Supply and demand remained more or less stable until 1997. In later part of 1990s, as new export possibilities came up, supply increased rapidly till 2001 and the demand also increased albeit at a lower rate. However, what is interesting to see from figure 2.2.2 is that throughout the period supply was enough to take care of any emergencies, but if the excess supply was above average, like in years 1987, 1992, 1997 and 2000, production was reduced to keep inventories at par with the average level.

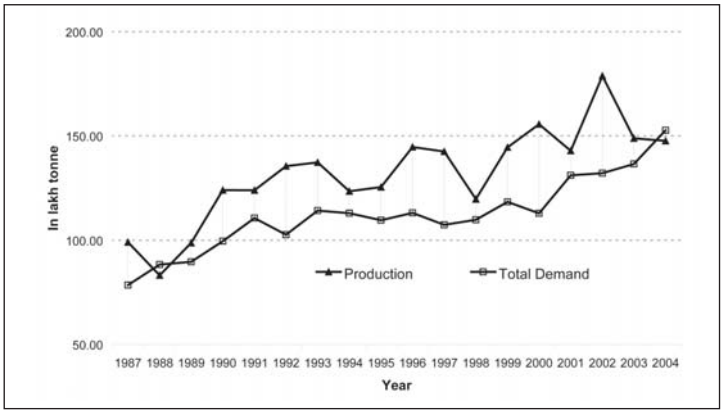

Figure 2.2.2 Supply-demand scenario in salt industry

Despite cutbacks in production between 1998 and 2004, the performance of the salt industry was better than targeted (Figure 2.2.3). The actual production continuously overshot the target production in these years, excluding 2003 and 2004. As a result, the Salt Commissioner's Organisation (SCO) slightly modified its target in 2002 and considerably in 2003. In 2002, the production target increased from 135 lakh tonnes to 140 lakh tonnes; however, the actual production was 178.79 tonnes. In 2003, the SCO set a higher target of 150 lakh tonnes. However, 2003 turned out to be a bad year for salt industry as production fell from 178.79 lakh tonnes to 148.82 lakh tonnes. This trend continued in 2004 also. The target was set at 155 lakh tonnes while the actual production fell to 147.61 lakh tonnes. Leaving one or two bad years the general tendency of overshooting the target implies that potentials of salt industry are not fully understood. However, if the target is based on actual requirements and not maximum production, such phenomenon is quite natural.

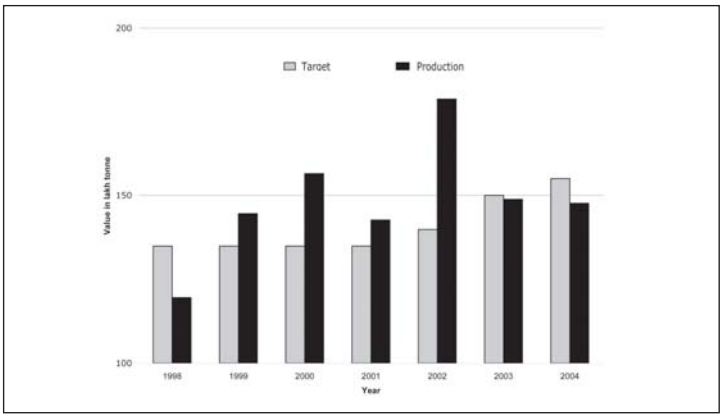

Figure 2.2.3 Targeted and actual production of salt-1998 to 2004

On the other hand, the salt industry can be observed to go through a production cycle once in 4 to 6 years. The periodical cycles are largely a function of supply glut in certain years leading to excess inventories and impact of weather (both positive and negative). Figure 2.2.4 shows periodicity in salt production between the volatile period 1976 to 2004. The moving average (MA) for 1976 is for the period 1973 to 1976.

Salt production units in categories IV and I continue to dominate production in India. During 1990 to 2004, production of salt in India grew at a CAGR of 1.68 percent. In the same reference period, the CAGR of salt production in category I units was 2.27 percent and in category IV units 1.49 percent. Category III units, during 1990 to 2003 recorded a marginal growth of 0.23 percent in production. Production of salt in category II units actually declined from 4.99 lakh tonnes in 1990 to 4.17 lakh tonnes in 2003. During this period, category II units achieved a negative growth rate of 2.38 percent (Figure 2.2.5).

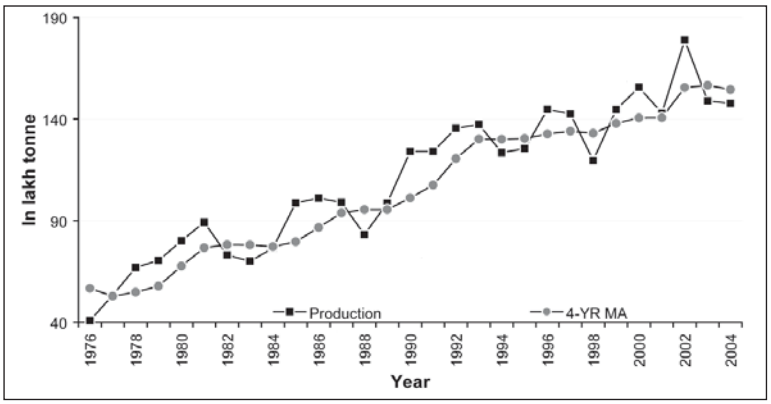

Figure 2.2.4 Periodicity in salt industry

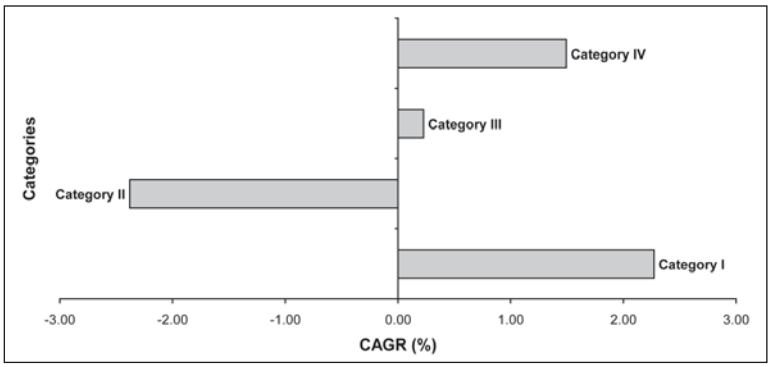

Figure 2.2.5 Growth of category-wise salt production in India

Because of this differential growth, the relative share of the categories in the country's salt production has changed. During the period 1970 to 2004, category IV units doubled their contribution from 13.12 percent in 1970 to 25.13 percent in 2004. On the other hand the contributions of units in categories II and III went down to 2.61 percent and 9.00 percent in 2004 from 11.23 percent and 13.24 percent respectively in 1970. As a whole, the share of recognised sector (sum of categories I to III) has been reduced to 75 percent in the 2000s from 80 percent in 1970s and the share of unrecognised sector has increased from 10 percent in 1970s to 25 percent in the 2000s.

One of the critical reasons for this declining trend in category III is the loosing ground of co-operative sector in salt production. The co-operative sector was once considered as a panacea to deal with fragmentation of salt land and unemployment at the village level. As the co-operative sector comes under category III, it enjoys advantages like exemption from payment of cess over their counterparts in categories II and I. However, it has failed to live up to the expectations even to a minimum satisfactory level.

Lack of performance in the co-operative sector can be attributed to two factors. First, lack of co-ordination and co-operation among the members of the co-operatives. Most of the co-operatives are performing through their individual members. As a result, the land has been reduced to smallholdings and size viability is absent. Second, they lack marketing channels. The co-operatives have become a tool in trader's hand that keeps them at subsistence level. Therefore, the capital formation of the co-operatives is negligible or even nil. This also prevents them from taking any steps to increase their productivity.

Overall the private sector continues to dominate the salt industry. In 2004 it contributed around 97 - 98 percent of the total salt production in India including 25 percent in the unrecognised sector and 9 percent in the co-operative sector. The public sector contributes around 2 to 3 percent of salt.

At the state level, Gujarat, Tamil Nadu and Rajasthan are the dominant states in terms of production. Andhra Pradesh, Maharashtra, Orissa, West Bengal, Karnataka and Goa are the other important producers of salt.

Overall, between 1989 to 2004, the salt industry in Gujarat including recognised and unrecognised sectors[3] recorded a CAGR of around 3 percent, while that of Rajasthan grew at 3.25 percent. Salt industry in

[3] *Licensed and non-licensed sector before de-licensing of the salt industry in 1996.*

Major salt producing centres in India

State	Area (in acres)	Production (in tonnes)
Gujarat		
Bharuch	49 064	86 5880
Bhavnagar	47 317	13 70 680
Jamnagar	60 907	25 09 110
Kutch	85 310	28 47 940
Patan	7 685	4 41 080
Rajkot	20 366	3 45 960
Surendranagar	52 049	10 74 910
Tamil Nadu		
Nagercoil	915.23	10 318
Tuticorin	7 443.97	9 04 596
Veppalodai	3 661.50	2 21 728
Valinokkam	6 020.75	1 38 790
Vedaranyam	10 498.97	2 24 907
Markanam	2 989.54	62 906
Covelong	7 017.20	1 26 144
Rajasthan		
Samabar	57 600	1 11 850
Rajas and Nawa	7 375.88	10 34 246
Kuchamman	1 041.98	34 570
Didwana	1 946.80	7 550
Sujangarh	1 206.37	20 000
Phalodi	6 728.50	1 15 835

State	Area (in acres)	Production (in tonnes)
Andhra Pradesh		
Iskapalle	1 619.51	48 301
Chinnaganjam	1 608.66	40 154
Pandraka	3 945.35	7 278
Guruznapally	887.58	13 254
Polavaram	307.28	5 438
Naupada	1 102.69	14 554
Maharashtra		
Palghar	2 406	38 295
Rai	4 323	29 185
Bassein	1 735	14 520
Uran	1 687	15 052
Orissa		
Ganjam	3 735.02	37 435
West Bengal		
Contai	4 203	16 900

Data for Tamil Nadu and Maharashtra pertains to the year 2004 and for other states 2003.

Tamil Nadu has grown marginally by 1 percent per annum. Where as salt production in Orissa, Maharashtra and Karnataka has declined over this period (Figure 2.2.6).

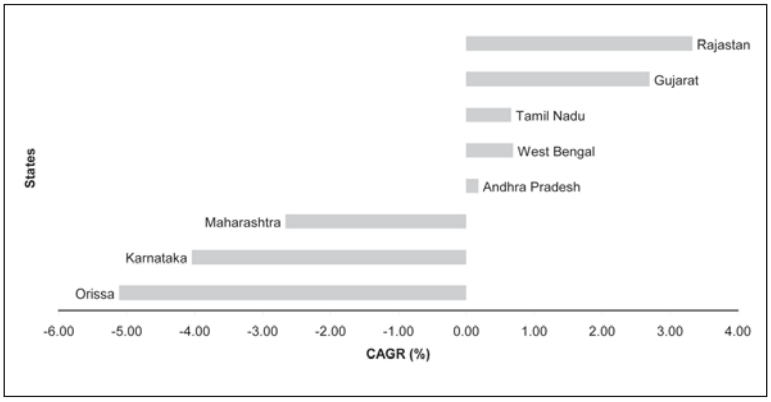

Figure 2.2.6 State-wise cumulative annual growth of salt industry

Area

The total area under salt production is around 5.52 lakh acres under all types of ownership, *viz.*, Central Government, State Governments and the private sector. However, the entire area is not developed or put into cultivation each year. A part of this area is also used for developing infrastructure like approach road, office, rest shed, labour quarter, etc. During 2004, out of 5.52 lakh acres, 3.22 lakh acres were put under cultivation. Gujarat covers around 70 percent of the total land available for salt production followed by Rajasthan (15 %) and Tamil Nadu (9 %). Among other states, Maharashtra holds around 5 percent followed by Andhra Pradesh (4 %), Orissa (0.85 %), West Bengal (0.80 %), Karnataka (0.16 %) and Goa (0.04 %).

Employment

Production of salt is labour intensive. At every stage of production, considerable number of workers is needed. Even corporate houses that have mechanised production to a certain degree employ considerable number of worker. As per the data available from the SCO, the industry employed 1 35 913 workers daily during 2004-05 production season. Gujarat (including Daman & Diu) is the largest employer in the industry, with daily employment of 81 408 workers, followed by Tamil Nadu, Rajasthan, Andhra Pradesh and Maharashtra. Orissa, West Bengal, Karnataka and Goa are minor employers. Table 2.2.1 summarises the state-wise employment of workers in the industry during 2004.

Table 2.2.1 Employment scenario in salt industry in 2004

States	Average per day employment
Andhra Pradesh	15 905
Goa	108
Gujarat	81 408
Karnataka	397
Maharashtra	2 609
Orissa	1 254
Rajasthan	16 153
Tamil Nadu	17 811
West Bengal	235
Himachal Pradesh	33
India	**1 35 913**

However, there is not much change in the person days created per day in the salt industry over the last few years. It averaged to about 1-lakh person days per day. This may be due to reasons such as (1) the industry is settling down and the market has remained more or less steady during the last six years and (2) since the employment figures are estimated, much variation could not be observed.

Distribution of salt

Gujarat, Tamil Nadu and Rajasthan are the three surplus states from where salt is transported to the length and breadth of the country. Salt is transported mainly for human and industrial consumption. Railways are the main conduits of transport of salt for human consumption. In 2004, 54.13 lakh tonnes of salt was transported throughout the country for human consumption, of which 57 percent was transported through rail, a negligible proportion (0.001%) through sea and the remaining 43 percent through road.

Salt meant for industrial purposes is mainly transported by road. In 2004, of the 76.56 lakh tonnes of salt transported for industrial consumption, 92 percent went by road, 2 percent through sea and 6 percent through rail.

Overall during 2004, 130.70 lakh tonnes of salt was transported for human and industrial consumption. Of this 71 percent was transported by road and 27 percent by rail. The remaining 2 percent used the sea route.

Export & Import

Export of salt from India has gained momentum in recent years. However, the growth of export has not been steady. It declined from record 16.14 lakh tonnes in 2001 to 13.66 lakh tonnes in 2002 and further to 12.22 lakh tonnes in 2003. However, 2004 was a turn around year as exports reached a record high of 22.04 lakh tonnes. Exporters hope that this trend will continue. India also imports small quantities of rock salt from Pakistan. During 2004, 75 649 tonnes of rock salt valued at Rs. 846.09 lakh were imported.

2.3 Issues in salt industry

The industry – environment interaction

Industrialisation has contributed immensely to the economic development of India. In many areas of industrialisation, this development has impacted the environment and in turn the quality of life. Since man has to live within the environment, the process of development should be sustainable[4] so that environmental quality is maintained within safe limits. The importance of emphasising sustainability is essentially to integrate industrial development and environmental management in the development process. It is only through an integrated effort of the environmental aspects into the planning and management of industrial development that significant progress towards sustainable society can be made.

The cost-benefits associated with the conflicting uses of natural resources determine the growth path of any industrial activity. Salt production is considered as a non-hazardous or non-polluting industry[5]. It broadly employs two types of methods: (i) solar/ artificial (vacuum) evaporation and (ii) mining. The mining technique is more energy intensive and affects the landscape of salt deposit areas like any other mining industry. Intensity of energy use is also higher for the artificial or vacuum evaporation method. The production of solar salt is one of the best examples of a win-win situation or a golden handshake between the industry and the environment, unless there is risk of environmental damage due to over-exploitation. Such a situation normally arises in the absence of sound and long-term policies.

A solar salt work is a series of connected concentrating ponds through which sea water flows, evaporates by the power of sun and the wind and deposits salt in crystallizing ponds- ensuring minimum use of fuel. Secondly, if practiced 'within limits' it does not contradict with marine and costal eco-systems as it (the salt pan) acts as a habitat for microorganisms and, as a food tray for birds and other fauna, etc. Further, the by-products of salt production have various other uses and have negligible or no impact on environment when released gradually or retained in the saltpans.

The following environmental guidelines have been recommended by the Government of India for setting up industries to ensure optimum use of natural and man-made resources in a sustainable manner with minimal depletion, degradation and/ or destruction of the environment.

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[4] *According to the World Commission on Environment and Development, "sustainable development means development which meets the needs of the present without compromising the ability of future generations to meet their own needs".*

[5] *As per Notification under Sections 3(1) and 3(2)(v) of the Environment (Protection) Act, 1986 and Rule 5(3)(d) of Environmental (Protection) Rules, 1986, salt manufacturing is a permitted activity in CRZ 1 or in areas that are ecologically sensitive and important such as national park, sanctuaries, reserve forests, wildlife habitat, etc and the area between the low and high tide lines.*

Areas to be avoided

Care should be taken to minimise the adverse impact of the industries on the immediate neighbourhood as well as distant places. Some of the natural life sustaining systems and some specific land uses are sensitive to industrial impacts because of the nature and extent of fragility. Industrial sites shall maintain the following distances from the areas listed:

- Ecologically and/ or otherwise sensitive areas[6]: at least 25 km; depending on the geo-climatic conditions the requisite distance shall have to be increased by the appropriate agency.
- Coastal areas: at least 500 meters from the High Tide Line.
- Floodplain of the riverine systems: at least 500 meters from the floodplain or modified floodplain affected by dam in the upstream or by flood control systems.
- Transport/ communication system: at least 500 meters from highway and railway.
- Major settlements (>3 00 000 population): distance from settlements is difficult to maintain because of urban sprawl. At the time of siting of the industry if any major settlement's notified limit is within 50 km, the spatial direction of growth of the settlement for at least a decade must be assessed and the industry shall be sited at least 25 km from the projected growth boundary of the settlement.

Criteria

Economic and social factors are recognised and assessed while siting an industry. Environmental factors must be taken into consideration in industrial siting. Proximity of water sources, highways, major settlements, markets for products and raw material resources is desired for economy of production, but all the above listed systems often pose conflicts with the norms/ standards earmarked for environmental protection. Industries are, therefore, required to be sited, striking a balance between economic and environmental considerations. In such a selected site, the following factors must be recognised.

- No forest land shall be converted into non-forest activity for the sustenance of the industry (Ref: Forest Conservation Act, 1980).
- No prime agricultural land shall be converted into industrial site.
- Within the acquired site the industry must locate itself at the lowest location to remain obscured from general sight.
- Land acquired shall be sufficiently large to provide space for appropriate treatment of wastewater still left for treatment after maximum possible reuse and recycle. Reclaimed (treated) wastewater shall be used to raise green belt and to create water body for aesthetics, recreation and if possible, for aquaculture. The green belt shall be 500 meter wide around the battery limit of the industry. For industry having odour problem it shall be a kilometre wide.
- Enough space should be provided for storage of solid wastes so that these could be available for possible reuse.
- Lay out and form of the industry that may come up in the area must conform to the landscape of the area without affecting the scenic features of that place.

The conflict

The salt industry-environment conflicts are arising due to the following reasons:

- ***Conflict with forestry and agriculture in terms of land use.***
- ***Reduction in level of ground water due to intense pumping of ground water.***
- ***High dependency ratio of salt workers on forest resources like wood.***

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[6] *Ecological and/or otherwise sensitive areas include (i) Religious and Historic Places; (ii) Archaeological Monuments; (iii) Scenic Areas; (iv) Hill Resorts; (v) Beach Resorts; (vi) Health Resorts; (vii) Coastal Areas rich in Corals, Mangroves, Breeding Grounds of Specific Species; (viii) Estuaries rich in Mangroves, (ix) Gulf Areas; (x) Biosphere Reserves; (xi) National Parks and Sanctuaries; (xii) Natural Lakes, Swamps; (xiii) Seismic Zones; (xiv) Tribal Settlements;(xv) Areas of Scientific and Geological interest; (xvi) Defence Installations, especially those of security importance and sensitive to pollution; (xvii) Border Areas (International) and (xviii) Airports.*

The salt industry has a high negative correlation with the agriculture activities established around salt works as salt works increase the salinity of ground water. In Nawa block of Rajasthan, a strong trend can be observed in conversion of agriculture land into salt pans. Once converted it is very costly to convert back to agriculture. The salinity in the soil increases to a level unfavourable for agriculture. Therefore, the land is required to be treated for removal of salinity.

Traditionally, production of solar salt involves trapping of tidal waters. It limits the production of salt to natural tidal flats and low-lying saline areas. After the availability of power and motors, seawater is pumped from the sea/ creeks or from wells to lands, which are away from the natural tidal flats. The saline water when stored in large pans for a long time enters the fresh water table due to seepage resulting in salinity of ground water, which is often the only source of potable water for coastal communities and thus have great impact on their life and livestock they raise for sustenance.

The second and probably more important issue is the conflict of salt industry with forestry. In Gujarat, such conflicts are becoming intense day by day. Two reasons are responsible for this. First, the environmental laws, which prohibit any economic activity in biosphere reserves and wildlife sanctuaries, now cover traditional salt production areas in the coastal belts. Second, in the last fifty years the salt industry has grown considerably in terms of area use. This growing industry needs more area and is now expanding into the erstwhile areas meant for conservation/ biodiversity protection.

The Wild Ass Sanctuary (WAS) in the Little Rann of Kutch (LRK) is one such area[7]. The WAS is the last home of the endangered Asiatic Wild Ass (*Equus hemionus khur*), locally known as *Gokkhar*. The Asiatic Wild Ass is also listed under Appendix I of CITES. The WAS is also a hot spot for production of salt because of its quality subsoil brine source and the traditional cheap labour provided by the agarias.

The area was notified as wildlife sanctuary in 1973[8] and was expanded to 4 954 sq. kilometres in 1978. However, LRK region produces around 31 percent of the total salt in Gujarat and is the home of agarias whose life depends mainly on production of salt. Between the period 1982 to 1995, salt production areas have increased from 17 167 acre to 32 992 acre, an increase of nearly 200 percent.

As such salt works are not harmful for wildlife, but due to salt production, every day about 100 trucks run through the wild ass tract disturbing their natural habitats. The area produces on an average 15 lakh tonnes of salt each year although the production potential has been estimated at almost 30 lakh tonnes per annum. Assuming a truck carries around 14 tonnes of salt in one trip, about 1 lakh trips are done every year in the sanctuary area, excluding the numerous trips by salt traders and merchants disturbing the natural habitat of the wild ass. In view of the above, a public interest litigation is filed in the Supreme Court to protect the sanctity of the WAS.

On the other hand, salt production is carried out in the LRK area since 1874 as per official records. The Government is now not renewing any lease to the salt industry in this area. According to local traders and industry people, in a convention in December 2000[9], a demand was raised to retrench the area of WAS as leaving around 5 000 sq. kilometres of land for around 2 500 animal is meaningless. The Government should de-notify a part of WAS and lease it to the salt industry, which provides employment to over one lakh people, directly and indirectly.

At the receiving end of all this debate are the agarias and the gokkhars. The WAS is the last home for gokkhars. Before partition, their pasture covered the entire Rann. Now their home is limited to about 5 000 acres. A further contraction in their pasture, as environmentalists argue, will push them toward human settlements increasing their conflict and a loss in population of wild ass and other flora and fauna.

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[7] *Source: 'An Ecological Study of Wild Ass Sanctuary of Little Rann of Kutch (A Comprehensive Study on Biodiversity and Management Issues)' by H. S. Singh et al. and from discussions with Devajeebhai Dhamecha, Naturalist, Dharangdhra, Surendra Nagar, Gujarat.*

[8] *Section 18 of the Wildlife (Protection) Act, 1972.*

[9] *Organised by the Action Committee of Gujarat Salt Manufacturers.*

On the other hand, the notification has snatched away land from agarias that they possessed through generations. Though, practically there is no restriction but legally, agarias have lost control over their traditional salt lands and are forced to depend on traders who are controlling the leases. According to Mr Devajeebhai Dhamecha, all the leases issued after notification are to non-agarias, who are mainly traders. The agarias have now become sub-lease holders and they are getting lower prices compared to the market. This has resulted in lower income for agaria families pushing them further backward.

Another evidence of invasion of salt industry in forest areas is the retrenchment of mangrove cover in coastal areas. As new coastal lands are brought under cultivation they encroach the mangrove cover. The mangrove cover gives support to a complex eco-system. It also acts as a wall against natural calamities as has been evident from the 26 December 2004 tsunami impact in the southern districts of Tamil Nadu.

Shrimp versus Salt: a Comparison

Since the early nineties shrimp farming has become lucrative offering high returns from the land. A kilogram of shrimp is sold for about Rs 200 (2005 price) where salt fetches less than Rs 4 per kilogram. Further duration of the shrimp crop is 120–130 days and depending upon the location and climatic conditions two crops can be taken in one year. The average production from shrimp ponds is about 265-270 kilogram per acre per year, which gives a good return of Rs 53 000 per acre. Assuming 60 percent of the revenue as input costs, a net profit of Rs 21 200 per crop per acre of shrimp pond is available in a good year.

Production of salt is also a function of location and atmospheric conditions. Depending on the conditions in coastal salt production areas, production of salt may vary from 10 to 70 tonnes per acre. Even at the higher end of 70 tonnes per acre production, the revenue (@ Rs 300 per tonne) is Rs 21 000 per acre. That is the net profit from salt in a good season is considerably lower than shrimp in a good season. However, it should also be mentioned that in a bad season the net profit may be the same or salt can actually earn more than shrimp since unlike shrimp, salt can be stored for more time and has a steady minimum demand. Further, salt does not face the risks of disease, as shrimps do.

The other conflict over land use is between shrimp farming and salt. Shrimp farming is more lucrative in terms of net returns. As land conditions for both salt and shrimp farming are similar, entrepreneurs have shown their interest to convert saltpans for shrimp farming. Their argument is that salt is a seasonal activity, so for rest of the season salt land can be used for shrimp farming as it increases the return from the land and also provides employment to salt workers. However, the Supreme Court[10] has banned any such conversion of saltpans into shrimp farms and conversion if any are in violation of the Apex Court's order.

The second environmental issue related to salt industry is the pumping of subsoil brine. Traditionally, the production of solar salt involves trapping of tidal waters. It limits the production of salt to natural tidal flats and low-lying saline areas. But as business flourished, more and more salt works were established away from the natural tidal flats. Some environmental activists working on the 'Ground Water Salinity Related Impacts and Mitigation Plans in the Bhavnagar Region[11]' have found that groundwater is pumped from a depth of 122 metres to exploit salt resources. If ground water withdrawal exceeds a maximum limit, the aquifer levels of the coastal area will decline, accelerating saltwater intrusion into the freshwater aquifers.

The concerned activists also cited the example of a 50-metre aquifer, which was known to be salty while the deeper one was better and potable. As more and more water was drawn from the ground over the years, ground water turned saltier and even the deeper layers turned salty. The 250-mg/l-chloride isoline migrated miles away from the coast and people adapted themselves to drinking water with chloride levels of about 1000 mg/l. In many villages near the coast, even that water became unavailable. Now, every drop of water has a pinch more of salt.

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[10] *In S. Jagannathan vs. Union of India. Writ Petition (Civil) No. 561 of 1994.*

[11] *Further repercussions of salt water extraction (Bahasa Indonesia) Posted By: Bambang Radi, www.csiwisepractices.org/?Read=160*

Similarly, in Nawa Block of Nagore District in Rajasthan, salt is produced from subsoil brine. Initially, when there were limited salt works, the recharge rate of ground water and extraction rate of subsoil brine was in equilibrium. But as more firms came up extraction rate seemed to exceed recharge rate and the ground water level started rapidly depleting. This is evident as the manufacturers are going deeper and deeper to get subsoil brine. Industry people have expressed their fear that if the level of ground water continues to get depleted the salt industry may close down in another 10 to 15 years.

Most importantly, in the above case the geological stability of the region will be disturbed and the region may face problem of land subsidence. This process occurs when groundwater is pumped from a confined sand and gravel aquifer, which is overlain by highly compressible clays. As pressure within the aquifer drops, the aquifer materials and the overlaying clay gradually becomes compacted. The consequences of land subsidence include: structural damage to buildings, roads and other infrastructure; malfunctioning water and sewer systems; and in coastal areas, increased risk of flooding.

The third important linkage of salt industry to environment is 'wood'. Majority of salt workers are dependant on wood as fuel for cooking. They, generally, collect wood from surrounding areas. This has two implications: First, a part of their welfare level is now dependent on availability and accessibility of these natural resources in the surrounding areas of salt works and second what is the impact of their behaviour on the surrounding forests is unclear.

After the tsunami, there are proposals for re-plantation of mangrove trees in the coastline. However, the success of such a re-plantation project will depend on how local communities and salt firms prioritise and participate in the project.

The above discussion can be summarised as follows:

- At the national level, more area can be brought under salt cultivation. Nevertheless, the decision to increase area should be guided by local factors.
- Focus should be more on increasing the productivity of existing salt land through scientific designing and reallocation of land.
- Government should assess the ground water situation in sensitive areas and act appropriately.
- To solve local level conflicts, instead of hypothesizing the reaction of stakeholders, direct interaction among the stakeholders is expected to derive concrete results. The environmental situation often identifies with 'prisoner's dilemma game[12]' where pursuit of individual interest leads to catastrophe in the system. A direct interaction among the stakeholders and government may avoid occurrence of such a situation if action is taken on time.

Growth in salt production is essential and the challenge for the Indian salt industry is to enhance salt production with minimum environmental damage. However, a detailed analysis of environment – salt industry interaction need further research, which is beyond the scope of the present study.

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[12] ***The Prisoners' Dilemma:*** *Cooperation is usually analysed in game theory by means of a non-zero-sum game called the "Prisoner's Dilemma". The two players in the game can choose between two moves, either "cooperate" or "defect". The idea is that each player gains when both cooperate, but if only one of them cooperates, the other one, who defects, will gain more. If both defect, both lose (or gain very little) but not as much as the "cheated" co-operator whose cooperation is not returned. The game got its name from a hypothetical situation where two criminals were arrested under the suspicion of having committed a crime together. However, the police does not have sufficient proof in order to have them convicted. The two prisoners are isolated from each other, and the police visit each of them and offer a deal: the one who offers evidence against the other one will be freed. If none of them accepts the offer, they are in fact cooperating against the police, and both of them will get only a small punishment because of lack of proof. They both gain. However, if one of them betrays the other one, by confessing to the police, the defector will gain more, since he is freed; the one who remained silent, on the other hand, will receive the full punishment, since he did not help the police, and there is sufficient proof. If both betray, both will be punished, but less severely than if they had refused to talk. The dilemma resides in the fact that each prisoner has a choice between only two options, but cannot make a good decision without knowing what the other one will do. Such a distribution of losses and gains seems natural for many situations, since the co-operator whose action is not returned will lose resources to the defector, without either of them being able to collect the additional gain coming from the "synergy" of their cooperation. The prisoner's dilemma is meant to study short-term decision-making where the actors do not have any specific expectations about future interactions or collaborations (as is the case in the original situation of the jailed criminals).*

Distribution of salt

The distribution of salt is confronted with two main issues: first, the movement of salt and second the zonal quota system. Railways play an important role in transporting salt from three surplus states *viz.*, Gujarat, Rajasthan and Tamil Nadu to the entire length and breadth of the country. On an average, 55 percent of edible salt is transported by rail from production centres. The remaining quantity moves by road and waterways. The rise in railway freight rate by over 135 percent in the 2002-03 Railway budget has hard hit the industry. The movement of salt from Gujarat dropped by over 40 percent, especially from Kutch. Later, a relief of 25 percent was announced, which was inadequate according to the traders.
As Mr Hiralal Parekh, President of the Indian Salt Manufacturer's Association puts it "the Rs 2 500 crores salt industry, which adds taste to meals across the world, is now getting a taste of government apathy." The irony is that if a railway rake is loaded from the salt fields of Rajasthan and sent to the north and northeast, the freight cost is lower by Rs 5 lakhs to Rs 8 lakhs per rake than for a rake loaded from Gujarat, especially from the Kutch region.

Secondly, according to traders, the Railways supply more wagons for transportation of salt during the off-season that is between July and November. During the peak season, however, the number of wagons noticeably decline. The Railways have also introduced rake system in which the traders have to pay for 40 wagons, whether they need it or not. Under the circumstances, it is cheaper to transport salt by road rather than ordering for a full rake of 40 wagons. However, transportation by road over a long distance is not viable.

Producers from Gujarat suggested that the rakes, which bring stocks of food grains, soya and other commodities to Kandla for export on a regular basis, return empty. The Railway's decision to run empty rakes from Gandhidham, ignoring the huge wagon demand that exists in the salt industry, does not seem logical and is against all commercial principles.

Allegations have also been made against the salt traders for overloading the rakes. According to newspaper reports a railway rake can legally be loaded between 1 100 and 1 155 bags, depending on the capacity of the bags, which are of the sizes of 50 kg, 60 kg, 70 kg and 75 kg. According to Railways, for years, salt traders have been overloading every rake by at least 200 more bags. In the process, Railways has been wasting manpower just trying to check this malpractice. In addition, the payment is made per rack, and thus, this amounts to short charging the Railways.

The salt producers in Gujarat are unhappy with the zonal quota system also. They question the rationale behind such quota system in an era of globalisation. On the other hand, salt producers from states such as Andhra Pradesh and Orissa support the utility of quota system. However, existence of quota system is also helping in disintegration of market and non-standardisation of the product.

Physical infrastructure

The salt industry's physical infrastructure consists of a broad array of systems and facilities that include transportation networks, including roads, rail, ports, electricity, housing and telecommunications services and other civic amenities. These systems and facilities do not exist in isolation: decisions about where to build or expand roads affect decisions about firm's establishment and *vice versa*. The SCO supports the construction of much of this infrastructure and has helped to ensure the safety of services it provides. The state and local governments and the private sector also play significant role in planning, developing, and maintaining this infrastructure. As we have moved into the liberalization era, the following situations are likely to influence the industry's needs for interconnected infrastructure systems and services.

- Broad gauge railway tracks and loading facility is not available in some of the salt producing centers in the country.
- Indian companies are less competent in terms of cargo loading at the ports that in turn increases the cost and reduces profit margin.
- In general, improper infrastructure is also an important factor in reducing the accessibility of medium and small salt farmers to domestic markets.

- Many areas in LRK can be brought under large-scale production by encouraging big investments, but lack of infrastructure in LRK region is a big hurdle in promoting production on large-scale.
- Rail transport is more cost effective than road transport as bulk of the commodity can be transported by rail. For Vedaranyam in Tamil Nadu, other than big manufactures who generally depend on their own road transportation, other producers are suffering from lack of rail infrastructure. Due to absence of rail infrastructure salt is transported by road. As this is not cost effective, they are unable to utilise export markets like the Tuticorin producers do.
- The road and rail infrastructure needs improvement in Bharuch, Bhavnagar and in most of the major salt producing areas in the LRK region in Gujarat. While export of salt has picked up, the port facilities exist only at Kandla. Development of other existing ports for export of salt can allow the producers to access a much larger export market.
- Road connectivity of salt production areas to the processing centers is poor. This increases the transportation costs as transportation is to be done in a phased manner. In the first phase, salt is transported through tractors from saltpans to storage grounds adjacent to highways and then it is transported to processing and marketing centers by trucks.
- Facility of drinking water is also not available in the vicinity of majority of saltpans. The salt manufacturers have to fetch water from near by city centres through tractors.

These trends hold wide-ranging and varied implications for the industry's future. The steps that the Government takes to eliminate these trends as it plans for and institutes infrastructure-related policy and investments in the coming years will have a direct impact on the future of the salt industry and in turn, on the quality of life of the salt workers.

Iodisation programme and the Indian salt industry

The easiest way to prevent iodine deficiency disorders (IDDs) is to iodise salt because everyone uses salt, every day. Iodisation programme basically means mandatory iodisation of salt to eliminate the IDDs. The United States and a few other developed nations, including Australia and the Scandinavian countries have managed to overcome the problem. The United Nations agency, UNICEF, which has led the international battle against IDDs, estimates that iodised salt programmes have protected 12 million children a year from brain damage.

The human body cannot retain iodine (unlike most other micronutrients) and, therefore, vegetables and pulses that are iodine-rich must be consumed daily. The fruit, vegetables and greens in the land-locked regions contain small amount of iodine. Therefore, the population in these regions does not get enough iodine in the body from water and food. Hence, the worst cases of iodine deficiency are found in the highland regions of the world, areas of greatest soil degradation, where vegetables and pulses have the lowest content of iodine. Sub-Saharan Africa, China, Indonesia and the vast region bordering the Himalayas are particularly affected with IDD.

The iodine deficiency is still one of the most serious medical and social problems in the world. Based on WHO data a third of the world population faces a risk of iodine deficiency, 700 million have goitre, while around 20 million have serious mental disabilities as a consequence of the iodine deficiency.

In India, it is estimated that 70 million people suffer from IDDs, with 200 million more at risk. There is no region in the country, which is free of IDDs. It is found in the major cities as well as in distant villages. With a view to ensuring universal access of iodised salt, the SCO has been identified as the nodal agency for creation of adequate salt iodisation capacity, its distribution and quality monitoring at production centres, under the National Iodine Deficiency Disorders Control Programme (NIDDCP). As on 31st December 2004 a total of 806 units were engaged in commercial production of iodised salt/ refined iodised salt generating a capacity of 117.44 lakh tonnes per year, which, according to the SCO is more than sufficient to meet the requirements of iodised salt in the country.

How IDD programme is affecting the salt Industry?

There is no restriction on movement of non-iodised salt. The unrecognised sector is producing non-iodised salt and selling it freely for human consumption at much cheaper rate. This is hampering the progress of iodisation programme and viability of iodised salt production by the recognised sector in the country.

According to many leaseholders, the producers are getting nearly the same price for iodised and non-iodised salt. However, there is considerable amount of cost involved in processing in terms of human inputs, raw material[13], sunk cost to establish iodine plant and the opportunity cost of keeping the salt for iodisation. Under such a situation if the recognised sector is forced to produce iodised salt, there is great possibility of avoiding proper iodisation of salt by such producers. There are evidences on record from Andhra Pradesh indicating packing of common salt as iodised salt.

The marginalisation of the small producer has become a symbol of the conflicts faced by India in transition – big business and multinational/corporate companies versus homespun tradition and the common man. It has become harder and harder for small salt producers to eke out a living because the industry mostly depends on the mercy of nature for evaporating brine water to produce salt. Many small producers are farmers driven from their land throughout the 1990s by drought, who obtained 10-acre coastal leases from the Government to produce salt.

On the other hand, those who are opposed to the compulsory manufacture of iodised salt put forward the following arguments:

- That IDDs affect a negligible percentage of the population and that a surfeit of iodine is harmful.
- That iodised salt is expensive because iodine must be imported (except in some places potassium iodate is given by Micronutrient Initiative (MI) and UNICEF).
- That the plastic packaging process necessary for preservation of iodine content is polluting on a massive scale.
- That the mandatory policy is ruining small farmers.
- That the policy is driven by the greed of multinational corporations and organisations.
- That the way Indians cook means that iodine evaporates during the cooking process, rendering iodisation meaningless.

They even argue that banning un-iodised salt when tobacco and alcohol are freely available is undemocratic (though comparing Iodine to tobacco and alcohol is not logical but they do argue this way).

The safety of iodised salt has been firmly established by seven decades of testing; studies in Japan provide no evidence that an iodine-rich diet (seaweed is a major ingredient of Japanese cooking and is the natural repository of much of the iodine that is flushed from the earth's soil) is detrimental to health. Nor do Indian cooking techniques destroy iodine. Tests show that only 30 percent of iodine is lost during cooking, leaving sufficient quantities to prevent IDDs. As for cost, even in impoverished nations, iodised salt is affordable. The additional cost of iodisation per person in India is about the cost of a cup of tea per year. It is negligible, even in a poor man's budget.

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[13] *Sometimes, during 1987-1993, Government of India provided potassium iodate to the salt producers or the cost of potassium iodate in lieu of that. UNICEF and NGOs (MI) have also provided potassium iodate to the small producer intermittently.*

As for the emotional arguments that greedy, monolithic, multinational organisations are driving local industries out of business, this argument lacks base. The real problem faced by small producers is not mandatory iodisation but tension created by a changing economic system. India has been open to free trade for only the last 10 - 12 years, and competition among once-protected industries has become savage.

The salt and iodine marriage, like that of fluoride and water, is one of the few cases where a universally used product can be cheaply treated to solve a public health threat. Accordingly, organisations such as UNICEF that have been involved in the decades-long struggle to wipe out IDDs have little time for the argument that legislative imposition is "undemocratic." Community consent is desirable, but iodised salt saves children from a terrible affliction that cripples them from leading a healthy, useful and productive life.

Developmental activities by the Salt Commissioner's Organisation

As per Salt Cess Act (1953), the SCO plays a pivotal role in the development of salt industry and labour welfare related activities. The extent of contribution to be paid for a particular scheme may generally have some relation to the cess collection and the number of recognised units/ salt works benefited. However, for small, medium and co-operative salt works these criteria are relaxed. The SCO also gives preference to salt works in backward areas for developmental works.

To decide on the allocation of funds for the developmental works in the industry, priorities are given to schemes for augmentation of brine supply, construction and improvement of auxiliary physical infrastructure like roads, bunds, etc and research and developmental projects for salt. Among labour welfare activities, priority has been given to water supply, construction of rest sheds, provision and augmentation of medical facilities, recreation facilities and educational facilities. No assistance is extended for routine works like maintenance of platform, embankments, etc.

These contributions to the developmental work and labour welfare activities are made in collaboration with the beneficiaries and/ or the respective State Government/ Zilla Parishad/ Panchayat Samiti. The SCO contributes up to 50 percent in case of category I units and up to 70 percent in case of categories III and II. It also ensures rehabilitation of the salt works affected by natural calamities.

The SCO works in close connection with the Central Salt and Marine Chemicals Research Institute (CSMCRI), Bhavnagar; the National Institute of Design (NID), Ahmedabad and the National Institute of Occupational Health (NIOH), Ahmedabad for issues relating to increase in land productivity, quality, design of tools and health of the workers. A model salt farm is proposed to be set-up in Nawa, in Rajasthan in collaboration with CSMCRI to disburse the scientific knowledge regarding salt production among the producers. However, during the study salt entrepreneurs have pointed out many difficulties with the developmental works supported by the SCO, which are as follows:

Non-availability of fund on time: SCO's share for sanctioned developmental works is not available on time. As a result, cost of the project escalates. Some of the entrepreneurs are of the view, that the SCO should declare the amount of funds available on zonal basis and make them available before the Regional Advisory Board (RAB) or the Central Advisory Board (CAB) meeting. Once a project is sanctioned, the funds should be readily available to complete the project within the stipulated time and the budgeted cost.

Transparency: Across the states, salt manufacturers feel that they are not getting their rightful share in developmental funds. Since this is a general feeling, the rationale for why a project is accepted or rejected should be mentioned specifically. More attention can also be given to the states where the industry is staggering. The developmental needs of the industry are mentioned in detail in Chapter 3.0 of the study. However, SCO is of the view that all the development needs of the salt industry for which financial assistance is required are considered by CAB/ RABs constituted for this purpose in which salt manufacturers are also represented as members.

Bias for labour welfare works: A section of the entrepreneurs feel that the SCO is now focusing more attention on labour welfare works at the cost of the industry. This feeling has been aggravated more after the launch of the housing scheme for the salt workers. Figure 2.3.1 shows how the funds have been allocated by the SCO on developmental works for the period 1991-92 to 2003-04.

During 1991-92 through 2004-05, the collection of cess increased annually by 2.70 percent, while in the same period, SCO's expenditure on developmental and labour welfare activities increased by 7.69 percent annually. Of the developmental expenditure, expenditure on industry increased by 8.69 percent and that of labour welfare activities by 4.77 percent. The share of expenditure on industry out of the total cess collection increased from 30.48 percent in 1991-92 to 49.07 percent in 2004-05. It was highest in 2000-01 when it reached 58.67 percent. However, the share of labour welfare work in the total cess collection increased from 13.36 percent in 1991-92 to a maximum of 29.79 percent in 2000-01 and thereafter decreased to 9.97 percent in 2003-04 and increased marginally to 16.33 percent in 2004-05.

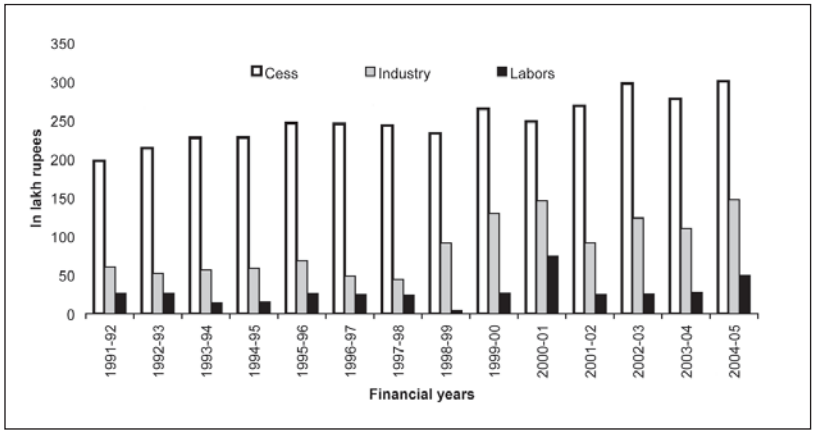

Figure 2.3.1 Developmental expenditure and salt cess fund 1991-2005

As it is evident from the data given above, such feelings have not much ground. However, the hype created by the housing scheme and the relatively small size of the fund available for developmental needs of the salt industry is largely responsible for this feeling.

The era of globalisation has brought new challenges for the salt industry as well as for the SCO. Therefore, the Organisation should lay more emphasis on modernisation of the industry by disbursement of scientific technologies and making the industry globally competitive, exploring export markets, encouraging and providing an enabling environment for the medium and small producers to adopt such changes.

Salt manufacturing - Industry or Agriculture?

The issue whether salt production is an industrial activity or should be part of the agriculture sector came up on many occasions during the discussions with the stakeholders. There is a diverse view among the salt producers on this issue. The Encyclopedia Britannica[14] defines an industry as a "Group of productive organisations that produce or supply goods, services, or sources of income." However, generally an activity is considered as industrial activity if the inputs and outputs are qualitatively different, *e.g.* iron and steel industry. On the other hand, agriculture and allied activities are more or less human interventions in natural processes where input and outputs differ quantitatively. By this measure, salt production has both the attributes. On one hand, it qualitatively changes the saline water or brine to produce salt and on the other hand it is a case of humane modification of natural process.

However, the debate is actually not about what should be the status of salt industry but why a large section of the producers want to change its status. Clearly, those who support its present classification as an industry are the big producers from salt producing states while those who are endorsing salt as agriculture are the small producers.

As it is obvious from the history of salt production in United States to branding exercise in India, small firms may eventually give way to big producers. There are two possible ways out of this problem for the small firms: first, modernisation and quality improvement of the product and second cost effectiveness. So far, existence of a large number of small firms in the salt industry in India is possible as the big units are yet to produce salt to meet the requirements of the country and secondly, the salt market is still controlled by traders who prefer to buy salt from small producers as they can be forced to sell the commodity at a lower price.

Modernisation and quantity-quality trade-offs are a near impossible for the small producers due to the amount of capital requirement, inability to store salt and an expectation of unviable returns from such

[14] *http://www.britannica.com/*

investment, if made. The only way left is reduction in costs of production. The important factors that contribute to the production costs of salt are transportation, fuel, labour and user charges for land, etc. While transportation costs are not directly borne by the producers, cost of fuel turns out as the most influential factor.

The matrix in Table 2.3.1 summarises the relative cost-benefit from the status associated with salt production. The matrix reflects the viewpoint of small salt entrepreneurs and clearly shows the root cause of such endorsement. As per the estimates of the leaseholders, immediate gains from such possible change in status of salt production is a decrease in the cost by 50 - 30 percent on account of fuel, assuming free power or lower per unit charge. This would mean that even in a worst price scenario the producers could expect a healthy profit margin of about 10 to 15 percent.

In conclusion, the gravity of the above debate lies in issues it raises regarding fuel and land policies. The Government's approach to these issues will determine the future of thousands of small producers and workers associated with the salt industry. In the existing structure, production of salt is more or less akin to traditional agriculture where producers produce for subsistence. To thrive and make the salt industry globally competitive, it should be organised more efficiently in line of organised industry. Pricing policies regarding use of inputs in salt production should agree with the needs of the salt production, especially those of the small producers. Promotion of sales co-operatives, creation of direct market linkages and close co-ordination in vertical linkages can address this problem to a large extent.

Table 2.3.1 The industry versus agriculture argument

Parameters	Industry	Agriculture	Winner
Transportation	Seen as the cash cow by major transporters like Railways.	Enjoys many relaxations depending on its status as food crop or cash crop.	Agriculture
	Subjected to quota and other restrictions.	No restrictions.	Agriculture
Power	Cash cow. Bears cross-subsidies for domestic and agriculture uses.	Enjoys benefits like free or subsidised power.	Agriculture
Labour	Subjected to various labour laws and associated costs for maintaining records, etc. However, being an unorganised sector salt industry in many cases escapes such laws.	Subjected mainly to Minimum Wages Act.	Agriculture
Credit facility	Attracts institutional credit more than agriculture. However, for salt industry, credit facility is hardly available to small and medium entrepreneurs.	In spite of establishment of Regional Rural Banks, adequate institutional credit is not available.	Industry
Land	Higher ground rent and royalties as a share of value produced by per unit of land.	Relatively lower ground rent and royalties as a share of value produced by per unit of land.	Agriculture
Standardisation of product	More feasible.	Less feasible.	Industry
Price	Entrepreneurs have little control over price.	Farmers have virtually no control over price.	Industry
Minimum Support Price (MSP)	A long-standing issue in salt industry. Such proposals are denied on the ground of high degree of regional variation in cost of production of salt.	Available to food grains and many other agricultural commodities.	Agriculture

2.4 The salt workers in India

The salt worker population in India mainly comprises workers from economically backward sections of the society. They constitute nearly 70 percent of the population. A large section of the workers are migrant. Migration takes place at three levels. Most common is the inter-village migration followed by inter-district migration and finally the inter-state migration.

An average salt worker family consists of five members. Population in the salt worker community declines sharply as cohort starts aging. Only around 2 percent of the population is over 60 years of age. Over 50 percent of the population is between 18 to 60 years of age. The rest are below 18 years.

Majority of the salt workers own a house, which they inherited or built personally. While over 50 percent of the workers have a house, which can be called as their 'own', only about 36 percent of the workers have any exclusive property right over his/ her dwelling unit. Over 56 percent of the workers stay in katcha houses either owned or provided by the leaseholder at the work site. Toilet facility at the work place or dwelling unit is rarely available irrespective of the state or location.

Awareness versus use of protective gear: the puzzle

An important determinant of the health of salt workers is their awareness about the use of protective gear. The puzzle here is though the workers are aware of the need and benefits of the protective gear, yet their use is limited. Why? A study conducted by the National Institute of Occupational Health (NIOH), Ahmedabad and Desert Medicine Research Centre (DMRC), Jodhpur provides some clue. Rajasthan is one of the major salt producing states where use of protective gear is found lower than the national average. The study confirms that the awareness about the need of protective gear and their benefits is quite high among the salt workers, but they are still not using them.

The reasons are many: The salt workers are unable or unwilling to bear the cost of the gear themselves and expect the leaseholders to provide the gear. However, the leaseholders attitude toward this issue is not encouraging. As a result, the workers are using cheaper and less effective substitutes like polythene bags, etc. Secondly, the salt workers find the conventional protective gear uncomfortable. The boots slow their movement in the pan, which in turn affects their productivity (= income) adversely.

The overall literacy level among salt workers is around 45 percent. The mean year of education is lower among the females as compared to the males. Most of the children study up to middle school, after which dropouts are quite common. The workers perceive their health as good where good health implies that the concerned person is otherwise not bed-ridden.

The average wage of the workers varies between Rs. 40 to Rs. 120 and they work between 180 to 300 days in a year depending on the state and location. The average per capita monthly income is around Rs. 600. Around 20 percent of the population is below poverty line[15]. Most of the workers are unsatisfied with their life and hold no hope for the future for themselves or for their children.

Extent of trade union membership is very low as compared to any other industry. The workers believe more on external agencies like Government to address their problems than the production system they belong to. Intra-worker bondage is quite high. A worker regularly discusses his/ her personal and professional problem with other workers. This comradeship acts as an informal union for the workers.

The health profile of the workers

A study by DMRC, Jodhpur among the salt workers of Rajasthan found that major morbidity disorders observed among the workers (in both sexes) were dermatological, respiratory, musculoskeletal, gastro-intestinal and ophthalmological. The study found that due to non-use of gumboots or other safety measures, salt crystals and the spade used for sweeping damaged their skin. Since the feet and lower limbs of the brine workers remain submerged in brine, presence of ulcers on the skin enhances salt absorption, as percutaneous absorption of various substances, including salt is known to be higher through damaged skin. However, this hypothesis needs to be confirmed.

To study the livelihood issue of the salt workers we have followed sustainable livelihood approach developed by the Department of International Development (DFID) of the United Kingdom. The following section gives a brief outline of this approach.

[15] *Calculated from the survey data.*

2.5 What is a sustainable livelihood?[16]

Livelihood comprises the capabilities, assets (including both material and social resources) and activities required for means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.

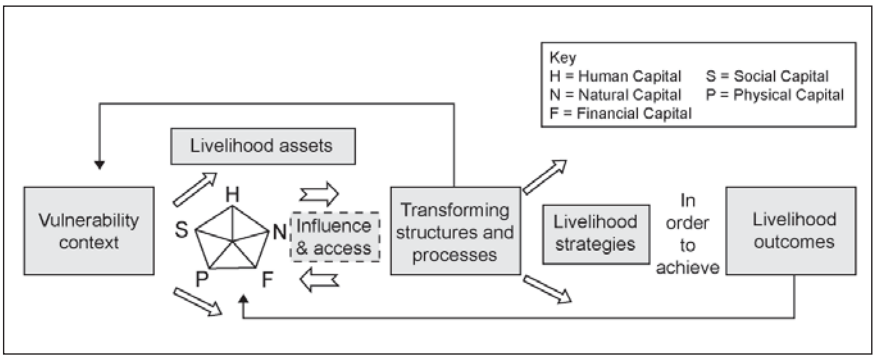

Figure 2.5.1 Sustainable livelihood framework[18]

The human entities, use the following resources to achieve sustainable livelihood[17]:

Human capital, e.g., demographic structure, education and health

Natural capital, e.g., land, wood, etc.

Physical capital, e.g. shelter, water supply, transportation, power, etc.

Financial capital, e.g. income sources, saving, etc.

Social capital, e.g. community bonding, membership to trade union, etc.

Access and control over these five resources determines the sustainability or vulnerability of livelihood. The present study examined the existing state of these five resources of salt workers to explore the issues concerning the vulnerability and sustainability of their livelihood. The schematic diagram 2.5.1 depicts the framework used for the study.

The salt workers are subjected primarily to the seasonality of production. A median salt worker will be engaged in salt production or in agriculture. This switching on and off costs them time and money. It also makes their income stream in a production year random.

Absence of financial cushion leads them to take a myopic attitude towards life. They are not able to take (and nor inclined to take) any long-run strategy like sending their children for higher education, etc. Each generation inherits and bequests their low level of human capital. As a result, it is hard for them to break out of their traditional livelihood. More over, it makes them vulnerable to any change in the production structure of their activities.

The institutional structure that governs the salt industry is not favourable to the workers. The organs of production, *viz.*, entrepreneur, salt worker, trader and government are characterised by presence of multiplicity of intermediaries. A large part of the revenue that could be available to the salt worker is siphoned out by these intermediaries.

Any developmental policy for the salt worker should focus on their rights to have these resources at their disposal. The following section of the report explores the position of the salt workers in respect of access and control over these resources.

2.6 Organisational structure of the salt industry

The organisational structure of any industry depends on the product it produces. Salt industry can be termed as an unorganised industry. The nature of linkages in salt industry is not formalised. The contracts are mostly verbal and tradition bound.

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[16] *Adapted from Chambers, R. and G. Conway (1992) Sustainable rural livelihoods: Practical concepts for the 21st century. IDS Discussion Paper 296. Brighton: IDS.*

[17] *http://www.livelihoods.org/info/info_guidancesheets.html*

[18] *Adopted from the sustainable livelihoods guidance sheets available at http://www.livelihoods.org/info/guidance_sheets_pdfs/section1.pdf*

In the perspective of the present study, the organisation of salt industry is studied at two levels: (1) at the industry level and (2) at the firm level. At the firm level, the following vertical linkages can be observed:

(1) Leaseholder → manager → labour contractor → worker

(2) Leaseholder → labour contractor → worker

(3) Leaseholder → worker

(4) Trader → leaseholder / worker

The first type of linkage is practiced in category I and in some cases in category II units, especially where the leaseholder is absent. A typical category I unit has around 4/5 labour contractors who gather, organise and supervise a group of 10 to 20 workers.

The manager is generally a permanent salaried employee who looks after the technical parts of the operation and supervises the work of pump operator, etc. A labour contractor is a contract worker. The contracts are generally traditional and verbal and are mostly inherited by the son from father.

The second variety of linkage is generally observed in category II units in the median range, where entrepreneurs are directly linked with the labour contractor.

In the above two varieties, except few units, worker are generally paid on the piece rate basis. Members of a group of worker are homogenous in respect of class and caste. Further, they generally belong to the same family or extended family.

In the third and fourth varieties of linkages the entrepreneur himself looks after the production. This linkage can be observed in category III and IV salt works. The area in this category is small (< 10 acre). If the entrepreneur lacks the capital then he generally take advances from the trader and undertakes production. In such cases the entrepreneur is bound to sell his produce to the trader at less (10 to 20 %) than the prevailing market price of salt. The trader also occasionally charges an interest rate at the local rate, which varies from 36 to 60 percent per annum.

The organisational structure is best defined as the vertical and horizontal linkages among the stakeholders in the industry. At the industry level, the stakeholders in the salt industry are: (1) producers, (2) intermediaries, (3) salt workers, (4) traders, (5) government and (6) consumers.

The nature of linkages – vertical and horizontal among these stakeholders and the relative strength of these linkages determines the shape of the industry and intra-industry distribution of revenue among the stakeholders.

One of the important features of the salt industry is the presence of multiple intermediaries at various stages of production and marketing. In the production stage, the intermediaries are the labour contractors. At the marketing stage, the intermediaries between entrepreneur and consumers are the mobile agents, local traders, transporters, processors, merchants, distributors and the retailers.

This multiplicity of intermediaries in the salt industry is under much criticism from various quarters, especially from the committees, which have been set up from time to time to suggest improvements in the salt industry. The basic argument against multiplicity of intermediaries is that they are rent seekers. Their presence in the system is reducing the welfare level of the other concerned stakeholders who are earning from value addition to the product.

The organisational structure in any industry is developed in a manner to reduce transaction costs[19] of production. In view of the above criticism a moot point arises with respect to the present organisational structure of the salt industry. Are these intermediaries really appendices, as argued by the salt committees or

[19] *Transaction costs are the negotiating, monitoring, agency and enforcement costs that have to be borne to allow an exchange between two parties to take place. The sources of these costs are the transaction difficulties that may be present in the exchange process.*

do they have a relationship like hand to body where without the hand the body will survive but lead a handicapped life. Since the present study mainly covered the production process of salt, the role of labour contractor has only been evaluated.

Seasonality in the production of salt and demand for specific skills in scrapping activity has given salt some special features. The problem and strategy set before a salt entrepreneur is as follows:

Problems	Strategies
Attracting workers from other sectors, *viz.* agriculture to salt manufacture during the production season.	Relatively higher wage in salt production as compared to agriculture.
Retaining the salt workers during the production season.	Calculating the payment of the workers on daily basis. Paying them weekly instalment or *hafta* and finally settling their dues at the end of the season.
Retaining the workers for the next production season as after one production season the worker gets some skill. The entrepreneur can reduce the training cost (through increase in production) by retaining the same set of workers.	Paying them advances for the next season to be adjusted after the end of the next season to maintain their livelihood during the non-production season.
To ensure the quality and quantity in production from them.	Productivity based payment or piece rate mode of payment.

The workers are not always locally available and there is no organised labour pool from which the entrepreneurs can get labour. Their response to this situation is to tap the workers through village leaders or community heads who in turn get a commission for their services. These are the first set of intermediaries that come into play in the salt industry.

Secondly, the entrepreneur needs some insiders who understand the mood of the salt workers and can motivate them throughout the production season. A labour contractor plays this role for the entrepreneur.

Thirdly, once advance is paid for the next season, some mechanism is needed on the part of the entrepreneur to ensure that they really turn up in the next season. The entrepreneur pays the advance to the labour contractor who then pays the worker in his group. This mechanism enables sharing of risk between the entrepreneur and the labour contractor. Due to this mechanism the labour contractor and the entrepreneur develop a long-term relationship, which is often a hereditary relationship. Repeated interactions over a long time help them to build a trust bond, which is absent between the salt worker and the entrepreneur.

Fourthly, some specific communities have historically been associated with salt production in different pockets of the country. Theses communities like Bandewals in Rajasthan, Agarias in Gujarat and Tuticorin salt workers are traditionally more skilled than the other salt workers. Since they cannot supply labour to the growing salt industry some of them have been utilised as trainer- cum- supervisors in the salt industry.

Of the factors listed above, the fourth factor is temporary in nature as workers generally pick up skill after 4 to 5 seasons. The first factor is also not that important as high growth rate of population and surplus workforce in agriculture ensures a continuous labour flow to the salt industry. However, the most important factor is trust and management capacity. A salt worker in his life time can get his dream promotion to labour contractor if he has a certain degree of rapport with the entrepreneur and also has a say or control over a group of workers. This trust and management issue is so important that there are some instances when in the absence of the husband, the wife has been promoted as the labour contractor.

