Ethiopia learns from Azerbaijan how to centralize production of iodized salt

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Ethiopia first issued a ban on non-iodized salt in 1996. Since almost all of its salt supply came from large plants on the Red Sea, progress towards USI was rapid, and the coverage of iodized salt reached 80% by 1981. But after the secession of Eritrea, the Red Sea salt was lost to the Ethiopian market. To ease the pressure on the national supply, the ban on non-iodized salt was lifted, and by 2005 iodized salt coverage had dropped to 4.2%. Thanks to renewed efforts, mandatory iodization was reinstated in 2011. Good compliance from salt producers has ensured a steady increase in the supply of iodized salt to >90% in 2014. But as a result of poor technology and a fragmented industry, only 43% of household salt provides adequate iodine (>15 ppm). In 2013, the Micronutrient Initiative supported a feasibility study, which concluded that by establishing a Centralized Iodization Facility (CIF) and improving internal and external monitoring, the Government of Ethiopia would be making an important step toward achieving USI.

To showcase the latest developments in fortification technology and best practices in monitoring, and to encourage Ethiopia to modernize its iodization infrastructure, UNICEF organized an experience-sharing visit to Baku, Azerbaijan on 17–25th October, 2015. The Ethiopian delegation included representatives of the Federal Ministry of Health, Food, Medicine and Health Care Administration and Control Authority (FMHACA), the Ministry of Industry, the Kadaba Salt Producers Share Company, the Micronutrient Initiative, and UNICEF.

The purpose of the visit was:

- To understand the path from small-scale iodized salt production to a CIF (particularly, the roles of salt producers/government/civil society, the iodization technology and production process, the procurement of the fortificant, and the impact of communication strategies on the consumption of iodized salt).
- To learn about the best practices in legislation enforcement and program governance.
- To explore partnership opportunities within the private sector between Ethiopia and Azerbaijan to enable future consultations and collaboration.

History of iodization in Azerbaijan

Azerbaijan is a republic situated at the crossroads of Europe and Asia. Country-wide usage of iodized salt in Azerbaijan was first achieved during the Soviet era. The salt was then produced in the Republic of Nakhchivan (currently an autonomous area of Azerbaijan), Ukraine, and Russia, which were part of the Soviet Union. But when independence was restored, access to iodized salt declined, and severe forms of IDD quickly reappeared. In its progress against IDD, Azerbaijan has successfully moved from small-scale to centralized production of iodized salt. Azerbaijan's CIF is suppling high-quality iodized salt to the population, with excess production exported to neighboring countries.

In 1999 a multi-sectoral committee and working group was established within the Ministry of Health to strengthen the national IDD program, enact iodized salt legislation, and improve the quality of iodized salt production, which at the time was in the hands of many small producers with outdated technologies and lacking quality control measures. In collaboration with the Ministry of Economy and Industry and UNICEF, a plan was designed to centralize the production of iodized salt as a national priority.

Azerbaijan's Centralized Iodization Facility

The construction of the CIF was undertaken by Azersun Holding in partnership with the Azerbaijan Investment Company (AIC) a state company under the Ministry of Economy and Industry. The total project value was $US 14 million, of which 25% was paid by the AIC. The AIC's involvement in the project ended in 2012, and the plant is now fully owned by Azersun. Since the start of its operations in 1991, Azersun Holding has been a market leader in food production, retail and farming throughout Azerbaijan and across the Region. It was the first private company in Azerbaijan's food industry to incorporate several enterprises under its control, pioneering the concept of a group of companies in the country. Azersun has invariably pursued a policy of corporate social responsibility through a consistent cooperative approach towards its customers, stakeholders, and the Azerbaijani public.

