



PROGRESS REPORT

**IODINE DEFICIENCY DISORDERS  
PREVENTION PROJECT**

with support from  
**The United States Agency for International Development  
(USAID)**

**UNICEF Macedonia  
December, 2005**

## CONTRIBUTION DATA

Progress report to	<b>United States Agency for International Development (USAID)</b>
Assisted country:	<b>FYROM</b>
Assisted Programme/Project:	<b>Early Childhood and Education Programme/Mother and Child Health</b>
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Funds used to date:	<b>\$16,723.00</b>
Duration of contribution	<b>17/11/2004 – 30/09/2007</b>
Period covered by the report:	<b>January 2005 – December 2005</b>

## I. BACKGROUND INFORMATION

In the past Macedonia was an iodine deficient area with a high prevalence of goiter in certain districts. The problem was identified for the first time in the 1950s, when approximately 200,000 people with goiter were registered. In the 1990s, the problem still existed and it was measured that in certain regions 60% of the primary schoolchildren had goiter.

In 1995, UNICEF started its cooperation with the Ministry of Health within the project "Elimination of Iodine Deficiency". A national survey using WHO/UNICEF and ICCIDD methods was undertaken which showed goiter in 18.7% of cases (range 7.8-29.8%) and the median UI excretion of 117 µg/L.

Following the findings of the survey and the recommendations to initiate a comprehensive national programme for achieving optimum iodine nutrition, in 1998, the Ministry of Health established a National Committee for Iodine Deficiency to plan, coordinate and manage activities aimed at eliminating IDD in the country. A wide range of activities was conducted including enactment and adoption of new regulations for salt iodization (20-30 mg of iodine per kg of salt), training of inspectors from the State Health/Sanitary Inspectorate for application of these regulations, training of health workers, educational activities targeting general policy makers, and in particular health policy makers, health workers, managers in salt production and trade, non-governmental organizations and households, etc.

In 2003, a team of experts nominated by ICCIDD, UNICEF, WHO and the Network for Sustained Elimination of IDD, assessed all aspects of the National IDD Programme and concluded that the National Committee for Iodine Deficiency had succeeded in bringing iodine intake into the range of iodine sufficiency. Surveys in 2002 found the national median Urinary Iodine Excretion (UIE) 198.5 mg/L with 11.8% of the population below 100 mg/L and 80% of households consuming adequately iodized salt...." In addition, there is a strong political commitment to USI/IDD and adequate National USI regulations are in place and fully implemented with a well-structured program of salt monitoring. This ensures that the current status of iodine sufficiency will be maintained in the future.

In order to sustain USI in the future, the experts' team made the following recommendations:

- Surveys among school children should be performed every 2 to 3 years, using the same methodology.
- Screening of neonatal TSH should be extended to all newborns.
- To continue to produce and import only iodised salt so that the use of iodised salt remains compulsory for all edible salt according to the rule book. Clear sanctions for non-compliance should be defined for producers, importers, and iodisation plants alike.
- Control of iodised salt at the border, at the iodization plants, in the food industry sector, and at the consumer level must be continued.
- Education and information on ID at the level of the consumers and key personalities must be continued and reinforced"<sup>1</sup>.

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<sup>1</sup> External Review of Progress in F.Y. Republic of Macedonia Towards Sustainable Optimal Iodine Nutrition, Skopje, 19-23 May 2003, Report by the Team of Experts nominated by the Network for Sustained Elimination of Iodine Deficiency

## II. UTILIZATION OF THE \$36,364 GRANT

### 2.1. INTRODUCTION

The overall goal of the project is to support the country in sustained elimination of IDD through Universal Salt Iodisation (USI).

Specific objectives are:

- To improve the existing salt quality control mechanisms in Public Health Institutes, Health and Sanitary Inspectorate and Market Inspectorate;
- To regularly monitor iodine status through organization of salt surveys and urinary iodine excretion surveys;
- To upgrade the capacities of the salt monitoring laboratories in the public health institutes;
- To upgrade the capacities of the national laboratory for urinary iodine excretion;
- To establish and upgrade capacities of the national center for data collection, analysis and reporting;
- To raise general public awareness on the problem of iodine deficiency, its consequences and create sustainable demand for iodized salt;
- To raise awareness among health workers on the use of iodised salt by children & pregnant women
- To support and facilitate regional information sharing and exchange of experiences.

