

IQ+ Jagriti

VOL. II, ISSUE 3, JULY 2004

Dear Colleagues,

Dr. John Thornton Dunn is no more. He passed away on April 13th, 2004 succumbing to a heart attack.

John, as he was fondly known in his vast circle of friends, was an ardent advocate for promotion of elimination of iodine deficiency disorders. He always emphasized the role of the media, especially the print media, as it has the advantage of sharing and communicating information and experiences on a regular basis and had a wider reach. Befitting this, John was the Editor of the IDD Newsletter of International Council for Control of Iodine Deficiency Disorders, a position he held from its first issue published in August 1985 to the latest issue of February 2004. He had numerous professional commitments and responsibilities including that of the Executive Director of ICCIDD.

The ICCIDD Editorial Team of the Regional Newsletter are particularly indebted to Dr. John Dunn for it was John who inspired us and advocated the need for a Regional Newsletter. Looking back, it was probably due to this bonding that John himself released the first Issue of IQ+ Jagriti in Singapore in December 2003 at the ICCIDD Satellite Symposium during the Conference of Asia-Oceania Thyroid Association.

It will be our endeavor to continue with the media-vision of Dr. John Dunn since John's departure may have caused a sudden vacuum in the publication of the International IDD Newsletter. As we pay our homage to John, we rededicate the Regional Newsletter and redouble our efforts to carry on with the zeal he has shown. We will cherish our association with John.

On behalf of the regional team, I wish to convey our heartfelt sympathy to Ann, his wife and family.

This issue of the Newsletter also covers the book release function of "Towards The Global Elimination of Brain Damage Due to Iodine Deficiency". This is the twelfth publication of ICCIDD in partnership with the Oxford University Press. John made an important contribution both in planning and preparation of the book which is dedicated to the memory of John T. Dunn.



Dr. Chandrakant S. Pandav
Regional Coordinator,
ICCIDD-South Asia Region.



Dr. John T. Dunn (center) releasing the Regional Newsletter, "IQ+ Jagriti", in Singapore in December, 2003. Also seen in the picture are Dr. Cres Eastman (left), Regional Coordinator (Pacific) and Dr. C.S. Pandav (right), Regional Coordinator (South Asia).

ICCIDD Publications in partnership with Oxford University Press

No.	Name of Publications	Year
1	The Story of Iodine Deficiency An International Challenge in Nutrition	1989
2	La Historia De La Deficiencia De Yodo (Spanish)	1992
3	L'Histoire de la Carence en Iode (French)	1992
4	SOS For A Billion The conquest of Iodine Deficiency Disorders 1st Edition	1994
5	SOS For A Billion The conquest of Iodine Deficiency Disorders 2nd Edition	1996
6	SOS For A Billion (Hindi) 1st Edition	1996
7	SOS Pour Un Milliard French	1997
8	The Story of Iodine Deficiency (Hindi)	1997
9	YES Worthwhile Investment in Health Economic Evaluation of IDD Control Programme in Sikkim	1997
10	Iodine Deficiency Disorders in Livestock Ecology & Economics	1997
11	Iodine in Pregnancy	1998
12	Towards the Global Elimination of Brain Damage due to Iodine Deficiency	2004

vl r̄ ek l nxe;
rel̄ ek T; frx̄b;
er; ek̄ veraxe;

*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.



John served as Secretary of the ICCIDD from its beginning in 1985. He was responsible for all necessary documentation and administration for the ICCIDD organization. He initiated the Monthly Update in February 1993 and continued its production to the present. He set up and maintained the ICCIDD data bank on Country IDD Status (CIDDS).



He became Executive Director in 2001 and his performance in this role was exemplary. He took new initiatives to strengthen work in the Regions by personal visits. He was responsible for establishing the additional Regional Coordinator position for the Asia Pacific Region. He facilitated the development of the International Resource Laboratories for Iodine (IRLI) Network and continued his work as Editor of the IDD Newsletter.

John was an unusually able and intelligent person. This was concealed partially by his humility and generous acceptance and appreciation of others. He had an excellent critical mind and a phenomenal memory.

He was a superb pianist with an incredibly detailed knowledge of classical music. He provided instant support for impromptu songs rendered by ICCIDD Board Members at Annual Meetings!

John was above all a warm human being-with great charm and good humour. He was a truly civilised man and universally popular with his colleagues in the ICCIDD and beyond.

We are fortunate to have known him-we are the poorer for his loss but are richer for his presence among us throughout the life of the ICCIDD.