SEWA has suggested a partial solution to this problem through creation of a labour bank, where labourers can be registered and supplied to different units as per their requirement. However, entrepreneurs are sceptical about this proposal as:

1) This will formalise the contract with workers. After a few seasons the workers will demand permanency. In a seasonal industry like salt it is not possible for them to keep permanent workers on their roll.
2) Since the income of the labour contractor is dependent on the productivity of his group, he tries to ensure that his group is the best. But if labourers are hired from a labour bank the productivity cannot be ensured.

The following schematic diagram (Figure 2.6.1) depicts the linkages among the stakeholders in the salt industry. An arrow in the diagram depicts control in the direction of the arrow and the information flow in the opposite direction of the arrow. A solid line implies more control and information flow, a broken line implies less control and noise in the information flow and a dotted line implies virtually no control and or no information flow.

The diagram suggests that the stakeholders in the salt industry are weakly related. The only strong linkage is the vertical linkage among trader, producer, labour contractor and the salt worker at the individual level, which is running the industry. The linkage between the trader and the consumer is also weak in view of the multiplicity of the traders.

The linkages between the Government and the salt industry are also found to be weak. Salt production is carried out in a widespread area, which is mostly remote and in inaccessible corners of the country. The Government is exercising its control through the SCO and its branches. The pre-independence era Salt Commisioner's Organisation, which controlled almost all the activities, is now mainly checking quality, collecting salt production statistics, organising distribution of salt and implementing some welfare schemes for the salt workers. This issue is discussed at length in the subsequent section.

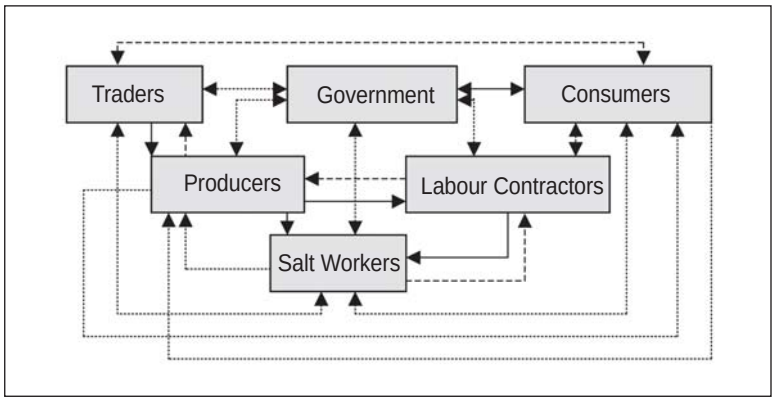

Figure 2.6.1 Relation structure in the salt industry

The most important linkage between the salt producers- the salt workers and final consumers –the chloride-alkali industry and household is virtually non-existent. They are only linked indirectly through a set of powerful intermediaries, *viz.*, the traders and the labour contractor. Welfare implication of this linkage is a rent for these intermediaries at the cost of the workers.

The intra-industry transaction matrix (Table 2.6.1) depicts the role played by the stakeholders and the costs and benefits of their interactions.

Table 2.6.1 The intra-industry transaction matrix

Stakeholders	Salt Workers	Labour Contractors	Producers	Traders	Government	Consumers
Salt Workers	-	Labour	Labour	-	Indirect tax	Salt
Labour Contractors	Employment scope, advances in off-season	-	Labour supply, supervision of work, commission	Salt	Indirect tax	-
Producers	Organises and manages production, hire labour	Sub-Leasing of land, commission	-	Salt	Salt Cess, Land Revenue, Tax	-
Traders	-	Price of purchased salt	Price of purchased salt	-	Tax	Marketing of salt
Government	Welfare Schemes	-	Land Infrastructure R & D	Communi-cation and distribution network	-	Organisation of salt distribution channels
Consumers	-	-	-	Revenue	Tax	-

The Market Linkage

Salt is a bulky commodity with low value to volume ratio. The price of salt in any place is sensitive to length of market linkages for the product. Generally, longer the chain, lower will be the revenue of the producer. The marketing structure of salt varies across the categories and places. Other factor that influences marketing of salt is the development of vertically linked industries in the neighbourhood area. During the study, the following marketing channels have been observed:

1) **Captive consumption**
2) **Entrepreneur → distributor → retailer**
3) **Entrepreneur → industry**
4) **Entrepreneur → local trader → distributor → retailer**
5) **Entrepreneur → transporters → inter-state trader → distributor → retailer**
6) **Entrepreneur → local trader → processor → trader → distributor → retailer**
7) **Entrepreneur → agent → outside trader → distributor → retailer**

The first four marketing channels can be observed in category I units and corporate units, while the last three verities of marketing channel can be observed in category II to category IV units. However, development of vertically linked industries can change this general observation. In Bharuch, Gujarat, even the small producers are getting this benefit as they can sell their product directly through tender to growing petroleum-based industries.

One of the important features of these marketing channels is existence of large number of intermediaries between entrepreneur and the distributor. This is quite similar to agriculture. The salt is produced during seven to eight months in a year, while salt is consumed throughout the year. In this backdrop, the intermediaries play two important roles: (1) they link the spot market of salt with forward market, and (2) they disburse the price information and help to reach a consensus price across salt production areas.

The local traders earn in the short run through misquoting of prevailing market price to the producer. However, this is a temporary feature as trust and personal relations play an important role for a long-term contract. If any local agent is found of such opportunistic behaviour, he may lose his future contracts in the industry. The main source of their earning is the difference in price of salt between season and off-season. The strategy is to buy salt at a lower price during the season and sell at a premium in the off-season. They also act as a link between salt producers, spread over a large and (some times) geographically separated area and salt processor, whose unit is mostly close to urban centres.

The agents on the other hand mainly act as a co-ordinator between the trader and the producers. On one hand, they maintain an up-to-date record of production of salt, quality and profile of the producer and their bargaining power in their respective area of operation. On the other hand, they also have large data bank on the potential outside traders. The trader and the producer have no knowledge about each other but both of them trust the agent. The trader and producer through the agent finalise a contract on the quantity and price of salt. For this co-ordinating activity, the agent charges commission from both the parties.

However, both the producer and the trader, practically have no power to monitor the activity of the agent. He has the opportunity of cheating both the parties as the entrepreneur and the trader may never meet each other.

The Salt Worker

The salt worker is at the lowest rank of this organisational structure (see Figure 2.6.1 on page 33). A typical salt worker is recruited by the labour contractor. He understands his duty and gets his payment from the labour contractor. The linkage between the entrepreneur and the worker as represented by a broken line is weak from the perspective of the worker. His relation with other salt workers is also weak. A typical salt labour works individually with his family unit or community unit. The only strong linkage he has is with his community. The migrant workers, especially show a strong community bonding.

The community takes all individual issues as group matters and work accordingly. The community bonding also works as an informal union through which a salt worker can exercise some control over the entrepreneur and contractor in case of issues like non-payment of wages. The best possible instrument at the disposal of a typical salt worker is changing his work place during the next season.

The linkage of a salt worker (Figure 2.6.1) with the Government and rest of the society as represented by the dotted line is nearly non-existent. In fact, the salt workers can be termed as invisible in the national workforce scenario. This is due to lack of information and awareness about their rights and minimal bargaining power due to their lack of coordination.

A typical salt worker's source of information is the local market (*haat*) and social ocassions like marriage and festivals where he meets other salt workers. They exchange their views about their respective employers, wages and other perquisites. If a salt worker finds that a particular employer is giving more benefits, he will try to shift to him in the next season. Due to this movement of the workers within a defined geographical region, wages and perquisites, generally converge towards a common standard.

The Government

Salt is a Central subject in the Constitution of India and appears as item No. 58 of the Union List of the 7th Schedule. Salt is declared as an item of food under Essential Commodities Act, 1955. The State Governments have been authorised to administer the Act with regard to fixing the price of salt and its movement within their territorial confines, if necessary. As per the Union List, the Central Government is responsible for controlling all aspect of the salt industry.

Salt manufacturing has been classified as priority industry. It is governed by the Salt Cess Act of 1953 and rules made thereunder. Respective factory laws and labour laws implemented by the Central and State Governments are also applicable to the salt industry.

The Salt Commissioner's Organisation

The SCO under the Ministry of Commerce & Industry (Department of Industrial Policy & Promotion), Government of India is entrusted with the regulation and control of manufacture, supply and distribution of salt within India. The main functions of the Organisation are:

1. Leasing out of Central Government land for salt manufacture;
2. Planning of production target;
3. Arranging equitable distribution and monitoring quality and prices;
4. Promoting technological development and training of personnel;
5. Maintenance of standards and improvement in the quality of salt;
6. Nodal agency for monitoring production, distribution and quality control of iodised salt;
7. Management of Departmental lands;
8. Planning, formulating and monitoring execution of labour welfare scheme;
9. Promotion of exports and pre-shipment inspection;
10. Collection of salt cess, assignment fee, ground rent and other dues; and
11. Rehabilitation of salt works affected by natural calamities.

An important issue regarding organisation of the salt industry relates to the status of the SCO. Is the SCO a productive intermediary or a renter? In this case rent is Government revenue equal to salary bill and other overhead costs of SCO, which amounts to Rs 600 lakhs after adjusting for salt cess and miscellaneous receipts.

The SCO in independent India is envisioned as a facilitator to the industry. However, the SCO in recent years has shifted its attention to labour welfare activities for which it has no such dedicated framework to implement the activities. The SCO has to depend on the leaseholders to implement their programmes. It can be said that much of time and information lost in this hierarchical implementation procedure of the labour welfare schemes limits the efficacy of the schemes.

During the survey workers and entrepreneurs have identified the following roles for the SCO:

1. To facilitate interaction with the workers through field camps;
2. To act as an agency to implement labour laws;
3. To act as a financer for developmental activities as banks are shy in advancing loan to this sector;
4. To explore export channels and aggressive marketing of Indian salt to potential markets abroad;
5. To standardise the product and marketing channels;
6. To withdraw unnecessary interferences where market is functioning;
7. To act as a co-ordinator between the State and the Central Governments like a single window system;

Presently, the main functions of the SCO are monitoring the production and quality of salt, distribution of salt and data collection and to some extent implementation of the welfare programmes. However, the Organisation still has a considerable presence in the salt industry, especially in category III and category IV salt works. This presence and experience of the field staff, if properly used, can make a productive niche for the SCO within the salt industry.

Labour Laws

The labour laws applicable to the salt industry are listed in the (see page 37). *De jure*, labourers are entitled to basic amenities and paid leaves. The provision of basic amenities like water, toilet, separate toilet for woman workers are a part of the set-up cost of the production unit. *De facto*, none of these Acts are being

implemented fully in the salt industry. Leaving few category III and category I units, these Acts are hardly implemented. The leaseholders have cited seasonal nature of the industry and low level of attachment of the workers to a particular unit as the basic reasons for not implementing these laws.

Labour Acts as applicable to salt industry in India

- The Minimum Wage Act, 1948
- The Industrial Dispute Act, 1947.
- The Workmen Compensation Act, 1923
- The Factories Act, 1948.
- The Industrial Employment (Standing Order) Act, 1946
- The Trade Union Act, 1926.
- The Provident Fund Act, 1925.
- The Employees State Insurance Act, 1948.
- The Bonus Act, 1965 (and the Payment of Bonus Act, 1965).
- The Payment of Wages Act, 1936.
- The Maternity Benefit Act, 1961.
- The Contract Labour (regulation And Abolition) Act, 1970.
- The Payment of Gratuity Act, 1972.
- The Employees Provident Fund, and Family Pension Act, 1952.
- The Equal Remuneration Act, 1976.

However, being a labour intensive and oligopsonstic[20] industry up to marketing level, the industry tries to cut costs in wage and amenity bills. Implementation of labour laws needs considerable amount of paper work at the minimum with out any significant scope for improvement in labour productivity. That is higher cost per labour and reduced profit margin. Secondly, as the monitoring and enforcing mechanisms of Labour Department is virtually absent in these far-flung salt works, chances of getting punishment for not observing the labour laws approaches zero. Lack of awareness among the workers and lack of unity in a larger sphere is another reason that helps the leaseholders to not to observe labour laws.

2.7 Summing up…

One of the inherent natures of Indian salt industry is its volatility due to its causal relationship with the behaviour of monsoon. The unpredictability component in monsoon gives the same attribute to salt production. Their income is a function of production and average number of days a saltpan remains open. The seasonality in production affects both these elements and exposes the salt workers to seasonal risks.

Second, if the industry is in a steady growth path, the workers will feel more secure about their future and can plan their life accordingly. This helps them to neutralise shocks like the 26 December 2004 tsunami or the 26 January 2001 Gujarat earthquake. However, uncertainty about the future makes them vulnerable towards these shocks. They cannot look for support in their livelihood as their livelihood is itself as unpredictable as the shocks.

Third, it also forces the worker to always look for multiple employment opportunities. They loose a considerable part of their time in searching for options. As a result, they cannot invest their time in planning for education of their children, health and skill formation. These low levels of human capital formation keep them at the bay. Most importantly, this low level of human capital in the older generation has influenced the welfare of future generations adversely.

Sustainable livelihood for salt workers, finally, is an outcome of constant industry-worker interactions. A weak industry cannot provide sound livelihood. An improvement in the performance of the salt industry can lead to improvements in the condition of the workers associated with it.

[20] *Derived from oligopsony industries where there are few buyers but large number of sellers.*

Chapter 3.0 : Socio-Economic Status of Salt Workers - Findings from the States

Introduction

In this section of the report, findings of the study on the livelihood situation of salt workers from seven major salt producing states are reported. The socio-economic status of workers is largely a function of the institutional set-up, health of the industry and the economy as a whole. Therefore, it is necessary to understand the situation of the salt workers in the background of the salt industry and the economy of the respective states.

The findings of the study are broadly presented in terms of five capital needs essential to lead a livelihood. These capitals as described in chapter 2.0 of the report are: human capital, physical capital, financial capital, natural capital and social capital. From policy perspective, this capital-based approach to livelihood is expected to shed light on the desired areas of policy interventions. Such interventions are usually done at two levels: (1) at the institutional level that is presented in the final chapter, and (2) directly at the capitals.

The inferences drawn in the chapter are based on the data generated under the study. Where necessary, comparative figures[1] at the state level are presented to give a clear picture of the relative situation of the salt workers as compared to other rural workers. This chapter also summarises the status of implementation of the two major Government Schemes for salt workers, Namak Mazdoor Awaas Yojana (NMAY) and Children Reward Scheme (CRS), as observed during the study. A detailed report on the Government schemes is presented in chapter 4.0 of the report.

3.1 Gujarat

Introduction

Gujarat was made a separate state on 1st May 1960. It is situated on the west coast of India between 20.6' N and 24.42' N latitude and 68.10' E to 74.28' E longitude. It is bounded by the Arabian Sea in the west, by Rajasthan in the north and northeast, by Madhya Pradesh in the east and by Maharashtra in the south and southeast (Figure 3.1). The State has a common border with Pakistan at the north-western fringe. The State has two deserts - one north of Kutch and the other between Kutch and the mainland.

The geographical area of the State is 1.96 lakh sq. kms and accounts for 6.19 percent of the total area of the country. The State has 25 districts, 226 talukas and 18 618 villages and 242 towns.

According to the provisional results of Population Census, 2001, the total population as on 1st March 2001 stood at 5.06 crores. The population density in 2001 was 258 persons per sq. km. The decadal growth rate of 1991-2001 is 22.48 percent.

Figure 3.1 Map of Gujarat showing important salt producing areas

The literacy rate in the State (excluding children in the age group 0-6) increased from 61.29 percent in 1991 to 69.97 percent in 2001. About 37.67 percent population of the State resides in urban areas (excluding earthquake affected areas). Out of the total population of 483.87 lakh (excluding the earthquake affected areas), 203.7 lakh (42.10 %) were workers and 280.2 lakh (57.90 %) were non-workers.

[1] *The comparative figures are derived from the Census data of 2001 wherever available. Otherwise, the 1991 Census data has been used for such comparisons.*

The State income *i.e.* Net State Domestic Product (NSDP) at factor cost (at 1993-94 prices) in 2002-03 was Rs 71 167 crores. At current prices, the NSDP in 2002- 03 was Rs 114 405 crores. The per capita income (*i.e.* per capita NSDP at factor cost) at constant (1993-94) prices was Rs 13 715 in 2002-03 and the per capita income at current prices was Rs 22 047 during the year[2].

The major food crops in the State are rice, wheat, jowar, bajra, maize, tur, gram and groundnut while major non-food crops are cotton and tobacco. In the year 1999-2000, the gross cropped area and net cropped area were reported to be 107.02 lakh ha and 94.99 lakh ha respectively. In the year 1995-96 the average size of land holding was reported to be 2.62 ha. Animal husbandry and dairying have played a vital role in the rural economy of Gujarat. As per the estimates of the survey of major livestock products during the year 2002-03, the production of milk, eggs and wool was 6.09 million tonnes, 385 million and 2.71 million kg respectively.

The important minerals of the State are bauxite, manganese ore, limestone and lignite. As per provisional estimates for the year 2001-02, the value of minerals *viz.* oil and natural gas, major minerals, minor minerals were Rs 4 182 crores, Rs 501 crores and Rs 169 crores respectively. With the largest petro- chemical complex in the country, Gujarat is a major producer of inorganic chemicals such as soda ash and caustic soda as well as chemical fertilizers. Gujarat Industrial Development Corporation (GIDC) has developed around 257 mega industrial estates such as the ones at Jhagadia, Vagra, Savli, Dahej and Anklaseshwar. Jamnagar, Porbandar, Jafrabad, Bhavnagar, etc are important centres of industry and trade.

The total generation of electricity in the State during 2001-02 was 50 069 MKWH, with a per capita consumption of 963 units. All the 17 940 feasible villages out of the total 18 028 villages (as per 1991 census) have been electrified.

The State has a coastline of about 1 600 kms, the longest among all coastal states of the country. There are 40 minor and intermediate ports geographically dispersed across South Gujarat (13 ports), Saurashtra (23 ports) and Kutch region (4 ports). During 2002-2003, the total cargo handled by the major port at Kandla was 406.33 lakh tonnes and the intermediate and minor ports handled a total cargo of 841.24 lakh tonnes respectively.

During 2000-01 there were 14 087 registered working factories in the State providing gainful employment to 7.48 lakh persons. These factories distributed Rs 4 856 crores as labour cost to employees, consumed inputs worth Rs 103 703 crores, produced Rs 128 962 crores worth of goods and services (valued at ex-factory prices) and contributed Rs 19 149 crores to the national income.

The climate is moist in the southern districts and dry in the north. The Arabian Sea and the Gulf of Cambay (or Khambhat) reduce the temperature and render the climate pleasant and healthy. The year can be divided into: winter season from November to February, hot season from March to May, southwest monsoon season from June to September and the intervening month of October.

As the Tropic of Cancer passes through the northern border, Gujarat has an intensely hot, or cold climate. The average rainfall varies from 33 to 152 cms. The southern region of the State has an average rainfall ranging from 76 to 152 cms. The northern districts have a rainfall varying from 51 to 102 cms. The rainfall in the southern highlands of Saurashtra and the Gulf of Cambay is approximately 63 cms while the other parts of Saurashtra have a rainfall of less than 63 cms. The semi-desert area of Kutch has a very low average rainfall. Certain areas in Ahmedabad, Mehsana, Banaskantha, Panchmahals, Surendranagar, Jamnagar and Kutch districts face chronic scarcity conditions for want of adequate rains, creating favourable climate for salt production.

The climate is particularly favourable for salt production with rainfall as low as 50 to 60 cm in the salt producing areas on an average during the monsoon (July to September). The temperature ranges between 25^0 C and 40^0 C in summer and 20^0 C to 35^0 C in the winter months. The relative humidity is in the range of 40 to 55 percent and wind velocity 9 to 10 km/ hour. Along the Saurashtra and Kutch coast, there are many areas with flat impervious clay, most suitable for salt production. The average yield of marine salt is 50 tonnes a year and in the inland salt works with high brine density (12^0 to 18^0 Be) the yield is about 150 tonnes a year.

[2] *Socio-Economic Review, Gujarat State, 2003-04 (p7).*

Study area

The BOBP-IGO study team visited Gujarat during December-January 2004-05 and covered salt producing areas in Jamnagar, Gandhidham, Santalpur, Surendranagar, Rajkot, Bharuch and Bhavnagar. The team interviewed 370 salt workers through structured questionnaires, conducted Participatory Rural Appraisals (PRAs) with salt workers at the community level and had interactions with leaseholders, State Government, Salt Commissioner's Organisation (SCO), corporate houses and other stakeholders related to the industry like traders and NGOs.

Jamnagar is a port city on the Gulf of Kutch, which is an arm of the Arabian Sea. With an average rainfall of 36 cms the climate is highly favourable for salt production. The saltpans mainly belong to category-I units. There are 12 captive units, one export oriented unit and 11 other private units in Jamnagar district. The main producer is TATA Chemicals, Mithapur, which produces around 2 000 ('000 tonnes) a year. Bulk of the salt goes to its caustic soda ash plant at Mithapur, the largest in Asia.

Gandhidham in Kutch district is an important salt producing centre in the State. Major salt producers here are Kutch Salt and Allied Industries and Friends Salt Works and Allied Industries. This area has all types of salt works from category I units to unrecognised units. However, categories II and I form the majority.

Little Rann of Kutch (LRK) comprises Banaskantha, Kutch, Rajkot, Surendranagar and Mahesana districts. Salt works in LRK get brine from the deposits of sub-soil saline water in the LRK desert. The majority of the salt sites are located in areas close to Surendranagar district. Other sites are in Santalpur (Banaskantha district) and a few sites are located in areas near Rajkot district. Almost all salt works in LRK come under category III units or unrecognised sector. There are 50 000 to 60 000 agarias[3] working on the saltpans in the LRK for 7-8 months a year.

Bhavnagar and Bharuch are important salt producing sites in the Gulf of Khambhat, in the south-western part of Gujarat. Nirma Chemicals Ltd, Bhavnagar Salt and Chemical Works are some of the major salt producers in Bhavnagar.

The Salt Industry

The salt industry in Gujarat is a good example of how scale, market and size of operations affect an industry and determine the future of communities associated with it. The industry in the State has grown much faster than those in Rajasthan and Tamil Nadu. Salt production in Gujarat gained momentum in the early fifties, when the Government of India decided to attain self-sufficiency in salt production. Subsequently, new areas were explored and over the years Gujarat has emerged as the leading salt producer in the country.

Gujarat is the only salt producing State, which uses both sea brine and sub-soil brine as the source of production. It accounts for 71 percent of total salt production, making it the country's largest producer. Total production in 2003 for the State stood at 10 585.9 ('000 tonnes)[4]. As per the Annual Report of the SCO for the year 2003, there are 698 recognised units and 2 074 unrecognised units in the State. Of the recognised units, 68.54 percent are marine (sea-based) and 31.46 percent are inland. Of the total unrecognised units, 53.04 percent are marine and 46.96 percent are inland.

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[3] *Agarias are an occupational group of people that represent various castes and religions and are primarily engaged in salt production in the Little Rann of Kutch.*

[4] *Annual Report, Salt Department 2003-04 (annexure 4.2).*

The recognised sector contributed 83.83 percent to the total salt production in Gujarat in 2003 and the remaining 16.17 percent came from the unrecognised sector. The share of the private sector amounted to 74.72 percent during the same year, followed by the co-operative sector (8.46 %) and public sector (0.65 %). There are four export-oriented units, 30 captive units, 111 co-operative societies and two public sector units in the State.

The salt production area under the recognised and unrecognised sectors is 348 829 acres and 14 464 acres respectively. Category I units comprise 93.53 percent of the total area under recognised sector. Of the remaining, 0.41 percent comes under category II and 6.01 percent under category III. As far as production is concerned, category I accounted for 74.75 percent of the total salt production in 2003. The figures for categories II, III and IV were 0.62 percent, 8.46 percent, and 16.17 percent respectively.

Salt units near the coastal areas mainly use sea brine, whereas saltpans in the LRK use only sub-soil saline water as the brine source. Jamnagar and Kutch (Gandhidham, Kandla) mainly fall under categories I and II. In the LRK, majority of the agarias, fall under categories III and IV. Production under category IV is undertaken in collaboration with salt merchants. There are few fully mechanised factories, especially in Jamnagar and Gandhidham areas. While in other salt works, mainly in the larger ones, there is a strong trend of mechanisation in loading and unloading activities. In the case of agarias, mechanisation is limited to use of pumps for drawal of sub-soil brine.

Advantage Gujarat…

Environmental conditions

High tides, large coastal plains, good spread of seawater and plenty of sunshine have rendered large tracts of land with salt encrustations for centuries in the region. In the last two decades, local entrepreneurs have set up large salt farms in the coastal plains. These farms were established close to tidal creeks from where seawater can easily be pumped out and spread over large tracts. Small ports were planned to cater to the export requirements. Coupled with this the corporate establishments also brought thousands of acres of land in the coastal plains under salt production. As salt is an important input for the chemical industry, production has flourished and the State is poised for much larger growth.

Backward integration

There is a strong presence of backward integration in the salt industry in Gujarat. There are 30 captive units, producing salt on 1 10 872 acres. About 40 percent of the total captive units in Gujarat are located in Jamnagar district. The socio-economic conditions of the workers in the captive units are better compared to other salt works. One advantage of the captive units is that they need not worry about the market. Basically, backward integration makes more sense where there is a dependence on critical skills and there are fewer alternatives to supply or deliver the results. Generally, salt- based industries require high quality salt as input. Impurities increase the production cost. Further, seasonal variations in supply have encouraged industries to start their own production units. Thus, backward integration allows industries to reduce dependency on input supplies, which in turn reduces the cost.

Market links

The growth of petro-chemical industries in Gujarat has created a huge demand for industrial grade salt. Most producers can now depend on this steady requirement of the industrial sector. The increasing demand for salt from China (the world's second largest producer) in recent years has also opened new vistas for the industry in the State. With the growing demand for salt (especially the industrial grade) in many other countries, exports are likely to increase, placing additional demand on expansion of area and better quality.

Little Rann of Kutch (LRK)

The desert in LRK has vast deposits of salt. The climate is also highly favourable. With rains restricted to 2-3 months (July-September), the rest of the year is absolutely dry. The high average wind velocity is also a favourable factor. Sub-soil brine is high in density (16^0-18^0 Be) compared to other parts of the State. Badagra quality of salt is mainly produced in this area. It is traditionally produced and consumed and most of the supply goes to Bihar and Uttar Pradesh for edible purpose. Badagra salt is not preferred much for industrial use due to high contents of magnesium (mg) and other impurities.

The Growth of salt industry in Dahej, Bharuch: The salt industry in Bharuch is developed on inland brine in Dahej and Gandhar villages of Wargha *taluka* of Bharuch. It has flourished since the early 1990s after the installation of IPCL and other chemical factories in Bharuch. The average demand of industrial salt per year of these factories is over 9 lakh tonnes, and the average annual capacity of the salt industry in the area is
6 to 7 lakh tonnes.

The salt farms are situated in 15 to 20 km radius of the industries. As a result the transportation costs are very low. However, there is a shortage of local labour for the industry. The petro-chemical industry can consume more than the total salt produced in Dahej in a normal year. For salt firms of Bharuch the demand for salt is steady and supply cost is low. Moreover, as price of salt is fixed in the beginning of the season through tenders, it is immune to supply shocks, which is a rare phenomenon in the salt market. Earlier salt firms in Bhavnagar used to supply salt to factories in Bharuch. They now supply if only there is a shortage in the requirement of salt by the petro-chemical industry. The transportation cost factor and demand have both played a positive role in Bharuch in the growth of the industry.

Bottlenecks

The salt industry has recorded a rapid growth in Gujarat. However, the full potential of the industry is yet to be realised. Factors such as lack of infrastructure, transportation and market are crucial factors in limiting the production potential of the industry in the State.

The road and rail facilities need improvement in Bharuch, Bhavnagar and in most of the major salt producing areas in the LRK. While export has picked up, port facilities exist only at Kandla. Development of other ports will allow producers to access a much larger export market. Power constitutes a major input in the total cost of production and the medium and small units suffer because of high power tariffs. Producers have also to provide water to the labourers through tankers at the work place.

According to leaseholders, in the Rail Budget 2003, freight for salt was increased by 135 percent. This increase adversely affected the salt industry resulting in closure of many manufacturing units. Many more are now facing closure.

The rail freight is a decisive factor in pricing the salt produced in different locations. Due to the increase in tariff, salt producers in areas like Tuticorin in Tamil Nadu and Nagore in Rajasthan have an advantage as they have secured buyers in nearby areas compared to Gujarat where markets remain to be far away from the production centres. Hence, their market rates are cheaper than salt produced in Gujarat. Even in case of transporting salt to Assam and West Bengal, producers in Rajasthan have to pay the Railways only half of what Gujarat producers have to pay. Therefore, salt producers in Gujarat, especially in Kutch are bearing losses. The introduction of wagon quota system by the Railways is an added burden. Transportation by road is costly, for a truck can carry only 11-12 tonnes of salt.

Infrastructure

The present status of infrastructure in the LRK is very poor. Road facilities are limited and a large part of the area is inaccessible. This has restricted the growth of the industry and also the participation of the corporate sector in modernisation of salt units. Better facilities will encourage the entry of the larger corporate houses. Agarias, who are small farmers and leaseholders, have to bear heavy cost of production due to the use of diesel in pumping sub-soil brine. Provision of electricity in the region can make production cost-effective.

The salt industry can play a very important role in LRK to generate rural employment. However, this area lacks infrastructure and suitable technologies for production. Underdeveloped marketing channels and lack

of awareness among the agarias also hampers the growth of the industry. Greater attention is needed in the following areas to increase production of salt and improve the quality of life of the agarias.

Marketing

Traditionally, middlemen have been playing an important role in the life of the agarias. The middlemen procure salt from the agarias mostly at pre-fixed rates or at prices mutually decided. The middlemen make a hefty profit and take advantage of the situation to a great extent. The Government should conduct a feasibility study to establish the optimum availability of resources for salt production in LRK and the forward and backward linkages for sustaining the production and thereby improving the socio-economic status of the agarias. A proper institutional set-up is also needed to correct the distortions created by the middlemen.

Technology (know-how)

The agarias own small plots and use traditional equipment and methods of salt production. Their methods of preparing the reservoirs, depth and quality of floor of crystallisers, ratio of reservoirs: condensers: crystallisers (so that quality and quantity of production can be maximised), etc is still traditional and does not bring the best output. The Central Salt and Marine Chemicals Research Institute (CSMCRI), Bhavnagar has done considerable research on the methodology of salt production. However, this technology has not reached the agarias in the LRK. Advancements in production technology need to be popularised and the agarias should be encouraged to adopt these new developments. Some pilot-scale demonstrations in the LRK will help in early adoption of cost-effective technologies. As an incentive for adoption, the SCO may also consider implementation of a pilot scheme in the LRK for the socio-economic upliftment of the agarias.

The Salt Workers

Gujarat employs the largest number of salt workers on an average per day among the salt producing states. There is no reliable estimate on the number of salt workers in Gujarat. However, according to the data available from the SCO, the industry employs over 50 000 workers per day in the salt industry. Even a conservative estimate based on this figure indicates that at least about 2 lakh[5] people are dependent directly or indirectly on the salt industry for their livelihood.

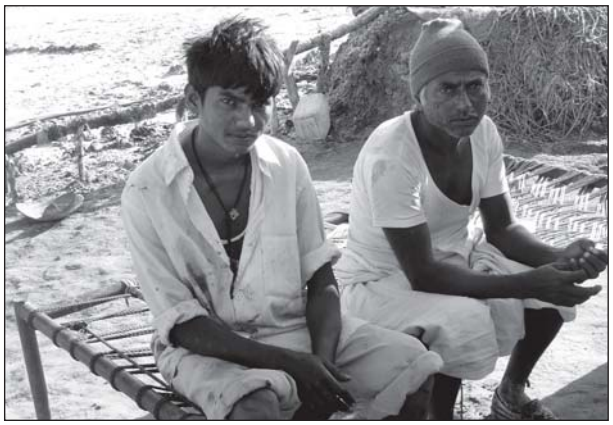
The salt worker community in Gujarat can broadly be classified as agarias, the traditional salt workers and others. The others category includes the larger section of workers who have been drawn to salt production from the agriculture sector.

The livelihood and employment situation of the workers is a function of the location of saltpan and the category. The status of labourers in category I units in Gujarat is far better than their counterparts in categories II, III and IV. In the State, leaseholders in category I and to some extent in category II, generally provide their workers with semi-pucca or pucca houses, drinking water, free electricity and wood for cooking during their stay at the production sites. In category II and III units, payment is on no-work-no-pay basis. The corporate establishments in the State provide leave as per the Labour Act. The labourers get protective gear like gumboots, goggles and caps (the details on gear/equipment is given later in this chapter).

[5] *Assuming a family size of five.*

The agarias are a collection of small leaseholder, sub-leaseholder and workers. Though status-wise they may be better, economically even leaseholder agarias are poorer than a worker in a category I salt firm. The adverse production conditions are largely responsible for this situation.

Agarias spend most of the time *i.e.* 8-10 months in the desert of LRK devoid of any infrastructure for housing, health, education and drinking water. Moreover, exploitation by moneylenders and traders make their situation worse. The low rainfall conditions in the region with meagre irrigation facility limits the scope of agriculture-based livelihood. Around 15 percent of the salt workers' population has agriculture land in the State. Drought, cyclone and earthquake pose continuous threat to the life of poor and marginalized communities in the LRK region. Development in transportation and communication has increased labour mobility in the region. Thus, workers from Santalpur, Surendranagar and other parts of the State migrate to Kutch and Jamnagar districts.



Generally, small salt farmers/agarias produce salt for traders by receiving credit for production. Very few agarias produce salt on their own and sell it in the open market. Paucity of working capital makes them dependent on the traders.

The wage rate system in LRK is different from that prevailing in Jamnagar and Gandhidham areas and the three commonly used payment systems that exist in LRK are described below:

1. **Contract system**: A mutual contract is drawn up between the leaseholder/ trader and the agaria under which the former pre-fixes the price of salt produced. Generally, it varies between Rs 60 and 70 per tonne. The agaria bears the total cost of production (expenditure on diesel, labour wages, etc.) The leaseholder/ trader pays in monthly instalments depending on the number of family members hired. At the end of the season, these instalments are adjusted against the total payment.
2. **Salary basis:** The leaseholder appoints a family of agaria to produce salt based on payment of a fixed amount every month, which generally ranges from Rs 2 000 to 3 000. The leaseholder meets the entire cost of production. The salary varies according to the type of work (example: at the time of harvesting the salary is much higher than during the rest of the season).
3. **Worker-cum-contract**: The leaseholder engages agarias as labour and the entire cost of production is borne by the leaseholder. This includes the expenditure on diesel, drinking water, maintenance of engine and pumps and other temporary labour costs. The labour generally gets Rs 10-15 per tonne under this system.

Human capital

Demography

People belonging to economically backward communities such as Kolis (Scheduled Tribes (ST) in Kutch and Scheduled Castes (SC) in the rest of Gujarat (RoG) and Dalits (SC) are primarily engaged in salt production. Other backward castes/ communities (OBCs) like Vaghris, Bharwads, Rabaris, Sipahis and Muslims are also hired in allied activities like transport, loading and unloading and packing. The demographic composition of backward classes in salt works is given in Figure 3.1.1.

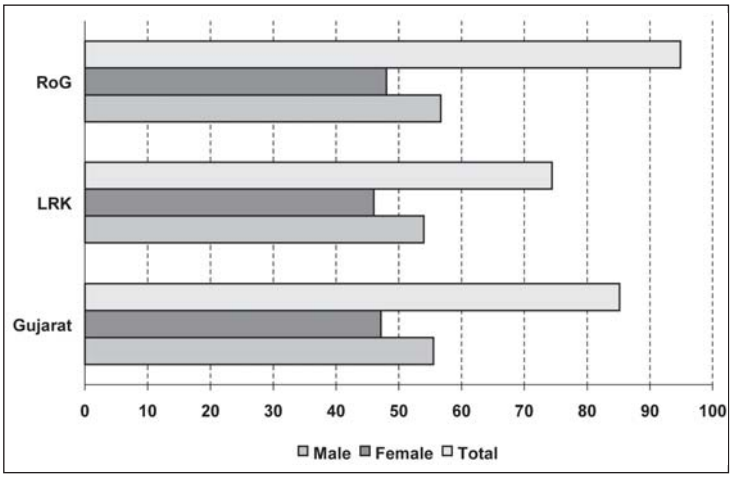


Figure 3.1.1 Demographic composition of backward classes (%)

Agarias in LRK consist of Kolis (60%) and Muslims (35%). The rest belong to Rajput and Vendur communities. However, these saltpans are mostly owned by the Barbas, a higher caste community.

Gujarat has the highest number of migrant workers (37.85 %) compared to other salt producing states. Most of these workers are from different parts of the State (mainly from adjoining districts), Bihar and Madhya Pradesh and many belong to the tribal and OBC communities. The proportion of migratory population is less in LRK than in rest of the State (Figure 3.1.2). This is largely attributed to its far-flung location and adverse working conditions. Agarias dominate the worker population in the LRK saltpans.

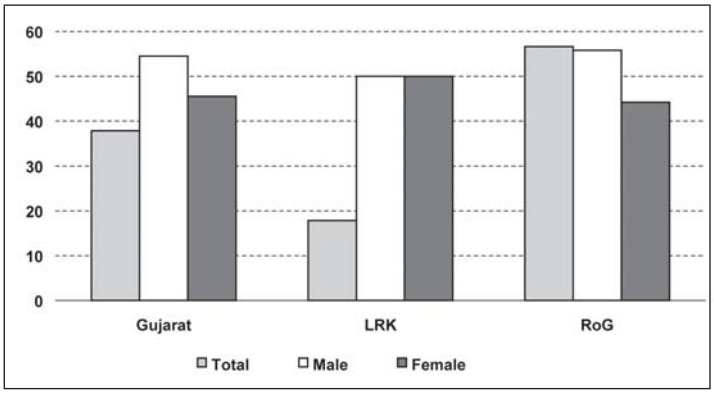


Figure 3.1.2 Demographic composition of migrated population (%)

Out of total migration, 4.92 percent is inter-state; the workers are mostly from Madhya Pradesh, Bihar and some from Chattisgarh. The remaining migration is from within the State.

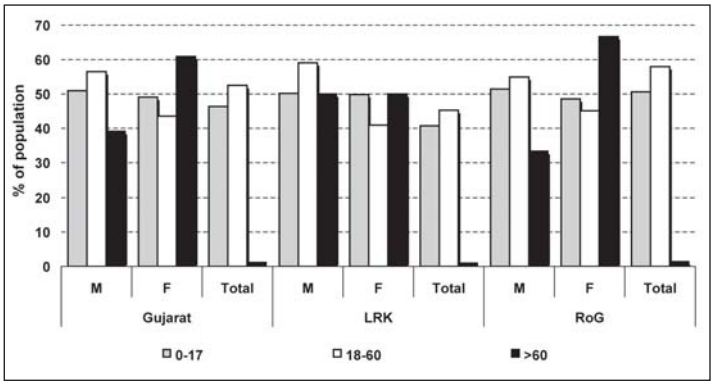


Figure 3.1.3 Age-wise distribution of salt workers (%)

Age composition

More than half of the population is in the 18–60 years age group. The number of people above 60 years of age is only 1.18 percent. Corresponding figures of rural population of 60 years and above in Gujarat is 7.3 percent[6]. It indicates a low life expectancy for salt workers. Malnutrition as a result of their poverty and various types of addiction may be a cause for this. In case of agarias, the situation is worse (population of 60 years and above is 0.95 %) (Figure 3.1.3). Agarias are more susceptible to addiction than their counterparts in RoG, since the former spend most of their lives in harsh and tough environs of the desert. Due to occupational health hazards and liquor addiction, the life expectancy of male agarias is generally less than their female counterpart[7]. In case of widow of agaria, life becomes miserable as she has to depend on relatives for her livelihood.

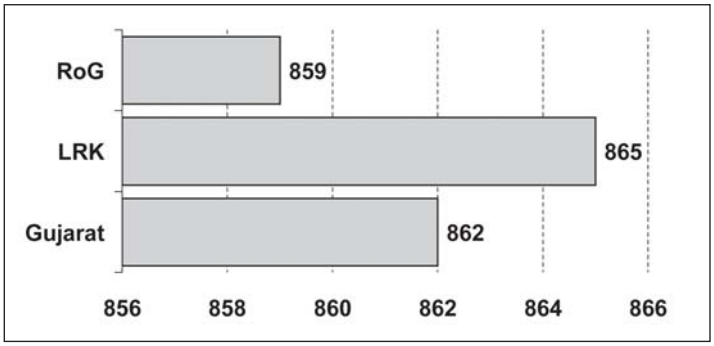


Figure 3.1.4 Sex ratio of salt worker population

The pattern of age distribution for LRK and the rest of Gujarat is similar to the age distribution profile of the State as a whole. The median age of the salt workers' population in Gujarat is estimated at 19 years, which implies that half of the workers are less than 19 years. The sex ratio is 862 (Figure 3.1.4), which is the lowest as compared to other salt producing states. It is also very low compared to the corresponding sex ratio (946)[8] for the rural population in Gujarat.

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[6] *Source: Census of India, 1991 (Data was not available for same variable in the provisional reports of 2001 Census).*

[7] *During the study team's visit to Kharaghoda, the accompanying salt official mentioned about a report in a local newspaper that published a photo showing hundreds of widows from salt workers villages in and around Kharaghoda.*

[8] *National Human Development Report, 2001.*

The average family size of the salt workers in the State as a whole is estimated at 5.25. In the LRK areas, it is estimated at 5.33 and for RoG the average family size is 5.19. The average family size of salt workers is comparable with the average family size (5.63) of the rural population in Gujarat.

Education

The salt workers of Gujarat are not as literate as those in other salt producing states. The literacy rate is low in the State, just 21.79 percent, of which the male population constitutes 71.27 percent and the percentage of females comprise 28.63 percent. The literacy among female population is a meagre 13.88 percent and among males 28.30 percent. The study also showed that out of total literate population for the State as a whole the population at literacy level is estimated at 44.23 percent. Population at middle class level is estimated at 47.61 percent and at tenth class level it is estimated at 8.17 percent. A somewhat similar trend could be seen for the LRK areas and the RoG (Figure 3.1.5).

One reason for the low literacy rate could be the relatively large proportion of migrant population. The children miss school as they live in the saltpans during the production season with their parents. They generally help their parents in household chores. Occasionally, they also help in salt works like preparation of bed, etc.

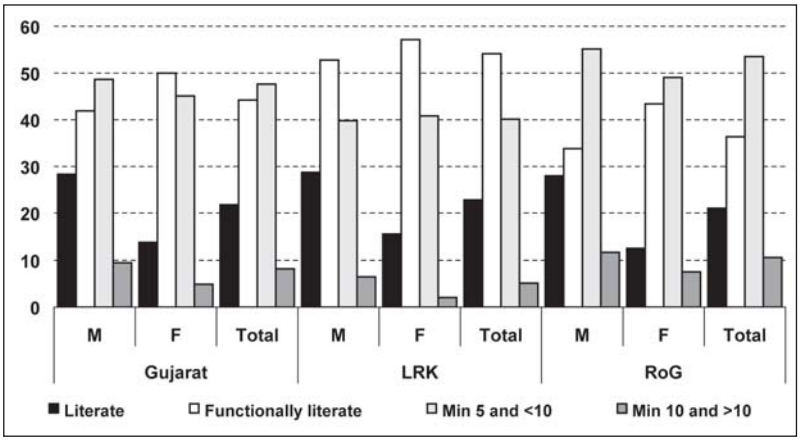

Figure 3.1.5 Education profile of salt workers (%)

The children of agarias start their life in remote areas and face problems like malnutrition. Devoid of child rights and heavy demand in salt work, these children are mostly ignored. Recently, some NGOs like GANATAR and SEWA and the State Government have put in good efforts to make education more accessible to children of salt workers. Innovative ideas like Alternative Learning Schools (ALS) and child care centres are being implemented. All these efforts need to expand in future on large-scale, to ensure a complete coverage of children of the salt workers.

In the present circumstances the agarias are not very keen on educating their children. They are uncertain about returns from educating their children, as labour services are the only major asset for them. However, trends are now changing. The SCO is also playing an important role in infrastructure development by providing financial assistance for such activities. Some efforts are also being made to scale-up education related activities through joint efforts of the State Government and the NGOs.

Children Reward Scheme (CRS)

Salt workers, in general, do not seem to be aware of the CRS (Table 3.1.1). This is attributed to the low literacy rate and high dropouts. The CRS is more than 10 years old now. Sadly, the Scheme has not been popularised adequately amongst the target audience, and hence there is greater need to

Table 3.1.1 Awareness on CRS

CRS	Gujarat	Little Rann of Kutch	Rest of Gujarat
Salt workers aware of CRS (%)	1.89	3.16	0.94

promote awareness about the Scheme using a combination of cost-effective approaches. Table 3.1.2 summarises the response from the workers to make the scheme more effective.

Table 3.1.2 Suggestions for better implementation of CRS

Suggestions (Figures are in %)	**Gujarat**
Arrangement of awareness camps by the SCO	33.63
Intimation from Leaseholder/ Labour Contractor	32.16
Effective media campaign	5.56
Inclusion of Trade Unions in implementation of the Scheme	6.14
Inclusion of NGOs in implementation of the Scheme	12.28
Assigning the Scheme to Panchayat	8.77
Other suggestions	1.46

Health

Considering the tough weather and working conditions, health facilities are very essential in the LRK region. About 97 percent of the salt workers throughout the State perceive that they are in good health or do not suffer from major illness. However, they suffer from skin diseases, eye irritation and malnutrition. In the LRK areas, besides eye and skin problems, the workers usually suffer from malaria and malnutrition, as basic health amenities are grossly inadequate. With respect to vaccination, the position is good and about 80.13 percent of the population is vaccinated[9] . The awareness on HIV/ AIDS is generally low, probably because of the inhibition to discuss sex-related issues, especially by the womenfolk.

Statistics on alcohol consumption is highly underestimated, for most workers were shy to talk about this habit. Tobacco consumption is very common and eight out of every 10 worker consumes tobacco. In the LRK saltpans, virtually no salt worker practises family planning. Table 3.1.3 gives a summary of the various aspects of health of the salt workers in Gujarat.

Because of their nomadic way of life, the salt workers in the LRK are also deprived of *anganwadi* facilities, including nutrition for pregnant and lactating mothers. Their daily diet does not include essentials, like green vegetables, milk and fruit. As they are in remote areas for eight months of the year, even getting daily rations is difficult because they can go to the market only after sunset and in the villages not many shops are open after sunset.

Table 3.1.3 State of health of salt workers in Gujarat

State of health (Figures are in %)	**Gujarat**	**Little Rann of Kutch**	**Rest of Gujarat**
Workers perceived their health is good	97.24	97.57	97.00
Suffering from chronic illnesses	2.76	2.31	3.10
Complete any or all vaccination programme	80.13	75.27	86.67
Couple protection rate	9.54	–	–
Awareness about AIDS/HIV infection	25.00	28.42	23.38
Consume alcohol	5.14	6.12	3.90
Consume tobacco	78.36	77.14	80
Consume both tobacco and alcohol	3.43	4.62	1.94

Aspiration

The study shows that 52.43 percent of the working population in the saltpans is dissatisfied with life and 58.38 percent workers think that there will be no change in the living conditions even for their children; in fact, they fear it may even become worse.

Physical Capital

Housing and amenities

Around 50.67 percent of the workers own houses in the State. This percentage is high (84.77 %) in the case of LRK as compared to the rest of the State (Figure 3.1.6). Of the remaining, 34 percent have houses given under Government schemes or they may have received assistance from an international/ domestic social/

[9] *Here vaccinated population includes those who have completed at least one vaccination viz. Polio, Measles, BCG, DTP, Hepatitis A, Hepatitis B, Hepatitis C, etc.*

welfare agency (for example the International Organisation of Migration (IOM) constructed houses in Gandhidham after the 2001 earthquake). On an average, 45.63 percent of the workers stay in *katcha* houses and 26.20 percent in *semi-pucca* houses. The access to electricity is fairly high (59.03 %) in Gujarat as compared to other salt producing states. The figure is also high compared to the general figure of rural population having access to electricity (56.40 %)[10] in Gujarat.

The study shows that only 21.29 percent of the population has access to toilet facility at the dwelling place. However, in the LRK areas, there are no toilets at the work place for agarias. One reason of this low level of toilet facility is both the leaseholder and the workers are under the impression that the workers are not comfortable with modern toilet facility!

The availability of fair[11] drinking water is good in the State (93.83 % for the State as a whole; Figure 3.1.7). Agarias mainly get their water by tankers for which they pay at the end of the year. The SCO has also provided tanks at various places, including areas in the LRK. There have been some efforts from Government agencies to supply safe drinking water to agarias in the LRK through pipeline. The pipeline constructed in Santalpur in the LRK through a joint venture of the State Government and the Gujarat Water Supply and Sewage Board (GWSSB) is now functional.

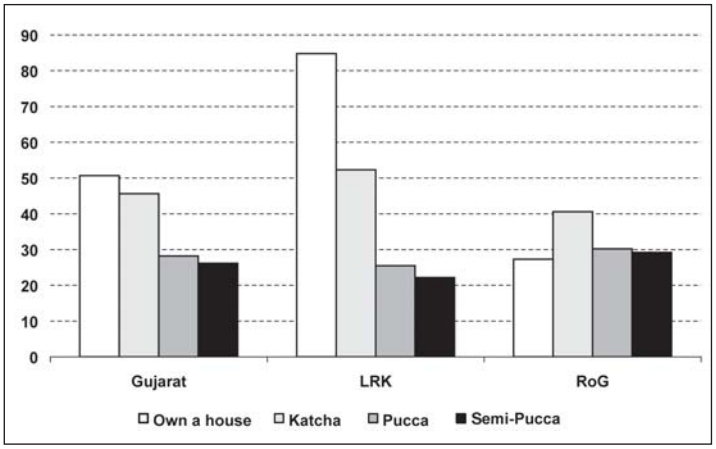

Figure 3.1.6 Housing condition (%)

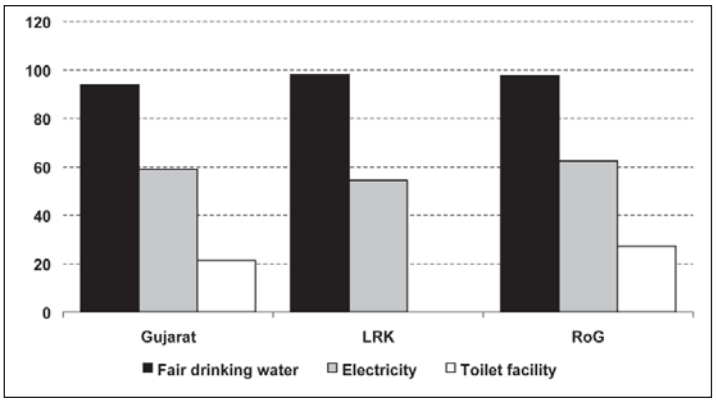

Figure 3.1.7 Amenities at the dwelling place (%)

Namak Mazdoor Awaas Yojana (NMAY)

Awareness about the NMAY among the salt workers in Gujarat is significantly low (Table 3.1.4) and those who have applied for the benefits of the Scheme in the State are mostly not aware of the guidelines of the Scheme (*e.g.* the place where the house can be built, contribution of the worker in the total expenditure, etc.)

Table 3.1.4 Awareness about NMAY

NMAY	Gujarat	Little Rann of Kutch	Rest of Gujarat
Workers aware of the Scheme (%)	6.67	14.57	0.96

Based on the feedback received during the study, it can be suggested that the salt workers, in general, would prefer a house on their own land in the village. This would give them a sense of ownership and a permanent shelter. The NMAY will surely improve the living conditions of salt workers in the country, if it is properly implemented. To popularise the Scheme, awareness programmes need to be given more thrust. The involvement of the salt workers at all stages will yield good results in implementation of the Scheme. A more detailed critique on the NMAY is presented in chapter 4.0 of this report.

When workers were asked about their opinion on how to make the Scheme more effective, a number of responses were received. These are summarised in Table 3.1.5.

[10] *Source: Census of India, 1991. Data for 2001 Census is not available.*

[11] *The word " fair" in the above text denotes that the water provided to salt workers is from safe source such as public water pipeline or protected well or any natural or artificial storage of safe water.*

Transport and communication

Around 55 percent of the workers can access a telephone booth within 15 minutes or one kilometre from their dwelling units (Table 3.1.6). Nearly 35 percent of the workers have to walk more than 15 minutes for a telephone, 10 percent do not have access to telephones. Most workers have to walk 36 minutes to access the nearest bus stop from their house. In the LRK saltpans, though nobody has telephone facility inside the house, most of the workers can access a telephone booth within 15 minute or 1 km from their dwelling unit.

It is the same case for going to market. About 51 percent can access a market within five km, the rest have to go further. About 42 percent households own a radio and 24 percent a television set. The trends for LRK and the rest of Gujarat are almost similar.

Table 3.1.5 Suggestions for better implementation of NMAY

Suggestions (Figures are in %)	**Gujarat**
Arrangement of awareness camps by the SCO	32.56
Intimation from Leaseholder/ Labour Contractor	31.12
Effective media campaign	6.92
Inclusion of Trade Unions in implementation of the Scheme	6.63
Inclusion of NGOs in implementation of the Scheme	14.70
Assigning the Scheme to Panchayet	6.92
Other suggestions	1.15

Table 3.1.6 Communication facilities

Communication infrastructure (Figures are in %)	**Gujarat**	**Little Rann of Kutch**	**Rest of Gujarat**
Population can access telephone within:			
Inside Dwelling	0.55	0.00	0.55
<15 minutes	55.07	54.14	56.31
> 15 minutes	34.79	33.12	36.41
Not accessible	9.59	12.74	7.28
Mean time needed to travel to nearest bus stop in minutes	36.46	49.41	26.82
Nearest local market:			
< 5 km	50.97	58.28	45.71
> 5 km	49.03	41.72	54.29
Households having radio	42.38	47.13	38.73
Households having television	24.10	19.11	27.94

Health and education infrastructure

The study showed that the mean distance between a worker's dwelling and school is 4.72 km in Gujarat, which means the children have to travel up to 10 km everyday. The mean distance between dwelling and school in the LRK areas is still higher and is estimated at 5.68 km.

Around 40 percent salt workers have to travel for two to six hours for reaching a hospital. In the LRK area 25 percent of the workers have to travel 2-4 hours to avail hospital facility and about 40.63 percent have to travel less than 2 hours to avail hospital facility.

There are 21 Comprehensive Health Care Units (CHCUs) or mobile medical vans; they cover almost every part of the LRK region. In each van, there is a medical doctor, multi-purpose health worker and medicines. All these vans are run by the State's Health Department. The Department has identified clusters of salt workers and a medical van visits these clusters once a week.

The mobile medical vans provide preventive health care services such as immunization, antenatal check up and health education. Serious cases are referred to the closest Community Health Centres (CHCs) or the Civil Hospital. SEWA and Bhansali Trust are having one mobile medical van each and SEWA is also operating 35 childcare centres in the LRK area.

The SCO also organises a medical camp for salt workers once a year in which health guidance and services are provided. Some of the salt associations have provided ambulances for emergency cases.

Financial capital

Working Conditions

A typical salt worker in Gujarat works for 215 days a year, 8 to 10 hours a day and earns Rs 60 to 100 per day. The study showed that about 68.93 percent of the workers wear goggles/ gumboots (Figure 3.1.8). In category I units, the use of gumboots and goggles was more conspicuous. In the LRK saltpans, though equipment was provided, agarias seemed uncomfortable working with such gear/ equipment. Some enterprising workers wore socks re-enforced with a piece of tyre as a sole instead of gumboots. They said this contraption made movement easy.

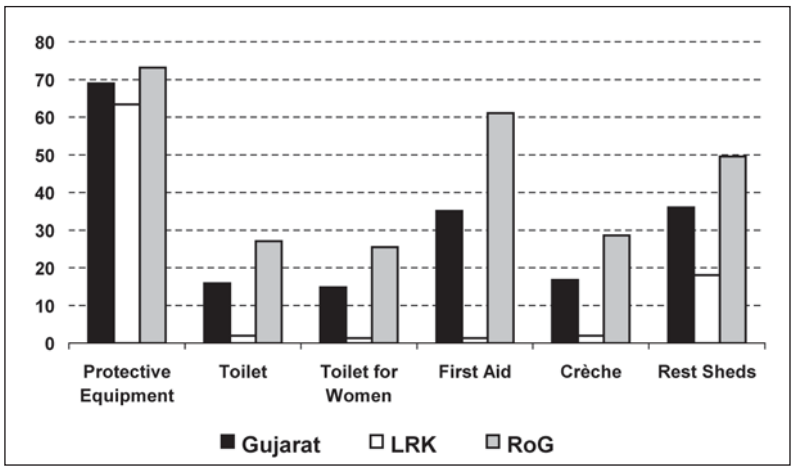

Figure 3.1.8 Salt workers with amenities at the workplace (%)

Rest sheds are available to 36.01 percent of the workers at the work place. Other facilities like sanitation are poor. Water supply is through tankers. The workers rarely enjoy benefits like paid holidays or maternity benefits.

The majority of the workers, however, feel more or less secure. About 84.70 percent think that they will be re-employed in the same saltpan/ firm in the next season (Table 3.1.7). About seven percent face lay off or replacement during a production season. There are also some cases of seeking favour by hierarchy/ co-workers. The study showed that three out of every 100 workers face this problem. Most of them do get payment regularly. A small number of salt workers (3.0 %) are not getting their payment regularly.

Table 3.1.7 Job security - A perception

	Gujarat	Little Rann of Kutch	Rest of Gujarat
Security of employment in the next season (%)	84.70	85.53	86.12

Income and employment

The per capita monthly income (PCMI) from all sources of a salt worker in Gujarat is estimated at Rs 677.73, which is the second highest among salt producing states in the country (after Maharashtra). However, in the LRK areas, the PCMI from all sources of a salt worker is Rs 291.38, which is low compared to the rest of the State (973.73). This implies that the distribution of income is highly skewed in Gujarat. Workers in Jamnagar and Bhavnagar earn Rs 80 to 100 a day. Table 3.1.8 summarises the information.

The incidence of poverty is quite high. As per the headcount method, 26.83 percent of the workers are below poverty line. This is higher than the corresponding figure of rural poverty ratio in Gujarat (12.40 %). In the LRK area, 58.71 percent workers are below the poverty line, significantly high compared to the RoG (3.74 %). This shows that the agarias are poorer than their counterparts in the RoG.

Salt workers in the State are mostly jobless during off-season; only 36.20 percent get some secondary occupation. The agarias are better off and 49.47 percent workers have secondary occupation, which is mainly agriculture. But, their practices are highly vulnerable to monsoon irregularities. In the off-season women get engaged in agriculture or charcoal making activities.

The salt workers also have to face frictional unemployment, which is more in the case of agarias. Nearly 10 percent of the population remains unemployed in weekly status. Only 23.18 percent of workers saved money during the last year (2003-04); the saving habit is irregular. During the last five years (1999 –2004), only 21.29 percent of the workers saved money. Those who did save during 2003-04 were 8.92 percent and

34.33 percent for LRK and RoG respectively. Workers who managed to save for last five years (2000-2004) were 7.05 and 32.34 for LRK and RoG respectively.

Table 3.1.8 Income and employment

Parameters (Figures are in % unless specified)	Gujarat	Little Rann of Kutch	Rest of Gujarat
PCMI for 2003-04 (in Rs)	677.73	291.38	973.73
Population below poverty line	26.83	58.71	3.74
Having secondary occupation	36.20	49.47	26.50
Unemployed in current weekly status in the age group 18-59	9.90	18.54	5.66
Population managed to save in 2003-04	23.18	8.92	34.33
Population managed to save in five years (1999-2004)	21.29	7.05	32.34
Average debt (in Rs)	12 265.60	12 052.08	12 972.41
Workers below 18 years of age	5.18	8.52	3.20

The study showed that 5.18 percent of the workers engaged in salt production are below 18 years of age[12] for the State as a whole and 8.52 percent for LRK region. Most of the children share the burden of their parents in the household activities to set the parent free for long hours in the salt work. However, a section of these children, especially between ages 14 to 18 years work themselves as salt workers. These workers are mainly from child-headed families of salt workers. Ill health of the family head also pushes the elder children of the family to join salt work early. In the case of agarias who work exclusively on saltpans with their families, the children help their parents in all sorts of household chores - washing, cleaning, baby-sitting, and also minor tasks in the saltpans.

Workforce composition

The workforce composition varies as per the requirements in the production process. Scrapping workers are mostly males while female workers are engaged in carrying of salt. Incidence of female worker is more in below 18 years age group. Table 3.1.9 summarises the information.

Table 3.1.9 Workforce composition

Age group	Male	Female
Below 18 years	59.38	40.63
Above 18 years	62.09	37.91
Total	61.88	38.12

Natural capital

Fuel

Wood is the most common source of fuel. At times the owner supplies the wood. However, in most cases the workers collect wood on their off days. In the LRK region, the common source is *Prosposis juliflora* – a fast growing species abundant in the region.

Agriculture land

Only 15.36 percent of the salt workers have agricultural land and the average size of the holding is 6.53 acres (Table 3.1.10). However, production is not enough to maintain the family even for six months. The socio-cultural value of agricultural land is quite high and in times of need, it helps the families get a loan. In the LRK region 14.56 percent workers own land, with an average holding of 7 acres.