Main partners are the Market Inspection, National Food and Nutrition Inspectorate, Republic Institute for Health Protection, Ministry of Education, Institute of Pathophysiology, Consumers' Organisation under the overall coordinating role of the National IDD Committee and the Ministry of Health.

The implementation of activities under the USAID supported project started in 2003. The first contribution was used to support the activities implemented in 2003 and 2004, mainly preparatory activities for the external review mission which took place in May 2003 and follow-up recommendations from the external review.

The new contribution was received by end of 2004 and was mainly used to support activities in 2005.

### 2.2. PROJECT ACTIVITIES

In its first meeting held in February 2004, the National ID Committee presented activities accomplished in 2004 and the situation with regard to USI and iodine status of the population. The conclusion was that the country maintains the status of optimum iodine nutrition. At the same meeting, the national ID Committee endorsed the annual programme for 2005. Based on this programme, the following activities were completed with the support of the contribution:

#### A. Monitoring of the status of iodine nutrition

1) **National Iodine Urinary Excretion Survey**- As per the experts' recommendations, the status of iodine nutrition has to be measured every second year. The National Expert team from the Institute of Pathophysiology conducted the iodine urinary excretion survey in the period September-December 2005. The survey covered 1,064 from 30 primary schools in the country. The preliminary results are the following:

- With palpation method, only 2.7% of the surveyed children have first degree goiter;
- With ultrasound method, the median value of thyroid gland volume was measured 2.74 ml;
- Urinary Iodine Excretion (UIE) showed median value of 222.9 mg/L with only 8% of children with UIE below 50 mg/L).

It can be concluded that the status of optimum iodine nutrition among the general population is maintained.

The salt survey showed that 92.7% of the salt samples taken from the households of the surveyed children are adequately iodised (only 2.9% were not adequately iodized or below 20 mg/kg). In addition, during the UIE survey salt was collected from the local shops in the surveyed communities and examined by the Republic Institute for Health Protection. These results match the results from the salt samples taken from the households.

The conclusion is that Macedonia maintains Universal Salt Iodisation (USI).

**2) Measurement of iodine status in pregnant and lactating women** - The survey was initiated to assess whether the current salt iodisation regime is effective and is covering the iodine needs of pregnant and lactating women. The survey includes measurement of urinary iodine excretion, measurement of the thyroid gland with palpation and ultrasound methods in the first semester of pregnancy, at the end of pregnancy and in the fifth month of lactation (including measurement of iodine in the breast milk).

The survey covers pregnant women from four cities in Macedonia (Veles, Berovo, Skopje and Kicevo). The first phase of the survey (first semester of pregnancy) covered 113 pregnant women at the average age of 26.9 and gestation period 4-24 weeks (median 11 week).

The preliminary results of the first phase are the following:

- With palpation method, 9.6% of the surveyed women had first and second degree goiter;
- With ultrasound method, the volume was 8.35 ml (median) or within the range 3.15-30.98 ml;
- Urinary iodine excretion showed median value of 193.4 mg/L or values in the range 34.4-443.5 mg/L.

The median value among pregnant women is still lower than the median value measured among the general population, i.e. among school children. However, a more comprehensive comparative analysis will be possible only upon completion of the survey in 2006.

**3) Determining daily salt consumption**- This is also an activity which was recommended by the experts. The method used is measurement of Na in urine collected during 24 hours in 42 adults (32 women and 10 men). Based on the grams of Na measured, it was calculated that the daily salt consumption in the country is on average of 10.42 grams or in the range 4.4-14.99 grams.

### **Support to the national UIE laboratory and Food and Nutrition Directorate**

In 2005, the National Laboratory for UIE was provided with small supplies and equipment. These supplies were used to support the ongoing surveys.

In addition, UNICEF procured 500 salt test kits and distributed them to the Inspectors from the Food and Nutrition Directorate now in charge of salt quality control.

