

VITAMIN & MINERAL DEFICIENCY

The Republic of Moldova is planning for more bold action to overcome large-scale losses of national health, brainpower, energy and productivity

A **Damage Assessment**
& **Protection Audit**
for

MOLDOVA 2006

LEADERSHIP BRIEFING

Chisinau, December 2006

VM deficiency: Damage Assessment for MOLDOVA 2006

Data on VM deficiency are imperfect and the seriousness of the problem demands better monitoring. Nonetheless, estimates of its overall impact are essential for national decision-making. Using best available data from a variety of sources, impact calculations have been made for more than 90 nations.

If no action would be taken to overcome VM deficiency, the damage inflicted on the people and the nation of Moldova can be estimated as follows:

- More than 30% of Moldova's 6-to-24 month-old children are at risk of disrupted brain development. **Cause: iron deficiency**
- An estimated 75 - 100 infants each year are at increased risk of death in the period immediately after birth. **Cause: severe anaemia in mothers**
- The deaths of several young Kyrgyz women every year in pregnancy and childbirth. **Cause: severe iron deficiency anaemia**
- Approximately 50 severe birth defects annually, including infantile paralysis. **Cause: folate deficiency**
- Suspected increase in deaths among adults from heart disease and stroke. **Cause: folate deficiency**
- In Moldova, more than 5,000 babies are born each year with intellectual impairment. **Cause: the mother was iodine deficient during pregnancy**
- Lowered productivity of the adult work-force. Losses to Moldova estimated at US\$ 21.4million each year, or 0.7% of GDP. **Cause: iron and iodine deficiency**
- A significant but unmeasured burden on health services and educational systems, and on families and society caring for children left disabled or mentally impaired

VM DEFICIENCY
PROTECTION AUDIT
FOR REPUBLIC OF
MOLDOVA

SALT IODISATION

About two of every three newborns in Moldova are currently being protected against mental impairment by the use of iodised salt in their households when their mother was pregnant.

IRON SUPPLEMENTS

Repeatedly, surveys show that about one third of the adult women and young children in Moldova have anaemia. Despite iron supplementation in pregnant women, no evidence is available of progress to reduce anaemia in Moldova. Only fortification can tackle the problem at the required scale.

FLOUR FORTIFICATION

Moldova is not among the 51 nations in the world that have enacted mandatory legislation that flour should be fortified with iron. The Republic is therefore missing the opportunity to protect the mental and physical health of its people and to increase the nation's productivity.

Moldova is not among the 38 countries in the world that require the fortification of flour with folic acid. Thus, up to 50 babies with folate deficiency-associated severe birth defects, including infantile paralysis, continue to be born each year. It is strongly suspected that fortifying flour with folic acid also reduces the risk of death among adults from heart disease and stroke.

VM deficiency: Protection Audit for MOLDOVA 2006

Estimation of the benefits obtained from actions to address VM deficiency is not perfect. Nevertheless, it is important to assess and share results of national actions that are already underway, and thereby stimulate a sense of achievement and resolve. Using best available data from a variety of reports and sources, the following progress calculations have been made for Moldova.

Benefits gained from the known and affordable strategies of food fortification, vitamin & mineral supplementation and public education among the people and in the nation of the Republic of Moldova are estimated as follows:

- Two out of every three babies born each year in Moldova are protected against intellectual impairment caused by the brain damage of iodine deficiency. **Reason: Use of iodized salt in the household during mother's pregnancy**
- Approximately 10% of the nation's 6-to-24 month-old children are protected against disruption of their brain development. **Reason: Their households have started using fortified food products voluntarily**
- Some unmeasured, but limited, reduction of severe iron deficiency, leading to less death risk among infants and young women during pregnancy and around childbirth. **Reason: Iron/folate supplements**
- Annual losses in GDP from lowered productivity of the adult work-force are being reduced. **Reason: The Republic of Moldova is planning steadfast progress in actions to fortify all salt and wheat flour, which benefits the entire population**
- The beginning of a dent in the burden on health services, educational systems, and on families and society caring for children left disabled or mentally impaired. **Reason: A planned, coordinated strategy to address VM deficiency is gaining acceptance in the Republic of Moldova**

VM DEFICIENCY DAMAGE ASSESSMENT FOR REPUBLIC OF MOLDOVA

IRON DEFICIENCY ANAEMIA

The Moldova Demographic Health Survey of 2005, conducted by the National Center for Preventive Medicine and covering more than 11,000 households throughout the country, reports that 32% of young children and 28% of women of reproductive age have anaemia. International experience predicts that at these levels of anemia in the most vulnerable groups, iron deficiency affects virtually the entire population. Thus, addressing the problem will require a universal solution.