[12] *However, while dealing with child worker, one must bear in mind that composition of workforce in pre-scrapping season and scrapping season varies considerably. The labourers below 18 years of age are engaged mainly at the preparatory stage and later on for packaging of salt bags and loading activities. As the survey was carried out during December 2004 to March 2005, starting from Rajasthan and concluding in West Bengal, the season changed from pre-scrapping to scrapping in different states. Therefore, figures for below 18 years labourers should be best treated as indicative in conjunction with family size and educational scenario.*

Table 3.1.10 Use of natural resources

Natural resources (Figures are in %)	Gujarat	Little Rann of Kutch	Rest of Gujarat
Households using wood as source of fuel	97.56	100.00	95.73
Households having agricultural land	15.36	14.56	15.96
Average holding in acre	6.53	7.00	6.21

Social capital

The industry in Gujarat, like elsewhere in the country, is marked by negligible presence of registered trade unions. Community bondage and affinity act as an informal union. Over 90 percent of the households regularly discuss their professional problems with others and 67.12 percent households discuss their personal problems.

Most of the salt workers (87.02 %) think that they and their neighbours are in the same situation. The workers (98.38 %) also think their co-workers are co-operative. Only 1.62 percent of workers reported exploitation by hierarchy/ co-workers. In the LRK region this exploitation is negligible (0.63 %).

Most of the family members (90.57 %) participate in community meetings to solve their problems. Bonds and affinity are limited to searching for a new job or gathering information about the employer. Hence, these informal unions do not have adequate bargaining power to deal with the issues of wages, amenities and security.

Though, 63.40 percent of the workers think that they should organise to get their demands, only 8.33 percent have ever approached the trade unions to solve their problem (Table 3.1.11). Only 4.40 percent of the population is a member of any trade union. This low membership may be because most of the workers do not think that trade unions can solve their problems.

Table 3.1.11 Role of Trade Unions

Perception/Interaction (Figures are in %)	Gujarat	Little Rann of Kutch	Rest of Gujarat
Workers think they should organise	63.40	76.67	57.46
Workers member of any trade union	4.40	0.00	4.40
Workers approach trade unions to solve their problems	8.33	2.17	11.41
Workers expect trade unions to solve their problems	0.00	0.00	0.00

In the LRK region only 2.17 percent of the population has ever approached the trade unions to solve their disputes and nobody claims affiliation to any union. Most of the workers (74.85 %) believe that only Government can solve their problems (Table 3.1.12) and 11 percent consider SCO as the appropriate institution to address their problems.

Table 3.1.12 Expectations from institutions

Agencies (Figures are in %)	Gujarat	Little Rann of Kutch	Rest of Gujarat
SCO	10.82	11.18	10.55
Ministry/Department of Labour	2.05	1.40	2.51
Government (nearest)	74.85	83.22	68.84
Leaseholders/Entrepreneurs	5.56	2.80	7.54
NGOs	4.09	0.70	6.54
Solve their problem themselves	2.63	0.70	4.02

3.2 Tamil Nadu

Introduction

Tamil Nadu is situated on the southeast coast of India, on the Bay of Bengal between 8.5' N to 13.35' N latitude and 76.15' E to 80.20' E longitude. The State, formerly known as Madras State, has boundaries with Karnataka and Andhra Pradesh on the north and northwest and with Kerala on the west. Two conclaves of the Union Territory of Pondicherry (Pondicherry and Karaikal) lie within the State (Figure 3.2). Tamil Nadu has an area of 130 058 sq. km (50 216 sq miles). The Western Ghats run along the western part of the State, with steep and rugged hills averaging 1 220 metres above the sea level and rising to 2 440 metres at the highest point. Bounded by the Eastern Ghats in the north and Nilgiris and Anai Malai Hills on the west, the State has large fertile areas along the Coromandel Coast, the Palk Straits and the Gulf of Mannar. Agriculture is the chief occupation. All the 13 coastal districts of Tamil Nadu suffered massive destruction and loss of life due to tsunami on 26 December 2004.

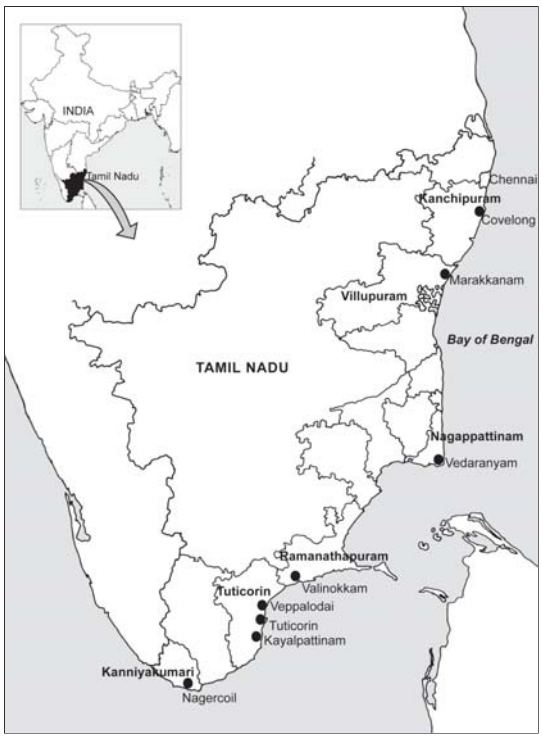

Figure 3.2 Map of Tamil Nadu showing important salt producing areas

The total population of the State stood at 62 110 839 as per the provisional results of the Census of India 2001, making Tamil Nadu the sixth highest populated state in the country. The decadal growth rate of population during 1991-2001 in Tamil Nadu stood at 11.19 percent and the sex ratio improved from 974 in the previous census to 986 in the 2001 census. The literacy rate has shown remarkable improvement- from 62.66 percent to 73.47 percent in ten years (1991-2001). However, there is gender disparity in the literacy rates with male literacy rate at 82.33 and female literacy rate at 64.55. The corresponding national averages are 75.85 percent and 54.16 percent respectively[13].

The GSDP at constant (1993-94) prices, which was at Rs 70 439 crores in 1996-97, has increased to Rs 91 841 crores in 2001-2002 (AE) registering an annual average growth of 5.46 percent. During this period, the primary sector consisting of agriculture and allied activities, forestry, fishing and mining and quarrying registered an annual average increase of 2.28 percent. The secondary sector consisting of manufacturing, construction, electricity, gas and water supply has recorded an annual average growth of 4.71 percent during the corresponding period. Tamil Nadu's per capita income during 1999-2000 stood at Rs 19 141 at current prices and Rs 12 504 at 1993-94 prices. These are significantly higher than the respective national per capita income of Rs 16 047 and Rs 10 204[14].

The major food crops of the State are rice, jowar, ragi, bajra, maize, and pulses. Cotton, sugarcane, coconut, tea and coffee as well as a number of horticultural products like bananas and mangoes are cash crops, while groundnuts, sesame, sunflower are important oilseed crops. The main sources of irrigation are rivers, tanks and wells. Reduction in the availability of water in the river Cauvery has impacted agriculture in the deltaic area.

Industrially, the State has made rapid strides and there has been a great deal of diversification, although traditional industries like hides and skins which have a major export potential, continue to occupy an important place. Besides, the State exports seafood, tea, coffee, spices, textiles and yarn engineering goods, black granite and other products including handicraft articles. Handloom is very important as a cottage industry. Tamil Nadu silk sarees are famous all over India. Cottage units produce cotton sarees, dhoties, towels and lungies.

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[13] *Tamil Nadu – An Economic Appraisal 1999-2000 (Chap. Population Dynamics) (p204).*

[14] *Tamil Nadu – An Economic Appraisal 1999-2000 (Chap. State Income) (p9).*

Tamil Nadu has a tropical climate, unlike most other parts of the country. The rainfall is largely from the northeast monsoon, October-December and April and May are the hottest months with temperature above 40° C. Coastal regions get uncomfortably warm and humid during these months. A mild winter falls between November and February. The average annual rainfall, ranges between 25 and 75 inches (635 and 1 905 mm) a year. Highest precipitation occurs in the Nilgiris and other hill areas with the least in Ramanathapuram and Tirunelveli districts.

The average annual rainfall in salt producing areas is 50 to 60 cms. Air temperature is 30^0 C to 40^0 C in summer and 25^0 C to 35^0 C in winter. The climate is quite suitable for the manufacture of salt by solar evaporation, though there are two rainfall seasons. The rich sub-soil brine in Tuticorin area also makes salt production a lucrative activity. However, the quality of salt does not compare well with that of Gujarat.

Study Area

The BOBP-IGO study team visited Tamil Nadu in April 2005 and covered major salt producing sites *viz.* Tuticorin, Veppalodai, Kayalpatnam in Tuticorin district, Valinokkam in Ramanathpuram district, Marakkanam in Villupuram district, Nagercoil in Kanyakumari district, Vedaranyam in Nagapattinam district and Covelong in Kancheepuram district. The workers were interviewed through structured questionnaires, PRAs were conducted and the team also interacted with manufacturers, Salt officials and other stakeholders related to the industry like traders and NGOs.

The major salt producing sites *viz.* Tuticorin, Kayalpatanam, Vedaranyam, Veppolodai, Valinokam and Covolong produce more than 96 percent of the total salt production in the State. Tuticorin, which is one of the most industrialised areas of the State, accounts for 46.49 percent of total salt production of the State[15]. As per the advance estimates of the SCO (Chennai Office) for 2004, Tuticorin produced 904 ('000 tonnes) salt. The main attribute of Tuticorin is the dominance of the unrecognised sector, which accounts for 75.17 percent of the total production. The rest is contributed by the recognised sector. Table 3.2.1 gives a snapshot of the salt industry in Tamil Nadu.

Table 3.2.1 Study area in Tamil Nadu (2004)

Sites (Figures are in %)	Units	Area	Production	Employment*
Nagercoil	2.73	2.16	0.53	2.33
Kayalpatnam	10.26	8.89	13.11	N/A
Tuticorin	53.91	17.59	46.53	43.24
Veppalodai	0.32	8.65	11.40	N/A
Valinokkam	0.67	14.23	7.14	N/A
Vedaranyam	28.09	24.81	11.57	18.80
Markanam	3.23	7.07	3.24	18.16
Covelong	0.78	16.59	6.49	17.47

* Figures for employment pertain to 2003

Valinokkam is about 30 km from Ramanathpuram, one of the most backward districts of Tamil Nadu. The Government established its first salt production unit, the Tamil Nadu Salt Corporation (TANSALT) here. Valinokkam has a unique advantage; it is located in the rain shadow area. The success of TANSALT encouraged many private producers to exploit the production potential in Valinokkam. The industry is now the second largest employer in Valinokkam after agriculture and allied activities. Around 15 villages in and around Valinokkam have benefited from TANSALT, which distributes around Rs 10 lakhs a month as wages to the workers. TANSALT is also constructing houses for salt workers under the NMAY scheme.

Out of the State's total salt workers population, 42.72 percent is from Tuticorin area. Majority of the salt-producing units in the area come under categories III and IV. Kayalpatanam, which is near Tuticorin, is the second largest salt producing centre accounting for 13.10 percent of total salt production in the State. Vedaranyam (11.56 %) and Veppalodai (11.40 %) account for almost the same proportion in the total salt production in the State.

[15] *As per the advance estimates obtained for 2004 from the SCO, Chennai.*

The industry in Vedaranyam is a mix of large and small-scale industries. As for the State, categories III and IV are major units here. Large units like Sanmar; Dharangdhra Chemical Works have their captive production unit in the area. Vedaranyam also has the second highest (18.57%) number of salt workers (after Tuticorin) in the State. Covelong, in Kancheepuram district, contributed 6.49 percent to the total production of the State in 2004 and employs 17.26 percent of the total workers of the State. All the 22 units in the area are recognised.

The Salt Industry

Tamil Nadu is endowed with the second longest coastline, about 1 000 km (13 % of the country's coastline). It is also the second largest salt producing State in the country (after Gujarat). Its salt works stretch along the entire coastline. However, the major concentrations are in Tuticorin district. There are 1 266 recognised and 2 236 unrecognised salt producing units in the State and the actual area under salt manufacture in both recognised and unrecognised units is 40 910 acres.

Production area under recognised and unrecognised sector is 32 320 acres and 8 590 acres respectively; 64.36 percent of the total area comes under category I and 7.78 percent, 6.86 percent and 21 percent comes under categories II, III and IV respectively. Besides, there are 8 co-operative units producing 2.65 percent of the total salt produced in the State.

The total salt production in Tamil Nadu is 2 385.8 ('000) tonnes as per the 2003-04 Annual Report of the SCO. The share of the recognised sector in the total production is 53.96 percent and the rest comes from the unrecognised sector. In 2003, share of the private sector amounted to 43.10 percent, followed by the public sector (8.21 %) and co-operative sector (2.65 %). As far as category-wise production is concerned, the share of category I was 43.03 percent in total production and figures for categories II, III and IV were 6.66 percent, 4.27 percent and 46.04 percent respectively. The average productivity (*i.e.* tonnes/acre) of salt land in Tamil Nadu is about 50 tonnes.

The Compound Annual Growth Rate (CAGR) of the industry in Tamil Nadu for the last 15 years (1989 to 2003) is 0.98 percent. During this period, the lowest production was reported in 1998 (15.66 lakh tonnes) and the highest in 2002 (25.85 lakh tonnes). The CAGR shows that the growth in the industry in the last 15 years is not satisfactory. The following reasons can be attributed to this slow growth rate.

- Unlike Gujarat, the salt industry in Tamil Nadu has failed to modernise itself in terms of scale.
- As compared to Gujarat or Rajasthan not much area has been brought under cultivation or developed during the last 15 years. This reflects stagnancy in the industry.
- Tamil Nadu traditionally caters to the southern states. However, Gujarat salt has now started intruding this market. Recently, Kerala imported salt from Gujarat. Even after considering the transport cost, which is the major factor in pricing salt at the consumer's end, Gujarat salt works out cheaper than the salt produced in Tamil Nadu.
- For Vedaranyam producers the nearest ports are Chennai or Tuticorin. Due to absence of rail facilities salt is transported by road. As this is not cost-effective these manufactures are unable to utilise export markets like the Tuticorin producers.
- Predominant markets for the salt produced in Tamil Nadu are local in nature, with inherent limitations on growth. Manufacturers have to explore outside market (domestic as well as international) in order to maintain reasonable long-term growth. They have failed to do this mainly because of poor marketing skills and low quality of salt.

- Corporate producers have their own road transport arrangements; however, others suffer from lack of rail infrastructure. As a result they lose market in chlor-alkali industries of Tamil Nadu and Andhra Pradesh to the Tuticorin producers.
- The irregularity in the monsoon also affects the salt industry severely every four to five years (on an average).
- Besides, the industry was also hit hard by the 26 December 2004 tsunami. The loss was mainly to the infrastructure, delay in production following intrusion of seawater in the condensers and reservoirs and loss of salt in stock. The SCO did not accept the loss figures quoted by the producers due to 'overstatement of losses'. This resulted in non-payment and compensation on loan to the producers.

Impact of tsunami on salt production in Tamil Nadu: In Vedaranyam, the salt production season is December to September. However, up to April 2005 enough brine was not available. Due to the tsunami waves, protective bunds, roads, bittern channels, brine pits were damaged extensively. The Vedaranyam Salt Producers Association has estimated loss of Rs 25 000 per acre. At the start of the season during mid-January 2005, the first two weeks of the season were missed and repair works on the farms did not start in many of the small holdings. Most of the workers remained unemployed for almost two months after the tsunami damaged the saltpans.

The SCO plans to give them an amount equal to Rs 70 a day for 50 days as ex-gratia. The SCO has also sanctioned Rs 57 lakhs for rehabilitation of salt works and plans to plant mangrove trees covering 500 metres area from the seashore, so that tidal waves damage to saltpans can be minimised.

However, the salt industry has a good potential in Tamil Nadu as new salt-based industries are being stablished in the State.

The Salt Workers

The average number of labourers employed daily in the industry in Tamil Nadu is 15 083[16], which is 15.03 percent of the total daily employment in the salt industry of the country. The labourers are employed through contractors. Most big units have their own registered contractors. Generally, the leaseholders do not interfere in the wage agreement between the contractor and the workers. However, according to the corporate leaseholders, they do ensure that the workers get the minimum wage. The contractors gets around Rs 230 - 300 per trailer load (approx. 4 tonnes) as commission, which is 5 to 12 percent a trailer load depending on the time of season and availability of labour. The balance is distributed among the workers. As Tuticorin is the main producing area, it has been considered separately from the rest of the State for the purpose of this study.

Human capital

Demography

In Tamil Nadu, economically backward communities such as Pallar, Nadar and Parayar constitute nearly the entire salt work force (Figure 3.2.1). However, the ownership of the salt firms is with the people belonging to other castes.

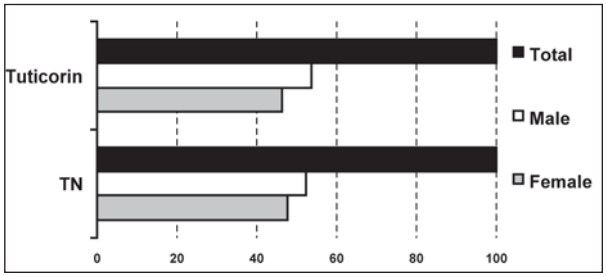

Figure 3.2.1 Composition of backward classes among salt workers (%)

Most of the workers are locals and the proportion of migrated population for the State as a whole is only 4.23 percent. They are largely from the neighbouring districts. Tuticorin area, which employs a large number of workers, has no migratory population (Figure 3.2.2).

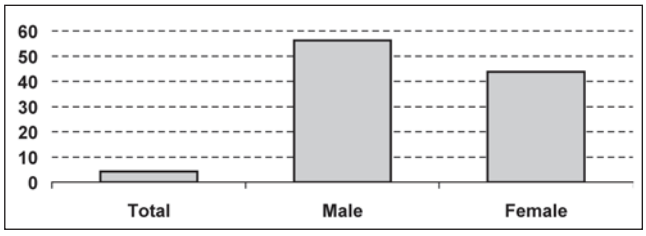

Figure 3.2.2 Demographic composition of migrated population (%)

[16] *Annual Report, Salt Department, Government of India (Annexure 4.2).*

In the industry, salt workers of Tuticorin area are considered more skilled compared to those in the rest of the State. They travel all over the State and even work in saltpans in Andhra Pradesh. Migrant workers from Tuticorin generally earn more than the local workers.

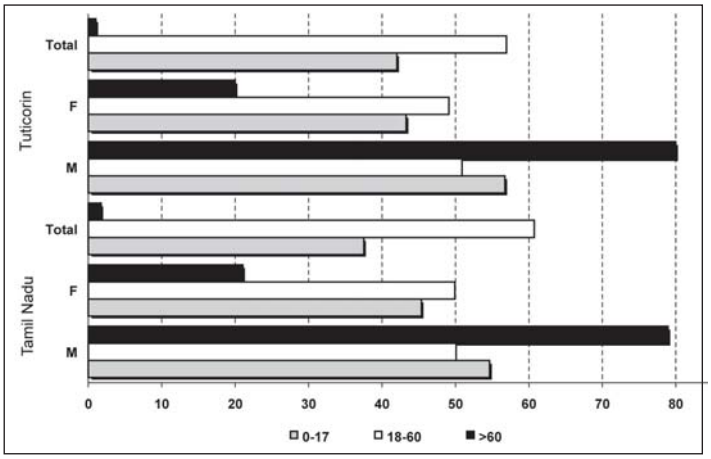

Figure 3.2.3 Age-wise distribution of salt workers (%)

Age composition

Age structure shows that 38 percent of the population is below 18 years of age and 60 percent is between 18–60 years of age (Figure 3.2.3). Only 1.74 percent of the population is above 60 years of age. Hardship of work and insufficient calorie intake may be the reason for low percentage of old-age group in the population. As per the Census data of 1991, rural population in the age of 60 years and above in Tamil Nadu is 7.4 percent.

The median age is estimated at 22 years. For men it is 21 years and for women 24 years. The average family size is 4.51, which is one of the lowest among salt producing states in the country. In comparison, the family size of rural population in Tamil Nadu is 4.26[17].

Table 3.2.2 Sex ratio in Tamil Nadu

Sex ratio	Tamil Nadu	Tuticorin
All ages	912	863

The sex ratio in salt workers population is 912 females per thousand males (Table 3.2.2). This is one of the lowest among salt producing states and is also lower than the general sex ratio for rural population of Tamil Nadu (992)[18] . Further, the sex ratio among Tuticorin salt workers is still low (863) compared to the general sex ratio for salt workers in the State.

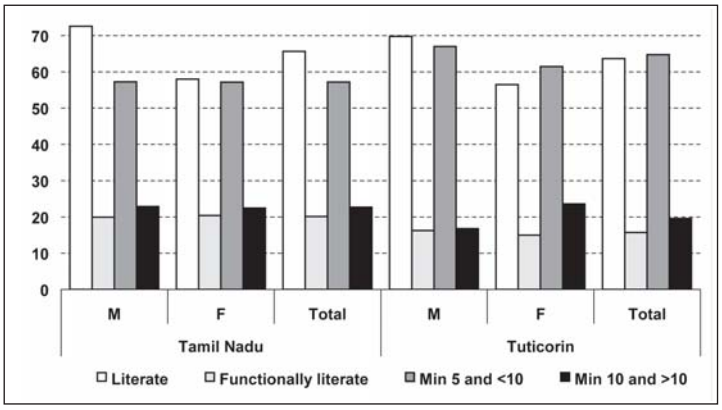

Figure 3.2.4 Education profile of salt workers (%)
(Age 6 years and over)

Education

The literacy level is lower (65.64 %) than the State's literacy level, which is 73.47 percent[19] as per 2001 Census (Figure 3.2.4). It ranks third among the salt producing states. Literacy among male and female population is 72.55 percent and 57.99 percent respectively. In Tamil Nadu, the general literacy among male and female population is 82.33 percent and 64.55 percent respectively, which is much higher than the literacy for both genders of salt workers.

Among literate salt workers population, 20.12 percent workers are estimated at functional literacy level and 57.20 percent are estimated at middle class level. The population at tenth class level and above is estimated at 22.68 percent.

Children Reward Scheme (CRS)

As in Gujarat, the awareness level of the CRS among the salt workers in Tamil Nadu is very low (Table 3.2.3).

Table 3.2.3 Awareness about CRS

CRS	Tamil Nadu	Tuticorin
Salt workers aware of CRS (%)	2.88	1.63

[17] *Estimated on the basis of data obtained from Census 2001.*
[18] *National Human Development Report, 2001.*
[19] *National Human Development Report, 2001.*

This seems to be a common phenomenon throughout the country. When the salt workers were asked to give their opinion on how to make the Scheme more effective, a number of responses were received, which are summarised in Table 3.2.4.

Table 3.2.4 Suggestions for better implementation of CRS

Suggestions (Figures are in %)	**Tamil Nadu**	**Tuticorin**
Arrangement of awareness camps by the SCO	50.00	19.82
Intimation from Leaseholder/ Labour Contractor	20.80	33.33
Effective media campaign	26.99	45.95
Inclusion of Trade Unions in implementation of the Scheme	0.44	0.00
Inclusion of NGOs in implementation of the Scheme	0.44	0.90
Assigning the Scheme to Panchayat	1.33	0.00

The salt workers, in general, have suggested a combination of awareness camps by the SCO and effective media campaign to make the Scheme more popular and in turn to improve the overall performance of the Scheme. However, the Tuticorin workers have felt that a combination of information from leaseholders and effective media campaign may be more helpful to popularise the Scheme.

Health

This study has attempted to bring out the worker's perception about his/ her health, rather than a systematic review of their health. Statistics show that 12 percent of the population reported their health as poor, which implies that 12 percent of the total population suffers from serious illness (Table 3.2.5). When the worker is not able to work, it means he is in poor health.

In general, these workers suffer from skin diseases, eye irritation, back-pain, etc. The ailments have become an integral part of their profession: they do not care much about such problems. Unless there is a serious illness, they continue to work everyday to earn bread. Besides eye and skin problems, the workers usually suffer from malaria, fever and other malnutrition related problems. Their daily diet does not include essentials like green vegetables, milk and fruit.

Table 3.2.5 State of health of salt workers in Tamil Nadu

State of health (Figures are in %)	**Tamil Nadu**	**Tuticorin**
Workers perceived their health as good	87.80	86.97
Suffering from chronic illnesses	12.20	13.03
Complete any or all vaccination programme	98.33	98.96
Couple protection rate	31.44	24.59
Awareness about AIDS/HIV infection	42.46	35.77
Consume alcohol	35.26	36.97
Consume tobacco	50.62	48.33
Consume both tobacco and alcohol	31.34	33.33

The population, which has completed vaccination, is 98.33 percent, which is the highest among salt producing states. Awareness about HIV/AIDS (42.46 %) is good compared to other states. Alcohol consumption (35.26 %) is considerably high in the State and ranks third among salt producing states.

Physical capital

Housing and amenities

Around 52 percent of the salt worker's population live in their own houses (Figure 3.2.5). The rest stay on leaseholder's land or rented house or in a house allocated under a Government scheme. The study showed that 54 percent of the workers in Tamil Nadu stay in *katcha* houses. The figure is also high as compared to

the general figure of rural population staying in *katcha* houses (42.8 %) in Tamil Nadu. About 32 percent of the workers have *semi-pucca* houses and 13.71 percent live in *pucca* houses. This is also less than the general figure for rural population staying in *pucca* houses in the State (18.8 %)[20].

A mere 10 percent of the salt workers' population has access to toilet facilities. Availability of fair[21] drinking water (93.17%) is reasonably good in the State. Above 64 percent of the population has access to electricity (Figure 3.2.6), which too is more than the general figure of rural households with access to electricity in the State (44.5 %)[22].

Namak Mazdoor Awaas Yojana (NMAY)

About 15 percent of the population was aware of the NMAY (Table 3.2.6). Though the Scheme has been recently introduced, efforts are needed to create more awareness amongst the salt workers.

The responses to make the NMAY more effective are summarised in Table 3.2.7.

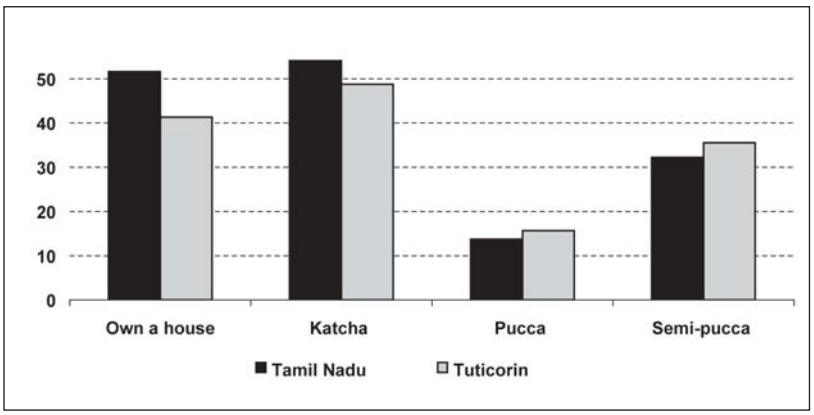

Figure 3.2.5 Housing condition (%)

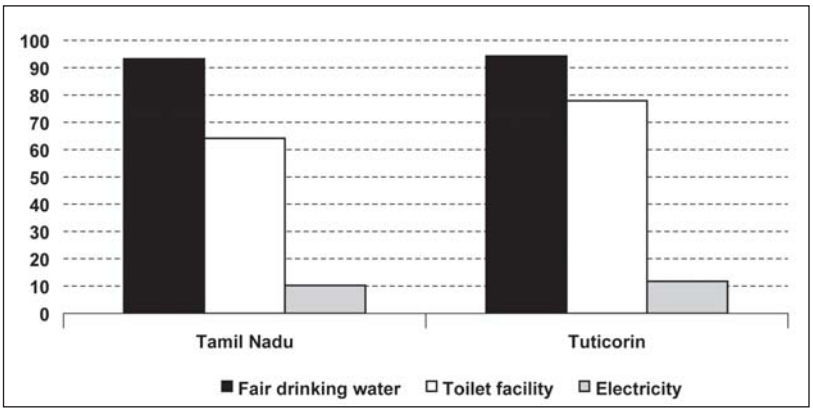

Figure 3.2.6 Amenities at the dwelling place (%)

Table 3.2.6 Awareness about NMAY

NMAY	Tamil Nadu	Tuticorin
Workers aware of NMAY (%)	14.90	11.38

Table 3.2.7 Suggestions for better implementation

Suggestions (Figures are in %)	Tamil Nadu	Tuticorin
Arrangement of awareness camps by the SCO	48.12	22.95
Intimation from Leaseholder/ Labour Contractor	24.27	36.07
Effective media campaign	24.69	39.34
Inclusion of Trade Unions in implementation of the Scheme	2.08	0.00
Inclusion of NGOs in implementation of the Scheme	0.42	0.82
Assigning the Scheme to Panchayat	0.42	0.82
Other suggestions	0.00	0.00

[20] *Source (for figures of population staying in katcha, semi-pucca and pucca houses for Tamil Nadu): National Family Health Survey of India, 1998-99, International Institute for Population Science.*

[21] *The word " fair" in the above text denotes that the water provided to salt workers is from safe source such as public water pipeline or protected well or any natural or artificial storage of safe water.*

[22] *Source: Census of India, 1991.*

Transport and communication

The study showed that 53.75 percent of the population has access to telephone within 15 minutes of walk; 28.75 percent have to walk more than 15 minute and 5.83 percent workers do not have a telephone in their vicinity (Table 3.2.8). Approximately, 1.25 percent population have a telephone at home. Around 32.63 percent population owns a TV set and 17.54 percent a radio.

On an average, the salt workers have to walk up to 22 minutes to access the nearest bus stop. About 85 percent salt workers have access to local market within 5 km from their dwelling, unlike workers in Gujarat and Rajasthan.

Health and education infrastructure

The mean distance between dwelling and school is 2.42 km in Tamil Nadu. This is one reason for the literacy rate to be good in the State. Around 79 percent salt workers travel less than two hours to reach a hospital; 19 percent less than one hour and 1.55 percent workers have to travel more than four hours to avail hospital facility.

Table 3.2.8 Communication facilities

Communication infrastructure (Figures are in %)	**Tamil Nadu**	**Tuticorin**
Population can access telephone within:		
Inside Dwelling	1.25	0.88
<15 minutes	53.75	84.96
> 15 minutes	28.75	9.73
Not accessible	5.83	0
Mean time needed to travel to nearest bus stop (in minutes)	21.56	19.01
Nearest local market:		
< 5 km	84.91	87.39
> 5 km	15.09	12.61
Households having radio	32.63	45.69
Households having television	17.54	14.55

Financial capital

Income and employment

The per capita monthly income (PCMI) of a salt worker from all sources in Tamil Nadu is Rs 630.82 (Table 3.2.9), which is the third highest among the salt producing states (after Maharashtra and Gujarat). The study showed that 19 percent of the workers had saved money during the last year and 17.60 percent managed to save during the last five years. However, the savings habit is irregular.

Table 3.2.9 Income and employment profile

Parameters (Figures are in % unless specified)	**Tamil Nadu**	**Tuticorin**
PCMI for 2003-04 (Rs)	630.82	615.00
Population below poverty line	2.75	0.81
Have secondary occupation	35.81	13.26
Unemployed in current weekly status in the age group 18-59	17.16	12.66
Security of the employment in the next season	99.60	100
Population managed to save in 2003-04	19.29	7.32
Population managed to save in five years (2000-04)	17.60	6.61
Average debt	12 976	9 238
Workers below 18 years of age	1.13	1.63

In Tamil Nadu, 2.75 percent of the workers are below poverty line, much lower than the corresponding figure of rural poverty ratio in the State (20.55 %)[23] . In other word, salt workers in Tamil Nadu are economically better off then their other rural counterparts.

Incidence of workers below 18 years of age group is not high in Tamil Nadu. However, a small percentage (1.13) does work. In reality, they belong to families of small salt farmers who exclusively work on the saltpans along with their family. Such children help their parents in household chores and from time to time also work in pans, which is the family's main source of income.

Workforce composition

The workforce composition varies as per the requirements in the production process. Scrapping workers are mostly males while female workers are used in carrying of salt. Incidence of female worker is more in below 18 years age group. Table 3.2.10 summarises the information.

Table 3.2.10 Workforce composition

Age group	Male	Female
Below 18 years	37.50	62.50
Above 18 years	59.39	40.61
Total	58.65	41.35

Working conditions

The job security is good: 99.60 percent sampled workers reported that their job is secure in the next season (Table 3.2.9). In Tuticorin, this response was 100 percent. However, the workers have limited scope for employment as only 35.81 percent reported that they had secondary source of income. Nearly 17 percent suffer frictional unemployment as they do not get regular job in one place or they keep changing places in search of better wages. The amenities available to the salt workers at the workplace are given in Figure 3.2.7.

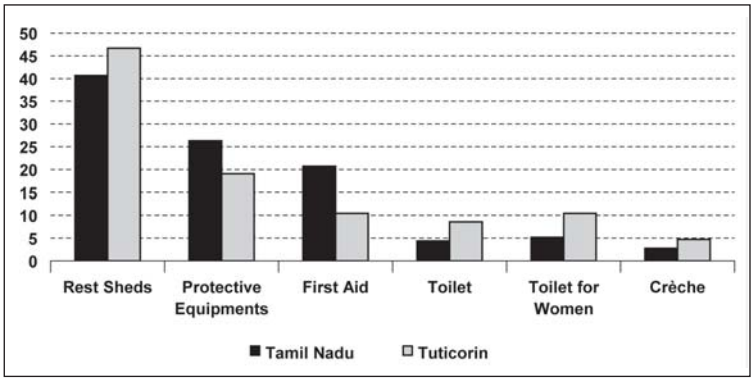

Figure 3.2.7 Population having access to amenities at work place (%)

Natural capital

Fuel

Wood is the dominant source of fuel and over 98 percent of the salt workers depend on it (Table 3.2.11).

Table 3.2.11 Use of natural resources

Natural resources (Figures are in %)	Tamil Nadu	Tuticorin
Households using wood as source of fuel	98.04	98.37
Households having agricultural land	5.88	3.25
Average holding in acre	6.77	–

Agriculture land

Salt workers population with agriculture land in Tamil Nadu is 5.88 percent (Table 3.2.11) and the average size of land holding is 6.77 acres.

Social capital

Almost 40 percent of the households regularly discuss their professional problems with neighbours. The majority of the workers (69 %) think they all are in the same situation. The workers (94 %) also think their co-workers are co-operative. Only 2.80 percent reported exploitation by hierarchy/ co-workers. However, 15.35 percent participate in community meetings to solve their problems.

The study showed that 6.15 percent of the workers consider it important to organise for their collective welfare and only four percent have approached trade unions to solve their problems (Table 3.2.12). A meagre eight percent are members of unions. The statistics also bring out that the workers do not have much faith in unions.

[23] *National Human Development Report, 2001.*

3.2.12 Role of Trade Unions

Perception/Interaction (Figures are in %)	**Tamil Nadu**	**Tuticorin**
Workers think they should organise	6.15	4.96
Workers member of any trade union	7.91	2.44
Workers approaches trade unions to solve their problems	3.98	0
Workers expect trade unions to solve their problems	4.89	1.77

Table 3.2.13 Expectations from institutions

Agencies (Figures are in %)	**Tamil Nadu**	**Tuticorin**
Salt Commissioner's Organisation	20.44	22.12
Ministry/Department of Labour	1.33	0.00
Government (nearest)	8.89	3.54
Leaseholders/Entrepreneurs	20.00	15.04
NGOs	0.89	1.77
Solve their problem themselves	43.56	55.75

Unlike other salt producing states, the workers do not have much faith on the Government. Only 8.89 percent believe that the Government can solve their problems (Table 3.2.13). About twenty percent workers feel that the leaseholders will solve their problem and 43.56 percent believe that they have to solve the problem on their own. About 20.44 percent workers in the State as a whole and 22.12 percent workers in Tuticorin area feel that the SCO can also solve their problems.

3.3 Rajasthan

Introduction

Rajasthan is situated in north-western India. It covers 3 42 239 sq. km (1 32 139 square miles) of land and lies between 23.3' N to 30.12' N latitudes and 69.38' E to 78.17' E longitudes. Compared to many countries that are located in a similar latitudinal belt, as in northern Arabia, the climate in Rajasthan is not very harsh.

Rajasthan is bounded by Pakistan in the west and northwest; Punjab in the north; Haryana in the northeast; Uttar Pradesh in the east; Madhya Pradesh in the southeast and Gujarat in the southwest (Figure 3.3). The southern part of Rajasthan is about 225 km from the Gulf of Kutch and about 400 km from the Arabian Sea.

The Aravali mountain ranges that run from Delhi to Gujarat cut through Rajasthan almost vertically, dividing the State into southeast and northwest. The northwest region covering two-thirds of the State consists mostly of sand dunes. Bikaner, Jaisalmer, Jodhpur and part of Jhunjhunu district form part of this region. The eastern region has large fertile tracts. In the west, Rajasthan is relatively dry and infertile; this area includes parts of the Thar Desert, also known as the Great Indian Desert. In the south-western part, the land is wetter, hilly and more fertile.

The climate varies throughout Rajasthan. Winter temperatures range from 8° to 28° C and summer temperatures range from 25° to 46° C. Average rainfall also differs; the western deserts accumulate about 100 mm (about four inches) annually, while the south-eastern part of the State receives 650 mm (26 inches)

annually, most of which falls from July through September during the monsoon season.

The population of the State is 5.6 crores as per 2001 census. The ratio of rural to urban population is 77:23. The density of population is 165 persons per sq. km and it varies from 84 persons per sq. km in the desert region to 203 persons per sq. km in other areas. The State's population has been growing at a much faster rate than the national average. The decadal growth rate (1991-2001) was 28.33 percent as against the national growth rate of 21.34 percent.

Figure 3.3 Map of Rajasthan showing important salt producing areas

The NSDP in Rajasthan at constant prices (1993-94) is estimated at Rs 60 738 crores in 2003-04 as against Rs 52 950 crores in 2002-03. The growth rate of NSDP from 1993-94 to 2003-04 has been 7.01 percent, which is among the highest growth rate witnessed in the same period in other states of the country. Rajasthan is predominantly an agrarian economy with agriculture and related activities accounting for about one-third of the State's income. Share of agriculture and allied activities in the State's NSDP is 29.70 percent, mining 3.05 percent, manufacturing 9.51 percent, construction 9.04 percent, electricity, gas and water supply 3.08 percent and services 45.62 percent. The per capita income for 2003-04 as per advanced estimates is Rs 8 571, at constant prices (1993-94), as compared to Rs 7 608 in 2002-03.

Rajasthan is one of the driest states of the country and the total surface water resource is only about one percent of the country's total surface water resources. The rivers are rain fed and identified by 14 major basins divided into 59 sub-basins. Surface water is confined to the south and southeast. There is a large area in the western part of the State, which does not have any defined drainage basin. Thus, the water resources in the State are not only scarce but are also unevenly distributed.

Study area

While large parts of the State are saline in character, production of salt is flourishing around the Sambhar Lake domain, *i.e.* from Sambhar to Nawa. Outside this region, there are potential depressions where production of salt could be viable. The State Government is trying to explore these potential areas by inviting private entrepreneurs.

The BOBP-IGO study team visited Rajasthan in the first two weeks of December 2004. The team visited saltpans in Sambhar, Rajas, Nawa, Kuchamman, Didwana, Sujangarh, Phalodi, Pokhran, Pachpadra and villages surrounding these salt works. Over 100 workers, randomly selected from these places were interviewed thorough a structured questionnaire. The team met officials from the Salt Commissioner's Organisation, Departments of Labour and Industrial Promotion and held discussions with entrepreneurs and traders regarding the prospect and problem of the industry and the labour situation in the State.

Rajas and Nawa in Nagaur district are the most prominent sites on the salt map of Rajasthan. This region produces around 78 percent of the total salt produced in the State and employs the majority of the salt workers. The region also determines the market price for salt and demand of salt in other production sites. However, the industry is declining in traditional regions like Didwana, Sujangarh and Phalodi. These regions suffer from a positional disadvantage as compared to Rajas and Nawa due to their distance from the

marketing zone. However, the salt industry in Rajas and Nawa is also approaching the carrying capacity of the environment. The water table is declining steadily and insufficient rains over the last few years has worsened the situation.

Table 3.3.1 Profile of the study area

Sites (Figures are in %)	**Units**	**Area**	**Production**	**Employment**
Sambhar	0.06	74.19	8.44	6.92
Rajas and Nawa	54.91	9.50	78.06	80.08
Kuchamman	2.35	1.34	2.61	3.22
Didwana	0.29	2.51	0.57	0.52
Sujangarh	2.47	1.55	1.51	1.05
Pokhran	2.47	1.61	0.07	0.15
Phalodi	28.83	8.67	8.74	8.05
Pachpadra	8.62	0.63	0.00	0.00

In Rajasthan and especially in Phalodi, quality degradation in brine is another problem. The degree of salinity of brine decreases as the workers dig deeper. Since the water table is going down, the wells are become increasingly deeper. The producers in Phalodi have responded to this problem by crude recycling of water. They pump less saline water and spread it around the wells. As the water seeps into the ground its salinity increases. This in turn increases the degree of brine of the bore wells. Though this innovation is working well as a short-term measure, in the long run it may not be cost-effective. It may also harm the water table as in this system excess water has to be pumped out than what is actually needed. Table 3.3.1 gives the profile of the study area in Rajasthan.

The Salt Industry

Rajasthan is the third largest producer of salt in India (after Gujarat and Tamil Nadu). It produced 8 percent of the total salt produced in India in 2003 with a share of 15 percent of the total land under salt cultivation. The industry is dominated by category IV units. It produces about 85 percent of the total salt production in Rajasthan though it covers only 17 percent of the area. The area under the recognised sector (categories I to III) is 83 percent and it produces 15 percent of the total production in the State. There are 202 units in the recognised sector: two in category one, 189 in category II and 11 in category III. The unrecognised sector has around 1 500 units. Table 3.3.2 summarises the situation.

Table 3.3.2 Salt industry in Rajasthan in 2003[24]

Variables	**Cat I**	**Cat II**	**Cat III**	**Cat IV**[25]	**Total**
Total area (in acre)	57 744	5 672	621	13 562	77 599
Actual area (in acre)	1 715	2 810	473	13 562	18 560
Number of units	2	189	11	1 527	1 729
Production (in tonne)	1 16 500	69 900	8 700	11 29 800	13 24 900
Land utilisation rate (%)	2.97	49.54	76.17	100.00	23.92
Production per acre of total area (in tonne)	2.02	12.32	14.01	83.31	17.07
Production per acre of actual area (in tonne)	67.93	24.87	18.39	83.31	71.37
Production per unit per acre of actual area (in tonne)	33.97	0.13	1.67	0.05	0.04

The industry, directly and indirectly, supports the livelihood of over one lakh people. During 2003, the industry provided direct employment to more than 12 000 workers on an average per day, which is around 12 percent of the total workers employed per day in the salt industry in the country.

[24] *Annual Report 2003-2004. Salt Department, Government of India, Ministry of Commerce and Industry, Department of Industrial Policy and Promotion.*

[25] *Data on actual area utilised is not available.*

In the last 15 years, from 1989 to 2003 the industry recorded a cumulative annual growth rate (CAGR) of 3.25 percent, highest among the salt producing states. Production increased from 9.09 lakh tonne in 1989 to 17.47 tonne in 2001. It declined marginally to 16.58 lakh tonne in 2002 and to 13.25 lakh tonne in 2003.

Transport is the biggest problems in Rajasthan. In centres like Kuchamman city, Didwana, Sujangarh and Phalodi entrepreneurs argued that due to the absence of rail infrastructure very few traders come to these places to buy salt. This is coupled with the migration of labourers to Rajas and Nawa, which has created a shortage of labour in these places.

Electricity has been cited as the other major issue. As per hour operating cost of a diesel pump is higher than that of an electric pump the production cost is high. These problems not only hinder efficiency level but also retard the growth in existing and potential areas. In general, the salt industry in Rajasthan suffers from the following problems:

1. **Approach road from the highways to the saltpans** – Virtually no road exists between the main road and the production areas. Salt has to be transported in a phased manner – from the saltpan to the main road by tractors and then by truck. This increases transport cost and takes longer. Producers in Kuchamman were willing to pay for construction of roads linking their saltpan to the main road if toll rate is fixed based on economic considerations. At the most it should be less than or equal to existing transportation cost per tonne of salt from the saltpan to the main road. Producers in Rajas too are willing to accept this idea if the Government builds the road.
3. **Water supply** – Presently, the entrepreneurs provide drinking water through tankers to the workers during the production season. This entails considerable expenditure, which adds to production cost. The salt producers want that the State Government should accept this responsibility.
4. **Power supply** – Salt production in Rajasthan requires pumping of sub-soil brine. Power is charged at the industrial rates, which increases the cost of production. The producers feel that the agriculture pricing for power should be applied to salt industry. Further, power supply should be improved.

The leaseholders are of the opinion that development in the industry would trickle down to the workers in the form of increase in demand for labour and wages. Similarly, any problem in the industry will affect the prospects of the workers.

The Government under the State Industrial Policy[26], 1998 has emphasised the development of existing salt works and identification and allotment of new areas for production. The salient recommendations applicable to the salt industry in the Policy are as follows:

Development of Salt Areas (Recommendation nos 25.1 – 25.3)

"Rajasthan is the third largest salt producing State in India. Over 1 200 units provide employment to approximately 70 000 workers in the rural areas. Recently, the Rajasthan Land Revenue (Saline Areas Allotment) Rules, 1970 were amended whereby powers of allotment, renewal, transfer and lease execution have been delegated at the district level. The following measures were proposed to develop the salt industry.

- *The State Government will support establishment of a model salt farm-cum-research centre with the assistance of the Central Salt and Marine Chemicals Research Institute (CSMCRI) for scientific development of salt sources and recovery of valuable by -products. Infrastructure facilities like roads, drinking water, electricity, telecommunication, labour welfare works, etc. will be made available in saline areas in a phased manner."*

However, the technology used for salt production is not scientific. It is a common practice among the producers to recycle the bittern with brine. Researcher at CSMCRI pointed out that due to this practice, the producers are not getting industrial grade salt and they are also suffering from lipid problem. Producers too are conservative in their approach towards modernisation. They fear new methods might lead to lesser

[26] *http://www.smallindustryindia.com/policies/state/rajasthan/pstrj14x.htm*

returns. Scientific technologies are based on realignment of land, which, according to some producers, will reduce production, though quality will improve. However, considering the prices of different grades of salt, the improvement in quality might not be enough to meet the revenue loss from reduced quantity. Moreover, the saltpans in the State are relatively small and not conducive to any modernisation programme.

The Salt Worker

The production season in Rajasthan varies from 8 to 10 months. The preparatory works start in late August *i.e.* soon after the monsoon. March to May is the peak season, which may continue up to June depending on the arrival of monsoon. The following part of the report presents the livelihood situation of salt workers in Rajasthan as a whole and also separately for Rajas and Nawa, as they are the two main salt producing sites.

Human capital

Demography

Most of the workers in Rajasthan are from backward classes and minority communities. They constitute over 81 percent of the salt workers population. Minority communities comprise majority of workers in Didwana, Phalodi and Pokhran. In Rajas and Nawa, people from backward classes constitute 80 percent of the salt workers population.

A significant feature in Rajasthan is that the migrant labourers constitute a considerable part of the workforce during the production season. In the State about 35 percent workers are migrant. In Rajas and Nawa, most of the workers are seasonal migrants and constitute about 64 percent of the worker population. Migration is observed at three levels: (1) Inter-village migration (51%) (2) Inter-district migration (47%) and (3) Inter-state migration (2%).

Migrants from Sujangarh, Didwana and Phalodi form the inter-district migrant population. Poor state of the industry in these places and the growth of the industry in Rajas and Nawa encourage them to move to this belt. In the rest of the State only about five percent of the workers are migrant. The migrant population is generally at a disadvantage as compared to the local workers. Their family maintenance cost is higher and they also lack community support and social security.

The sex ratio is 961 females per thousand males, which is marginally better than the sex ratio of 932 in rural Rajasthan as per the 2001 Census. Sex ratio among the salt worker population in Rajas and Nawa is 900 females per 1000 males. This seemingly opposite behaviour of sex ratio in Rajas and Nawa as compared to rest of Rajasthan may be because salt worker population of Rajas and Nawa comprises a large number of migrant workers. Many times only male members migrate leaving the family behind. This increases the number of males in the population in the cross-sectional data.

The average family size is 6.87, which is highest among the salt producing states of India. Migrant households and households from backward classes have a larger family than the rest. At the State level, family size of a backward class household is 6.96 as compared to the State average of 6.87. Migrant households also generally have a larger family as compared to the local workers. At the State level the size of a typical migrant household is 7.36 as compared to the family size of 6.63 of local workers. In Rajas and Nawa the same for migrant labour is 7.06 and for the local worker it is 5.80. However, it is not that migration encourages a larger family size- a larger family encourages migration.

Given the larger family size, the dependency ratio is quite high even though assuming that both husband and wife are working. Hence the workers cannot save much. The absence of future

security in turn compels a working couple to go in for a larger family, preferably of more than one son, who can act as their pension fund, if required. Table 3.3.3 summarises the demographic situation of salt workers in Rajasthan.

Table 3.3.3 Demography of salt workers

Characteristics (Figures are in % if not specified)	**Rajasthan**	**Rajas & Nawa**	**Rest of Rajasthan**
Migrants	35.14	64.29	5.45
Backward classes	80.88	80.00	81.25
Family size of which,	6.87	6.61	7.15
Backward classes	6.96	6.56	7.41
Local	6.63	5.80	6.96
Migrants	7.36	7.06	11.00
Sex ratio (Female/1000 males)	961	900	1033

The salt worker population in Rajasthan is fairly young. Nearly 48 percent of the population is below 18 years, 49 percent between 18 to 60 years and only 2.75 percent is more than 60 years of age. Among men, over 50 percent population is below 18 years, around 50 percent between 18 to 60 years and only about one percent is aged more than 60. In comparison, among women, about five percent is in the 60+ bracket and 45.72 percent of females are aged less than 18 years of age. About 50 percent of female population is between 18 to 60 years.

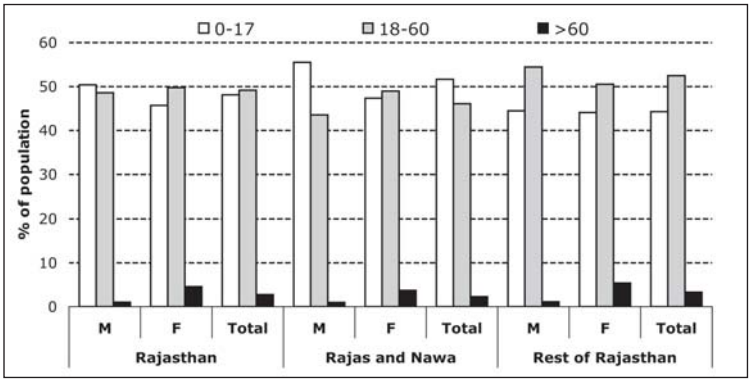

Figure 3.3.1 Age profile of salt workers

In Rajas and Nawa, the median worker is younger compared to the rest of Rajasthan. About 52 percent of the workers are below 18 years and the proportion of men aged 60+ is less than one percent. The data indicates that after reaching adulthood probability of survival[27] for males is lesser than for females (Figure 3.3.1).

Education

The workers think that formal education does not pay in their trade. Knowledge about scraping, etc is learnt on the field. Even for a promotional prospect from salt worker to labour contractor, education is found to be less important; social capital of the worker is the determining factor in promotion. For a salt worker education has some relevance only in his social status and day-to-day life. The workers' requirement of education is restricted to basic arithmetic and counting abilities, reading newspaper, bus numbers and understanding signs. The large number of educated people without a job is also a discouraging factor to them.

In Rajas, Bhanwar Lal Balai, a migrant worker from Dudu told the study team. "Why should I send my sons to college? What is the guarantee that they will get a government job after finishing college? It is better if they work with me and start earning". Bhanwar Lal has three sons studying in class VII, V and III. Nawarat, the eldest, is now in class VII. He is expected to join the labour force by the next season. Just another case of school dropout!

The overall literacy rate for the salt worker population in the age group six years and over is 34.15 percent. Male and female literacy rate is 46.08 percent 29.30 percent respectively. Comparatively, for rural Rajasthan as per 2001 census the literacy rate is 55.92 percent with male literacy of 72.96 percent and female literacy rate of 37.74 percent. Table 3.3.4 summarises the status of education in Rajasthan.

[27] *The life expectancy at birth for rural Rajasthan is 57.5 years. Therefore, work in saltpans is probably not a disadvantageous livelihood as compared to other rural livelihoods.*

Table 3.3.4 Educational profile of salt workers
(Age 6 years and over)

Educational attainment (Figures are in %)	Rajasthan			Rajas & Nawa			Rest of the Rajasthan		
	M	F	Total	M	F	Total	M	F	Total
Literates	46.08	29.30	34.15	40.93	17.51	29.73	53.24	26.95	40.00
Awareness on CRS			1.80			0.00			3.64

As evident from the above Table, the educational scenario in Rajas and Nawa is worse than that of the State, especially with regard to females. This is mainly due to the large number of migrants. The children of migrant workers miss school for most part of the year and ultimately stop going to school. For a female child, as the parents go to work, household chores keep her away from the school.

Among the literate salt workers, population with at least five years of education form 38.74 percent. The sex wise break-up for males and females in this criterion is 36.60 and 43.48 percent respectively. Among the literates in the State, about 14 percent have completed at least 10 years of education. First major dropout occurs between the primary level and secondary level of education (Figure 3.3.2).

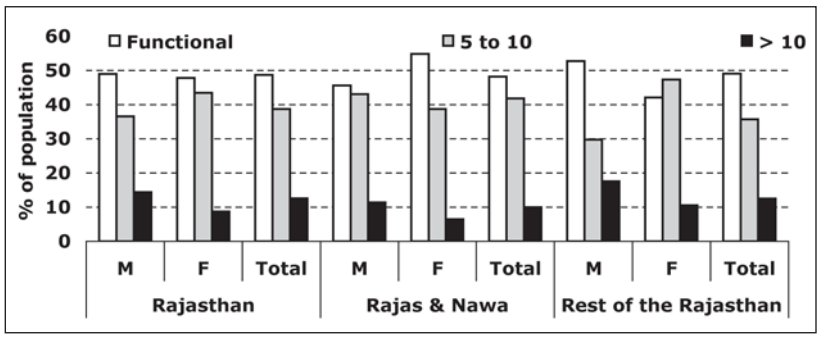

Figure 3.3.2 Break-up of literate population as per years of education

Children Reward Scheme (CRS)

This Scheme is meant to encourage workers to send their children to school and to provide a financial support to meritorious students. However, awareness of this Scheme is poor with only 1.80 percent of the workers knowing about the Scheme (Table 3.3.4). Those who do are not aware of the procedures to avail the benefits. In Rajas and Nawa, the workers were ignorant about the Scheme.

Health

To a salt worker, 'good health' is if he/she is able to work and poor health is when he/she is unable to perform daily routines. The study shows that in Rajasthan around 90 percent of the workers perceive that their health is good. The rest do not go to work because they may be sick. The children are more susceptible to the seasonal changes and harsh weather in the saltpans while the adults suffer from back-pain, headache, eye and skin problems. Some workers have also reported hypertension. According to a study[28] prevalence of hypertension was 4.3 percent in both sexes of salt workers. The study found that major morbidity disorders observed among salt workers were dermatological, respiratory, musculoskeletal, gastro-intestinal and ophthalmological in both the sexes. In Rajas and Nawa, about nine percent of those who have poor health suffer from various chronic illnesses.

The incidence of child vaccination in Rajasthan is below the national average for salt workers. Only 79.25 percent of the children are completely or partially vaccinated. Most of the vaccinated population have taken polio drops and the respondents (mostly males) are not sure what other vaccination programmes are completed.

[28] *"Dermal ulcers and hypertension in salt workers" by Kripa Ram Haldiya, Raman Sachdev, Murli L Mathur and Habibulla N Saiyed – ICMR & NIOH and "Morbidity profile of desert population engaged in salt production in Rajasthan" by Kripa Ram Haldiya, Raman Sachdev, Murli L Mathur and Habibulla N Saiyed – ICMR & NIOH.*

The incidence of observing family planning practice (traditional and modern) for salt workers in Rajasthan is 44 percent. However, the effective couple protection rate is lower. Most of the couples do not adopt modern methods of family planning. Awareness about HIV infection and other sexually transmitted diseases and possible protection is low. Only 34.26 percent of the workers are aware about it. The women are less aware than the men. Table 3.3.5 summarises the health situation of salt workers in Rajasthan.

Table 3.3.5 Health profile of salt workers in Rajasthan

State of health (Figures are in %)	**Rajasthan**	**Rajas & Nawa**	**Rest of Rajasthan**
Workers perceived their health as good	90.18	91.84	88.50
Suffering from chronic illness	8.84	8.91	8.78
Complete any or all vaccination programme	79.25	77.78	80.77
Couple protection rate	44.00	45.83	42.31
Awareness about AIDS/HIV infection	34.26	30.91	37.74

Over 70 percent of the salt workers population is addicted to tobacco. Incidence of alcohol consumption is found to be low at 15.45 percent. However, this may be due to under reporting, as workers are shy to speak about their drinking habits. The incidence of both alcohol and tobacco consumption is also high in Rajas and Nawa (about 20 %) as compared to the rest of the State (5.45 %) (Figure 3.3.3).

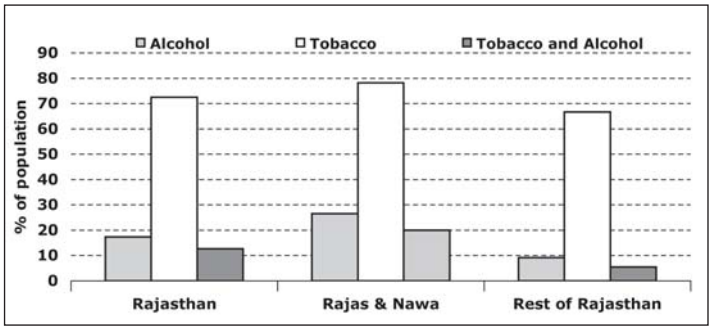

Figure 3.3.3 Addiction scenario

Aspiration

The study showed that 63.06 percent of the salt workers are not satisfied with their life and around 58 percent think that there will be no change in their livelihood conditions in the future and conditions may be worse for their children. Table 3.3.6 summarises the aspiration levels of the salt workers in Rajasthan.

Table 3.3.6 Aspiration levels of salt workers in Rajasthan

Parameter (Figures are in %)	**Rajasthan**	**Rajas & Nawa**	**Rest of Rajasthan**
Unsatisfied	63.06	57.41	73.58
Negative attitude towards future	58.88	57.41	60.38

Physical capital

Housing and amenities

Government schemes and policies are primarily concerned with the provision of physical capital to the salt workers, which can be seen and easy to monitor.

Most of the workers (84.29 %) own a house, which they either built with their own resources or inherited. However, only about 63 percent of workers who own a house, enjoy exclusive property right over the dwelling unit. Among the workers who own a house, 25.42 percent have *katcha* houses, 13.56 percent have *semi-pucca* houses and 61.02 percent have *pucca* houses. Considering all types of ownership, about 26 percent of the workers live in *katcha* houses and about 58 percent live in *pucca* houses. This includes housing provided at the work site by the leaseholders for migrant workers. Comparatively, in rural Rajasthan, 46.30 percent of population lives in *pucca* houses, 24.80 percent in semi-*pucca* houses and 28.90 percent are living in *katcha* houses[29] (Figure 3.3.4).

The major source of drinking water is through tankers. Although, water is slightly salty, the workers do not mind. About 91 percent workers feel that they are getting fairly good water. According to 1991 Census,

[29] *National Human Development Report, 2001.*

50.62 percent households in rural Rajasthan have access to safe drinking water.

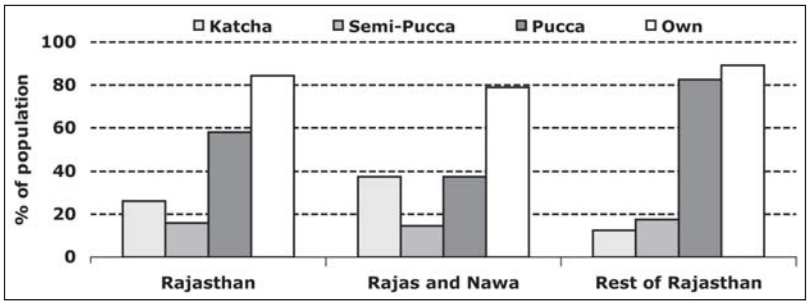

Figure 3.3.4 Dwelling and ownership status of workers

Toilet facilities are virtually non-existent and only 6.42 percent of the population has access to a proper toilet. Even the labour quarters at the work sites rarely have toilet facilities. At the State level, this scenario is comparable to the situation that existed in rural Rajasthan during the 1991 Census. As per the 1991 Census 6.65 percent households had access to toilet facility. The leaseholders/entrepreneurs are of the opinion that the workers do not require toilet facility, as they find it more convenient to use open spaces in the fields. The situation is expected to improve after the implementation of NMAY Scheme in the State.

About 24 percent of the salt workers have access to electricity. As per 1991 Census, 32.44 percent households have electric connection in rural Rajasthan. Table 3.3.7 summarizes the situation of civic amenities available to the salt workers in Rajasthan.

Table 3.3.7 Civic amenities

Amenities (Figures are in %)	**Rajasthan**	**Rajas and Nawa**	**Rest of Rajasthan**
Perceive drinking water quality as fair	90.99	91.07	90.91
Access to toilet facility	6.42	7.27	5.56
Electricity connection	24.55	21.43	27.78
Aware about NMAY	14.41	19.64	9.09

Namak Mazdoor Awaas Yojana (NMAY)

Only 14 percent of the workers in Rajasthan are aware of the NMAY scheme. In Rajas and Nawa awareness about NMAY is slightly higher (19.64%) than in the rest of the State. In the existing structure, leaseholders play an important role in screening the beneficiaries and implementation of the Scheme. It was also alleged that the entrepreneurs were manipulating the screening of the actual salt workers. Most of the salt workers (58 %) felt that awareness camps by the SCO will help improve the situation and can bridge this information gap.