## **2.3 RESULTS ACHIEVED**

In 2005, salt survey and urinary iodine excretion survey using standard ICCIDD/UNICEF/WHO methodology were conducted. The results confirmed the positive trend in indicators, median UIE at 222.9 µg/L and 93% of salt sample with optimum iodine content. The salt factory “Izvor” is increasing the annual salt production and since recently has become the authorized dealer of the salt produced, Tuzla. Thus, they are now covering 80% of the salt needs in the country. The number of salt importers has halved from 51 in 2002 to 26 in 2004. As per the experts’ team recommendations, data from salt used in food industry was presented for the first time and commitment was expressed to maintain this component of reporting in future.

In 2005, the transfer of responsibilities with regard to quality salt control from the State Health and Sanitary Inspectorate to the newly established Food and Nutrition Directorate went smoothly. The IDD Committee organized a one-day seminar for all inspectors now part of the Food and Nutrition Directorate to inform them about the effectiveness of the current salt quality control mechanism and emphasize the importance of maintaining this result. The first report from the Directorate’s work is expected in early 2006.

The Consumers’ organization continued its educational activities related to IDD through its ten branches in the country. IDD education is now part of their annual report and regular activities.

## **2.4 CONSTRAINTS**

1. The need for development and implementation of clear sanctions for non-compliance for producers, importers and iodization plants with the regulation for salt iodization is still relevant.
2. The threat from bird flu mobilized all relevant institutions in the country around the development of a national action plan for protection from bird flu. This meant that planned activities, such as the meeting with Vet inspectors and the second meeting with the Food and Nutrition Directorate, had to be postponed to 2006.
3. The system on USI with regard to data collection and reporting is already established but requires further strengthening and “protection” within the context of the ongoing reorganization of inspection services.

## **2.5 FUTURE ACTIONS**

### **Monitoring and Evaluation:**

1. Need to ensure that existing salt quality monitoring mechanisms - which are now part of different inspectorates (health/sanitary, market, veterinary) belonging to different sectors (health, economy, agriculture) - are maintained in the future reforms within the National Directorate for Food and Nutrition.
2. Support the National ID Committee in monitoring iodine status of the population and salt quality control, but also in strengthening the national reporting and monitoring system.

The UIE survey among pregnant women will contribute to the world research and debate on whether USI is sufficient to cover needs for iodine of pregnant and lactating women. In Macedonia, there is

an increased understanding and awareness that USI is the most effective strategy for maintaining optimum iodine nutrition.

## Unified Reporting on Progress toward Optimum Iodine Nutrition

Indicators and Criteria	Salt Iodization Status		Iodine Nutrition Status		Occurrence of National Efforts									
	% of households using adequately iodized salt	Trend in salt iodization since mid-decade of 1990s	National median UIC (ug/L) and year	% of population <100ug/L	A National multi-sector Coalition is effective and functional	Political Commitment to USI/IDD elimination is evident	A National Executive Officer has been appointed	A national USI law or iodized salt regulations have been enacted	Commitment to (re)assess national progress is evident	Consumer education and social mobilization is continuous	Regular salt iodine data collected at factory, retail & household	Regular urine iodine data collected of school children	Salt industry maintains quality assurance of iodized salt	A database established with mandatory public reporting
<b>Afghanistan *</b>	<b>11*</b>	↗	-			X	X							
<b>Belarus ***</b>	<b>37</b>	↗	<b>45</b>	<b>80,9</b>		X		X	X		X	X	X	
<b>Bhutan **</b>	<b>82</b>	↘	<b>256</b>	<b>7,4</b>	X	X	X	X	X	X	X	X	X	X
<b>Cambodia *</b>	<b>12*</b>	→	-			X				X			X	
<b>China *</b>	<b>93</b>	→	<b>241</b>	<b>16,2</b>	X	X	X	X	X	X	X	X	X	X
<b>Dominica ***</b>	<b>18</b>	↘	-					X						
<b>Guatemala ***</b>	<b>37***</b>	↘	<b>72***</b>	-										
<b>Indonesia ***</b>	<b>65</b>	→	-			X	X	X	X	X	X		X	X
<b>Lao PDR *</b>	<b>75</b>	↘	-		X	X		X			X		X	
<b>Macedonia **</b>	<b>93</b>	↘	<b>222.9</b>	<b>8</b>	X	X	X	X	X	X	X	X	X	X
<b>Mongolia *</b>	<b>60*</b>	↘	<b>128*</b>	-	X	X	X				X		X	
<b>Myanmar *</b>	<b>80*</b>	↘	<b>136</b>	<b>38,2</b>	X			X		X			X	
<b>Pakistan</b>	<b>17</b>	→	-				X						X	
<b>Panama ***</b>	<b>95</b>	→	-	<b>8,6</b>		X		X	X	X	X		X	
<b>Russian Fed *</b>	<b>30</b>	→	-		X	X					X		X	
<b>Sudan</b>	<b>1</b>	→	-				X							
<b>Turkey *</b>	<b>64</b>	↘	-		X	X		X			X		X	
<b>Moldova</b>	<b>52*****</b>	↘	<b>78.4*****</b>	<b>N/A</b>		X	X		X	X			N/A	



