Progress in salt iodization among small salt producers in West Africa

In Ghana and Senegal, a focus on encouraging salt iodization by small producers is paying dividends

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Introduction

Stretched out over 74 square kilometers, the Songor lagoon near Ada, Ghana dries out seasonally, leaving a white snow-like layer of salt covering its floor. Salt is wealth in this area. During this time, hundreds of members of nearby communities gather here to collect and sell their salt to traders who bring the product to market on heavily laden trucks. It's a feverish explosion of physical and economic activity that lasts just a few short weeks and yet it produces a significant portion of Ghana's total salt production for the year. A similar event occurs in Senegal during the hot summer between January and June, when rivers that reach hundreds of kilometres inland from the ocean dry to a thick layer of white.

For communities living along these flats, collecting salt is their livelihood and the industry has probably existed in this informal way for hundreds, perhaps thousands of years. National governments who seek to prevent iodine deficiency disorders through Universal Salt Iodization (USI) in their countries have faced an uphill battle attempting to change the way these markets operate. New models of how to do this, however, are being demonstrated that will make a significant contribution to improving the populations' health.

Ghana and Senegal are the two largest salt producers in West Africa, producing an estimated combined total of 600,000 metric tons of salt, about 80% of which is exported to countries in the region. However, the two countries also have relatively low levels of salt iodization. A recent UNICEF Survey (2006) found only one-third of households have adequately iodized salt in Ghana; in Senegal the result was only slightly better at 40% salt iodization (2004 DHS). Although about half the salt produced in these countries comes from medium to large producers with adequate iodization capacity, the other half comes from thousands of small producers who work seasonally, producing no more than 50 tons individually per year from the salt fields in the vicinity of their homes.

Salt production at the Songor Lagoon near the town of Ada, Ghana.

Challenges and solutions

Small producers tend to be more difficult to work with than large producers. Large producers, more often than not, have more knowledge of salt iodization, are more organized, have larger incomes and have fixed operation addresses where governments can monitor iodization. Small producers, on the other hand, tend to be less informed about the need to iodize, exist in hard-to-reach areas often without an address, do not have the means to invest in iodization equipment and function outside the formal economy, and thus outside the purview and control of national governments.

The secret of the work with small producers has been ensuring they derive clear benefits from salt iodization, and are adequately supported in the uptake and use of iodization technology, thereby preventing a habitual return to traditional methods. Support, as we will see

below, embraces not only a long-term, up-close commitment to assisting the producers, but also the formulation of incentives which the producers understand. The mostly poor and uneducated small producers, having low profit margins and risk aversion, will only apply salt iodization techniques when they clearly recognize the benefits to them. As the living conditions of small producers improves through collaboration with organizations supporting USI, so does their motivation to continue iodization.

Small salt producers in Fatick, Senegal

GPS mapping

One of the very first steps development organizations needed to carry out was to identify the locations of small producers' salt sites. In large, uncharted rural areas the most efficient way to do this was through aerial photographs and GPS mapping. This step allowed numerous new salt production locations, previously unknown by governments, to be discovered. It also aided existing and potential producers, with whom the information was shared, by revealing potential land for expansion or investment; the capacity and suitability of that land for production; the existence of road networks; and the layout and density of the local populations needing salt.

Small producer cooperatives

Once the small producer sites were located, contact with producers was made and, where they didn't exist, assistance was offered to establish cooperatives to farm the salt and receive development assistance. In Senegal, for instance, the growth of cooperatives was supported by government agencies such as chambres des métiers (chambers of commerce) and the internal trade bureau. In their favor, cooperatives are more likely to be profitable, with their ability to collectively negotiate higher prices from traders, manage price fluctuations, take advantage of economies of scale and access new markets. However, their firm establishment often requires difficult changes in perception and behavior regarding such issues as competition, self-reliance and group functioning. In Senegal, there have been occasions where tempers have flared in some cooperatives over access to the iodization machine.

Iodization machine improvements

The management and adaptation of technology is another problem area which had to be addressed. Iodization machines, which form the core of the iodization process, are relatively complex pieces of machinery that require training to operate and expertise to maintain. In the past, they were often tethered to inappropriately sized fixed generators that consumed too much fuel to be used efficiently by small producers. Moreover, their movement through the salt fields was impeded by their attachment to cords and small wheels which were ineffective in sandy and muddy terrain. These machines have, however, undergone substantial improvements since their introduction including the use of an on-board power source, large wheels, adjustable speed capacity, steering to navigate through salt fields as well continually simplified and streamlined mechanics and electronics. The machines have been upgraded specifically with the needs of the small producer in mind and producers appreciate the efficiency with which they are able to bag and bring their salt to market.

Sustainable potassium iodate procurement

Sustainable and easy access to potassium iodate has been another hurdle to overcome. Unlike large producers which have the capacity to procure and stockpile large quantities of the substance, small producers need relatively small quantities over extended periods of time. Although iodate was given to producers at the outset at no cost, it's expected that they will eventually purchase the product themselves and become self-sustaining.

In Senegal, a system of procurement centers have been established through chambres des métiers. Other models, such as those used in Ghana, have attempted to harness the private sector to procure on behalf of the industry. In both cases, finding the optimal system for an individual country will take some time.

National Support for Iodization

The overall context in the country is also of crucial importance to the success of small-scale iodization. The more active and well-organized the national networks, the greater the prospects of support for small producers. In most countries a well-functioning national coalition comprised of the government, private sector, civil society, the media and development agencies is the key to this work. In a select few countries, including Senegal, highly effective government bodies, such as CLM (a multi-sectoral coordination commission responsible for national nutritional implementation), are able to work alongside a coalition and support small producers through its many local and partner NGO offices. This reflects an important degree of ownership which translates into a better organized and resourced campaign to achieve salt iodization throughout the country.

Conclusions

In Senegal, where there has been significant progress, a second phase of marked quantitative and qualitative expansion can begin. This phase will:

- increase the number of cooperatives involved
- guarantee that sustainable and timely procurement of iodate takes place
- continue to ensure records of iodized salt productions are kept by producers
- pilot new business models to ensure small producers and cooperatives become more profitable.

In Ghana, where the progress of work with small producers has been slower, partially due to poor weather conditions affecting production, development organizations must continue to increase their presence on the ground and their interaction with small producers as the key method of ensuring success.