We extend our deepest sympathy to Ann, herself a notable scientist who collaborated with John in his laboratory work. To their three children, Cathy, Peggy and Bob we extend our deep sympathy and also to other family members on their sudden tragic loss.

We have included an 'In Memoriam' page to John Dunn in the recently released book 'Towards the Global Elimination of Brain Damage due to Iodine Deficiency' to which he contributed so significantly.

Basil Hetzel, Chairman Emeritus ICCIDD



IDD Elimination- A Global Progress Report



A

need was felt particularly in the professional groups and among the programme managers of micronutrient deficiency elimination on having a status report. It is quite timely that the Micronutrient Initiative, Ottawa and the UNICEF, New York have jointly brought out a well-documented publication appropriately titled "Vitamin & Mineral Deficiency A Global Progress Report".

Appreciating the need and importance of communicating the contents of the report, we reproduce portions of the report pertaining to elimination of iodine deficiency disorders. The full report can be viewed at www.micronutrient.org.

Ed.

Part 1 : Damage Assessed, Progress Recorded : Iodine deficiency is estimated to have lowered the intellectual capacity of almost all of the nations reviewed by as much as 10 to 15 percentage points. Iodine deficiency in pregnancy is causing almost 18 million babies a year to be born mentally impaired.

Part 2 : A Job Less than Half Done: Iodine A solution to the problem of iodine deficiency has been available for more than 80 years. Beginning in Switzerland in 1921 and in the United States in 1924, most industrialized nations have mandated or permitted the iodisation of salt. In India, the effectiveness of iodised salt was demonstrated in the 1950s in a landmark study by the late Vulimiri Ramalingaswami. But for most of the 20th century, other priorities prevented the developing world from address the problem. When the consequences of even moderate iodine deficiency began to be appreciated in the 1980s, international agencies like UNICEF and ICCIDD began to press the case for the iodisation of household salt world-wide.

There followed a decade of remarkable efforts by scientists and researchers, regulators and inspectors, governments and non-governmental organizations, and by thousands of individual salt producing companies all over world. UNICEF led the global effort. Aid donors like the Canadian International Development Agency (CIDA) provided much of the initial funding. Non-governmental organizations made major contributions (most notably the Kiwanis whose 600,000 members in 83 countries have raised more than US \$70 million for salt iodisation programmes). Not the least, thousands of the world's salt producers, most them private and many of them small, responded to the call.

By the year 2000, iodine was being added to approximately two-thirds of the developing world's salt and approximately 70 million new-borns each year were protected against the threat of mental impairment. Today, over 100 nations have salt iodisation programmes. Some of the world's poorest countries including Bangladesh, Cameroon, Eritrea, and Nigeria have all passed the 70% mark for salt iodisation. The People's Republic of China, which made a commitment to universal salt iodisation following the World Summit for Children in 1990, iodised 90% of its salt in under 10 years.

(Extract of) Figure 1 : Countries Ranked by Percentage of Households Consuming Iodised Salt, - 2000-2003

Country	Estimated % of households using iodized salt
SOUTH ASIA	
Bhutan	95
Bangladesh	70
Nepal	63
India	50
Pakistan	17
Afghanistan	15
EAST ASIA AND PACIFIC	
China	93
Vietnam	77
Lao PDR	75
Thailand	74
Indonesia	65
Myanmar	48
Mongolia	45
Philippines	24
Cambodia	14

The statistical tables are given in the report for each of 80 countries. The current best-estimate of the prevalence of iodine deficiency as measured by the total goitre rate or TGR is presented in these. This is a measure that must be treated with caution. On the one hand, goitre (the swelling of the thyroid gland) is a clinical symptom and is therefore likely to underestimate the extent of the underlying problem. On the other hand, the TGR is a population-wide figure that does not yet reflect recent advances in salt iodisation. Nonetheless the TGR is an indicator to which all nations should attend. It is now accepted that any country with a TGR of 10% or more is likely to suffer a population-wide lowering of intellectual capacity by between 10% and 15% (with all that this implies for families and communities, for educational investments and school performance, for individual productivity and for national development efforts).

Of the 80 countries reviewed, all but 14 have a TGR in excess of 10% and 24 of those nations, including some of the most populous like India and Pakistan, have rates of 20% or more.

These rates are now on the decline in almost all nations as salt iodisation begins to deliver its benefits. But 60% or 70% is not enough. Every year 50 million children are still being born without the protection that iodine offers to the growing brain and body. Approximately 18 million of these children will suffer some significant degree of mental impairment.