Transport and communication infrastructure

In the State as a whole, about 52 percent of the workers can access a telephone booth within 15 minutes or one kilometre from their home. In Rajas and Nawa this percentage is much less (36.36 %) and as salt works are now spreading away from the highways, the average distance to access a telephone is also increasing. However, about 28 percent of the workers can hardly access a telephone in case of emergency. On the other hand, in the State, most of the workers can access a bus stop within 25 minutes of walking from their dwelling. However, in Rajas and Nawa, it takes 5 minutes to 3 hours to reach the nearest bus stop depending on the location of the saltpan. The average distance from the local market is more than five kilometres.

About 19 percent households own a radio and about 11 percent households own a television set. In Rajas and Nawa the percentage of the population owning a radio is higher (about 25 %). Table 3.3.8 summarises the situation of communication facilities available to the salt workers in Rajasthan.

Health and education infrastructure

School facility up to primary level is available within one km radius of the village. However, for secondary level of schooling students have to travel over 10 kilometres. Colleges are situated in the nearby urban centres over 20 kilometres from the salt production areas. Non-availability of a secondary school in the village neighbourhood discourages the parents to send their children, especially girls, for further study.

Table 3.3.8 Communication facilities

Communication infrastructure (Figures are in %)	Rajasthan	Rajas and Nawa	Rest of Rajasthan
Population can access telephone within:			
<15 minutes	51.82	36.36	67.27
> 15 minutes	20.00	21.82	18.18
Not accessible	28.18	23.64	32.73
Mean time needed to travel to nearest bus stop (in minutes)	25.00	23.00	26.00
Nearest local market:			
< 5 km	47.27	41.82	52.73
> 5 km	52.73	58.18	47.27
Households having radio	18.92	25.00	12.73
Households having television	10.81	10.71	10.91

Primary Health Centres are generally available near the production areas. But, in most cases people have to go to the nearest urban centres for treatment. On an average, it takes about two hours to reach a hospital.

Table 3.3.9 Use of natural resources

Natural resources (Figures are in %)	Rajasthan	Rajas and Nawa	Rest of Rajasthan
Households using wood as source of fuel	94.59	94.64	94.55
Households having agricultural land	55.86	58.93	52.73
Average holding in acre	8.86	7.00	9.17

Natural capital

Fuel

The salt workers are highly dependent on common pool assets for their survival. Wood is the major fuel for cooking and other purposes. Over 95 percent of the population uses wood for cooking, which is collected from fallow and forestlands surrounding the saltpans. In Rajas and Nawa a few leaseholders also provide wood free of cost to the workers, However, extension of salt works has led to fewer trees and people have to sometimes walk more than 15 km to collect wood.

Agriculture land

Around 56 percent of the salt workers have their own agriculture land. However, the returns from agriculture are nominal and not enough even to meet household requirements for six months.

In Rajas and Nawa about 59 percent of the salt worker household have agricultural land and the main produce is bajra. The average agricultural holding is 9 acres of land. However, variation in the size of holdings among the salt worker population is significant. Majority of the workers have about 2 acres of land. Due to insufficient rain, agricultural produce is very low and does not last a family a year. Table 3.3.9 shows use of natural resources by the salt workers.

Financial capital

Working condition

A typical salt worker in Rajasthan works for 200 to 300 days in the saltpan and earns Rs 50 to 100 after working for 8 to 10 hours a day. The minimum wage as on 31 December 1998 was Rs 44 per day[30], whereas (in June 2000) an unskilled agricultural worker was earning Rs 60 a day. The study indicates that 32 percent of the workers were not getting Rs 60 as on December 2004. In Rajas and Nawa, work is available to a

[30] *Table-6 - Minimum wages fixed/ revised as on 31.12.1998 in scheduled employments. http://labourbureau.nic.in/mwreptxt.htm*

typical salt worker for 240 days. The official working hours, according to the leaseholders is eight hours, though the workers often work even for 10 to 14 hours on a given day to earn a higher income.

The workers are employed through a contractor who pays them on the basis of their productivity. Workers are generally divided into groups of 5 to 10 members on the basis of family relation, village, caste, etc. and allotted a particular plot in the pan.

At the end of the day, the contractor calculates the production of each group, which is multiplied by a pre-fixed rate per tonne of salt. The total amount is then distributed equally in the account of the team members. Though the wages are calculated on a daily basis, the contractor/ manager of the unit holds the payment until the production season ends. The workers get a weekly payment or *hafta* @ Rs 100 to Rs 200 per worker for day-to-day expenditure. At the end of the season, the salary is adjusted against payments made.

The salt works in Rajasthan are situated around 3 to 10 kilometres from the main road. The means of transport are restricted to tractor or a cycle. Most of the workers in the State work with out any protection under the hot sun. Only 6.60 percent of workers have goggles. A study[31] by the National Institute of Occupational Health (NIOH), Ahmedabad and the Desert Medicine Research Centre (DMRC), Jodhpur shows that around 30 percent of the salt workers use unconventional measures to prevent contact with salty water, salt dust, raw salt and glare. The study also shows that there was a huge gap between their knowledge and practice with protective devices. Rest shed at the work place is available to 74.77 percent of the workers. However, nearly 19 percent of the rest sheds are in poor condition. Other facilities like sanitation are rare. Water is supplied to the workers through tankers. Benefits such as paid holidays, maternity benefits, etc are rarely made available to them. Table 3.3.10 summarises the situation with respect to amenities and working conditions.

Table 3.3.10 Amenities at the workplace

Amenities (Figures are in %)	**Rajasthan**	**Rajas & Nawa**	**Rest of Rajasthan**
Protective gear	6.60	5.66	7.55
Sanitation	5.66	9.26	1.92
Rest Sheds	74.77	76.36	73.08
Job security	22.55	19.61	25.49
Lay-off / Replacement	30.77	25.93	36.00
Non-payment of wages by due date	25.24	9.26	42.86
Seeking personal favour by hierarchy/ co-worker	5.83	1.85	10.20

Employment of the workers in the same saltpan/ firm in the next season is not guaranteed. Only about 20 percent of the workers in Rajas and Nawa think that they will be re-employed in the same saltpan/ firm. For the State as a whole 23 percent workers think they will be re-employed in the same firm. The study shows that in Rajasthan 30.77 percent of the workers face lay off or replacement during a season. In Rajas and Nawa, 26 percent workers face this problem. There are also some cases of seeking undue favour by hierarchy/ co-workers in the State. Six out of every 100 workers face this problem. A considerable number (25.24 %) do not get their payment regularly. Especially, the marginal leaseholder-*cum*-salt workers complained that the traders do not clear their payment on time. However, these problems are not severe in Rajas and Nawa where only nine percent of workers have complained about irregularity in receipt of wages.

[31] *"Knowledge, Attitude and Practices Related to occupational Health problems among Salt Workers in the Desert of Rajasthan, India" by Kripa Ram Haldiya, Raman Sachdev, Murli L Mathur and Habibulla N Saiyed – ICMR & NIOH.*

Income and employment

The per capita monthly income (PCMI) of salt workers in Rajasthan from all sources during 2003-04 is Rs 403.74 (Figure 3.3.5). It is the third lowest PCMI among the salt producing states. Incidence of poverty is quite high. Around 47 percent of the workers are below poverty line[32]. This is much higher than the corresponding figure of rural poverty ratio in Rajasthan (13.50 %). The situation is marginally better in Rajas and Nawa, where the PCMI is Rs 444.94 and about 39 percent of the population is below poverty line.

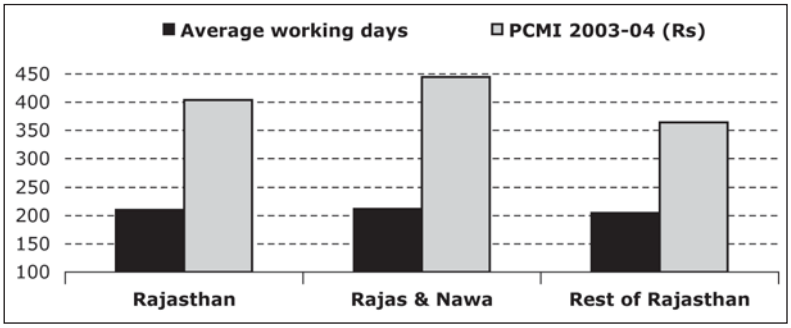

Figure 3.3.5 Seasonal employment and income of salt workers

Most of the workers perceive their economic condition as poor to very poor (90.48 %). They feel they are poorer than the average Rajasthani. The salt workers suffer from lack of employment during the off-season. At the State level, only 23.84 percent of the workers get any secondary occupation during the off-season. Though 56 percent of the workers own agricultural land most of it remains fallow due to lack of rain.

Table 3.3.11 Poverty, employment and debt scenario

Parameter (Figures are in %)	**Rajasthan**	**Rajas & Nawa**	**Rest of Rajasthan**
Population below poverty line	46.85	39.29	54.55
Have secondary occupation	23.84	30.83	17.57
Unemployed in current weekly status in the age group 18 – 59 years	12.09	9.70	14.07
Male unemployed in current weekly status in the age group 18 – 59 years	9.21	8.33	10.00
Female unemployed in current weekly status in the age group 18 – 59 years	14.15	10.75	16.81
Household saved money during 2003-04	12.26	10.91	13.73
Household saved money during 1999-2004	11.22	8.51	13.73
Average debt (in Rs)	19 158.33	17 075.00	19 505.56
Household perceived their position as poor to very poor	90.48	94.34	86.54
Workers below 18 years of age	16.22	18.25	11.86

The workers do not have enough work even during the season. Current weekly status of unemployment in the 18 to 59 years age group is 12.09 percent. Temporary unemployment is much higher among women than among men. The situation is considerably better in Rajas and Nawa. Unemployment rate for the age group 18 to 59 is 9.70 percent as per current weekly status. Table 3.3.11 summarises the income and employment scenario in the State. Interactions with Bandewals provide some insights on the economics of salt production in Rajasthan and their socio-economic conditions (see Box on page 76).

The study showed that the savings habit among salt workers in Rajasthan is irregular, only 12.26 percent of workers saved money during the last year (2003-2004). In the last five years (1999-2004), only 11 percent of the worker households saved money. In Rajas and Nawa about 11 percent of household

[32] *The Planning Commission estimation of poverty line in Rajasthan is Rs.344.03 per capita per month.*

saved during the year 2003-2004 and in the last five years only about nine percent of households saved some money. On the other hand, about four out of every 10 workers are highly indebted. The amount of debt varies between Rs 1 000 and Rs 100 000. The average debt in the State is Rs 19 158.33. In Rajas and Nawa, the situation is slightly better.

Incidence of workers below 18 years of age is comparatively higher in Rajasthan. About 16.22 percent of the workers in the salt industry are below 18 years of age. The incidence of this age group is more in Rajas and Nawa as compared to the rest of the State. In Rajas and Nawa about 18.25 percent of workers are below 18 years of age. The salt packaging industry employs a large number of under-aged workers. However, it should be keep in mind that some of these workers are not contract workers and they accompany their family members in the field and help them in work.

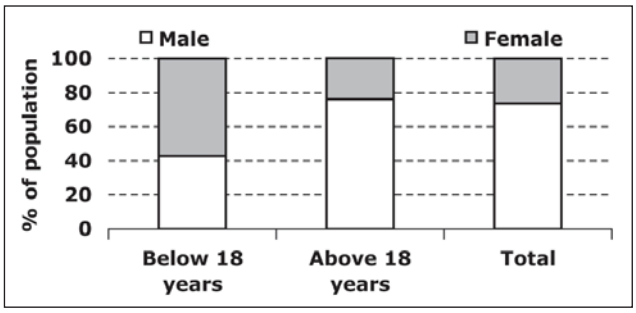

Figure 3.3.6 Workforce composition

Workforce composition

The workforce composition varies as per the requirements in the production process. Scrapping workers are mostly males while female workers are used in carrying of salt. Incidence of female worker is more in below 18 years age group (Figure 3.3.6).

Social capital

Membership to registered trade unions is virtually non-existent among the salt workers in Rajasthan. Only around three percent of them are members of any registered trade union. In Rajas and Nawa it is merely two percent. However, about 70 percent of the workers in the State feel that it is important for them to be organised. In Rajas and Nawa 63 percent workers feel the same. In the absence of formal unions, community bondage and affinity among the workers act as an informal union. Table 3.3.12 below gives more details.

Table 3.3.12 Role of Trade Unions

Perception/Interaction (Figures are in %)	**Rajasthan**	**Rajas & Nawa**	**Rest of Rajasthan**
Workers think they should organise	70.41	63.46	78.26
Workers member of any trade union	2.86	1.89	3.85
Workers approach trade unions to solve their problems	0.00	0.00	0.00
Workers expect trade unions to solve their problems	1.23	2.50	0.00

These fellow feelings come from mutual discussion of their professional problems. Over 80 percent of the households regularly discuss their professional problems with other households and 77.55 percent households discuss their personal problems with others (Figure 3.3.7). This difference is because while professional problems are also discussed outside the community, discussions on personal problems are restricted within the community. Most of the workers (88.24 %) think that they and their neighbours are in the same situation. About 91.35 percent of workers said they their colleagues cooperate with them.

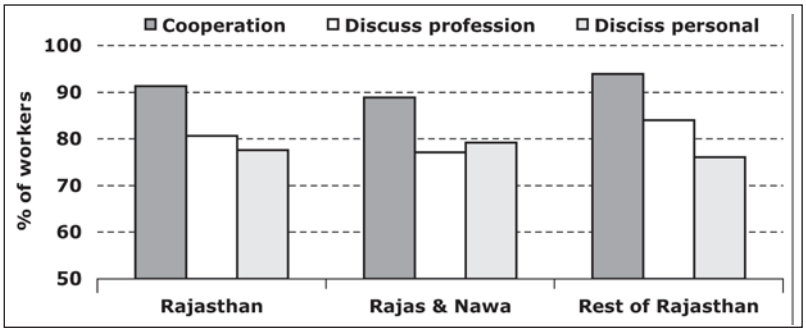

Figure 3.3.7 Pattern of interaction of workers

Most of the salt workers believe that external delivery institutions like Government alone can solve their problems. About 65 percent workers in the State and in Rajas and Nawa expect the Government to solve their problem. However, about 19 percent of the workers in the State also believe that the leaseholder/ entrepreneur (*Malik* or *Seth* in the workers lingo) can solve their problem within the production system through a more active role. In Rajas and Nawa,

An hour with Bandewals

Bandewals are traditional salt workers of Rajasthan. They are heterogeneous in respect of religion and caste, but homogenous in terms of their occupation. This work group came to be known as "Bandewals" vide a Supreme Court directive in 1980. The public sector company, Sambhar Salt Limited traditionally engages Bandewals on contract during the production season. The study team met the Bandewals in Sambhar. Following are the excerpts from the conversation:

"This is the only livelihood we have. Some of us have small plots of agricultural land, but production is negligible. At the beginning of the season, we sign a contract with the Company. They provide us material to construct rest sheds and some instruments for production and we sell them our produce at a pre-settled price. We arrange finance from the local moneylenders. They charge us a very high rate of interest – two or three percent a month. Some of us travel nearly 15 kilometres to work every day.

The good days are gone. We do not get our payments regularly. The Company has weakened in the last 10-15 years. Some of the traditional bandewal families have migrated to other areas in search of work. Some have left for lack of work. Earlier there were 600 families working here, now only 47 families are left.

To us, happiness means enough food and work. We have to buy new chappals every two or three months. Our skin becomes dry after working for the whole day in the saltpans. Have you ever seen the funeral of a Hindu salt worker? His body does not burn. We are not satisfied with our life. We are getting a raw deal. We do not want our children to lead the same life, but what else can they do. Our children are not educated; they cannot get a government job, so they will just follow our path and die."

Economics: As per the sub-lease agreement with Sambhar Salt, the Bandewals undertake production of salt on their plot of land. The area of sub-lease varies between a minimum of 10 acres to a maximum of 100 acres. The Bandewals hire pumps and buy fuel from the market.

The price of salt depends on quality, which is determined by the company. If the quality is good (NaCl > 98%) Bandewals get around Rs 160 a tonne, a lower grade (NaCl<98%) fetches around Rs 120 per tonne. The profit margin depends on the cost of inputs, which include mainly fuel and charges for hired labour, if any. On an average, a 10-acre plot gives the following returns:

Production	=	500 - 600 tonne
Price	=	Rs 120 – Rs 160 per tonne
Total Revenue	=	Rs 80 000 to Rs 100 000
Total Cost (Including fuel, hiring charge of pump,food, etc. Excluding cost of family labour, interest charges)	=	Rs 40 000
Net revenue	<	Rs 40 000 per season
Average family size	=	6
Per capita income from salt (season)	<	Rs 6 500
Per capita income per month in a salt production season (8 month)	<	Rs. 800

25.50 percent workers hold this view, while in the rest of Rajasthan only 10 percent workers support this view. This sharp difference in the workers' perception about the role of leaseholder reflects the situation of the industry in Rajas and Nawa and the rest of State. The details on expectations of the workers from institutions are given in Table 3.3.13.

Table 3.3.13 Expectations from institutions

Agencies (Figures are in %)	Rajasthan	Rajas and Nawa	Rest of Rajasthan
Salt Commissioner's Organisation	7.41	2.50	12.20
Ministry/Department of Labour	2.47	0.00	4.88
Government (nearest)	65.43	65.00	65.85
Leaseholders/Entrepreneurs	18.52	27.50	9.76
Non-Governmental Organisations	1.23	0.00	2.44
No one. The workers have to solve their problem themselves	2.47	2.50	2.44

3.4 Andhra Pradesh

Introduction

Andhra Pradesh was formed on 1st November 1956 under the States' reorganisation scheme. The State lies between 12.41' N and 22°N latitude and 77.0' E and 84.40' E longitude . It is bound by Maharashtra, Chhattisgarh and Orissa in the north, the Bay of Bengal in the east, Tamil Nadu to the south and Karnataka to the west (Figure 3.4). Andhra Pradesh is the fifth largest state in India with an area of 2 76 754 sq. km and accounts for 8.4 percent of India's territory. The State has a coastline of 972 km, which is the third longest among all the coastal states in India.

Figure 3.4 Map of Andhra Pradesh showing important salt producing areas

The State can be broadly divided into three regions: Coastal Andhra, Telangana and Rayalaseema. Coastal Andhra occupies the coastal plains between the Eastern Ghats, which run along the length of the State, and the Bay of Bengal. Two major rivers, the Godavari and the Krishna, flow through the State.

The economy is predominantly agriculture based and is the fifth largest in India in terms of area of operation and population. Agriculture provides employment to 65 percent of the State's population. There are 106.03 lakh operational land holdings, of which 85.51 lakh belong to small and marginal farmers constituting 81 percent holdings and together they hold 42 percent of the area-operated. Andhra Pradesh leads in the production of rice (paddy) and is called India's "Rice Bowl". Rice, tobacco, cotton, chilly, and sugarcane are the local crops. Andhra Pradesh is also one of the top states in the production of horticulture crops owing to its varied climatic conditions. Poultry farming and shrimp aquaculture are the other important sectors in the State.

Major industries in the State are automobile, pharmaceuticals, horticulture, textile and mining. Andhra Pradesh is well known internationally for its skills in chemical synthesis and process engineering and is fast emerging as the pharmaceutical capital of India. The State is the second largest storehouse of mineral resources in the country and mining has been identified as one of the growth engines for the overall development of industry and infrastructure. A total of 48 minerals are found in the State including vast unexplored resources of coal, limestone, oil and natural gas, manganese, iron ore, ball clay, fire clay, gold, diamond, graphite, dolomite, quartz, tungsten, feldspar, silica, etc.

Andhra Pradesh has shown tremendous growth in IT industry. Software exports from the State have risen from just Rs 40 million (US$ 1 million) in 1992-93 to Rs 20 000.00 million (US$ 400 million) in 2000-2001. Andhra Pradesh has been able to achieve above 100 percent CAGR (Compounded Annual Growth Rate) in the software sector during the period 1992-2000.

The GSDP growth rate during the period 1994-2002 in the State is 5.01 percent, which is lower than the national average of 5.89 percent for the same period. The average annual growth rate in the agriculture sector in this period was 1.0 percent and the average annual growth in employment was 1.1 percent as against 2.4 percent for the earlier decade. The per capita income at current prices has increased by 6.1 percent between 1998-99 and 1999-2000. While at Constant (1993-94) Prices it has gone up by 3.3 percent between 1998-99 and 1999-2000. The State ranked 23rd in terms of human development index in 1991 and 19th in terms of human poverty index as per National Human Development Report of 2001.

Study area

Production of salt in Andhra Pradesh is spread all along its long coastline from Nellore district in the south to Srikakulam district in the north. However, the major production areas are in Chinnaganjam and Iskapalle. Iskapalle alone contributes around 37 percent of the State's total salt production. The total salt production at this site was over 48 000 tonnes in 2004. Chinnaganjam, which is the other important site, produced 40 000 tonnes in 2004. However, Chinnaganjam employs about 62 percent of total salt workers. The site at Pandraka has large number of salt production units falling in the unrecognised sector and their production is much less than Iskapalle and Chinnaganjam. Table 3.4.1 summarises the profile of the salt industry in Andhra Pradesh.

Table 3.4.1 Profile of the salt industry in Andhra Pradesh

Sites (Figures are in %)	**Units**	**Area**	**Production**	**Employment**
Iskapalle	12.91	16.91	36.90	17.86
Chinnaganjam	15.08	16.80	30.68	62.08
Pandraka	61.41	41.20	5.56	3.72
Guruznapally	4.37	9.27	10.13	4.61
Polavaram	0.46	3.21	4.15	2.68
Bhimunipatnam	0.99	1.10	1.45	1.95
Naupada	4.79	11.52	11.12	7.09

The State has two rainy seasons – the first major spell is during July to October and the second shorter spell from November to January. Nellore in the south receives an annual rainfall of 110.05 cm while Visakhapatnam in the north receives an annual rainfall of 58.44 cm. The mean wind velocity varies from 3 to 14 km an hour. It reaches the maximum during April to June. The maximum temperature goes up to 36 to 40 degree celsius in the summer months with a relative humidity around 70 percent.

The BOBP-IGO study team visited Andhra Pradesh in the second half of February 2005. The team visited saltpans in Iskapalle, Chinnaganjam, Pandraka, Guruznapally, Polavaram, Bhimunipatnam and Naupada and villages surrounding these salt works. Around 200 salt workers, randomly selected from these sites were interviewed thorough a structured questionnaire and interactive community meetings. The team met officials from the SCO, members of the Central Advisory Board of Salt and held discussions with entrepreneurs and traders regarding the prospects and problems of the industry, including the situation with respect to the workers.

Table 3.4.2 Salt industry in Andhra Pradesh

Variables	Cat I	Cat II	Cat III	Cat IV	Total
Total area (in acre)	16 386	3 088	3 215	2 973	25 662
Actual area (in acre)	6 117	2 316	2 537	2 973	13 943
Number of units	25	94	744	971	1834
Production (in tonne)	98 100	52 600	79 200	75 600	305 500
Land utilisation rate (%)	37.33	75.00	78.91	100.00	54.33
Production per acre of total area (in tonne)	5.99	17.03	24.63	25.43	11.90
Production per acre of actual area (in tonne)	16.04	22.71	31.22	25.43	21.91
Production per unit per acre of actual area (in tonne)	0.64	0.24	0.04	0.03	0.01

The Salt Industry

Andhra Pradesh is the fourth largest producer of salt in India. The annual production is 3.06 lakh tonnes or 3.47 percent of the countray's total production in 2003. The State covers 3.47 percent of the total area under salt production in India, of which, 89 percent is in the recognised sector and 11 percent in the unrecognised sector. Presently, over 1 700 units are engaged in salt production in Andhra Pradesh and over 90 percent of these units are in categories III and IV.

During the last 15 years (1989 through 2003), the salt industry in Andhra Pradesh recorded a negative growth, with a CAGR of (-) 0.04 percent. The total annual production of salt in the State during these years varied from 2 - 4 lakh tonnes. The major portion of the State's output is consumed domestically. A small percentage goes to neighbouring Karnataka, Maharashtra, Chhattisgarh and Orissa. Due to small size of the units and not-so-suitable environmental conditions, production of salt in Andhra Pradesh is much less compared to its neighbouring state Tamil Nadu. Table 3.4.2 gives a snapshot of the salt industry in Andhra Pradesh.

In Chinnaganjam, the entrepreneurs are unhappy with the condition of physical infrastructure. The roads linking saltpans to the main roads are mostly muddy paths. Salt is carried by tractor from the production points and then loaded in trucks. This double loading increases the cost of production. Further, these roads become virtually inaccessible during the rainy season. During that time, salt is carried away from the platform to the truck loading point in head loads. This increases the loading time and loading cost to a great extent. Non-availability of power is another major problem. Operation of diesel pumps is not cost-effective. Supply of electricity to the saltpans can help in reducing the cost of production and making the industry more competitive.

However, leaseholders are not ready to pay for the cost of electric poles and other infrastructure needed. Moreover, a section of them are also concerned over the tariff. During the off-season, they are not ready to pay any charge for power infrastructure. The leaseholders also want agriculture power tariff to be applicable to the salt industry.

In Guruznapally and Bhimunipatnam the major worry of the leaseholders is the dying brine supply channel. They expect the SCO to address this problem. In Pennigudru and Guruznapally, the brine supply channel is silted and with the available brine only

25 percent of the leased area can be cultivated. Coupled with this, the sweet water inflow from paddy fields get mixed with the brine supply channel (Patal gudda), making the density of brine low and reducing the per head production to about 600 to 800 quintals per day. The leaseholders have proposed a 10 km-pipeline to be constructed from Mada Adbi at Chelangi on the Bay of Bengal to Patal gudda canal that can cover both Guruznapally and Pennigudru salt works. The pipeline can increase the area under cultivation to 95 percent and per head production to about 1 000 quintal per day. This will boost the income and employment of the workers on a permanent basis and the producers are ready to pay user charge for the brine.

The salt iodisation programme is also worrying the entrepreneurs. According to the entrepreneurs, consumers in Royalaseema do not like iodised salt. This limits the market for iodised salt. However, as per the prevailing law they are forced to produce iodised salt. They do not get any premium on this salt and hence suffer losses.

Another aspect of the iodisation story is that unrecognised units supply non-iodised salt in the market and those who produce iodised salt suffer. The entrepreneurs want the State Government to procure iodised salt from the local market for public distribution system as this will support the home industry and will encourage the entrepreneurs to produce iodised salt. At present, the State buys iodised salt from Tamil Nadu.

Industrial relations in some parts of the industry are also not healthy. In Naupada, entrepreneurs complain that the workers do not allow salt to be loaded in trucks from the platform. They want the earlier practice of stage-by-stage loading. In Bhimunipatnam, entrepreneurs say the local workers are not efficient and do not allow migrant workers to come and work. On the other hand, workers complain of low wages and irregular employment.

The industry is of the view that in recent years the SCO is concentrating mostly on labour welfare activities and ignoring the development of the industry. According to leaseholders[33] , the relations between the SCO and the industry should be productive and help the industry to grow. The Department should concentrate on the industry's development and encourage the leaseholders to carry out labour welfare programmes.

Cooperative societies and marginal leaseholders suffer from lack of storage facilities. So, they are forced to sell the entire produce before the onset of monsoon. This fetches a low price. Construction of storage grounds on cost sharing basis can help these societies get more uniform price throughout the year.

In Andhra Pradesh, most of the co-operatives in the salt industry lack co-operation in production and marketing. The members raise funds, undertake production and sell individually. Membership to the co-operative is generally inherited from father to son. The members' share of land in the process gets further divided into smaller holdings.

However, the social pride associated with such holdings (sometimes less than 50 cent (one acre is equal to 100 cents) of land on which the entrepreneur makes his own reservoir, condenser and crystalliser) more than compensates the diseconomies of size. There is lack of mutual trust among the members and they are also apprehensive of the possible opportunism by the secretary and the president in case of co-operative farming and/ or marketing. Owing to these factors, cooperative movement in Andhra Pradesh has failed to realize its potentials. The members fall easy prey to the local traders. They get loans from the traders to carry out production at an interest rate of three percent or even higher a month and are bound to sell the salt to the same trader at a rate less than the prevailing market price.

The Salt Workers

Income from salt related activities is low in Andhra Pradesh, compared to Gujarat or Tamil Nadu. The workers are employed mostly on fixed payment basis for eight hours work a day. There is considerable variation in the wage structure of male and female workers. The structure is biased toward male workers on the presumption that female workers are less productive. However, the smaller family size of the workers as compared to other salt producing states makes them comparatively better off.

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[33] *In the words of Mr V Viswanath Babu, Salt Manufacturer and member, Central Advisory Board, "It is like nurturing the hands while starving the body. They are not considering how the body could carry the weight of the hands and what the hands will do without a body."*

Human capital

Demography

The average family of a salt worker comprises 4.16 members, the lowest among the salt producing states. The overall sex ratio is 935 female per thousand male. According to the 2001 Census, the overall sex ratio in rural Andhra is 983 female per thousand males. Table 3.4.3 summarises the demographic information in respect of salt workers in Andhra Pradesh.

Table 3.4.3 Demography of salt workers in Andhra Pradesh

Characteristics	Andhra Pradesh	Chinnaganjam	Rest of Andhra Pradesh
Backward classes (%)	31.02	17.59	49.37
Migrants (%)	5.73	0.90	12.75
Sex ratio (females per 1000 males)	935	968	896
Family size	4.16	3.90	4.52
Of which,			
Backward classes	4.48	4.39	4.53
Local	4.15	5.80	3.95
Migrants	4.09	3.00	4.20

Workers from other classes dominate the workforce. Schedule caste and OBC workers constitute 31.02 percent of the population. Migrant workers, mostly from Tuticorin in Tamil Nadu constitute 5.73 percent of the workers population.

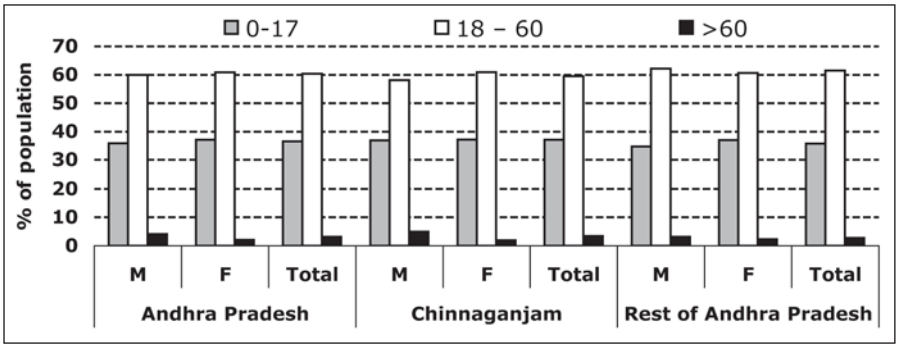


Figure 3.4.1 Age profile of salt workers

Age composition

About 60 percent of the population is in the 18 to 60 years age group and 36.49 percent of population is below 18 years. Only 3.11 percent of the population is more than 60 years of age. For rural population in Andhra the life expectancy at birth for male and female is 60 and 61.9 years respectively for the reference period of 1992-96 (Figure 3.4.1).

Education

Education level of workers in Andhra Pradesh is better than those in Gujarat and Rajasthan. The overall literacy rate in the age group six years and over is 59.89 percent. This is marginally higher than the rural literacy rate for Andhra Pradesh, which as per 2001 census is 55.33 percent. Table 3.4.4 summarises the information on the status of education among salt workers.

Table 3.4.4 Educational profile of salt workers
(Age 6 years and over)

Educational attainments (Figures are in %)	Andhra Pradesh			Chinnaganjam			Rest of the Andhra Pradesh		
	M	F	Total	M	F	Total	M	F	Total
Literates	64.32	55.24	59.89	64.80	54.17	59.54	79.86	64.54	72.14

Literacy rate among male and female workers is 64.32 percent and 55.24 percent respectively. Comparative figures for literacy rates among the rural male and female in Andhra are 66.13 percent and 44.36 percent respectively (Figure 3.4.2).

Among the literates, 39 percent of men and 42 percent women are functionally literate, that is they can read and write. Among the literates, those with at least five years of education are 38.11 percent. Out of total literate male population, 32.35 percent have completed up to 5 years of formal education, and out of total

literate females, 45.13 percent have completed 5 years of formal education. Population with at least 10 year of education is 13.63 percent, among literate males it is 17.23 percent and among literate females it is 9.23 percent.

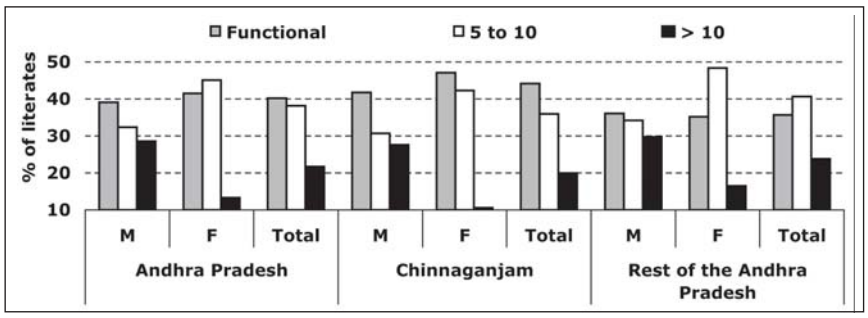


Figure 3.4.2 Break-up of literate population as per years of education

Children Reward Scheme (CRS)

In spite of the high literacy rate, awareness about the CRS is very low. Only 1.57 percent of the workers knew about it. Most of the workers (82 %) suggested that inclusion of NGOs in the Scheme and awareness camps by the officials of the SCO could help improve the implementations of the scheme.

Health

Around 94 percent of the workers perceive their health as good. Major health problems are pain in the joints, eye irritation, lung infection, headache, digestive problem, etc. The study shows 95.34 percent of the children are vaccinated and have also taken polio drops. However, the households are not sure what other vaccinations they have completed.

Table 3.4.5 Health status of salt workers

State of health (Figures are in %)	**Andhra Pradesh**	**Chinna-ganjam**	**Rest of Andhra Pradesh**
Workers perceived their health as good	92.17	91.87	92.52
Suffering from chronic illnesses	9.04	10.09	7.75
Complete any or all vaccination programme	98.92	98.13	100.00
Couple protection rate	19.35	10.19	32.05
Awareness about AIDS/HIV infection	57.67	60.91	53.16

The incidence of couple protection rate for salt workers in Andhra Pradesh is 19.35 percent. However, of late, many workers restrict their family size to two or three children. Generally, men observe no family planning practices, though women do undertake tubectomy operation. Awareness about HIV infection and other sexually transmitted diseases and possible protection is average. The study showed that 57.67 percent of population is aware of HIV/AIDS and possible protection. Awareness among females is lower than that of males. Table 3.4.5 summarises the information on some aspects of the health status of salt workers in Andhra Pradesh.

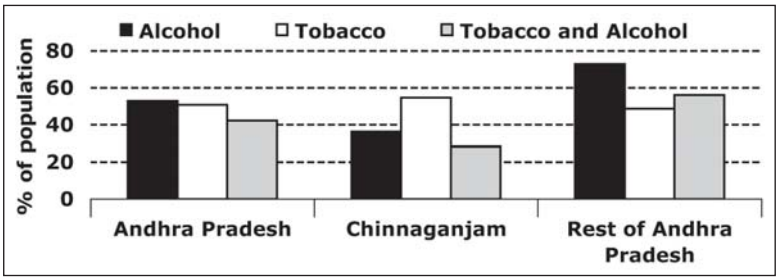


Figure 3.4.3 Addiction scenario in Andhra Pradesh

Consumption of cheap and locally brewed liquor is common. The workers said this was unavoidable because of the hard work on the saltpans. Nearly all men smoke, some of the women chew tobacco (Figure 3.4.3).

Aspiration

The study shows that 65.63 percent of the workers are not happy. About 93 percent of the workers think that there will be no change in the standard of living for them or for their children, rather it may get worse in the coming days. Table 3.4.6 summarises the information on this aspect.

Table 3.4.6 Aspiration levels of salt workers

Parameter (Figures are in %)	**Andhra Pradesh**	**Chinnaganjam**	**Rest of Andhra Pradesh**
Unsatisfied	65.63	65.18	66.25
Negative attitude towards future	93.26	98.21	86.42

Physical capital

Housing and amenities

Most of the workers (87.88 %) own a house. For the migrant workers, leaseholders generally provide temporary shelters. About 79.46 percent of the workers live in *katcha* houses. The rest have *pucca* or *semi-pucca* houses. As compared to salt workers, the statistics for population in rural Andhra indicates that 32.60 percent households have *pucca* house, 25.30 percent household have *semi-pucca* house and 42 percent households have *katcha* houses (Figure 3.4.4)[34].

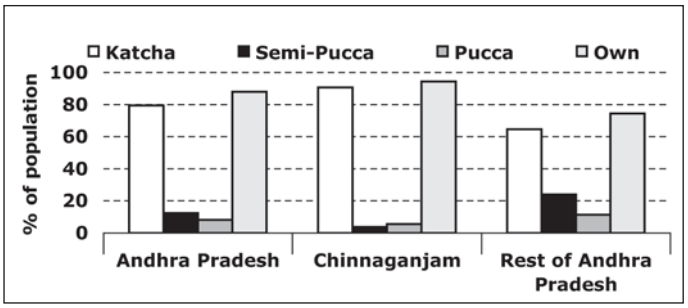


Figure 3.4.4 Dwelling and ownership status of workers

Of civic amenities, toilet facility is non-existent. Only 2.62 percent of the population has access to any type of toilet, excluding open field. However, there are no complaints of water or power shortage. Most of the workers have water source near their dwelling and say that the water is good. The majority (55.98 %) have electricity connection, which is better than the corresponding figure of rural Andhra Pradesh. As per the 1991 Census, 37.50 percent households have electric connection. Table 3.4.7 provides more details on these aspects.

Table 3.4.7 Civic amenities

Ownership, dwelling type and amenities (Figures are in %)	**Andhra Pradesh**	**Chinnaganjam**	**Rest of Andhra Pradesh**
Perceive drinking water quality as fair	89.89	98.15	78.75
Access to toilet facility	2.62	1.82	3.70
Electricity connection	55.98	42.72	72.84
Aware about NMAY	56.32	45.54	71.79

Namak Mazdoor Awaas Yojana (NMAY)

Awareness about the NMAY is quite high in Andhra Pradesh. About 55 percent of the worker population is aware of the Scheme, which is the second highest awareness level after Orissa. However, so far only one percent of the workers have benefited from the Scheme in the State.

Under the Scheme, the task of primary identification of the beneficiary lies with the leaseholders. In some instances in Andhra Pradesh, the workers have reported that the leaseholders have given preference to known persons only, who are otherwise not eligible for the Scheme. Such incidences have created conflict between the leaseholders and the workers. About 23 percent of the workers are not satisfied with the implementation and selection procedure and 68 percent want a third-party interference in the Scheme for better results. Table 3.4.8 gives an overview of the NMAY in Andhra Pradesh.

Table 3.4.8 Snapshot of NMAY

Population aware (%)	56.32
Benefited (%)	0.94
Positive points (%)	Amount of grant is good (36.18)
Negative points (%)	Processing Time (25.13), Implementation (13.07), Selection (9.55)
Suggestions (%)	Inclusion of NGOs (68.34), Awareness camp by the Salt officials (13.57), Intimation from leaseholder (11.56)

[34] *National Human Development Report 2001.*

Transport and communication

About 77 percent of the workers can access a telephone booth within 15 minutes or one kilometre from his dwelling. However, 19 percent of the workers cannot access a telephone booth if an emergency arises. On the other hand, most of the workers can access a bus stop within 12 minutes of walking from their house. The average distance from the local market is less than five km. About six percent households own a radio and 29 percent households own a television set (Table 3.4.9).

Table 3.4.9 Communication infrastructure

Communication infrastructure (Figures are in %)	Andhra Pradesh	Chinnaganjam	Rest of Andhra Pradesh
Population can access telephone within:			
<15 minutes	77.25	65.14	93.75
> 15 minutes	3.70	6.42	0.00
Not accessible	19.05	28.44	6.25
Mean time needed to travel to nearest bus stop (in minutes)	12.00	28.00	9.00
Nearest local market:			
< 5 km	85.41	97.22	68.83
> 5 km	14.59	2.78	31.17
Households having radio	5.75	7.62	2.90
Households having television	29.10	13.89	49.38

Health and education infrastructure

A middle school is situated within a five km radius of the village. However, for secondary level, students have to travel 8 to 10 km. Colleges are mostly situated in the nearby urban centres over 20 kilometres from the salt production areas. Non-availability of school in the village neighbourhood after the primary level discourages the parents to send their children, especially the girls for further study.

Primary health centres are generally available at the work spot. But, for most cases salt workers have to go to the nearest urban centres for treatment. On an average, it takes about two hours to reach a hospital.

Natural capital

Fuel

The salt workers are extensively dependent on common pool assets for their survival. The major fuel they use for cooking and other purposes is wood. The study showed that 95.88 percent of the population depends on wood for cooking, which they collect from fallow and forestlands surrounding the saltpans. Women on the way back home collect firewood.

Agricultural land

Around 10 percent of the working population have their own agriculture land, which is good for one crop. However, this is sufficient to maintain family diet for about six months.

Financial capital

Working condition

A typical local male salt worker is employed for 180 to 200 days a year and earns Rs 45 to 70 after working eight hours a day. Women get less, Rs 17 to Rs 25 a day. The minimum wage for the salt workers as on 31.12.1988 is between Rs 18.46 and 44.42. The minimum wage for unskilled agricultural labourer in Andhra Pradesh was between Rs 30 to Rs 36 a day as on 30.06.2000[35].

[35] *http://labourbureau.nic.in*

The following reasons are cited by the leaseholders to explain this gender difference in wages: (1) women work for only half a day after completing their house work, (2) they are less productive and (3) they are engaged in preparatory works only. However, according to the workers, there is not much difference in the working hours or productivity. Even for the same work women workers end up getting less then men.

Migrant workers from Tuticorin, Tamil Nadu are getting a higher remuneration. However, they also work longer, for 10 to 12 hours a day and are considered as skilled workers in the industry.

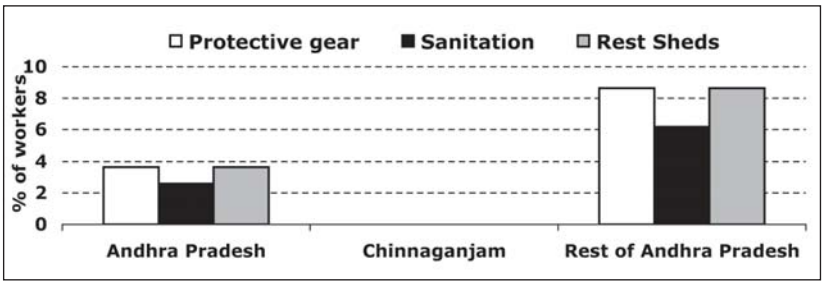


Figure 3.4.5 Amenities at the workplace

Most of the workers work without proper protection from the hot sun. Only 3.63 percent of workers have goggles. Rest sheds are available to a meagre 2.59 percent of the workers. Other facilities like sanitation are rare (Figure 3.4.5). Drinking water is generally supplied through a hired worker or tanker. Some firms do not provide drinking water. The workers have to walk three or four km to their work place carrying their own water. The workers rarely enjoy benefits like paid holidays or maternity benefit.

However, jobs during the next season are generally assured; 92.51 percent of the workers know that they will be re-employed. None of the workers are laid off or replaced during a production season; 6.74 percent workers have reported exploitation at the work place like seeking personal favours by hierarchy or co-workers. Table 3.4.10 summarises the data on amenities at the workplace.

Table 3.4.10 Job condition in Andhra Pradesh

Parameters (Figures are in %)	**Andhra Pradesh**	**Chinnaganjam**	**Rest of Andhra Pradesh**
Job security	92.51	97.30	85.53
Lay-off/ Replacement	0.00	0.00	0.00
Non-payment of wages by due date	3.37	0.00	8.00
Seeking personal favour by hierarchy/ co-worker	6.74	5.36	15.19

Income and employment

Salt workers in Andhra Pradesh are financially better off than most of the other salt producing states. This is due to the small family and scope of employment in agriculture and fishing during the off-season. Of the total salt workers' population, around 81.27 percent can get work in off-season in agriculture related activities. Around 9.46 percent of the population faces unemployment in weekly status.

The per capita monthly income (PCMI) from all sources during 2003-04 is estimated at Rs 620.86. In spite of the comparatively low income, the PCMI of the salt workers in the State is comparable with that of Tamil Nadu and Gujarat. Incidence of poverty among the salt worker is comparatively low. Two percent of the workers are below poverty line[36], which is much lower than the corresponding figure of rural poverty ratio in Andhra Pradesh (10.50 %). Thus, salt workers are better off then their other rural counterparts.

However, the workers do not save much. Only 6.32 percent of workers saved money during 2003-04. During the last five years (1999-2004), only 6.32 percent of the salt worker households saved. Many of the salt workers, especially the marginal leaseholders are highly indebted. The average amount of debt is over 21 000 rupees for the State. Most of the workers perceive their economic condition as poor (37.17 %) or very poor (51.83 %).

[36] *The poverty line in rural parts of the State is 262.94 as per the Planning Commission estimate in 1999-2000.*

The condition of the small and marginal leaseholder is no better than the worker. These leaseholders borrow from local traders at a high interest rate (36 to 60 % per annum). They are also bound to sell the produce to these traders at three or four percent less than the market price. Secondly, small and marginal leaseholders cannot stock their output. As a result, they get a price lower than what prevails during the early part of the season. Table 3.4.11 gives details on the income and employment scenario of the salt workers in the State.

Incidence of workers below18 years of age is significant in Andhra Pradesh. About 8.17 percent of the workers in the salt industry are below 18 years of age. In Chinnaganjam, the largest employer salt factory, incidence of workers in this age group (7.06 %) is marginally less than the rest of the state (9.06 %).

Table 3.4.11 Income and employment profile

Parameter (Figures are in %)	**Andhra Pradesh**	**Chinnaganjam**	**Rest of Andhra Pradesh**
PCMI for 2003-04 (in Rs)	620.86	620.59	621.17
Population below poverty line	1.56	0.90	2.47
Have secondary occupation	81.27	88.69	72.91
Unemployed in current weekly status in the age group 18 – 59 years	9.46	5.71	14.07
Male unemployed in current weekly status in the age group 18 – 59 years	7.02	4.96	9.35
Female unemployed in current weekly status in the age group 18 – 59 years	12.04	6.45	19.57
Average debt in rupees	21 264.29	25 016.67	18 450.00
Household saved money during 2003-04	6.32	9.01	2.53
Household saved money during 1999-2004	6.32	5.45	7.50
Workers below 18 years of age	8.17	7.06	9.60

Workforce composition

The workforce composition varies as per the requirements in the production process. Scrapping workers are mostly males while female workers are engaged in carrying of salt (Figure 3.4.6).

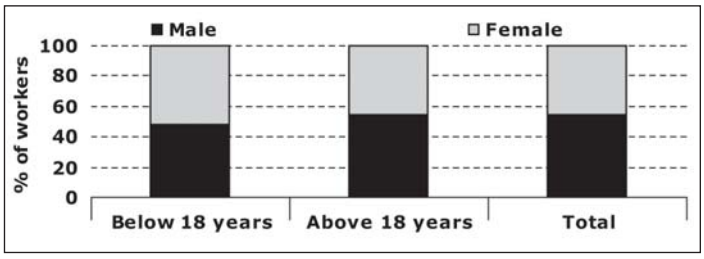


Figure 3.4.6 Workforce compositions

Social capital

Membership to registered trade unions is not common among the salt workers. Only 10.05 percent of salt workers are member of any registered union. Only 22.49 percent of the workers feel that it is important for them to organise under trade union (Table 3.4.12).

However, it is common for the workers to discuss their professional and personal problems among themselves.

Table 3.4.12 Role of Trade Unions

Perception/Interaction (Figures are in %)	**Andhra Pradesh**	**Chinna-ganjam**	**Rest of Andhra Pradesh**
Workers think they should organise	22.49	22.55	22.39
Workers member of any trade union	10.05	6.36	15.19
Workers approach trade union to solve their problems	1.57	1.79	1.27
Workers expect trade unions to solve their problems	1.55	0.89	2.47

Nearly all the workers (99.48 %) regularly discuss their professional problems with other workers and 96.37 percent households discuss their personal problems with other households.

One-fourth of the workers (24.87 %) think they and their neighbours are in the same situation. However, most of the workers (97.41 %) think their co-workers are co-operative. A considerable portion (95.85 %) of the salt worker household participates in community meetings at the village level to solve their problems. The details on this aspect can be seen in Table 3.4.13.

Table 3.4.13 Community-level interactions

Perception/Interaction (Figures are in %)	Andhra Pradesh	Chinnaganjam	Rest of Andhra Pradesh
Economically same as the others in the community	24.87	19.64	32.10
Get co-operation from colleagues	97.41	96.43	98.77
Workers discuss their professional problems with other workers/community	99.48	100.00	98.77
Workers discuss their personal problems with other workers/community	96.37	100.00	91.36

Most of the workers believe that external delivery institutions like Government alone can solve their problems. About 90 percent workers in the State and 86.61 percent in Chinnaganjam expect Government to solve their problem. While only 2.07 percent worker think that solution to their problems can be found within the production system through a more active role of leaseholders/ entrepreneurs. A small portion of 4.15 percent workers also wants the inclusion of NGOs in their development programmes (Table 3.4.14).

Table 3.4.14 Expectations from institutions

Agencies (Figures are in %)	Andhra Pradesh	Chinna-ganjam	Rest of Andhra Pradesh
Salt Commissioner's Organisation	2.07	1.79	2.47
Ministry/ Department of Labour	0.00	0.00	0.00
Government	90.16	86.61	95.06
Leaseholders/ Entrepreneurs	2.07	3.57	0.00
Non-Governmental Organisations	4.15	7.14	0.00
The workers have to solve their problem themselves	0.00	0.00	0.00

3.5 Maharashtra

Introduction

Maharashtra is the third largest state in India both in area (3 07 690 sq. km) and in population. The State is situated on the western coast of India, on the Arabian Sea between 15.6' N and 22.1' N latitudes and 72.6' E to 80.9' E longitudes. Maharashtra borders Goa and Karnataka to the south, Andhra Pradesh to the southeast, Gujarat, Dadra and Nagar Haveli, and Madhya Pradesh to the north, Chhattisgarh to the east, and the Arabian Sea to the west (Figure 3.5). The Western Ghats, which run north and south, parallel to the Arabian Sea, separate the western coastal portion of Maharashtra from the eastern portion of the State, which lies on the Deccan plateau. The coastal strip, which is about 720 km long and not more than 80 km wide, is also known as the Konkan strip and is famous for its paddy fields and coconut gardens.

The population as per 2001 Census was 9.69 crore. During the decade 1991-2001 the population growth in the State was 22.7 per cent (annual compound growth rate being 2.07 %). In-migration is one of the major reasons for the high population growth rate in the State. The projected population of the State as on 1 March 2004 is about 10.13 crore.

The State has registered impressive growth in literacy. The literacy rate of population aged seven years and above has improved from 64.9 percent in 1991 to 76.9 percent in 2001.

The preliminary estimate of the State Income (*i.e.* Net State Domestic Product) at current prices for the year 2002-03 was Rs 2 63 225 crore and the *per capita* State Income was Rs 26 386. At constant (1993-94) prices, the State Income in 2002-03 was estimated at Rs 1 54 466 crore and the *per capita* State Income was Rs 15 484.

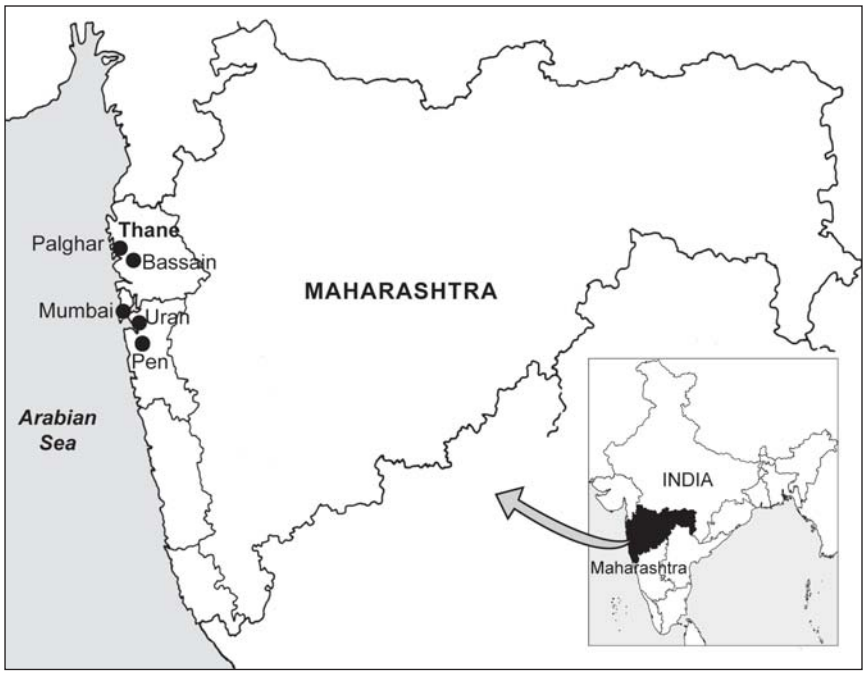


Figure 3.5 Map of Maharashtra showing important salt producing areas

Although, Maharashtra is a highly industrialised State, agriculture continues to be the main occupation of the people. Principal crops include rice, jowar, bajra, wheat, pulses, cotton, sugarcane, several oilseeds including groundnut, sunflower and soybean, turmeric, onions and other vegetables. The State has large areas under fruit cultivation of which mangoes, bananas, grapes and oranges are the main crops and earn considerable foreign exchange for the country. Irrigation facilities are being extended to further promote agriculture in the State.

Maharashtra has made great strides in the industrial sphere and accounts for 23 percent of the gross value of industrial output in the country. The State has a great tradition in textiles. Maharashtra is also known for the development of sugar industry on co-operative lines in which the farmers have acquired a share in the sugar mills. Pharmaceuticals, petrochemicals, heavy chemicals, electronics, automobiles, textiles, engineering, food processing and plastics are some of the major industries of the State. Small-scale industries have also come up in a big way in the State.

As per 55th round (July 1999-June 2000) National Sample Survey (NSS), data about a quarter of the population (25.02 per cent) in the State was below poverty line. The incidence of poverty in urban areas (26.81 %) was more than that of rural areas (23.72 %).

In the 59th round of National Sample Survey (January-December, 2003), information on 'Land and Livestock holding', and 'Debt and Investment' was collected. As per the survey, the average land owned per household was 1.01 hectares. About 70 percent households in rural areas were engaged in farming either as self-employed or as labourer. About 25 percent of the total rural households were estimated to be indebted and average amount outstanding was Rs 43 367 per indebted household.

The State enjoys a tropical monsoon climate; the hot scorching summer from March onwards results in the monsoon in early June. The seasonal rains from the western sea-clouds are very heavy and the rainfall is over 400 cm, on the Sahyadrian crests. The Konkan on the windward side is also endowed with heavy rainfall, declining northwards. East of the Sahyadri, the rainfall diminishes to a meagre 70 cm in the western plateau districts, with Solapur-Ahmednagar lying in the heart of the dry zone. The highly pulsatory character of the monsoon, with its short spells of rainy weather and long dry breaks, floods, as well as droughts add much to the discomfort of the rural economy.

Climate conditions, with annual rainfall of 203 to 305 cms and average humidity of above 75 percent, which retards evaporation, are not as favourable for salt production as in Gujarat. The yield per acre is 14 - 15 tonnes, the lowest among salt producing states. The season of salt manufacture is November to May.

Study Area

The BOBP-IGO study team visited Maharashtra during March 2005 and covered major salt producing sites *viz*. Phalkhar, Bassain, Rai, Uran and Pen. In all 82 workers were interviewed through structured questionnaires and the team had interactions with manufacturers, State Government officials and other stakeholders like traders and NGOs.

Phalkhar, Bassain and Rai are the main salt producing areas in the State, located around Mumbai. Most of the salt works in the area come under categories II and IV. There are a few cooperative societies (category III) also.

Due to recent industrial developments, majority of the salt works have been closed in Uran, which is located in Raigarh district (near Navi Mumbai). Pen, which also comes in Raigarh district, is not very far from Uran. Salt works here are more traditional and many of them come under category III.

The Salt Industry

Presently, the salt industry in Maharashtra has 197 units producing 193.3 (‘000) tonnes of salt annually. Of these, 192 units are recognised and five are unrecognised. The actual area under salt production in the State is 15 586 acres, of which majority is under recognised sector (99.78 %). The private sector constitutes 66.48 percent of the total production. Cooperative units man the remaining 33.06 percent. The share of the unorganised sector is a meagre 0.47 percent.

The salt industry in Maharashtra has degraded over time. Annual production is less than two lakh tonnes. The average productivity of salt land in the State has also fallen drastically, from 25-30 tonnes/acre in 1980 to just 14 or 15 tonnes/acre today.

This decline is mainly due to its location. Most salt works are located around Mumbai, which has witnessed a fast pace of urbanisation and industrialisation resulting in conversion of saltpans into more productive uses. The salt works have been using creek water as their source. Due to rapid growth in residential areas around the salt works, the entire wastewater goes into the creeks, thereby reducing the salinity levels. This increases the production cost, which in turn affects the economic viability to a considerable extent. In short, the salt industry in Maharashtra seems to be on its last legs and in the coming years it might totally disappear. This also sets an example of how location can be an advantage as well as a disadvantage.

The issue of land ownership is another major concern as far as the future of the industry in the State is concerned. As the land value has increased manifold, the old leaseholders are returning to claim ownership. Many sites are also under litigation. Some leaseholders with political influence have gained ownership. However, the issue has affected salt production adversely and in the last 15 years the production has fallen from four lakh tonnes to less than two lakh tonnes.

The Government has not renewed many leases in Phalkhar, Bassain and Rai area since 1988. The salt manufacturers are in a dilemma as they are not sure whether in the next season they will have the land for production. Apparently, there is no reason for non-renewal of the lease.

Market conditions too are not favourable to producers. Gujarat salt, which is superior in terms of cost and quality, captures most of the vital markets in the State. The salt produced in Maharashtra is limited to local consumption and to an extent caters to the small industries around Mumbai.

Uran used to be one of the important salt producing centres in the State. Due to industrial development, all the salt works are virtually closed. Jawaharlal Nehru Port Trust and the City and Industrial Development Corporation of Maharashtra Ltd (CIDCO) have engulfed the area. However, land ownership problem is cropping up in this area. It may be that in four to five years no salt work will be left in Uran. The high demand of land for industrial purposes has skyrocketed the price of land giving birth to a tussle over the ownership status of this land.

The traditional salt cultivators of this area are claiming ownership of the land and are in conflict with the State and the Central Governments who are at present holding the ownership over these lands. The SCO is also thinking of shifting its office to Pen, which still produces salt. Pen area has traditional salt works. However, the agriculture farmers complain that salt production increases soil salinity, which in turns affects the productivity of agriculture crops. There are a few cases of tussle over land ownership here as well. One positive point for the industry in Pen is the cooperative units, which are doing fairly well. The co–operative societies in Phalkhar and Bassain area are also functioning well.

The Compound Annual Growth Rate (CAGR) of salt industry in the State for the last fifteen years (from 1989 to 2003) is estimated at (–) 2.85 percent. This clearly shows the decline of the industry in the State. Coupled with this the salt produced in near-by Gujarat makes the industry less viable from the economic angle.

The Salt Worker

The salt industry in Maharashtra, on an average, employs 2 974[37] workers per day. This is 2.96 percent of the total number of average daily employment in the country. Most of the workers in the State are wage labourers except few migrant workers who are engaged on contract basis. The migrant workers are mostly from the adjoining areas of Gujarat.

In Pen area, unlike other salt producing areas in the State, *makta* system is prevalent. *Makta* is a sub-contract given to a family of a worker to produce salt in a particular piece of land given by the leaseholder. Under this system the workers have to pay *makta* (a certain pre-fixed amount for use of the land) at the end of the year to the leaseholder. *Makta* differs from owner to owner depending on the size and the productivity of the land. On an average, a 25 acre plot can fetch a *makta* of Rs 1 000 a year.

Human capital

Demography

The salt workers in Maharashtra are scattered and fragile due to the brittle nature of the industry. Most of the workers are local though a few belong to *adivasi* communities who have migrated permanently to the salt producing areas of Palkhar and Bassain from Diu. The migratory population is only 6.68 percent and active migration is mainly from the adjoining districts of Gujarat.

Proportion of the backward classes among total salt worker population is 51.79 percent (Figure 3.5.1). Backward classes mainly comprise *kolis, adivasis* who inhabit the coastal area. The Maratha community is dominant in the remaining salt worker's population.

Age composition

Age structure shows that 34.37 percent of the total population is below 18 years of age and 60.38 percent of the population is between 18 and 60 years group (Table 3.5.1). This shows that a large working population is available for work.