Notes:

\*\*\*\* Families with children aged <7years /ECD Study; \*\*\*\*\* children aged 8-10 years /  
Nutrition Study Moldova 1996; ECD Study, 2002

Country	Macedonia
Total Population	2,02mln
% of Total Population Consuming Iodized Salt	93% (Salt survey 2003)
Target Population under Proposal	Up to 538,000 (children aged 0-18 years)
% of Target Population Consuming Iodized Salt	80 % families
USAID FY'05 Funding	\$ 36,364.00

Program Area	Major Activities	Milestones (2002-2005)	Indicator		Budget
			Baseline 2002	Target 2005	
Commercial/Industry <ul style="list-style-type: none"> <li>• Commercial Analysis</li> <li>• Production Efficiencies &amp; Cost Reduction</li> <li>• Quality Assurance &amp; Control</li> <li>• Marketing</li> </ul>	N/A				
Equipment & Supplies <ul style="list-style-type: none"> <li>• Donations &amp; Subsidies</li> <li>• Credit/Loans</li> <li>• Revolving Funds</li> <li>• Installation &amp; Maintenance</li> </ul> <p>Note: USAID funds cannot be used for the direct purchase of fortificant.</p>	N/A				

<p>Public Sector/Government</p> <ul style="list-style-type: none"> <li>• Legislation</li> <li>• Regulations/Standards</li> <li>• Monitoring &amp; Enforcement Procedures, Roles &amp; Responsibilities, Penalties</li> <li>• Registration of Non-Iodized Salt Users</li> <li>• Industry Tax/Duty Concessions</li> <li>• IEC/Social Marketing</li> <li>• Links to Other National Fortification Activities</li> </ul>	<p>- Technical assistance to the National IDD Committee in the development of the annual plan of activities, especially with regard to the follow up of the external review recommendations</p> <p><b>-Monitoring Enforcement procedures:</b></p> <ul style="list-style-type: none"> <li>- Food and Nutrition Directorate inspectors informed about the need to maintain salt quality control;</li> <li>-UIE survey and salt survey conducted;</li> <li>- UIE survey among pregnant women initiated</li> </ul>	<p>- 2005 - National IDD/USI Program &amp; Plan developed and implemented;</p> <p>2005 - effective surveillance system of iodized salt further strengthened;</p> <p>2005 – 93 % population uses IS;</p> <p>2005- Optimum iodine nutrition maintained</p>	<p>Adequate policy and regulations in place, Adequate system of USI monitoring &amp; reporting, but not standardized and formalised</p>	<p>Monitoring and reporting system standardized and well-established; Government maintains ownership over the national IDD programme and sustains progress.</p>	
<p>PVO/NGO/Civil Society</p> <ul style="list-style-type: none"> <li>• Consumer Acceptance &amp; Demand</li> </ul>	<p>N/A</p>				
<p>Iodized Oil Supplementation</p> <ul style="list-style-type: none"> <li>• Integration within Antenatal Care Services</li> </ul> <p>Integration within other MCH Activities</p>	<p>N/A</p>				
<p>OR/M&amp;E/Reporting</p> <ul style="list-style-type: none"> <li>• Use of ISPAT</li> <li>• Operations Research</li> </ul>					

<b>Personnel</b> <ul style="list-style-type: none"> <li>• Staff Positions</li> <li>• Short-term Consultants</li> </ul>	/				
<b>Total</b>					