IODINE DEFICIENCY

The finding of goiter (neck enlargement) in 37% of schoolchildren in 1996 was confirmation that iodine deficiency threatened the brain development of newborns and infants in Moldova. The above-cited Demographic Health Survey in 2005 found adequately iodised in 59% of the households in Moldova. Very recently, a specialised national survey conducted by the National Center for Preventive Medicine has found that more than two out of three households in Moldova are now consuming adequately iodised salt.

VITAMIN A DEFICIENCY

Thanks to the widespread consumption of fruits and vegetables, complemented by an occasional amount of milk and eggs, it is not likely that vitamin A deficiency is a public health issue in young children of Moldova.

“It is no longer a question of treating severe deficiency in individuals. It is a question of reaching out to whole populations to protect them against the devastating consequences of even moderate forms of vitamin and mineral deficiency.”

Carol Bellamy, Executive Director, UNICEF

“Fortifying foods with basic vitamins and minerals is both essential and affordable.”

Bill Gates, co-founder, Bill and Melinda Gates Foundation

“For nearly 40 years, food fortification has protected the populations of the United States, Canada, and many other countries. It is long past the time when the same protection was available to the peoples of the developing world.”

Nevin Scrimshaw, President, International Nutrition Foundation

“The case for the elimination of vitamin and mineral deficiency is compelling beyond description. The return on investment is beyond equal.”

Rolf Carriere, Executive Director, Global Alliance for Improved Nutrition

“This is a vital economic and humanitarian cause and we in the food industry are uniquely positioned to help progress.”

Brendan Stewart, Chairman, Australian Wheat Board

“The cost is minuscule. The benefit enormous. We have acted on this issue both because it is right – and because it presents our business in a positive light.”

Philip Punarma, Chief Commercial Officer, Bogosari Flour Mills, Indonesia

“Vitamin and mineral deficiencies deprive 1 billion people world-wide of their intellect, strength and vitality”

The World Bank

“The road to regional health and life-long productivity cannot be passed without removing the obstacle of vitamin and mineral deficiency.”

Joseph Hunt, Health and Nutrition Advisor, Asian Development Bank

“We now have the knowledge and the solutions that can protect the muscles, brains and blood of whole populations at an extraordinarily low cost.”

Venkatesh Mannar, President, Micronutrient Initiative

A MESSAGE TO LEADERSHIP

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VM DEFICIENCY – THE BREAKDOWN

Iodine deficiency is the leading cause of preventable mental impairment in the world. It significantly reduces mental capacity and work potential. In pregnancy, it causes babies to be born dead, physically disabled, or with severe brain damage.

Iron deficiency reduces activity levels and productivity in whole populations. In children 6 to 24 months, it disrupts normal brain development. Effects on children include stunting, sickliness, poor school attendance, and lower levels of concentration and memory. Severe anaemia also causes higher death rates in childbirth.

Folate deficiency before and during early pregnancy is a major cause of serious birth defects. In adults it is associated with a higher rate of deaths from heart disease and stroke.

A problem not only for the poor:

Iron deficiency still affects up to 10% of the population in Western Europe and the United States.

Iodine deficiency remains a matter of concern in countries like Germany, Spain and the United States.

Folate deficiency is still causing birth defects in Europe, where flour is not fortified with folic acid.

SOME NATIONS MOVING RAPIDLY

Damage assessment reports have been issued for more than 90 individual nations. Some of these nations are now moving rapidly against VM Deficiency:

- 49 nations in the developing world have already passed the 75% mark for salt iodization.
- 39 developing countries are reaching 75% or more of their young children with vitamin A supplements.
- 51 nations, including the USA and Canada, now require the fortification of flour with iron.
- 40 nations, again including the USA and Canada, are fortifying flour with folic acid.

This **Damage Assessment** and **Protection Audit** report was developed for:

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