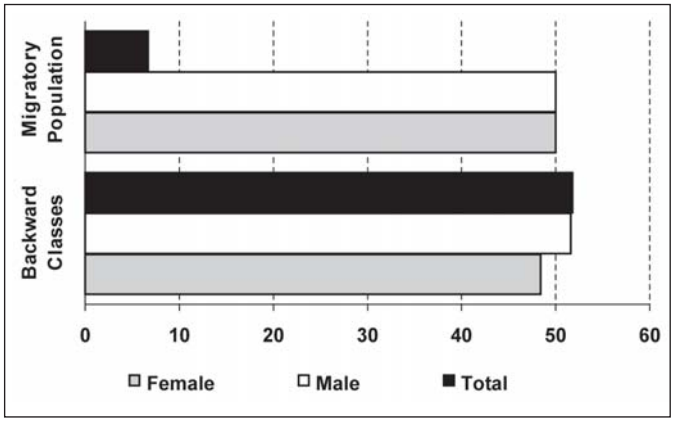


Figure 3.5.1. Demographic composition of backward and migratory population (%)

[37] *Annual Report, 2003-04, Salt Department, Government of India. (Annexure 4.2, p17).*

Table 3.5.1. Age-wise distribution of salt workers

Age group in years	0-17			18-60			>60		
	M	F	Total	M	F	Total	M	F	Total
Population (in %)	52.78	47.22	34.37	49.01	50.99	60.38	50.00	50.00	5.25

The median age for the salt workers in Maharashtra is estimated at 27 years. The average family size of the salt worker is 5.11. The sex ratio of salt workers' population for the State is estimated at 985. Comparative figure of sex ratio of rural population in Maharastra[38] is 959. In terms of sex ratio, the State ranks second among salt producing states (after Orissa). The age-wise details on sex ratio are given in Table 3.5.2.

Table 3.5.2. Age-wise sex ratio

Age group in years	0-17	18-60	>60	Total
Sex Ratio	895	1 040	1 000	985

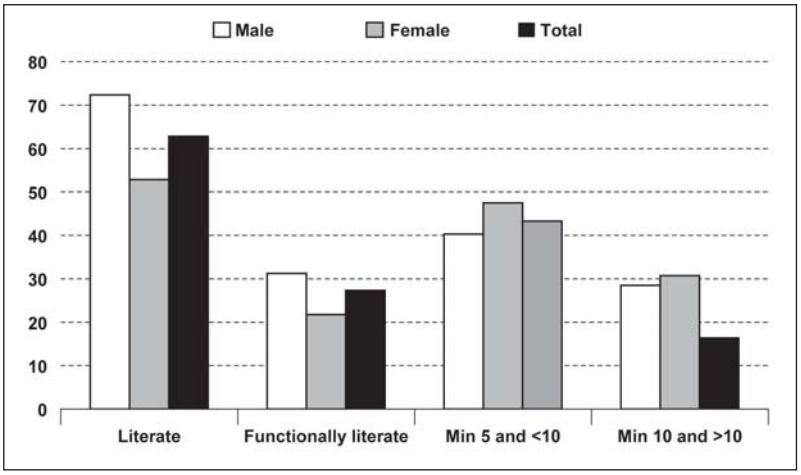


Figure 3.5.2 Education profile of salt worker

Education

Literacy rate among the salt workers was found to be 62.82 percent for age group of six years and over with 72.36 percent for men and 52.88 percent for women (Figure 3.5.2). The literacy rate among salt workers is low compared to the general rural literacy rate (82.17)[39] in the State.

In terms of educational attainment, the study showed that 43.27 percent workers are at middle class educational level and 16.33 percent at tenth class educational level, which is better than the other salt producing states.

Children Reward Scheme (CRS)

Table 3.5.3 Implementation of CRS

Salt workers aware of CRS	2.44 %

Though the State has good literacy rate among the salt workers, awareness about the CRS is very low (Table 3.5.3). This lack of awareness is in trend with the other states.

Health

Table 3.5.4 Health status of salt worker

State of Health (Figures are in %)	**Maharashtra**
Workers perceived their health as good	97.61
Suffering from chronic illnesses	2.15
Complete any or all vaccination programme	94.74
Couple Protection rate	64.94
Awareness of HIV/AIDS	60.27
Consume alcohol	23.17
Consume tobacco	40.74
Consume both tobacco and alcohol	9.88

About 98 percent of the salt workers perceive that they do not face much health problems (Table 3.5.4). Only 2.15 percent were reported to be suffering from severe illness like respiratory problems, digestive and heart diseases, etc. The workers have also reported to be suffering from skin diseases, eye irritation and back-pain. However, these diseases were not taken seriously as they were considered part of their work. Most of the salt workers (94.74 %) were covered under vaccination programme. The study also showed

[38] *National Human Development Report, 2001.*
[39] *National Human Development Report, 2001.*

that majority of the workers understood the importance of family planning and 64.94 percent workers reported regular use of birth control measures.

Awareness about HIV/AIDS is found to be good (60.27 %) among the salt workers. A numbers of workers (23.17 %) consume alcohol regularly and 40.74 percent of the population also consumes tobacco regularly.

Physical capital

Housing and amenities

Around 84.15 percent salt worker's population is living in their own house (Table 3.5.5). The remaining population stays on leaseholder's land or in a house allocated under one of the Government schemes. The study also showed that 65.85 percent workers in the State stay in the *katcha* houses, 25.61 percent in *semi-pucca* houses and 8.54 percent in *pucca* houses. Merely 13.41 percent population has access to toilet facility at the dwelling. The availability of safe drinking water is found good in the State (95.12 %) and 67.07 percent population has access to electricity.

Table 3.5.5 Housing and amenities

Ownership, dwelling type and amenities (Figures are in %)	**Maharashtra**
Own a house	84.15
Living in *katcha* house	65.85
Living in *semi-pucca* house	25.61
Living in *pucca* house	8.54
Access to fair drinking water	95.12
Access to electricity	67.07

Namak Mazdoor Awaas Yojana

About 37.8 percent of the salt workers' population knew about the Namak Mazdoor Awaas Yojana (NMAY) at the time of the survey (Table 3.5.6). Though the Scheme has been recently introduced, the executing agencies have to concentrate on generating more awareness about the Scheme. The responses received from the salt workers to make the Scheme more effective are summarised in Table 3.5.7.

Table 3.5.6 Implementation of NMAY

Salt workers aware of NMAY	37.8 %

Table 3.5.7 Responses from the salt workers

Suggestions (Figures are in %)	**Maharashtra**
Awareness camps by the SCO	90.32
Intimation from Leaseholder/ Labour Contractor	1.61
Inclusion of NGOs in the implementation of the Scheme	8.06

Transport and communication

The study shows that it takes an average of 13 minutes for a salt worker to reach the nearest bus stop. It also shows that 58.23 percent population have access to telephone within 15 minutes of walk, 21 percent people have to walk more than 15 minute and 11.22 percent workers do not have access to a telephone in their vicinity. Approximately, 9.31 percent population have a telephone facility at home. Around 22 percent population have TV set and 30 percent population own a radio.

Health and education infrastructure

The mean distance between dwelling and school is 3.31 km in Maharashtra. Almost all workers have access to hospital facility within a travel distance of less than one hour.

Financial capital

Income and employment

Per capita monthly income (PCMI) from all sources of a salt worker in Maharashtra is Rs 704, which is the highest among the salt producing states (followed by Gujarat and Tamil Nadu). The Study also showed that 18.29 percent of the total workers saved money during the last year and 17 percent have managed to save money during the last five years (Table 3.5.8). It is also interesting to note that the saving habit is regular among those who save.

Around 8.54 percent of the workers are below poverty line. This is much lower than the corresponding general figure of rural poverty ratio in Maharashtra (25.02 %)[40]. In other word, the salt workers in the State are economically better off than their other rural counterparts.

Table 3.5.8 Income and employment profile

Parameters (Figures are in % unless specified)	**Maharashtra**
PCMI for 2003-04 (in Rs)	704
Population below poverty line	8.54
Having secondary occupation	31.03
Unemployed in current weekly status	10.45
Security of the employment in the next season	51.85
Population managed to save in 2003-04	18.29
Population managed to save in five years (2000-04)	17.07
Proportion of population indebted	35.37
Average debt (in Rs)	29 206
Workers below 18 years of age	1.48

The salt workers have limited scope for employment as only 31 percent workers reported that they have secondary source of income (Table 3.5.8). Over 10.45 percent of the population does not get regular employment for at least one hour in a week. In terms of indebtedness, the salt workers are worse than those in other states. About 36 percent salt workers are found indebted and the average debt is estimated at Rs 29 206. However, this figure is less compared to average debt (Rs 43 367) of rural population of Maharashtra.

Incidence of workers below 18 years of age in the salt industry in Maharashtra is insignificant. However, the study shows that 1.48 percent of workers below 18 years of age exists in the State. In fact, families who exclusively work on saltpans, particularly in Pen area where the *makta* system is prevalent, children do minor jobs to help the family.

Workforce composition

The workforce composition varies as per the requirements in the production process. Scrapping workers are mostly males while female workers are engaged in carrying of salt. Table 3.5.9 summarises the workforce composition.

Table 3.5.9 Workforce composition

Age group	**Male**	**Female**
Below 18 years	71.43	28.57
Above 18 years	77.10	22.90
Total	76.81	23.19

Working Condition

Job security among the salt workers is not good as only 51.85 percent workers feel that their job is secure for the next season (Table 3.5.10).

Use of protective gear is reasonably good and 76.54 percent salt workers use them. However, no toilet facilities are provided at the work place. Rest sheds are available to 56.79 percent of the salt workers.

Table 3.5.10 Working conditions of salt workers

Amenities (Figures are in %)	**Maharashtra**
Protective Equipments	76.54
Toilet	0.00
Toilet for women	0.00
First Aid	45.68
Crèche	2.50
Rest Sheds	56.79

Natural capital

Fuel

Though the salt works are located near Mumbai, the widely prevalent source of fuel is wood (83 %). About 14 percent of the population uses LP gas and 2.15 percent population uses kerosene as major source for fuel.

Agriculture land

The salt worker's population with agriculture land is estimated at about 45 percent with an average land holding of 2.73 acres**.** Main crop is rice as all salt works are located in the Konkan area, which gets good rain in the rainy season. Agriculture produce is mostly consumed in the family.

[40] *National Human Development Report, 2001.*

Social capital

The study showed that about 94 percent of the households regularly discuss their professional and personal problems with neighbours and friends. The majority of the workers (65 %) think they and their neighbours are in the same situation and nearly all the workers feel that their co-workers are co-operative. No worker has reported exploitation by hierarchy/ co-workers. About 94 percent of the salt worker households also participate in community meetings at the village level to solve their problems.

The study also showed that 98.68 percent of the salt workers think that it is important to organise for their collective benefit. However, no salt worker has approached trade unions to solve their problem. About 8 percent of the population is member of trade unions, however, workers have less faith in them. On the contrary, the salt workers have good faith in Government and 94.12 percent of the workers expect that Government could solve their problems. Small and equal numbers of workers (1.47 % each) also expect the leaseholders, NGOs and the SCO to solve their problems.

3.6 Orissa

Introduction

The formation of the linguistic province of Orissa in 1936 may be regarded as a landmark in the history of the evolution of the Indian Union. The demand for linguistic states, which became so conspicuous after independence, had its genesis in the movement of the Oriya-speaking people for a separate province on the basis of language during the latter half of British rule. This movement had a long and chequered history ranging from the last quarter of the nineteenth century till the new province was created on 1st April 1936.

Figure 3.6 Map of Orissa showing important salt producing areas

Orissa is located between the parallels of 17.49' N and 22.34' N latitude and meridians of 81.27' E and 87.29' E longitude. The Bay of Bengal on the east, Madhya Pradesh on the west and Andhra Pradesh on the south bound it (Figure 3.6). It has a coastline of about 450 kms. It extends over an area of 155 707 sq. kms. On the basis of homogeneity, continuity and physiographical characteristics, Orissa has been divided into five major morphological regions: coastal plain in the east, middle mountainous and highlands region, central plateaus, western rolling uplands and the major floodplains.

The total population of Orissa is 367 06 920 as per the provisional results of the Census of India, 2001. The scheduled tribes and scheduled castes population constitutes approximately 40 percent of the total population. Over 76 percent of the people depend on agriculture. The agricultural sector accounts for 32 percent of the gross state domestic product (GSDP) and 62 percent of the total employment. Rice, pulses, oil seeds, jute, mesta, sugarcane, coconut and turmeric are important crops. The State contributes one-tenth of the rice production in India. Among cash crops, jute accounts for the maximum area. The State is the fourth largest producer of jute after West Bengal, Bihar and Assam. Sugarcane is the second most important cash crop in Orissa. Among the new cash crops, the most important is cashew, which has been planted extensively in Cuttack, Puri and Ganjam districts.

Orissa is one of the richest states in India in terms of its share of mineral resources and accounts for large reserves of bauxite, iron ore, coal and chromites. The State also has large base of thermal coal, which can act as a cheap source of energy.

Despite its rich natural resources, the State is suffering from poor industrial development due to lack of adequate infrastructure facility. For instance in the 1990s, Orissa achieved a growth rate of 4.3 percent compared to the national average of 6.7 percent. There is stagnation in per capita income in the past two decades. Around 17.5 million people live below the poverty line. Poverty is acute in the western and southern districts of the State. Mining and industry account for only 6.4 percent and 20.7 percent of its SDP, respectively. However, Orissa Government is now taking significant steps to streamline the economic scenario of the State through expanding market and inviting private players to utilise her vast reserve of mineral resources.

Study area

Table 3.6.1 Status of salt industry

Place	Units	Area	Production
Ganjam	44	3 735.02	37 435
Orissa	46	4 560.00	37 900
Share of Ganjam (%)	95.65	81.91	98.77

The climatic condition of Orissa is not very favourable to salt production. The coastline is around 370 km long. However, due to its fractured nature long stretches of land are not available. The average annual rainfall is 80 to 140 cms and maximum air temperature is 25^{o} to 35^{o} C. The relative humidity is 60 to 70 percent. The salt production season lasts for six or seven months. The preparatory works start in late December and the season continues up to June/ July depending on the arrival of the monsoon. Production areas are mainly in Ganjam, Puri and Balasore districts. However, at present, the salt production activities are concentrated within Ganjam district. Table 3.6.1 gives a snapshot of the situation of Orissa salt industry in 2003.

The BOBP-IGO study team toured Orissa during the first week of March 2005 and visited saltpans in Ganjam, Huma, Sumadi and Surula in Ganjam district. The team met officials from the Salt Commissioner's Organisation, Regional Advisory Board Members, labour union leaders and held discussions with the salt entrepreneurs regarding the prospect and problem of the industry and labour situation. Workers were selected at random and interviewed through a structured questionnaire.

The Salt Industry

Orissa once produced the finest quality of salt and supplied it to Bengal Province and Central India. However, at present the industry in Orissa is fighting for its survival. In the last 15 years, from 1989 to 2003, the industry recorded a negative CAGR of 5.0 percent. During 2003 the industry produced just 38 thousand tonnes of salt compared to 1.03 lakh tonnes of salt in 1989. This production accounted for only 0.22 percent of the total salt produced in the country during the corresponding period. The area under salt production in the State is 0.83 percent of the total salt producing area in the country. Presently, there are 46 units in the recognised sector. Leaving four units, the other units are in categories II and III. The industry employs a little over 700 workers a day on an average during the production season. Table 3.6.2 summarises the situation of the industry in Orissa.

Table 3.6.2 Salt industry in Orissa in 2003

Variables	Cat I	Cat II	Cat III	Total
Total area (in acre)	1 955	709	1 931	4 595
Actual area (in acre)	905	674	1 094	2 673
Number of units	4	19	23	46
Production (in tonne)	13 800	10 200	13 900	37 900
Land utilisation rate (%)	46.29	95.06	56.65	58.17
Production per acre of total area (in tonne)	7.06	14.39	7.20	8.25
Production per acre of actual area (in tonne)	15.25	15.13	12.71	14.18
Production per unit per acre of actual area (in tonne)	3.81	0.80	0.55	0.31

However, Orissa has positional advantage in terms of its location. It is situated close to the eastern and north-eastern states. The biggest concern for salt is the transport cost. Orissa due to its positional advantage can invade this market, which now imports salt from Gujarat. However, lack of entrepreneurial skills, environment, brine quality and unhealthy industrial relations have kept the industry at bay.

Several site-specific issues were noticed during the study. Sahib canal, the main canal supplying brine to Ganjam, has problems with the sluice gate. Leaseholders pointed out that, as the sluice gate is 1-½ feet above the ground it couldn't store tidal water. The salt producers in Surula said that the main brine supply channel was silted. It was not possible for users to bear the high cost of de-siltation. They want the State Government or the SCO to take this responsibility. One of the major beneficiaries in Surula, Bahuday Salt Production and Sales Co-operative Society was ready to pay a user fee for accrued benefits from the de-silted channel.

Marketing of salt is another concern for the leaseholders. The domestic demand of salt in Orissa is limited. At present due to low production, the supply matches the demand. Orissa's potential markets are in West Bengal and the north-eastern states. Still, in spite of distance, Gujarat salt is cheaper in the above-referred states than Orissa salt and the quality is also superior.

Since independence, the Government of Orissa and the SCO have considered many committee reports and proposals for revival of the industry in the State without any effective implementation. One proposal was to establish a model salt farm in Ganjam. Over the period the industry has weakened further and according to the leaseholders no effective action has been taken. They have also complained about lack of co-ordination between the State Government and the SCO.

On the positive side, relative success rate of the co-operatives in Orissa is quite impressive. Even with an average membership of over 100 these co-operatives function at par with private firms. Except Sumadi, the industrial relation is fairly good in Orissa. In Sumadi, according to the salt workers, some private salt works have closed without paying the workers their dues. The workers are also not satisfied with the role of the State Government and the SCO in settling these issues.

The Salt Workers

Income from salt related activities is low in Orissa due to a short production season coupled with low wage rate. The workers are employed mostly on fixed payment basis, for eight hours of work a day. According to local practices in some places if the season continues beyond its normal limit due to delay in monsoon, the worker will appropriate the entire production after the normal deadline of the production season.

Human capital

Demography

Salt workers in Orissa comprise people of both Telugu and Oriya origin. Among the workers of Oriya origin, women generally do not work in the saltpans. As a result the share of women workers is low in the State. The average family of a typical salt worker in Orissa comprises 6.10 members, which is the second highest among the salt producing states of India. The overall sex ratio of 989 female per thousand male is on the upper side of national average (Table 3.6.3). As per the 2001 Census the sex ratio for rural Orissa is 986.

Table 3.6.3 Demography of salt workers

Characteristics	Orissa
Backward classes (%)	7.41
Migrants (%)	3.33
Family size	6.10
Backward classes	8.00
Sex ratio (females per thousand males)	989

Backward classes and inter-village migrant workers constitute 7.41 percent and 3.33 percent of the population respectively. The backward classes have a higher family size of 8-member household.

Age composition

The study shows that of the total population, 58.47 percent of the population is within 18 to 60 years of age, 34.43 percent below 18 years and only 7.10 percent of the population is more than 60 years of age. Of the total male population about 93 percent is below 60 years while of the total female population about 95 percent is below 60 years (Figure 3.6.1).

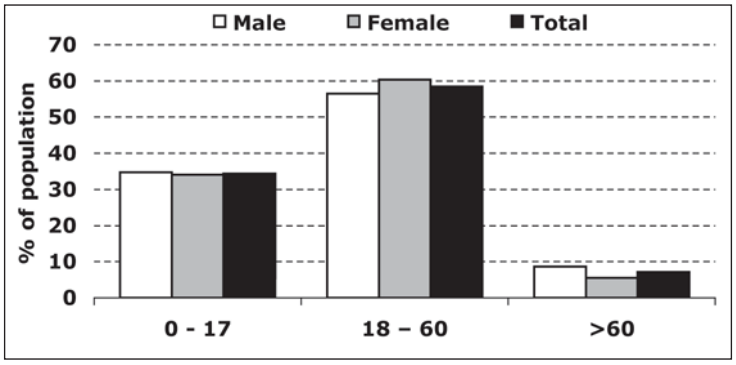


Figure 3.6.1 Age-sex composition of salt workers

Education

The overall literacy rate in the age group six year and above is 34.46 percent. Total male and female literacy is 47.19 percent and 21.59 percent respectively. The literacy rate of the salt workers is far below the State's rural literacy rate. As per the 2001 Census, the literacy rate for rural Orissa is 60.44 percent, which comprises 73.57 percent of male literates and 47.22 percent of female literates. Table 3.6.4 summarises the status on education.

Table 3.6.4 Educational profile of salt workers

Age 6 years and over

Educational attainment (Figures are in %)	**Male**	**Female**	**Total**
Literates	47.19	21.59	34.46

Among the literate salt workers, the population with at least five year of education is 45.90 percent. Out of total literate male and female population, 16.67 percent males and 52.53 percent female are only functionally literate. Among the literates, population with at least 10 year of education is 19.67 percent (Figure 3.6.2).

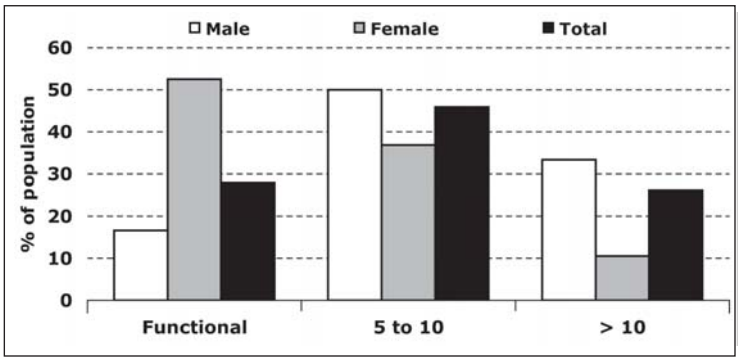


Figure 3.6.2 Break up of literates as per years of education

Children Reward Scheme (CRS)

Awareness about the CRS is poor. Only 3.57 percent of the workers knew about the Scheme. Most of the workers suggested that awareness camp by the SCO could help to improve the situation.

Health

Around 94 percent of the workers perceive their health as good. Common problems are pain in the joints, eye irritation, lung infection, headache and digestive problem, etc. Among those who perceived their health as poor, 11.48 percent suffered from these chronic illnesses. The incidence of child vaccination in Orissa is not satisfactory. Only 21.74 percent of the children are completely or partially vaccinated.

Table 3.6.5 Health situation of salt workers

State of health (Figures are in %)	**Orissa**
Workers perceived their health is good	94.44
Suffering from chronic illnesses	11.48
Complete any or all vaccination programme	21.74
Couple protection rate	63.64
Awareness about AIDS/HIV infection	71.43
Consume alcohol	59.26
Consume tobacco	62.96
Consume both tobacco and alcohol	25.93

The incidence of couple protection rate for salt workers in Orissa is 63.64 percent. Awareness about HIV infection and other sexually transmitted diseases and possible protection is good. The study showed that 71.43 percent of population is aware about HIV/AIDS.

Over 59 percent of the workers consume alcohol weekly. About 63 percent of the workers have the habit of consuming tobacco in various forms like *Bidi, Paan masala, Tambaku,* etc and about 26 percent of the workers are addicted to both alcohol and tobacco. Table 3.6.5 summarises the situation.

Aspiration

The study showed that 73.33 percent of the salt workers are unhappy with their life and 66.67 percent thinks that there will be no change in their livelihood condition in the future or for their children. It may rather get worse (Table 3.6.6).

Table 3.6.6 Aspiration levels of the salt workers

Parameter (Figures are in %)	**Orissa**
Unsatisfied	73.33
Negative attitude towards future	66.67

Physical capital

Housing and amenities

Most of the salt workers (88 %) own a house. About 66.67 percent of the workers live in *katcha* houses and the rest in *pucca* or *semi-pucca* houses. About 30 percent of the population use any type of toilet, which is far better than in other states. In rural Orissa, 10.20 percent have *pucca* house, 19.10 percent have *semi-pucca* house and 70.60 percent have *katcha* house as per the 50th round of National Sample Survey (1993-94)[41]. About 10 percent households are using toilet in rural Orissa as per the 1991 Census.

Table 3.6.7 Housing and amenities

Ownership, dwelling type and amenities (Figures are in %)	**Orissa**
Living in *katcha* house	66.67
Living in *semi-pucca* house	14.81
Living in *pucca* house	18.52
Own a house	88.00
Of which,	
Katcha	77.27
Semi-pucca	13.64
Pucca	9.09
Perceive drinking water quality as fair	82.76
Access to toilet facility	30.00
Electricity connection	23.33

Most of the workers have water sources where they live. About 83 percent of the population have access to fair quality of water as per their own perception. Around one-fourth (23.33 %) of the workers have electricity connections to their houses. Table 3.6.7 summarises the status of housing and amenities available to the salt workers in Orissa.

Namak Mazdoor Awaas Yojana (NMAY)

Awareness about the NMAY is quite high in Orissa. About 64 percent of the working population is aware of the Scheme. This is due to a census of salt workers undertaken by the SCO in Orissa just before the BOBP-IGO study. However, people have very less or no idea about the structure and implementation of the Scheme. Table 3.6.8 provides an overview of the response of the salt workers to the NMAY.

Table 3.6.8 Implementation of NMAY

Population aware (%)	64.29
Benefited (%)	0.00
Positive points (%)	Cannot say (76.66)
Negative points (%)	Cannot say (66.66)
Suggestion (%)	Cannot say (43.33), Awareness camp by the Salt officials (20)

Transport and communication

About 52 percent of the workers can access telephone booth within 15 minutes of walk from their dwelling and 37 percent can access a telephone booth after a 15 minutes walk. However, 11 percent of the workers

[41] *National Human Development Report, 2001.*

have hardly any access to telephone booth. On the other hand, most of the worker can access a bus stop within 21 minutes walk from the dwelling. The average distance from the local market is less than 5 km. About 19 percent households own a radio and about 7 percent own a television set (Table 3.6.9).

Table 3.6.9 Communication infrastructure

Communication infrastructure (Figures are in %)	**Orissa**
Population can access telephone within:	
<15 minutes	51.85
> 15 minutes	37.04
Not accessible	11.11
Mean time needed to travel to nearest bus stop (in minutes)	20.30
Nearest local market:	
< 5 km	82.14
> 5 km	17.86
Households having radio	19.00
Households having television	7.00

Health and education infrastructure

Schools up to primary level are available within a 3 km radius of the salt worker villages. For higher education, they have to travel around 30 kms by bus. Primary health centres are available within one to three kms of their work sites. However, in most cases, the workers have to go to nearest urban centres for treatment. On an average, it takes less than two hours to reach a hospital.

Natural capital

Fuel

About 90 percent of the salt workers in Orissa are extensively dependent on wood for cooking. They collect it from fallow and forestlands surrounding the saltpans.

Agriculture land

Around 23 percent of the salt workers population own agriculture land, which is good for one crop. However, the returns from agriculture are meagre and not sufficient to meet the household requirements for half a year.

Financial capital

Working condition

A typical salt worker in Orissa works for 180 to 200 days a year and earns around Rs 50 after working eight hours a day. The minimum wage for a worker is Rs 30.00 - 2.50 - 32.50 as on December 1988. The minimum wage rate notified by the State during June 2000 for unskilled agriculture workers is Rs 42.50 per day with provision for variable dearness allowance.

Table 3.6.10 Amenities at the workplace

Amenities (Figures are in %)	**Orissa**
Protective gear	0.00
Sanitation	0.00
Rest Sheds	65.52
Job security	100.00
Lay-off/ Replacement	42.86
Non payment of wages by due date	89.29
Seeking personal favour by hierarchy/co-worker	37.04

The salt workers toil with out any protection under the hot sun. Rest sheds are available at the work place to about 66 percent of the workers. Other facilities like sanitation are not available.

The possibility of re-employment condition is satisfactory in Orissa. The workers are sure they will be re-employed in the same firm in the next season. However, around 43 percent of the workers are laid off or replaced. They also face the problem of non-payment of wages on due date (89.29 %) and other forms of exploitation like non-payment of wages at all in some sites. Table 3.6.10 gives the details of the amenities at the work site.

Income and employment

The per capita monthly income (PCMI) from all sources during 2003-04 is Rs 339.89, which is the lowest per capita income among the salt producing states. The reasons are short production season, sick industry and lack of better livelihood options.

Incidence of poverty among these workers is high and 36.67 percent of the workers are below poverty line[42]. Correspondingly in rural Orissa, 48.01 percent of the population was below poverty line during 1999-2000. Although 64 percent people have option for secondary occupation like agriculture, but agriculture wage is also low. Therefore, many workers migrate to nearby urban centres to work on daily wages during the off-season. Unemployment rate is around 12.50 percent in current weekly status. Most of the workers perceive their economic condition as poor or very poor (86.66 %).

Table 3.6.11 Income and employment profile

Parameter (Figures are in % unless specified)	**Orissa**
PCMI for 2003-04 (in Rs)	339.89
Population below poverty line	36.67
Have secondary occupation	64.23
Male unemployed in current weekly status in the age group 18 – 59 years	12.50
Average debt (in Rs)	18 666.67
Household saved money during 2003-4	23.33
Household saved money during 1999-2004	26.67
Workers below 18 years of age	20.24

During 2003-04, 23 percent of the salt worker population saved some money. It is less than the average rate of proportion of the household saved money during the last five years (1999-2004), which is 26.67 percent. This also reflects on the declining trend in the real income of the workers during the period. Many workers are highly indebted, the average amount of debt being Rs 18 666.67 (Table 3.6.11).

Incidence of workers below 18 years of age is significantly high in Orissa. About 20.24 percent of the workers in the salt industry are below 18 years of age. This explains to some extent the larger family size and low level of educational attainment in the State.

Workforce composition

The workforce composition varies as per the requirements in the production process. Scrapping workers are mostly males while female workers are engaged in carrying of salt (Figure 3.6.3).

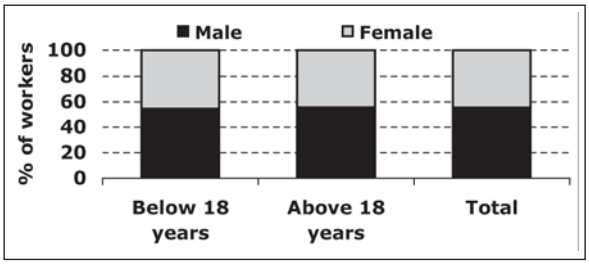


Figure 3.6.3 Workforce composition

Social capital

Membership to registered trade unions is not common. Only 13.04 percent of salt workers are a member of any registered union and 25 percent feel that it is important for them to organise under trade unions (Table 3.6.12).

Table 3.6.12 Social capital: Role of Trade Unions

Perception / Interaction (Figures are in %)	**Orissa**
Workers think they should organise	25.00
Workers member of any trade unions	13.04
Workers approaches trade unions to solve their problems	0.00
Workers expect trade unions to solve their problems	6.67

However, it is common among the workers to discuss their professional and personal problems among themselves. Nearly all workers (93%) regularly discuss their professional problems with other workers and 82.76 percent households discuss their personal problems with other households.

About half of the workers (46.67%) think that they and their neighbours are in same situation. Most of the workers (92.86%) consider their colleagues as co-operative. A considerable portion (43.33%) of the salt worker household participates in

Table 3.6.13 Social capital: Community-level interaction

Perception/Interaction (Figures are in %)	**Orissa**
Economically same as the other	46.67
Get co-operation from colleagues	92.86
Discuss their professional problems	93.10
Discuss their personal problems	82.76

[42] *The poverty line in the rural part of the State is 323.92 as per the Planning Commission estimate in 1999-2000.*

community meetings at the village level to solve their problems (Table 3.6.13).

Most workers believe that external delivery institutions like Government and the SCO alone can solve their problems. About 60 percent workers in the State expect SCO to solve their problem. Noticeably, expectations from the leaseholders are negligible. Above 17 percent workers also liked the inclusion of NGOs in programmes aimed at their development (Table 3.6.14).

Table 3.6.14 Expectations from institutions

Agencies (Figures are in %)	**Orissa**
Salt Commissioner's Organisation	60.00
Ministry/Department of Labour	6.67
Government	10.00
Lease holders/Entrepreneurs	0.00
Non-Governmental Organisations	16.67

3.7 West Bengal

Introduction

West Bengal is located at the centre of the eastern region of India. The State lies between 27°13'15" and 21°25'24" north latitudes and 85°48'20" and 89°53'04" east longitudes. It is strategically positioned with three international frontiers, Bangladesh, Nepal and Bhutan. The State has borders with Bihar, Orissa, Sikkim and Assam (Figure 3.7). It stretches for about 700 km, from the Bay of Bengal in the South to the mighty Himalayas in the North. The State has an area of 88 752 sq. km, which is around three percent of the total area of the country. About nine percent of the country's total population lives in West Bengal.

West Bengal has two natural divisions. The Himalayan north and the alluvial plain that lies south of it. West Bengal is essentially a flat, featureless alluvial plain, and a large portion of it being a part of delta of river Ganga. The coastal areas have two distinct characters, west of the Hooghly the coastal strip in Midnapur district consists of sand dunes and salt marshes mingled with each other. The marshes are formed behind well-developed sand bars. At places there are large shifting sand dunes, which have a tendency to blow landwards and encroach upon the cultivated land behind. Vistas of casuarina plantations are being developed all along the coast to fix the dunes and stop sea erosion.

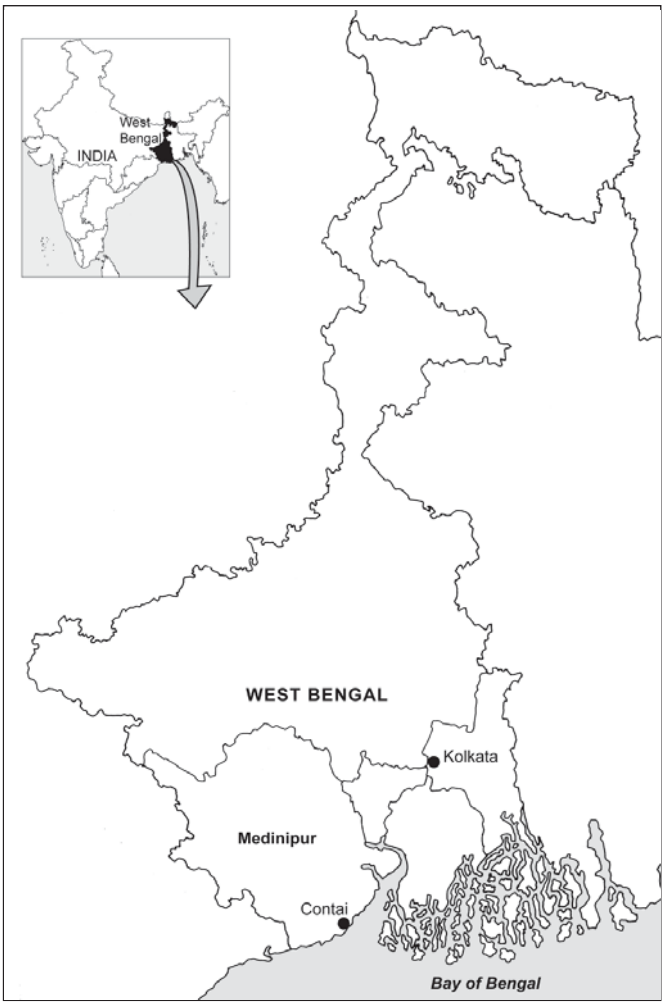


Figure 3.7 Map of West Bengal showing important salt producing areas

West Bengal has a tropical climate. The hot season lasts from mid-March to mid-June, with the day temperature ranging from 38° C to 45°C in different parts of the State. The high temperature often causes troughs of low pressure to form on the plains inviting sudden brief storms known as *kal-baisakhi*, accompanied by thundershowers. These summer storms can be quite destructive. The monsoon arrives by the middle of June. Winter, which lasts about three months, is mild over the plains, the average minimum temperature not falling below 15° C. It is attended by a cold and dry northern wind, substantially lowering the humidity level. Winter is the season for rabi crops- pulses, potato, vegetables and citrus fruits.

Agriculture is the chief occupation, a good many are cultivators or farm workers. Rice is the principal food crop of West Bengal. Other food crops include maize, pulses, oilseeds, wheat, barley, potatoes and

vegetables. The State supplies about 66 percent of the jute requirements of the country and its soil and heavy rainfall are ideal for jute cultivation. Tea is another important cash crop. Darjeeling tea is famous for its quality. Tobacco and sugarcane are also grown in the State.

West Bengal is the third largest economy in the country with a State Domestic Product (SDP) in 1997-98 (at current prices) amounting to Rs 806.7 billion The State registered strong economic growth over the past several years, propelled by significant advances in the agricultural sector. In 1998-99, the growth of West Bengal's SDP, at constant prices, was 7.08 percent, while country's GDP increased at 6.81 percent. There are over 10 000 registered factories in the State and the State Government has opened 'Shilpa bandhu', a single window agency for providing investors with all kinds of assistance in setting up and running industrial units. Kolkata is noted as a major centre for industries including the jute industry. There are a number of Steel plants in the State apart from the alloy steel plant at Durgapur. The manufacturing industries play a vital role in the economy of the State. Among the important industries, manufacture of shoes, medicines and pharmaceuticals, weaving, spinning and weaving of jute, manufacture of fabricated metal products and structural metal products, etc are worth mentioning.

Study area

Salt production season in West Bengal lasts for six to seven months. The preparatory work starts in late December and the season continues until June/ July depending on the arrival of monsoon. The average annual rainfall is 150 cms.

The BOBP-IGO study team visited West Bengal during the second week of March 2005 and visited saltpans in and around Contai in Midnapore east. Workers, randomly selected from these places were interviewed thorough a structured questionnaire. The team met officials from the Salt Commissioner's Organisation and held discussion with the salt entrepreneurs and traders regarding the prospects and problems of the industry and labour situation.

The Salt Industry

During the medieval and British period the popular method of salt production in West Bengal was by boiling water (*Panga salt)*. However, the old practices have now given way to solar salt production from sea brine.

The salt industry in West Bengal is a small story of turn around. During the last 15 years from 1989 to 2003, the industry has recorded a positive CAGR of 0.21 percent. Salt production has increased from 0.06 lakh tonnes in 1996 to 0.17 lakh tonnes in 2003. The industry occupies 0.80 percent of the total salt production area of the country and produced 0.10 percent of the total salt during 2003. The industry employs 235 workers a day on an average during the production season. Table 3.7.1 gives a snapshot of the salt industry in West Bengal.

Table 3.7.1 Salt industry in West Bengal in 2003

Variables	Cat I	Cat II	Cat III	Total
Total area (in acre)	2 697	1 370	136	4 203
Actual area (in acre)	854	1 232	136	2 222
Number of units	8	38	1	47
Production (in tonne)	3 500	11 900	1 500	16 900
Land utilisation rate (%)	31.66	89.93	100.00	52.87
Production per acre of total area (in tonne)	1.30	8.69	11.03	4.02
Production per acre of actual area (in tonne)	4.10	9.66	11.03	7.61
Production per unit per acre of actual area (in tonne)	0.51	0.25	11.03	0.16
Employment per day	114	297	39	450

The entrepreneurs are hopeful of a positive growth for the industry owing to new markets opening around the Kolkata industrial belt and through penetration in the local domestic market.

However, the environmental and infrastructure conditions are not conducive for a rapid growth of the industry in the State. The major problem of the industry is availability of land. The State Government owns the salt lands. During the last few years, there was a tussle between the leaseholders and the Government regarding the assignment fee and ground rent issues. Presently, the ground rent with cess adds up to Rs 3 700 an acre. According to the leaseholders, the rate is exorbitant and will choke the industry's future prospects. On this account the leaseholders are unhappy with the SCO also as they have not mediated in solving the issue.

Power and road infrastructure is also a major constraint. Most of the saltpans are not electrified and the road conditions are poor. Some of the entrepreneurs have themselves constructed approach road to the platform to facilitate transportation to the main road.

The Salt Workers

Income from salt related activities is low in West Bengal. Short season and low production is the major reason for this. Workers are not happy with their current wage rate and want an increase in their wages. As a social tradition, women in West Bengal do not work in the saltpan.

Human capital

Demography

Economically backward classes constitute 20 percent of the salt worker population in West Bengal. The average family of a salt worker comprises 4.81 members. The family size of backward classes is marginally higher at 5. The overall sex ratio for salt worker population is 910 female per thousand male. Sex ratio for rural Bengal as per the 2001 Census is 950. Table 3.7.2 summarises the information on the demographic profile of the salt workers in the State.

Table 3.7.2 Demography of salt workers

Characteristics	West Bengal
Backward classes (%)	20.00
Family size	4.81
Family size (Backward classes)	5.00
Sex ratio	910

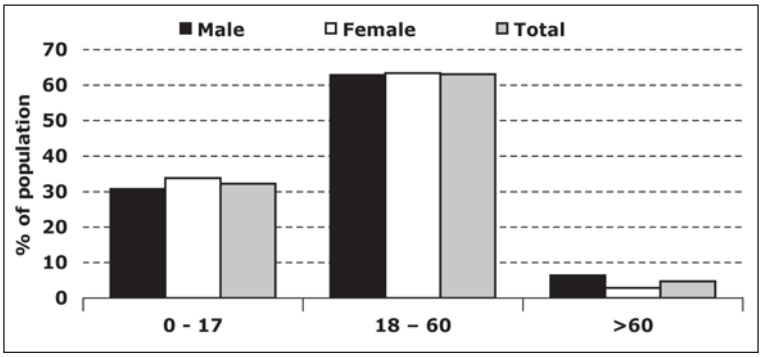


Figure 3.7.1 Age sex composition of salt workers

Age composition

The age composition of salt worker is quite similar to the age distribution pattern of the salt worker population at the national level. About 63.09 percent of the population is within 18 to 60 years of age; 32.21 percent below 18 years and 4.70 percent above 60 years of age (Figure 3.7.1).

Education

The overall literacy rate in the age group six years and above is 86.86 percent, highest among the salt workers of India. The total male literacy is 95.77 percent and female literacy is 77.27 percent. As per 2001 Census, the overall literacy rate in rural Bengal is 64.06 percent – 73.75 percent for males and 53.82

Table 3.7.3 Educational profile of salt workers in West Bengal
Age 6 years and over

Educational attainments (Figures are in %)	Male	Female	Total
Literates	95.77	77.27	86.86
Of which,			
Functionally literate	41.18	33.33	37.82
Minimum 5 years but less than 10 years of education	32.35	49.02	39.50
Minimum 10 years but less than 12 years of education	19.12	17.65	18.49
Minimum 12 years	7.35	0.00	4.20
Aware of CRS	–	–	0.00

percent for females. Among the literate salt workers, population with at least five years of education is 39.50 percent, which comprises 32.35 percent male and 49.02 percent female. Among the literates, population with at least 10 year of education is 18.49 percent and the break up for males and females is 19.12 percent and 17.65 percent respectively (Table 3.7.3).

Manas Senapati is an under graduate student in Calcutta University, His father Rash Behari Senapati could not continue his study beyond class VIII. He is working in the salt industry for the last 20 years. However, he wants his son to study as far as he can so he took loan and also sold assets to meet the educational expenditure of his son.

Till the visit of the study team he was not aware about the CRS. In his 20 years career as a salt worker he never knew that the Government also wanted the salt workers' children to be educated and implemented a Scheme that could help workers like him to meet the educational cost of their children.

Sushmita Jana is a school final student. She is a regular student with a good track record. She is also entitled to get a scholarship under the CRS, but her father never applied. He always dreamt of some government help as he found it very hard to meet the cost of his daughter's education. However, he

Children Reward Scheme (CRS)

None of the workers seemed to know about the CRS. In fact it was for the first time they were hearing about the Scheme. The workers suggested that Salt Officials should meet them in their work place and tell them how they could avail the benefits under the Scheme. It was also suggested that the leaseholders/ entrepreneurs should provide them the details of the Scheme.

Health

Around 91 percent of the workers perceive their health as good. Major health problems are pain in arms and legs, eye irritation, lung infection, headache and digestive problems. Among those who perceived their health as poor, nine percent were suffering from these chronic illnesses. The child vaccination coverage in West Bengal is good and nearly 100 percent of the children are completely or partially vaccinated.

Table 3.7.4 Health situation of salt workers

State of health (Figures are in %)	**West Bengal**
Workers perceived their health as good	90.60
Suffering from chronic illnesses	8.59
Complete any or all vaccination programme	100.00
Couple protection rate	66.67
Awareness about AIDS/HIV infection	35.71
Consume alcohol	10.53
Consume tobacco	60.00
Consume both tobacco and alcohol	5.26

The incidence couple protection rate for salt workers in West Bengal is 66.67 percent. Awareness about HIV infection and other sexually transmitted diseases and possible protection is low. About 36 percent of the population is aware about HIV/AIDS.

Nearly 11 percent of the workers consume alcohol weekly. About 60 percent of the workers consume tobacco in various forms like *Bidi, Paan masala, Tambaku,* etc. About five percent of the workers are addicted to both alcohol and tobacco (Table 3.7.4).

Aspiration

The study shows that 86.67 percent of the workers are unsatisfied with their life and 90 percent thinks that there will be no change in their livelihood conditions in the future or for their children. They feel things may worsen in the future (Table 3.7.5).

Table 3.7.5 Aspiration levels of salt workers

Parameter (Figures are in %)	**West Bengal**
Unsatisfied	86.67
Negative attitude towards future	90.00

Physical capital

Housing and amenities

Most of the workers (77 %) own a house. However, about 91 percent of the workers live in *katcha* houses and the rest in *semi- pucca* houses. In rural West Bengal[42], 15.60 percent of population lives in *pucca* houses, 38.00 percent in *semi-pucca* houses and 46.40 percent in *katcha* houses. Nearly all the salt workers population is using any

[43] *National Human Development Report, 2001.*

type of toilet, which is the best amongst all the salt producing states.

Most of the workers have water source within the vicinity of their dwelling unit. About 97 percent of the population perceives to have access to fair quality of water as per their own perception. However, electrification of the villages is poor (Table 3.7.6). The effective use of electricity is nil. In rural Bengal, only 17.75 percent household had electric connection during the 1991 Census.

Table 3.7.6 Housing and amenities

Ownership, dwelling type and amenities (Figures are in %)	**West Bengal**
Living in *katcha* house	91.30
Living in *semi-pucca* house	9.68
Living in *pucca* house	0.00
Own a house	76.67
Of which,	
Katcha	91.30
Semi-pucca	8.70
Pucca	0.00
Perceive drinking water quality is fair	96.77
Access to toilet facility	100.00
Electricity connection	0.00
Awareness about NMAY	26.67

Namak Mazdoor Awaas Yojana

About 27 percent of the working population is aware of the Namak Mazdoor Awaas Yojana. However, they are yet to be benefit from the Scheme. Awareness of the worker depends on the firm they are working for, as some leaseholders/ entrepreneurs themselves do not know much about the Scheme.

Transport and communication

About 45 percent of the workers can access a telephone within 15 minutes walk from their dwelling unit. The rest have to walk for more than 15 minutes. On the other hand, most of the workers can access a bus stop within 35 minutes walk from his dwelling. The average distance from the local market is more than 5 km. About 24 percent households own a radio (Table 3.7.7).

Health and education infrastructure

School facility up to primary level is available within five km radius of the salt workers' villages. For higher education, people have to travel for about 20 kilometres by bus. At the college level, parents prefer to send their children to Kolkata, which takes around three to four hours by bus.

Table 3.7.7 Communication infrastructure

Communication infrastructure (Figures are in %)	**West Bengal**
Population can access telephone within:	
<15 minutes	45.16
> 15 minutes	54.84
Mean time needed to travel to nearest bus stop (in minutes)	33.87
Nearest local market:	
< 5 km	13.33
> 5 km	86.67
Households having radio	24.00
Households having television	0.00

Primary health centres are available within one to three km of the production areas. However, in critical cases, people have to go to Kolkata. On an average, it takes less than two hours to reach the district hospital.

Natural capital

Fuel

The salt workers in West Bengal use straw and-cow-dung cake as fuel. About 58 percent of the population depends on cow dung cake for cooking.

Agriculture land

Around 42 percent of the salts workers have their own agriculture land. However, the size of the holdings is small and good for one crop only. Returns from agriculture are meagre and not sufficient to meet the household requirement for half a year.

Financial capital

Working condition

A typical salt worker in West Bengal works for 180 to 200 days in the saltpan earning Rs 60 to 67 after working eight hours per day. The minimum wage rate in the State was Rs 58.42 as on 31.12.98.

Table 3.7.8 Amenities at the work place

Amenities (Figures are in %)	**West Bengal**
Protective gear	20.00
Sanitation	20.00
Rest Sheds	93.33
Job security	96.55
Lay-off/ Replacement	0.00
Non-payment of wages by due date	0.00
Seeking personal favour by hierarchy/ co-worker	0.00

Facility of rest sheds at the work place is available to about 93.33 percent of workers. Of the other facilities, first aid is available to 13.33 percent salt workers. A section of the workers believe that use of gumboots or goggles will reduce productivity. However, in an experiment during the BOBP-IGO study, workers found goggles comfortable.

Excluding the above facts, working conditions are quite good. Employment in the next production season is generally secured and about 93 percent of the workers think that they will be re-employed in the same firm in the next season. Table 3.7.8 summarises the information on amenities at work place.

Income and employment

The per capita monthly income (PCMI) of salt workers in West Bengal from all sources during 2003-04 is Rs 404.73, which is the second lowest among the salt producing states. Incidence of poverty is high, about 37 percent are below poverty line. This is much higher than the corresponding figure of 31.7 percent for rural poverty in the State. About 34.51 percent people have option for any secondary occupation like agriculture. Since agriculture wages are low many workers migrate to nearby urban centres to work as daily labour during the off-season. Unemployment rate is around 10 percent in current weekly status (week preceding the survey). Most of the workers perceive their economic condition as poor or very poor (90 %).

Table 3.7.9 Income and employment profile

Parameter (Figures are in % unless specified)	**West Bengal**
PCMI for 2003-04 (in Rs)	404.73
Population below poverty line	36.67
Have secondary occupation	34.51
Male unemployed in current weekly status in the age group 18 – 59 years	10.20
Average debt (in Rs)	6 250.00
Household saved money during 2003-4	41.38
Household saved money during 1999-2004	48.00
Workers below 18 years of age	0.00

During 2003-04, 41.38 percent of the households saved money, which is less than the average savings in last five years, 1999-2004 (48 %). Table 3.7.9 summarises the information on income and employment status of the salt workers in West Bengal.

Incidence of workers below 18 years of age is comparatively low in West Bengal. The recognised sector does not employ young workers for scrapping purposes. However, workers below 18 years of age can be seen more in the unrecognised sector of the State. In recognised sector, during preparatory stage some workers below 18 years may be employed. However, as the BOBP-IGO study was carried out in the State during the scrapping season, they are not reflected here.

Workforce composition

The workforce composition varies as per the requirements in the production process. As a tradition females do not work on the saltpan. So nearly all the workers are male. (Table 3.7.10)

Table 3.7.10 Workforce composition

Age group	**Male**	**Female**
Below 18 years	0.00	0.00
Above 18 years	97.44	2.56
Total	97.44	2.56

Social capital

Table 3.7.11 Role of Trade Unions

Perception/Interaction (Figures are in %)	**West Bengal**
Workers think they should organise	29.00
Workers member of any trade union	23.33
Workers approaches trade unions to solve their problems	0.00
Workers expect trade unions to solve their problems	0.00

Membership of salt workers to registered trade unions is highest in West Bengal. About 29 percent of the salt workers are members of any registered trade union. However, this is much less when compared to other industries. Workers also do not expect much from the unions. Only 29 percent of the workers feel that it is necessary to join a union (Table 3.7.11).

Discussion of professional and personal problems among themselves is common. About 63 percent of the workers regularly discuss their professional problems with other workers and 53 percent of workers discuss their personal problems.

Table 3.7.12 Social capital: Community level interactions

Perception/Interaction (Figures are in %)	**West Bengal**
Economically same as others	26.67
Get co-operation from colleagues	100.00
Discuss their professional problems	63.33
Discuss their personal problems	53.33

About 27 percent of the workers think that their neighbours are in the same situation as they are. The entire population of the salt workers (100 %) think their co-workers are co-operative. A small portion (17 %) of the worker household also participates in community meeting at the village level to solve their problems (Table 3.7.12).

About 76 percent of the salt workers believe that external delivery institutions like Government alone can only solve their problems. Conspicuously, expectations from the leaseholders are also quite high and about 21 percent workers believe in the leaseholder's ability to solve their problem. The expectations from the entrepreneurs are mostly related to increase in wages and regular employment (Figure 3.7.2).

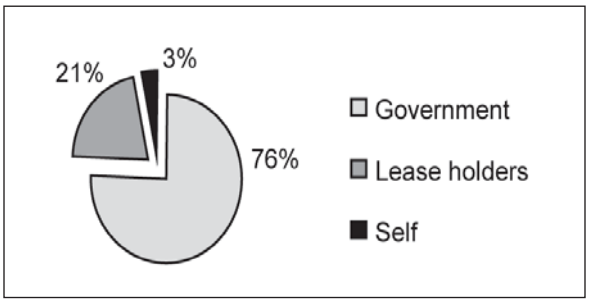
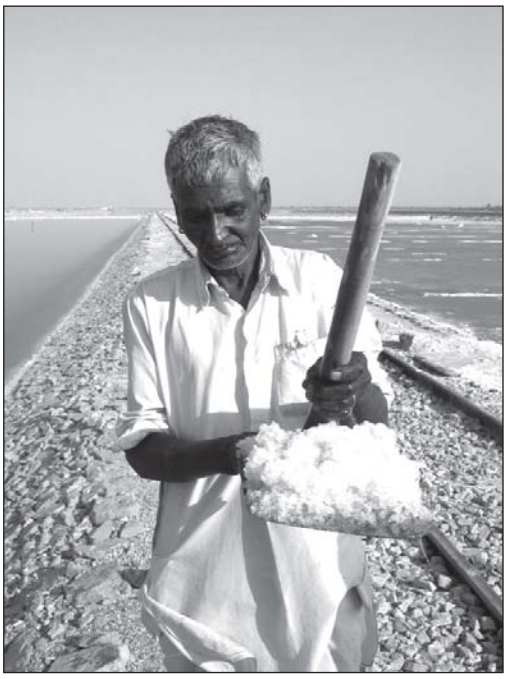


Figure 3.7.2 Expectations from Institutions

3. 8 National profile of salt workers

"Where the mind is without fear and the head is held high;
Where knowledge is free;
Where the world has not been broken up into fragments by narrow domestic walls;
Where words come out from the depth of truth;
Where tireless striving stretches its arms towards perfection;
Where the clear stream of reason has not lost its way into the dreary desert sand of dead habit;
Where the mind is led forward by thee into ever-widening thought and action –
Into that heaven of freedom, my Father, let my country awake".

– Rabindranath Tagore in Gitanjali[44]



The Vision Paper for 2020 prepared by the Planning Commission, Government of India echoes the above dreams of Rabindranath Tagore and expects India to join the rank of the upper-middle income countries in terms of standard of living by 2020. In this backdrop, the salt industry can play an important role by creating employment opportunities in remote and backward areas. The industry is growing at about 4 percent per annum. Employment in the industry has increased by 39 percent between 1989 and 2004. At this rate the industry is expected to create a considerable number of jobs in the coastal saline tracts and desert areas where salt production is one of the major economic activity.

The status of salt industry in the states covered in the BOBP-IGO study show disparities in terms of development. While in Rajasthan and Gujarat it is vibrating, in Maharashtra and Andhra Pradesh it is retarding. Tamil Nadu displays a mix of progress, satisfactory in some salt producing areas and retarded in others. Attitude of the State Governments towards the industry also varies. *Ex- ante* it can be expected that these variations in the institutional responses toward the industry will be reflected in the socio-economic status of the salt workers. A cross-sectional summarisation of the information in this respect is presented in the following paragraphs.

The immediate concern of an average salt worker is income and employment. The number of days work available to a worker is highest in Gujarat (215 days) followed by Andhra Pradesh and Rajasthan. The picture for Tamil Nadu is impacted by the 26 December 2004 tsunami and, therefore, does not give the real situation (Figure 3.8.1). The number of working days available to a worker depends on his skill, labour market in the area and the climatic conditions. Due to favourable climate, a worker in Gujarat enjoys advantage over his counterpart. In Rajasthan, as work is concentrated around Rajas and Nawa, this area attracts a large number of migrant labour from outside areas. This supply glut also reduces the work availability of an average worker.

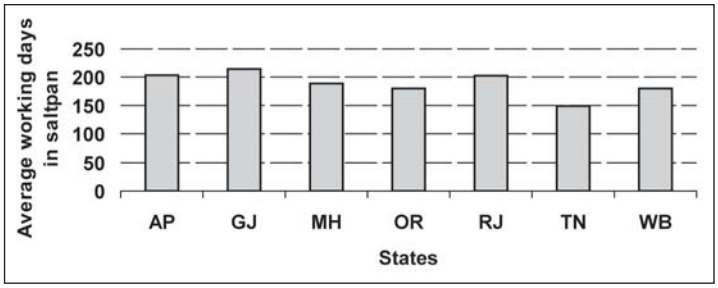


Figure 3.8.1 Average work availability to a salt worker

[44] *http://www.poetseers.org/nobel_prize_for_literature/tagore/git/19*

The income of a median worker depends on his wage and availability of work in the pan. Depending on the wage rate, monthly income of a median worker varies significantly among the states (Figure 3.8.2). Workers in Maharashtra, Gujarat, Tamil Nadu and Andhra Pradesh earn much higher than workers in Rajasthan, Orissa and West Bengal. The wage rate of the workers varies between Rs 40 to Rs 180. Maharashtra and Gujarat pay the highest. In Maharashtra, the opportunity cost of hiring a salt worker is mainly responsible for increased wages while in Gujarat, consolidation of corporate houses has lead to standardisation of wage in salt production areas near the industrial belts. However, the degree of intra-state variation of wage in Gujarat is high. If the income of agarias, who are mainly employed on a seasonal payment basis, are converted into daily income, they are poorer than a salt worker in Bhavnagar and Jamnagar.

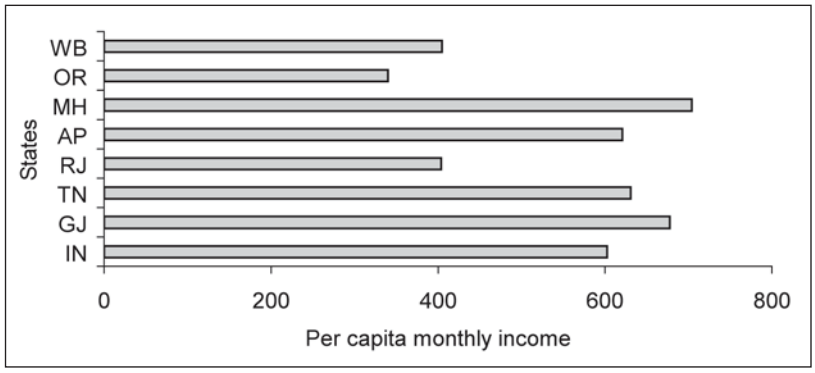


Figure 3.8.2 Per capita monthly income

In Tamil Nadu, the salt works are mainly concentrated in Tuticorin. The Tuticorin belt is industrially developed and provides alternative employment avenues to the salt workers. In Rajasthan, the low per capita income is due to a lower wage rate of Rs 40 to Rs 100 and also due to lack of work between two production seasons. Presence of a large number of small salt works (categories IV and II) and migration from other salt production areas to Rajas and Nawa is another important reason. In West Bengal and Orissa short duration of the production season seems to be the main reason for low income.

The composition of workforce is slightly dominated by males. At the national level about 62 percent of the workers are male. However, in below 18 years age group, the male - female ratio is nearly 50:50 (Table 3.8.1). Generally, the male workers are engaged in scrapping activities while the female workers are engaged during preparation of the pan and later shifting of salt.

Table 3.8.1 Estimated composition of workforce[45]

Age group/State	14 to 18 years			18 years and above			All ages		
	M	F	T	M	F	T	M	F	T
Andhra Pradesh	1 064	1 182	2 246	13 832	11 409	25 241	14 975	12 512	27 487
Gujarat	4 327	2 960	7 288	82 829	50 572	1 33 401	87 058	53 631	1 40 689
Maharashtra	48	19	67	3 425	1 017	4 442	3 463	1 046	4 509
Orissa	239	199	439	960	768	1 729	1 201	966	2 167
Rajasthan	1 941	2 587	4 528	17 826	5 562	23 388	20 546	7 370	27 916
Tamil Nadu	130	217	348	18 074	12 359	30 433	18 053	12 728	30 781
West Bengal	-	-	-	396	10	406	396	10	406
India	7 773	7 165	14 938	1 37 319	81 697	2 19 016	1 45 307	88 648	2 34 844

The seasonal migrant workers constitute about 1/5th of the workforce. Incidence of migrant workers is location-specific and is seen more in Gujarat and Rajasthan. In these states, seasonal migrants constitute over 1/3rd of the working population. The boom of the industry in certain salt producing areas attracts workers from neighbouring areas where the industry is enervated (Figure 3.8.3).

Seasonal migration occurs at three levels; (1) inter-village, (2) inter-district and (3) inter-state. High incidence of inter-village migration can be observed in the Little Rann of Kutch (LRK) in Gujarat and Rajas

[45] *Estimated- for detail see Appendix III. The relevant columns may not add up to the "all ages" figure as they are estimated separately and aggregated rounding error.*

and Nawa in Rajasthan followed by inter-district migration (*e.g.* Amreli to Bharuch). Incidence of inter-state migration is common in Andhra Pradesh, where workers from Tuticorin in Tamil Nadu are engaged as skilled workers during the production season. The migrant workers, who migrate with the family, prefer to be engaged as couples.

