COVID-19: impact on iodine programs
In late 2019 a novel coronavirus, SARS-CoV-2 causing Coronavirus disease 2019 (COVID-19) appeared in Wuhan China, and on 11th March 2020, WHO declared it to have developed pandemic status. The pandemic has since touched every aspect of our lives, and iodized salt programs have not been spared. This series of articles discuss the impact of the pandemic and the lockdown on iodine programs across the world, from South East Asia, to India, Haiti, Russia and the Middle East North Africa region.

Fortification of staple foods is a critical weapon in the fight against COVID-19

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The COVID-19 pandemic has engulfed the world. Health care systems all over the world have been stretched to unprecedented levels, and health care workers have become the world’s heroes as they work to contain the epidemic under significant personal risk. Governments all over the world, including throughout Asia, have put into place measures to persuade citizens to stay at home in an attempt to slow the spread of the disease and reduce infections and deaths from the pandemic. Measures include closure of businesses, requirements to work and stay at home and restrictions on domestic travel. As a result, families have been separated, incomes reduced, unemployment increased, and people are having difficulty in obtaining basic necessities.

The COVID-19 pandemic has dire implications for nutrition. Even before the pandemic, Asia contained nearly half of the individuals, worldwide, suffering from the triple burden of malnutrition, characterized by the coexistence of undernutrition (stunting and wasting), micronutrient deficiencies and overweight and obesity. The determinants of this triple burden are complex and likely to be further compounded by the pandemic. Widespread poverty, unemployment and low education negatively affects household food security and limits accessibility, availability and affordability of healthy food items. These challenges may provoke a surge in malnutrition among the most vulnerable populations.

Good nutrition is critical for the functioning of the immune system and protects against diseases. The WHO guidance during the pandemic highlights that “good nutrition is crucial for health particularly in times when the immune system may need to fight back” While more data is needed on the role of nutrition in reducing the severity of COVID-19, the role of micronutrients to the optimal function of immune systems is well established.

Fortification of staple foods is a safe, very low-cost, effective, evidence based public health strategy to ensure that everyone, including the most vulnerable, has access to essential micronutrients. Successful examples in the Asian region include the mandatory addition of multiple micronutrients to flours and cereals, vitamins to cooking oil and iodine to salt.
Fortification can improve immunity and prevent infections and prevent nutritional deficiencies that increase mortality, constrain educational attainment and work productivity and increase the risk of birth defects. While women and children benefit in particular because they have the highest requirements for micronutrients; all members of the population benefit from fortification of staple foods. This is true especially for lower income populations who cannot afford micronutrient-rich foods and supplements and whose intake of vitamins and minerals is mainly from fortified food. Disruptions to food systems due to COVID-19 are expected to negatively affect access to fresh and perishable foods due to farmers inability to produce or distribute, resulting in less diversity of nutrient rich foods on the market. We therefore anticipate a rise in consumption of non-perishable foods, which are a poor source of micronutrients. However, consumption of fortified staple foods such as cereal flours, cooking oil and salt and use of these fortified foods in production of processed foods such as instant noodles and bread will mitigate these negative effects.

Our agencies are partners working with Governments to support and strengthen large-scale fortification programs and we are committed to doing all that we can to ensure that the production, distribution and consumption of fortified foods does not falter. The first step is to ensure production and distribution of fortificants (the micronutrient(s) added to foods during the fortification process). We have reached out to fortificant manufacturers in countries with fortificant manufacturing factories (India, China, Germany) and distribution hubs in Asia (Malaysia, Singapore, Thailand) and have confirmed that stockpiles of fortificants are adequate, though lockdowns at some ports has resulted in inevitable delays. However, difficulties in delivery of fortified foods have been encountered due to the limited operations of local haulage suppliers and increases in transport costs especially for small and medium scale producers.

Governments can help ensure the continued production and availability of fortified foods by:
1. Ensuring that fortificants for food fortification are prioritized for clearance at ports or at border sites.
2. Exempting fortificants from import duties, taxes, levies and other government-imposed chargers to counter increases in the cost of fortificant due to falls in the value of many currencies as the result of COVID-19.
3. Clarifying that logistics suppliers for the food industry are essential service providers and enabling access to information and shared economies on spare haulage capacity wherever that exists.
4. Mitigating the delays in fortificant supplies by putting in place policies for national stockholding of fortificant to ensure local availability and access by fortified foods producers.
5. Ensuring fortified staple foods and condiments are distributed in social safety net programs, to mitigate against potential rise in micronutrient deficiencies for vulnerable populations.

