

[Let's Make a Change]

AN INITIATIVE TO CULTIVATE QUALITY
SALT THROUGH MODERN METHOD



A Joint Initiative



Islampur Salt Mill Owner Versatile
Cooperative Society Limited





Iodized salt is vital for a child's physical and mental development. Modern and quality salt farming can take the process to the next level, making it easily available for everyone.

Hopefully, everyone will come forward to get involved in producing quality salt on 59,560.90 acres of land. But for making it successful, farmers need practical knowledge alongside the establishment of display fields provided by the Government and other private sectors.

Bumper production will greatly benefit farmers on the fringe level and improve their living standards as well. Everyone has to keep trying and the process of development will continue flourishing if certain essential modifications are put in place.

I am thankful to Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) and UNICEF Bangladesh for coming up with such an initiative. I am highly optimistic that it will lead to the production and availability of quality iodized salt for the public and be able to export abroad to meet the needs of the country which will play a vital role in our national development.

I wish the salt producers overall success.

Mohammad Shafiul Alam
Cabinet Secretary
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Bangladesh Small and Cottage Industries Corporation (BSCIC) under the Ministry of Industries with the collaboration of United Nations Children’s Fund (UNICEF) has been implementing the project “Universal Salt Iodization” since 1989. The statistics of 2011-12 shows that it has been possible to deliver iodized salt to the doors of 80% population of the country.

I believe that this initiative of establishing field level display centers taken by Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) in collaboration with UNICEF Bangladesh and BSCIC will play a vital role in ensuring the delivery of iodized salt to the doors of the rest 20% of our population. And I do believe that this joint effort will make sure the quality salt production and thus our people will be benefitted. As a result it will improve the living standard of field level farmers who our involved with this project.

I wish every success of this project.

Md. Abdul Halim
Secretary
Ministry of Industries
Government of the People’s Republic of Bangladesh

Iodine Deficiency Disorders (IDD) are the leading cause of preventable mental development disorders in young children. It ranges from stunted growth to more subtle degrees of impaired cognitive development. The consequences of IDD affect hundreds of millions of children and adults. They include reduced IQ levels, poorer school performance and lower work capacity. It is also blamed for still-births, miscarriages, physical impairment and thyroid dysfunctions.

IDD was identified as a major public health issue in Bangladesh in the 1980s. Between 1981 and 1997, a programme to administer injected iodized oil was implemented in districts with high rates of IDD. However, as the wider prevalence of IDD came to be known, fortification of salt with iodine was found to be a far more cost-effective and sustainable solution. In 1989, the Government of Bangladesh passed a law making it mandatory for all edible salt to be iodized in line with the global recommendation of Universal Salt Iodization (USI). Based on it, the production of iodized salt was initiated in Bangladesh in 1990.

UNICEF has been supporting the Ministry of Industries since 1981 for the implementation of the salt iodization programme in Bangladesh. This includes – among other measures - support for the development of appropriate salt iodization technology in the country, capacity strengthening of salt millers, establishment of a monitoring system and effective implementation of legislation.

Currently, UNICEF is working with both the public and private sectors, i.e. Bangladesh Small and Cottage Industries Corporation (BSCIC) under the Ministry of Industries and Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS), to improve the availability of adequately iodized salt for all. Improvements of quality and in the quantity of crude salt are some of the critical issues that greatly effect the production of quality salt. This is an issue of critical importance for the achievement of USI and the national human resource development.

I would like to sincerely thank BSCIC and ISMOS for their active initiatives in this regard. I also wish success to the Ministry of Industries in taking necessary actions to scale up the concerned initiatives nationwide.

Tomoo Hozumi
Representative
UNICEF Bangladesh



BSCIC deserves great credit for starting the salt industry programme. At present in Cox's Bazar and Chattogram districts, 27,528 farmers have used the polythene technique in an area totaling 59,563.90 acres. Every year on average the salt industry sector contributes about 1,200 crore Taka to the national economy. About 10 to 15 lacs of people of Bangladesh are directly or indirectly dependent on the salt industry.

BSCIC, along with the development partners have been operating the Universal Salt Iodization (USI) programme since 1989. The government and development partners have been joined by the private organization Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) which has stepped up its development of the salt industry. The participation of both government and non-government sectors is a milestone in the development of the salt industry in Bangladesh.

As a result of this combined effort, BSCIC has established a 10 acre exhibition salt field in Chowfaldandi, Cox's Bazar Sadar, Cox's Bazar and Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) has established a three year term 24 acre training-cum exhibition salt field in Khan Ghuna, Islampur, Cox's Bazar Sadar, Cox's Bazar with direct technical support from UNICEF Bangladesh by 2018-2019 season. The result will definitely ensure top quality salt production.

