

A conversation with Arnold Timmer and Tesfaye Chuko on July 6, 2015

Participants

- Arnold Timmer – Chief of Nutrition Programmes, UNICEF Ethiopia
- Tesfaye Chuko – Nutrition Officer, UNICEF Ethiopia
- Timothy Telleen-Lawton – Senior Research Analyst, GiveWell
- Ben Rachbach – Research Analyst, GiveWell

Note: This set of notes was compiled by GiveWell and gives an overview of the major points made by Arnold Timmer and Tesfaye Chuko.

Summary

GiveWell spoke with Arnold Timmer and Tesfaye Chuko of UNICEF about the work of the Global Alliance for Improved Nutrition (GAIN) on universal salt iodization (USI) in Ethiopia. Conversation topics included the relative roles of UNICEF, the Micronutrient Initiative (MI), the Iodine Global Network (IGN), and GAIN with respect to USI in Ethiopia, GAIN's technical support for salt producers, GAIN's work on quality assurance and quality control (QA/QC), funding for USI programs, and other background information on salt production and iodization.

Relative roles of UNICEF, MI, IGN, and GAIN

UNICEF, MI, IGN, and GAIN have all collaborated on USI work in Ethiopia.

Arnold Timmer has worked on the high-level strategy of UNICEF's USI program in Ethiopia, while Tesfaye Chuko's experience is in the day-to-day management of the program. Before joining UNICEF in 2009, Tesfaye Chuko worked as a Regional Coordinator for micronutrients for MI in Ethiopia beginning in 2006.

UNICEF

UNICEF has focused on advocacy and communication. UNICEF advocated, in collaboration with GAIN, for the creation of the revolving fund for potassium iodate (described in detail below). UNICEF's advocacy also influenced Ethiopia's Food, Medicine and Health Care Administration and Control Authority (FMHACA), which in January 2012 announced enforcement of the law requiring salt iodization that had been passed in 2011.

UNICEF has communicated with salt producers, salt transporters, and consumers about USI. For salt producers and government stakeholders, UNICEF has provided logistical, technical, and financial support; demonstrated best practices for salt iodization; and held regional workshops. UNICEF also contributed funding for a new micronutrient survey, scheduled to take place in 2015.

MI

MI has collaborated with UNICEF to establish a standing committee on salt iodization in the Ministry of Health; provided logistical, technical, and financial support; completed a feasibility study on improving the quality of iodized salt in Ethiopia through establishing a central iodization facility (CIF); and provided funding for a new micronutrient survey, scheduled to take place in 2015.

IGN

IGN has discussed with UNICEF how to keep up momentum for USI, including linking iodine nutrition to other micronutrient issues. However, IGN has not played a very significant role in the progress on USI in Ethiopia so far.

GAIN

GAIN took the lead on advocating for the revolving fund for potassium iodate. It has focused on technical support for salt producers and QA/QC, as described below. GAIN is particularly good at working with businesses.

GAIN's technical support for salt producers

The revolving fund for potassium iodate

In an early stage of work on USI in Ethiopia, GAIN, UNICEF, and MI donated potassium iodate to salt producers through the Ministry of Health of Ethiopia. The USI partners believed that USI efforts would be more sustainable if salt producers purchased potassium iodate for themselves, so it wrote a feasibility assessment of the creation of a revolving fund for potassium iodate run through the Ethiopian government, and later helped to set up the fund. With funds contributed by GAIN, MI, and UNICEF, GAIN's premix facility purchased potassium iodate from suppliers in bulk and provided it to the Ethiopian government to start the revolving fund.

Before GAIN's revolving fund feasibility assessment, UNICEF had already wanted to shift away from donating potassium iodate to salt producers and wanted a cost recovery mechanism to be established for sustainable supply. UNICEF had worked closely with all stakeholders to get salt producers on board with a plan that could cut into their profit margins. GAIN's feasibility assessment helped show salt producers that the extra costs of iodization could be passed on to consumers if the government raised the price it sets for salt. GAIN had worked directly with salt producers in other countries, so it had the expertise necessary to convince salt producers to agree to use the revolving fund.