The salt production plant was built in the Masazir salt lake region and put into operation in 2010. It is the first modern salt processing plant in the country to produce high-quality refined and iodized salt. The raw product comes from the Masazir Lake and, with an average annual capacity of 90,000 tons (60,000 tons in 2014), the plant is able to meet the national demand for iodized salt. It produces salt for human consumption (refined salt) and industry use (mechanically produced salt), and it exports its products to Georgia, Kazakhstan, Tajikistan, and other countries in the Region. There is a modern internal quality control system in place, and due attention is given to human health, production safety, quality, and environmental protection. The company invites different members of the civil society, such as students and journalists, to learn about its product quality and its contribution toward the elimination of IDD in the country.

Visiting the Salt Production Factory around Masazir lake and meeting small salt producers cooperating with Azersun

The role of an enabling environment

The law on IDD prevention and mandatory universal salt iodization in Azerbaijan came into effect in January 2003. It prohibits the import, sale, and production of non-iodized salt for human and animal consumption. A national iodization standard for edible iodized salt is set at 40 ± 10 ppm (30–50 ppm). The national protocol on iodized salt quality control and monitoring was developed and approved by the MoH in 2007. It includes food hygiene standards, as well as provisions for quality control and external (laboratory) monitoring of the quality of iodized salt. Salt producers and the Ministry of Health officials responsible for enforcing the law received technical support, and UNICEF provided portable devices for testing iodine in salt. The Customs Office plays a significant role in controlling the imports of iodized salt. An intersectoral Task Force has met regularly to monitor the activities regarding salt iodization to evaluate progress and make recommendations. Advocacy meetings have been held with all stakeholders and partners, including communities and families.

The Independent Consumers' Union

The Independent Consumers' Union is a non-governmental organization established in 1997 to protect consumers' rights. Made up of over 21,000 volunteers, the union's major activities include:

- Creating public awareness of product quality, standards, and regulations through multi-media campaigns.
- Identifying and withdrawing from the market any low-quality salt products that have been imported or produced in Azerbaijan.
- Informing relevant government bodies of any lapses in law enforcement and product quality.

Take-home messages for the Ethiopian delegation

The following lessons have emerged from this productive visit that will be relevant to the Ethiopian context:

- Effective leadership and government support are essential to the success of the CIF project in Ethiopia. In Azerbaijan, the Government played an important role in developing a business plan, providing the initial investment, creating the market for iodized salt, and establishing the factory framework.
- Transition from small-scale to centralized salt iodization in Azerbaijan has led to a significant improvement of iodine status (median UIC of pregnant women increased from 54 µg/L in 1998 to 135 µg/L in 2009) and household coverage with adequately iodized salt (41.3% in 2000 and 79% in 2011).
- For the long-term success of the project, the Government must ensure that the centralization does not adversely affect the livelihoods of the raw salt collectors in Ethiopia.
- Ownership of the CIF should be clear and agreed upon by all parties.
- Production of salt for industrial and other purposes may be considered in addition to iodized salt.
- All factors that could prevent the success of a CIF in Ethiopia must be understood. One of the major factors that the Government must address is the socioeconomic situation in Afar.
- When setting the iodization standards, it should be remembered that long distances between the production site and the markets may lead to significant losses of iodine during transport and storage.
- Mandatory legislation should include all salt for human as well as animal consumption as IDD affects the productivity of the livestock.
- The Ethiopian Consumer Association and the Government Consumer Protection Agency should be strengthened to play a more important role in raising awareness, monitoring the gaps, and assuring that consumers have access to safe and adequately iodized salt.

Recommendations and next steps

1. The Government should take full responsibility for protecting the Ethiopian population from the burden of IDD considering its negative effect on people's health and the economic development of the country. To achieve this, the Government must collaborate with salt producers to develop a business plan, a financing mechanism, and a follow-up mechanism to ensure program implementation and sustainability.
2. Salt producers should see salt iodization as a viable business model and should take charge of their social responsibility by producing and distributing adequately iodized salt.
3. Due attention should be given to human health, production safety, environmental protection, proper packaging, and personnel training.
4. Consumer associations and protection agencies should play a role in protecting the health of consumers and monitoring enforcement.