Iodine deficiency therefore remains the single greatest cause of preventable mental retardation in the world today.

Salt Pyramid

The road to universal 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 likely to be more difficult to reach.

In India, for example, a fifteen-year effort had brought iodised salt to almost two-thirds of the population by the year 2000; but by and large it is the more expensive grades of salt that have been iodised. Protection is

therefore still not reaching, in any reliable way, the 300 million people at the bottom of the economic pyramid who tend to use poorer grades of salt. If iodised and non-iodised salt are both available in the market place, and if the iodised product is even slightly more expensive, the poor will be effectively excluded.

Recent data from UNICEF confirms that this concern is not limited to India. Across 28 countries studied, the richest fifth of the population were found to be 50% more likely to be consuming iodised salt than the poorest 20%. In some, the inequality is extreme; among the poorest fifth of the population in the Philippines only just over 10% are estimated to be consuming iodised salt as opposed to more than 50% among the richest fifth.

A realistic overview must also acknowledge that achieving salt iodisation is only half the battle. Sustainability is all. And in 2004 there are worries that salt iodisation levels are slipping back in countries such as India, Indonesia, Bolivia, Russia and Vietnam.

India, with the largest number of iodine deficient people, appears to have allowed salt iodisation to slip back towards 50%. Iodine deficiency is reported to be re-surfacing in the Balkans, and in some Central Asian Republics the level of salt iodisation has fallen towards the 25% mark lower than in many parts of Africa. In Bangladesh, after remarkable early successes, the momentum of the iodisation efforts seems to have stalled at a point well short of the goal of universal iodisation.

Globally the proportion of people consuming iodised salt is thought to have fallen from 70% to about 65% since the year 2000. If true, this means that 5 million fewer children are being protected from mental impairment every year. With few exceptions, *it is not the capacity of countries to iodise salt that has decreased; it is the commitment that is showing signs of faltering.*

Significantly, the People's Republic of China is pressing on past the already achieved 90% target and towards 100% salt iodisation. A key to this sustained effort has been China's formal five-yearly review process designed not only to monitor progress, budgets, training, and best-practice but to renew high-level political commitment to universal salt iodisation.

There is much that can be learnt from such experiences as countries struggle to sustain political will and to find practical solutions to particular logistical problems at the national level. To facilitate this mutual learning, an International Network for the Sustained Elimination of Iodine Deficiency has been created with the aim of drawing on world-wide expertise to solve particular problems and fill in the major gaps in salt iodisation's progress.

In overview, this initial push towards salt iodisation in the 1990s has brought remarkable progress; but there are signs that momentum may be getting lost in the early years of the 21st century. This is, therefore, a critical time. Eliminating iodine deficiency demands a renewed drive to iodise the salt consumed by the poorest third of the population in each nation. The fact that two-thirds of the developing world's salt has been iodised should not be taken to mean that the world is two-thirds of the way towards the goal' indeed to say that the half-way point had been reached would be to overstate the case.

The element iodine was discovered in 1811, but almost a century passed before it was established that lack of iodine caused the swelling of the thyroid gland commonly known as goitre.

Following research in 1921 showing that 90% of Zurich schoolchildren were suffering from goitre, the Government of Switzerland became the first in the world to recommend iodine supplementation either by weekly

tablets or by consuming iodised salt. Similar studies revealed a 20% to 30% incidence of endemic goitre among schoolchildren in Austria, Northern Italy and Germany.

In the United States, the alarm was first raised in Michigan in 1918 when it was revealed that over 30% of men medically examined for war service had been found to have enlarged thyroid glands. Many were declared unfit for service. By 1923 an Iodised Salt Committee had been formed, including physicians and representatives of the Salt Producers Association.

On May 1, 1924, six local salt companies began loading iodised salt on the shelves of Michigan's grocers. Later that same year, the Morton salt company began marketing iodised table salt nation-wide under the headline 'Children protected against simple goitre are found to be superior in development'. In Michigan itself newspaper adverts boosted sales, and by 1932 iodised salt accounted for 90% to 95% of all sales.

Meanwhile, Europe was also moving towards salt iodisation swiftly controlling goitre, cretinism, and the milder forms of iodine deficiency. Illustrating the need to maintain vigilance, the problem now appears to be re-emerging in parts of Australia, Belgium, France, Germany, Italy, Poland, the Balkans, the Commonwealth of Independent States, and in the Central Asian Republics.

