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Message

With the objective of promoting the Salt Industry in India with special focus on Gujarat, Confederation of Indian Industry (CII) organized the "National Conference on SALT 2005" on 28-29 January 2005 at Nirma Institute of Management, Ahmedabad, in collaboration with Dept of Salt, Ministry of Commerce & Industry, Govt of India and Industries Commissionerate, Govt of Gujarat.

It was the first ever Salt Conference, organised in Gujarat due to the initiative taken by CII. The conference addressed topics like the scenario of salt Industry in India, emerging export opportunities, salt fortification, logistics & infrastructure requirement of salt industry, quality improvement, labour welfare & other issues.

Dr C S Pandav, Regional Coordinator, ICCIDD & Professor, AIIMS chaired the session on Salt Fortification. During the session the importance of micronutrient iodine in human nutrition was discussed. Salt has been recognised as an ideal vehicle for supplementing this micronutrient to the human population.

Although 80% of the population of India has access to iodised salt, only 49% of total salt production is adequately iodised as per National Family Health Survey-II (1998-99). Iodine Deficiency Disorder (IDD) is now recognized as

a defect affecting human resource development and causing loss of Intelligence Quotient (IQ). There is an urgent need to reach the remaining population, who are most vulnerable to IDD, by supplying iodised salt through public distribution system. Making adequately iodised salt available to every one, everywhere at every time should be our goal instead of simply universal access to iodised salt.

During the session, a delegation from Turkmenistan also shared their useful ideas about the iodisation of salt.

I feel proud to mention that the Salt Conference organized by CII was extremely successful in increasing the awareness about iodisation of salt, which would go a long way in promoting iodised salt as a valuable nutrient.



(Piruz Khambatta)
Chairman, CII Gujarat Council



Turkmenistan becomes the first country in CIS to achieve Universal Salt Iodisation

Turkmenistan has been recognized as the first country among the Commonwealth of Independent States (CIS) and Central Asian countries and the fourth in the world, which has ensured Universal Salt Iodization in accordance with generally accepted international standards.





विरं एकं लंखे;
 रेलं एकं तः, फ्रंखे;
 एकं; एकं वेरंखे;

From the unreal lead me to the real;
 From darkness lead me to light;
 From death lead me to immortality.

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ICCIDD Vision & Mission

Vision: The vision of ICCIDD is a world virtually free from Iodine Deficiency Disorders with national endeavors to maintain optimal iodine nutrition primarily through consumption of iodized salt, which should be made easily available and affordable for all people for all times.

Mission: The mission of ICCIDD is to provide a focused advocacy to governments and development agencies, of a continued priority for iodine nutrition, providing technical expertise in a multidisciplinary approach.

Dedication: ICCIDD dedicates itself to programs fully supported at the national level for permanent, sustained success and will work with all partners and national entities towards that end.



Editorial

Dear Colleagues,

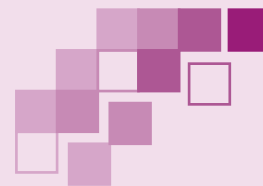
It may sound repetitive when our spotlight again is on industry. But, this only shows the significant role that industry has in the program of sustainable elimination of iodine deficiency disorders in India. The program itself has socio-economic-health dimensions. There may not be much such disabilities having these kind of multiple ramifications; therefore, the high stakes and a larger role of all stakeholders. Achieving defined and expected results is the outcome of synchronized efforts of all those who are committed to this great cause. Sustaining the success is key to the program. Here comes the role of the iodized salt manufacturers whose onerous responsibility it is to ensure availability of adequately iodized salt to all sections of the population at affordable price. Often it is against many an odds. Notwithstanding the oddities, it is heartening for all of us committed to the mission of sustainable elimination of IDD to note that the salt industry in India has lived up to take on the challenge effectively.



The recently held, "National Conference on Salt 2005", organized by the Confederation of Indian Industry (CII) at Ahmedabad was a landmark event. Probably this is the first such Conference in India. Though called national, it was international in character with participation from International agencies like UNICEF, the Micronutrient Initiative and ICCIDD. Representative from overseas organizations both governmental and non-governmental groups participated and contributed in a big way. The intent of the Government of India was much in evidence with Knowledge Partnership from Salt Department (Ministry of Commerce and Industry, Government of India) and support extended by the Industries Commissionerate of Gujarat Government. The outcome of the conference will, it is rightly expected, act as a guiding light in the IDD elimination at global level. We take pride in covering the conference in this edition of IQ+ Jagriti.

The pall of dark shadows left by the tsunami tragedy that struck the region still looms over us. On behalf of the entire ICCIDD family and our network partners, we express our heartfelt sympathy to the survivors of the catastrophe whose sufferings are manifold. We commend the efforts of all national governments and voluntary groups concerned in the rehabilitation programs. ICCIDD is doing its mite in mitigating the sufferings through its regional network specially in Sri Lanka. Please visit our website icciddsl.org for more information.

Chandrakant S. Pandav
 Regional Coordinator, ICCIDD



SALT INDUSTRY AND SUSTAINING ELIMINATION OF IODINE DEFICIENCY DISORDERS IN INDIA*

Chandrakant S. Pandav, Peter Parekattil,

R. Sankar, M. G. Karmarkar

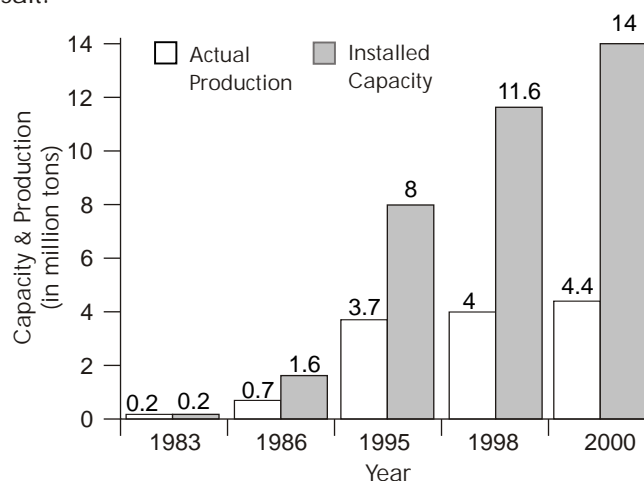
Introduction

Iodine deficiency is the world's most important cause of preventable brain damage and mental retardation. The clinical and subclinical manifestations of iodine deficiency that affect all stages of human growth and development are collectively termed as iodine deficiency disorders (IDD). On an average, children living in iodine deficient areas have an intelligence quotient (IQ) 13 points lower than children in iodine sufficient areas. IDD as a public health problem has been reported from 110 countries. In absolute terms, Southeast Asia (which includes India, Bangladesh, Indonesia) and the Western Pacific (which includes China) together account for more than 50% of the world's population at risk of IDD. Moreover, iodine deficiency continues to be a concern in most countries in Europe (even Western Europe, including 10 million people at risk in Germany).

Unborn Child : The Most Vulnerable

- 90% of the growth & development of the human brain takes place between 3rd month of pregnancy and 3rd year of life.
- This makes it vital that all expecting mothers get their daily iodine requirement

To prevent IDD, the body requires just 150 µg of iodine per day or a teaspoonful in a lifetime! This minute quantity, however, needs to be consumed regularly and consistently. The most common method of iodine supplementation is consumption of adequately iodized salt.



The Installed Capacity and Actual Production of Iodised salt from 1983 to 2000

As shown in the graphics above, the increase in production of iodised salt is 22 times in a time span that encompasses 1983 - 2000. The role of industry for this remarkable achievement calls for a special mention.