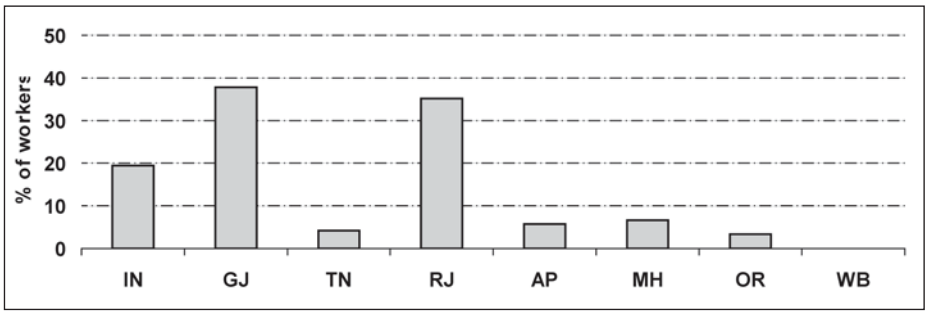


Figure 3.8.3 Share of migrant workers in workforce

There is considerable difference in payment structure of the male and female workers. The bias is against the female workers. It is commonly believed by the employers that women workers are inefficient and work less. However, since labour wage is the major cost component that the leaseholder can control, a gender differential on account of inefficiency serves as an important instrument. From Figure 3.8.4 it can be seen that concentration of women workers is around Rs 50 daily wage where as for male workers it is between Rs 50 to Rs 100.

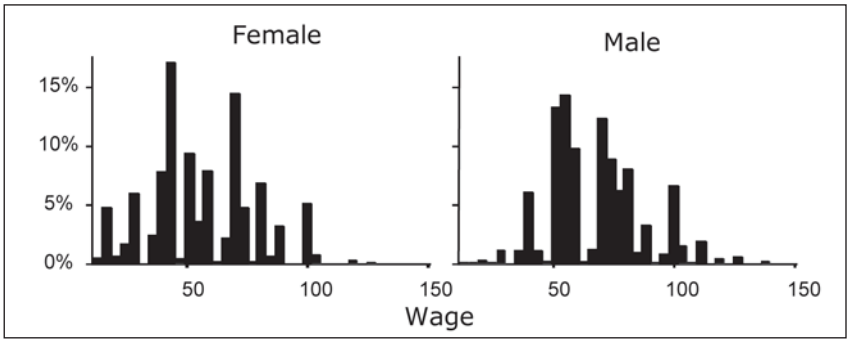


Figure 3.8.4 Gender differential in daily earning – national scenario

Another important feature of the industry is that workers are employed on "no-work-no-pay" basis. Barring few, the workers are not entitled to paid holidays or other leave facilities. The payment structures generally comprise: (1) daily wage and (2) seasonal contract. In category I and II units, workers are employed on a daily basis. Generally, the labour contractor, who has a seasonal contract with the leaseholder, employs the workers. Their wage is calculated on daily basis but payment is made at the end of the season. However, they are given a fixed allowance varying from Rs 200 to Rs 400 per week for their expenditure, which is adjusted with their stipulated wage at the end of the season.

In the seasonal contract system the salt worker enters into a pre-season agreement with the leaseholder about the price of salt that he would produce in the leaseholder's land and would only sell to him. In this case, the leaseholders pay advances/loans to the salt worker to carry out production. Sometimes the leaseholders also pay a fixed monthly allowance to the salt worker during the production season.

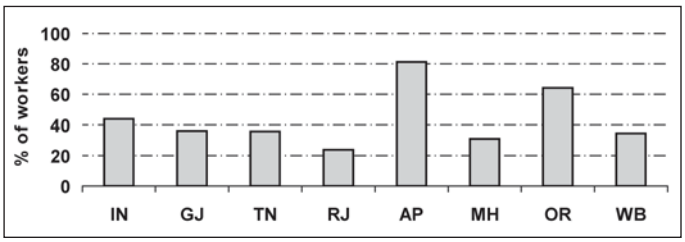


Figure 3.8.5 Workers having alternative employment in off-season

Since salt is a seasonal industry, scope of alternative employment plays an important role in determining the well being of the salt workers. At the national level only 43 percent of the workers can find employment during the off-season. Though workers in Andhra Pradesh generally get employment in agriculture sector and in Orissa workers migrate to urban centres and find employment in construction works. As the salt production is carried out in far-flung areas, alternative employment avenues are less, until the workers are ready to migrate. Since it is also not possible to extend the production season at will, the only alternative is consolidation of production, processing and transportation works within a viable time-frame (Figure 3.8.5).

The total family income per month, which is a function of income from salt and from other sources, is also quite distinct among the states. Owing to the lack of alternative employment, total family income of the salt

workers may be the same as his income from salt production. However, the income of the workers varies considerably across the states and within the states. In Gujarat, workers from Jamnagar-Bhavnagar belt constitute the upper and middle-income groups while workers of LRK comprise the lowest. In Orissa and Rajasthan most of the families are in lower income group. In Maharashtra, majority of the families earn at least Rs 2 000 per month (Figure 3.8.6).

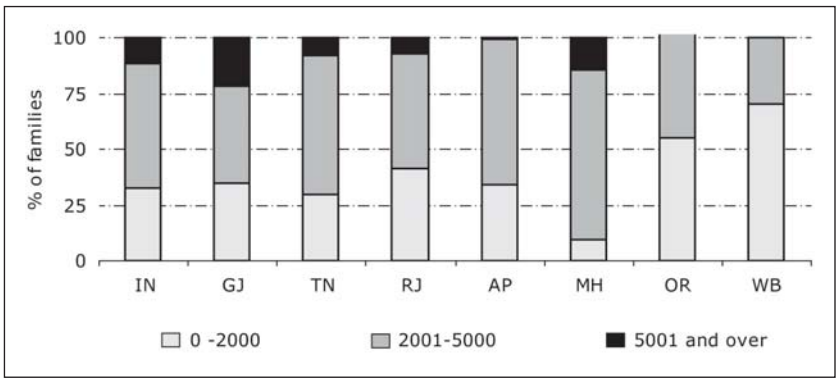


Figure 3.8.6 Distribution of families as per monthly total income

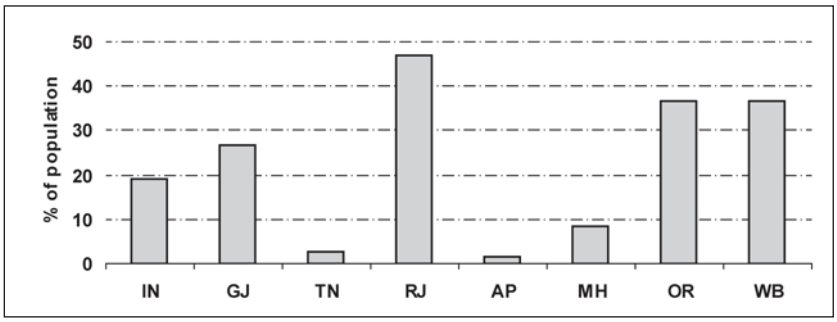


Figure 3.8.7 Workers below poverty line

Based on the availability of work and wage, salt workers in Maharashtra, Gujarat, Tamil Nadu and Andhra Pradesh enjoy a better position than their counterparts in other states. As income is available for 7-8 months, the shortfall of income for 4-5 months leads the workers to a debt trap and poverty (Figure 3.8.7). The advance/loan for off-season usually comes from the leaseholder through labour contractor or from the merchant. The effective interest rates for these advances are a minimum of 2 to 3 percent per month. An average salt worker is rarely ever in a position to repay his debt completely. Since his debt is a function of his occupation, it is also not possible for him to seek another occupation as such a step will seize the debt flow and may threat his living. Thus, the workers' become bondage of their own occupation with a remote possibility of ever breaking out of it.

The Minimum Wage Act, 1948 forms the basis of the wage structure in all the salt producing states. Leaseholders observed that the workers are getting more than the minimum wages. However, workers think that they are earning less as compared to their work. The fixation of minimum wage in salt works is a challenging issue as the workers are paid on a piece-rate basis and not on daily fixed wage basis.
The BOBP-IGO study shows that the workers generally earn at least as much as an agriculture worker. However, since the wage is related to the amount of work done and the definition of amount of work done is in the domain of labour contractor/leaseholder, workers are observed to get as low as Rs 15, much lower than the corresponding agriculture wages (Table 3.8.2 and Figure 3.8.4). In Gujarat, the lower range of wage is arrived from conversion of agarias seasonal family income to per capita daily wage. In Andhra Pradesh, Rajasthan and Tamil Nadu the lower range of wage is applicable to female workers who are said to work only for half a day.

The state of the industry plays an important role to determine the workplace environment. Maharashtra and Gujarat workers (excluding LRK) enjoy a better work environment as compared to other states. They are generally provided with gumboots and goggles. Provision and use of protective gear is very infrequent in other states. As a whole, less than half of the workers at the national level are using protective gear like gumboots and goggles, essential to avoid skin and eye problem common with the salt workers (Figure 3.8.8). Where they are not provided, irrespective of location, the leaseholders argue that: (1) workers are not comfortable with gumboots as it reduces their productivity (= income), (2) they are not also comfortable with goggles, (3) women worker cannot be expected to wear goggles as their male relatives also work with them and they prefer a veil (*ghunghat)* which serves the same purpose and (4) workers do not like to use toilets.

Table 3.8.2 Minimum wages and comparative daily wages

State (Month of visit)	Daily Wage rate in Rupees		
	BOBP-IGO Study	Minimum Wage Notification, 1988 for saltpan[46] Basic-DA-Total	Average Daily Wage Rates in agricultural occupations during 2002-03 in corresponding month[47]
AP (Feb)	15.00-150.00	25.96-18.46-44.42	31.99-61.48
GJ (Dec)	11.00-150.00	58.50-6.40-64.90	50.76-65.59
MH (Feb)	48.00-120.00	51.92-18.07-69.99	33.56-63.86
OR (Mar)	40.00-55.00	30.00-2.50-32.50	57.92-55.21
RJ (Dec)	20.00-150.00	44.00	90.00
TN (Apr)	30.00-85.00	26.92-21.98-48.90	38.55-118.83
WB (Mar)	60.00-67.00	58.42	48.75-78.32

Interaction with the workers also shows that they believe the use of protective gear will hamper their income by reducing their productivity (though they have never tried them). In some places, depending on the quality of salt to be produced, workers use socks reinforced with tyre padding.

As a whole, the attitude of leaseholders and workers towards amenities at workplace reveals that there is little concern for the resultant health hazard of the workers from both the quarters. However, the reason for their lack of concern may be different. While for leaseholders it seems irrational to incur cost on provision of amenities, as the operation is not hampered by it or they lack the financial strength to provide them. For workers, they are not in a position to ask for the amenities as adjustment needed on the use of protective gear takes some time, which could also mean loss of time and income.

The provision of amenities also increases the cost of production. The corporate and big firms can afford as they are either a captive unit or have direct market access. For others, the leaseholder will face comparative

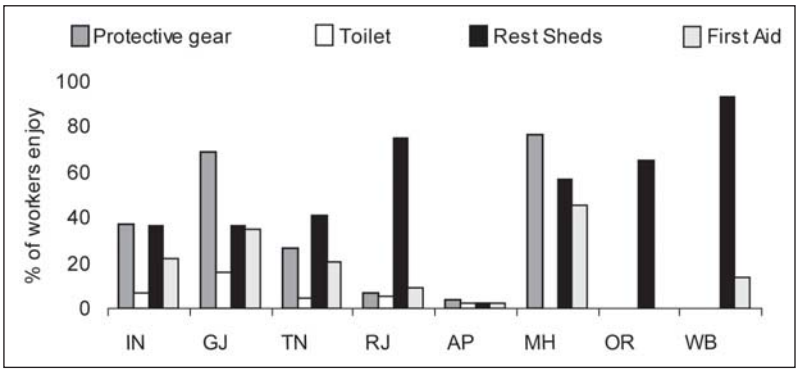


Figure 3.8.8 Amenities at the workplace

[46] *The information is based on the notifications received in Labour Bureau till 12.06.2001 from different States/Union Territories and excludes wages fixed on piece rate basis available at http://labourbureau.nic.in/wagetab.htm last accessed on January 9 2006.*

[47] *Table 8(a), 10 (a), 11 (a) and 12 (a) and Table 14 (a) of Wage Rates in Rural India 2002-2003 available at http://labourbureau.nic.in/wrr2tab.htm last accessed on January 9 2006. Range of wage is for both sexes for activities of weeding (unskilled) to ploughing (skilled).*

disadvantage due to increase in cost and competitively fixed price. Therefore, unless, all the firms in the market (or majority of them) do not implement them simultaneously, no single firm will be encouraged to implement them properly. This is not possible unless the monitoring mechanism is effective. Labour welfare is a state subject but out of 1 073 workers interviewed in the study, only six workers ever had a contact with a labour welfare officer during the year 2004-05.

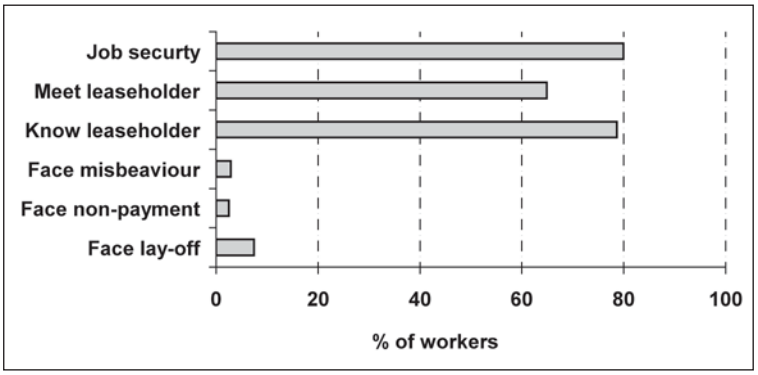


Figure 3.8.9 Relationship between leaseholders and workers

The relationship between the leaseholders and the workers were measured as certainty of employment in the next season, interaction with the leaseholders, non-payment of wages on due dates, replacement during the season and incidence of misbehaviour by the leaseholders. The study reveals that, at the national level about 80 percent of the workers are sure about their job in the next production season with the same firm, though only about 65 percent of the workers have ever met the leaseholders. This reflects on the control of intermediaries in the industry.

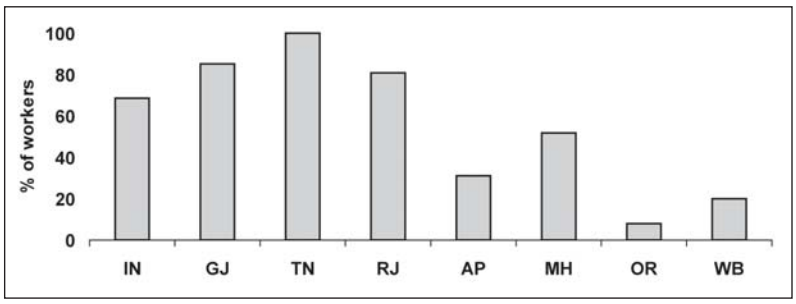


Figure 3.8.10 Share of backward classes in worker population

Relationship between the labour contractor and the leaseholder and between the labour contractor and the workers seems to be the single important determinant of job security. Since the labour contractors generally hold traditional relationship with both leaseholder and the workers, chances of job security are also high. Incidence of retrenchment or replacement is about 7 percent at the national level. A non-performer worker for any reason has a good chance to be replaced during the season. Hence, the workers generally do not acknowledge health problems that may result in their replacement and loss of work for the season. However, there are very few cases of non-payment of wages and misbehaviour by the leaseholders/supervisor or co-workers (Figure 3.8.9).

Workers from socio-economically backward classes constitute about 69 percent of the national workforce. In Tamil Nadu nearly all of the workers are from backward classes followed by Gujarat and Rajasthan. In other salt producing states the share of backward classes in the workforce is less (Figure 3.8.10). For a new entrant, work in the salt industry is not an optimal choice, but a forced one. Lack of alternative employment opportunities pushes a worker to this industry. Ironically, for the same reason the industry faces temporary labour shortage when monsoon approaches as workers go back to agriculture. An improvement in the working conditions and wage structure may act as a pull factor in this regard.

The salt worker population is young and about half of the population is between 18 to 60 years of age. Higher birth rate and lower life expectancy are the main reasons for a pitcher-shaped population structure of salt workers. However, large concentration of population in

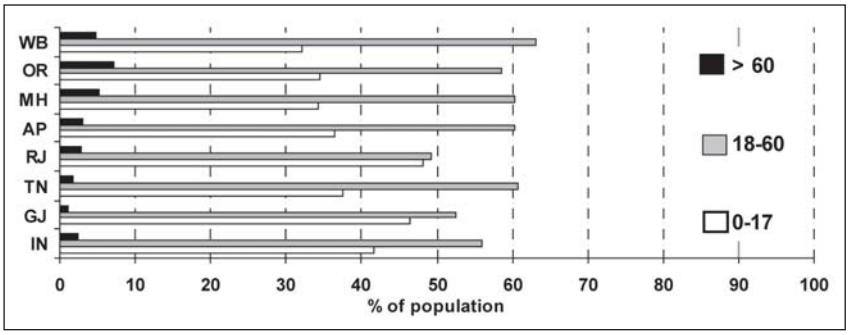


Figure 3.8.11 Age profile of salt workers

the early years will also ensure a steady future supply of the workers in the industry (Figure 3.8.11).

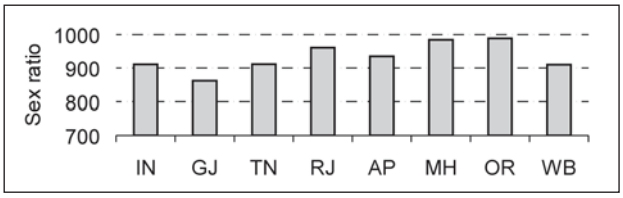


Figure 3.8.12 Sex ratio of salt workers population

The sex composition of the workers population is unfavourable to females in the early age group. However, females seem to have a better life expectancy than males. In the 60+ age group females outnumber males comprehensively. Work and addictions are probably the cause of a dis-proportionate life expectancy of the sexes (Figure 3.8.12).

Health and education are not important for the salt workers. They perceive themselves in good health till they are active and can work. They avoid taking preventive measures, which in most cases lead to serious illness. However, the overall health scenario of the salt worker population is gloomy. The children suffer from malnutrition and the harsh weather of the saltpans. Overall, 94 percent of the workers think that they and their family member are in good health, *i.e.* they are physically active. The remaining six percent of the population (Figure 3.8.13) *i.e.* over 37 thousand[48] salt workers are in poor health and they are not in a position to carry out even normal day-to-day activities.

The common health problems of the workers are skin problem, pain in eye and head, backache, pain in arms and legs, stomach disorder and other ailments such as cold, malaria, etc. Contagious diseases like tuberculosis are also quite common among the salt workers. Figure 3.8.14 provides a snapshot of the common health problems of the salt workers. There is a visible lack of quality in supply and storage of drinking water in the saltpans. The health problem is aggravated further as workers are reluctant to seek medical help at the preventive stage. They are even reluctant to attend free medical camps conducted by the SCO from time-to-time. Since, cost of a visit to hospital or medical camp is equal to their loss of one days wage, they prefer to work rather than visit the doctor.

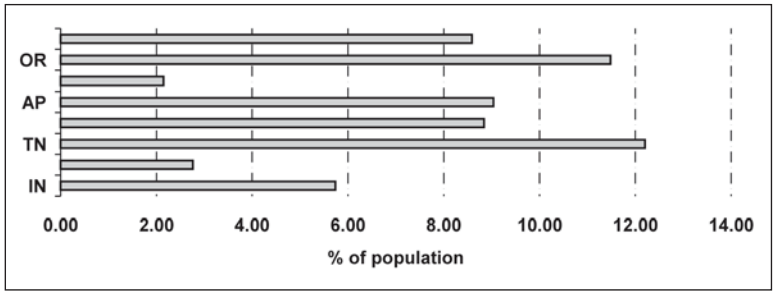


Figure 3.8.13 Salt workers in poor health

Similarly, education is not much important for salt workers and very few workers' families dare to dream a life beyond the saltpan. Therefore, they are not much interested in the education of their children. The need for education largely stems from the requirement for basic counting abilities, reading signs and newspaper, etc. This need is fulfilled in the primary level of education after which dropout ratio is quite high. Also, for a poor family, the opportunity cost of sending children to school may be high and act as a discouraging factor. Children of migrant salt workers are at a more disadvantageous position than their local counterparts. They miss the school for most part of the season and ultimately lose interest in studies. The level of education among females is less than the males (Figure 3.8.15).

Another crucial factor that is influencing the livelihood of the salt workers is their dwelling

[48] *Estimated from survey data and employment figure as presented in Appendix III.*

conditions. Over 50 percent of the salt workers have a dwelling unit that they can call their own[49] . In Rajasthan, Andhra Pradesh, Maharashtra, Orissa and West Bengal over 2/3rd of the workers own a house. However, majority of the workers do not have a *pucca* or permanent house except in Rajasthan (Figure 3.8.16). Also, most of the families are living in a single room house and privacy is unheard of.

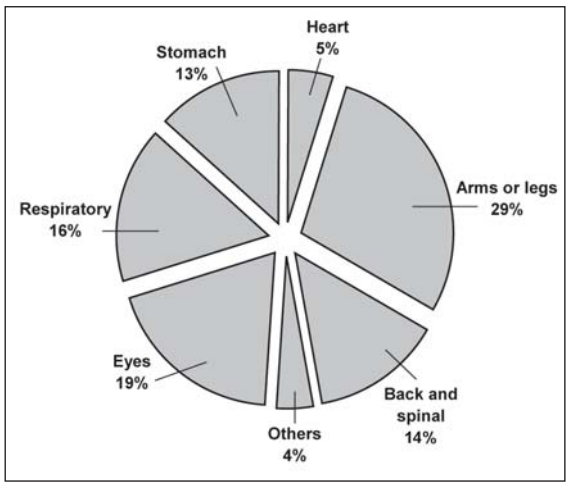


Figure 3.8.14 Major health problems of salt workers

Amenities like sanitation are non-existent except in West Bengal. Pipeline water is available to less than 50 percent workers at the national level. Though the majority of the workers perceive the quality of water as good but incidence of water borne diseases as mentioned above make it suspicious. Electricity is available to a majority of the households in most of the salt producing states except West Bengal. However, schools after primary level, and hospitals are not accessible in close vicinity (Figure 3.8.17).

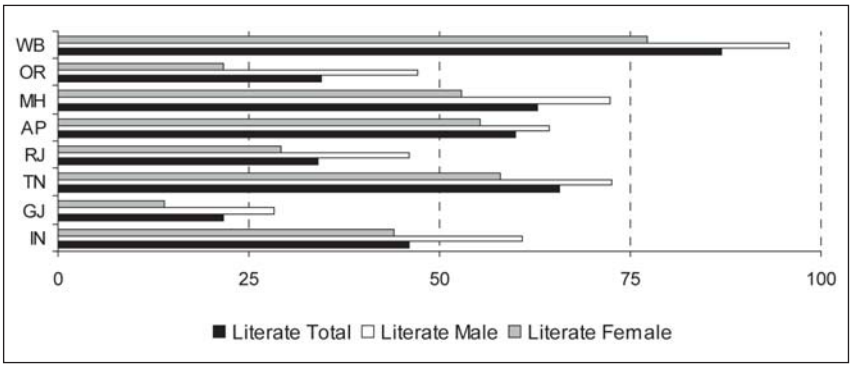
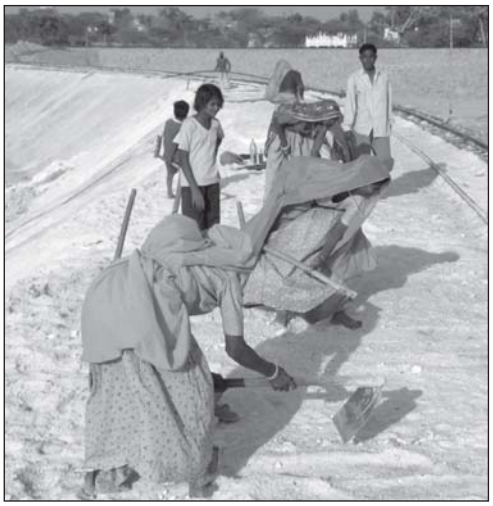


Figure 3.8.15 Education status of salt workers

The workers feel that they should be organised to bargain for better amenities and their quality of life should be improved. They discuss their personal and professional problems regularly within their community. However, inter-community interaction is low and workers rarely participate in the village meetings. They have more faith in Government and leaseholders than in Trade Unions. Within a firm, the community acts as an informal union of the workers.



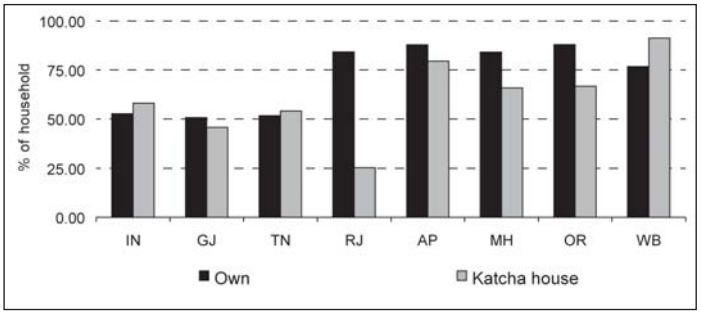


Figure 3.8.16 Living conditions of salt workers

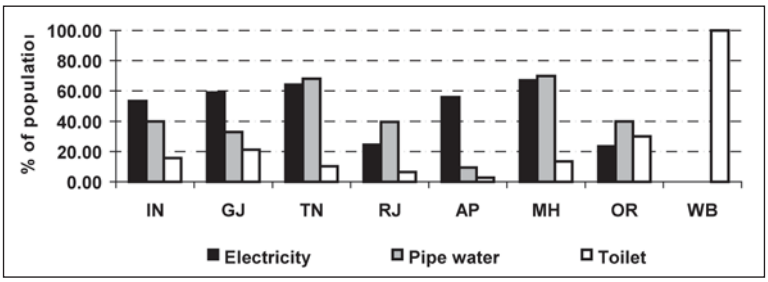


Figure 3.8.17 Amenities at the dwelling place

[49] *Ownership means if the sample worker is occupying a dwelling unit where he is living by himself and is not making payments in any form of rent to anyone, then the worker is considered as owning a house (in accordance with definition of ownership used in National Population Census, 2001).*

In conclusion, the following is summarised:

- During the salt production season, workers earn at least as much as other rural workers. However, the income is not sufficient to meet the family expenditure for 12 months.
- There are very few alternative employment opportunities during the off-season.
- Even during the season, the workers face frictional unemployment.
- Working in the saltpan is the second best option for the salt workers. They (try to) move to agriculture during monsoon sometimes creating temporary labour shortage in the industry.
- Seasonal income and lack of alternative employment push the workers in a debt trap, which at times is well manipulated by the interest groups to keep the worker in the occupation even when the contracts are disadvantageous to the worker (especially for marginal farmers).
- There is infrequent interaction between the leaseholder and the workers, though depending upon their relationship with the labour contractor, the workers are more or less certain about their employment.
- Labour laws are hardly implemented in the salt industry and workers rarely get paid leave, provident fund facility, etc. However, the payment of wage is regular.
- Workers are mostly from backward classes and about $1/5^{th}$ of them are seasonal migrant.
- Life expectancy of the workers is low. It is lower for males than females. Work, malnutrition and addiction are the possible reasons.
- Workers give little importance to health or education. Even in Maharashtra and parts of Gujarat where the workers get better income, stock of human capital is low. One reason may be that there is no extra return from higher education over basic reading, writing and counting abilities to a salt worker. But as a whole, financial capital of the salt worker has not lead to access to higher level of human capital of the salt workers. This implies that in the long run it will be hard for them to improve their situation.
- Access to physical capital in form of housing, school, health centre and drinking water will improve the living conditions of the workers considerably.
- To implement labour welfare measures the entire industry or the market segments need to move in unison. This is a rare possibility unless there is change in the legal provisions and adequate monitoring to ensure their compliance.

Epilogue

In 1936, Mr Shugan Chand Aggarwal[50], the then Superintendent of Northern India Salt Revenue Department, wrote the first treatise on the Indian salt industry. Seventy years hence, the BOBP-IGO study on salt workers does not find much change in the quality of life of an average salt worker. In these seven decades, the industry grew manifold, elevating India as a major player in the global salt production. Unfortunately, this development has bypassed the salt workers, who continue to remain in poverty and deprived of the basic amenities of life. The fear of hunger and uncertainty still engulfs them. If Vision 2020 of the Government hopes to realise Tagore's dreams of independent India, development has to reach the salt workers so that they can look towards a better tomorrow.

[50] *In: The Salt industry in India.Mr Aggarwal later became the first Salt Commissioner to Government of India. The said publication was revised in 1956.*

Chapter 4.0: Welfare Schemes for Salt Workers

4.1 Introduction

The Central Government is presently running two welfare Schemes *viz.*, Namak Mazdoor Awaas Yojana (NMAY) and Children Reward Scheme (CRS), which are directly targeted at the capacity building of salt workers. These Schemes are implemented by the Salt Commissioner's Organisation (SCO) along with other labour welfare activities directed at the improvement of working conditions of salt workers.

The objective of NMAY is to provide low cost housing for salt workers in the vicinity of their workplace or their native place. A proper implementation of the Scheme will improve the state of physical capital available to salt workers and hence improve their level of well-being. On the other hand, the CRS is meant to target the potential human capital of salt workers. Objective of the CRS is to encourage education of the children of salt workers through performance based incentives.

Among the salt producing states, only the Government of Gujarat has came up with some concrete welfare schemes for salt workers of their own. However, most of the other State Governments are functioning as a facilitator and patron of the existing Centrally Sponsored Schemes of the Government of India.

In the present chapter, findings from the field on the implementation status of these schemes, have been discussed. The points that were raised with the target beneficiaries related to the level of awareness of the workers about these schemes, the implementation procedure and the scope of improvement in the schemes. One major condition for the successful implementation of these schemes is an effective co-ordination between the Central and the State agencies responsible for implementation of the schemes. We have tried to analyse how effective these co-ordinations are in real settings. The basic inputs for this chapter of the report are drawn through personal interviews and group discussions with salt workers, leaseholders, State Government officials and Salt officials working at the factory level.

4.2 The Namak Mazdoor Awaas Yojana - an appraisal

A. The Scheme

The Scheme[1] targets the workers in the salt industry, who, in spite of being there for a long period are yet to achieve satisfactory level of physical capital. Besides the local salt workers, the NMAY is also expected to benefit thousands of migrant workers mainly in Gujarat and Rajasthan, who, if eligible could get a house at the place of their migration. As a result they will not only get a better shelter for their family but also permanent residential status in the place of migration and benefits associated with such status like access to public distribution system (PDS), etc.

Under this Scheme salt workers are given assistance up to Rupees forty-five thousand (Rs 45 000) to construct houses in private or government lands allotted to them. If the price of the government land transferred to the Scheme is included, the actual level of benefit for the salt worker is far more than the assistance of Rs 45 000 provided under the Scheme. At the early stages of the launch of NMAY, the awareness of workers about the Scheme was substantially low. However, with the progress of awareness level, the number of potential beneficiaries has far exceeded the number of house to be constructed respectively in each state.

As the demand is much more than the supply, the problem of identification and selection of beneficiaries is turning out to be the most crucial factor for determining the success of the Scheme. Flexibility in the design of the Scheme regarding choice of site has given rise to a tussle between the leaseholders and the workers in some places due to their conflicting

[1] *Guidelines of the Scheme are given in Appendix IX.*

interests. In this battle of interest the workers are naturally on the back foot as the power of identification lies with the leaseholders.

Table 4.2.1 Awareness on NMAY

State	Workers aware (%)
Gujarat	06.67
Tamil Nadu	14.90
Rajasthan	14.41
Andhra Pradesh	56.32
Maharashtra	37.80
Orissa	64.29
West Bengal	26.67
India	23.00

B. Reports on progress

As the Scheme was introduced a few months prior to the BOBP-IGO study, therefore the awareness level among the workers about the Scheme at the national level came out to be quite low (Table 4.2.1). At the national level, only 23 percent of the workers were aware about the Scheme, during the survey[2]. However, in individual States like Andhra Pradesh and Orissa the awareness level was high due to a census carried out by the SCO to identify the beneficiaries. A summary of the feedback received from the salt workers on the implementation of the Scheme is given below:

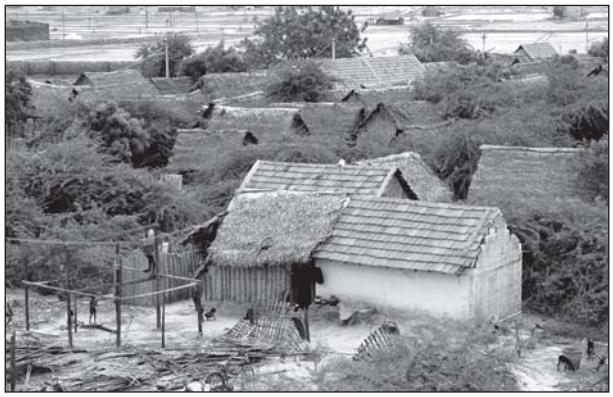
- *Of the total 994 suggestions, 39 percent suggest awareness camps by the SCO as the best option.*
- *About 23 percent of the workers have shown their faith in the existing system of disbursing knowledge through the leaseholders.*
- *About 20 percent of the workers want NGOs to be included in the Scheme.*
- *Notably, most of the workers are not interested in assigning the Scheme to the Panchayat or inclusion of trade unions in the selection procedure.*

The following detailed report on NMAY is based on site(s) in Andhra Pradesh and Gujarat. The basic information on the implementation of this Scheme in other states is detailed in chapter 3.0 of the report.

Naupada in Andhra Pradesh

During the first visit of the study team[3] to Naupada salt factory in Andhra Pradesh on 02 March 2005, a section of the salt workers had expressed their dissatisfaction with the procedures adopted for selection of beneficiaries under the NMAY. As considerable developments had taken place subsequent to the first visit of the study team and the guidelines of the NMAY were also partially modified, it was decided to revisit Naupada to get more details on the implementation of the Scheme. The revisit was, therefore, designed mainly to study the implementation of the Scheme in Naupada area with the following specific objectives:

- Progress of the modified scheme;
- Allocation procedures followed;
- Participation/ performance of workers, leaseholders and executing agency in the Scheme;
- Awareness among workers on different aspect of the Scheme, and
- Scope of improvement in different parameters of the Scheme.



The following observations were arrived at after having extensive discussions with the salt workers (at both community and individual levels), leaseholders and leaseholder's associations and one official from the Andhra Pradesh State Housing Corporation (APSHC). The Superintendent of Salt, Naupada, Superintendent of Salt, Office of the Deputy Salt Commissioner, Chennai region and other salt officials facilitated the meetings.

[2] *A second round of study in Andhra Pradesh and Gujarat showed a perceptible increase in the awareness, although during this visit no quantification work was carried out.*

[3] *Study team of the Bay of Bengal Programme Inter- Governmental Organisation (BOBP-IGO).*

Observations

Scope of the Scheme

The Scheme is meant for salt workers but the term "salt worker" has not been clearly defined in the guidelines of the Scheme. Instead, the term 'labourer' has been defined, which includes any bonafide labourer employed in salt industry either as a salt labourer or self-employed person for a period of five years. Further a person working on the firm for a major part of the season *i.e.* not less than 6 months during the last five (5) consecutive years shall also be regarded as a salt labourer. Therefore, it is difficult to target the real beneficiary. This ambiguity in the definition was apparent during the team's first visit to Naupada, where salt workers[4] complained that the leaseholders had included pump operator, tractor driver, etc for benefits under the NMAY. During the second visit the leaseholders stated that the guidelines did not specifically mention any preference to the workers engaged only in scrapping operations. According to them, ***a salt worker was anybody associated with salt manufacturing.*** They justified their argument by stating that in Naupada, scrapping workers also performed the role of pump operator, watchman, etc.[5] Therefore, some of the beneficiaries included were pump operators, etc.

Progress

The Scheme is under rapid implementation in Naupada. The land was handed over to the beneficiaries in the last week of March 2005. The SCO and the Government of Andhra Pradesh have allocated land in prime locations (places adjacent to main roads and saltpans) for construction of houses, which shows the commitment of the implementing agencies in improving the socio-economic status of salt workers. Some beneficiaries were also allowed to build houses on their own land. Construction has started for 204 houses allocated in Srikakulam district. It was informed that the first phase of the Scheme would be completed by mid-September 2005.

Coordination

The SCO acts as a coordinating agency between the leaseholders and the APSHC in implementing the Scheme. According to the Superintendent of Salt, Naupada, the State Government is co-operative and the co-ordination is quite effective and this is also reflected in the progress of the Scheme. However, the leaseholders were not happy with the degree of coordination and suggested that the Scheme could be better implemented by the SCO.

Allocation procedure

The individual leaseholders (Categories I & II) and the Naupada Salt Minor Licensees Association (NSMLA)[6] have to (a) identify and (2) select the salt workers eligible for the Scheme. As per the guidelines/ norms of the NMAY, the role of the leaseholder is defined as follows:

> " 3 (b): … Every salt works which is eligible to participate in the scheme may like to prepare the details of salt labourers working under them in descending order of the number of years of service rendered by each labourer in the salt works… (4) In case the number of persons are more and the available houses are less, the State Level Committee will decide about the criteria for allotment."

In Naupada, every leaseholder (Categories I & II) and the NSMLA are assigned quotas on the basis of total houses sanctioned and the area of the saltpan. The leaseholders first identify the workers and from that list they make a list of the workers as per the quota allocated to them. This list is finally recommended to the SCO. Since in this procedure the number of names recommended is equal to the number of houses to be constructed, it can be said that the leaseholders are also selecting the beneficiaries under the Scheme. The leaseholders, therefore, play a role greater than that expected from them.

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[4] *For the purpose of the study, a salt worker is defined (in consultation with the SCO) as the person who is directly and physically involved in production of salt and who actively participates in one or all of following activities. The nature of her/ his contract with the leaseholder is generally as wage labourer or as sub-leaseholder. She/ he may also be a leaseholder provided that whatever may be the status, she/ he has to participate in one or all of the following activities: (1) preparation of saltpan, (2) scrapping (3) heaping (4) shifting of salt from pan to platform.*

[5] *However, during the meeting with the Salt Commissioner and other Officials of the SCO it was mentioned that the term salt worker included those working in the saltpan as scrapper and shifter and did not include pump operator, manager, watchman, etc.*

[6] *Naupada Salt Minor Licensees Association is the association of leaseholders who have less than 10 acre of lease.*

Screening

The SCO in co-ordination with the APSHC and the State Revenue Department is screening the documents and undertakings submitted by the salt workers in support of their eligibility. The screening team also ascertains whether the aspirant worker is otherwise benefited from any other Government scheme. So far, only 14 workers have been disqualified.

Selection

The study team ascertained the actual procedure adopted by the leaseholders for selecting the salt workers under the Scheme. The leaseholders stated the following criteria for selection of the workers: (a) Experience – the worker should have worked for minimum five years in the ***same firm.*** (b) She/ he should not have a *pucca* house or should not be a beneficiary of other Government scheme. (c) She/ he should be ready to pay her/ his share. (d) ***Quality of her/his work and sincerity.*** (e) ***Relations***[7] with the leaseholder.

Of these criteria, (d) and (e) are subjective factors and are not mentioned in the guidelines on the Scheme. It was felt that these subjective criteria could lead to bias in the selection procedure and distort the transparency of the Scheme. As far as experience of the workers was concerned, it was not necessary as per the guidelines to work in the 'same' firm for five years. This addition coupled with criterion (e) showed that the relation of the worker with the leaseholder was a determining factor for the selection. The point of caution is that since the workers are at the receiving end, they have to keep their name in the good books of the leaseholder to avail themselves of the benefits of the Scheme in the existing structure.

Awareness of the workers

The study team discussed with the salt workers on the eligibility conditions, implementation procedure, supporting documents and the amount of grant. Most of the workers were aware of the eligibility conditions. However, there was a bit of confusion about the condition of five years of work experience in the same firm or industry.

The workers were also not sure about the implementation procedure. Some workers felt that the APSHC is implementing the Scheme.

Contribution of the workers

Initially the Scheme prescribed that the share of the beneficiary would be thirty percent (Rs.15 000) of the estimated cost of the house and 100 percent of any increase in the cost beyond Rs 50 000. Later, in view of the poor economic conditions of the workers, their share was reduced to Rs 5 000 or 10 percent of the cost of the house payable in labour, kind and or cash. However, any increase beyond the stipulated cost of Rs 50 000 would still be borne by the beneficiary. As per the norms set by the executing agency (APSHC) in Andhra Pradesh, beneficiaries have to construct the house up to lintel (beam) level with their own money. At the foundation level, they are supplied with bricks and cement and at the lintel level, the first instalment toward share of the Government is deposited in their bank account.

The study team observed the following in this respect: (a) the cost of Rs 50 000 has been estimated on the basis that the houses will be constructed in cluster of four blocks, while in actual field setting, the houses are constructed in cluster of two blocks and, or, individually. As a result, more number of walls has to be constructed, thus escalating the cost and (b) The actual cost – visible and hidden paid by the workers is more than the ceiling. The beneficiaries are reported to have borrowed money ranging between Rs 15 000 to Rs 20 000 from local moneylenders at an interest rate of Rs 2 or 3 percent per month to construct their houses up to lintel level. This implies that for a loan of Rs.15 000 the workers pay Rs 300 a month as interest. If the houses are actually completed by mid- September 2005 as per the deadline set by the SCO, the workers will end up paying Rs 300 x 6 month = Rs 1 800 extra towards their loan. That is their share will be Rs 5 000 *plus* Rs.1 800 as interest and the latter amount will further increase if the work is delayed.

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[7] *The question asked if two workers had the same background and experience, but one worker was engaged with the firm for generations and the other was a first generation entrant whom would they recommend (hypothetical situation).*

The salt workers also work as labourers in the construction of their houses. As March to May/June is the peak season for salt production, the workers have to forego the income from salt production, which for a normal worker results in loss of about Rs 600 a month or a cumulative total of Rs 1 800 in three months of peak season. This further increases their share in the house construction. Assuming that there is no increase in the cost of house beyond Rs 50 000, the actual contribution of the salt worker is about 17 percent as against a ceiling of 10 percent envisaged under the Scheme.

The workers also have to open an account with the Andhra Bank paying Rs.1 000 besides bearing the cost of taking photographs of their houses as a proof of construction. All these costs are over and above the compulsory share of 10 percent and 100 percent of any increase in cost of the house over Rs 50 000. Further, they also have to spend Rs 10 for going to the Bank, which is 10 kilometres from Naupada.

Infrastructure at the construction site has not been completed. The workers have to pay for levelling the land and bringing water. Some workers have also complained that cement is not supplied to them and they had to buy from outside market, which added to their cost.

The main stakeholders in this Scheme are the workers. However, up to selection level they are treated more or less as minors. Their 'guardians', the leaseholders, are largely acting on their part. After the selection, they are given some role in deciding the place of house, etc. Secondly, if the workers are made to pay more than the prescribed ceiling of Rs 5 000 as they are paying now, they are being led to a situation of debt trap.

Quality of the houses and design

The workers are satisfied with the design of the houses but not with the quality of the raw material supplied to them. In a letter to the SCO, the leaseholders association also complained about the same. The representative from APSHC pointed out that bricks made from fly ash were being supplied for the construction of the houses, which were more durable than the traditional bricks and cost-effective, as 700 fly-ash bricks were equivalent to 1 000 traditional bricks in terms of space covered. Therefore, it saved money in terms of labour and cement. Further, the maintenance cost of the houses made with fly-ash bricks was also lower than the traditional bricks, resulting in more savings in the long run. However, the workers and leaseholders complained that the bricks were not water-cured properly.

Outside pressure

The leaseholders reported interventions by the local politicians and labour unions, which interfered in the selection of beneficiaries. However, according to the leaseholders, such pressures have been mostly resisted.

The executing agency

The role of APSHC can be best described as ambiguous. It has played an important role in screening and encouraging the workers to start construction. However, they are also charged with supply of inferior material, unnecessary holding of workers money, low monitoring and failure in providing basic infrastructure like providing water at the work site. As per the guideline at least a hand pump is to be provided where required before the onset of construction. They have further complicated the procedure by incorporating their own norms in the implementation of the Scheme.

The Scheme is envisaged and financed by the SCO. However, findings from the second visit to Naupada showed that the role of the SCO had been reduced to that of a mere facilitator *i.e.* urging the leaseholders and the APSHC to do the needful. Much of this passivity can be attributed to the unorganised nature of the industry, the SCO's staff strength and budget limitations.

Gujarat

The main purpose of the revisit was to see the progress in implementation of NMAY in Gujarat. During field visit, the study team visited Dharangdhara, Kharaghoda, Maliya and Gandhidham. The following parameters were used to assess the progress of NMAY in Gujarat.

- ***Progress in terms of construction of houses;***
- ***Participation/ performance of the workers, leaseholders and the executing agency in the Scheme;***
- ***Awareness among the workers on different aspect of the Scheme;***
- ***Scope of improvement in different parameters of the Scheme.***

Progress in construction of houses under NMAY

There is significant development in respect of construction of houses in Maliya and Gandhidham. Many houses have been completed. In the LRK region, construction of houses has not yet started. It was informed that delay in construction of houses is because the land on which houses are to be constructed belongs to the State Government. Identification and sanction of land is still incomplete.

Contracts for construction of houses are given to different salt associations/ NGOs. In Kharaghoda, SEWA has been assigned to construct some 200 houses and in Gandhidham, Kutch the Small-scale Salt Leaseholders Association has been assigned the construction part.

Selection of area/site/ land for NMAY

In Gandhidham and Maliya, most of the houses are built at the work place. In Maliya, the houses constructed are in low-lying area and would be inaccessible during monsoon season. The contractors and the monitoring agencies should have considered this aspect. However, the Government of Gujarat has sanctioned a seperate scheme for construction of road access to dwelling units in these areas. The Government of Gujarat is also paying the share of the beneficiaries and any escalcation in costs of dwelling units.

According to the Guidelines of the Scheme, the house should be constructed on land, which would have an easy approach to road, electricity, drinking water and willingness of the salt labourers to stay in the area. Most of the houses constructed under the Scheme in LRK are at the work site. In fact, the salt workers stay at the site only during the production season (*i.e.* 8-10 months). Further, these salt works are located in far-flung areas, where it is difficult to get essential things like drinking water, electricity, health facilities, approachable road, market, etc. Moreover, most of these places are inaccessible in monsoon months. This would mean that the workers cannot stay in the house throughout the year and these houses would not be a permanent shelter for the salt worker who is also supposed to invest 10 percent in the house construction.

This is short of the NMAY objectives, which aims to provide

Conflict in selection of sites for NMAY: The conflict is related to the site of the house to be constructed: 1) in the village or 2) at the work place. Constructing house in the village would certainly give the salt workers a sense of security and ownership. It would be a permanent shelter for their family.

The problem is that the house in the village has less utility for them, as salt workers spend most of the time of the year *i.e.* 8-10 months at the work site. On the other hand, house at the work place would improve their working conditions. Generally, salt works are located in far-flung areas where high temperature, higher wind velocity and cyclones are common phenomenon. To protect them from all these adversities a house at the work place will be more useful and play an important role.

Problem with this option is that due to remote location of work sites, it is difficult to get essential things in such areas. These areas are not accessible throughout the year. Staying at the work place all the time means cut off from relatives and social interactions. As discussed above, house at work place would not be permanent shelter for salt workers. There is always a sense of insecurity as the house is built on a part of leased land, which may lead to conflict between the leaseholder and the worker.

permanent shelter to salt workers/ agarias. Leaseholders feel the Scheme can create conflict between them and the workers if ownership of the house constructed at the work place is given to the workers.

In reality, leaseholders have great influence over the workers. This can be seen more in Gujarat. It is easy for the leaseholders to provide asymmetric information to illiterate salt labourers and get the house constructed wherever they wish. Though the second visit of the study team was during the off-season, they could still meet few labourers. However, none of them were aware of the Guidelines of the Scheme.

Ownership of house

Ownership of the house constructed under the Scheme would lie be given to the worker. However, the worker does not have the right to sale or transfer of the house without permission from the SCO. If any salt worker wants to migrate to other place, he can transfer his right over the house to other incoming worker by obtaining necessary permission from the SCO/ State Government. Though the Scheme induces the salt workers to migrate less and stick to one place for long, the inaccessible nature of salt works in monsoon may induce the salt workers to migrate to other places in search of livelihood.

According to Shri Bachubhai Ahir (member of the Central Advisory Board for Salt Industry and various other committees and also a leaseholder), ownership of the house, which would be constructed at the work place, should belong to the manufacturer/ leaseholder. This would help to avoid any conflict between workers and the manufacturers. There are many migratory workers in the LRK region and salt works are inaccessible during monsoon months. A house constructed at the work place cannot be permanent shelter for salt workers and, therefore, the ownership of the house should belong to the leaseholder.

Design and quality of house

The quality of houses constructed is good. Workers are also satisfied with the design and construction of the house. Even leaseholders showed their satisfaction over the design and construction of the houses. As per the Guidelines of the Scheme, the houses are constructed in clusters of four. In small salt works, the houses are constructed in bunch of two as well.

Participation of workers/ leaseholder/ other agencies in executing NMAY

As far as the workers are concerned, their participation is least in the implementation of the Scheme. Their awareness level about the Guidelines of the Scheme is also very low. All the paper work for salt worker is done by the leaseholder and their participation is greater than any other single agency involved in the implementation of the Scheme at the ground level. Leaseholders are playing the important role of identifying potential beneficiaries, constructing houses and doing necessary paper work for salt workers. Following are some positive and negative points, which can be generated by leaseholders' participation in the Scheme.

It is important to delineate the role of leaseholders explicitly in implementation to avoid potential misuse of the Scheme. Leaseholders are very important as far as identification of beneficiaries is concerned. It is better if they are restricted to this role only.

Participation of NGOs is limited in the implementation of the Scheme. In some places they are also responsible for construction of houses. Wherever NGOs are associated with the salt workers, they can also be used to identify and scrutinise potential beneficiaries.

C. Demand and requirements of NMAY

As per the finding of the study about 73 percent of salt workers are staying in *katcha* or *semi-pucca* houses and about 51 percent of the families are staying in *katcha* houses. However, only about 30 percent of population have exclusive property right over their dwelling units as most of the workers are staying in their ancestral houses or government land. A back-of-the-envelope calculation taking average employment of one lakh workers per day and in considerable cases where both the husband and wife work, at least **forty thousand houses** are needed to be constructed at the national level, if those who have *katcha* and *semi-pucca* houses are only considered. If we consider all adult married salt workers who do not have an exclusive house for them, as eligible, the figure goes up to over fifty thousand. At the present level of Government allocation for this Scheme, and assuming only those who are living in *katcha* houses are considered, the cost

will be around **Rs 180 crores,** excluding the cost of land. However, during the 10th Five-Year Plan (2002-07), five thousand houses are to be constructed in the Scheme. During the financial year 2003-04, the SCO has released Rs 2.5 crore for construction of 1476 houses in Gujarat, Andhra Pradesh and Tamil Nadu[8]. It is estimated that at this rate, it will take eight Five-Year Plans or forty years to meet the housing requirements of the salt workers in the country!

However, there could be some downward adjustments in this figure as many salt workers are benefited from other Government schemes and, or, otherwise not eligible as they do not have the required five years experience. There will be also some upward adjustments in the figure as benchmark of 1 lakh worker in the industry is probably much lower than the actual number of workers in the industry since the data regarding number of workers in category four is only an approximation.

4.3 The Stakeholders Analysis

The main stakeholders in this Scheme are the salt workers and the SCO, which is mandated to promote the Scheme. However, there is no direct linkage between them and it gives rise to a multiplicity of stakes, which have otherwise, no relation with the schemes. In Table 4.3.1, a matrix has been presented describing the relative position of the stakeholders. The existing information disbursement channel for these schemes is as follows:

The problem with this information channel is that first all the leaseholder, in categories II and III are not informed in time. Secondly, all the workers are also not informed in time. As a result a large section of the workers remain unaware about the Scheme.

Too much emphasis has been put on benevolence and moral of the stakeholders. This is best exemplified by the role of the leaseholders where he has to first inform the labourer, then select the right one and finally also contribute towards the share of the beneficiary, which is however optional. Where the dwelling units are allocated in the work place, the leaseholder has incentives as under this scheme he has to contribute only 10 percent as compared to 30 percent in other developmental works. But where the dwelling units are to be constructed in villages, as workers want there or no space is available in the workplace, leaseholders have no incentive except some moral obligations. The Scheme further assumes a perfect co-ordination between the concerned State Government agency and the SCO. However, this coordination varies from state to state and may not be optimum in most of the cases.

Though the original Scheme and associated estimates are based on housing blocks, now even single dwelling units are sanctioned in the Scheme. If a block of 4 dwelling units is converted into 4 separate houses, 3 extra walls have to be constructed. The saving in cost that could be done by constructing common walls between two dwelling unit is now to be added, thereby escalating the cost of the houses.

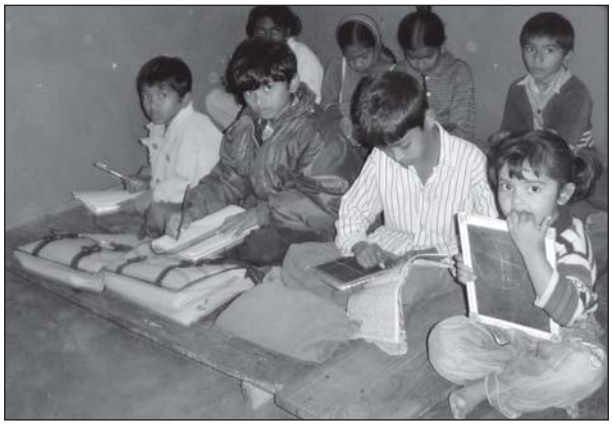
A scope of possible misuse of this Scheme is its overlap with labour welfare activities. The SCO undertakes joint ventures (JV) with the leaseholders in a cost-sharing basis as per the Salt Cess Act of 1953. In these JVs, share of the leaseholder varies between 50 to 30 percent depending on the category of the lease. Construction of sheds for workers comes under this Scheme. However, if the leaseholder allocates the land for NMAY he is getting a better asset for the workers at a lesser cost. Again as per the Contract Labour (Regulation and Abolition) Act, 1970 the contractor, or, and, the principal employer are liable to provide shelter and related amenities at the workplace at their own cost. Under NMAY as there is provision to construct houses at the workplace, it is a blessing for the leaseholder who could get few labour quarters in their leases at 90 percent Government cost. In Gujarat, where a major section of the salt workers are migrant and employed on contract, the study team encountered this issue in most of the places where the houses are to be constructed! A majority of the leaseholders are of the view that the houses should be constructed in or near the work place. Their argument is based on the fact that the worker spends most of the time at the workplace so maximum benefits can be drawn from constructing the house at the workplace.

[8] *Annual Report of the Salt Department, 2003-04.*

Table 4.3.1 Stakeholder analysis (based on NMAY Scheme)

Stakeholder	SCO (State-level offices)	SCO (Factory offices)	State Government	Leaseholder	Salt Workers
Position (assumed)	Financing, implementing and co-ordinating.	Disbursing information and selection.	Help SCO in selection and supervising and contributing in construction of houses.	Disbursing information and identification of beneficiaries.	Target beneficiaries, expected to provide accurate information.
Position (actual)	Financing	Disbursing information.	-do-	Selection, co-ordination and disbursing of information.	Relationship with the leaseholder is a major consideration for inclusion under the Scheme.
Power	Main implementation agency but has no (legal) control over State Government officials or leaseholders.	Can control only minor and small lease-holders. Its control or monitoring action of big leaseholders is minimal.	Have control over selection process. In many cases responsible for delay in the selection process.	Have exclusive control over selection process and can also influence selection of construction site.	Have some control over site selection but otherwise largely out of the decision-making process.
Other agenda	Shifting interest from develop-mental activity in the industry to that of labour welfare guardian.	Unknown	Unknown	Controlling the labours by using the power of selection. Construction of labour quarters at a lower cost.	Unknown
Stake in the success	High, as the Scheme may determine its future role in labour welfare activity and also the viability of the Organisation.	Low, as success or failure in implementation will not boost or hamper the career.	Low, as it is a Central Government project. However, local politicians are found to be having high stakes.	High, as it is a win-win scope for them. Controlling labour and improving labourers living standard.	Very high as it amounts to a permanent shelter for them.
Sacrifices	Unknown	Extra workload and commitment to identify the salt workers and coordination with the stakeholders.	Unknown	Time and money cost in securing necessary documents. Possibility of being framed as biased by the labourers, resulting in low loyalty.	Possible debt trap to pay their share. A moral bondage to the leaseholder.

4.4 Children Reward Scheme



The Children Reward Scheme is defined as the Scheme for grant of reward to the children of salt workers and is applicable to all the salt worker's children. The Scheme was initiated in 1985 with the objective of granting 100 cash prizes each year to deserving and talented children of salt workers. Potentially, this Scheme is more important than NMAY as it is intended to develop human capital of the workers in the salt industry, which in the long run will ensure better income possibilities and higher welfare levels for the salt workers.

In spite of being in existence for over 20 years, the awareness about the Scheme is very low. The following reasons can be attributed to this. First, weak promotion by the SCO officials[9]. Second, due to low literacy and low enrolment ratio, salt workers are unaware of the Scheme. Third, no promotion of the Scheme by the schools in the vicinity of salt works. Since the number of scholarships awarded under the Scheme and their monetary value is much low as compared to NMAY and leaseholders have no direct benefit from this Scheme it has remained anonymous in most of the places. There is also ignorance at the factory officer level about the procedure to implement this scheme and the supporting documents needed for its implementation.

The Scheme was revised during 2003-04 to make it more attractive. It now provides a cash award of Rs.1 000 for students of class VI to VIII. For students of class IX and X, the amount of award is Rs 1 500 and for students of class XI and XII, the award is Rs 2 000 . As mentioned above, the Scheme is grossly underutilised and of the possible 100 awards under the Scheme, only 17 were awarded during 2003-04. These 17 awards were restricted to Ahmedabad and Chennai region. Two other regions, Kolkata and Mumbai have not submitted any recommendation and no student has been awarded in any category, though education level of salt workers in these regions is comparatively better than that of Ahmedabad region.

A. Relevance of the Scheme

About 34 percent of the salt worker population is below 14 years who are targeted in Sarva Siksha Abhiyan for minimum eight years of primary education. However, a majority of the children in the school going age either never go to school or dropout without completing the minimum eight years of education. A major reason of this dropout phenomenon is financial hardships.

Under the Scheme, 100 scholarships are awarded every year to the deserving children. The Scheme can play a major role in giving financial support to the meritorious students. More than this the Scheme can be used to create a favourable attitude toward education among the salt workers by informing them about the Scheme and the monetary benefits associated with it.

Table 4.4.1: The Children Reward Scheme

State (Figures in %)	Workers aware	Suggestions
Gujarat	01.89	Awareness camp by the SCO (35.45) Intimation by leaseholders (24.19) Inclusion of NGOs (20.85)
Tamil Nadu	02.88	
Rajasthan	01.80	
Andhra Pradesh	01.57	
Maharashtra	02.44	
Orissa	03.57	
West Bengal	00.00	

B. Feed back from the field

The Scheme is faceless and nameless in the salt workers' world. Most of them heard about it only from the study team during their personal interviews. Table 4.4.1 summarises the information:

[9] *The efforts of SCO in propagating the CRS started yielding results in Tamil Nadu. 93 applications have been received for the year 2004-05, which are under process. Similar efforts are being made in other salt producing States also.*

Responses of worker regarding better implementation of this Scheme are quite similar to that for NMAY. This reflects the traditional relationship shared by the salt workers with the SCO and the leaseholders. These two agencies are still most trusted and considered as a unique source of information. Though NGOs in recent years have also made a high impact on the mindset of the salt workers.

4.5 Labour welfare schemes of State Governments

Among the State Governments only Gujarat has taken some positive steps towards the welfare of the salt workers. The State Government has been implementing various schemes for the salt workers through the Gujarat Rural Workers Welfare Board (GRWWB). A brief description of the Schemes is given below:

A. Health

For the welfare of agarias and their families, the Health and Family Welfare Department has implemented "Agaria Health Scheme". Under this Scheme, 21 Mobile Comprehensive Health Care Units have been provided in 14 districts of the State to provide health services. In each van, there is a doctor, a multi-purpose health worker and medicines. The Health Department has also identified clusters of salt workers and a medical van visits these clusters once a week. Each mobile medical van covers 15-20 villages every week. The Health Department is incurring Rs 12.60 lakhs per annum on provision of medicines to the salt workers.

The mobile medical vans also provide preventive health care services such as immunisation, antenatal check up and health education. If there are any serious cases, they are referred to the nearest Community Health Center (CHC) or Civil Hospital. SEWA and Bhansali Trust are also having one mobile medical van each. In addition, SEWA is operating 35 childcare centers in the LRK area.

To reach out to the remote and scattered salt works, efforts are made to group the large, medium and small salt works in clusters so that the medical and educational facilities can be made available to the salt workers. The State Government is taking the assistance of NGOs like SEWA, GANATAR and Bhansali Trust.

The SCO also organises medical camps for salt workers once a year in which health guidance and services are provided. Some of the salt associations have purchased ambulances for emergency cases with financial assistance from the SCO.

A total of 4 970 kits of protective equipments (sun goggles, gloves, gumboots) have been provided to salt workers by the Government of Gujarat. To make existing protective equipments more work-friendly, the National Institute of Occupational Health and the National Institute of Design, Ahmedabad have been assigned a study. The report is expected to be available shortly.

To provide emergency treatment at the work site, 130 first-aid boxes are provided. The workers are trained in first-aid and medicines are provided intermittently. First Aid kits have been provided in 45 Gujarat Rural Welfare Centres run by the Rural Labour Commissioner. Each year, medicines are replenished. In Kutch District, 300 drinking water storage tanks at a cost of Rs 18 lakhs have been provided to salt workers.

