IDD reappears in Vietnam as vigilance slips

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HANOI, 9 November 2012. Your LCD TV screen is made with it; your brain does not function well without it. Meet iodine, a multifunctional chemical element found in soil and seawater that when mixed with table salt, is the most effective way to thwart preventable brain damage. Consumed in inadequate quantities by millions of children globally, iodine deficiency disorders (IDD) are one of the leading causes of mental retardation, say health experts. But with few physical signs – save a swollen thyroid gland, or goiter – to herald its presence, IDD often debilitates quietly.

“With an infection, you have fever. But for micronutrient [deficiencies], the impact is hidden,” said Le Phong, coordinator of IDD activities at the government Hospital of Endocrinology in Vietnam’s capital, Hanoi.
Where nature does not contain adequate iodine, iodine-fortified table salt has been used widely - and successfully - in the past two decades to boost iodine intake in dozens of countries. In 1993, 110 countries were classified as “iodine-deficient”. Salt iodization brought that figure down to 32 in 2012, according to ICCIDD and UNICEF.

A number of countries, like Vietnam, eliminated IDD by outlawing non-iodized salt, regulating the salt industry, investing in health education to inform people about the link between salt and brain development, equipping laboratories and training technicians to measure iodine content in people and foods - only to see a resurgence in IDD when vigilance slipped. Since declaring IDD under control in 2005, the country is once again facing falling iodine levels and rising complications, say health workers.

“We are losing a generation,” said Le from the Hospital of Endocrinology, referring to studies that link insufficient iodine intake during pregnancy to stillbirths, miscarriage, low birth weight, shortened child survival and mental retardation (irreversible even if the child is later exposed to sufficient quantities of iodine).

In 1993 two out of 10 schoolchildren surveyed in Vietnam had goiter and the median concentration of iodine in their urine (UIC) was far below criteria for adequate iodine nutrition levels, which start at a UIC of 100 μg/L daily for the general population, and go up to 250 μg/L for pregnant and lactating women. The median UIC of the surveyed schoolchildren was 32 μg/L. The following year the prime minister passed a decree calling for iodized salt in all food preparation; gave US$3.1 million to the Hospital of Endocrinology to manage the country’s battle against IDD; and set 2005 as the deadline to control IDD.

**Goal reached**

By 2005, the goiter rate fell to less than 4 percent, from 22 percent in 1993. Median UIC in schoolchildren 8-12 years old had almost tripled to 113 μg/L in that period. Slightly more than nine out of 10 people surveyed nationwide reported getting enough iodized salt in their diet, a milestone known as universal salt iodization (USI). Mission accomplished.

But since then, funding to control IDD shrank to some $300,000 annually; a new decree was passed in 2006 that no longer made salt iodization mandatory; and the number of households using salt with sufficient iodine content has halved, according to a 2011 government survey that tested salt’s iodine content in more than 11,000 households nationwide.

*Not only table salt, but also many condiments and special seasonings in Vietnam contain iodine*  
*Photo: Phuong Tran/IRIN*

*Mountain communities are hit hardest by deficiency*  
*Photo: Contributor/IRIN*
Median UIC among women of reproductive age (15-44) fell from 122 μg/L in 2006 to 83 μg/L in 2009. While pregnant women require higher levels of iodine than the general population, only 18 percent of them in Dong Thap, a southern province in Vietnam’s Mekong Delta region, had the iodine levels needed to give birth to healthy newborns, according to a 2008 government survey.

What went wrong?
Downgrading IDD control from a national health priority to routine activities in the public health sector, with provincial authorities making decisions, “seriously affected” IDD control. Rather than giving iodized salt subsidies to communities most at risk of IDD living in mountainous areas, provincial officials gave cash (no conditions) to poor families to buy the salt for themselves. But rarely did that happen. With no adequate IEC [information, education and communication], it appears that most people used the money for other things instead of buying iodized salt.

