

**Eliminating iodine deficiency disorders through Universal Salt
Iodization**

**in Central Eastern Europe, Commonwealth Independent States
and the Baltic States (CEE/CIS/BS)**

Draft Strategy Note

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1. Historic background

The UNICEF region of Central Eastern Europe and Commonwealth Independent States and the Baltic States (CEE/CIS/BS, also referred to in this article as 'the region') is comprised of 22 countries¹. Salt iodization efforts date back to the time of the former Soviet Union² when iodized salt was centrally produced and distributed to areas where goiter had been identified as an endemic problem. The approach was generally limited to assessment and mass prophylaxis in endemic goiter areas only. Endemic goiter and cretinism were virtually eliminated through targeted distribution of iodine tablets among vulnerable groups and careful monitoring. In the 1970's and 80's the monitoring system weakened and gradually IDD returned^{3,4}. The entire system collapsed with the break up of the Soviet Union in 1991 and iodized salt production was completely interrupted in countries across the region except in the Former Republic of Yugoslavia⁵ where salt iodization continued.

In the early 1990's the countries began to recognize an increase of goiter that indicated IDD was a recurring problem. The response in some cases included production and distribution of iodized salt, but in most countries it was limited to the distribution of iodine supplements. Where salt iodization did take place it mainly included only table salt, leaving out other types of edible salt including salt for food industry and animal consumption. Universal Salt Iodization (USI), the effort supported by UNICEF globally includes all consumable salt as the optimum way to protect every new born from brain damage due to iodine deficiency. In most countries of the region, however, no sustainable effort took place toward USI until late 1990's.

UNICEF initiated efforts to promote USI in the region in the early 1990's. While establishing its presence in the region efforts were stepped up in 1993 with advocacy for USI legislation through specially-organized meetings of national governments and salt industry partners⁶.

Many CIS countries have presented a unique set of challenges to the adoption of USI. These include: the remnants of centrally-directed thinking; a salt industry that is often quasi-private rather than private; a clinical perception of iodine deficiency; a lack of public awareness regarding the nature and enormity of iodine deficiency; a lack of awareness that salt iodization is an effective preventive measure; and the new and unique commercial structures producing alternative iodized foods. On the other hand, the large and well-developed salt industries producing good quality salt and a well educated population proved to be a good basis for salt iodization efforts.

As a result, initially, salt iodization did not increase significantly as shown by the household survey data of 2000 indicating that only 26% of households in the region were using adequately iodized salt. This was the lowest rate among all the regions in the world (bar chart). The most recent results from several national surveys and iodized salt supply data indicate an increase of the regional average of household using iodized salt to 48%.

The lack of progress toward USI urged UNICEF and other partners to increase efforts substantially. In 2001, UNICEF made elimination of iodine deficiency through USI a regional priority. The first

¹ Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, UN administered province of Kosovo, TFYR Macedonia, Moldova, Romania, Russian Federation, Serbia and Montenegro, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan

² This analysis and background information generally does only apply to the Republics of the Former Soviet Union. Turkey is also not reflected in the statements in the historic background

³ G.Gerasimov and F. Delange: Eastern Europe and Central Asia: Overview of IDD status. IDD Newsletter Volume 13 No 1, February 1997.

⁴ Gregory Gerasimov, IDD in Eastern Europe/Central Asia. IDD Newsletter Volume 18 No 3, August 2002.

⁵ Serbia & Montenegro, Macedonia, Bosnia & Herzegovina, Slovenia, Croatia, and UN Administered Province of Kosovo

⁶ UNICEF/ECO workshop in Turkmenistan 1994, PAMM training in Georgia 1998.

step was to strengthen internal technical and management capacity through recruitment of staff at the national and regional level. A thorough review of the programme identified weaknesses and areas for improvement.

The main challenges that were identified included:

1. Weak political will to eliminate iodine deficiency through USI for which mandatory legislation of iodization of all salt for human and animal consumption is required and its enforcement.
2. Lack of awareness among the medical and academic community, programme managers and decision makers of the nature and extent of the IDD problem beyond goiter. The effect on brain development of the fetus during pregnancy and the consequences on society as a whole were widely ignored.
3. Poor understanding that iodine deficiency is a public health problem which requires a population wide intervention in the form of USI rather than a targeted approach screening selected areas or individuals.
4. Little recognition by the government of the crucial role of the salt industry as a partner in national USI efforts.