ASEAN populations are already going through much hardship during the pandemic. Many will rely on public distribution and social protection schemes that distribute fortified food. Enabling citizens to flatten the curve is vital from both a public health and economic perspective, and continued supply of fortified foods will ensure that a rise in micronutrient deficiencies will not add to the morbidity and mortality toll from COVID-19.
COVID-19 lockdown and two wet spells bring salt farmers misery in Andhra Pradesh, India

From S. Murali, writing in The Hindu, April 28, 2020


Over 2000 small and marginal farmers extract salt for six months in the mandals of Motumala, Biramkonda and Kothapatnam in Prakasam district till the onset of the southwest monsoon.

Fifty-year-old P. Pitchaiah, a salt farmer from Motumala village near Kothapatnam, was hoping to get decent returns during this summer. Now his hopes have been completely dashed in the wake of the COVID-19 lockdown. Workers have not turned up at his salt pan for more than a month now to scrap salt and move it to safety. "I am also unable to engage truck to move the produced salt in view of the lockdown in force," laments the salt producer doing all that he could to move the scrapped salt to a godown nearby on his own amid the threat of a downpour.

The lockdown has come at most inopportune time as it was during April and May that salt production reaches its peak, explains another salt farmer Thambi Srinivasulu. "I am not in a position to break even for salt extraction this year," he says. The wet spell twice during April has also brought misery to them. Another salt producer G. Raghava says "every time rains occur, salt production is held up for about 10 days."

Another farmer, K. Brahananda Reddy, wants the State government to purchase salt from them and give it to people under the public distribution system, in order to get some relief as a severe labor shortage hit salt extraction. "We are also ready to supply salt fortified with iodine to get a better rate for our produce," they say and plead for institutional credit for processing the salt widely used in tanneries and chemical industrial units.

Salt being moved from a salt pan by workers in lockdown-bound Gundamala in Prakasam district, India.
Haitian iodized salt program weathers the COVID-19 storm

Chip Wirth; David O’Brien; James Reimer, Salt Project Director of the University of Notre Dame Salt Program

Formidable challenges are not new to Father Jean Michelet Dorescar, Congregation de Sainte Croix, C.S.C., and General Manager of Bon Sel Dayiti, a Haitian fortified salt processor. After all, his country endures the ravages of frequent and devastating natural disasters, compounded by chronic economic instability and political unrest. Despite Haiti being in the grips of the COVID-19 pandemic, Fr. Michelet continues to be tireless in his efforts to provide the country with fortified salt to prevent iodine deficiency and help eradicate lymphatic filariasis, a mosquito-borne disease that affects more than two million Haitians.

The Bon Sel facility remains Haiti’s sole salt processing facility and plays a crucial role in fortifying both local and imported salt, as well as supplying food processors and food service operators with iodized salt. By expanding into the food industry, particularly bakeries and bouillon makers, iodized salt is reaching a wider population in which consumption patterns have shifted away from the in-house use of salt. In addition, Fr. Michelet has overseen an expansion into the industrial salt industry, providing positive margins to help offset operating expenses. The Bon Sel facility operates as a social enterprise with support from the University of Notre Dame and Cargill Salt, using commercial principles and marketplace strategies to address the pressing challenges of iodine deficiency and lymphatic filariasis more effectively.

The COVID-19 pandemic presents new and daunting challenges to healthcare, with many programs now halted or severely curtailed. The Bon Sel program is an example of a community-based health intervention that can continue to deliver benefits when many other activities must be suspended due to COVID-19. In spite of the pandemic, Fr. Michelet and his team continue to leverage the Haitian salt supply chain to cost-effectively achieve healthcare objectives for preventing IDD. Bon Sel demonstrates how a commercial enterprise collaborating with like-minded government agencies and non-governmental organizations can serve as key contributors in addressing humanitarian needs.

With some packaging supplies running low and his labor force restricted, Fr. Michelet tends to the daily processing and fortification of salt. He is heartened by the ample amount of salt and is pleasantly surprised by the volume of sales and shipments to his commercial customers, particularly the bakeries and bouillon makers. While the mix of sales may shift somewhat, he accepts that the changes are merely part of the ebb and flow of supply and demand in the marketplace. Fr. Michelet is accustomed to having to adapt in the face of natural disasters, and COVID-19 is no exception—he continues to make the adjustments necessary to ensuring that the Haitian salt industry is in a position to benefit the health of his fellow Haitians. Once again, Bon Sel, Haiti’s indispensable salt program, weathers a storm.
Ekaterina Troshina, IGN national coordinator for Russia, on the frontlines against COVID-19

Prof. Ekaterina Troshina (on the right in the photo) has been the IGN National Coordinator in Russia for 15 years. She works as Head of Department of Therapeutic Endocrinology and Deputy Director of the in Moscow. She is coordinating IDD prevention activities in the Russian Federation, and has been working for many years to establish legislation for iodized salt at the national level.

Russia has a large number of COVID cases, about half of them in Moscow. As the number of COVID-19 cases in Moscow increased, several hospital departments of the National Medical Research Center for Endocrinology are admitting COVID patients with endocrine comorbidity (diabetes, thyroid and adrenal diseases, etc.) and Prof. Troshina is in charge of treatment of more than 40 patients with pneumonia and other COVID-19 complications.