*“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

BOOK RELEASE

Report by special correspondent

International Council for Control of Iodine Deficiency Disorders (ICCIDD) has brought out a publication, entitled "Towards The Global Elimination of Brain Damage Due to Iodine Deficiency". This is the twelfth in the series of publications ICCIDD has in partnership with Oxford University Press. The book presents empirical insights based on decades long research programs and implementation activities in all parts of the world. Notable is the emphasis and focus given to the developing countries. It is a commendable effort that brings out the inclusive circle of "research-policy-program-implementation and back to research".

The history of addressing the problem of elimination of iodine deficiency disorders is well-described in the book. It also makes a demarcation between pre -1990 situation and developments thereafter, when National Governments, iodized salt producers and major international agencies, e.g. UNICEF, WHO, the MI and the ICCIDD made concerted and coordinated efforts, which resulted in achieving the present level of success.

The book unwraps a fount of information for the students at all levels in the field of public health and nutrition. It serves as an analytical document for policy makers. It brings together global experience for program managers. It can also be used to provide guidelines for professionals, and equally well by groups at the grassroots levels.

The Editorial Team comprises

Dr. Basil Hetzel (Senior Editor),
Dr. Francois Delange, Dr.
John Dunn, Dr. Jack Ling, Dr.
Venkatesh Mannar and
Dr. Chandrakant S.

Pandav. The contributing authors, thirty four in all, are experts in the field of sustainable elimination of Iodine Deficiency Disorders (IDD) with experiences

transcending the geographical boundaries in the international arena of public health.

The book was released at a solemn function held in New Delhi on Monday, May 31, 2004. Her Excellency, Mrs. Michelle Marginson, Deputy High Commissioner, Australian High Commission to India, released the book in the presence of a select audience. In her Keynote Address, Mrs. Marginson traced the longstanding association of the Australian Government with the ICCIDD right from the days of its inception in 1986.

Others who addressed the invitees included Dr. Basil Hetzel (Chairman Emeritus of ICCIDD), Ms. Eileen Stewart (First Secretary, Canadian High Commission to India, Dr. Werner Schultink (Chief-CDN Section, UNICEF-India), Dr. Monir Islam (Director Health WHO-SEARO), Mrs. Veena Rao, IAS (Joint Secretary, Department of Women & Child Development, Government of India), Dr. R. Sankar (The Micronutrient Initiative), Dr. M.G.Karmarkar (Senior Adviser, ICCIDD). Dr. Chandrakant S. Pandav (Regional Coordinator, ICCIDD) presented and anchored the event. All the speakers, inter-alia, mentioned the success of inter-agency collaboration and past successful efforts jointly with ICCIDD in combating the age-old scourge of IDD. They all emphasized the need and commitment for sustainability of programs for its elimination successfully.

Representatives from various national and international organizations (Ministry of Health & Family Welfare, Indian Council for Medical Research, National Institute of Health & Family Welfare, World Food Programme,

World Bank, WHO, UNICEF, The Micronutrient Initiative, OUP, ICCIDD, All India

Institute of Medical Sciences, civil society representatives, social activists, public health professionals) attended the function and used the occasion for interactions and sharing. Individuals and institutions who made contributions in bringing

out the book were acknowledged and felicitated in the course of the function.



Dr. Basil S. Hetzel, Chairman Emeritus of ICCIDD receiving the first copy of the book from H. E. Mrs. Michelle Marginson, Deputy High Commissioner of Australia to India, as Dr. C.S. Pandav looks on

From the blurb

This book provides a comprehensive account of the global effort directed at sustainable elimination of an ancient scourge of mankind, IDD or the iodine deficiency disorders. This condition is the most common preventable cause of brain damage in the world today with 2 billion people at risk and over 20 million affected. And yet this is preventable. All that is required is a daily intake of iodine, best provided through the vehicle of iodized salt.

The book describes the great progress that has been made since 1990 when the goal of elimination was unanimously accepted by the UN World Summit for Children and by the World Health Assembly (WHA). By the year 2000 approximately 70 per cent of households had access to iodized salt, indeed a remarkable achievement.

The book also describes the development, since 1990, of an informal global partnership between the people, the salt industry and sovereign governments of IDD affected countries, with the support of international agencies such as WHO, UNICEF and the World Bank, bilateral agencies in Australia, Canada, The Netherlands, Belgium, Sweden, and the USA, Kiwanis International, The Gates Foundation (through UNICEF), and technical agencies such as ICCIDD and MI.