Making progress on USI in Ethiopia in the absence of the revolving fund would have been difficult due to the following:

- **There is a thin global market for potassium iodate.** There are relatively few global suppliers of potassium iodate, which can make prices volatile. The 2011

tsunami that affected Japan caused disruptions to potassium iodate suppliers there, which caused prices to go up, even though overall demand for potassium iodate was down due to the global recession. Ethiopian salt producer associations would likely have difficulty coping with these kinds of price fluctuations if they were dealing with potassium iodate suppliers directly.

- **It is cheaper to buy potassium iodate in bulk.** Ethiopian salt producer associations would buy smaller quantities if they bought from suppliers directly. If salt producer associations bought smaller quantities individually, the overall cost to them would be higher.
- **Ethiopian salt producer associations do not have enough information or expertise to deal with potassium iodate suppliers directly.** Ethiopian salt producers often lack access to the Internet or other methods to connect with global potassium iodate suppliers.

The revolving fund also has several advantages over private companies serving as middlemen between salt producer associations and potassium iodate suppliers. Private companies charge salt producers more. In addition, potassium iodate for the revolving fund is purchased from certified suppliers that are assessed regularly. If a private company were buying potassium iodate and then selling it to Ethiopian salt producer associations, the quality of the product could vary.

Since 2013, no donor organization has directly paid for potassium iodate, which means that the revolving fund is functioning properly. Even if GAIN, MI, and UNICEF stopped USI work now in Ethiopia, the revolving fund would likely continue working.

Monitoring potassium iodate supplies

GAIN has also focused on monitoring supplies of potassium iodate in Ethiopia. Before the re-initiation of salt iodization in Afar region in 2010, many salt producers were not using the potassium iodate donated to them, and it was often left to expire. GAIN found the expired potassium iodate, tested it, and found that it was still fit for consumption. However, the Ethiopian government declined to allow the use the potassium iodate because it had officially expired.

GAIN worked with a potassium iodate supplier to exchange the 12 tons of expired potassium iodate for six tons of new potassium iodate for use in Ethiopia.

GAIN's work on quality assurance and quality control (QA/QC)

GAIN has also worked with FMHACA on QA/QC for iodized salt. GAIN has prepared technical documents and manuals, provided equipment for laboratories, and trained workers to test the quality of iodized salt. However, most salt is iodized in Ethiopia using knapsacks rather than more reliable iodization machines, which makes it difficult to produce adequately iodized salt. Since iodized salt in Ethiopia is not yet high enough quality, the standards for quality of salt iodization cannot yet be fully implemented.

After the quality of iodized salt in Ethiopia improves, GAIN and other USI partners will need to ensure that the government has enough capacity to enforce standards for the quality of salt iodization. GAIN will likely have to deal with other emerging problems, including ensuring that iodized salt is used in processed foods and establishing and enforcing requirements for packaging salt for consumers and industrial users.

Funding for USI programs

While funded by The Bill and Melinda Gates Foundation Partnership Project (and other donors, including USAID and CIDA), UNICEF spent significant funding on its USI program in Ethiopia. Now that the Partnership Project is ending, UNICEF will continue supporting USI program in Ethiopia using new USAID funding. If salt producers and government stakeholders reach an agreement about creating a CIF, UNICEF would likely require greater levels of funding for advocacy and communication work.

UNICEF and other agencies may attempt to tie iodine nutrition to other nutrition goals in order to access funding from broader nutrition initiatives (e.g. funding for addressing stunting).

Other background information on salt iodization

UNICEF and GAIN's work on USI in other countries

UNICEF has been working on USI since the 1980s. Arnold Timmer worked on USI for UNICEF in Sudan in the 1990s and Eastern Europe in the early 2000s. UNICEF played a large role in getting the proportion of the world's salt iodized from 20% to 70%, but found that the business models that provided early successes have not been as viable for the countries remaining without universal salt iodization.

GAIN and UNICEF have also collaborated on solving USI implementation problems in other countries. In Bangladesh, GAIN and UNICEF also encountered potassium iodate that was unused by salt producers and set to expire. In addition, the government partner in Bangladesh asked for more funds, even though previously dispersed funds had not been used. In this situation, GAIN had the technical expertise to build arguments for why previously dispersed money and potassium iodate needed to be used first, and UNICEF convinced policymakers by using GAIN's arguments.

Politics and history of salt production and iodization in Ethiopia

There are hundreds of individual salt producers in Ethiopia, most of them small-scale. Since there are so many salt producers, UNICEF and other organizations generally communicate with salt producer associations, instead of individual salt producers.