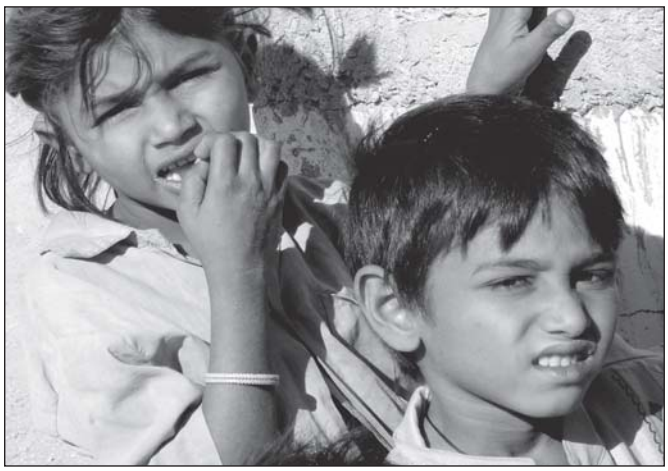
Salt workers are provided Rs 1 lakh on accidental deaths/ permanent disability under the Shrumik Suraksha Scheme of the Rural Labour Commissioner.

In Santalpur, the local salt association has set up a referral hospital by using Rs 25 lakhs from the salt cess. M/s Hindustan Salt runs a hospital at Kharaghoda. The Health Department of the State also organises special diagnostic camps in saltpan areas of the State.

B. Education

Generally, the salt workers stay in remote areas and are highly scattered. It is difficult to provide education facilities to children of salt workers as most of them migrate to work place with the family every season. Even in places where education facilities are available, the task is to make them understand the importance of education, so that workers send their children to school regularly. Educational facilities

are provided to salt workers by Alternative Learning Schooling (ALS) Centers, some of which are run by NGOs like GANATAR and mobile teacher/schools implemented by SEWA.



According to the Education Department of Gujarat, there is adequate number of primary schools. One Adarsh Nivasi Shala (model residential school) is functioning at Bhachau (Kutch) where boarding and education is free.

The Empowered Committee for Welfare of Salt Workers has instructed that mid-day meal scheme be introduced in all schools where children of salt workers are studying. The Committee has also approved Rs 30.06 lakhs for providing uniforms, school bags, notebooks, etc. for children of salt workers studying in class 1 to 7. Under Children Reward Scheme of the SCO cash prizes have been awarded to 14 meritorious children from Kutch district. The SCO also provides assistance to many schools for infrastructure development.

GANATAR has done good work in terms of educating children of agarias. More than 40 ALS centers in and around LRK region are run by GANATAR. These centers function as bridge schools so that the children can later join the mainstream school. GANATAR also covers children who are dropouts or who have never been to school.

As per the estimates of GANATAR there are at least 90 000 to 1 00 000 school going children in the LRK. Present coverage by GANATAR is around 1 000 students. There are many Government schools also which cover majority of the school going children. However, Government schools mainly cover those children who do not migrate to salt works.

During the production season, Balvadi-cum-Ghodiyaghars are run for the children of the salt workers at the production sites. There are 50 such centres operating in the State. At 14 places where the residential quarters of salt workers are near the production sites, Balvadi-cum-ghodiyaghars are sanctioned on a permanent basis.

C. Ration Cards

The Food and Civil Supplies Department of the Gujarat of Government has been instructed to provide ration cards to all salt workers. The Empowered Committee has sanctioned Rs 48 lakhs for 3 mobile fair price shops (FPS) covering Rapar/Santalpur, Patadi/Dharangadra and Halvad/ Maliya areas.

D. Welfare Centres

Under this Scheme, 45 welfare centres for workers have been established in the salt production areas. Besides running Balvadis, these centres include activities such as library, primary health, sports and culture. The honorary staff educates the workers and informs them of the Government's welfare schemes.

E. Housing Scheme

Under this Scheme, financial assistance amounting to 75 percent of the total cost is given for construction of pucca houses on their own plot. For providing temporary shelter, 474 tarpaulin tents have been provided at a cost of Rs 8.28 lakhs. Details of the budget under the Scheme are shown in Table 4.5.1.

Table 4.5.1 Details of the *katcha/ pucca* quarter scheme for salt workers

Year	Permission granted	Number of quarters	Amount paid
1995-96	1 022	282	28.07
1996-97	62	453	43.95
1997-98	2 572	197	19.59
1998-99	-	878	81.20
1999-2000	-	450	45.02
2000-2001	-	558	58.48

F. Rest Rooms

Assistance is given for construction of rest rooms @ Rs 36 000 per unit. The GRWWB provides 75 percent of the total cost and the rest is borne by the salt unit. Such rest rooms have been built in Valsad District during 1997-98 and the Board spent Rs 54 000 for creating the facility.

G. Identity Cards

Identity cards have been prepared for 18 738 workers, out of 70 244 workers in the State (as per 2002 -2003 Census of salt workers by GRWWB).

H. Total development

Under this Scheme, awareness camps, financial assistance for serious illnesses, tours, welfare, etc. are undertaken for the workers.

I. Group Insurance Scheme

Under the Group Insurance Scheme (GIS), 45 801 unorganised workers in the age group of 18 to 60 years are provided insurance coverage, which ranges from Rs 3 000 in the case of natural death to Rs 6 000 in the case of accidental death. The Scheme was revised in 1995 raising the limits to Rs 25 000 in case of accidental death and complete disability and Rs 12 500 in case of partial disability. Table 4.5.2 provides the details of the Scheme during the period 1993-94 to 2000-2001.

Table 4.5.2 Progressive figures under the GIS in Gujarat

Year	Beneficiaries	Amount paid (Rs in Lakhs)
1993-94	109	3.69
1994-95	307	9.33
1995-96	570	17.52
1996-97	620	19.38
1997-98	594	20.46
1998-99	628	33.58
1999-2000	699	31.47
2000-2001	731	34.22

4.6 Recommendations

I. The foremost requirement for successful implementation of the schemes is to clearly specify their scope, norms for identification of the beneficiary *i.e.* the salt worker and the functions and jurisdiction of those associated in the implementation of the schemes.

II. The responsibility structure of the schemes is not defined. As it is clear from the stakeholder analysis, everybody associated with the schemes has some sort of positive or negative influence, but no clearly defined responsibility. As the main government agency for the salt workers, the SCO is largely responsible for the successful implementation of the schemes. However, the SCO at the field level is in no position to assume or exercise such responsibility. It has little or no control, legal or moral, over the leaseholder or the State Government officials. The situation is worsening by the lack of fund and unfamiliarity with local language in some places. Considering this the District Collectors could be a better option to implement the schemes. However, it is unlikely that the District Collector can give as much importance to the schemes as given by the SCO. Secondly, the District Collectors will be virtually inaccessible to the workers. Perhaps the way out would be to empower the factory officer through suitable arrangements with the State Government to implement the schemes.

Logo for NMAY

As per guidelines of NMAY every house built under the scheme is to display a logo of the Scheme and other particulars such as the name of the beneficiary and year of construction. In this regard the BOBP-IGO created a logo for NMAY, which exhibits the core attributes of the salt workers' environment and in a way creates a brand for the houses constructed under the Scheme.

III. Basic infrastructure like water should be provided at the work sites at the earliest by the construction agency.

IV. The share of beneficiaries in the NMAY has been reduced from thirty percent to ten percent at present, in view of their economic condition. However, the way it is executed, the workers end up paying much more. It should also be ensured to provide funds in time to the beneficiaries to keep them out of possible debt burden.

V. The leaseholders play an appreciable role in the implementation of the NMAY. However, inclusion of the subjective factors in the selection process by the leaseholders could distort the transparency of the Scheme. During the subsequent phases, the SCO should ensure that the selection is carried out in a more transparent manner limiting the role of the leaseholder to identification of workers. It is suggested that a representative of the local Panchayat body or NGO should be included in the screening procedure. If this is not possible, the corresponding office of the SCO should closely monitor the selection process. The selection process should be through an "open door" policy so that bias can be reduced to the minimum possible.

On a positive note, all the stakeholders: workers, leaseholders and the SCO are quite enthusiastic about the possibilities of the welfare of salt workers, which in the subsequent stages may act as an impetus for more efficient disposal of the schemes.

Chapter 5.0 Recommendations

The right to development is a fundamental human right rooted in the provisions of the Charter of the United Nations, the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights.

The institutional arrangements[1] governing any industry can be broadly seen as an effect of the interplay of two factors (a) market and (b) non-market. In case of salt industry, the market part of the organisation comprises entrepreneurs, traders, salt workers and multiple intermediaries like labour contractors and finally the consumers. The non-market part comprises primarily the Central and State Governments represented by the SCO and other concerned Ministries/ Departments such as Labour, Industry, Health and Railways.

In an ideal situation, the market forces largely determine changes in the institutions governing the organisational structure of the market. On the other hand, changes in the non-market organisations are mostly impacted by the policy decisions of the Government. However, the market relations in salt industry are yet to be formalised or standardised to the extent where it can be termed as an organised industry. On the other hand, the industry is more close to the agriculture sector in terms of production relations and marketing channels. In simple terms, it implies that as an unorganised industry, less is expected from the stakeholders in terms of standardization of quality, proper iodisation, implementation of labour laws, quality in the labour inputs, supply of reliable information, etc.

A part of this opportunism can be explained due to lack of proper monitoring mechanism from the industry as well as by the Government. The salt industry is now in a de-licensed era and confronted with the issues of globalisation and brand positioning. In this new-scenario a paradigm shift is needed to give the industry a reorientation to meet the growing requirements of the consumers as well as the chemical industry, which is dependent on industrial grade salt. Therefore, the non-market forces have to play a major and effective role to ensure the sustainable growth and development of the salt industry in the country.

The sustainability of livelihoods, as mentioned before is an outcome of the interactions between the salt worker, his capitals and the institutional arrangements. Two issues are important here. First, the state of capability of the worker as expressed by the quality and domain of his asset pentagon and second the scope given to him by the institutional arrangements. The present study shows that a typical salt worker in Gujarat, Orissa or any other state is suffering from lack of capability and adverse institutional arrangements. Any programme for the upliftment of the salt workers needs to address both these issues otherwise it will generate only momentary benefits.

However, so far the programmes or policies for the salt industry are designed either for the industry or separately for the workers. What is needed is a comprehensive plan encompassing both the industry and the workers, as they are inseparable. The future policies for development of the salt industry should be directed at the qualitative and quantitative growth of the industry while ensuring a just[2] distribution of benefits from such growth between the workers and the entrepreneurs.

[1] *Institutional arrangements are specific guidelines or governance structures - designed by trading partners to mediate particular economic relationships.*

[2] *From a workers' perspective, a just distribution can be defined as a situation when he/ she can live and grow – economically and socially within the industry. While the entrepreneur's perspective implies a steady and quality supply of labour and a resultant improvement in productivity, lower cost of monitoring and a better quality of the product.*

The sustainability of livelihood of salt workers and enabling them to be developed is crucial for future growth path of the salt industry. The recommendations made in this chapter are based on the following considerations:

- The workers in the salt industry should be capable of achieving their livelihood goals from salt industry. This implies diversification of salt works so that it can generate round the year employment.
- The institutional arrangements governing the salt industry should be efficient to implement labour laws and thereby creating a favourable work environment for the workers. That is the laws and organisations governing the industry should be pro-development, and should allow removal of bottlenecks, delays, etc. They should encourage and enable the industry to implement labour laws.

5.1 The Roadmap

Recommendations are made for three major stakeholders in the salt industry:

(i) Salt Commissioner's Organisation (SCO), (ii) salt workers and the (iii) industry. The suggestions for the SCO are made with the objectives of making it a pro-market specialised organisation that can play multiple roles in the salt industry. Recommendations for the salt workers include measures to specify their status and livelihood and building their financial base as well as social security needs. The set of recommendations for the industry aim at making it more competitive and diversified in the global scenario and also to include labour welfare and labour laws as endogenous to the production system. In view of these objectives, the first step towards reorientation of the salt industry is to provide the necessary institutional support without unnecessary interference. In this regard the following is recommended:

1. The prime input for any successful planning is the availability of quality and systematic data. The salt industry lacks proper data on production, area, employment, wage, etc. The available figures are mostly rough estimates. The SCO is mandated to collect and compile this data but due to lack of adequate infrastructure at the field level, data collection cannot be done systematically. Apprehensions of the entrepreneurs in providing correct data also influences the data collected by the SCO. It is suggested that estimates of salt production can be made following the procedures adopted by the Ministry of Agriculture for crop estimates.
2. Area specific policies should be developed for the salt industry in consultation with the local entrepreneurs. It is suggested that vertical linkages are highly conducive for the growth of the salt industry and, wherever possible, the sector should be linked to the chemical industry to ensure a steady demand.
3. The Government should facilitate technology transfers at regular intervals to create level-playing field in the industry. This would enable a balanced growth of the small-scale producers and make their operations cost-effective. The CSMCRI should play a pro-active role in technology development and transfer to the salt industry, especially for the small and marginal salt producers.
4. The major salt producing states should orient their leasing policy to ensure optimum utilisation of the resources. If entrepreneurs do not undertake production for three or more consecutive years, the lease should be cancelled and such entrepreneurs should be debarred from future bidding.
5. Duration of lease should be increased to 20 years from the existing 10 years, so that the leaseholders are encouraged to take long-term growth plan, as it is followed by the SCO.
6. The entrepreneurs in categories II and III need a single window clearance, which can be coordinated by the SCO.
7. The field level establishments of the SCO are suffering from lack of adequate infrastructure and funds. Most of the staff is also de-motivated. To enable the SCO to be efficient and play a larger role in the development and modernisation of the salt industry, an overhauling of the organisation is urgently needed.

8. The State Governments should be encouraged to fix the revenue and royalties on salt lands under their control at par with those fixed for the SCO land.

9. The SCO should encourage the entrepreneurs through incentive measures to undertake labour welfare activities.

10. Assistance should be provided to the industry to get credit, construction of storage ground, etc.

5.2 The salt workers

The salt worker in India has an undefined status. Therefore, it is essential to first define a salt worker. This definition could then be used for preparing a National register on the salt workers. Presently, traditional salt workers form a minority and workers from other sectors are entering the salt industry in search of alternative livelihoods. They come to work in the salt industry because they have nothing else to do. The first challenge to both the industry and the worker is to make the environment such that workers stick to the industry.

The long-term objectives of the salt industry should be to make the workers capable of attaining their needs. This can be done by improving the earning potential of the workers through training and education of the children of salt workers. In this regard the following measures are suggested:

A. National registration scheme for salt workers

The experience of NMAY and CRS raises the issue of identification of salt workers. The first issue is who is a salt worker and second how to identify him or her. If the process of identification is done in the background of a monetary reward, the possibility of over-identification or exclusion of real salt workers cannot be ignored. However, reliable identification is a must for successful implementation of any development plan.

So far, only the Government of Gujarat has taken some steps toward identification of salt workers and issuing identity cards to them. From the perspective of workers also, especially for the migrant workers, such identification is necessary if it could help them in accessing the PDS, Government schemes, insurance and schooling facilities.

From the perspective of the industry, it will give an idea about the supply of labour available to the industry. Demand for labour from the industry can be estimated given their land size and production target. Coupling this together, the industry will get a clear picture of labour market in the industry. It can also be utilised to track migration and industrial relations.

The first step, as mentioned above is to define who is a salt worker. Following are the types of workers engaged in the salt industry: (1) saltpan workers (2) workers engaged in transportation of salt at various levels excluding shifting of salt from pan to platform, and (3) workers engaged in salt washaries, iodisation plants and packaging of salt. Excluding these 3 categories, there are other workers who are engaged as managers, guards, pump operators, tractor drivers, labour contractors, etc. To start with, the present study has used the following steps to define a salt worker:

B. Who is a salt worker?

The following criteria are used to identify a salt worker.

1. On field identification
2. Nature of job
3. Time spent in salt works
4. Share in income
5. Visual inspection

The first step to identify a salt worker is to visit a saltpan and record the names of the workers who are working there.

The second step is to record their nature of job. A person is considered as salt worker if he/she undertakes one or all of following activities:

a. Preparation of pan
b. Scrapping
c. Heaping
d. Shifting of salt to platform

The third step is time consideration. A person is a salt worker if he/she spends most part of the year in salt production related activities listed above.

The forth criterion is 'share in income'. If the person earns major share of his/ her yearly income from salt production activities, he/she is a salt worker.

When the persons are interviewed in the villages, in synchronisation with criterion listed under 2 to 4, identification marks associated with salt works *viz.,* blisters in the hand and leg, discoloured and burned skin, etc can also be checked.

Based on the above, a salt worker can be defined as follows:

A salt worker is a person who is above 18 years of age and engages directly and physically for most part of the year in salt production activities such as of preparation of brine, scrapping, heaping and shifting of salt to platform. He/ she earns major part of his/her annual income from his/ her direct involvement in salt production.

The next step is the registration of the salt workers. The registration process raises the following issues:

1. Who will do the registration?
2. Who will pay for it?
3. As number of workers in the salt industry varies through the season, at what time of the year the registration should be done?
4. How should it be done?

Who will do the registration? During the study it was quite apparent that, irrespective of state or location, two agencies are most known to the salt workers – the leaseholders and the factory officers of the SCO. It is felt that the registration exercise can be best done by the SCO, which has access to the salt works through its field establishments. The SCO can include leaseholders, the Labour Department of the respective states and/ or NGOs, etc to facilitate the registration process. However, accountability of the whole process should lie solely with the executing agency and its officers.

Who will pay for it? Salt is a Central subject while labour is a State subject. Therefore, any policy regarding salt should be of concern for both the Central and the State Governments. In this regard both the Central and the State Government can share the expenditure for registration. However, a small amount of registration fee can also be charged to set a filter in the registration process.

When should the registration be done? As the composition of the workforce is not uniform throughout the production season, the registration can be done on two or three occasions during the season *i.e.* at the beginning of the season, peak season and or at the end of the season.

How should it be done? The following steps are suggested for carrying out the registration:

(i) The launching time of the registration programme should be advertised in local dailies, local radio and TV channels to create awareness among the salt workers. The registration programme should also be communicated in advance to the salt workers through the leaseholders.

(ii) The Executing agency accompanied by a video photography team will visit the salt works and meet the workers during the beginning of the production season. It will explain the process of

registration and will record the name and picture of salt workers who are willing to register themselves.

(iii) The same exercise will be repeated during the peak and, or at the end of the production season.

(iv) Registration cards will be issued to the salt workers through the leaseholders. The leaseholder will also collect the prescribed fee from the workers or can adjust the fee from the wage bill of the participant workers. In case the registration card is not delivered it should be handed over to the executing agency.

A detailed proposal on the registration of salt workers (Namak Mazdoor Panjeekaran Yojana) is enclosed at Appendix III.

C. Working condition

i. Fixing of minimum wage

The following steps are suggested to fix minimum wage for the salt workers engaged on piece-rate basis:

1. List the different steps in the production process and the time taken by an average worker for each process.
2. The time taken for each process should be worked out by tri-partite consultations, involving Government, workers and employers.
3. A calculation should be made of the basis of the quantity of salt produced by an average worker in an 8-hour day.
4. A list of the worker's expenses should be made and expense per quintal calculated.
5. The minimum wage for an 8-hour day should be fixed.
6. The minimum wage should be divided by the quantity of salt produced in a day. This will give the gross piece-rate.
7. The worker's expense per quintal should be added to the gross piece-rate. This is the net piece-rate, which should be considered as the minimum wage.

ii. Security of Employment

Employers tend to keep the workers insecure by not registering their name as workers. It is, therefore, important to ensure the following minimum records to be maintained by the employer.

1. Register with all workers' names and date of starting employment.
2. Production record.
3. Payment to the workers.

In addition to the above, each worker should have a production record card, which should state the following:

1. Name of the worker.
2. Name and address of employer.
3. Date of joining employment.
4. Date-wise production record of salt produced and payment received.

The liability of the worker should be vested upon the leaseholder irrespective of the size of lease. At present, leaseholders are escaping their obligations by sub-leasing to labour contractors.

In the existing structure it is not possible to eliminate the role of the middlemen overnight for the reasons mentioned in Chapter 2.0 of the report. However, the process of identification can be initiated through inspection by the field offices of the SCO. The process of identification should be carried out directly

through an All-India census of salt workers where the stakeholders have no direct expectations. Identification of workers in the background of any developmental scheme is likely to be inaccurate and sometimes even provide an exaggerated picture.

iii. Health and Family Welfare

Health profile of a population is directly related to the nature of work and the amenities available to the people engaged in such works. Salt manufacturing takes place under difficult conditions and the general amenities available to the workers are of low order. Many salt producing areas have permanent water scarcity, which results in routine consumption of water from unhygienic sources. As a result the population working in the salt production activities is more vulnerable to water borne diseases.

The study shows that salt workers in general cope up with their health problems in very crude and traditional ways. Considering the tough nature of the job and the remoteness of their working sites, there is a need for greater attention on the health of salt workers by the employers/ leaseholder and the Government. Based on the information collected during the study, the following suggestions are made to improve the health and family welfare status of the salt workers in the country.

- Mobile clinics should be made available to the salt workers, wherever it is difficult for the population to access hospital facilities. Through such clinics, health care and family welfare measures can be made accessible to a larger section of the workers, awareness campaigns on health care can be organised and lives can be saved in case of emergencies. In this regard, special attention is needed in the LRK and other far-flung areas of Rajasthan where working conditions are the toughest.
- There is need of increasing awareness towards use of protective gear by the salt workers at the work place. In addition, the protective gear also need improvisation to make them more work-friendly.
- Awareness on family planning is also very less. There should be special efforts to generate more awareness on family planning measures among the salt workers.

Appointment of Health Assistants

During the study, the salt workers were found to underrate their health conditions. They considered themselves to be in good health as long as they could walk or work. A visit to the doctor or the medical clinic is avoided until it becomes necessary. This lack of concern about the health leads them to (1) ignore early indications of chronic health problems and miss the scope of preventive interventions, and (2) sub-optimum utilisation of existing health infrastructure available to them. However, the study also indicates that they regularly discuss their personal problems including health within the community. Hence, a health worker from their own community/group will be better positioned to make them aware about the health related problems and can help them in seeking medical attention at the early stages. Toward this purpose, a group of dedicated health assistants from the salt workers community can be employed on a contractual basis. They will work as the eye, ear and hand of the existing health infrastructure and since they will be from the same community, they will be better positioned to deliver health inputs, even in the far flung production points within their domain. A detailed project proposal on the health issue of the salt workers, *Namak Mazdoor Swastha Sahayata Yojana,* is enclosed as Appendix IV.

Drinking water

One important issue related to the health and welfare of the salt workers is provision of potable water in the salt production areas. Presently, majority of the population depends on other sources of drinking water like tankers. Pipeline water is infrequent and the workers have to travel considerably to avail the pipeline water. It was noted during the study that out of those who were reported to be in poor health, about $1/5^{th}$ were suffering from digestive and stomach related problems, which also raises the issue of the quality of water available to them. Secondly, the cost of drinking water is considerably high for the workers when it is supplied through the tankers. Hence, provision of low cost quality drinking water is a challenge before the salt industry.

In the short run the existing system of supply, *i.e.* through tankers can continue and over the next 10-15 years pipeline water should replace tankers as the major source of drinking water in salt producing areas. The pipeline water can also be supplied through construction of Reverse Osmosis (RO) plants in the coastal areas. However, the RO plants will need a higher capital cost and an equally larger recurring expenditure. In the given scenario, a more cost-effective and better alternative would be the harvesting of rainwater. It is well documented now that even in the desert of Rajasthan rainwater harvesting is possible and viable. It will also create community level assets as externality and will be a long-term solution for the growing population. A detailed scheme for provision of drinking water to the salt workers, entitled, *Namak Mazdoor Payajal Apurti Yojana*, is enclosed as Appendix V.

iv. Education

The salt workers are suffering from low literacy rate and high dropout from school. In line with the objectives of *Sarva Siksha Abhiyan (SSA)*, minimum eight years of education should be ensured for the children in the salt workers' community in the age group 6 to 14 years. Basic objective of education as related to salt industry is to build human capital for the future development of the industry. However, problem of education is more severe with the migrant workers. The children of migrant workers who otherwise would have gone to school in their native place, miss school for most of the time due to migration of their parents. The following measures are suggested in this regard:

Bal mandir: Place where children can come together for playing and other entertainment activities. A mid-day meal can encourage more number of children to come together in the Bal-mandirs.

Automatic enrolment: Children of migrant workers should be automatically enrolled in the nearest school at their place of migration.

Makeshift schools: Salt works in most cases are spread in remote places away from village centres. As a result the nearest school is also few kilometres away. It discourages the parents to send their children to school. Makeshift schools may be set-up at the periphery of salt works in a particular area. From cost considerations, minimum required size of population to set up a school in the age group 6 to 14 can be set at 50. This is twice the limit set in SSA.

Inclusion of NGOs: In the Little Rann of Kutch, NGOs are doing considerable work in encouraging the agarias to send their children to school. Government should encourage more NGOs by providing evaluation based financial support to venture in to education programmes for children of salt workers.

v. Basic amenities at workplace

This should be a part of the lease condition and renewal of leases. The leaseholder can be given a time of 3 to 5 years depending on the area of lease during which the leaseholder is liable to provide basic amenities like protective gear, water, rest sheds, sanitation and first aid. In case he fails to provide these amenities within the stipulated period, the lease shall be cancelled.

To ensure that the leaseholder meets the terms and conditions of the lease, a deposit equivalent to approximately one season's wage bill for required number of salt workers (*example:* 2 workers per acre) can be retained with the SCO. The deposit will be forfeited in case the leaseholder fails to meet the terms and conditions of the lease.

vi. Social security measures for the salt workers

There are number of models of providing social security to the workers in the unorganised sector. These may be classified as (1) Centrally funded social assistance programmes, (2) Social insurance schemes, (3) Social assistance through welfare funds of Central and State Governments, and (4) Public initiatives.

The objective of the social security measures is to curb the uncertainties that are associated with any livelihood and also

In India the term social security is generally used in its broadest sense, it may consist of all types of measures - preventive, promotional and protective as the case may be. The measures may be statutory, public or private. The term encompasses social insurance, social assistance, social protection, social safety net and other steps involved.

to provide cushion to absorb the shocks. The present section focuses on insurance as a viable social security measure for the salt workers.

The uncertainties associated with livelihood can be classified as insurable risks and non-insurable risks. Insurable risks are loss of livelihood due to death and disability and unemployment. Formally, two types of instruments cover the risk of livelihood due to death and disability: (1) term policies, which insure the risk of an event and (2) endowment policies, which offer returns on saving with term benefits, whichever is applicable.

Presently, it is estimated that there are about 5 lakh people[3] who are directly and indirectly dependent on salt as their principal means of livelihood. They are adding taste to our food and providing input to the multi-crore chlor-alkali industries. But their life is always at stake due to seasonal nature of the industry, poor wealth base and lack of alternatives. The present study also shows how a salt worker family is vulnerable to income shocks due to death, disability and unemployment. Unfortunately, in the country programmes for social protection against unemployment are virtually non-existent[4], but instruments are available to insure the risks of death and disability. As a major recommendation it is proposed that a group insurance scheme for salt workers should be introduced with terms, conditions and clauses of the insurance plan as simple as possible so that the workers face no hassle while making authentic claims. The designs of an insurance scheme as applicable to salt worker in the country is enclosed at Appendix VI of this Report.

5.3 Better management practices in production and labour welfare in the salt industry

In existing salt works the technology is not tuned for manufacture of high purity salt. If the salt industry has to accelerate its growth rate in future, there is a greater need for better management. While considering better management practices (BMPs), the labour welfare practices should be integrated in the process. Some of the important BMPs and labour welfare practices applicable to salt industry are outlined in the following paragraphs. A conceptual structure of "Salt Parks" –an institutional arrangement to make salt industry more organised is also discussed in Appendix VII.

A. Production and technical aspects

i. Quality and Brine: Implementation of proper feeding system for producing requisite quality of salt is important. There should be strict control over brine discharge *i.e.* 29° Be. This will help to reduce magnesium impurities in the salt. Harvesting operations should also be strictly controlled to avoid contamination of mud with salt, which will help to reduce insoluble as well as calcium impurities. Random sampling should be undertaken from top to bottom to get accurate quality norms.

The quality of salt produced can be substantially improved from the present 97 percent to 98 - 99.5 percent (with reduction in the calcium sulphate content from 0.5 - 0.8 % to well below 0.5 % thereby rendering it acceptable to the chemical industry and for export markets) by maintaining a pre-crystalliser area where brine can be concentrated to 25.5° Be and feeding systems in series. These improvements should be introduced in both marine and inland salt works.

The dredging of sand bars in creeks and desilting of supply channels should be intensified to ensure the supply of brine. The quality of salt should be improved by washing it in pans with brine or by suitable mechanical washing.

The manufacturing process must be modified and regulated on the basis of solubility ratings. The brine density should be carefully controlled and bitterns must be regularly discharged from crystallisers. This will lead to an improvement in the quality of salt. The salt supplied to the chemical industry should be subjected to mechanical washing before dispatch.

The Central Salt and Marine Chemicals Research Institute, Bhavnagar should offer viable technologies for producing high grade salt with low impurities of calcium, magnesium and sulphate.

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[3] *No official estimate is available on the actual size of the workers. The above is a rough estimate assuming (1) average daily employment of 1 lakh and (2) a family size of 5+ and the practice among most of the workers to engage as couple.*

[4] *The National Rural Employment Guarantee Bill, 2004 (tabled in Parliament on 21 December 2004) is a positive step toward this direction.*

ii. Reservoir – condenser management: Maintaining the proper ratio of reservoir-condenser-crystalliser is important to maintain the quality of salt produced. It is possible to reduce the contamination of gypsum with salt to some extent by maintaining a pre-crystalliser area. Proper maintenance of crystalliser's dykes is important to avoid contamination of soil and this will result in reduction of insoluble impurities.

Hard pudding of clay by vibratory rollers or lining of beds with polyethylene film should be adopted in salt cultivation areas in sandy tracts, which have high rates of percolation. Layouts should be reviewed and modified in relation to the initial brine density and areas should be realigned if there is variation in this in the manufacturing season to maintain proper ratio between crystallisers and condensers. Adoption of multiple irrigation or single irrigation with series feeding system can lead to increased yields. Construction of pre-crystalliser areas before charging brine into crystallisers and deep pond reservoirs to store adequate quantity of high-density brine during the rainy season will increase the yields.

iii. Training programmes for workers and supervisors: Salt workers need to be trained on the techniques of harvesting good quality salt. Educating equipment driver to take care while loading so that soil contamination below carpet can be avoided. This will help to reduce mixing insoluble and other foreign materials.

iv. Establishing washeries wherever possible: Adoption of proper washing system is essential to bring down impurities of salt. Washeries should be established wherever it is feasible as they are crucial for production of quality salt. Sufficient time should be given after washing for reduction of magnesium. Proper heap management should be adopted to avoid mixing of unwashed salt with washed one.

v. Un-interrupted power supply should be ensured during the manufacturing season.

vi. Wind mills should be installed wherever possible to use non-conventional sources of energy for pumping brine and they should be connected to the grids of the Electricity Boards. This will help in reducing cost of production.

vii. Axial flow pumps should replace all submersible pumps used for pumping brine in a phased manner, as they are more economical.

B. Storage and marketing

i. Market linkages and price determination: There are established market linkages for salt producers in category I and to some extent in category II. As far as salt works in categories III and IV are concerned, the market linkages are indirect *i.e.* through salt traders (middlemen), which is not efficient as salt traders take away considerable profit. For price determination, unlike producers in category I, producers in the other three categories do not have bargaining power. Salt producers in other three categories can come together to form co-operatives or small local groups to increase their bargaining power and in turn create market linkages.

India can be a major exporter of salt in the years to come. To accomplish this, a study should be commissioned to identify the emerging export potential and tapping of markets abroad, especially those in the Asian and African countries. The study should cover quality/ quantity of salt needed, time schedule to supply, CIF price, etc and the infrastructure facilities needed to meet these requirements.

The major recommendations in this regard are as follows:

- Internal transportation by rail needs streamlining.
- There should be no restriction on movement of non-refined iodised salt by rail under the Zonal Scheme.

- Adequate time should be given for loading of salt in rail rakes.
- Rail rakes should be provided in a time bound manner to various salt loading stations for transportation of salt.
- A quarterly meeting of Salt Commissioner, Railways Board and representative of the Salt Industry should be organised to discuss the transportation problems of the salt industry.

- Supply of ordinary iodised salt should be encouraged in consumer packs for better retention of iodine.
- The economic viability of setting up a barge jetty facility at Bagasara village near Navlakhi Port, Rajkot District and possibilities of exporting salt from Vadinar jetty of Kandla Port in Jamanagar District should be explored.
- As a short-term measure a dedicated berth for export of salt should be allotted at Kandla Port to reduce retention period of ships.
- Infrastructure at major/ minor ports should be upgraded to increase loading rate to reduce the turn around time of vessels and hence the demurrages and CIF cost of salt exported.

ii. Storage facility for raw and iodised salt: Salt producers should maintain good storage facility to prevent harvested salt from any damage due to un-seasonal rains. Good storage facility is very important for iodised salt as in open storage the percentage of iodine gets reduced.

C. Social security and welfare needs

Rest sheds at work place: Generally, salt works are located in far-flung areas where scarcity of drinking water, high temperature and high wind velocity makes life of workers difficult. Proper rest sheds at the work place should be high priority for all types of salt works.

Protective gear and equipment: Occupational safety in terms of health is important and all salt producers in all categories should encourage the workers to use protective gear at the work place.

Implementation of social security measures for workers: Applicable social security measures like Provident Fund for salt workers should be implemented by salt producers in categories I and II strictly. For categories III and IV, social security measures are difficult to implement due to their smaller size. Implementation of the insurance scheme proposed in the report will be a significant step towards this.

Proper implementation of labour acts like paid leaves, equality of wages, maternity leaves, minimum wage norms, maintaining first aid box at work place, etc. should be ensured. Providing proper drinking water with good storage facility should be provided at the work place.

Housing and education facility for migrant workers: It should be ensured that all salt producers in category I provide housing and school facility for the migrant workers.

Register of workers: All salt works in all categories should maintain register of workers, which would be crucial for implementation of welfare programmes.

5.4 SWOT[5] Analysis for Salt Industry in India

The salt industry in India has great potentials for expansion and to contribute to the economic wealth of the country. However, to achieve this potential the industry needs a sound policy framework, which takes into account the long-term needs of the industry. To enable the formulation of such a policy, the following SWOT analysis has been carried out for the salt industry in India:

[5] *SWOT – Strengths, Weaknesses, Opportunities and Threats.*

SWOT[6] Analysis for Salt Industry in India

Strength's	Weakness
• A long coastline and vast inland saline resources in Rajasthan and the Little Rann of Kutch (LRK). • Favourable environment. Dry and windy environment in the coastal areas, in LRK and entire Rajasthan. • Availability of cheap skilled and unskilled labourers compared to other salt producing countries. • The State Governments (especially Gujarat, which accounts for 70 percent of salt production) evolving paradigm shifts to support the industry. • Suitable locations for export to various countries (China, Philippines, Qatar, Malaysia, etc.). • An extensive Railway system, excellent anchor points. • Established Salt Department and R & D institutions such as CSMCRI, Bhavnagar. • Higher salt density in some areas in Gujarat.	• Low productivity. • Only 54 percent of recognised area developed till 2003. • Significant differences in quality of salt produced. High sodium and magnesium contents compared to international standards – not suitable for industrial requirement. • Significant differences in scrapping skill across the states and lack of training. • Organisation of production channel in line of agriculture- loss of industrial level efficiency. • Presence of stages of intermediaries – non-proportional distribution of revenue. • Internal road infrastructure inadequate. Roads linking saltpans to the anchor points are virtually absent. • Infrastructure at major/ minor ports needs to be upgraded to increase loading rate to reduce the turn around time of vessels and hence the demurrages and CIF cost of salt exported. • CIF cost is high compared to other salt exporting countries. • Cost of production is high due to unavailability of electricity in many areas. • Restriction on movement of non-refined iodised salt by rail under Zonal Scheme. • Insufficient storage facility for raw salt. • Many large salt producers do not have washeries, which is crucial to improve the quality of salt. • Inefficient implementation of labour laws. • Industrial use of salt is less than the domestic consumption, which is contrary to the international scenario. • Poor performance of categories II and III units. • Low degree of mechanisation.

[6] *SWOT – Strengths, Weaknesses, Opportunities and Threats*.

Opportunities	Threats
• Increase in exports - emerging chlor-alkali industry, edible salt market in the world and consequently the export potential from India particularly to Asian and African markets. • Integration of small and medium salt producers will allow salt production at a competitive level. • The State Governments (especially Gujarat and Rajasthan) evolving paradigm shifts to support the entrepreneurs. • Untapped wind and solar energy as alternative self-sufficient energy sources. • Huge domestic market, large livestock and a population growth rate of about 2 percent per year. • Entry of China, the second largest producer of salt as importer.	• Export market is yet to be stable. • High land rent and royalties on State government lands for salt production. • Low labour cost may be due to inadequate implementation of labour laws. • Build up of inventory in Tamil Nadu, Gujarat. • Conflict with agriculture surrounding the salt producing areas over land use pattern. • Conflicts with wildlife and marine sanctuaries. • Major competitors in international market like Australia and Mexico. • Industry is highly vulnerable to monsoon fluctuations. • Improving the management of Railways so as to increase credibility. • Changes in PFA Act to avoid harassments to genuine producers. • Changes in Pollution Act for salt industry. • Interrupted power supply hampering the production season. • Rapidly depleting ground water level due to extraction of sub-soil brine. • Health of domestic chlor-alkali industry – the largest consumer of salt. • Frequent cyclonic weather in the east coast and natural calamities like earthquakes and tsunami.

5.5 Conclusion

In 1930, Mahatma Gandhi rebelled against the British policy of monopolising the salt trade at the cost of common people, started one of the most famous movements of India's freedom struggle. Incidentally, the year 2005 marked the 75th anniversary of Dandi March. The Mahatma's mission yielded fruits and today salt is freely available in each nook and corner of the country. It is meeting the expanding needs of the chemical industry and is now also an export item earning valuable foreign exchange.

However, an average salt worker irrespective of his work or location, still continues to suffer from inadequate resource base. This inadequacy has kept him in the poverty trap over generations. Unless significant steps are taken to improve their status, the future generations of the salt workers will also have a less chance of coming out of the poverty trap. The future of the salt industry is inter-woven with the outlook and approach of the workers and, therefore, development of the workers becomes a pre-requisite for the sustainable development of the industry in the country. Further, to optimise the potential in a globalised era with declining trade restrictions, the salt industry needs long-term policy interventions to cash its strength, subtract its weaknesses, materialise the opportunities and counter the threats that may come in its path of progress. We conclude with the hope that the present report would be a stepping-stone towards this direction.

5.6 Summary of major recommendations

Sl. No.	Recommendations	Major Components	Implementing agency	Modalities of implementation	Time-frame
1.	Namak Mazdoor Panjeekaran Yojana –A National Registration Scheme for Workers in the Salt Industry in India	Identification and Registration of salt workers Census of salt workers Issue of identity cards	Salt Commissioner's Organisation (SCO)	Central Sector Scheme (100% funding from SCO) Assistance from leaseholders	10th Five-Year Plan (likely to spill over to 11th Five-Year Plan)
2.	Namak Mazdoor Swastha Sahyata Yojana – A Health Scheme for Workers in the Salt Industry in India	Appointment of trained Health Assistants from salt workers' community to work from within the community	SCO	Central Sector Scheme (100% funding from SCO) Appointments on contract basis for a fixed-term Training of workers by the Health Department	11th Five-Year Plan
3.	Mobile Health Clinics (MHCs)	Provision of Medical Vans with the required complement of staff	SCO, State Governments, NGOs	Provision of Medical Vans through financial assistance from SCO Provision of Medical Staff by States Recurring expenditure by States	10th Five-Year Plan
4.	Namak Mazdoor Payajal Apurti Yojana - A Drinking Water Scheme for Workers in the Salt Industry in India	Pipeline supply Setting up of Reverse Osmosis Plants Rainwater harvesting	SCO, State Governments, Area specific strategy	Involvement of concerned Central and State-level agencies Formation of User Groups One time grant by SCO Inclusion of leaseholders	11th Five-Year Plan
5.	Education	Makeshift schools near saltpans Bal Mandirs	SCO, State Governments, NGOs	Coordinated efforts between State Governments, NGOs and SCO Inclusion of leaseholders	10th Five-Year Plan
6.	Namak Mazdoor Bima Yojana –A Group Insurance Scheme for Workers in the Salt Industry in India	Group Insurance Scheme Protection against financial loss due to death and disability Retirement benefit	SCO, State Governments, leaseholders	Centrally Sponsored Scheme Single master policy for all salt producing states Involvement of Leaseholders and State Governments	11th Five-Year Plan

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Sl. No.	Recommendations	Major Components	Implementing agency	Modalities of implementation	Time-frame
7.	Amendments to Lease-Agreement concerning Labour Welfare	Inclusion of labour welfare clauses in lease agreement Provision of security deposits from leaseholders of Category I and II units Fixation of ground rent/ royalties on the basis of infrastructure Extension of lease period to 20 years in all cases	SCO, State Governments	Through inclusion of labour welfare clause (s) in the agreements	10th Five-Year Plan
8.	Salt Parks - Establishment of Special Salt Production Zones	Special salt production zones in areas dominated by small salt farmers Provision of necessary physical infrastructure Institutional support Standardization of quality of product Implementation of labours laws Standard marketing channels	SCO, State Governments, Private sector	Identification of area Fully Government owned or joint ventures Formulation of Rule/ Regulations, etc.	11th Five-Year Plan
9.	Technology Transfer	Positioning of SCO to coordinate between R & D agencies and the industry Encouraging industry to adopt new technologies	R & D Institutions, SCO, Leaseholders	Identification of technological needs of the industry Development of suitable technologies for Category II to Category IV firms Subsidy/ grant/ loan to make technology transfer viable	11th Five-Year Plan

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Sl. No.	Recommendations	Major Components	Implementing agency	Modalities of implementation	Time-frame
10.	Improvement of Infrastructure	Repair of brine supply channel where necessary Provision of all-weather road to all salt production centres Provision of broad gauge rail track and loading stations in all viable areas Timely supply of rail wagon and rational freight charge Provision of electricity supply Dedicated jetties for exporters	SCO, State Governments, leaseholders	Through existing Schemes of the State Governments/ SCO / Ministry of Railways/ Surface Transport User fee by leaseholders	11th Five-Year Plan
11.	Better management practices in Salt Industry	Improvements in production techniques, especially for small salt producers Better storage and marketing facilities Strengthening of social security and welfare of salt workers/farmers Training camps for salt workers/farmers	SCO, leaseholders, State Governments, R & D Institutes	In co-ordination with R & D Institutes, State Governments and Leaseholders	11th Five-Year Plan

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Appendix I

Methodology

When BOBP-IGO undertook the study on the socio-economic condition of salt workers, paucity of reliable data on the number of salt workers and their geographical distribution posed a major hurdle in the statistical designing of the study. What we had at best was a set of quality information on production and area under salt works. To overcome this problem, a statistically large population of salt workers was assumed at the national level. Assuming the salt workers' population at the national level at around one lakh, a sample size between 1 000 to 1 200 was considered adequate for statistical estimation at standard 95 percent confidence interval level. Time and resource constraints were other guiding factors for arriving at this sample size. One of the basic objectives was also to design a simple and sound methodology of sampling that would enable future expansion of the survey without losing comparability. The sound methodology of geographical stratification was used to draw a multistage random sample from an area-based salt workers' population living in different salt producing states.

The other factors that mostly affect statistical outcomes are characteristics of population like caste, gender, age, employment, etc. However, a large sample size based on stratified sampling method is expected to take care of these issues. The next problem was to distribute the samples over the salt-producing states. We used production, area under salt production and data available from SCO on per day average number of employment to calculate the sample size for each state and each place to be visited for the sampling. Weights were also assigned to categories of salt production units to arrive at the appropriate sample size.

During the survey care was taken to collect samples in such a way that workers working on different categories of salt works and gender distribution of workers were fairly represented. However, during the interviews with female workers, the male counterpart was found to be interfering in most cases. In many cases women worker were shy to talk before their male relatives. On this ground the survey results could be termed as biased towards the male salt workers.

The objectives of the study were to find quality data on the socio-economic variables pertaining to salt workers. Therefore, emphasis was also laid on the workers at the community level to understand their problems and to draw inferences on the community preference structures and how the individual was related to the community. The hypothesis behind the study was that for an overall understanding, the sustainable livelihoods of all stakeholders should be considered. This is also a criterion of livelihood sustainability model of the Department for International Development of the United Kingdom. In pursuit of this goal, semi-structured questionnaires for leaseholders and other stakeholders like concerned government agencies and NGOs working with salt workers were developed and used during the study.

For the salt workers two set of questionnaire were developed. One was a structured questionnaire for personal interviews covering demographic, asset, social and economic variables. The other was a semi-structured questionnaire for participatory rural appraisal (PRA) and focus group discussions. However, no sample target was fixed for the PRA. The PRA exercise was done where salt workers were living as a community and ready to participate in the appraisal.

The place of work was mostly selected as the place of interview to tackle the identification issue of the salt worker and to meet the criterion we set to define a salt worker. However, in places like Tamil Nadu, where salt works were closed due to heavy rain during the survey, workers were interviewed in their villages. Help was taken from leaseholders and officials from the SCO to identify the workers.

Competent and well-qualified field investigators were engaged in respective states to overcome communication gap. The field assistants were provided with proper orientation prior to the sampling and were also cautioned about avoidable sampling errors like prompting and personal bias.

The study was undertaken in seven major salt producing states of India - Rajasthan, Gujarat, Maharashtra, Tamil Nadu, Andhra Pradesh, Orissa and West Bengal during the year 2004-2005. Together, these states cover about 99 percent of area and production. A sample size of 1 177 salt workers was selected at the national level of which ultimately 1 073 samples were considered for analysis. Following is the detail of samples collected from each state.

State	Total area (in acre)	Total unit	Total production (in '000 tonnes)	Average daily employment	Sample size
Andhra Pradesh	25 662 (4.70)	1 834 (0.40)	306.4 (2.06)	14 388 (14.34)	193 (17.98)
Gujarat	3 61 519 (66.21)	3 27 584 (71.85)	10 585.9 (71.13)	53 900 (53.72)	371 (35.58)
Maharashtra	20 026 (3.67)	11 971 (2.63)	193.3 (1.30)	2 974 (2.96)	82 (7.64)
Orissa	4 560 (0.83)	46 (0.01)	37.9 (0.25)	748 (0.74)	30 (2.80)
Rajasthan	77 599 (14.21)	1 729 (0.38)	1 324.9 (8.90)	12 425 (12.38)	111 (10.34)
Tamil Nadu	49 409 (9.05)	3 502 (0.77)	2 385.8 (16.03)	15 083 (15.03)	255 (23.77)
West Bengal	4 203 (0.77)	47 (0.01)	16.9 (0.11)	235 (0.23)	31 (2.89)
India	5 45 924	4 55 905	14 882	1 00 332	1 073

Source: Annual Report 2003-04, Salt Department, Ministry of Commerce and Industry, Department of Industrial Policy and Promotion, Government of India.

Note: Figures for area, unit, production and employment are total of recognised and unrecognised units. Figures in parentheses are relative of the respective state to India in percentage.

Proceedings of the National Workshop on the Socio-Economic Status of Workers in the Salt Industry in India

The Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO) organised a National Workshop on the Socio-Economic Status of the Workers in the Salt Industry on 17th February 2006 at the Mahatma Gandhi Labour Institute, Ahmedabad, Gujarat. Sixty-one participants representing the concerned Ministries/ Departments of the Central/ State Governments, Salt Industry and Social and Non-Governmental Organisations attend the Workshop. A list of participants is placed at Annexure 1.

Dr Y S Yadava, Director, BOBP-IGO welcomed the participants. In his introductory remarks, Shri S Sundaresan, Salt Commissioner, Government of India said that this National Workshop was the first ever national level meet on the salt workers. In the past such meetings focussed more on the industry. He mentioned that during 2005 India produced 196 lakh tonnes of salt and exported 38 lakh tonnes. The average annual production was now ranging between 140 to 150 lakh tonnes. Shri Sanjay Thade, Director, Department of Industrial Policy and Promotion, Government of India stated that the Government was paying attention to the needs of the salt workers. He informed that the Government plans to implement several drinking water schemes for salt producing areas in the country.

Shri V K Babbar, Principal Secretary (Labour & Employment), Government of Gujarat presided over the Workshop. In his inaugural address Shri Babbar said that the time is appropriate to formulate short and long-term programmes for salt workers. Complementing BOBP-IGO on the comprehensive study, he said that we now have a national perspective on the salt workers and the industry. Recalling some of the earlier reports on the subject, he mentioned that the first report was prepared by the Gujarat Institute of Development Research followed by two reports from NGOs – SAVE and CARE.

Highlighting the issues of salt workers in the country, Shri Babbar said that we now need to address the micro-level issues, make detailed assessments to see whether the salt workers are better off today than before, how much money is required to eke out a proper living for the families, the micro-economics of salt production at the farm level, the role of NGOs and whether they can replace traders, regulation of middlemen, can a minimum price be fixed for salt, especially for the small salt producers, etc. He said that we could learn from the experience of National Dairy Development Board in co-operative salt farming and informed that the issue of a separate welfare board for salt worker is still under consideration of the Government of Gujarat. He urged the salt manufacturers' associations to be involved in the welfare programmes in a big way and said that the Government needed professional help to set up salt parks. Education of children of salt workers is a big concern for the State Government and in this regard lauded the efforts of the NGO, GANATAR. Shri Babbar also appreciated the proposed plan of GANATAR to set up community hostels for children of migrant salt workers.

In the first Technical Session, Dr Yadava made a power point presentation on the findings of the BOBP-IGO study. A 24-minute documentary film (*75 Years after Dandi – India's Salt Workers Look for their Place in the Sun*) prepared by BOBP-IGO followed the presentation.

Following the presentation and the documentary film, a panel comprising Shri B J Bhatt, Regional Labour Commissioner, Government of Gujarat; Shri S Mohan, Joint Commissioner of Labour, Government of Tamil Nadu; Shri M A Ansari, Deputy Salt Commissioner, Government of India; Ms Trupti Trivedi, Co-ordinator, SEWA; Ms Veena Padia, Project Director, CARE Gujarat; Mr Sukhdev Patel, Director, GANATAR and Mr D S Jhala, President Indian Salt Manufacturer's Association initiated discussions on the findings of the BOBP-IGO study. Shri Bhatt chaired the Panel.

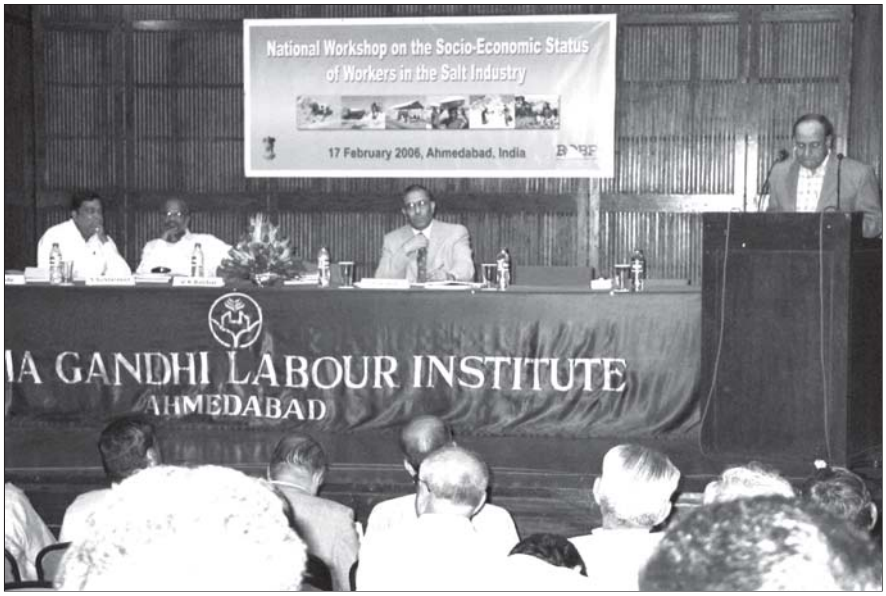
The Panel members complimented BOBP-IGO for the comprehensive study on the salt workers and said that the study will contribute towards better understanding of the issues and also towards finding solutions to the

problems of the salt workers in India. The Panel felt that as the study was based on a sample survey and, therefore, the inherent limitations of a survey could not be ruled out.

Shri Bhatt informed that the Empowered Committee of the Government of Gujarat had sanctioned a registration scheme for the salt workers in the State and identity cards would be issued to the workers under the scheme. The scheme is expected to be implemented shortly. He also appreciated the efforts of GANATAR in implementing educational programmes for the children of salt workers in Gujarat.

Ms Padia observed that the BOBP-IGO study is based on extensive work and the report makes some bold statements. However, the data should be analysed more critically. She asked whether the income data in the report pertains to per capita monthly income (PCMI) of per capita monthly disposable income. Ms Padia informed that the workers are highly indebted and much of their income goes to the traders and merchants. The agarias take advance at the beginning of the season. After adjusting the advance at the end of the season, they are not even left with Rs 3 000. A CARE study on the salt workers had identified seven sources of exploitation of the salt workers, namely trader, grocer, water supplier, diesel supplier, etc. Hence, instead of PCMI, the per capita monthly disposable income is more important. Further, the report does not highlight the health issues of women salt workers and said that reproductive health issues like excessive bleeding are a major concern among salt workers. On the use of protective gear, the findings of the BOBP-IGO study are also contradictory to the information generated by a SAVE-CARE study conducted in the Little Rann of Kutch (LRK) salt workers. Ms Padia further informed that CARE is cooperating with the Government of Gujarat on development of the salt production-cum-technology centres where land, technology and other facilities will be provided to the salt workers to make them competitive and also access the market. However, the NGOs cannot substitute the role of the Government or the private sector but can only play complementary role.

Pictures from the National Workshop, top: Shri V K Babbar, Pricipal Secretary (Labour & Employment), Government of Gujarat; middle: Shri S Sundaresan, Salt Commissioner, Government of India; below: Inauguration of the Workshop.



Shri Jhala stated that a detailed study of this nature has been undertaken in the country for the first time. However, the study has focussed on the workers and industry-related issues have not been discussed in detail. He said that in the last 40 years changes have been made in the lease conditions and other rules, which have affected the industry badly. Four-decades back Ballarpur Salt Works provided *pucca* houses to every worker, but this is not possible now due to change in the lease period from

20 to 10 years. Such changes have adversely affected the investments and the industry has lost the stability that it enjoyed earlier. Shri Jhala said that the future of the worker should be linked with the industry. Since the industry's survival lies in automation, alternative livelihood of the large workforce presently associated with the industry is more pressing than anything else. To improve the status of agarias, the industry should be stabilised. Agarias can be trained in alternative livelihood options like artemia culture, tractor/truck driver, pump operator, etc. He also suggested that for modernisation of the salt industry, the Government, the industry and the NGOs should sit together and formulate long-term strategies.

Ms Trupti Trivedi of SEWA describing the status of agarias stated that the entire agaria family is engaged in salt production, but at the end of the season their income is very low. About 80 percent of the agarias are from backward classes and live below the poverty line (BPL). However, many of them do not have the BPL card. Existing welfare measures hardly reach the LRK region. For improving the profitability of salt production, the agarias can be given subsidised diesel like marine fishers get. Diesel consumption accounts for about 50 percent of the cost of production. Temporary shelters with facilities like crèche, ration shop, etc. should also be provided in the LRK region during the production season.

Shri Shukhdev Patel representing the NGO, GANATAR said that he was particularly happy with the study as the children's issues were highlighted. The study is comprehensive but more information on health of women workers should be included. The data generated by the Indian Council of Medical Research would be useful in this regard. He further said that the situation of salt workers has worsened through the years. Their children are not going to school because schools do not exist. Existing health facilities like mobile health clinics are non-functional. Shri Patel said that measures like the Empowered Committee are of ad-hoc nature. The Committee lacks representation of salt workers. He emphasised that the crux of the matter is to acknowledge the salt worker's right to live their life at par with any other Indian citizen and there is no question of preferential or differential treatment between industry and the workers.

In the second technical session, Dr Yadava presented the recommendations of the study, which was followed by panel discussion and interactions with the participants.

Discussing the merits of the Namak Mazdoor Panjeekaran Yojana (NMPY), Shri Bhatt noted that the registration scheme of salt worker would provide valuable information to the Government. He suggested that the registration of salt workers could be done in line with the registration of workers in the construction sector.

Commenting on the Namak Mazdoor Swastha Sahayata Yojana (NMSSY), Shri Bhatt said that in the education sector such a step by GANATAR has been successful and the same can be repeated in the health sector through NMSSY. However, Shri S Thade observed that health schemes exist for rural areas and launching of new scheme(s) may lead to multiplicity and waste of funds. Therefore, prior to the introduction of new schemes, the status of existing schemes should be evaluated. Ms Trivedi supported the need of NMSSY but apprehended the possibility of elite capture of the scheme. However, Ms Padia felt that the NMSSY would benefit the salt workers, as the health assistants can be a link point between different government agencies and the salt workers.

Regarding Namak Mazdoor Bima Yojana (NMBY), Shri Bhatt informed that the Empowered Committee of the Government of Gujarat already has a proposal to introduce an insurance scheme for salt workers. Shri Thade suggested that occupational hazards should be reflected in the insurance scheme and the existing scheme in the handloom sector can serve as a guideline. Shri Patel emphasised on the need for early implementation of NMBY.

Shri G Kalaiselvan representing AWAKES an NGO said that the workers face problem due to lack of alternative employment opportunities. Livelihood programmes for salt workers can be initiated on the basis of success achieved with communities affected by the tsunami in Tamil Nadu. To empower women salt workers, micro-level credit programmes should be initiated. For school dropouts, vocational training will be helpful and the NGOs can play a major role in this respect. Shri Kalaiselvan said that the NGOs

are finding difficult to implement Namak Mazdoor Awaas Yojana (NMAY), as they have to interact with both the Central and State agencies. He further said that the salt workers should be treated as partners in the activities aimed at their development.

Shri Santosh Kamdar, Managing Director, Bhavnagar Salt Works complimented BOBP-IGO for the report. He said that the salt industry has both organised and unorganised sectors. The workers in the unorganised sector are in a poor condition and they should be considered separately. The suggestions in the BOBP-IGO study mainly focus on the plight of the workers in the unorganised sector. The recommendations for the organised sector can be implemented immediately. He said that the workers in the organised sector are earning over Rs 2 000 per month. However, the industry is in trouble on account of reduction in the lease period, from 20 to 10 years, increases in the annual rent (from Rs 10 to Rs 60 per acre) and royalty (from Rs 1 to Rs 8 per acre). The burden on the industry is enormous and the problem is further aggravated by the increased cost of iodisation. He suggested that each salt producing district of Gujarat should be represented in the Empowered Committee to ensure that funds are allocated proportionately and the Central Advisory Board should meet more frequently to discuss the problems of the industry.

Shri S Mohan, Joint Commissioner of Labour, Government of Tamil Nadu said that 'bridge schools' should be provided for children of salt workers and medical benefits should also be added in the proposed NMBY.

Shri Patel said that GANATAR supports all the schemes proposed in the study. However, duplication should be avoided. The insurance scheme is urgently needed and it should cover occupational hazards of the workers. The anganwadi/ balwadi programme should also reach the workplace of the salt workers. There is no alternative occupation for the salt workers hence the adolescent group amongst the workers should be provided with vocational training programmes.

Shri B C Raval of Solaris Chemical said that alcohol consumption and lack of saving habits are the major problems in the agaria community. In this regard, the NGOs should work with agarias and create more awareness amongst the community. The information base on the salt workers should be strengthened with quality data, which can be used for fruitful interventions. He suggested that the NMSSY should be initiated. The SCO and one agency from the state government can monitor its implementation.

In the concluding session, Shri Sundaresan thanked the participants for their constructive and useful inputs, which would be included in the final version of the report to be submitted by the BOBP-IGO to the Government of India. He also requested the participants to communicate additional comments/ observations, if any to the BOBP-IGO by 28 February 2006.

In his concluding remarks, Shri Babbar emphasised on the need of defining a salt workers and felt that priority attention should be given to those working in the unorganised sector. He said that the salt production areas are very hostile and many government officers, health workers and teachers are reluctant to work in these areas. Hence implementation of welfare schemes is a major problem. Shri Babbar felt that the NGOs can play major role in this respect and the report should highlight this. The role of different government agencies in the implementation of the recommendations should also be identified.

The Workshop concluded with a vote of thanks by Dr Yadava.

* * *

List of Participants

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Namak Mazdoor Panjeekaran Yojana - A Scheme for Registration of Workers in the Salt Industry

Objectives

The objective of this scheme is three fold: (1) identification of workers related to the salt industry at the national level, (2) enumeration, collection of data and registration of the salt workers, and (3) providing identity/ registration card to the salt workers.

Justification

Availability of quality information is a pre-requisite for policy making, implementation of programmes/ schemes aimed at welfare of salt workers and their monitoring and evaluation. The salt workers, due to their seasonal occupation and unorganised character are not adequately reflected in any data bank on the national workforce. Presently, area specific information on salt workers is available through studies conducted by the NGOs, a census on salt workers conducted by the Government of Gujarat and yearly employment figures for the salt industry published by the Salt Commissioner's Organisation (SCO). The present study conducted by the BOBP-IGO provides comprehensive details on the socio-economic attributes of salt workers in the country and is a benchmark in this direction.