“People are a nation's greatest resource. Our greatest asset will be an educated and capable workforce.

Our Government will work along with State governments to set up public spending on education, to universalize access to elementary education and to improve the quality of our education.”

Dr. Manmohan Singh
Prime Minister of India

(in his address to the Nation on June 24, 2004)

The Intelligence Quotient (IQ) score of children living in an iodine-deficient environment is nearly 13 points less than those living in iodine-sufficient environments.

IMPLICATIONS OF LOSS OF IQ

Poor scholastic performance



Frequent failures/grade repetitions

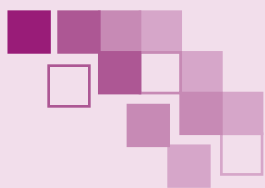


Absenteeism / Drop Outs



Reduced impact on economic and social development

* Reprinted from brochure, “National Conference on Salt 2005” 28-29 January, 2005 (P 23-29), Nirma University, Ahmedabad.



National Family Health Survey 2 (1998-1999)

The National Family Health Survey 2 was the second in the series of all India surveys carried out to monitor the maternal and child health indicators in the country, using a representative sample. In the second edition of the survey, the consumption of iodised salt at the household level was included as one of the parameters. The salt at the household level was tested with the use of the rapid Salt Testing Kits (STK). The results showed that 49% of the households in the country were using adequately iodised salt, i.e. iodine content 15 parts per million (ppm), as measured by the salt testing kits. A total of 28% of the households were found to be using non-iodised salt. Another 22% were using salt that had iodine less than the recommended levels of 15 parts per million. The encouraging aspect of the results were that 71% of the population is consuming salt with some amount of iodine in it. Now the focus would be to sustain these achievements, improve the quality assurance and focus on the remaining 28% of the population, which is yet to be covered.

The table below shows that only 36% of poor segments of the population consumes adequately iodised salt. The socio-economic divide on consumption of iodised salt is alarming. One possible solution to bridge this gap is supply of adequately iodised salt through public distribution system at subsidized price. It is heartening to note that the State of Chhattisgarh has taken a lead in this. The State is distributing 'Chhattisgarh Amrut Namak' brand of iodised salt to the below poverty line (BPL) population at 25 paise per k.g. But, this is only a beginning. There is a long way to go to cover the entire country. How can the industry live up to contribute in facing this colossal challenge?

NFHS :2 Socio-economic status and use of iodised salt

Socio-economic Status	Non-iodised Salt (%)	Inadequately iodised Salt (%)	Adequately iodised Salt (%)	Total %
Low	36	28	36	100
Medium	28	22	50	100
High	13	9	78	100

Year 2000 and Beyond

In 1997, in a move to increase the sale and consumption of iodised salt, the Government of India banned the storage and sale of non-iodized salt for human consumption. This move, though well intentioned, may well have been the cause for the protesting voices raised

against Universal Salt Iodisation, as the implementation of this order by the government raised the question of choice by the consumers.

On September 13, 2000, the Government of India lifted the ban on the sale of non-iodised salt. The reason given was that, "When the question was of individual choice, compulsion is undesirable".

Some of the factors that may have been responsible for the government taking this drastic move were:

1. Price difference between iodised and non-iodised salt
2. Difficulties faced by the salt producers under the Prevention of Food Adulteration (PFA) Act, 1954.
3. Politics and economics of Liberalization
4. Principle of Choice

The two main reasons can possibly be the price difference between packaged refined free flowing iodised salt and the common salt available and the difficulties faced by the small scale salt producers under the PFA Act, which had stringent penalty for not conforming to the standards set by the government.

The price of the packaged refined free flowing iodised salt is two to three times more than the price of the common salt. But, invariably, the price of this high quality branded product is higher compared to the price of the non-packaged products available in the market. Some groups highlight the price difference, but this is true for all products. In the absence of price control mechanisms, the market forces govern the sale of the salt, slightly tilting towards the product, which has added value be it in terms of appearance, packaging, labeling and other sales promotion strategies. Another widespread misconception of the people is that the packaged refined salt is the only salt in the market that is iodised. But the fact remains that more than 80% of the salt that is sold in the country is in the crystal or powdered form. In point of fact, even crystal and powdered salt is being effectively iodised.

Estimated percentage of households consuming adequately iodised salt:

South Asia		East Asia and Pacific	
Bhutan	95	China	93
Bangladesh	70	Viet Nam	77
Nepal	63	Lao PDR	75
India	49	Thailand	74
Pakistan	17	Indonesia	65
Afghanistan	15	Myanmar	48
		Mongolia	45
		Philippines	24
		Cambodia	14



The second objection was raised to the interpretation given by the government officials to the Prevention of Food Adulteration Act, under which iodised salt sale was governed. Under this Act, if the salt sample did not have 30 parts per million of iodine at the production level or 15 parts per million of iodine at the consumption level, then the salt manufacturer could be proceeded against legally at the location or State where the salt sample was collected and analyzed, regardless of the place of origin of the salt and the salt manufacturer. This was treated akin to a criminal offence, punishable with a monetary fine and a jail term. The Food Inspectors, in their efforts to rigidly implement the rule, ignored some of the genuine problems that the salt producers were facing, where the

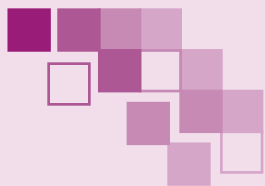
salt produced by someone else had their address on its cover and they were being summoned in court for someone else's negligence. The salt producers, who had actively gone out of their way to support this programme from the very beginning, were unhappy with the treatment and consequent harassment being meted out to them. These social issues are not easily tackled by quantitative scientific methods and the concept of qualitative research methodology plays an important part in understanding the process related to legislation and enforcement.

The recommendations made at the ICMR Workshop on Micronutrients, 24-25 November, 2003 at Delhi are given below.

Current provisions in the PFA	Recommended amendments to the Act
Non-bailable warrants if the salt iodine content is less than 30 ppm at the production level and 15 ppm at the consumption level Imprisonment for not less than 6 months	Non-bailable warrants and punishment should be omitted.
Fine of upto Rs. 1,000/-	This rule should be amended to include a fine amount not less than Rs. 10,000/-
The legal provisions to prevent misbranding (brand name, content, MRP, batch number, address) exist Presently there is no monetary fine	Detection of misbranding of iodized salt should be given high priority A fine amount of not less than Rs. 10,000/- should be imposed on the concerned producer, wholesaler and retailer

Information Sharing

- Dr. Chandrakant S. Pandav has been elected Vice-President of Indian Public Health Association North Zone (IPHA) at its 49th Annual Conference held in Lucknow from 11th to 13th February, 2005.
- Dr. Chandrakant S. Pandav has been conferred Dr. D.N. Pai Oration on 17th February, 2005 at the 32nd Annual National Conference of IAPSM & 12th Annual Conference of Maharashtra Chapter of Indian Association of Preventive & Social Medicine (MCIAPSM) held at Pravara Medical College, Loni, Maharashtra from 16th to 18th February, 2005.
- Nutrition Foundation of India had organized a 3 days Meeting on Food & Nutrition Security in South Asia from 7th to 9th March, 2005 at India International Centre, New Delhi.
- Nutrition Syndicate, R-18, Hauz Khas, New Delhi 110 016 has come out with a handbook entitled, "Food Fortification in India Frequently Asked Questions", 2004.
- Management thinker C.K. Prahlad Rao has written a book, "The Fortune at the Bottom of the pyramid". This is published by Wharton School Publishing, priced at Rs. 499/-. A section in the book widely covers the role of the corporates in addressing the public health problem. Production and distribution of iodised salt is one of the important aspects highlighted in the book. The OutlookMoney issue 15 November, 2004 page no. 58 has rated the book in the must-read category in their book review section, 2005.