Ethiopia used to import salt from Djibouti and some Middle Eastern countries, but the Ethiopian government later helped set up domestic salt production in Afdera, Afar. Since

local people did not have prior experience with salt production, salt from the region has tended to include impurities, which makes iodization more difficult.

The politics and history of salt production in Afar are complex, and misaligned incentives and interests among stakeholders have caused challenges to progress on USI:

- Salt producers in Afar usually lease their plots from a landowner. There is often a lack of trust between salt producers and landowners. Even if salt producers are willing to work on iodization, landowners may be unwilling to make investments in iodization capacity.
- Large-scale producers may “hide” in salt producer associations. When communicating with the federal government or donors, salt producer associations may claim that their members cannot afford to make investments in iodization capacity. While this may be true for many small-scale producers, it is not necessarily true for the large-scale producers who are also represented by the association.
- Salt producer associations own iodization machinery donated by development partners, but individual salt producers usually operate it. Individual salt producers often do not have an incentive to take care of the machinery, which requires frequent maintenance due to the extreme heat in Afar. As a result, iodization machines often break down.
- Salt iodization checkpoints, where salt from producers is tested for iodine content, are located close to production sites to make it difficult for producers to evade the checkpoint. However, the regulatory activity at the checkpoint is very soft. All iodized salt with varying iodine levels, including sub-standard iodized salt, can pass the checkpoint.

The MI study determined that imported iodized salt from Djibouti or Sudan would cost about the same about as uniodized salt in Ethiopia. However, in order to protect the jobs of salt producers in Afar, the federal government currently does not plan to import iodized salt.

Iodization and salt prices in Ethiopia

Consumers end up paying the costs of iodization through increased salt prices. In Ethiopia, the federal government mandates salt prices, and prices were raised to accommodate the additional expense of iodization. In 2013, after iodization, the mandated price paid to a producer for 100 kilograms of salt was raised from 80 birr to 150 birr. The price increase from 80 birr to 102 birr was due to inflation, and for the remaining 48 birr price increase, 8.31 birr can be attributed to the cost of potassium iodate itself, while the rest is due to additional labor costs.

People in Ethiopia did not reduce their demand for salt in reaction to the price increase. Individual consumers usually only buy one kilogram or less of salt at a time. For this amount of salt, the price increase was one or two birr. Due to relatively high inflation, people in Ethiopia are generally used to price increases of this size for basic commodities.

Future plans for USI work

In Ethiopia, UNICEF and other partners have plans for continuing to monitor and make progress on USI:

- **Central Iodization Facility (CIF):** Compared to individual salt producers using knapsacks, a CIF would improve the quality of iodized salt. Iodization at a CIF would be mechanized, and the salt itself could be washed to remove impurities. A CIF would also likely include a packaging facility. UNICEF would advocate for the establishment of a CIF, whether it is through a public-private partnership or a different model. UNICEF believes that a CIF should be established by private and/or public business enterprises with limited technical operational support by partners.
- **National surveys:** In 2014, results from a national household survey were reported, including that about 90% of salt tested included at least some iodine and that about 40% was adequately iodized. Results from the National Micronutrient Survey, which was funded by donors and partners, are coming out this year. Next year, there will be a Demographic and Health Survey (DHS), which will use Rapid Test Kits (RTK) on household salt and test urinary iodine concentration (UIC).
- **Advocacy and communication:** Even though a salt iodization law has been passed and the revolving fund is functioning, UNICEF will still need to advocate for USI in the future. Over time, support for iodizing salt tends to erode, so UNICEF needs to occasionally remind stakeholders of the importance of iodization. In addition, changing circumstances (such as the Ethiopian government allowing the importation of iodized salt, or learning that some communities have low levels of consumption of iodized salt) may require new advocacy strategies. Future advocacy may focus more on tying iodine nutrition to other micronutrient issues, rather than focusing on iodine in isolation.
- **Maintaining achievements and continuing progress towards USI:** USI is usually considered to be achieved when 90% of salt is adequately iodized. However, if a future survey found that 90% of salt in Ethiopia was adequately iodized, UNICEF and other agencies' work would not be finished. Since it is possible for progress on USI to erode, there needs to be around four or five years of consistently finding that greater than 90% of salt is adequately iodized in order to feel confident that USI has been achieved.

All GiveWell conversations are available at <http://www.givewell.org/conversations>