In 2002 the UN General Assembly Special Session (UNGASS) on Children set a new elimination goal for 2005. The progress in the 130 IDD affected countries is reviewed in detail with careful definition of the reasons for success or failure, followed by a comprehensive discussion of the sustainability aspect of the elimination of IDD.

The urgent need for coverage of the remaining 30 per cent of households as well as consolidation of the existing achievements depends on sustained political will, which follows community awareness and understanding of the problem by governments and their people.

As Dr. Gro Harlem Brundtland, Director General of WHO said in 1999 at the World Health Assembly, 'When elimination of IDD is achieved it will be a major and total public health triumph, ranking with smallpox and polio'.

The book is available at ICCIDD Secretariat in New Delhi. Price - US \$ 20/- (Special price in India Rs. 595/-)



Launch of the book "*Towards the Global Elimination of Brain Damage due to Iodine Deficiency*" at UNICEF Headquarters, New York.
From L to R: Dr. Jack Ling, Chairman ICCIDD; Dr. Ian Darton-Hill, Senior Advisor Micronutrients Nutrition Section UNICEF; Dr. Kul Gautam, Dy. Executive Director UNICEF; Dr. Basil S. Hetzel, Chairman Emeritus ICCIDD; Dr. Nita Dalmiya, UNICEF Project Officer Micronutrients; Dr. Chandrakant S. Pandav, Regional Coordinator ICCIDD-South Asia Region.

National Workshop on Micronutrients

24th & 25th November 2003

The Indian Council of Medical Research (ICMR), India's premier medical research body, conducted a two day workshop on 24th and 25th November 2003 in New Delhi, to deliberate on the current efforts to eliminate micronutrient malnutrition. The 80 participants included Health Secretaries of the Ministry of Health from various states, experts from the field of iodine, iron and vitamin A deficiency elimination, non-governmental organizations, and international agencies. The theme was to seek out strategies to improve the efficiency of the national programs that focus on eliminating the deficiencies of these micronutrients, and to operationalize the recommendations of the 10th Five Year Plan.

Most part of the discussions was conducted under the ambit of working groups, formed for the three micronutrients IDD Working Group, IDA Working Group, and Vitamin A Working Group. The recommendations of the IDD Working Group, chaired by Dr. Kalyan Bagchi and coordinated by Dr. Chandrakant Pandav, are given below.

Ed.

IODINE DEFICIENCY DISORDERS

1. Tenth Five Year Plan (2002-2007) Goals

- ▶ Achieve universal access to iodized salt
- ▶ Generate district-wise data on iodized salt consumption
- ▶ Reduction in the iodine deficiency disorders (IDD) prevalence in the country to < 10% by 2010

2. National Iodine Deficiency Control Programme (NIDDCP):

This programme was initially named as National Goitre Control Programme (NGCP) in 1962. However, in 1992 it was renamed as NIDDCP to give due importance to the spectrum of physical and mental disorders caused due to iodine deficiency affecting all stages of human growth and development.

2.1 Objectives:

The main objectives of the programme are:

- ▶ Baseline surveys to assess the magnitude of iodine deficiency disorders in the districts
- ▶ To supply iodized salt in place of non-iodized salt
- ▶ To resurvey the districts after every five years to assess the prevalence of iodine deficiency disorders and impact of universal consumption of iodized salt
- ▶ Monitoring of iodine content of salt and urinary iodine excretion levels in the population
- ▶ Nutrition and health education to improve the universal consumption of iodized salt
The goal of NIDDCP is universal iodization of salt for human consumption so as to reduce the prevalence of IDD below 10% in endemic districts of the country.

2.2 Beneficiaries and Services

The beneficiaries of the program are the entire population of the country

2.3 Implementation

The Directorate General of Health Services (DGHS) of the Ministry of Health and Family Welfare, Government of India is the nodal agency for policy decisions on the NIDDCP. The Salt Commissioner's Office under the Ministry of Industry is responsible for monitoring the production and distribution of iodized salt to all the states and Union Territories. The Salt Commissioner, in consultation with the Ministry of Railways, arranges for movement of iodized salt from the production sites to the states and union territories on a priority basis. The important activities being undertaken by the NIDDCP are:

DGHS

- ▶ Technical guidance on NIDDCP to states and Union Territories
- ▶ Undertaking independent IDD surveys in the states and Union Territories
- ▶ Imparting training in IDD to the state health personnel
- ▶ Collection, compilation and analysis of relevant data on IDD from the states
- ▶ Monitoring the distribution of iodized salt at consumer level through the State Health Directorate/State Prevention of Food Adulteration (PFA) Authority

DGHS/ Salt Commissioner/DWCD

- ▶ Intersectoral Coordination and maintenance of close liaison with the Ministry of Industries, Railways, Department of Women and Child Development, Information & Broadcasting and various stake holders of NIDDCP in the states and Union Territories.
- ▶ Monitoring the quality of iodized salt at the production level in collaboration with the office of the Salt Commissioner.
- ▶ IEC activities to generate awareness about IDD in the country

2.4 Current status:

Available data suggest that there has been substantial increase in the availability and consumption of iodized salt during the 1990s. The National Family Health Survey 2 (NFHS-2) survey (1998-99) showed that 49 per cent of households use iodized cooking salt at the recommended level of 15 parts per million (ppm) or more, whereas 22 per cent use salt containing less than 15 ppm of iodine. 28 per cent of the households use salt that is not iodized at all. The survey also reports that the low income group has the lowest percentage of population consuming adequately iodized salt. The recent Reproductive and Child Health (RCH) surveys (2002 - 2003) have reported a significant decline in the consumption of adequately iodized salt.

The data from NFHS 2 shows that in coastal states like Tamil Nadu, Andhra Pradesh, Kerala, and Gujarat, the percentage of households consuming adequate iodized salt is much lower than in many of the northern states. One of the reasons could be that the salt transported by road is not subject to any kind of quality control regarding iodization. This loophole in the law makes it possible for transport of non-iodized salt by road to areas even beyond 250 km. Therefore, these states have ready access to non-iodized salt.

Recommendations of the Workshop

- ▶ In view of the country wide endemicity of Iodine deficiency disorders (IDD) among population and also keeping in view the serious consequences of IDD, the NIDDCP should be accorded high priority.
- ▶ Implementation of State Ban on the sale of non-iodized salt and Policy Support.
- ▶ There is a need for encouraging states like Kerala, Gujarat, Maharashtra, which either do not have the ban or have a partial ban, to implement the ban on sale of non-iodized salt in the entire state. Other states, which have the statewide ban, should be encouraged to implement PFA more strictly. In that context, the Ministry of Health and Family Welfare, Human Resource Development, and Industry, Government of India should communicate the urgency in IDD elimination to the state governments, urging them intensify efforts to implement the IDD control program effectively.

3. Demand Creation

Information, Education, Communication (IEC) messages regarding universal salt iodization (USI) / IDD should shift from goiter to loss of IQ and poor

scholastic performance, effects of iodine deficiency on pregnancy outcome (stillbirths, abortions, low birth weight and mental handicap). New education and communication approaches also involving school children must be considered and successful experiences shared between states.

4. Increasing Supply of Iodized Salt

Support and encouragement of salt producers and salt traders to increase the supply of adequately iodized salt, Effective partnerships with the private sector should be forged and continuously maintained.

5. PFA Act Implementation:

Modification of Prevention of Food Adulteration (PFA) Act should be undertaken as under:

Current PFA Act	Recommended Amendments to the PFA 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 imprisonment should be omitted.
Fine of up to Rs.1000/-	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.	Detection of misbranding of iodized salt should be given high priority.
Presently there is no monetary fine.	A fine amount of not less than Rs. 10,000 should be imposed on the concerned producer, wholesaler and retailer.

The modified PFA Act should be effectively enforced.

6. Monitoring of Iodine Content of Salt

Establishment of effective quality control and monitoring system of iodine content of salt at all levels, as per the national guidelines should be carried out.

7. Provision of salt testing kits

Salt Testing Kits should be made available to Multi-purpose Workers (Male and Female), and Anganwadi Workers for testing iodine levels at the household level. Under the RCH Program, Kit A provided at the sub-center level should also include 7 salt testing kits. Of these, one kit each is to be provided to the Male and Female Multi-purpose health worker and one each to five Anganwadi workers. The results of the analysis should be included in the monthly reporting forms, i.e. Form 9 of RCH for MP (male and Female) workers and appropriate forms for Anganwadi Workers.