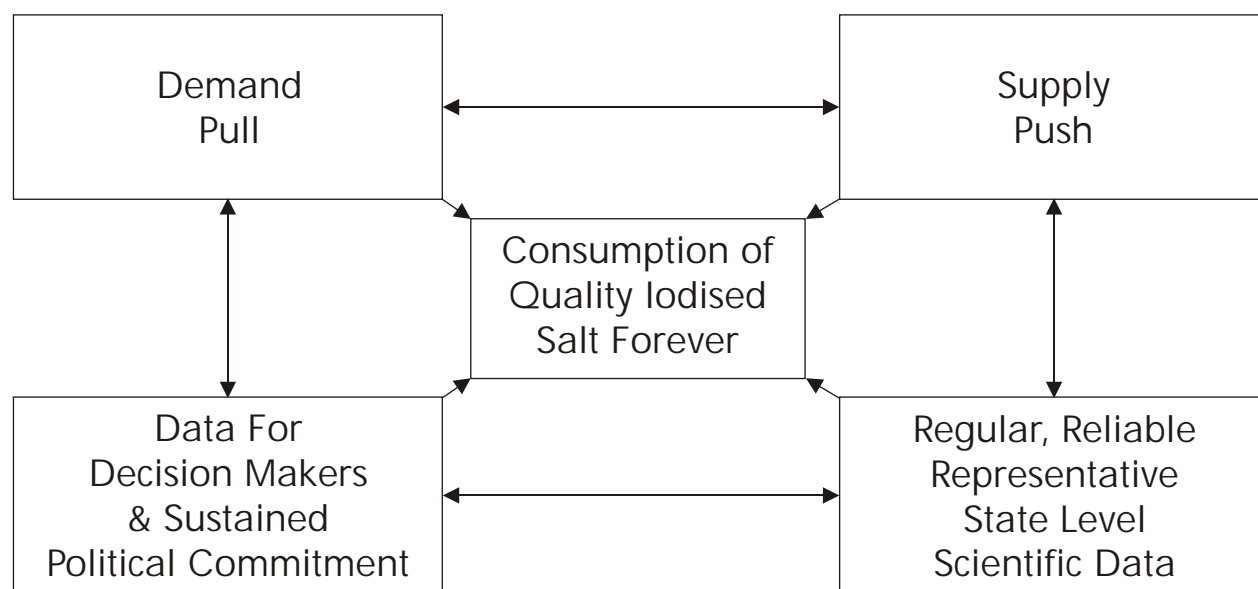


The way forward

The IDD multi-component model draws its origins from the Social Process Model described by Professor Basil Hetzel, its main components being:

1. Demand for Iodised salt (Pull)
2. Supply of Iodised salt (Push)
3. Regular Reliable Representative State Level Scientific Data
4. Data for Decision Makers and Sustained Political Commitment

This is explained in the following diagram:



The Salt producers and the various associations of the salt producers in the different salt producing states have performed an enormous service to make India self sufficient in the production of common salt. We have more than required capacity to produce iodised salt. The salt producers and the salt traders have concerns for three main factors:

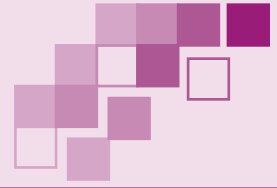
1. Economic incentives
2. Technical Support
3. Social Incentive

1. Economic incentives : All iodised salt in the country is produced mainly in three states: Gujarat in west India, Rajasthan in north-west India and Tamil Nadu in south India. The salt is then transported from these production centers to the rest of the country by road and rail transport. For distances beyond 500 kilometers, it is economical to transport the salt by the rail. In an effort to induce the salt producers to manufacture only iodised salt, the Government of India and the Ministry of Railways have

introduced iodised salt under the Category B priority. This ensures that it is placed second only to Defence in terms of the priority. If the turnover of the iodised salt is good and the transport of the product is assured at a lesser rate (as compared to road transport), then it makes good business sense to invest in the manufacture of iodised salt.

2. Technical Support : The salt producers have been receiving support from the government. Salt Commissioner's office, under the Ministry of Industry provides technical assistance and monitor the quality of iodised salt at the production level. Bilateral and international agencies like UNICEF, MI, WHO and ICCIDD have been regularly contributing their time, resources and expertise in ensuring that the salt production is of the highest quality.

3. Social Incentive : The salt producers have fulfilled their commitment to the children of India. By ensuring the supply of adequately iodised salt to all areas in the country, they are giving each and every growing fetus and



child an opportunity for optimum mental and physical development. The economic development of a society alone is not sufficient for overall improvement of the health status of a community; there has also to be a social change bringing about equity and equality of distribution of development in the community.

The creation of a demand for iodised salt or the provisions of an adequate supply of iodised salt is necessary but not sufficient for the IDD Elimination Programme to run independently. This has to be bolstered by regular, reliable, representative, state level scientific data and data for decision makers.

In a program where spectrum of magnitude of the problem is large the stake are high. This is the case with IDD elimination programme. So is the range of stakeholders. This applies well to the IDD elimination program's success and sustainability. The broad alliance of stakeholders, both voluntary and mandatory, who are working in harmony in India for the program are:

1. Salt Producers
2. Human Rights and Legal Practitioners
3. Educational Institutions
4. Media and Communicators
5. Non-governmental Organizations / development sector
6. Government and Panchayati Raj Institutions
7. Health Professionals and Nutritionists, and
8. International NGO's and Bilateral Agencies

DUTIES OF THE CITIZENS OF INDIA

UNDER ARTICLE 51A, PART IV-A

Inserted by the 42nd amendment in 1976

It shall be the duty of every citizen of India-

“ To strive towards excellence in all spheres of individual and collective activity, so that the national constantly rises to higher levels of endeavour and achievement.”

The problem concerns all. The solutions in our hands. Synchronised efforts will give results. An immeasurable contribution to a better developed nation and visions realised.



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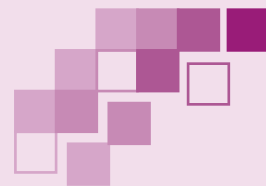
- Mr. Arvind Agarwal (Industries Commissioner, Govt. of Gujarat)
- Mr. Piruz Khambatta (Chairman, CII Gujarat Council)
- Mr. Anil Patel (State Minister For Ind. & Tourism)
- Mr. Satish Sohoni (Chairman of the Conference)



National Conference on Salt 2005 (28-29 January, 2005)
Delegates from Turkmenistan with Dr. Pandav & Mr. Amit Shukla (Executive, CII Gujarat)

The road to universal salt iodisation is now likely to become steeper. The one third of the developing world's people who are not yet protected by iodised salt are, by and large, the more marginalized populations economically, culturally, or geographically and are like to be more difficult to reach.

From 'A Global Progress Report' on Vitamin and Mineral Deficiency by UNICEF-2004



PROCEEDINGS OF, "NATIONAL CONFERENCE ON SALT 2005"

A National conference on Salt was jointly organized by Salt Department, Government of India, Government of Gujarat and Confederation of Indian Industry (CII) at Nirma University, Ahmedabad on 28th & 29th of January 2005. The conference was sponsored by Nirma Ltd, & co-sponsored by Tata Chemicals Limited. Jakhau, Salt Company Pvt. Ltd. Jakhau, Kutch and UNICEF, New Delhi were the associate sponsors. It is the third in the series of conference organised by CII. The earlier conferences were held at Jaipur during December-2002 and February-2004 on industrial and edible salt respectively and the response was very encouraging. The present conference was organised in the back drop of growing demand for Indian salt in the international market and the potential of India to become a major global player, being the third largest producer of salt in the world.