In response, support was increased to national partners to advocate for high level political commitment for USI legislation, build national partnership and coordination alliances, increase iodized salt production through support of the salt industry, ensure consumer acceptance of iodized salt, and increase understanding among scientific partners.

Crucial in this approach has been the financial support from USAID, Kiwanis International, the Bill and Melinda Gates Foundation, US Fund, and the Centers for Disease Control and Prevention (CDC). In (sub-)regional partnership with Asian Development Bank (ADB), ICCIDD, WHO, EU Salt, USAID-MOST, and the Network for Sustainable Elimination of IDD, substantial progress has been made between 2001 and 2004.

2. Progress toward Sustainable Elimination of Iodine Deficiency

Progress towards the goal

With the World Fit for Children 2005 goal (sustainable elimination of iodine deficiency through USI) looming ahead there is still a long way to go for CEE/CIS/BS. Currently, 48% of the households use iodized salt. Based on national population data and birth rates, 51% of the 5.4 million new born children in the region are protected. Unfortunately this also means that 2.7 million new born children are not protected from IDD (table). Most of these children are born in Russia (1 million/year; 30% iodized salt use), Turkey (400,000/year; 70% iodized salt use) and Ukraine (260,000/year; 31% iodized salt use). The regional average is greatly affected by these populous countries (see annex).

Recently, the UNICEF Regional Office made a projection of the national situations vis a vis the progress towards the 2005 goal in each country.

- Currently, USI (> 90% of households using iodized salt) has been achieved in 7 countries (Macedonia, Bulgaria, Serbia & Montenegro, Croatia, Turkmenistan, Bosnia & Herzegovina, Armenia). In Macedonia and Turkmenistan, also all other criteria for sustainable elimination of iodine deficiency⁷ have been met, as confirmed by an external assessment team.
- In another 5 countries, elimination of iodine deficiency by 2005 is feasible (Lithuania, Kazakhstan, Georgia, Romania, and Azerbaijan) as well as in the UN Administered Province of Kosovo.
- The time-frame in the remaining countries to achieve the goal (Kyrgyzstan, Uzbekistan, Tajikistan, Albania, Belarus, Moldova, Latvia and Turkey) is projected to last into 2006-2007, while in Russia and Ukraine perhaps longer time is required, depending on political will to legislate USI.

Political commitment and USI legislation.

Successful achievement of USI depends greatly on political commitment of key decision makers. The main focus has been on evidence based advocacy for mandatory legislation. UNICEF focuses on mandatory legislation as a condition for achieving USI (the "push" factor) which is complemented by communication activities to stimulate use of iodized salt (the "pull" factor). In absence of mandatory legislation the effect of communication activities is therefore limited. Various regional and global events have been organized to advocate among high level decision makers for USI legislation.

Commitments by government and civil society to the World Summit for Children goals (1990) including elimination of IDD were renewed through regional and national meetings related to the Global Movement for Children in Europe, namely, the Heads of CIS States Conference in Minsk (April 2001) where a joint declaration to collaborate on national efforts to reach USI was signed. The United Nations Special Session on Children in 2002 resulted in an outcome document - *a World Fit for Children* - which includes the goal to eliminate IDD through USI by 2005. This outcome document was signed by all governments in the region. Also, in October 2003 an international advocacy meeting was organized in China where nine countries from the CEE/CIS/BS were represented at a high political level. Georgia and Turkey are examples of countries where a big change in political will resulted in a rapid increase in usage rates of iodized salt from $\pm 20\%$ to $\pm 70\%$ in both countries.

The regional Goodwill Ambassador and former chess world champion, Anatoly Karpov has started advocating for USI legislation since 2002 in several countries through his high-level public profile and personal contacts with politicians. In the Russian Federation, Karpov discussed draft USI legislation with various government and Parliament members and succeeded to bring draft USI

⁷ ICCIDD, UNICEF, WHO: Assessment of Iodine Deficiency Disorders and Monitoring their Elimination. WHO, 2001.

legislation to the State Duma (parliament) in 2004, a significant step forward. In Ukraine, President Kuchma expressed his personal commitment for USI during a meeting with Karpov in 2002. Karpov also emphasized the need for more comprehensive USI efforts in various other countries including Lithuania, Kazakhstan, Serbia and Montenegro and Moldova.

Most advocacy activities by UNICEF and partners took place nationally. By using cost-benefit figures, the consequences of USI and IDD have been presented as issues of national economic and social development, not simply health issues. Creative approaches have been used for example in Russia where awareness and support was built in the Oblasts (regions) among local authorities, who then advocated for USI at the national level. A similar approach is now being followed in Ukraine. Also civil society has shown to be powerful in advocating for USI (Azerbaijan, Russia, Ukraine).