However, the information accrued from the present study or the previous studies are largely based on sample surveys and could be useful for providing directions to policies and programmes but do not adequately reflect on the magnitude of the task required for uplift of the salt workers at the national level. To enable formulation of sound policies and programmes for the salt workers in the country, correct estimation of their population and various other attributes associated with their occupation are essential.

The SCO is presently operating two schemes at the national level, Namak Mazdoor Awaas Yojana (NMAY) and Children Reward Scheme (CRS) for the salt workers. The NMAY aims at providing *pucca* dwelling units to the deserving salt workers and is heavily dependent on correct information to identify the real beneficiaries and in the process assess the magnitude of the Scheme. The CRS, directed at encouraging education among salt worker's children needs specific information on the number of school going children and their educational profile.

Unfortunately, quality information is lacking for both the Schemes.

Estimation of the existing social security nets is another crucial requirement for any future intervention in the direction. If the workers are not properly identified and their existing social security nets are not evaluated, it may not be feasible to introduce any social security measure for the salt workers. Implementation or extension of crucial services like health facility, drinking water, etc. in salt producing centres also needs information on the age-sex wise distribution of workers and their population size, etc.

Implementation

The first step to fill this information vacuum is a census of salt workers in the country. The census will give reliable information on the size, demography and other relevant attributes of salt workers. The data is essential to determine the magnitude of the task required for the socio-economic uplift of the salt workers, the desired areas of interventions and subsequent monitoring and evaluation of such interventions. The task may necessitate the following steps:

1.0 Defining the scope: The salt industry can be considered as a vertical linkage of salt production and processing units. Salt processing also includes iodisation plants. The first task is to define the scope of the industry *i.e.* whether both production and processing units are to be included or only the production units. However, in line with the existing schemes of the SCO, the scope of the industry can be limited to production units only.

2.0 Defining a salt worker: The workers in the salt industry are engaged in diverse activities from preparatory stage to scrapping and transportation. The industry is also marked by presence of middlemen or labour contractors, who are mainly engaged in providing managerial services. There are also a number of workers engaged in activities like pump operators, maintenance of records, etc. Hence, it is necessary to define the 'salt worker' in consultation with the industry.

3.0 Listing of units: A list of all the enlisted units from category I to category IV at the national level who are engaged actively in salt production will be required. These units will supply data on their past record of number of employment, preferably month-wise. This information is necessary to determine the time span and budget of the survey.

4.0 Designing of database: Depending on the time span and the budget of the scheme a structured questionnaire and database will be developed to collect the necessary information.

5.0 Enumeration and registration: A team comprising members of the implementing agency, SCO officials, enumerators and a video team will visit the salt pans and salt workers' settlements for conducting the census. The process will be on lines of National Population Census and issuing of identity cards to voters.

6.0 Post-census sample check: A post –census sample check will be carried out to determine the error level in the data and to correct any possible exclusion from the exercise.

7.0 Issuing of identity card: The salt workers will be issued registration numbers and identity card within a set time-frame.

8.0 Publication of results: The preliminary result of the exercise will be published within a set time-frame of the registration and enumeration.

Number of salt workers in the country: a back-of-the- envelope calculation

In the absence of any data on size of the salt workers, a back-of-the-envelope exercise has been carried out to estimate the population size of the salt workers. From the data published by the SCO and census of salt workers in Gujarat, it is estimated that the industry employs one worker for three acres of area under salt production. As per the data published by the SCO, 321 910 acres were cultivated during 2004 for salt production with an average daily employment of 135 913, *i.e.* 2.368 workers or 1 worker for every 3 acres. Further, the census conducted by Gujarat Rural Workers Welfare Board (GRWWB), Ghandinagar in 2002 enumerated 70 224 salt workers in Gujarat, of which 65 805 workers got regular employment in 2 lakh acres. This also works out to 1 worker per 3 acres.

The total workforce is a sum of those working in the industry plus reserve pool consisting of temporarily unemployed workers. Since data on employment for a sample period of last three years (2002-04) shows a variation in the workforce from 108 552 to 100 332 to 135 913, the hypothesis of a reserve pool is valid.

Based on the BOBP-IGO study, it is observed that the age of entry in the workforce is about 14 years. Out of the 3 657 sample population in the age group of 14 years and above, only 222 were found to be studying and the remaining 3 435 were engaged in earning activities. Of these 3 435 sample population, about 1 987 workers got regular employment in the salt industry, which is 58 percent of the workforce employed during 2004-05, the period of the study. Keeping the above sample estimations of employment in mind and the total workforce of 135 913 during 2004-05, the total size of the workforce (including those unemployed) is estimated at 2 34 884. Assuming a standard error of 5 percent, the size of the work force will be between 2 23 140 to 2 46 628.

Further from the study it is also seen that on an average about 1.81 workers per family get employment in salt production activities and the number of families engaged directly and indirectly in salt industry works out to be between 1 23 282 to 1 36 067. Assuming the average family size of 5.02, the total population of salt workers is estimated between 6 18 876 to 6 83 056.

Namak Mazdoor Swastha Sahayata Yojana - A Scheme for Augmenting Health Services for the Salt Workers

Objective

This is a specific health scheme targeted at the salt workers. Under the scheme a trained force of health workers will be recruited from the salt worker's community and will work from within the community to implement health and family welfare schemes, will act as a health adviser to the community and also work as an one stop source of information about the health conditions of the salt workers under his/her area of operation.

Necessity

During the study the salt workers were found to underrate their health conditions. They considered themselves to be in good health as long as they could walk or work. A visit to the doctor or the medical clinic is avoided until it becomes absolutely necessary. This lack of concern about the health leads them to (1) ignore early indications of chronic health problems and miss the scope of preventive interventions, and (2) sub-optimum utilisation of existing health infrastructure available to them.

Presently, under different family welfare schemes, anganwadi workers and community health workers are working with the community in the country. However, much of their services are unavailable to the salt workers due to the nature of their job and locational disadvantage, especially during the production season. The salt workers also suppress their illnesses in the fear of loosing their job. Hence degree of trust is vital to deliver health inputs to the salt workers. Secondly, primary health centres (PHCs) and community health centres (CHCs) are suffering from lack of infrastructure and are virtually non-functional in and around majority of salt production areas. Comprehensive medical facility is available only around nearby rural or urban centres, which on an average takes about 2 hours to travel by bus from the salt production centres (as shown by the survey data). Due to poor financial situation, the salt workers avoid to go to the urban centres, and also one visit to the nearest medical centre means the worker will loose nearly a full working day, which adds to the cost of the worker.

However, the study also indicates that the workers regularly discuss their personal problems including health within the community. Hence, a health worker from their own community/group will be better positioned to make them aware about the health related indications and can help them in seeking medical attention at the early stage.

Structure of the scheme

The scheme will be known as ***Namak Mazdoor Swastha Sahayata Yojana (NMSSY).*** Under the scheme, the Salt Commissioner's Organisation (SCO) will select 1 candidate per 500 persons from salt worker communities. That is initially for about half a million salt worker population, 1 000 health workers will be appointed. The appointed staff in the scheme may be called ***Namak Mazdoor Swastha Sahayata Karmi (NMSSK).*** They will go through a 6-months certification course in first aid, primary health care measures, family welfare, filling up of medical forms, etc. The course will be organised and finance by the SCO in cooperation with the Health and Family Welfare Department of the Central Government and the respective State Governments[1] . The leaseholders and NGOs can also be encouraged to participate in the scheme. After successful completion of the course these 1 000 NMSSKs will be assigned to work in their respective places among the salt worker community as health assistants and attend to the activities as listed below.

[1] *Presently, the Department of Health and Family Welfare conduct basic training courses for multi-purpose health workers. The training scheme is 100 percent centrally sponsored and duration of the programme is 1 ½ year.*

Criterion for selection of candidates

The ideal candidate will be between 18 to 25 years of age with minimum level of education of school leaving certificate. In exceptional cases, if no candidate is available with required minimum qualification, the age criterion can be relaxed.

Stipend and remuneration

During the training, the candidate may be given Rs. 1000 per month with free lodging facility in and around the training centre. After the appointment, the NMSSK will get a monthly salary of Rs. 2000 and travel allowances not exceeding Rs. 500 per month. The stipend and the remuneration will be borne by the SCO.

Nature of job and duty

The appointments of NMSSK will be on contractual basis and purely temporary. The activities listed below will form the basic duties of the NMSSK:

- The NMSSK will be responsible for regular primary health check up of salt worker families in his/her jurisdiction, will make them aware of the chronic and infectious diseases like tuberculosis and AIDS. The NMSSK will also create awareness on health and hygiene and inculcate healthy habits among the salt workers including use of protective gear at workplace.
- The NMSSK will make regular visits to saltpans to collect information from the workers about their health conditions and will encourage them to seek medical attention whenever it is felt necessary. He / she will also visit pregnant mothers and parents to assist them in completion of delivery at the health centres and completion of immunisation programme.
- The NMSSK will maintain a roster of health profile of the salt workers, immunisation programmes and family welfare programmes for pregnant mothers like supply of iron tablet, etc. He/ she will be the single point source of information regarding the general health situation of the workers under his/ her jurisdiction.
- The NMSSK will work from the premise of the primary health centres and will assist the medical staffs during diagnostic interrogations of salt worker, follow ups on health condition of the patients and will accompany the staff in mobile health clinics (wherever applicable) during their routine visit to the salt production centres.
- During the salt production season the NMSSK will submit a report to the SCO about the number, age and gender profile of the workers emigrating from his/her area and also their general health situation, a copy of which will be given to the NMSSK in charge of the area the workers are migrating. Similarly, he/she will also take care of the workers immigrating to his/ her jurisdiction during the season.
- The NMSSK will also help the SCO officials in conducting health camps, etc whenever required.
- Each NMSSK will be given a First Aid box and supply of antiseptics, bandages and over-the-counter medicines whenever required by the SCO.
- The NMSSK will undergo a refreshment course of two-month duration every two year.

Reporting and monitoring

The NMSSK will submit a fortnightly report (every second Friday) to the Office of the respective Salt Factory Officer. The report will contain number of families' he/ she visited during the period, the area covered, health situation of the families' he/ she visited and details of his/ her travelling expenditure with necessary documents.

The salt factory officer will pay visit to the communities covered in the scheme in his jurisdiction at least twice a month and will furnish a report including his observation and report of the NMSSK(s) under him to the respective regional offices by the first week of every month.

Recognisation

The SCO may also institute a reward scheme for 100 best performer NMSSKS every year. The reward could be in cash (Rs 1 500) or a bicycle depending on the requirement of the NMSSK.

Termination of contract

The SCO at its discretion can terminate any NMSSK at any time serving him/her one month notice due to his/ her failure to discharge duty satisfactorily or due to undesirable practices by the NMSSK or both.

Cost-Benefit Structure of the Scheme

Cost

On the basis of assumption that initially about 1 000 NMSSKs can be appointed, the following cost benefit comparative can be seen:

First year

Training Cost @ Rs. 1 000 per month per candidate for 6 months.	**Rs. 6 000 000**
Stipend @ Rs. 1 000 per month per candidate for 6 months	**Rs. 6 000 000**
Lodging @ Rs. 500 per month per candidate for 6 months	**Rs. 3 000 000**
Remuneration @ Rs. 2 000 per month per NMSSK for 6 months after the appointments	**Rs. 1 2 000 000**
Medical accessories @ Rs. 1 000 per year per NMSSK	**Rs. 1 000 000**
Total	**Rs. 2 8 000 000**

Second year onwards

Remuneration @ Rs. 2 000 per month per NMSSK for 12 months	**Rs. 2 4 000 000**
Medical accessories @ Rs. 1000 per year per NMSSK	**Rs. 1 000 000**
Expenditure on rewards @Rs. 1 500 for 100 rewards	**Rs. 1 500 000**
Expenditure (lump sum) on materials and posters to create awareness about immunisation programmes, diseases, health and hygiene, use of protective gears and various schemes of the SCO like children reward scheme	**Rs. 1 500 000**
Total	**Rs. 2 8 000 000**

Benefits

It is not possible to quantify the benefit in the present moment. However, the benefit will much outweigh the costs. At the least the Scheme will create a constant monitoring over the health situation of the salt workers. Which is very important for social security measures like insurance scheme for the salt workers.

Namak Mazdoor Payjal Apurti Yojana – A Scheme for Providing Potable Water in Salt Production Centres

The salt production centres are spread in far-flung coastal areas and desert regions of Gujarat and Rajasthan. Due to remote location, drinking water has always been a major issue with the salt works. Presently, the leaseholders supply water through tankers to the salt workers by charging fee in some places. In Gujarat the State Government and the SCO have provided water tanks to store drinking water at work place. Though SCO has provided water tanks in other states also, it needs to be extended to all far-flung salt producing areas.

The issue of drinking water was raised with the salt workers during the BOBP-IGO study and the workers generally perceived the quality of drinking water supplied through tankers as fairly good and potable. However, it was noted that transportation was not carried out in a hygienic manner and the storage tanks at the work place were not disinfected. The salt workers also require awareness on hygienic ways of storing, using and transporting drinking water. This problem was observed to be more acute in the LRK areas and could be correlated with the high incidence of stomach related problems in the children of salt workers in the LRK salt works.

Considering the hot temperature and high wind velocity in salt producing areas, it is important to ensure regular supply of quality drinking water, which will go a long way in improving the quality of life of the salt workers. Due to the vast differences in the location and geographical spread of the salt works in the country, it is not possible to arrive at a single water supply strategy for all areas. However, planning strategies for drinking water supply would largely depend upon the location, degree of concentration of salt works in the area, average number of beneficiaries and budgetary considerations. A set of possible strategies with their pros and cons are detailed in the following paragraphs:

Strategies

A. Tanker water: This constitutes one of the most common and widely used means of transporting water in remote areas. Most of the salt workers are supplied tanker water at their workplace. Depending on the number of workers, frequency of supply varies from 2 to 4 times a week and the tanker water is stored in concrete wells or PVC tanks at the workplace. The workers use this water for most of their daily chores.

Pros: The supply of tanker water is easy to start, as sunk cost and gestation periods are low. Cost of supply (operating cost) is mainly the weighted sum of distance and fuel cost.

Cons: The maintenance cost is equal to the depreciation cost of the vehicle, which is roughly about Rs 10 000 to Rs. 15 000 per year for one tanker. The fuel cost is also expected to increase over time. The social cost or cost of pollution is also considerable. In a nutshell the maintenance cost of this system is expected to increase in consonance with the increase in fuel cost over long run increasing the user fee over time.

B. Pipe water and storage points: In LRK, water storage points are constructed at strategic locations to cater to a neighbourhood of salt works in 4 to 5 kilometres radius. This policy can be extended to other centres also. However, leaseholders in Bharuch cited one such proposal as not viable since proposed user charges of per litre pipe water was more than the existing user charge of per litre tanker water.

Pros: This will ensure supply of quality water on regular basis to the salt worker. The user charge if adjusted for inflation is expected to come down over time, as the maintenance cost will be lower.

Cons: There is hardly any natural drinking water source near the salt producing centres like river or sweet water reservoirs. Generally, the ground water is also salty. Therefore, the basic source of water will remain the same for tanker water or pipe water– miles away from the salt producing centres. As a result a large waterway (pipeline) infrastructure is needed. The sunk cost and gestation period will be high. In the short

run this will be reflected in higher user charges. But as mentioned above if the user charges are higher than the existing private cost of supplying water to the salt works, leaseholders may not participate in the scheme. This will in turn make the scheme unviable.

However, if Government bears the whole cost of construction, maintenance, treatment of water and other operational costs, the scheme will work. But it should be also kept in mind that in urban and also in rural areas, the current trend is to levy user charges for drinking water supply due to budget considerations of the Government.

C. Reverse Osmosis plants: Another option of supplying water, especially in marine-based salt production centres is setting up of Reverse Osmosis (RO) plants. The scale of operation will be a function of breadth of area and number of population under its domain. Presently, the Government has undertaken such projects in Tamil Nadu and Lakshadweep.

Pros: Installation of RO plants in coastal salt production area is suitable when safe source of drinking water is limited and, or, its transportation from a distance source is unviable. The RO plant will use seawater as input to produce steady supply of potable drinking water. Alternative sources like extraction of ground water or river water may not be safe due to problem of fluoride/ arsenic and water pollution. Extraction of ground water may also pose an environmental threat unless there is clear picture of extraction and recharge rate of ground water. There are some varieties of RO plants available with low energy consumption[1] and this can be further reduced through use of windmills in synchronisation with conventional power sources.

Cons: A water supply project based on RO will include installation cost of the plant in conjunction with the installation of pipeline or tanker network to supply the water. Therefore, the cons for a pipeline water supply and a tanker-based water supply is applicable here also. The cost of installation (sunk cost) will be further augmented by the cost of installation of plant and a higher gestation period. Hence, from financial perspective a RO plant based water supply system will be the costliest. The same is applicable for

[1] *www.unep.or.jp/ietc/publications/ techpublications/techpub-8e/index.asp*

operation and maintenances. Since the degree of technical and manpower requirement will be much higher in case of RO plant, the cost also will be higher. If any of the above three options is not subsidised (presently, the fuel and the pipeline based water supply are subsidised), the user cost will be beyond reach for most of the salt workers and small leaseholders and they will not willingly join the project. However, if the total project is fully subsidised, the workers will be immensely benefited. Or, in brief, it seems that the project, at least at the initial level, is to be subsidised and the degree of subsidy will depend on budgetary allocation and willingness to pay by the targeted beneficiaries.

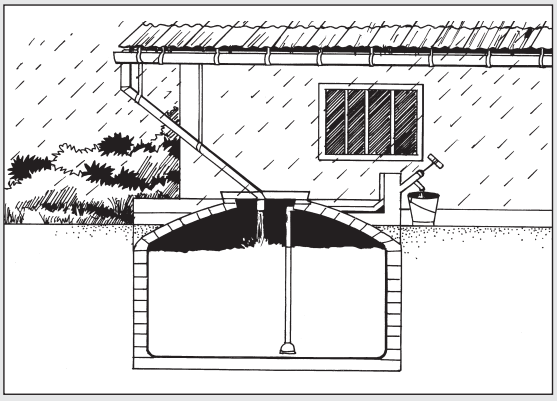
D. Rainwater harvesting: This can be the most viable way of supplying clean water where there is sufficient rain during the monsoons. Areas in Tamil Nadu, Andhra Pradesh, Orissa and West Bengal enjoy sufficient rains during the monsoon months, which go waste. Even in the desert areas of Rajasthan and Gujarat this method is practicable. Under this scheme protected under ground wells are to be constructed to store water during the monsoon. From these storage wells water can be supplied to the nearby saltpans through pipeline.

The scheme can be implemented through villages surrounding the saltpans. This would necessitate setting up of one watershed producer group in each village that will look after the operation and maintenance of the watershed in the village domain. Initially, NGOs working in this field can assist the producer group by providing necessary training and orientation. Once operational, water can be sold to the saltpans at a mutually agreed rate and the revenue generated from this can be ploughed back for maintenance of the facility.

Pros: This could be the most cost efficient way to supply water and the project can be implanted by the leaseholder with little financial and technical contribution from NGOs and the Government. The cost can be shared by the leaseholder on the basis of use intensity. Water harvesting programmes can produce water, generate employment and income in the participating areas and can be more productive and viable in the long run.

Rainwater harvesting in Rajasthan desert :

Rajasthan is located in the north-western part of India. To its northwest lies the very low rainfall (annual rainfall is 120 mm) sandy tract of the *Thar* Desert. The technology of collecting rainwater is hundreds of years old in the desert. The Barefoot College (BC), Tilonia started adopting rainwater harvesting practices in 1986. The project covered an area of approximately 2 000 sq. kms and several hundred villages in the saline belt of Rajasthan. To revive the dying wisdom of rainwater harvesting, traditional knowledge and skill, the BC identified the local elders who had traditional knowledge and skills in tank construction to transfer their skills to the younger generation. The BC has so far constructed 283 community tankas (underground tanks) to collect rooftop water and 90 nadis (ponds) for storage of rainwater from adjoining natural catchments during the rainy season in 90 villages. The completed tank has costs



Rs 1.50/litre to Rs 2.50 / litre to complete. In 2000-2001 the trained barefoot engineers constructed 283 community tankas in 200 schools and 83 at community centres to collect 12 million litres of rainwater providing drinking water to over 40 000 people and more than 6 500 local poor people have received employment for 60 days in the construction of these tankas.

Source: www.water-2001.de/datenbank/571528843.40079.25/ RAINWATER%20HARVESTING-Germany-II.doc

Secondly, all the other options (except tanker) have to be implemented by outside agencies, as the level of skill requirement is unlikely to be found at the village level. Therefore, welfare creation will be limited to supply of potable water, creation of employment in the construction phase and limited employment during the implementation of the project. However, rainwater-harvesting project will create sustainable asset at the village level and long-term employment opportunities. It can also be merged with organisation of women SHGs to operate the project that can ensure women empowerment – an objective of the Tenth Five-Year Plan.

Cons: The major problem is to convince the stakeholders about the scheme. Since a considerable amount of community effort is required, participation will remain a problem. Such schemes are yet to make much headway in India. Maintenance of the wells could also be the other critical issue for the success of a water-harvesting project.

E. Educating salt workers in hygienic ways of using drinking water: To ensure that the water supplied to the salt workers is maintained in a hygienic manner and utilised optimally, considerable amount of awareness and education will be required. Such education programmes should include hygienic ways of transporting, storing and using drinking water and the dangers of water borne diseases on the health and productivity of the workers. The State Governments and the SCO should use the services of NGOs in conducting awareness camps and education programmes for the salt workers.

The following table summarises the recommendations:

Project	Sample areas	Degree of concentr-ation of salt works	Existing source/ agency	Implementing agency	Cost comparatives	User cost/ charge	Project horizon
Pipe water with storage points	LRK, Didwana, Kuchamman	Low	Tanker/ Private	Government	High sunk cost, better quality	Subsidy + Beneficiary	5 years
	Bharuch, Velinokkam, Chinnaganjam	High					
Tanker	Bharuch, Velinokkam, Chinnaganjam	High	Tanker/ Private	Government	Short-run measure increasing operational cost in the long run	Subsidy + Beneficiary	2 years
RO plant	Marine based salt pans	High	Tanker/ Private	Government	High sunk cost, high operational and maintenance cost	Subsidy + Beneficiary	5 years
Rain water harvesting	Tamil Nadu and Andhra Pradesh	High	Tanker/ Private	Village group in collaboration with NGOs and Government	Low user charge and relatively low sunk cost and gestation period	Beneficiary	5 years
Educating salt workers on hygienic way of using drinking water	All Salt Producing states	—	—	Government/ NGOs	Low cost	Subsidy	2 -3 years

Namak Mazdoor Bima Yojana – A Group Insurance Scheme for Workers in the Salt Industry

1.0 Introduction

Presently, there are over five lakh people who depend on salt as their principal means of livelihood. The workers in the salt industry are one of the poorest sections of the society. They suffer from poor health, illiteracy and low and seasonal income. The workers rarely earn enough to meet their expenditure. They end up with little or no savings and mostly with heavy debt as their retirement age approaches. At any point of time in their life a salt worker family is vulnerable to income shocks due to death, disability and unemployment.

2.0 Case for insurance of workers in the salt industry

Production of salt is seasonal and employment in the industry is available for 6 to 10 months each year depending on the behaviour of the monsoon. During production period, a worker earns Rs 50 to Rs 100 per day, with the average family income ranging from Rs 1 500 to Rs 3 000 per month . The average family size of a salt worker is about 5, with two members in the working age group of 18 to 60 years, two members below 18 years and one member above 60 years. The workers also suffer from periodic unemployment during the production season. As a result a large section of the workforce is forced to live below the poverty line. Under the circumstances extension of available social security nets to include the salt workers is of great importance. It can help the salt worker family with necessary financial cushioning in case of unfortunate events like death or disability of the earning member. At present such a situation is dealt by reciprocal loan relationship with relatives and friends and or through loan (bonded) from the moneylender. However, this security net is fragile, as it cannot deal with covariant risks.

The existing market-based insurance schemes are not ideal to meet the requirements of the salt workers. Under the existing personal insurance schemes the worker needs to pay an unbearable premium to have a reasonable insurance cover. The possible alternative is to implement a Group Insurance Scheme (GIS) for the salt workers through a single master policy. Such a scheme will on one hand provide the risk coverage to the salt workers as well as reduce the chance of adverse selection. However, as the scheme may not be profit optimiser for the insurance company, it can, therefore, be best implemented through public insurance companies like the General Insurance Company.

As per the existing wage structure, the salt workers generally get an advance in the beginning of the season, and balance at the end of the season. In between they get money for family maintenance. The composition of workforce also varies during the season. A GIS may be introduced at the beginning of the production season, *i.e.* during October, or at the end of the production season depending on the definition of target groups.

3.0 Short title

The Scheme may be called *Namak Mazdoor Bima Yojana (NMBY).*

4.0 Definitions

For the purpose of the scheme the following shall, unless the context otherwise require, mean: -

a. “Salt worker” means a person who is between 18 and 60 years of age and engages directly and physically for at least 6 months in one salt production season in activities related to one or more of the following: preparation of bed, scrapping, heaping and shifting of salt to platform and loading/ unloading of salt from platform to any medium of transportation and identified by the Salt Commissioner’s Organisation as salt worker.

b. "Sponsoring agency" means any agency/ organisation recognised by the Salt Commissioner's Organisation, which will organise the workers and implement the Scheme. Leaseholders, Leaseholders' associations, NGOs, Co-operative societies may come under this category.

c. "Nodal agency" is the Salt Commissioner's Organisation, which will implement and monitor the Scheme.

d. "SCO" means Salt Commissioner's Organisation, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India; with its headquarters at Jaipur, Rajasthan and offices in different salt producing States and Union Territories (UTs).

e. "Certifying authority" means an officer nominated by the State Government to certify the details of accident and death or injury on account of an accident of an insured salt worker for settlement of claims.

f. "Nominee" means a person nominated by the insured salt worker to receive claim under the Scheme in case of the salt workers death.

g. "Scheme" means Centrally Sponsored *Namak Mazdoor Bima Yojana* for the workers in the salt industry.

h. "Event" means death or disability of the insured salt worker naturally or in an accident.

i. "Disability" means permanent or partial disability. Permanent disability means loss of both hands, loss of both legs, loss of sight, loss of one hand and one leg, loss of ability to work due to paralysis of limbs and gout. Partial disability means loss of one hand or one leg or one eye.

j. "Accident" means on job accidents or accident while performing any job related task.

k. "Insurance Company" means a subsidiary of the General Insurance Corporation of India that will formulate and implement the Scheme.

5.0 Objective of the scheme

The objective of the Scheme is to provide life insurance cover for salt workers between age 18 to 60 years to reduce their vulnerability towards income shocks. The sum assured in the Scheme may be Rupees one lakh (Rs 1 00 000) for natural death or permanent disability during the coverage period of insurance. In case of accidental death or permanent disability due to accident at worksite, double the sum assured will be given to the nominee of the insured salt worker or the salt worker, as may be the case. The scheme will also provide a small amount as "Retirement Benefit".

6.0 Extent of insurance cover

Under the scheme, the insured salt workers' nominee or the salt worker shall be entitled to get a claim equal to sum assured of Rupees one lakh (Rs 1 00 000) in case of natural death or permanent disability, as may be the case. In case of accidental death the nominee of the insured salt worker shall be entitled to a claim of Rupees two lakh (Rs 2 00 000). In case of partial disability the claim shall be Rupees fifty thousand (Rs 50 000). However, in case of accidental death outside work place, such as death due to natural calamities, the claim shall be Rupees one lakh only (Rs 1 00 000).

A salt worker insured under the scheme will be entitled for insurance cover as detailed above. However, the insurance cover shall be available only if full amount of the premium for such insurance has been received by the Insurance Company through the SCO before the date of event, otherwise no cover will be available.

7.0 Group insurance[1]

The Insurance Company will issue a centralised master policy for all the salt producing states and UTs on a particular date in favour of the SCO and the sponsoring agencies for all the salt workers sponsored for insurance under the scheme. The insurance cover shall be available to them from the date of receipt of full premium by the insurance company, for a period of 12 months ending the last day of the 12th month.

8.0 Procedure for insurance

At the beginning of each financial year *i.e.* April – May, the Central Government shall announce the date of implementation of the master policy, in consultation with the Insurance Company. The launch of the Scheme may be scheduled at the end of the season *i.e.* May – June or during the middle of the season *i.e.* during January – February. At the onset of the season, the SCO, in collaboration with the sponsoring agencies will start the identification exercise and shall make sure that the share of premium from the sponsors is released and is available with the SCO.

A sponsoring agency may sponsor a group of salt workers for insurance under the Scheme by sending details of the group on a prescribed proforma for this purpose along with the premium as per the terms of the policy per person to the SCO. The cover will be available after the insurance company has received the premium from the SCO.

9.0 Retirement benefit

At the age of retirement (that is 60 years of age) the salt worker may be given a lump sum of Rupees five thousand (Rs 5 000). The salt worker will be entitled to get the retirement benefit only if he/ she is at least fifteen (15) years in the scheme and no other claim has been paid to the worker during the coverage period of the insurance and no premium remained unpaid at the date of retirement.

10.0 Settlement of claim

a. In case of death of the insured salt worker either naturally or in accident the sponsoring agency will submit the claim to the SCO along with the death certificate issued by a certifying authority within a period not exceeding nine months of the event. The certificate will consist full details of the cause of death. In case of accidental death, the certificate should clearly indicate the date, place and time of the accident; a copy of the FIR lodged with the Police and the nature of work the insured was engaged in during the accident. The claim will be paid to the nominee of the insured worker.

b. In case of permanent/ partial disability of the insured salt worker, the sponsoring agency will file a claim with the SCO with accompanying documents from a certifying authority indicating clearly the nature of disability. In this case the claim will be payable to the insured.

c. On receipt of the claim from the sponsoring agency, the SCO shall file the claim with the Insurance Company within 15 days of receipt of the claim. The Insurance Company shall review the claim and if the claim is viable it will settle the claim with the insured or his/ her nominee through the SCO within thirty days of receipt of claim.

11.0 Tentative budget of the scheme

The Scheme will be implemented on pilot basis during the Eleventh Five-Year Plan Period and will target about one lakh salt workers in the 18 to 60 years age group, although majority of the salt workers are between 18 to 48 years of age. Table 1 (see page 170) gives an estimated age-sex distribution of the salt workers between age group 18 and 60 years.

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[1] *Presently, the Government of Gujarat is implementing a group insurance scheme for the salt workers. Under the Scheme, 45 801 unorganised workers in the age group of 18 to 60 years are provided insurance coverage, which ranges from Rs 3 000 in the case of natural death to Rs 6 000 in the case of accidental death. The scheme was revised in 1995 raising the limits to Rs 25 000 in case of accidental death; Rs 25 000 in case of complete disability and Rs 12 500 in case of partial disability. So far, over 4 000 workers have benefited from the Scheme.*

As the master policy will target a large cohort of about one lakh workers (or even at a cohort size equal to fifty percent of the target), the cohort population may be expected to observe the existing age specific mortality rate (ASMR)[2] of rural India as given below.

As can be seen from Table 2, the risk of dying increases rapidly from the age group 45 years and above. However, given the age distribution of salt workers it can be said that the cohort mortality risk is low.

Table 1 Estimated age-sex distribution of salt workers

Age group (in years)	Total	Male	Female
18-28	31 660	19 831	11 829
28-38	29 473	16 302	13 171
38-48	24 254	15 557	8 698
48-60	14 612	10 487	4 125
Total	1 00 000	62 177	37 823

Table 2 ASMR of rural population in india

Age group (in years)	Total	Male	Female
15-19	2.2	1.8	2.7
20-24	4.0	3.2	4.7
25-29	3.2	2.9	3.5
30-34	3.5	4.3	2.8
35-39	4.0	4.2	3.8
40-44	5.2	6.3	4.0
45-49	8.1	9.0	7.1
50-54	13.6	15.1	11.8
55-59	13.9	16.3	11.9
60-64	28.6	29.8	27.3

Source: National Family Health Survey (NFHS II), 1997-98

Premium

In the pilot phase of the scheme, the premium can be fixed at Rupees 100 per worker per annum. The premium can be paid in the following ways: (i) ***"50:50"*** the Central Government will provide fifty percent of the premium; the concerned State shall pay the rest. (ii) ***"40:40:20"*** the Central Government will pay 40 percent of the total premium, the respective State Government shall also pay 40 percent, the balance 20 percent shall be paid by the leaseholders or the sponsoring agency. The premium may be reviewed after five years considering the claim ratio.

Cost

In the first year of the policy the total cost of the Scheme shall be equal to total premium *plus* transaction costs. That is Rupees one crore per *annum*, of which, Rupees 40 lakh each shall be paid by the Central Government and the State Government and Rupees 20 lakh shall be paid by the sponsoring agencies. The total transaction cost may be borne by the Central Government.

12.0 Conclusion

The NMBY will be a landmark scheme in providing social security to the vulnerable salt workers. The salt workers, due to their anonymity as a worker group and their inability to form a trade group, remain mostly outside the ambit of available labour welfare measures. As an additional benefit accruing from the Group Insurance Scheme, there will be a tab on the size of the workforce and its movement, which is essential to metamorphose the unorganised salt industry into an organised industry.

[2] *ASMR = Number of death in a particular age group/population in that age group multiplied by 1 000*

Salt Parks – A Scheme for Establishment of Special Salt Production Zones

1.0 Why do we need salt parks?

Salt production is a labour-oriented activity. Over five lakh workers are dependent on the industry directly and indirectly for their livelihood. Salt production is a seasonal occupation and requires hard work and continuous stay in the coastal areas/ desert with infants and family. The workers have to toil for long hours with low wage rates (compared to the tough nature of work). As the salt works are in remote and poorly accessible areas, they have limited access to basic amenities and medical facilities. In addition, drought, earthquake and other natural calamities (like the 26 December 2004 tsunami in southern districts of Tamil Nadu) push them back into vulnerability and poverty. They are highly vulnerable because of their poor economic conditions and the seasonal nature of their occupation. Since they are at the total mercy of the traders they get credit at very high interest rates (up to 60 percent) and an average salt worker is in perpetual debt.

Exploitation by middlemen, weak market linkages, limited accessibility to credit and growing competition in the industry are some of the reasons for poor conditions of the small salt producers and workers attached to them. Small holdings and absence of sound technological know how prevents small salt producers to introduce cost-effectiveness in production and enjoy the economies of scale. Market linkages for small salt producers are through traders, which are inefficient and do not allow enough incentives for the small producers to grow. Further, lack of institutional set-up and low levels of literacy hinders their ability to face the growing competition.

Presently, small salt producers are scattered and highly unorganised. On account of their asymmetric knowledge of the market and lack of good mechanisms for fixation of price, traders/ middlemen take the advantage to a large extent. As a result the small salt producers are deprived of their potential income and never get the right incentives to work to their optimum levels. It is also evident that the middlemen do not bring in any efficiency but on the other hand create distortions in the system.

In the prevailing situation, the following issues need priority attention for the healthy growth of the small salt producers and workers:

- *Ensured regular employment at least during the salt production season.*
- *Income generation commensurate with the nature of work.*
- *Reduced involvement of middlemen and a strong institutional set-up to substitute the functions of middlemen.*
- *Easy access to credit at reasonable interest rates.*
- *Level playing field to allow small-scale producers to grow.*

2.0 What is a salt park?

A salt park would be an establishment that would allow salt producers located within the jurisdiction of the park to collectively utilise the available resources at optimum levels. In other words, it would allow producers to produce salt at most efficient level and to market the produce directly with minimum and or no involvement of intermediaries. The park would make available essential infrastructure like electricity, roads, railway tracks (wherever possible), etc so as to allow utilisation of the resources in the most economically viable manner and in the process correct the distortions created by traders/ middlemen.

The salt parks could be established under private-public partnership or cooperative sector comprising small salt producers or it can be larger industrial units promoting satellite farming. The structure and nature of the enterprise would *inter alia* depend on the location (*e.g.* in the Little Rann of Kutch a public-private

partnership will be more viable, since private enterprise alone would be less interested to invest in a highly backward region), carrying capacity of the area and market linkages.

3.0 What would be the functions of a salt park?

The important functions of a salt park would be to promote effective coordination between the salt producers under the jurisdiction of the park, dissemination of necessary technology to the producers, arranging for transportation and marketing channels and facilitating access to credit facilities at reasonable rates for the members.

The demand and production of salt is an example of horizontal market[1] and the profitability for enterprises producing goods in a horizontal market is determined largely by the internal factors. Internal factors include the effective use of technologies for optimising production, availability of skilled labourers and quality managers, quality of goods produced, economies of scale, etc.

Small holdings are a major hindrance in introduction of new technologies, which can be useful in reducing cost and optimising production. Salt parks will enable such producers to avail new technologies collectively. Another significant advantage of the salt parks will be to allow economies of scale to small producers, which will be a key factor in reducing the overall cost of production of salt. The major benefits of salt parks could be summarised as follows:

- *Economies of scale in production, transport and marketing.*
- *Healthy market linkages.*
- *Reduced involvement of intermediaries (middlemen).*
- *Improvement in quality of salt produced.*
- *Increase in opportunities for human resource development.*
- *Better income generation for workers and producers.*
- *Greater access to credit at reasonable rates.*

4.0 The agencies responsible for establishment of salt parks

The role of Central/ State Governments is paramount in the setting up of salt parks in the country. Besides playing the role of a facilitator, the Government could also be an active partner in the public-private joint ventures. The role to be played by the public/ private sector agencies in the establishment of salt parks in selected areas in the country can be described as follows:

i) The Central/ State Governments

- Identification of feasible areas for establishment of salt parks.
- Formulation of appropriate policies and guidelines for establishments of salt parks.
- Participation in joint ventures with the private sector, wherever feasible.

ii) The private sector

- Participation in joint ventures with the public sector and also with cooperatives, which can act as satellite units for the industry.
- Providing consultancy (management and technical) to such other establishments.

iii) Role of NGOs

- Assist in establishing cooperative units.
- Provide an interface between small producer units and the industry.
- Facilitate human resource development.

[1] *A simple definition of horizontal market is a market that satisfies wide range of industries. A good example of a horizontal market is the demand and production of plastic pellets.*

5.0 Probable areas for establishment of salt parks

Initially sites may be identified in the following areas for setting up of one or two salt parks, depending on the availability of area and response of the stakeholders. If successful, the experience can be replicated in other sites also.

- ***Little Rann of Kutch (Gujarat)***
- ***Gandhidham belt (Gujarat)***
- ***Sambhar Lake (Rajasthan)***
- ***Tuticorin belt (Tamil Nadu)***
- ***Vedaranyam (Tamil Nadu)***
- ***Chinganjam (Andhra Pradesh)***

6.0 Conclusion

Government-run schemes/ programmes will have limited impact on the socio-economic conditions of salt workers if they lag behind the technological developments and the growing competition in the salt industry. Cost–effectiveness and qualitative improvements in salt production would be the two main pillars of sustaining small-scale operatives in the industry. The fragmentation of holdings and poor investments in transfer of technology/ human resources development is making them vulnerable to uncertainties, poor price realisations and a vicious control of the traders/ middlemen. While the proposed salt parks cannot be a panacea for all the problems faced by the small-scale producers and salt workers they can certainly lead to a situation where economies of scale, better bargaining powers in marketing and trade, increased credit access and improved human resource development can help them to realise their potential to optimum levels.

As we strive for permanent solutions to the growing problems of the salt industry, the proposed salt parks can be an important step in the direction. The salt parks can help in bringing paradigm changes in the industry, which in turn will have a positive impact on the lives of thousands of salt workers and small-scale producers.

Summary of Recommendation of Various Committees on Salt Industry

After independence the Government felt the pressure to meet the domestic demand for salt. To address the issues that confronted salt production activities the Government set-up four committees, *viz*. the Patel Committee in 1947, the Salt Expert Committee in 1948, the Munabhai Shah Committee in 1958 and the High Level Salt Enquiry Committee in 1980. The challenge before the first three committees was to formulate strategy towards achievement of self-sufficiency in salt production and price control. The fourth committee was mandated with the task of re-organising salt industry to increase its efficiency.

The recommendations of the Patel Committee, 1947 were concentrated on bringing the salt industry under the control of the Government. The Committee recommended that in order to optimise the utilisation of the salt resources, planned effort would be needed. It was recommended that salt production and salt resources should be brought under the direct control of the state. However, at the same time, the state should also encourage and assist in the expansion of production by private sector. The recommendations further stated that such expansion should be subject to control by the state in the matters of quality, price and distribution and increase in investment by Government and private sector should be encouraged in modernising the industry. To improve the quality of salt produced, the Committee recommended establishment of model salt works and technical expert committees. These model works were expected to promote the use of up-to-date technology in the existing and up-coming salt works. It was also recommended that the Government should bring the entire salt produced under price control.

Most recommendations made by the Salt Experts Committee of 1948 were aimed at making salt production more efficient, *i.e*. to increase salt production and decrease the cost of production. Better management of the crystallisers, condensers and brine was suggested to improve quality of salt produced and competitiveness of the salt industry. A geological survey was suggested to investigate differences in deposits and composition of brine in Sambhar Lake and other parts of Rajasthan. Maintenance of Sambhar canal was to be done using proper methodologies. Improvement in quantity and quality produced and modernisation of salt works around Sambhar Lake, other part of Rajasthan, Kutch, Santalpur, Dharasana, Kharagoda, Bombay, Madras were also recommended. It was suggested that the number of labourers working in the industry were in excess. Therefore, the system of employing labourers needed a change and manufacturers were to find alternative employment during the monsoon months for the labourers.

Complete abolition of sale of salt by measure, which prevailed in few regions like Madras, Bombay, etc was recommended. Like the Patel Committee, this Committee also recommended establishment of model salt firms in principal salt producing centers like Bombay State, Madras State, Travancore and Orissa. The Committee further recommended a separate research station at Sambhar and coordination between all the research centers. Artificial evaporation in open direct fire pans was discouraged. Further, it was suggested that good proportion of industrial grade salt should be produced economically by solar evaporation only.

Recommendations made by Manubhai Shah Committee of 1958, mainly focused on improvements in the role of the Central and the State Governments in terms of leasing the land, collection and imposition of Salt Cess and licensing and registration of salt land. This was the first Committee, which looked into the status of salt workers in the country. The Committee recommended that the states should take steps to ensure fair wages to salt workers and enforce current labour laws in the industry. The Committee also suggested separate ‘labour cell’ in the Salt Department. The Central Salt Advisory Board was made responsible for sanctioning and monitoring the utilisation of the welfare funds of salt workers.

The Committee recommended that cooperative societies should be promoted by providing loans, grants, concessions, etc. It was also suggested that cooperative societies should be given preferences while leasing the land. Small units were encouraged to form cooperative societies. The Committee further recommended that regardless of the area worked, all the salt works had to obtain license and register themselves with the Salt Department. Salt workers with area less than 10 acres were exempted from obtaining license, but they had to register themselves with the Salt Department.

The High Level Enquiry Committee of 1980 gave comprehensive recommendations on the salt industry. The Committee made a complete review of cost of production of salt in India. Based on this analysis the Committee suggested review in the price mechanism, Salt Cess Act and land revenue for the salt land. It was the first time that any Committee undertook such a comprehensive analysis of salt production in India. The Committee also discussed labour issues and came with a set of recommendations. The Committee did much good work in analyzing and assessing the demand of salt in the country.

The Committee suggested that a study should be conducted to improve salt export. It suggested that import of rock salt was to be restricted only for ayurvedic purposes. Comprehensive measures were suggested to improve movement of salt by rail and water. Improvement of infrastructure for movement of salt from salt works to port, railway sidings/ heads was suggested. The Committee asserted that since cost and price of salt varies between and within regions, it was not possible to fix minimum support price for a commodity like salt.

The Committee observed that the administrative cost of collecting cess was much more than the amount of cess collected. The Committee recommended that cess should be increased on the salt consumed by manufacturers of caustic soda and soda ash instead of charging cess to the several thousands of scattered salt producers across the country.

The High Level Enquiry Committee found that though most of the salt producing states have implemented the minimum wage act and other labour welfare act, but in general the salt workers still remain in problem.

Specifically, the report pointed out the following areas of concerns and made its recommendations:

1. Abolition of contractors and intermediary: recruitment of labours in the saltpans should be direct and not through labour contractors.
2. Prohibition of child labour in the salt works: children should be prohibited from working in the saltpans.
3. Assurance of employment: due to seasonal nature of production in the saltpans work is not available throughout the year. Further, work is also not guaranteed at the beginning of the next season, as it is primarily dependent on the labour contractor. This situation needs correction.
4. No work no pay: the workers are not getting payment for holidays, which is contrary to the existing Labour Acts.
5. Maternity benefit: there are two issues here. First a pregnant woman will probably not get a job if it is known beforehand. Secondly, if she is in job, then she will not get any benefit such as paid leave for six week, etc. Such benefits should be made available to the workers.
6. Crèche: there is no facility to keep small children at the site of work. Their mothers either carry them to work or leave them in the care of relatives. Crèches should be provided for infants and young children.
7. Working hours: are not fixed and vary through out the season. Workers probably cannot protest in fear of the being sacked. Working hours should be fixed as per standard norms and payment of overtime should be made for extra work.
8. Amenities: basic amenities like drinking water, sanitation, rest shed, which are not available should be provided.

9. Housing: housing facility is very poor. A whole family of 8 to 9 members lives in a single room hut. This situation should be improved.
10. Educational facility: dropout rate is high. Facilities should be made to allow children to attend school.
11. Preventive accessories: accessories such as goggles, gumboots should be made available to the labourers to prevent injury to the body.

The Committee recommended that the concerned state governments should appoint a special labour officer in the salt producing areas to tackle such issues. The Salt Department on the other hand should act as a watchdog to supervise the implementation of existing labour laws. The Committee further recommended that provision of primary health care facilities should be incorporated in the lease agreements.

Appendix IX

Namak Mazdoor Awaas Yojana - Guidelines

1. Introduction

The salt workers are deprived section of the society to work amidst harsh and barren climate of blistering heat during the day and cold winds during the night. Most of them are migrant workers who live in make shift shelters made of mud and straw. The scheme has been formulated to ameliorate the living conditions of salt workers by providing shelters preferably in the place of working.

2. Objective

The objective of Namak Mazdoor Awaas Yojana (NMAY) has been formulated by the Department of Industrial Policy & Promotion to provide dwelling units to salt workers in the salt producing states of Gujarat, Andhra Pradesh, Tamil Nadu, Rajasthan, Orissa, Maharashtra, etc. The approximate plinth area of the house to be constructed shall be about 22.2 sq. meters which will include one room, one kitchen, veranda and toilet in a cluster of 10 houses subject, of course, to changes to suit local conditions but adhering to the local by-laws and rules for construction of houses.

3. Target group

3(a) **Labourers:** Bonafide labourer employed in Salt Industry either as salt labourer or self employed persons for a period of 5 years or more will be eligible for assistance under the scheme. A person working on a salt farm for a major part of the season *i.e.* not less than 6 months during the last 5 consecutive years shall be regarded as Salt Labourer.

Only one person in a family shall be eligible for assistance under the scheme and each adult married member will be considered as belonging to different family.

3(b) **Salt Works:** Salt works should be functioning at least for the last five years except in case of small salt works up to 10 acres land holding.

Salt works affected in the 'earthquake' particularly located in Gandhidham, Anjar, Bachau Taluka in Kutch district, Maliya- Miyans Taluka in Rajkot district and Jodia Taluka in Jamnagar district and cyclone prone and affected areas of Orissa and any other areas which requires intervention.

The captive or export oriented salt works run by the big industrial houses may be asked and persuaded to construct houses for their labourers.

To construct one house for every 10 acre of land allotted to a salt works subject to a maximum of 100 units in a single salt works. It is also proposed to provide community centre for a cluster of 100 houses and infrastructure facilities like roads, water storage tanks, etc.

Every salt works which is eligible to participate in the scheme may like to prepare the details of salt labourers working under them in descending order of the number of years of service rendered by each labourer in the salt works.

The salt works will also prepare a list indicating willingness on the part of the salt labourers to contribute up to 10% of the cost of the house.

4. Allotment of houses

The houses will be allotted on ownership basis on execution of required agreement in the prescribed format.

Allotters can transfer the house to other beneficiary salt labourer on written consent of Salt Commissioner/ State Government.

The salt labourer should not have availed benefit for such facility from other schemes of the Government.

In case the numbers of persons are more and the available houses are less, the State Level Committee will decide about criteria for allotment.

5. Location of NMAY houses

The scheme has been formulated for salt producing states such as Gujarat, Tamil Nadu, Rajasthan, Andhra Pradesh, Maharashtra, Orissa, etc.

6. Upper limit for construction assistance

As per the estimates firmed up, the cost of a block of 4 units would be about Rupees 1 60 000 *i.e.*, cost of each unit is about Rupees 40 000. The Government's contribution in respect of each unit would be limited to Rupees 28 000. In the Rann of Kutch areas for elevated platform additional cost of Rupees 10 000 per unit is also provided.

7. Executing agency

The construction of houses shall be undertaken as per the approved plan by the local NGO/ Salt producer/ any agency as decided by the respective State Government/ the salt producers in consultation with Salt Commissioner.

The construction activities shall be supervised by the Salt Commissioner/ State Government concerned and the same should be reported to the Central Government (Department of IP & P) at regular intervals.

Preference will be given to the agency who will bring matching contribution.

As regards modalities are concerned, the housing scheme shall be executed strictly as per the provisions contained in the extant Code of Principle being followed by Salt Commissionerate, as far as release of funds are concerned. The beneficiaries will be encouraged to contribute in terms of labour, kind and cash up to a ceiling of 10% of the total cost.

8. Type design

The plinth area of the house will be about 22.2 square meters comprising one kitchen, veranda and toilet.

The dwelling unit will be constructed on the leased lands for salt manufacture, panchayat land, Nagar Palika land or the land as identified by the State Government, and also in the lands owned by the beneficiary (patta land). The selection of land will have co-relation with the availability of facilities like approach road, electricity, drinking water and the willingness of the salt labourers to stay in the area.

9. Cost of home & funding pattern

The cost of each dwelling unit is Rupees 40 000 including infrastructure facilities it comes to Rupees 50 000.

90% of the cost of the scheme would be funded by the Central Government through the Salt Department.

10% of the cost of the scheme would be borne by the salt producers/ beneficiaries or any other stakeholders including NGOs, etc. willing to support the beneficiary.

The share of the Salt Department will be released in instalments keeping in view the progress of the construction.

On completion of the project, the executive agency shall submit the completion report and audited account to the Salt Commissioner.

On acceptance of completion report, the final payment of the department share would be released.

10. Drinking water supply

The availability of drinking water supply should be ensured by the agencies responsible for the implementation of the NMAY. Where necessary, a hand pump should be installed on the site before the work is started by the salt works or the State Government.

11. Sanitation & sanitary latrines

Construction of sanitary latrine forms an integral part of NMAY houses. The Government of India attaches considerable importance to the construction of sanitary latrines as a sanitation measure and, therefore, sanitary latrines should invariably be taken up as part of the NMAY houses. A system of drainage from the houses should also be provided to avoid overflow from the kitchen, bathroom, etc.

12. Environmental improvements and social forestry

Plantation of trees in the entire habitat or around the individual house should be taken up simultaneously. Trees may be planted near the housing clusters so that, in due course, enough trees are available nearby to enable the beneficiaries to get fuel/ fodders/ small timber. Such plantations can be taken up under the social forestry programme.

13. Involvement of voluntary organisations

Suitable local voluntary agencies with proven good track record wherever available should be associated with the construction of NMAY houses. The supervision, guidance and the monitoring of construction can be entrusted to these voluntary organisation. In particular the voluntary agencies should be made use of to popularise the use of sanitary latrine and also in the constructions of smokeless chullahs.

14. Inventory of Houses

The implementing agencies should have a complete inventory of houses constructed under NMAY, giving details of the date of start of construction and the date of completion of houses, cost involved, number of houses allotted; names of the salt works, exact place of location including survey number, etc. in which the houses are located.

15. Display of NMAY Board and Logo

On completion of NMAY house, the executing agency concerned should ensure that for each house so constructed, a board is set up displaying clearly the house built under NMAY and should indicate the NMAY logo, name of the beneficiary and the year of construction.

16. Monitoring

The implementation of the Scheme shall be monitored by the Central Level Committee (mentioned in Para 20 below) in close coordination with State Level Committee, which in turn will be assisted by the officials of Salt Commissionerate. The composition of the State Level Committee shall be as under: -

1. Secretary / Commissioner of Industries of concerned state.	:	Chairman
2. Deputy Salt Commissioner of the Region	:	Member-Secretary
3. Representative of labours Commissioner of the concerned State.	:	Member
4. Representative of Salt Manufacturers Association of the region.	:	Member
5. Executing Agency	:	Member
6. Representative of Donor Agency	:	Member

The officers dealing with NMAY at the State Headquarters should visit districts regularly and a certain through field visits whether the programme is being implemented satisfactorily and whether construction of houses is in accordance with the prescribed procedure. Likewise, officers at the regional and head office levels must closely monitor all aspects of the NMAY through visits to work sites in interior areas. A schedule of inspection which prescribes a minimum number of field visits for each supervisory level functionary from the State level to the block level should be drawn up and strictly adhered to.

A representative or nominee of the Ministry of Commerce & Industry, Government of India should invariably be invited to participate in the meetings of the committee.

The following reports and returns should be submitted to the Government of India by the Regional / Head office of the Salt Commissionerate in respect of the NMAY:

A Quarterly progress report to be furnished by Telex/ Fax/ Email/ Nicnet in Proforma – I, by 10th of every succeeding month. A detailed Annual progress report to be submitted by 25th April of the succeeding year in Proforma – II.

17. Evaluation studies

The States should conduct periodic (once in six months) evaluation studies on the implementation of the NMAY.

Evaluation studies may be got conducted by reputed institutions and organizations on issues thrown up by the concurrent evaluation, meriting detailed studies by the States as well as the Government of India.

Copies of the reports of these evaluation studies conducted by the States should be furnished to the Government of India.

Remedial action should be taken by the States/ Salt Commissionerate on the basis of the observations made in these evaluation studies and also in the concurrent evaluation conducted by or on behalf of Government of India.

18. Transparency in implementation of NMAY

It is of utmost importance that the NMAY is properly implemented and misutilisation and other irregularities are minimized. For this, there is an urgent need to have greater transparency in the implementation of NMAY at various levels. This would basically require that people should have access to information about implementation of these programmes in all their aspects. The disclosure of information should be the rule and withholding of information an exception.

19. Pattern of funding

NMAY is a Centrally Sector Scheme funded on cost-sharing basis between the Government of India and the beneficiaries/ stakeholders in the ratio of 70:30. The scheme shall be implemented under the overall supervision of Department of IP & P. In case of any doubts/ problems in the implementation of the Scheme, it shall be referred to Central Level Committee (as mentioned in Para 20 below) for resolving the issues.

20. Criteria for allocation of resources

The central assistance under NMAY will be allocated to the states on the basis of the directions issued by the Central Level Committee as envisaged in the Scheme *i.e.*

1. Joint Secretary, Government of India, Ministry of Commerce & Industry, Dept of I P & P, New Delhi : Chairman
2. Salt Commissioner, Jaipur : Member-Secretary
3. Industry Commissioner/ Secretary of the State Government : Member
4. Representative of Central Labour Commissioner : Member
5. Representative of Donor Agency : Member

21. Release of Central assistance

50% of the funds will be released on the recommendations of State Level Committee and on the acceptance of Project Report.

40% of the funds would be released on completion of the construction up to plinth level. Balance 10% would be released on completion of the house and submission of audited report.

22. Release of beneficiaries share to the executing agency

The beneficiaries/ stakeholders shall release their share to the executing agency within one month after release of central assistance and a copy of the same should endorsed to the Ministry of Commerce & Industry.

23. Separate Bank Account for NAMY

The NMAY funds (central share as well as stakeholders share) shall be kept in a nationalised / scheduled or cooperative bank or a Post Office in an exclusive and separate savings bank account by the executing agency.

24. Utilization of interest earned on deposits

The interest amount accrued on the deposits of the NMAY funds shall be treated as part of the NMAY resources.

25. Drawal of funds by the executing agency

Drawal of funds from the accounts shall only be made for incurring expenditure under NMAY.

26. Release of funds to executing agency

Release of funds should be made to the executing agency on a staggered basis depending on the progress of the work. The entire money should not be paid to the executing agency in lump sum. Instalments of payments can be laid down by the State Level Committee or Central Level Committee to be linked to the progress of work.

Appendix X

Glossary

1. **Capital:** Assets of livelihood and entitlements. There are five capitals that are necessary for a sustainable livelihood. They are:

   Human capital

   Human capital represents the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. At a household level human capital is a factor of the amount and quality of labour available; this varies according to household size, skill levels, leadership potential, health status, etc.

   Physical capital

   Physical capital comprises the basic infrastructure and producer goods needed to support livelihoods. (1) Infrastructure consists of changes to the physical environment that help people to meet their basic needs and to be more productive. (2) Producer goods are the tools and equipment that people use to function more productively. The following components of infrastructure are usually essential for sustainable livelihoods: (a) affordable transport, (b) secured shelter and buildings, (c) adequate water supply and sanitation (d) clean, affordable energy and (e) access to information (communications).

   Financial Capital

   Financial capital denotes the financial resources that people use to achieve their livelihood objectives. The definition used here is not economically robust in that it includes flows as well as stocks and it can contribute to consumption as well as production. However, it has been adopted to try to capture an important livelihood building block, namely the availability of cash or equivalent, that enables people to adopt different livelihood strategies.

   Natural capital

   Natural capital is the term used for the natural resource stocks from which resource flows and services (*e.g.* nutrient cycling, erosion protection) useful for livelihoods are derived.

   Social capital

   There is much debate about what exactly is meant by the term 'social capital'. In the context of the sustainable livelihoods framework it is taken to mean the social resources upon which people draw in pursuit of their livelihood objectives. These are developed through: (1) networks and connectedness, either vertical (patron/client) or horizontal (between individuals with shared interests) that increase people's trust and ability to work together and expand their access to wider institutions, such as political or civic bodies; (2) membership of more formalized groups which often entails adherence to mutually-agreed or commonly accepted rules, norms and sanctions; and (3) relationships of trust, reciprocity and exchanges that facilitate co-operation, reduce transaction costs and may provide the basis for informal safety nets amongst the poor.

2. **Community:** The term in the questionnaire refers to the saltpan workers and their families. A community is viewed as a distinct segment of society, having common interests and living in the same locality.

3. **Drinking water:** Water that is intended for human consumption and other domestic uses. It may be used directly from the tap, or indirectly in beverages or foods prepared with water. Drinking water needs to be free of chemicals and organic substances that may be harmful to human health and free of organisms capable of causing human disease. Drinking water should also be at a reasonable temperature.

4. **Happiness:** Happiness is considered here as contentment or satisfaction towards life as a whole. There may be several versions of happiness. A version accepted by the majority will be considered as the perception of the community.

5. **Household:** The term 'household' means the people of a house collectively staying in the same house and dependent on each other socially and financially.

6. **Income:** Legal earnings from saltpan work and other occupation in cash or kind.

7. **Labour Union/Trade Union:** A union is a legal entity consisting of employees or workers having a common interest. A union is formed for the purpose of collectively negotiating with an employer (or employers) over wages, hours of work and other terms and conditions of employment. Unions also often use their organisational strength to advocate for social policies and legislation favorable to workers.

8. **Leaseholder:** Person who owns the contract for producing salt on the specified land recognised by a particular contract. This mainly includes all kinds of leaseholders - private, Government and cooperative societies.

9. **Local salt workers:** Salt workers who belong to the area and are staying in villages/ settlements close to the saltpan. It mainly includes people who have been working for many years on the saltpan with their families.

10. **Main stakeholders:** People (community) working in saltpans as workers, their family and living in the same locality/ settlements. They are homogenous in respect of institutions, beliefs, etc but may/ may not be homogenous in respect of interest and goals. They include both local and migrated salt workers.

11. **Migrated salt workers:** People who have migrated temporarily from distance places to work in the saltpans. Such people return to their original places after their contract is over.

12. **Occupational hazards**: Problems faced by the salt workers in their work place. These include health problems such as burning of skin, body lacerations, eye problems, body pain, etc.

13. **Other Stakeholders:** People (other than the salt workers) otherwise associated with salt workers and their families for their livelihood and living in the same locality/ settlements, *viz*., local traders, moneylenders, etc.

14. **Provident Fund:** Provident and other funds include employers' contribution to old age benefits like provident fund, pension, gratuity, etc. and contributions to other social security benefits such as the Employees' State Insurance (ESI), compensation for work injuries and occupational diseases, provident fund linked insurance, retrenchment and lay-off benefits.

15. **Salt Factory:** A place where processing of salt is undertaken. Generally, factory owners buy raw salt from saltpan owners and process it for edible or industrial purpose.

16. **Saltpan:** A piece of land used for production of salt.

17. **Wage:** Wages/ salaries are defined to include all remuneration in monetary terms and also payable more or less regularly in each pay period to workers as compensation for the work done during the accounting year. It includes:
    - Wages and salaries including pay for leave period and holidays;
    - Payment for dearness, overtime, compensatory, house rent and other allowances;
    - Production bonus, good attendance bonus, incentive bonus, etc. which are paid more or less regularly for each pay period; and
    - Lay-off payments and compensation for unemployment except where such payments are made from trust or other social funds set up especially for this purpose.

The amount of wages/ salaries payable during the accounting year are expressed in terms of gross value *i.e.* before deductions for fines, damages, taxes, provident fund, employees' state insurance contribution, etc. For workers employed through contractors, payment made to these workers and not the payment made to the contractors are recorded. Benefits in kind (perquisites) of individual nature are only included. It excludes employer's imputed value of group benefits in kind and travelling and other expenditures incurred for business purposes and reimbursed by the employer.

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