Starting in 2006, the central committee in control of IDD was dismantled with all responsibility given to the Hospital of Endocrinology, which Le, the director of the hospital’s IDD control activities, said is too overstretched to do much health promotion or education. In a 2008-09 survey by his unit, 43 percent of mothers linked goiter to iodine deficiency, while only 19 percent knew lack of iodine could lead to mental retardation. Le said since 2006 when the national government stopped supporting the country’s 64 provincial labs set up to monitor salt iodine content, most are no longer operational. The only lab to receive government funding is Le’s.

Meanwhile, the global price of potassium iodate (KIO3), the form of iodine used to fortify salt, increased. A 2010 study of the global iodine market noted how a current global shortage of iodine, exacerbated by the 2010 twin disasters in Japan (a KIO3 producer), will keep prices unstable until up to late 2012. KIO3 prices nearly doubled between 2003 and 2011, reaching $60 per kilogram.

“We get less money for it and are getting less for our money,” said Le. Based on WHO’s recommendation of six grams of salt daily, Vietnam needs 187,000 tons of iodized salt annually. The Hospital of Endocrinology – currently the country’s sole purchaser of KIO3 – met 16 percent of that demand in 2011.

Building back
Boosting iodine levels can “theoretically be fairly fast, within months,” - as soon as iodized salt is sold - said Maria Andersson, of ICCIDD, a scientist with the Human Nutrition Laboratory at the Swiss Federal Institute of Technology and co-author of analyses about IDD trends over the past decade.

But the reality of how long it takes to reach the entire population with iodized salt depends on the effectiveness, knowledge and commitment of salt producers to iodize salt; whether laws require it; monitoring and control measures for iodine content; and the support the food industry has to include iodized salt in its products, she told IRIN.

For iodine nutrition to improve, the iodized salt needs to make it into households, and into their food - and most importantly - be consumed, said Andersson. It also needs to be well-packed so iodine is not lost during storage and transit. It is also a question of how much time it takes to clear the shelves of non-iodized salt, which “won’t happen overnight”, said Roger Mathisen, a nutrition specialist at UNICEF’s office in Vietnam.

Along with salt, what else to fortify?
In Vietnam, agencies and NGOs have looked into fortifying widely consumed fish sauce (made by fermenting fish with salt) with nutrients missing in diets. Also popular is ‘bot canh’, a powder that includes salt, pepper and monosodium glutamate. In a 2010 survey of some 400 pregnant women in rural northern Vietnam (Ha Nam Province, 50km south of the capital), a quarter of the women reported not using iodized salt or cooking powders. Women said they felt iodized salt made food taste bitter and that monosodium glutamate or ‘bot canh’ made it taste “smoother”.

Salt iodization and fortification levels need to take account of the population’s iodine needs and how - and how much - people consume salt, Andersson added. It is better to target salt, as most condiments already include it, said UNICEF’s Mathisen, who noted regulating the salt industry is easier than setting up parallel monitoring and enforcement systems.

With funding from the US Agency for International Development, UNICEF is advocating that the government revive salt iodization by making it mandatory once again, re-establishing national oversight, and shifting KIO3 procurement from the government’s budget to the salt industry’s so the consumer bears the cost, which is minimal, said Le with the Hospital of Endocrinology. “We are talking about a price difference [between iodized and non-iodized salt] of 250 VND [one US cent] - less than the cost of a cigarette.”

Parliamentarians have agreed on the need to control IDD, but are reticent to tackle it again, he added. “It can be harder rebuilding something than it was to build it in the first place.” But it is not just a question of building back, said Mathisen. “The issue is how to build back better. What existed was obviously not sustainable.”

Its important that iodized salt is used in processed foods in Vietnam
Photo: Phuong Tran/IRIN
Status of the National IDD Program in Vietnam in 2012: a ICCIDD/UNICEF/WHO report

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A joint mission of ICCIDD, UNICEF and WHO visited Vietnam on 7-11 May, 2012 to evaluate the IDD control program. The following is the executive summary and recommendations from that report.