An example is being set up both at the public level and private level with the technical assistance of UNICEF Bangladesh in the development of salt industry. Wishing the success of this joint venture too.

Md. Mostaque Hassan, NDC
Chairman (Additional Secretary)
Bangladesh Small and Cottage Industries Corporation (BSCIC)



Human life from birth to death depends on different nutritive elements. Iodine is such an element which - within proper limitations - is needed every day. Salt is the best means of taking this vital element to the human body. I strongly believe that the triumph of quality salt farming and quality iodinated salt production are significant milestones.

This enterprise is a new horizon in terms of collaboration from the government, the salt owners' association, farmers and UNICEF Bangladesh. The basic goal of this enterprise is to develop the living standards of fringe-level farmers while simultaneously ensuring that iodinated salt is 100 percent available across Bangladesh.

Thanks to Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) and UNICEF Bangladesh for their joint venture in establishing 24 acres display field that features a Quality Salt Farm. I hope that people of Bangladesh will get more iodized salt through the development of more of these ventures.

I wish success to everybody involved in this enterprise.

Md. Kamal Hossain
Deputy Commissioner
Cox's Bazar




Islampur Salt Mill Owner Versatile
Cooperative Society Limited

I feel proud to be a part of Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) and their effort to make salt cultivation become more modern and developed. I have no doubt it will eventually make the sector more successful and effective. The combined effort of the salt cultivators, millers and UNICEF to introduce developed salt cultivation to our country is testimony to the skills and perseverance of all people involved in this sector. The aim of this project is to produce quality iodized salt and take it to marginalized people, thereby eradicating iodine shortages. It is no exaggeration to say that the participation of all the partners in this project reflects their responsibility towards humanity and their contribution towards making our country more prosperous.

I especially mention Dr. Ireen Akhter Chowdhury, Nutrition Officer, UNICEF, Bangladesh whose ceaseless endeavors have enabled us to make this journey possible. The assistance of UNICEF has not only triggered more optimism among the cultivators of Bangladesh, but also a renewed confidence that iodized salt can benefit everyone, no matter where they live.

Please join us and let us change ourselves and others as well with the slogan 'Let's Make a Change'.



Shamsul Alam Azad
President
Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS)

Introduction

It is vitally important to ensure the cultivation of quality salt to achieve 100 percent use and production of quality iodized salt. It is our earnest goal to build up an "iodized Bangladesh", which is why in Cox's Bazar (51,802.30 acres) and in Chattogram (7,761.60 acres), there is a 59,563.90* acre area that has been utilized for a salt cultivation project. The aim is to increase sodium chloride production and salt production itself. With this vision in mind, Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) under took the project in which UNICEF Bangladesh provided technical assistance.

Initiative to Cultivate Quality Salt through Modern Method

A high-level team from the Ministry of Industry, BSCIC and Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) visited the salt field at Tuticorin, India, in 28 August 2017 under the leadership of Joint Chief Secretary of the Ministry of Industries. GAIN & UNICEF Bangladesh were with cooperation.

A combined team of UNICEF international and national experts including Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) subsequently published a report about the viability of Bangladeshi salt farmlands, the standard of salt etc. The team worked from 10-13 February 2018 in Cox's Bazar Sadar, Kutubdia and Moheshkhali.

Post Cox's Bazar Visit Conference

The first conference with the mill owners and farmers was arranged in Cox's Bazar on 14 February 2018, jointly organized by the ISMOS, UNICEF and BSCIC. The traditional farming method of gathering salt was elaborately discussed. International experts presented a comparative analysis of salt farming methods of both India and Bangladesh. Every aspect of salt farming and production was debated in detail, as were other aspects of the industry. Mill owners and farmers said they benefitted hugely from the conference and were keen participants in the question-and-answer session.