Sri Satish Sohoni, COO, Tata Chemicals and Chairman of the conference stated that the main objectives of the conference were to provide a forum for discussion on issues like:

- Marketing and emerging opportunities in salt export
- Measures required to make Indian salt industry globally competitive
- Infrastructure and technology up-gradation of salt industry
- Measures to be taken for safety and welfare of the labourers engaged in salt industry
- Steps required to be taken in respect of small and medium enterprises (SMEs) to ensure quality of iodised salt marketed
- Documentation of actionable suggestion emerging out of the two days deliberations, sharing it with the Salt producing States Government and discussing them at a National seminar on National Alliance for Improved Nutrition (NAIN), at New Delhi.

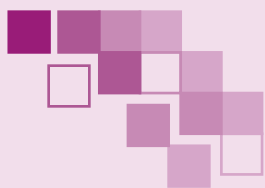
The two days conference was inaugurated by Shri Anil Patel, Hon'ble Minister of State for Industries & Tourism Government of Gujarat by lighting a lamp. Shri Patel in his inaugural address stated that Gujarat is the only state in the country to have a separate ministry to look after the development of salt industry, welfare of labour engaged in it and sufficient funds have been provided to undertake these activities. He highlighted the steps taken by the government to promote salt industry and labour welfare activities. He stressed the need of uplifting socio economic status of the 100,000 salt workers in the state,

out of which 80% are in unorganized sector. He informed that the life insurance amount has been enhanced from Rs. 50,000 to 100,000 with effect from 26.1.2005 and the entire premium amount is paid by the state government. He congratulated industry for achieving a record export of two million tons of salt from Gujarat and stressed that Industry should take necessary steps to expand its international market. He informed participants that the Government of Gujarat is in the process of engaging a National/International expert to study the entire gambit of export of salt and steps to be taken for developing export market. He promised to favorably consider suggestions made in this conference for developing infrastructure needed to promote export of salt and labour welfare activities.

The conference was divided into five technical sessions besides the Valedictory Session. After presentation of papers on various subjects by the experts from the industry in each session, there was lively interactive session in which the speakers answered a variety of questions from the delegates.

Shri S. Sundaresan, Salt Commissioner eloquently explained the strong position of Salt Industry in India vis-à-vis its global competitors. The geo-climatic position and facilitating industrial environment in the country in general and Gujarat in particular are the other advantages. Presence of a separate department under Central Government to administer this politically sensitive and most essential daily commodity has made India the third largest producer of salt after USA and China. He informed that balance of salt consumption is gradually shifting from Western Europe and North America to the growing market of the Pacific Region. However, the exports of salt from India to Asian Pacific region have not taken off to the desired level due to some inherent constraints. As regard to labour welfare work, he stated that Salt Department has engaged a consultant Bay of Bengal Project, An inter Governmental organization based in Chennai to prepare a base line socio economic status of the workers engaged in the Salt Industry. The report is expected by June, 2005 and would be discussed with all salt manufacturers and concerned State Governments.

Shri Arvind Agarwal, Industries Commissioner, Government of Gujarat stated that Gujarat is the largest producer of salt in the Country. The production of salt has gone up from 0.5 million tons at the time of independence to 11 million tons. It is primarily due to



entrepreneurship of Gujarat Salt producers, favorable industrial policy and cordial industrial relation in the State. He informed delegates that vast reserve of the salt and other valuable marine chemicals like potassium salt, Bromine etc available in the Runn of Kutch are yet to be fully exploited. He assured that State Government would favorably consider proposals for improving infrastructure facilities needed to improve quality of salt and loading of salt at ports to boost exports. He added that the salt industry has many challenges to overcome in order to become a global player and urgent steps are required to be taken by the industry as well as the Government to convert every challenge in to an opportunity. The people of Gujarat have done so in the past particularly after 2001 earth quake and their efforts are recognized internationally.

Shri M. A. Ansari, status of salt industry in India, Various development and labour welfare schemes available to the industry. Shri D.S. Jhala, Dev Salt Works, gave an account of status of salt industry in Gujarat. He stated that salt conforming to international specification is being produced in the state. The Salt washeries have been setup to further upgrade quality of salt and he advocated for exploring possibilities of creating necessary infrastructure facilities to promote export of salt from Bagasara area, near Navlakhi Port in Rajkot District and at Vadinar port in Jamnagar district. Shri M.S. Prakash, Tuticorin Salt & Marine Chemicals Ltd., gave an account of status of salt industry, opportunities and challenges in southern states.

In Session II the emerging export opportunities for Indian Salt Industry were explained at length by Shri Hari Prasad of Friends Salt Work, Gandhidham and Shri Rudolf Werner of Netherlands Management Cooperation Programme. The discussion was moderated by Shri P.B. Anandam, Managing Director, Jakhau Co. Pvt. Ltd. who has got vast experience in exports of salt. Many issues which need to be addressed immediately for capturing the export market were discussed thread bare in the interactive session with the participants.

Use of salt as a vehicle to supplement micro nutrient iodine to the entire population, especially the vulnerable sections of the society, was highlighted by Dr. Eric-Alain Atego, Programme Officer, UNICEF and

Prof. M.G. Karmarkar, AIIMS. While acknowledging the progress made in providing access to iodised salt in the country, the need for closer monitoring of quality of iodised supplied and reaching the remaining 30% of the population, who also happen to be most vulnerable to



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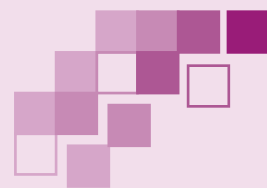
Mr. Arvind Agarwal (Industries Commissioner, Govt. of Gujarat)
Mr. Piruz Khambatta (Chairman, CII Gujarat Council)
Mr. M. A. Ansari (Deputy Salt Commissioner) lighting the lamp
Mr. S. Sundaresan (Salt Commissioner, Govt. of India)
Mr. Satish Sohoni (Chairman of the Conference)

Iodine Deficiency Disorders (IDD), was stressed. Shri. K. N. Patel, Additional Director, Health, Government of Gujarat presented an over-view of implementation of IDD Control Program in Gujarat and specific goals set by the State Government to achieve and sustain universal salt iodisation (USI) in its vision-2010 document. Shri R.R. Rathi, Director, Shree Laxmi Enterprises highlighted the issues facing the iodised

salt industry viz. stringent provisions of PFA Act, gray market of iodised salt (spurious brands) filling the production supply gap etc. Shri U Bharath, Business Manager, Hindustan Lever Ltd. briefly explained Information Education & Communication (IEC) and marketing strategies adopted by their company to promote consumption of iodised salt. He stressed the need to reach-out to the people by increasing penetration of mass media for achieving the goal of USI.

The logistics and infrastructure requirements of salt industry so as to optimise the export potential were explained and discussed at length in Session IV which was chaired by Shri Jayant Parimal, Chief Executive Officer, Gujarat Infrastructure Development Board. The Infrastructure requirement of salt industry was detailed by Shri Mukesh G Parikh, Sr. Vice president-Marketing, Gujarat Adani Ports Ltd and Shri S.C. Mathur, Chief Nautical officer, Gujarat Maritime Board. The logistic issues faced by Salt Industry were highlighted by Sri M. M. Sand, Vice President, Century Chemicals, Jamnagar. During the interaction with the delegates, the speakers answered some of their specific issues related to export of salt from minor ports of Navlakhi, Bhavnagar and Dahej. There was a consensus on improving the infrastructure at the major and minor ports in India for sustained exports in future.