8. Strengthening of Salt Department

There is a need to carry out rigorous monitoring of quality of iodized salt at the production level. The activities should include upgrading of laboratory facilities, periodic and regular training of staff, and development of standard protocol for monitoring, internal and external quality assurance, development of a system for reporting and dissemination of results, and development of Geographical Information Systems (GIS) / Information Technology (IT) road map of the Salt Department. These steps would be effective and efficient only when the salt department develops linkages with the health department so that appropriate action is taken against the salt producers and traders who do not meet the set standards under the PFA.

9. Laboratory Facilities

There is a need for establishing regional IDD laboratories for monitoring the iodine content of salt. At present there are three laboratories (AIIMS and NICD at Delhi, AIIPH at Kolkata) carrying out estimation of urinary iodine excretion levels. There is a need to strengthen these laboratories and establish a standard protocol, including quality assurance, amongst these laboratories.

10. Annual Cyclic Monitoring and Information Management

There is a need of collecting data on iodized salt consumption and urinary iodine excretion level in the different districts of the country. About 120 representative districts should be covered each year for assessment of iodine content of the salt and urinary iodine excretion level. This would ensure that, over 5 years, all the districts of the country would be covered. Standardized methodology and uniform indicators should be utilized to collect, compile and analyze the collected data. This data should be incorporated into a database of IDD indicators (including salt iodine, urinary iodine, goiter rates), which should be available to all. This database needs to be updated annually.

11. Packaging of Iodized Salt

Iodized salt should also be packed in ½ kg consumer polythene packs at the production site itself to prevent iodine losses during transportation and storage.

12. Support to Small Scale salt producers

Small Scale salt producers should be encouraged to form cooperatives and, in that case, Government of India should provide iodization plants to these cooperatives.

13. Transportation of Iodized Salt

Rail transport is the most important means for transport of iodized salt in India. The Ministry of Railways should be requested to provide covered wagons for transport of iodized salt, and ensure its regular and periodic supply.

14. Ensuring Iodized Salt to Poor / Low Socio-economic Communities

In view of lower consumption of iodized salt by the low income group, iodized salt should become part of Public Distribution System (PDS) catering to population Below Poverty Line (BPL). Many states are selling the salt through the public distribution system (PDS) and there is a need of universalizing the same.

15. Intersectoral Co-ordination

There is a need for integration of IDD control program activities with prevention and control of iron and vitamin A deficiencies. This has been successfully done under the RCH program in Maharashtra and Gujarat. There is a need for involvement of Panchayati Raj institutions for effective implementation of NIDDCP at the district levels, block and village levels.

16. Need for Regular Reviews:

The Workshop reiterated the need for regular review meetings of the four committees for IDD elimination that have been established for monitoring the implementation of NIDDCP. These Committees are: National Steering Committee chaired by Secretary Health, Program Implementation Committee under Director General of Health Services, National and State Level Lab Monitoring Committee, National Level IEC Committee.

Similar state level committees should be re-activated / constituted to include all stakeholders - Departments of Health and Family Welfare, Education, Food and Civil Supplies, Women and Child Development, State Planning Commission, Managers from other programs like RCH, ICDS, National agencies like Salt Department, ICMR, NIN, NIE, AIIMS; Salt producers and traders, NGOs, International agencies like UNICEF, MI, ICCIDD, WHO.

Researchable Issues:

Operational Research

To determine feasible strategies for monitoring iodine content of salt at different levels.

Basic Research

To study the relevance of different indicators of iodine status in pregnancy and suggest suitable indicators for screening for iodine deficiency during pregnancy.

Information Sharing

- ▶ Nutrition Foundation of India and Centre for Research on Nutrition Support Systems organized a Workshop on the theme of "Nutrition in the Medical Curriculum" in New Delhi from 28th to 30th April, 2004. Technical support for the same was provided by Medical Council of India, Directorate General of Health Services, Ministry of Health & Family Welfare, Indian Council of Medical Research, National Academy of Medical Sciences and Department of Biotechnology.
- ▶ Resource Mobilization Workshop was organized by DSPRUD-WHO in New Delhi from 24th to 26th May, 2004. The Resource persons were Dr. Finlay Craig from U.K. and Ms Jacqueline Sawyer from WHO Geneva.
- ▶ The book "Towards The Global Elimination of Brain Damage Due to Iodine Deficiency" was released at a specially held function in New Delhi on 31st May 2004. This is the twelfth publication of ICCIDD in arrangement with Oxford University Press.
- ▶ Regional workshop on "Sustaining Universal Salt Iodization in the Northeastern Region" at Guwahati - 25th & 26th June, 2004

Forthcoming Events:

- ▶ Eighth South East Asia Regional Scientific Meeting of International Epidemiological Association at Jhansi, India from 5th to 8th December 2004.

