



BRIGHTER FUTURES

Protecting early brain development through salt iodization

The UNICEF-GAIN Partnership Project

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ABBREVIATIONS

ASIN	Act for Salt Iodization Nationwide
CEE/CIS	Central and Eastern Europe and the Commonwealth of Independent States
CIDDP	Control of Iodine Deficiency Disorders Project
CIF	Central Iodization Facility
CLM	Cellule de Lutte contre la Malnutrition
ECOWAS	Economic Community of West African States
ECSA-HC	East, Central and Southern African Health Community
GAIN	Global Alliance for Improved Nutrition
ICDS	Integrated Child Development Services
IDD	iodine deficiency disorders
KIO ₃	potassium iodate
MT	metric tons
MUIC	median urinary iodine concentration
NGO	non-governmental organization
NIDDC	National Inter-Sectoral IDD Committee
PDS	Public Distribution System
SAARC	South Asian Association for Regional Cooperation
SUN	Scaling Up Nutrition Movement
UEMOA	Union économique et monétaire ouest-africaine
UNICEF	United Nations Children's Fund
USI	universal salt iodization
USSR	Former Union of Soviet Socialist Republics
WHO	World Health Organization

PREFACE

The global campaign to eliminate iodine deficiency

In September 1990, the largest gathering of world leaders ever assembled came to the United Nations in New York, adopting a Declaration on the Survival, Protection and Development of Children and a Plan of Action for implementing it over the next decade. An important part of the world leaders' vision was the virtual elimination of iodine deficiency, the world's leading cause of preventable mental impairment. Through a global movement to universally add iodine to edible salt, world leaders saw that they could protect the developing brains of children, adding billions of intelligence quotient points to the world.

Today, that goal has been achieved in many countries, with iodized salt now available to 86 per cent of the world's households¹ and increasingly in use throughout the food industry. This improvement in iodine nutrition translates into a near elimination globally of new cases of cretinism, the most serious form of iodine deficiency. It has decreased the incidence of goiter and adverse pregnancy outcomes such as stillbirths, while protecting the intellectual capacity of hundreds of millions of children worldwide, with a significant impact on the lives of future generations.

In the context of this global campaign, this report documents a part of that story: the work of the UNICEF-GAIN Partnership Project, funded by the Bill & Melinda Gates Foundation from 2008 to 2015, to improve iodine nutrition through salt iodization in 13 priority countries, as well as regionally and worldwide. The report highlights the success of the global effort to eliminate iodine deficiency disorders (IDD) as a public health problem. We hope that the report will provide insights on how to better target programme vulnerabilities, sustain our successes, and ensure that future generations are protected against the debilitating effects of IDD.





SUMMARY

Adapting programming to challenging contexts

The UNICEF-GAIN Partnership Project was implemented from 2008 to 2015 in 13 priority countries with large populations that were unprotected against iodine deficiency. Efforts to increase the use of iodized, food-grade salt in participating countries yielded important results. Over this period, an additional 466 million people consumed adequately iodized salt, and they are therefore now protected against iodine deficiency. This includes an estimated 18.2 million pregnant and lactating women, leading to the protection of newborn cognitive health, as well as 113 million children, aged 6 months to 15 years old, whose brains are protected against the devastating effects of iodine deficiency.

Over the grant period, the Partnership had to adapt its strategies to new programming contexts. At the outset, we focused our efforts on increasing the overall supply of adequately iodized salt and improving household consumption levels. It soon became apparent, however, that even in predominantly low- and middle-income countries, increasing amounts of salt were being consumed through processed foods and condiments, thus requiring these sources to be considered and monitored alongside household salt in national iodine programmes. Using World Health Organization (WHO) recommendations on these issues, the Partnership worked to capitalize on

commonalities between two mutually improving public health objectives. Working closely with the food industry and public health officials, we have reinforced the message that as sodium intakes decrease, salt iodine content can be adjusted to maintain optimal population iodine status.