Dr. Chandrakant S. Pandav, Prof. AIIMS, New Delhi introduced Ms. Dilara Ayazova, a UNICEF representative from Turkmenistan, who spoke on the status of salt and



salt iodisation programme in her country. She informed delegates that iodine needed for iodisation of salt is available in her country. Dr. Pandav suggested preparing a, "Business plan" for solving problem of the Salt industry by this August gathering, which should be made available to all concerned for appropriate action.

In order to capture the growing export market, the Indian salt industry has to gear itself to meet the international standards in quality, environmental and labour issues. All these were lucidly explained in detail by Dr. P.K. Ghosh, Director, Central Salt and Marine Chemical Research Institute, Bhavnagar, Gujarat, Shri S Ramani, M.D., Sahayamatha Saltners Pvt Ltd and Shri Santhosh Kamdar, Director, Bhavnagar Salt and Industrial Works Pvt. Ltd. He gave a brief account of production of industrial grade salt in southern region and Gujarat respectively. The quality and productivity issues were highlighted by Shri R.S. Pandey, Vice President-Technical, Gujarat Heavy Chemical Ltd. and Shri I.L. Momin, Vice President-Manufacturing, Tata Chemicals Ltd. The labour welfare schemes available for salt workers in Gujarat were detailed by Shri B.P. Bhatt, Welfare officer, Rural Labour Commissioner's office, Gandhinagar while the health aspects of salt workers were dealt by Dr. Harsiddh Sadhu, Assistant Director, National Institute of Occupational Health, Ahmedabad.

Shri D. Rajgopalan, Principal Secretary, Department of Industries and Mines in his valedictory address congratulated the organizers for arranging such conference and assured that the Government of Gujarat would favorably consider all proposals for the welfare of the salt workers and promotion of export of salt from Gujarat to the foreign countries.

The suggestions emerged at the end of the two days conference to put Indian salt industry on a strong footing and to become a major global player are as follows:

Production

- The lease period in Gujarat should be increased from 10 to 20 years considering the long gestation period in developing salt works.
- A decision regarding renewal of lease of land falling in Wild Ass Sanctuary (WAS) in the little Runn of Kutch and marine park areas of Jamnagar in Gujarat should be taken immediately.
- Land revenue (assignment fee) levied on salt department land should be reasonable and in proportion to the production/yield in that area.
- Power Tariff on Salt Industry should be made on par with agricultural sector.
- Un-interrupted power supply should be ensured during the manufacturing season.

- All submersible pumps used for pumping brine should be replaced by axial flow pumps in a phased manner as the latter are more economical.
- Wind Mills should be installed wherever possible to use non-conventional sources of energy for pumping brine and they should be connected to the electricity board grids, to reduce cost of production.

Supply

- There should be no restriction on movement of non-refined iodised salt by rail under Zonal Scheme, within the country, in the present era of globalisation.
- Internal transportation by rail needs streamlining.
- Adequate time for loading of salt in rail rakes should be given.
- Rail rakes for transportation of salt should be provided in a time bound manner to various salt loading stations.
- Supply of ordinary iodised salt should be encouraged in consumer packs for better retention of iodine.
- A quarterly meeting of Salt Commissioner, Railways Board and representative of the Salt industry be organized in New Delhi to discuss the problem of salt industry

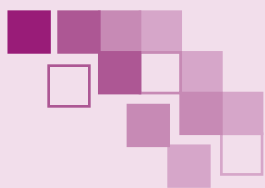
Exports

- A study needs to be commissioned to identify the emerging Chlor Alkali industry, edible salt market in the world and consequently the export potential from India particularly to Asian and African market. The study should cover quality/quantity of salt needed, time schedule to supply, CIF price etc and infrastructure facilities needed to meet these requirements.
- The economic viability of setting up a barge jetty facility at Bagasara village near Navlakhi port, District Rajkot and possibilities of exporting salt from Vadinar jetty of Kandla port in Jamnagar District is 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 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.

Quality

- Quality of salt produced in the country needs to be upgraded to global standard i.e., 97+% of Sodium Chloride for edible salt and 99+% for Sodium Chloride for industrial salt with low Calcium, Magnesium and Sulphate contents.
- In process quality control viz proper brine management is more economical than upgrading the quality at the consuming end.





- Salt workers need to be trained on the techniques of harvesting good quality salt.
- Central Salt and Marine Chemical Research Institute, Bhavnagar should offer viable technologies for producing high grade salt with low impurities of Calcium, Magnesium and Sulphate.
- Various disciplines of salt manufacture need to be integrated to yield a product portfolio beneficial in the long run.

Labour

- Salt manufacturers and government should accord top priority to labour welfare activities
- Effective steps are to be taken to ensure availability of potable water to all salt workers
- The on going study on the socio-economic status of salt workers by Bay of Bengal Project, Chennai be made available to all stake holders including salt producing State's Government, discussed and its recommendations implemented
- Health and educational facilities to salt workers and their children also need to be given top priority.
- Salt workers should be provided with protective gears viz. goggles and gum boots to prevent occupational hazards and they should be encouraged to use them.
- Namak Mazdoor Awas Yojna (NMAY) implemented by Salt Commissioner should be given wide publicity for giving maximum benefit to the workers. as funds are no constraint
- Salt workers should be provided social security by way of group insurance

Iodisation

- There is a need to increase production of iodised salt to provide access to the remaining 20% population by:-
- Creating an effective and sustained demand for iodised salt.
- Promoting iodised salt in public domain.
- Enforcing legislation in fair and transparent manner
- Enabling legal environment.
- Since only 49% of the iodised supplied has prescribed levels of iodine as per NFHS-II survey (1998-99) the quality monitoring system needs to be strengthened.
- Stringent provisions of PFA Act require dilution.
- Eliminate gray market (spurious brands) by using hologram technology.

Strengths of Indian Salt Industry

- A wide coastline
- Favourable environment factors
- Cheap labour
- Government (esp. Gujarat) evolving paradigm to support the industry.
- Wide optimism this year in Gujarat because of export to China
- Suitable location for export to various countries (China, Phillipines, Qatar, Malaysia)
- A well connected rail line, excellent anchor points
- Established salt departments and R&D institutions such as CSMCRI, Bhavnagar
- Higher (2 times) salt density in some areas in Gujarat

Challenges:

- Improving productivity
- Producing competitive quality
- Conventional energy sources such as solar and wind
- Anchor points
- Narmada's proximity for drinking water for labourers
- Public distribution for populations below poverty line
- Information, Education & Communication

The Way Forward

High priority, easy changes

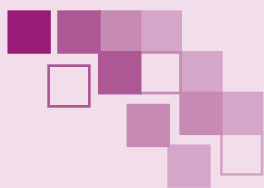
- Changes in PFA acts to avoid harassments of genuine producers
- Improving the management of railways so as to increase credibility and remove undue bureaucracy
- Changes in pollution act for salt industry and the permission for the refining of the salt by the same plant

High priority, tough changes

- Labour conditions including health, housing, education and water and protective covering. (fear of reduction of labour force in such a labour intensive industry)
- Infrastructure development
- Demarcation of Wild Asses Sanctuary boundary and allocation of boundary outside it without hassles.
- Price regulation in terms of reducing the transport costs and reducing the whole sellers and retailers profit.
- Land lease rate reduction in Tamil Nadu, making it comparable to Gujarat.
- Training of "Agyrarias" Salt workers
- Development of wind mills and solar panels for independent power supply

Low priority, easy changes

- Seasonal industry (mass storage of raw salt)
- Compulsion of having washeries by salt unit with large areas.