Latest Articles on Iodine / IDD in indexed and unindexed journals

S.No.	Title
1.	Current Status of Iodine Nutriture and Iodine Content of Salt in Andhra Pradesh By: Umesh Kapil, Preeti Singh., Priyali Pathak Indian Pediatrics, Vol 41, No 2, February 2004 Pg 165-169
2.	Goitrogenic Content of Indian Cyanogenic Plant Food and their IV Anti-thyroidal Activity By: Amar K Chandra, Sanjukta Mukhopadhyay, Dishari Lahari, Smritiratan Tripathy Indian Journal of Medical Research, No.5, Vol. 199, May 2004, Pg 180-185
3.	Elimination of Iodine Deficiency Disorders in Delhi By: Umesh Kapil, Vani Sethi, Geetanjali Goindi, Priyali Pathak & Preeti Singh Indian Journal of Pediatrics, Vol 71, No.3, March 2004 Pg 211-212
4.	Iodine Deficiency & Development of Brain Vani Sethi & Umesh Kapil Indian Journal of Pediatrics, Vol 71, No. 4, April 2004 , Pg 325-330
5.	Iodine Nutritional Status of School Children in a Rural Area of Howrah District in Gangetic West Bengal By: Amar K Chandra, Smritiratan Tripathy, Dishari Lahari & Sanjukta Mukhopadhyay Indian Journal of Physiology & Pharmacology, Vol 48, No.2, April 2004, Pg 219-224

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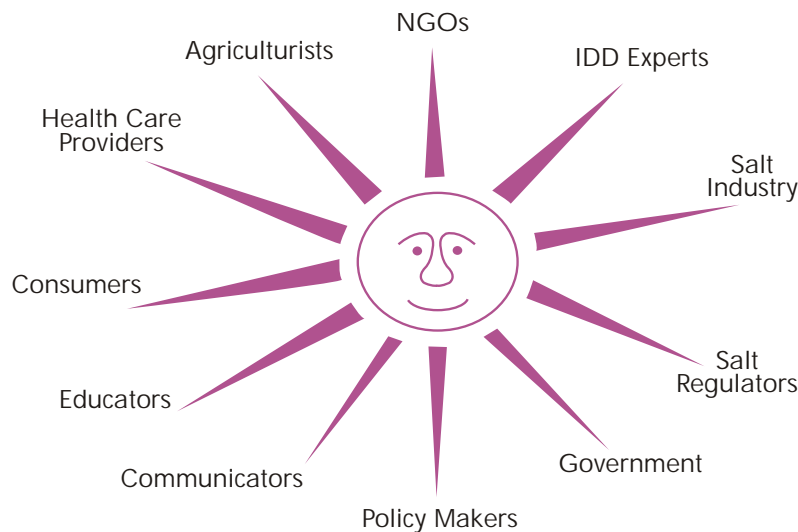
A Salt Story

Some children find a grain of salt the size of a hen's egg. The grain eventually finds its way into the hands of the king. Nobody knows or can discover what it is until a hen is observed pecking the salt. It is then realized that it is foodstuff. The king wants to know where it came from but none of his advisers have seen the likes of it before. It is suggested that perhaps the peasants know about its origins. The oldest peasant, bent double with age, wrinkled, toothless, deaf and blind is brought before the king. This peasant knew only of small grains but informed the king that his father might know. The father came, walking with a stick, looked at the grain and after listening to the king's questions, answered that he could throw little light on the mystery but his father was sure to know. The grandfather was sent for and soon arrived, walking erect without the aid of even a stick. The bright-eyed grandfather informed the king in a strong voice that in his youth such grains were everywhere, but that was in a time when the whole of the land belonged to all of the people, when land could not be owned, only one's own labour. The king asked two final questions: why did such grains grown in the soil in those days but not at present, and what was the old man's secret of youth after all he had all his teeth and his eyes were good unlike his grandson's and, unlike his son, could walk without the aid of a stick. The ancient one answered that recently people had lost interest in work and wanted to live on the labour of others. In his time people ate what they produced, were satisfied with what they had and did not look upon the possessions of others with greed.

Adapted from "On the Salt March" by Thomas Weber
Published by HarperCollins Publishers India, 1997

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

Daily consumption of Iodised salt
is a healthy habit



Sustaining Elimination of IDD



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