All the efforts mentioned above have resulted in a legal framework for USI in 17 countries while in the remaining 5 countries work continues on convincing the leadership to act. The Russian Federation and Ukraine have no USI legislation yet because of denial of the iodine deficiency problem, leading to objections towards the mandatory iodization of all edible salt. Producers of other iodized products in Russia and Ukraine lobby strongly for alternative food sources, leading to a bias against the acceptance of USI. The main focus will remain on advocacy for USI legislation at national and sub-national level. In countries where USI legislation is absent and not expected soon, alternatives are being explored to increase the use of iodized salt in a sustainable way. For example, in the Russian Federation, merchandising techniques were tested in 2004 to help shop keepers shift salt sales to predominantly iodized salt.

Five countries have legislation on mandatory iodization of only table salt. Food producers in these countries believe (whether legitimate or not) that iodized salt affects the quality of their product. As table salt comprises a small proportion of all salt consumed (30-40% in industrialized countries), achieving optimum iodine status throughout the population is unlikely to be successful with iodization of table salt or food grade salt alone. Due to the high consumption of bread UNICEF advocates strongly to use iodized salt for baking of all bread and continues to work with other food producers. Experiences from other countries (Bulgaria, Belarus, Macedonia, Western Europe) are used to address this concern.

Programme management and coordination

National coordination alliances with more balanced involvement of public (government, medical institutes), private (salt industry) and civic partners (consumer groups) to plan, manage and monitor are key for improving the ongoing national iodine deficiency elimination efforts. Support is provided to build alliances and strengthen their required capacities.

Micronutrient programme management workshops organized regionally and nationally for members of national coordination teams helped to further develop understanding, communication, and coordination of programme activities.

In addition, several programme review missions took place in all countries by consultants or UNICEF staff which helped to identify weaknesses in the current approach and work plans and how to improve these.

National USI efforts were strengthened in many countries involving public, private and increasingly the civic sector. Bulgaria is an example where multi-sectoral partnership has been successful. In Russia the Public Coordinating Committee (PCC), without government members, is strongly lobbying for USI legislation resulting in discussion of the law in the State Duma.

National strategies sometimes include corrective actions of limited impact such as communication activities to improve household storage and utilization of iodized salt. Capacity building activities are organized to strengthen strategies through workshops, on-the-job capacity building, inter-country exchange of experiences and round table discussions.

Production and supply of iodized salt

Production of only iodized edible salt is obviously the main pillar of the USI efforts. Several salt producers meetings were organized (Moscow 1997, regional producers meeting in Kiev 1999, Salt 2000, The Hague, Tashkent, 2002 and Bishkek, 2004) to raise awareness about USI, build partnerships and obtain a commitment to supply ever increasing amounts of iodized salt.

Initially, to increase production of iodized salt rapidly, support was provided for salt iodization equipment, potassium iodate, laboratory equipment and supplies for quality control within the factory. Technical support was provided for salt iodization and quality assurance which resulted in better quality iodized salt. Emphasis was also placed on involving the salt producers/importers as equally important partners in the national coordination bodies. Salt producers have been supported to form associations that have facilitated work and communications amongst partners.

To sustain production of iodized salt, efforts were focused on increasing awareness among the producers, importers, wholesalers, and retailers. With new legislations in place, enforcement is still weak in many countries. Therefore, mobilizing the suppliers to produce, promote and sell only iodized salt is crucial. Maintenance of salt iodization without external support is a sustainability concern. UNICEF helps to identify potassium iodate producers and importing companies as well as negotiating more favorable import conditions.

Iodized salt production data is a useful and reliable monitoring tool, which provides roughly the same proportion as household survey data. It serves as an easy tool to monitor progress frequently. There has been an increase in total production of iodized salt (as % of total salt required) from 20% in 1999/2000 to 52% in 2003 (see graph).

Awareness raising and ensuring acceptance among partners and the end users

As the approach and quality of communication activities vary greatly amongst countries in the region, in 2003 UNICEF commissioned a review of IDD/USI communication activities in nine countries conducted by the Johns Hopkins University. The main conclusions pointed out an inadequate capacity in the area of communication, an under-utilization of the private sector as a communication channel, the need for scaling up of communication activities, and the limited impact of communication in absence of USI legislation as a "push factor".