Progress toward Optimum Iodine Nutrition in Turkmenistan

Stakeholders

- * Ministry of Health & Medical Industry
- * State concern "Turkmendokunhimiya"
- * Ministry of Trade
- * Standard Agency "Turkmenstandartlary"
- * State custom
- * Food Industry Association
- * Unicef Turmenistan, USAID & ICCIDD

Current Situation

The Government of Turkmenistan is committed to achieve Universal Salt Iodization (USI) In 1994 it announced the commitment to work with international agencies for achieving the USI goals. It was recommended that the most cost-effective way to prevent Iodine Deficiency Disorders among population was to iodize edible salt produced in the country. It was in line with the State Programme "Health" of President of Turkmenistan Saparmurat Turkmenbashi adopted in 1995.

The population in the country is about 6 million The estimated annual amount of table salt needed for this population is 24 thousand tons per year. 100% of country needs are covered by national producers.

Salt Industry

Nowadays the "Guvlyduz" Plant is the only functioning salt plant in Turkmenistan. Raw material for iodized salt production is self-segmenting of the Guvly Lake of a sea origin located along Caspian see coast. The capacity of "Guvlyduz" salt plant is enough to cover the country needs. Import of salt for human consumption to Turkmenistan is negligible. The main customers of the final product are retail trade, food industry, and other industries.

The salt plant annual projected capacity for iodized salt manufacture amounts to 200,000 tons. Production capacity of "Guvlyduz" salt plant allows producing iodized food salt in volumes of 70 - 80 thousand tons per year. Salt iodination at the Plant is done by adding a potassium iodate, using the wet method.

Potassium iodate is obtained from "Hazar" Chemical Plant. Production capacity of "Hazar" Chemical Plant allows producing potassium iodate in volumes of 40 tons per year

and potassium iodide in volumes of 330 tons per year. Actual demand of potassium iodate for Turkmenistan is 2.16 tons per year.

Presently "Guvlyduz" Salt Plant has three lines producing iodized salt which are using wet spray method for salt iodization. Since 1 June 2003 the iodine content in salt is corresponding to new adopted standards 40 +/- 15ppm.

According to the Presidential Decree the salt plant "Guvlyduz" of the State Concern "Turkmendokunchemistry" should supply 32 thousand tons of table salt to the Ministry of Trade and Foreign Economic Relations of Turkmenistan for free distribution among the population, taking into account the average quality of 400gms of salt per person per month.

USI Program

Salt Iodization Law : Following UNICEF/ECO International Conference on the Elimination of Iodine Deficiency Disorders (Ashgabat, 1994), President of Turkmenistan issued Decree N 2626 on "Salt Iodization and Flour Fortification with Iron" in May 1996. According to the Decree the entire salt produced locally should be iodized and Salt Iodination is obligatory for all plants, irrespective of patterns of ownership, at the territory of Turkmenistan. The Ministry of Energy and Industry of Turkmenistan and the Academy of Science of Turkmenistan (with technical assistance of UNICEF) were responsible for actions for achievement of universal salt iodization starting September 1996.

On 14 August 2003 the President of Turkmenistan signed a Decree "On free provision of the population of Turkmenistan with electricity, gas, water and table salt" at the People's Council Meeting.

In order to carry out the Decree of Halk Maslahaty (People's Council) of Turkmenistan from 14 August 2003 "On free provision of population of Turkmenistan with electricity, gas, water and table salt" as well as to support the financial status of the salt plant Guvlyduz of the "Turkmendokunchemistry", the President of Turkmenistan issued Decree N 6351 of 22 August, 2003 on "Tax Exemption of the Salt Plant Guvlyduz of the State Concern "Turkmendokunchemistry".

National Leadership : In 1996 the Inter-Agency Commission on supply of Turkmenistan population with iodized salt and iron-fortified flour was established by the Decree of the Cabinet of Ministers. It includes governmental agencies responsible for food production and quality control, sale and implementation of the adequate policy and reforming in taxation.

Monitoring: Some remarkable progress has been made in



Guvly Lake

"Guvlyduz" Salt Plant



the context of iodine deficiency disorders control.

In order to establish monitoring system on iodine deficiency elimination UNICEF procured and assisted in installation of laboratory equipment for determination of iodine in urine including training for personnel in Scientific and Clinical MCH Centre, Ashgabat. National co-ordinator on IDD elimination participated in Regional Meetings on eliminating micronutrient malnutrition in Germany (1997) and Georgia (1998).

From 1999 to 2001, UNICEF supported development and implementation of a comprehensive national plan on monitoring and elimination of Iodine Deficiency Disorders and provided support in conducting DHS in 2000.

Following the IDD assessment conducted in 2001 the National plans with specific recommendations on strengthening of National IDD/USI Monitoring System throughout the country and for biological monitoring of IDD in Turkmenistan was prepared.

The Ministry of Health and Medical Industry developed internal and external quality control of iodized salt on the production level, in order to strengthen monitoring system for USI and quality of salt iodization process.

At production site the samples are taken regularly from each bath of iodized salt to determine the amount of iodine. For testing of iodine in salt used titration method. The method is quality internally/externally controlled. The results of the control checks and measurements of iodine content in the salt samples are entered in a special laboratory logbook and showing that iodized salt samples are systematically taken during production runs, and tested for iodine.

In order to assess the quality of iodized salt at the production and retail level, Sanitary and Epidemiological Inspection (SEI) is conducting regular monitoring field visits to verify of iodized salt stock management at retail level and implementation of "First-In-First-Out" (FIFO) principle. As a result, the ordering procedure for iodized salt (to prevent its excessive storage at the wholesale and retail levels) was improved. The training workshops for the specialists from the Ministry of Trade, with specific focus on implementation of "First-In-First-Out" warehouse inventory procedure (FIFO) is organized on a regular basis by the Sanitary and Epidemiological Inspection at velayat's level.

In May 2002, the State Sanitary and Epidemiological Inspection of the Ministry of Health and Medical Industry of Turkmenistan designed and implemented the monitoring and monthly reporting system on the market and household level with usage of iodine test kits on regular basis. Preliminary reports show that

100% of households have access to iodized salt.

According to results of 2004, National representative survey of 879 schoolchildren, a median value of urinary iodine (UI) was 170 mcg/L (optimal levels are 100-300 mcg/L). Only 18% of the individual urinary iodine samples were below 100 mcg/L while less than 5% of samples were below 50 mcg/L. There was only minimal discrepancy in status of iodine nutrition between different regions (velayats) of Turkmenistan with the highest median UI level (232 mcg/L) in Balkan velayat (close to iodized salt production site) and with the lowest median UI level (156 mcg/L) in Dashoguz velayat. Thus, results of most recent national monitoring data show optimal level of iodine nutrition of Turkmenistan population.

Key Lessons Learned

The National Program "Strategy of economic, political and cultural development of Turkmenistan" is ensuring high living standards for the population. Turkmenistan has the political will towards the universal salt iodization as well as the potential capacity. The country has both the salt and iodine production facilities in the country producing enough qualitative and quantitative amounts of components to achieve the USI goal.