* According to Salt Farmer Census 2018, Bangladesh



28 August 2017, Salt Field Visit, Tuticorin, India

12 February 2018, Traditional Salt Field Visit, Pukkhali, Sadar, Cox's Bazar

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for every child



14 February 2018, 1st Workshop, Cox's Bazar



12 May 2018, Inspection of Advanced Salt Cultivation in the Modern System, Machilipatnam, Andhra Pradesh, India

Observations and Recommendations of International Experts after Visiting Salt Farmlands

Observations:

1. Problems with the design of salt farmlands
2. Not following the proper methods of preserving sea water
3. Defective water flow system
4. Premature collection of salt
5. Land fragmentation resulting in more expenses
6. Lack of farmland nursery

Recommendations:

1. To ensure proper design of farmlands
2. To preserve more salted water during high tides
3. To determine the salinity of water by using baume hydrometers
4. To ensure water flows according to design
5. To collect salt during suitable times
6. To join small fragmented farmlands
7. To nurse the crystallizer bed after second collection of salt
8. To visit those farmlands which match the weather of Cox's Bazar and henceforth ensures cultivation of quality salt
9. To establish demonstration field for a quality salt cultivation system in Cox's Bazar

Recommendation Execution Process

Steps have been taken regarding the execution of a significant decision by Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) to prioritize the observations, recommendations and international expertise of UNICEF.

A decision was taken for an expert from the Indian area of Machilipatnam in Andhra Pradesh to inspect the salt fields and conduct a comparative study in regard to the weather of Cox's Bazar. UNICEF provided technical support for the visit.

The Comparative Status of Machilipatnam & Cox's Bazar after the Experience Gained from the Visit

SL	Subject	Machilipatnam	Cox's Bazar
1	Weather	+/- 1 ^o -3 ^o	+/- 1 ^o -3 ^o
2	Rain	Equal	Equal
3	Source of Saline Water	Bay of Bengal	Bay of Bengal
4	Salinity of Water	Uniform	Uniform
5	Production per Acre	50 Tone (Maximum)*	24.91 Tone**
6	Storm & Surge	Uniform	Uniform
7	Area of the Field	Extra Large	Very Small
8	After Cultivation use of the Field	Uniform	Uniform
9	Use of Tools	Uniform	Uniform

Table 1.0.

Workshop on Exchanging Ideas Based on Experience from Machilipatnam Visit

A workshop on exchanging ideas that followed the expert's visit was organized by the combined efforts of UNICEF & Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS). Experiences gathered from Machilipatnam were shared at the meeting, which was attended by marginalized cultivators and the salt mill owners.

A Discussion on 'Let's Make a Change'

The third workshop on exchanging ideas was held as a joint venture of Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS) and UNICEF on 03 August 2018 focusing on the motto 'Let's Make a Change'. At the meeting, members unanimously agreed to achieve five goals:

*According to Machilipatnam Salt Field, Andhra Pradesh, India
 **According to Salt Farmer Census 2018, Bangladesh



11 June 2018, 2nd Workshop, Cox's Bazar



3 August 2018, 3rd Workshop, Cox's Bazar

The 5 Goals

Goal-1 Quality Salt Cultivation

Goal-2 Consolidation

Goal-3 Model Refinery

Goal-4 Central Lab

Goal-5 Central Database

Goal 1: Five actions for implementing Quality Salt Cultivation

Activity-1: Demonstration Field Establishment

Activity-2: Imparting Practical Knowledge to the Cultivators

Activity-3: Providing Basic Tools to the Cultivators

Activity-4: Dividing the Whole District into Six Zones

Activity-5: Area-based Awareness Creation

Activity-1: Demonstration Field establishment

Choosing a 24 acre area in Islampur, Cox's Bazar Sadar, Cox's Bazar for establishing a 'Demonstration Field of Quality Salt Cultivation System';

Activity-2: Imparting Practical Knowledge to the Cultivator

The importance of founding a training center on the demonstration field premises with a view to imparting practical knowledge to cultivators;

Activity-3: Providing Basic Tools to the Cultivators

Giving Baume hydrometers to the cultivators so they can ascertain the salinity of water and gain practical knowledge;

Activity-4: Dividing the Whole District into Six Zones

Dividing Cox's Bazar district into six zones and giving importance on preparing sub-demonstration fields.

The Zones:

4.1. Cox's Bazar Sadar

4.2. Moheskhali

4.3. Kutubdia

4.4. Pekua

4.5. Chokoria

4.6. Teknaf

Preparing each zone with 3 (three) cultivators and 3 (three) salt field owners

Activity-5: Area-based Awareness Creation

Create awareness through organizing monthly area-based meetings, while ensuring extensive exposure through festoons, banners, leaflets, billboards and local media.

A workshop on "Future Initiative to the Development of Iodized Salt"

Honorable Chairman Md. Mostaque Hassan, NDC, BSCIC emphatically praised the 5 (five) goals under the slogan 'Let's Make a Change' and ensured full cooperation towards UNICEF's project for technical assistance in the workshop on exchanging ideas entitled "Future Initiative to the Development of Iodized Salt" was held in Cox's Bazar in April 2019. The workshop was organized by UNICEF, Bangladesh. The participants were BSCIC and Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS).

