

The GAIN-UNICEF Salt Iodization Partnership Project: optimizing the production, distribution and use of iodized salt in India

Global Alliance for Improved Nutrition, Geneva, Switzerland. www.gainhealth.org

With funding from The Bill and Melinda Gates Foundation, the Global Alliance for Improved Nutrition (GAIN) and the United Nations Children's Fund (UNICEF) have partnered to support the reduction of iodine deficiency in 13 countries, as part of the global effort toward Universal Salt Iodization (USI). Since 2009, this collaboration has been committed to reaching more than 750 million people through sustainable, business-led and market-orientated efforts.

USI in India

One of the 13 focus countries (*Table 1*) of the GAIN-UNICEF Salt Iodization Partnership Project, India has made significant investments in salt iodization and has momentum from the government and the private sector to deliver iodized salt to the country's population of 1.2 billion. As one of the largest salt industries and delivery networks in the world, the partnership works closely with representatives of salt producers, regional organizations, government officials and industry experts to accelerate progress to reach and sustain USI.

India is the only country in the partnership with the added benefit of a dedicated Salt Department headed by the Salt Commissioner positioned within the government. This department head acts as a champion for adequately iodized salt production, and is essential to the delivery, production monitoring, distribution and quality control. More recently, and with backing from the Salt Commissioner him

self, the partnership supported the introduction of an innovative online platform, which continuously monitors the quality of iodized salt across India. Using real-time data, the iodized salt industry can be effectively regulated to ultimately monitor India's coverage of adequately iodized salt.

"It is the poor and those in geographically isolated communities who are most likely to suffer severe iodine deficiency," said Greg Garrett, Director of Large-Scale Food Fortification at GAIN.

"The partnership is focused on improving access and availability of adequately iodized salt nationwide but with a focus on these communities."

India: early to adapt to salt iodization.

The public health benefits of salt iodization have been long understood and accepted, in both developed and developing countries. In the 1960s, India was among the first countries in Asia to implement mandatory salt iodization practices with early fortification policies, forcing traders to sell only iodized salt. While it has made significant strides in increasing iodized salt production in recent years, this progress has not always been steady or straightforward. In 2000, and before the formation of the GAIN-UNICEF USI Partnership Project, the ban on selling only iodized salt was lifted – dramatically increasing consumption of noniodized salt. Iodized salt consumption decreased within five years with approximately half of Indian households consuming non-iodized salt.

As a result, the ban was reinstated in 2005. This, along with industry improvements in iodization practices and packaging, placed iodized salt firmly back on the market. To date, the partnership has helped improve the availability of iodized salt across the country, with a focus on equitable distribution to hard-to-reach populations. Particularly in rural areas, these communities are less likely to consume iodized salt. With increased availability and improvements in iodization practices and packaging, effective monitoring and heightened consumer awareness, at least 71 percent of households in India are now consuming iodized salt.

Building partnerships at the national and regional level for salt iodization.

Prior to the formation of the partnership, India had already launched and implemented a coalition to monitor the progress of salt iodization and to advise the government on best practice for delivering the most sustainable approach to achieve USI. The GAIN-UNICEF USI Partnership Project strengthened this 'National Coalition for Sustained Iodine Intake'



Most Indian salt producers now iodize their salt

through creating regional hubs in 15 states to specifically engage with local governments and key stakeholders, build awareness and improve local monitoring.

To make the product more appealing and to create consumer demand in these regions, effective social marketing campaigns were introduced to specifically target hard-to-reach populations. With assistance from local partners, highly strategic com-



USI provides millions of Indian women and children with adequate iodine

munications efforts helped raise consumer awareness of iodized salt at the grassroots level. Schools and local health clinics, known as Anganwadi Centres, provided education sessions for the most vulnerable rural populations about the benefits of consuming iodine through iodized salt.

The GAIN-UNICEF USI Partnership Project has also helped to increase delivery of quality iodized salt to marginal populations through working with regional-level organizations and industry in India. It has supported the salt distribution network in Rajasthan, the country's largest state. Through targeting the delivery channels, the effort significantly increased the availability of iodized salt through the Rajasthan Public Distribution System. Meanwhile, the partnership also worked closely with industry in the southern state of Tamil Nadu. There, it supported the Tamil Nadu Salt Company, a regional salt enterprise owned by the state government, in the production and delivery of sufficiently iodized salt. To complement these efforts, UNICEF creates and strengthens long-term demand for iodized salt among consumers and the salt industry. It also reinforces government and public sector commitment through advocacy.

