Mozambique redoubles its salt iodization efforts

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Background
Mozambique, a southeast African country on the Indian Ocean, has a population of over 24 million, of which 45% are aged less than 15 years. Stunting affects almost 43% of children, and only 56% of the population is literate.

In the country’s first national survey conducted in 2004, 15% of children were goitrous, and their median urinary iodine concentration (UIC) was 60 µg/L, putting Mozambique in the mildly iodine deficient bracket. The provinces of Niassa, Zambezia and Nampula were classified as moderately deficient, and rural areas had much lower urinary iodine levels (54 µg/L) than urban areas (90 µg/L). More recent data are not available. But a national iodine deficiency survey focusing on UIC in about 3,000 women of reproductive age and household availability of iodized salt was recently finalized, and a report is expected soon.

Salt industry and household coverage of iodized salt
Mozambique has more than 300 salt producers, mostly concentrated in the coastal provinces of Maputo, Nampula and Cabo Delgado. Only eight producers are large, and the vast majority are small- or medium-sized. Most salt producers, traders and retailers are licensed through the Ministry of Trade and Commerce and registered in a national database. But when it comes to small producers, many are thought to operate without a license. There are reportedly around 100 unregistered small salt producers in Zambezia alone.

In 2010, the total annual salt production in Mozambique was estimated at 145,000 metric tons, sufficient to cover human consumption (around 90,000 tons), animal consumption, industry use (including dried fish) and allow for some export. Salt imports, mainly from South Africa, and salt in processed foods contribute only marginally to total salt consumption in Mozambique.

DHS and MICS estimates of household use of iodized salt in 2003, 2008 and 2011 were generally very low. In 2001 only 45% of families were using salt containing any iodine, ranging from 7% in Cabo Delgado to 76% in Gaza. This represents a decrease from the 58% reported in the 2008 MICS. In the same year, only 25% of households were using salt iodized at the minimum recommended level (>15 ppm). Because salt from the large producers, who monitor the quality of their iodized salt, is mostly exported, a large proportion of the locally marketed and consumed salt comes from medium and small producers. The manual spray-mixing technique used by many small producers to iodize their salt may cause a wide range of iodization levels, often below adequate. There are also reports of iodized salt being sold at double the price of non-iodized salt despite the fact that the national iodization program is fully funded by UNICEF through the Ministry of Trade and Commerce. The price of salt may also vary greatly depending on whether it is coarse or fine, locally produced or imported.

Legislation, enforcement and monitoring
Universal salt iodization (USI) with potassium iodate for human and animal consumption was first mandated in 2000, with iodine levels set at 25–55 ppm. In 2007, the Ministry of Health and the Ministry of Trade and Commerce agreed to establish working groups to support, coordinate and oversee the implementation of a national salt iodization program. The primary role of the Ministry of Health (in collaboration with UNICEF) in the program concerns advocacy, which includes communication, education and formulating recommendations. But these activities have been slowly fading in Mozambique partly because of a lack of support, resources and financial backing.

Since 2010, iodized salt legislation is enforced by the National Inspection of Economic Activities (INAE), which is semi-autonomous under the Ministry of Industry. INAE integrates the inspections formerly implemented separately by the Ministries of Health, Industry, Finance and others. This shift in responsibilities has caused a major loss of momentum, which is being regained slowly. Funding for INAE’s running costs is very low, further weakening the inspections, which currently focus on raising awareness among producers rather than on penalizing their non-compliance with the national standards.
In theory, the infrastructure for monitoring and quality assurance is available and adequate. There are about 11 national and provincial and 3 regional laboratories where salt iodine analyses can be performed. WYD iodine checkers (about 85 in total) have been distributed to the largest and medium-sized salt producers and provincial inspectors since 2007, and their recipients have been trained. The United Nations Industrial Development Organization (UNIDO) Mozambique has been involved in assessing the capacity of national and provincial laboratories.

The failure of systematic monitoring and law enforcement was one of the main weaknesses identified in a review of the iodized salt sector in 2010, and again in 2012. Mateus Matusse, National Director of Industry at the Ministry of Industry and Trade, believes that the reluctance of small producers to comply with iodized salt legislation is one of the main obstacles on the road to successful USI in Mozambique. The forecasting and distribution of potassium iodate, procured by UNICEF, presents another challenge that also contributes to the irregular fortification.

Recent developments and planned activities
Despite the established programmatic infrastructure and organization, there seems to be a clear disconnect between the political will and the execution of the salt iodization program on the ground. Pieter Jooste, the ICCIDD Global Network Regional Coordinator for Southern Africa, visited Mozambique in October 2013 to discuss current iodine-related strategies and planned activities with some of the key stakeholders in the ongoing iodization efforts. In summary:

- New legislation is currently being drafted on fortification of staple foods such as maize meal and cooking oil, which will incorporate the salt legislation. For this purpose, the existing salt regulation is being reviewed so that it can be aligned with the broader national and international requirements.

- Promotion of iodized salt is named as a key activity in the government’s Multisectoral Action Plan for the Reduction of Chronic Malnutrition 2011–2015, which aims to achieve 80% use of adequately iodized salt by 2020.

- UNICEF is providing support to undertake an assessment of the salt industry to develop an understanding of the proportion of the national needs met by small, medium, and large producers, which will feed into a new national strategy for universal salt iodization.

- In close collaboration with UNICEF, UNIDO is planning a qualitative assessment of the current situation of the small salt producers in Nampula, arguably the poorest province in the country. The strategy is to formulate interventions that will empower small salt producers in Nampula and to mobilize external funding to assist them with iodization and appropriate packaging of their salt. A second priority is to create jobs for the general development of the communities.

- Two promising proposals have been made by the Ministry of Health. Since iodine nutrition already forms a small component of the school curriculum, it was suggested to have this component expanded in primary and secondary schools as a long-term strategy to improve the knowledge of iodine nutrition across the population. Training could also be offered to community health workers and even to medical doctors.

- Secondly, it was proposed that a recommendation is formulated to ensure that iodized salt is used in all bread baked in Mozambique. Using iodized salt in bread is a key strategy in ensuring adequate iodine intake in many countries (Australia and New Zealand are the two most recent examples). But this proposal may not be simple to implement in view of the large percentage of non-iodized salt still entering the market, the weak monitoring and enforcement, and the non-compliance of salt producers.

- To tackle non-compliance among small producers, ICCIDD was asked to provide information about access to simple, practical and inexpensive field equipment to iodize salt, similar to that used in Senegal. A revolving fund has also been proposed to ensure market-driven forecasting, procurement and distribution of potassium iodate in the future.