Comparative Difference between Conventional & Modern Salt Cultivation

SL	Subject	Salt Cultivation (Conventional)	Salt Cultivation (Modern)**
1	Production per Acre	24.91 Tone	50 Tone (Maximum)
2	Sodium Chloride	74.52% (Maximum)*	97% (Maximum)
3	Use of Polythene	Required	Not Required
4	Labour Required for 5 Acres	5 Person	1 Person

Table 2.0.

Comparative Average Investment for Conventional & Modern Salt Cultivations per Acre** (per Season)

SL	Subject	Salt Cultivation (Conventional)	Salt Cultivation (Modern)
1	Lease Rate of the Land	62,500.00	62,500.00
2	The Labor Wages	90,000.00	18,000.00
3	Polythene Cost	10,000.00	00.00
4	Others	6,000.00	6,000.00
	In Total Investment	1,68,500.00	86,500.00
	Depreciation on Investment	00.00	82,000.00

Table 3.0.

* Bangladesh Council of Scientific and Industrial Research (BCSIR)

**According to Machilipatnam Salt Field, India

***According to Association Data



27 April 2019, Meeting, Cox's Bazar



25 May 2019, Experimental Production, 24 Acres Demonstration Salt Fields Using Modern Methods, Khan Ghuna, Islampur, Cox's Bazar Sadar, Cox's Bazar

The Comparative Value/Price of Conventional and Developed Salt Produced per Acre

SL	Per Ton (Average Value)*	Price of Conventional Salt	Price of Developed Salt
1	5,000.00	1,24,550.00	2,50,000.00
		Probable Price Increase	1,25,450.00

Table 4.0.

Profit against Conventional and Developed Salt Cultivation per Acre

SL	Cultivation Method	Investment	Sale	Profit
1	Conventional	1,68,500.00	1,24,550.00	(-) 43,950.00
2	Developed	82,000.00	2,50,000.00	1,68,000.00

Table 5.0.

A Successful Demonstration Field Prepared for Quality Salt Cultivation through Modern Method

Two demonstration fields have been established for Quality Salt Cultivation through Modern Method in Cox's Bazar with the assistance of UNICEF, Bangladesh.

A ten-acre exhibition field at Chowfaldandi, Cox's Bazar Sadar, Cox's Bazar has been put into action for a period of two years by BSCIC, and a twenty-four-acre training-cum-demonstration field has also been inaugurated at Khan Ghuna, Islampur, Cox's Bazar Sadar, Cox's Bazar by Islampur Salt Mill Owner Versatile Cooperative Society Limited (ISMOS). High quality salt has experimentally been cultivated in the demonstration fields using modern methods. Full-fledged high-quality salt cultivation will start in the demonstration fields during the period of 2019-20.

*According to Association Data

A Comparative Position of the Cultivation of Experimentally Produced Developed Salt through Modern Method and the Cultivation of Conventionally Produced Salt*

SL	Parameter Name	Conventional Salt %	Developed Salt %
1	Moisture	15.69	2.39
2	Sodium Chloride	74.52	94.84
3	Calcium	0.20	0.09
4	Sulfate	4.67	1.59
5	Magnesium	0.18	0.07
6	Insoluble Mater	0.21	0.13

Table 6.0.

Encouraging the Cultivators about High Quantity Salt Cultivation in the Next Three Years

SL	Season	Total Cultivators**	Rate	Total Cultivators
1	2018-19	27,528	15%	4,130
2	2019-20	27,528	50%	13,764
3	2020-21	27,528	100%	27,528

Table 7.0.

The Target of the Next Three Seasons Regarding the Production from High-Quality Salt Cultivation

SL	Season	Total Cultivating Area	Target to Turn it Into a Modern Sector	Highest Production Ton***
1	2018-19	59,563.90 Acre	15%	4,46,729.25
2	2019-20	59,563.90 Acre	50%	14,89,097.50
3	2020-21	59,563.90 Acre	100%	29,78,195.00

Table 8.0.

Target 2021

- To contribute in making Bangladesh 100% successful in using iodized salt
- To lesser the necessity of salt imports by increasing salt production in the country
- Taking steps to export salt after meeting the demand inside the country

*Bangladesh Council of Scientific and Industrial Research (BCSIR)

According to Salt Farmer Census 2018, Bangladesh *35-50 Ton Production per Acre

Goal-1



Quality Salt Cultivation