Improving quality control.

Although mandatory legislation exists and supports adequate iodization of salt in India, this often is not enough to achieve sustainable elimination of iodine deficiencies. To ensure all iodized salt being consumed by households and food producers contains the appropriate amounts of iodine, robust quality assurance is required across the entire supply chain. Success requires active participation on many levels to ensure high quality iodized salt reaches consumers.

Problems are inevitable during such a large-scale effort and enforcing legislation is a key challenge in such complex environments. Leakage of non-iodized or inadequately iodized salt into the market does occur and can be attributed to a number of factors: from producers being unable to properly iodize their salt or refusing to iodize, to poor packaging diminishing iodine levels. From salt producers to retailers, all parties along the supply chain must remain committed to preserving the quality and effectiveness of the end product, so that adequately iodized salt ultimately reaches the consumer. To address this, the GAIN-UNICEF USI Partnership Project ensures the salt industry in India understands and uses effective iodization techniques, and that governments and industry are equipped with the necessary resources to monitor and maintain information about production quality.

In India, external quality control is conducted by the Salt Department. Officials collect salt samples for testing in 32 laboratories throughout the country. In 2010, GAIN conducted an analysis of laboratory capacity, and, through the Indian office of ICCIDD, provided technical assistance to establish a standardized monitoring protocol. This was the first time an outside agency gained access to data from government laboratories, and after the training, 76 percent of the samples analyzed met the appropriate standard – a figure higher than previous measurements.

Improving data collection through an online system.

India has one of the largest salt industries in the world with over 13,000 salt producers and a complex delivery network. Therefore, monitoring is a key challenge in such an intricate environment. With 55 percent of edible salt transported by rail, rail transport clearance offers a built-in check for monitoring quality. Still, monitoring is a key challenge.

To effectively track production, quality, and movement of iodized salt, especially to rural regions, accurate and up-to-date information and statistics are essential. Historically, the Salt Department would manually collect data through its network of divisional offices that was then communicated up a chain of reporting channels to the Salt Commissioner. This process resulted in data duplication, redundancy, and gaps; it was also labor-intensive and costly.

With technological expertise close at hand in India, there was no need to look far for a solution to monitor quality and distribution. Recognizing the limitations of the manual data collection process and need for improved efficiency, the partnership joined other national partners to support development and installation of a state-of-the-art Management Information System for the Salt Department to track the iodine levels of salt being distributed across the country.

With support from the GAIN-UNICEF USI Partnership Program, the Salt Department is now implementing an online platform that records the quality of iodized salt across India. This allows officials to centralize data collection, and effectively follow the salt to ensure equitable access.

“With the introduction of the system, the efficiency of the department will increase exponentially,” said Mr. M.A. Ansari, the Salt Commissioner of India. “It will go a long way in professionally managing Salt Department processes.”

Formally launched in February 2012, this efficient Management Information System will complement improvements in quality assurance and quality control with the latest information on the iodized salt industry. For the Salt Department, it will dramatically increase its efficiency in decision-making and reporting.

“This investment will help future generations in India access adequately iodized salt and avoid irreversible mental and physical setbacks,” added Greg Garrett, Director of Large Scale Food Fortification at GAIN. “Based on India’s experience, our goal is to make available similar tools in other countries where we are implementing our universal salt iodization project in partnership with UNICEF.”

Table 1: Countries involved in the Gain-Unicef Universal Salt Iodization Partnership

While over 120 countries have salt iodization programs in place, several of these still face challenges in monitoring iodized salt quality, enforcing legislation, distributing to remote areas, guaranteeing access to fortificant for salt producers, and improving consumer awareness.

Bangladesh	Niger
China	Pakistan
Egypt	Philippines
Ethiopia	Russia
Ghana	Senegal
India	Ukraine
Indonesia	

The Future

Developing this system for India is a key achievement, and is just part of GAIN’s global work to improve the quality of iodized salt in the GAIN-UNICEF USI Partnership Project countries. To address the specific needs of individual countries, GAIN and partners Intertek and ICCIDD are developing a universal set of quality management standards, manuals and training tools. These tools as well as the Management Information System designed for India are easily customized for

any country or USI project. In light of this, industry regulators in India now have innovative tools available at their fingertips to monitor and accelerate salt iodization and reach the remaining 30 percent of consumers in India with adequately iodized salt.