Awareness raising and increasing acceptance among all stakeholders needs to be continuous and sustainable, as campaign-like activities are expensive. Incorporation of iodine deficiency elimination and USI in the curriculum of primary/secondary education, and in technical, medical and public health training ensures long-term awareness raising. This approach is now pursued in several countries. Messages on the iodized salt package and information for the consumer in sales outlets is another way of ongoing awareness raising. The involvement of communities and school children as social mobilization activity was well demonstrated in Uzbekistan where more than 6 million school children were included in a campaign to test salt brought from their homes for the presence of iodine. This example is being followed in many other countries of the region.

The communication strategy is often weak in addressing the critical information gaps such as mobilization of the salt supply channel, the lack of knowledge among food processing industries in using iodized salt, and the lack of evidence-based material on the transient effects of introduction of iodized salt in an iodine deficient population. Development of communication plans are supported as well as better exchange of experiences between countries.

Documenting lessons learned and utilization of regional expertise

A wealth of experience and expertise exists in countries. Efforts have been made to improve documentation of lessons learned and make them available to relevant countries. Inter-country

study tours, use of local expertise and technical assistance has become more common and has not only led to more successful transfer and sharing of knowledge but also empowered country teams. A resource package is under development and includes scientific and technical material, guidelines on topics such as monitoring, communication, legislation, and also contains lessons learned from several countries on a variety of topics.

Monitoring

Monitoring the process of salt iodization and its impact on iodine status in the population is of major importance to ensure efficiency and efficacy of USI. Monitoring and enforcement both serve a programme management purpose and need to be integrated. While more countries have USI legislation and an increased production of iodized salt, monitoring receives more attention in the last few years. With insufficient funding for monitoring, the main challenge is to set up an effective, affordable and manageable system. Monitoring of USI in CEE/CIS/BS is challenged by: i) poor quality data; ii) inadequate analysis and use of data for corrective actions; iii) weak capacity (technical, staff, unclear responsibilities); and iv) an incoherent and fragmented system with numerous responsible parties.

UNICEF in collaboration with ADB, MOST-USAID⁸, CDC⁹ and KAN¹⁰ has provided support to monitoring of USI through a variety of mechanisms including: consensus building workshops, technical support by consultants, and through exchange visits between countries (Romania with Bulgaria, former Yugoslav Republic of Macedonia with Kosovo, Russian Federation & Bulgaria with Turkmenistan, Tajikistan with Iran, Armenia with Italy, Kyrgyz Republic with Bangladesh, etc.).

Experiences show that transfer of information and development of monitoring systems alone needs to be complemented with consensus building among all responsible parties and adoption of the monitoring plan by higher level decision makers. In addition, the ownership and empowerment of partners is markedly enhanced during study tours and inter-country exchange with colleague specialists. Also, monitoring cannot be seen in isolation from programmatic characteristics and concerns. For example, illegally packaged salt (and sold as iodized), and "leakage" of industry salt (non-iodized) into the consumer market have to be taken into consideration when reviewing the information to be collected. Finally, monitoring activities for iodine deficiency elimination need to be built into existing monitoring activities for other food fortification interventions.

Sustainability

While rapid progress is noted, sustainability of USI efforts remains a major concern because of: lack of national ownership, international agencies like UNICEF are often seen as the driving force; a weak political will at the highest levels of government, regulatory agencies and salt industry; the salt industry is not or inadequately represented in the national coordinating alliance; producers of iodized salt do not maintain salt iodization without external support; and continued dependency on external funding.

UNICEF will further focus on strengthening the national coordination and oversight function and recognizes that limited external funding is still required once USI has been achieved.

⁸ Micronutrient organization of USAID

⁹ Centers for Disease Control and Prevention, Atlanta USA

¹⁰ Kazakh Academy of Nutrition, Almaty Kazakhstan

3. Strategic support for Sustainable Elimination of IDD

Lessons learned

The progress achieved in CEE/CIS/BS since the late 1990's is the result of the national commitment and efforts of UNICEF and other partners in supportive roles. In order to define the future support role that UNICEF should play in ensuring sustainable elimination in all countries of CEE/CIS/BS, it is important to consider the main lessons learned:

1. High level **advocacy** using evidence based arguments that reflect on consequences of IDD beyond health is not only crucial in initial phases but should be seen as a continuous periodic activity to keep decision makers engaged and alert.
2. One main lesson learned from other regions in the world with long-standing IDD elimination programmes is that success, once achieved, can easily slide back. Once IDD has been eliminated the effort needs to be sustained forever. **Sustainability** aspects need to be addressed in all programme elements while high-level commitment needs periodic renewal.
3. **Coordination** of the programme activities requires a coalition at national level with presence of government (public), salt industry (private), and consumer (civic) representatives. Recommendations for action need to carry weight and require follow up at higher decision-making level.
4. **USI legislation** is key for sustained elimination of IDD and a priority of UNICEF support. Enforcement remains a major weakness, however, which needs not only to be stressed through with enforcement agencies but also through mobilization and awareness raising activities along the salt supply channel and consumers.
5. Permanent and adequate supplies of **iodized salt** is the sole responsibility of the salt industry. Maintenance of equipment and procurement of fortificant needs to be self-sustaining.
6. Use of iodized salt in **food processing** (home based and industrially) is a concern in several countries (reflected in legislations) which can undermine the achievement of IDD elimination. For these countries, specific support is required to increase the use of iodized salt in food, where proven and accepted.
7. Consumer **perception and behavior** can greatly affect the success of the elimination efforts. Communication activities need to be in place to inform the consumer and needs continuous adaptation to the changing situation.
8. **Monitoring and enforcement** are to be seen as an integrated instrument to provide information on the performance and impact of the efforts which should be used for corrective programmatic actions. Support should not only focus on defining the minimum monitoring framework but should play a major role in building consensus among all responsible parties and in obtaining buy-in from decision makers.
9. A number of countries (in particular Russian Federation, Ukraine, and CARK) in CEE/CIS/BS present a unique situation where USI competes with a large range of **other iodized food products** and supplements. This results in negative publicity for USI, resistant scientists with vested business interest in iodized products, and a compromised support for salt iodization. Creative response is required to obtain political commitment, to incorporate USI in legal frameworks, to coordinate USI efforts, and to convince crucial partners.
10. Ample **experience** and programme **knowledge** exists throughout the region on a wide range of issues (use of iodized salt in food, monitoring data on TSH and iodine induced hyperthyroidism, community mobilization, marketing and merchandising techniques, working with salt industry, sub-national advocacy, etc). Better documentation and creative ways of sharing is required to maximize benefits for other countries.

UNICEF strategic support at regional and national level

The proposed UNICEF supporting role in the various stages of IDD elimination is the result of a consultation process with Country Office staff. The regional overview including lessons learned and the main thoughts on UNICEF support was shared and discussed at the Health and Nutrition

Cluster meeting in Turkey in July 2004. This stimulated discussion with partners at national level on their elimination strategy. Feed back was provided to the Regional Office indicating the type, duration and level (funding needs) of support UNICEF would be providing. While recognizing the fact that any progress made in countries is the result of national efforts by all partners, support from UNICEF plays a catalyzing and essential role. In all countries some level of support is required not only to achieve elimination of IDD but also during the 2-3 years to follow to address national ownership and sustainability.

Two main stages for support in IDD elimination are distinguished: a) the achievement of USI and IDD elimination, and b) sustaining the success.

a) The achievement of USI and IDD elimination

The role of UNICEF in a whole range of activities resulting in increased salt iodization lies in advocacy for political commitment for USI and legislation, strengthening management and operational capacity, development of national partnerships, development of monitoring and enforcement systems, raising public awareness and ensuring permanent and adequate supplies of iodized salt.

Focus in countries with low use of iodized salt require support in areas including commitment building, production and supply, communication, and partnership building. Countries close to reaching the goal need support in monitoring and enforcement, communication and management. UNICEF's continued guaranteed support is very important at this stage.

b) Sustaining the success

In countries where IDD has been eliminated UNICEF's support will gradually be reduced and will focus on sustaining the success, periodic renewal of commitments of national leaderships, strengthening of national oversight functions and consolidation of habitual norms in industry, and consumption patterns. Support is also required for improved monitoring and sustainable communication activities. Countries in this phase will require continued support for another 3 years.

Annex 7 provides an overview of the support UNICEF would be providing to fully accomplish these tasks. Estimated levels of funding requirements are available upon request.

UNICEF strategic support at national and regional level

UNICEF Country Offices will provide direct support to programme implementation and focus on challenges specific to the country. This will be described in more detail below.

UNICEF Regional Office will play an overall strategic role in support to countries while addressing the main challenges also from a regional perspective. The core functions include monitoring and reporting of programme performance, optimize partnerships, knowledge building and innovative approaches, integrate approaches and strategies to address micronutrient deficiencies, build capacity of country staff and to secure funding. Specific activities will be elaborated below.