Iodized salt coverage and COVID-19 in MENA/EMR

The coronavirus outbreak is first and foremost a human tragedy, affecting millions of people. It is having a growing impact on the consumption and production of iodized salt and flow of adequately iodized salt to the community level in Middle East North Africa (MENA)/Eastern Mediterranean (EMR) member states. The immediate and socio-economic impacts of the COVID-19 pandemic are likely to disproportionately impact the quality of the diets and nutrition services as well as practices of communities, pregnant women and breastfeeding mothers in the region especially with regard to salt iodization and food fortification.

The novel COVID-19 pandemic has put the world on a standstill, affecting major operations. In MENA/EMR the iodized salt production started to be halted in many member states, particularly in countries already having difficulty in sustaining the production such as in Yemen, Syria, Iraq, Libya, Morocco, Sudan. It has also disproportionately affected production in most of the other countries in the region, with the exception of the Gulf member states, where iodized salt is imported under rigorous monitoring and observation of quality control operating systems to sustain the coverage.

A major impact on the quality of iodized salt production and distribution is expected during and post the COVID-19 pandemic due to the interruption of proper monitoring, limitations on mobility and transportation, and implementation of social distancing measures, which collectively prohibit the labor force from reporting to
workplaces. The effects of quarantine and isolation on most businesses in the region are also impacting salt work.

To assess the current impact of COVID-19, we conducted a rapid on-line assessment in a few countries of the region to review the obstacles and appraise the magnitude of interruption in production, transportation, availability and affordability of iodized salt in the market. The exercise also assessed the obstacles in the importation of potassium iodate from the main sources, and the commitment of industry and policy makers to sustain the iodization program during and post the COVID-19 pandemic.

Our rapid assessment revealed that in many countries of the region there is a drop in manufacturing of iodized salt at industry level. Amongst 45 industry settings investigated, only 15 showed no interruption and reflected sustained commitment in producing iodized salt; these plants are mainly in Egypt, Iran, Tunisia, KSA, Kuwait, UAE and Oman. Furthermore, we investigated the reasons for sustaining or failure to sustain the production. We found that the major cause is the interruption in supply of potassium iodate and the labor force. At community level, we investigated reasons of not using iodized salt in cooking, whereby more than 40% responded that the restricted mobility and difficulty in reaching big hypermarkets were the main reasons for low consumption of iodized salt, while small groceries increased the purchase and selling of artisanal salt and coarse salt which is used in big quantities as cheap source for cooking, and sterilization purposes, including as a hand wash. Investigation regarding the availability of potassium iodate revealed that 80% of the salt industry in the region suffered from shortage of supply and an increase in price since the spread of the COVID-19 pandemic, coupled with interruption of all means of transportation. Our search also indicated that in only a few countries of the region – especially in Gulf member states – the stock of iodized salt is enough for the coming 90 days.

To explore the extent of decision-makers’ commitment towards strengthening regulatory monitoring during this period of COVID-19, we approached a few policy makers in selected countries of the region and we found that the main focus now is to curb the spread of COVID-19. Hence policy makers could be using the pandemic to refrain from imposing any regulatory measures or monitoring of iodized salt production flow to the market or to ensure that the household have access to iodized salt.

We recommend the so-called ‘SALT Approach’, an acronym which signifies “Stimulate and Support”, “Appreciate, Authenticity”, “Listen, Learn, Link”, and “Transfer, Team, Trust and Transform” towards improving USI and coverage during and post the COVID19 pandemic in MENA/EMR Member States.

Our starting point is: when people take ownership of their challenges, they will face the challenges. In addition, when a sense of ownership becomes embedded within iodized salt producers, the action they take is not affected by any external stimuli, such as the current pandemic episode. Creating such a sense of ownership could be a foundation to salt iodization sustainability in MENA-EMR region.

Salt producers enthused with political will are key to sustaining the progress achieved so far. Appreciation of the industry’s role in converting from production that is only consumption-driven, towards a more comprehensive marketing system where the salt industry takes part of the responsibility of awareness and communication among the wholesaler and retailers, as well as restriction of unhindered commerce in non-iodized salt. Agencies providing emergency food aid should ensure that salt provided as part of the food basket conforms to the required level of iodization, especially in countries currently under war conflict such as in Yemen, Syria, Iraq and Libya. It is time to listen to the small-scale producers to promote their participation in salt iodization activities by providing minimal incentives to such producers and forming cooperatives for easy accessibility to items of iodization, including potassium iodate. Finally, it is vital to introduce a universal IDD day celebration to inject the sense of ownership and encourage community leaders and new generations to grant more attention to this important public health issue.

Ensuring adequate supplies of iodized salt in MENA/EMR during the COVID-19 pandemic is important for family health.