Future Plans

The period of free gas, electricity, water and salt consumption by the population was extended until 2020 by Decree N 35 of the Khalk Maslakhaty (People's Council) of Turkmenistan "On free provision of the population of Turkmenistan with electricity, gas, water and table salt". By 2002 the state will increase financing for this purpose 5.3 times as much as compared with 2000 that will allow accelerating the future progress towards achieving the Elimination of Iodine Deficiency Disorders.

At present the Ministry of Health and Medical Industry is preparing for the country's verification/certification in achieving elimination iodine deficiency through USI.

The priority for the years ahead is to enhance the information, education, and communication component of the IDD Program to sustain the success achieved.



Iodine monitoring lab. in Ashgabat



G. Gerasimov, ICCIDD Regional Co-ordinator in "Guvlyduz" salt plant



UNICEF Regional Director congratulates Turkmenistan on Universal Salt Iodization, 01 November, 2004

From left to right:

- H.E. Ovezgeldi Ataev, speaker of Turkmenistan Parliament;
- Ms. Maria Calivis, UNICEF Regional Director
- Mr Mahboob Shareef, UNICEF Representative in Turkmenistan
- Ms. Regina Molera, Programme Coordinator UNICEF, Turkmenistan
- Ms. Shemshat Rejepova, Communication Assistant, UNICEF Turkmenistan

Ashgabat, Turkmenistan, 1 November, 2004 UNICEF Regional Director Maria Calivis arrived in Turkmenistan today to congratulate the government on the country's achievement of universal salt iodization (USI).

She presented Turkmenistan with an award on behalf of UNICEF, the World Health Organisation (WHO) and the International Council for Control of Iodine Deficiency Disorders (ICCIDD) in recognition of this achievement.

Commenting on the award, Calivis, who is UNICEF Regional Director for Central and Eastern Europe, the Commonwealth of Independent States and the Baltics, said:

"USI is the most effective way to protect children from iodine deficiency the world's leading cause of preventable mental retardation and brain damage. So this award is a major milestone for Turkmenistan. This is the first country in Central Asia and only the fourth country worldwide to reach this target.

"I congratulate the government for its efforts on USI. Such investment in children is an investment in the future, and is to be commended.

Turkmenistan's USI campaign began more than a decade ago, with the President playing a key role in pushing for optimum iodine nutrition, including a 1996 decree enforcing the use of iodized salt countrywide. UNICEF, which this year celebrates ten years of work in Turkmenistan, has supported government efforts by conducting surveys and providing technical assistance, while the US government has donated more than \$200,000 to the USI programme.

Calivis will meet other government and international officials during her four-day visit to the country. She will also travel to Dashoguz velayat (region) to visit joint Government-UNICEF projects. She will be joined by Mr. Mahboob Shareef, UNICEF Representative in Turkmenistan.



November 2004

The United Nations Children's Fund (UNICEF), the World Health Organization (WHO) and the International Council for Control of Iodine Deficiency Disorders (ICCIDD), having received in October 2004 the report from the joint external review, "Progress Towards Elimination of Iodine Deficiency Disorders in Turkmenistan", hereby congratulate the Government of Turkmenistan for the success in achieving Universal Salt Iodization, the most effective way to reach the goal of elimination of iodine deficiency disorders as a public health problem.

This remarkable achievement was the result of the necessary legislation, advocacy and technical support provided by the Government to achieve USI within a short period of time. Turkmenistan is the first country of the Commonwealth of Independent States to reach Universal Salt Iodization and optimal iodine nutrition. It is a determination of sustained elimination of iodine deficiency disorders.

We are confident that efforts to sustain these achievements will continue, and with appropriate national public-private sector oversight, will ensure sustained access to iodized salt and optimal iodine nutrition, thereby protecting the health and well-being of children and the entire population of Turkmenistan for generations to come.



Status with respect to Programmatic Indicators

The Status with respect to 10 programmatic indicators is given below:

1. An effective functional national body (council or committee) responsible to government for the national program. It should be multidisciplinary with a chairman appointed by the Minister of Health	National Commission Chairman Deputy Prime Minister, Minister of Health & Medical Industry. It is multidisciplinary
2. Evidence of political commitment to USI & elimination of IDD	Highest Level: Three Presidential Decrees in last 10 years
3. Appointment of a responsible executive officer for IDD elimination program	Executive Officer located in MH & MI
4. Legislation or regulations for USI, ideally covering both human & agricultural salt	In place since 1996
5. Commitment to assessment & reassessment of progress towards elimination with access to laboratories able to provide accurate data on salt & urinary iodine	Yes, in place, Carried out, "base-line survey" in 1994, small survey in 1999 and later DHS survey in 2000 and more recently country-wide IDD survey in 2003-2004.
6. A program of public education & social mobilization on importance of IDD & consumption of iodized salt	Yes, Already developed. National logo for iodized salt present
7. Regular data on salt iodine at the factory retail & household levels	Yes, Meticulously maintained records & registers (Computerization recommended)
8. Regular laboratory data on UIE in school age children with appropriate sampling for higher risk areas.	Yes, Meticulously maintained records & registers (Computerization recommended)
9. Cooperation from the salt industry in maintenance of quality control	Yes, Active and regular collaboration between salt producer and Sanitary Epidemiology Service (SES) responsible for quality control
10. A database for recording of results of regular monitoring procedures particularly for salt iodine and UIE	Yes, Presently it is in the form of records and registers. (Computerization recommended)