Advocacy for high political commitment and USI legislation

a) National

In countries without firm political commitment and/or USI legislation, focus will remain on evidence based advocacy using arguments addressing consequences of iodine deficiency beyond health. In Russian Federation and Ukraine, regional advocacy among local governments will be more strongly pursued in order to extend the pressure for USI beyond national partners.

In several countries enforcement is major challenge which is mainly due to inadequate capacity (staff, technical, equipment) and fragmentation of the enforcement agencies (unclear roles and responsibilities). In addition to strengthening multi-partner discussion on monitoring and enforcement reform, mobilization activities will target the salt supply channel and consumers to sell and use iodized salt.

b) Regional

Experiences have shown the need for continued renewal of commitment to ensure sustained success of IDD elimination. The regional office plays a crucial role in bringing USI and IDD elimination on the agenda of region-wide political conferences (CIS meeting, MCH forum), in individual meetings with political leaders (Regional Director during visits and World Health Assembly) and through the work of Regional Goodwill Ambassador Karpov. In large countries Russian Federation, Ukraine, and Turkey the regional office directly advocates with high-level decision makers.

Success stories will be documented and highlighted in the media and will be used for advocacy in other countries. High-level advocacy material with tailored information addressing the specific audience requires more focus. Material like the Damage Assessment Report needs to be developed for other countries and for tailored use at regional and country level.

Programme management and coordination

a) National

National events (round table, workshops) aim to strengthen micronutrient elimination strategies and will include a consensus building and advocacy component to obtain buy-in from high level decision makers. Capacity building in technical areas like monitoring and communication will strengthen the partnership and management. More support will be given to strengthen a sustainable national alliance with management and oversight function, and with public reporting on programme performance. National ownership and self-funding of programme functions are key characteristics which are long term efforts.

b) Regional

The regional workshops on 'Strengthening Strategies for the Elimination of Micronutrient Malnutrition' in Almaty (2003, CDC supported) and Ankara (2004, USAID supported) were successful in bringing together national partners and discuss main strategic choices for micronutrient programmes. The exchange of views and experiences between countries was perceived as extremely valuable. Moreover, the workshops increased commitment and follow up upon return in their respective countries. The last of these workshops for the remaining countries in South Eastern Europe is scheduled for March 2005.

National alliances are the basis for eliminating IDD and for sustaining its success. International agencies like UNICEF and ABD are often the driving force behind these alliances. Now that many countries have or are close to eliminating IDD national partnerships need to be strengthened. Equal membership of government, salt industry and consumer organizations needs to be ensured. In addition, the alliance should function as a national watch whose advise leads to programme adjustments.

To strengthen national micronutrient strategies as well as national partnerships, workshops could be organized with 3-4 participating countries at a time, to strengthen partnerships by jointly developing national plans of action, building consensus and obtaining national buy-in from decision makers.

Regional and global partnerships

a) Regional

In the CEE/CIS/BS, the regional office has had close partnership with traditional partners like WHO and ICCIDD. More recent partnerships include ADB, CDC, MOST-USAID, and to a certain extent with the private sector and academic institutions. In order to address some of the challenges and to further strategic thinking, collaboration with partners needs to be strengthened and expanded.

Salt producing or trading companies for example EU salt, Akzo Nobel, Unilever can provide specific technical support to countries on marketing, merchandising, trade issues, and assist in local distribution and sale of iodized salt. Specialized marketing support can help to study consumer perception and develop strategies to better address perception barriers.

In the areas of monitoring and strategy development, collaboration with CDC, MOST-USAID, Emory University, and Kazakh Academy of Nutrition has played an important role to increase the capacity, improve country strategies and action plans, and resulted in better performance. Further

work is required with these and new partners specifically to a) strengthen monitoring through consensus building workshops, b) develop long term integrated micronutrient action plans, c) apply newly emerging technologies of double fortified salt in population wide interventions, and d) obtain better information on iodine status of pregnant women.

Monitoring of programme performance and impact

Regular feed back on programme activities will provide information on progress, identify problem areas, new emerging challenges and opportunities for action. For example, it is important to identify areas/population groups with low use of iodized salt, trends in iodized salt production, sustainability concerns, etc.

a) National

Support for monitoring will become more important in advanced phases of salt iodization. Establishing effective, affordable and manageable systems has proven to be a challenge. Consensus building and endorsement from decision makers will receive more focus.

b) Regional

RO has developed monitoring tools in 2004, serving country and regional purpose, for iodized salt supply and for monitoring critical success factors of sustainable IDD elimination. Further work is required to improve these and fully maximize their purpose by incorporating them in routine programme management. It will also help to streamline the approach and technical support provided by consultants.