Data from China also suggested that excessive intakes of iodine would need to be monitored and avoided alongside deficiency. As a result, the Partnership shifted its focus from merely preventing deficient iodine intakes to achieving optimal iodine intakes. This, in turn, informed many of the monitoring and communication activities designed as part of the project. Finally, with a changing global nutrition landscape, the Partnership had to position iodine nutrition programmes within a broadening and increasingly multi-sectoral nutrition agenda.

Progress has differed across the regions. In many countries in Europe and Central Asia, the salt industry has made iodization part of good manufacturing practices. In Russia and Ukraine – the two countries supported by the Partnership from this geographic region – the importance of the food industry's use of iodized salt for achieving adequate population iodine intake has become evident, but the absence of political commitment to mandatory legislation on salt iodization highlights the need for continued

advocacy to make iodine deficiency control a national priority.

In East Asia and the Pacific, strong policies and legislation helped establish iodized salt as the norm for households and industry. China established a robust monitoring and surveillance system that has documented greater than 90 per cent use of iodized salt, and achievement of adequate iodine intake throughout the country. In Indonesia, a focus on local production of salt and decentralization helped provinces improve household consumption of iodized salt, while in the Philippines a renewed focus on enforcement of existing regulations was created.

In Eastern and Southern Africa, salt iodization has become linked to the broader food fortification and nutrition agenda, with governments concentrating on all programme elements and building synergism with other nutrition initiatives. Ethiopia had to rebuild its programme after the conflict with Eritrea stopped its normal supply of iodized salt, and over the past years has effectively established a salt industry and dramatically increased the supply of iodized salt.

In the Middle East and North Africa, important progress was realized towards controlling iodine deficiency through strengthening of salt iodization programmes and the salt industry.

Egypt established effective coordination and oversight mechanisms and has thus made gains towards expanding the use of iodized salt and achieving adequate population iodine status.

In South Asia, salt iodization helped drive the broader nutrition agenda and effectively control IDD in all of the region's countries. In Bangladesh, effective iodine deficiency control is supported by a strong policy and legislative environment, and coordination among all key stakeholders. In India, vulnerable groups benefited from increased access to iodized salt through public distribution programmes, and the first ever national iodine survey validated that its 1.25 billion people receive adequate amounts of iodine. In Pakistan, new national legislation on salt iodization is being championed and complements efforts to increase iodized salt production and raise awareness about iodine deficiency.

In West and Central Africa, changing trade patterns have affected the salt industry, but there has been good regional cooperation in harmonizing standards, including those for iodized salt. In Ghana, seasoning cubes containing iodized salt show promise as a major source of iodine in the diet to prevent iodine deficiency. In the Niger, stakeholders have updated national legislation to address loopholes for imported salt that is not iodized and have

The groundwork has been set in the 13 Partnership countries. The structures and capacity have been strengthened to continue the path towards the sustainable achievement of optimal iodine nutrition through technical advances, improved government leadership in some countries, better commitment to monitoring, and enhanced public perceptions. At the same time, the rapidly shifting context in some Partnership countries required adjustment of targets throughout the project period.

Going forward, a number of constraints will need to be addressed in order to ensure the long-term sustainability of national iodine programmes. Iodine nutrition needs to be better linked to national nutrition and development priorities. There is a continued need to further strengthen regulatory monitoring systems as part of broader food control, and to refine performance measurement systems and metrics to improve the timely utilization of data for programme improvement. There is also a need to better understand salt consumption patterns, including the use of iodized salt by the food industry, and whether changes in consumption patterns call for programmatic adjustments. Finally, monitoring systems need to be modified to identify groups at risk for iodine deficiency and to improve their iodine status.

Nevertheless, global progress to control IDD is

for flexibility, vigilance and, above all, strong partnership between all stakeholders to advance iodine nutrition and eliminate iodine deficiency. UNICEF and GAIN, working with governments, industries, donors and partners, are committed to maintaining their support to create a brighter future for mothers and children through salt iodization.

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