TURKMENISTAN ACHIEVES UNIVERSAL SALT IODISATION

CHRONOLOGY OF THE SUCCESS

YEARS	EVENTS
1991-1993	After dissolution of Soviet Union in 1991 production of iodised salt in Turkmenistan seized due to breakdown of economic ties within the former state and lack of some necessary equipment, reagents and supplies.
1994	Decree of Turkmenistan President ¹ 1656 (14.02.1994) "On Supply of Salt to the Population of Turkmenistan free of charge". According to this decree each Turkmenistan citizen can receive 400 g of salt every month free of charge through the network of community shops.
1994	UNICEF opens its office in Turkmenistan and other countries of Central Asia and in Kazakhstan.
1994	In March 1994 first survey of iodine deficiency has been performed with support of UNICEF and ICCIDD. Dr. G.Gerasimov of ICCIDD in collaboration with national specialists conducted survey in Ashgabat and Dashgoveuz. Medial urinary iodine (UI) level in Ashgabat was 75 mcg/l and in Dashgoveuz - 37 mcg/l while goiter prevalence in schoolchildren was 20% in Ashgabat and 64% in Dashgoveuz. This data confirmed existence of mild and moderate iodine deficiency in Turkmenistan and served as a baseline data for further surveys. Based on these data political decision on IDD elimination has been achieved.
1994	Turkmenistan government hosts ministerial level ECO/UNICEF/WHO meeting (15-16 June, 1994) on iodine deficiency disorders (IDD). Consensus recommendations called for urgent efforts to ensure universal salt iodization (USI) and IDD elimination.
1996	President of Turkmenistan S.Nyazov on 28.04.1996 adopted a Decree ¹ 2626 "On salt iodization and flour fortification with iron" that set for requirement that all edible salt shall be iodized. This Decree brought necessary legal framework for elimination of iodine deficiency through USI.
1996	Ministry of Health and other government agencies approved the use of potassium iodate (KIO ₃) for salt iodization at the level of 23 +/- 11 mg/kg. Local production of potassium iodate on Khazar Chemical Plant has been recovered. UNICEF provided "Gulyduz" salt plant with necessary iodization equipment to launch production of iodized salt.
1997	UNICEF provided support to strengthen laboratory capacity of national institutions in monitoring of iodised salt quality and in biological monitoring. Laboratory for urinary iodine (UI) determinations was organized in Mother and Child Health Center named after Gurbansolan-enge (MCH Center) of the Ministry of Health.
1999	Training workshop in IDD monitoring was conducted in MCH Center with UNICEF and ICCIDD support. In the course of this training a small scale IDD survey was performed in Ashgabat. Results of this survey showed that 90% of salt from households was iodised. Hence, UI levels in schoolchildren showed persistence of mild iodine deficiency.
2000	Salt iodization capacity of "Gulyduz" salt plant was improved and its management reported 100% iodization of salt for human consumption. Government of Turkmenistan invested in construction of a new factory for iodization and packaging of edible salt.
2000	Demographic Health Survey (DHS) was performed in Turkmenistan with support of UNICEF and US Agency for International Development (USAID). Results of this survey showed that 78% of salt samples had iodine content of at least 15 mg/kg. Other salt samples had insufficient amount of iodine due to instability of low amounts of iodine in salt. UI assays showed iodine deficiency among population of Turkmenistan, especially in remote regions.
2002	UNICEF consultants G. Gerasimov and F. van der Haar, both of ICCIDD, visited Turkmenistan and recommended to increase level of salt iodization to internationally accepted normative. Based on this recommendation, by resolution of the Ministry of Health and in agreement with State Standard Service "Turkmenstandarlary" and State Consortium "Turkmendokunkhimia" starting from January 2003 the level of salt iodization was increased from 23 +/- 11.5 mg/kg to internationally recommended level of 40 +/- 15 mg/kg. State Customs forbade import of non-iodized salt.
2002	Resolution of Ministry of Health and Medical Industry of Turkmenistan ¹ 61 (6.05.2002) «On constant laboratory control and monitoring of iodized salt quality» was adopted. According to this Resolution State Sanitary Epidemiological Inspection (SEI) strengthened laboratory control and monitoring of iodized salt quality. With UNICEF support all provincial (velajat) SEI were equipped with laboratories for qualitative iodine measurement in salt by titration and personnel trained in this method.
2003	Resolution of Khalk Maskhatly ¹ 35 (14.08.2003) extended action of Turkmenistan President decree «On free supply of Turkmenistan population with electricity, natural gas, water and edible salt» up to 2020. According to this decree iodized salt will be distributed free of charge to the population up to 2020.
2003	Turkmenistan President adopted a Decree ¹ 6351 (22.08.2003) "On Exemption of salt plant "Gulyduz" from taxes". By exemption of salt producer from all taxes and duties Turkmenistan government ensured continuous production of iodized salt and its free distribution to population. In 2003 "Gulyduz" salt plant supplied 32,200 tones of iodised salt for local needs, or more than 5 kg per capita of population per year.
2003	On high level International Meeting for the Sustained Elimination of Iodine Deficiency Disorders in Beijing (15-17 October 2003) with attendance by 27 countries and 10 international agencies and organizations Dr. Annamurad Orazov, Head of State Sanitary Epidemiological Inspection of the Ministry of Health, announced that Turkmenistan reached USI and is close to elimination of iodine deficiency among its population.
2003	Ministry of Health requested UNICEF assistance to conduct national survey of iodine nutrition. With support of UNICEF consultant G.Gerasimov, ICCIDD Regional Coordinator, MCH Center (Director Ch.Nazarov) developed design of 30 cluster representative survey of iodine nutrition.
2004	UNICEF supplied new equipment for UI laboratory in MCH Center and conducted training of national specialists with support of UNICEF consultant L.Ivanova, ICCIDD Director.
2004	National monitoring representative survey was conducted in January-March 2004 in 30 randomly selected schools in all velajats of Turkmenistan: 879 schoolchildren were surveyed by specialists of MCH Center. Besides, 900 hundred of salt samples were tested for iodine by specialists from local SEIs. Normal iodine nutrition in the population was confirmed by urinary iodine determination: a median value of urinary iodine was 170 mcg/l, perfectly within the optimal range of 100 to 300 mcg/l. There was only minimal discrepancy in status of iodine nutrition between different velajats of Turkmenistan with the highest median urinary iodine level (232 mcg/l) in Balkan velajat (close to iodized salt production site and the Caspian Sea) and with the lowest level (156 mcg/l) in Dashgoveuz velajat.
2004	Turkmenistan government prepared Official Report on the Achievement of Elimination of Iodine Deficiency in Turkmenistan through Universal Salt Iodisation. This report along with request for external assessment of national program of elimination of iodine deficiency was submitted to UNICEF, WHO and ICCIDD.
2004	C. Pandav and L. Locatelli-Rossi, both ICCIDD Directors, visited Turkmenistan on behalf of the Network for sustainable elimination of IDD to provide independent assessment of the history and present situation of National iodine Deficiency Disorders Elimination Program in Turkmenistan and the ongoing national efforts towards optimum iodine nutrition with special emphasis on universal salt iodization and to sustainability. After careful review, both experts recommended that Certificate should be given to the Government of Turkmenistan for achieving optimal iodine nutrition through USI and Sustaining Elimination of IDD
Nov. 2004	UNICEF Regional Director Maria Calivis arrived in Turkmenistan to congratulate the government on the country's achievement of USI. She presented Turkmenistan with an award on behalf of UNICEF, the World Health Organisation (WHO) and the International Council for Control of Iodine Deficiency Disorders (ICCIDD) in recognition of this achievement.

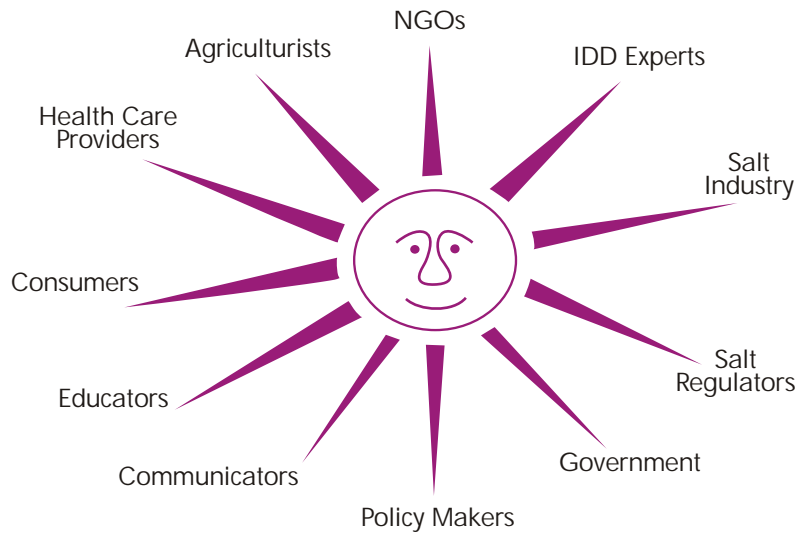


"Take the case of the world's salt manufacturers. Working with the United Nations, they have made sure that all salt manufactured for human consumption contains iodine. The result is that every year, more than 90 million newborn children are protected against iodine deficiency, and thus against a major cause of mental retardation."

Kofi Annan,
UN Secretary General
in his address to the World Economic Forum (4th Feb, 2002)

आयोडीन युक्त नमक प्रतिदिन।
बुद्धि और स्वास्थ्य सुरक्षित हरदिन।।

Daily consumption of Iodised salt
is a healthy habit



Sustaining Elimination of IDD



Publishing any material in IQ+ Jagriti does not necessarily mean ICCIDD's endorsement of the views expressed therein or the results quoted.

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