Suggested activities: consultancy to improve monitoring tools based on country feed back, on-the-job training, include as part of workshops, adjust Terms of Reference for consultants, incorporate in monitoring and reporting procedures, establishment of programme database.

Knowledge building and development of new approaches

a) National

Useful experiences will be identified and documented and made available for colleagues in other countries. Exchange will also take place between national partners at meetings, inter-country visits and study tours. Better coordination is required between countries to maximize these exchanges.

Regional

The challenge in better utilization of available experience and expertise in the region is to make these widely available and explore alternative ways of sharing.

The regional office has started to stimulate documentation of lessons learned and utilization of regional expertise through study tours, exchange of country expertise through visiting consultants, sharing of lessons learned with country staff, and the development of the IDD elimination resource package. The resource package includes a wealth of information for managers and partners to learn from other countries' experiences, to obtain 'how to' guidance on areas like monitoring and communication, and to find information on how to deal with common challenges. One next step will be to develop a more continuous medium, for example a website, that will help exchange of information. The Regional Office will also need to play a more structured coordinating role to link countries together for exchange of information, study tours, etc.

The knowledge building is an important role of the regional office to keep pace not only with new scientific developments but also to identify and discuss programmatic areas that require attention. Substantive effort is required through meetings on thematic issues with participation from regional and global technical and programme persons. New ideas coming out of these meetings may require support for example implementation of scalable innovative solutions e.g. double fortified salt with iodine and iron in partnership with salt industry partner. Another example is exploring more sustainable monitoring methods through sentinel sites or through clinics surveying pregnant women.

Awareness raising and ensuring acceptance among partners and the end users

a) National

Together with the strengthening of the enforcement system more focus will go toward mobilization and motivation of salt supply channel (producers, importers, wholesalers, retailers) to ensure compliance to only provide iodized salt. In certain areas where the capacity of the salt producers is limited to iodize salt (small producers) or where (poor quality) salt is produced by unlicensed enterprises, the consumers/community will be mobilized to demand iodized salt. This approach is of particular importance when big industries iodize their salt but where smaller producers in difficult to reach areas (often severely affected by IDD) do or can not adhere to government regulations. These countries often show stagnating usage rates at insufficient levels (60-80%).

A particular challenge is the use of iodized salt in food production (meat, cheese, pickles, bread, etc). Mobilization activities using evidence and experiences from other countries are required to achieve the use of iodized salt in a minimum number of food items, in particular bread.

Medical professionals showing concern that introduction of iodized salt will lead to increased health risk certain individuals need to be included in targeted communication activities as well.

Furthermore, the focus at national level will be the sustainability of communication activities through incorporating messages in curriculum at schools and in training programmes of medical professionals and through product promotion and consumer information by the private sector.

b) Regional

Based on an extensive review of communication activities in 9 countries in the region by Johns Hopkins University in 2003, it has become apparent that communication activities need to be scaled up and planned in a structured manner with a focus on sustainability. The quality in communication plans vary widely between countries. The regional office has to address these gaps through development of a comprehensive communication strategy that will serve as guidance for communication plans in all countries. The main aspects include:

1. Communication needs to be an integral part of other programme activities especially monitoring, enforcement and supply of iodized salt.
2. The main purpose of communication is ensuring acceptance and increase immediate use of iodized salt through campaigns (short-term, and curriculum and product promotion (long-term))
3. The purpose and expected outcome has to be in conjunction and mutually supportive with mandatory legislation, for example enforcement needs to be complemented by mobilization of salt wholesalers, retailers and consumers
4. The communication activities should anticipate rumours and adverse effects. Media training and examples from other countries need to be included.
5. Clear guidance is required for development of messages
6. All aspects need to be laid out in a communication plan.

Support is required to develop national communication plans through workshops and/or consultancies.