Executive Summary
Vietnam had a very successful Iodine Deficiency Disorders control Program between 1993-2005. The Government of Vietnam set three targeted goals to eliminate IDD: Goiter Rate <5%, Median Urinary Iodine Concentration >100mcg/L and Household iodized Salt Coverage >90%; these were achieved in 2005.

The Ministry of Health in Vietnam deemed that the goals had been reached and IDD activities would simply become part of the routine activities of local public health sector. The Government Decree 163 issued in 2005 no longer called for mandatory salt iodization for human consumption and food processing. There was no specific annual budget allocation for IDD activities. The effective IDD Management Team under the Hospital of Endocrinology in Hanoi was dissolved. Monitoring and communication activities to promote IDD have clearly been inadequate since 2005.

Recent survey data (2008) revealed, from some provincial areas, that IDD are again a public health problem in the country. In the Mekong Delta provinces, IDD is worsening. Household usage of adequately iodized salt went from more than 90% in 2005 to less than 50% in 2011. Ethnic minorities living in the mountainous areas suffer a similar fate as those living in the South West and South East areas of the country.

The joint ICCIDD/UNICEF/WHO mission identified a number of achievements and constraints in Viet Nam. These have been discussed with appropriate health authorities. At the end of the mission, the team provided a summary of its conclusions and recommendations to the MOH.

Recommendations
1. Revise current Decree 163 by including mandatory iodization of all edible salt for human consumption and food processing, including various types of salt-based seasonings. According to a recent study conducted by the National Institute of Nutrition, sodium is consumed mostly through various seasoning products, not as pure salt. Appropriate stakeholders, including salt industry representatives should be identified and included in this revision process; with clear coordination mechanisms.
2. Re-establish a National Committee for IDD Control, involving health and other sectors, with clear goals, targets and a time frame.
3. Re-establish the Hospital of Endocrinology in Hanoi as the national monitoring laboratory to oversee all laboratories carrying out IDD monitoring functions (at national and sub-national levels), including laboratories in the salt factories. Immediate next steps are highlighted in the report.
4. The management structure and governance of the National Hospital of Endocrinology, 7 regional Laboratories, 64 provincial laboratories and 72 salt laboratories, must be defined with clear roles and responsibilities outlined and documented.
5. Purchase of KIO3 should not be the function of the National Hospital of Endocrinology or the MOH and it should be industry based. In the longer term, the cost of KIO3 should be incorporated into the price of iodized salt and this should be paid for by consumers. This pricing structure must be transparent, reasonable and affordable by consumers, after broad consultation with appropriate authorities. In the meantime, it is essential to continue providing subsidized iodized salt, in-kind (as opposed to providing cash to households) in areas where subsidies are considered necessary. Incentives for companies should also be put in place such as tax reductions/ exemptions on purchase of equipment, supplies, premix, etc.
6. Information, Education and Communication activities have been minimal and messages have mostly focused on the elimination of endemic goiter rather than prevention of brain development from iodine deficiency and its impact on productivity and economic development. It is time to consider turning the table around to concentrate on prevention of brain damage as a result of IDD, develop messages promoting iodized salt to improve IQ scores and contribute to the development of the whole nation.
7. The government must mobilize sufficient resources to support the revitalization of the national IDD control and prevention program and allow some flexibility for provinces to use resources to support IDD.
8. In view of the growing awareness of the rising tide of non-communicable diseases in Viet Nam and the beginning of a campaign to reduce salt consumption to decrease hypertension in the population, it is both necessary and advantageous to link the IDD program with the sodium reduction program. This should be done at 3 levels: a) by advocating for a reduction in sodium intake through all sodium containing seasonings; b) by monitoring jointly sodium and iodine intake; c) by ensuring that achievements in reducing sodium intake will be matched by progressive increases in iodine concentration of salt and other sodium containing products, as required to maintain good iodine status.
9. It is proposed that a review meeting be scheduled about 2 years after the submission of these recommendations to the appropriate authority, to monitor progress in achieving the recommended targets and to provide any further support required.