Production and supply of iodized salt

a) National and regional

Sustaining salt iodization without external support is a sustainability concern. Free donation of potassium iodate is no longer authorized and iodization equipment is only provided in exceptional cases (where iodization efforts are scaling up). Support is required to link salt producers to potassium iodate producers in the region for direct procurement or through importing companies or distributors who can include potassium iodate in their supply list. UNICEF can also assist in negotiating more favorable import conditions (tariffs, clearing procedures, etc). In exceptional cases UNICEF can also assist in revolving funds or offering procurement services for potassium iodate. *Procurement workshops and specific technical expertise are planned.*

Salt industries are often seen as passive actors in the salt iodization effort. Self-sustained salt iodization requires better understanding by the other partners of the industry's perspective and to increase national ownership. Country Offices will focus more on mobilizing salt producers to self-sustain production of iodized salt. *Technical support may be provided for marketing.*

Iodized salt production data is a useful and reliable monitoring tool, which provides roughly the same information on proportion of iodized salt use as household survey data. It serves as an easy tool to monitor progress frequently. Regional office has introduced the periodic monitoring of

iodized salt supply data with all Country Offices. *Further work is required to facilitate use of the monitoring tool with Country Offices and dissemination of compiled overviews with salt suppliers.*

Integrated approach for micronutrient interventions

a) National and regional

Multiple activities have been carried out in the region where other micronutrients beyond iodine were addressed. With limited resources available both from national budget and from external funding it makes sense to focus on cross cutting issues for other micronutrients than iodine at the same time. Globally, resources to address iron, folic acid, and zinc deficiency are still relatively scarce. Iron deficiency is a universal problem in CEE/CIS/BS with significant impact on maternal and child survival, and, although many opportunities exist through the high consumption of flour which is produced in large mills, flour fortification can not be taken on at large scale by UNICEF due to limited resources.

Also from scientific point of view an integrated approach makes sense. Evidence increasingly suggests the synergistic interaction between micronutrients which in programmatic terms makes an investment more effective if more micronutrient deficiencies are addressed through the same intervention. Double fortification of salt, multi-micronutrient supplementation, and fortification of flour with a mix of micronutrients are some of the many examples.

The regional office wants to better integrate micronutrient interventions and plans to advance known and explore new opportunities (complementary food fortification with multiple micronutrients, home-based fortification using sprinkles or food-lets, flour and oil fortification, double fortification of salt, etc).

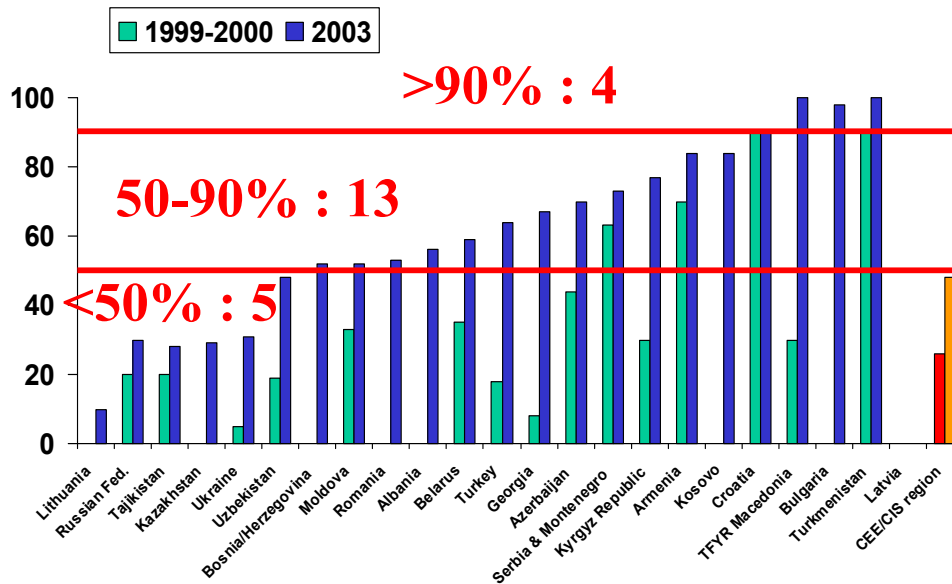
Conclusion

CEE/CIS/BS has made a remarkable leap forward in a very short period of time. While further attainment of the success is imperative, UNICEF recognizes the challenges that lie ahead which need to be reflected in its strategic support. Because of the unique character of CEE/CIS/BS, UNICEF's role needs constant adjustment. Focus of support remains on advocacy for USI legislation, a balanced and effective national coordination alliance with involvement of the salt industry as an equal partner, sustainable monitoring and enforcement, and ensuring acceptance of iodized salt. There is need for constant renewal of high-level political commitments and national oversight.

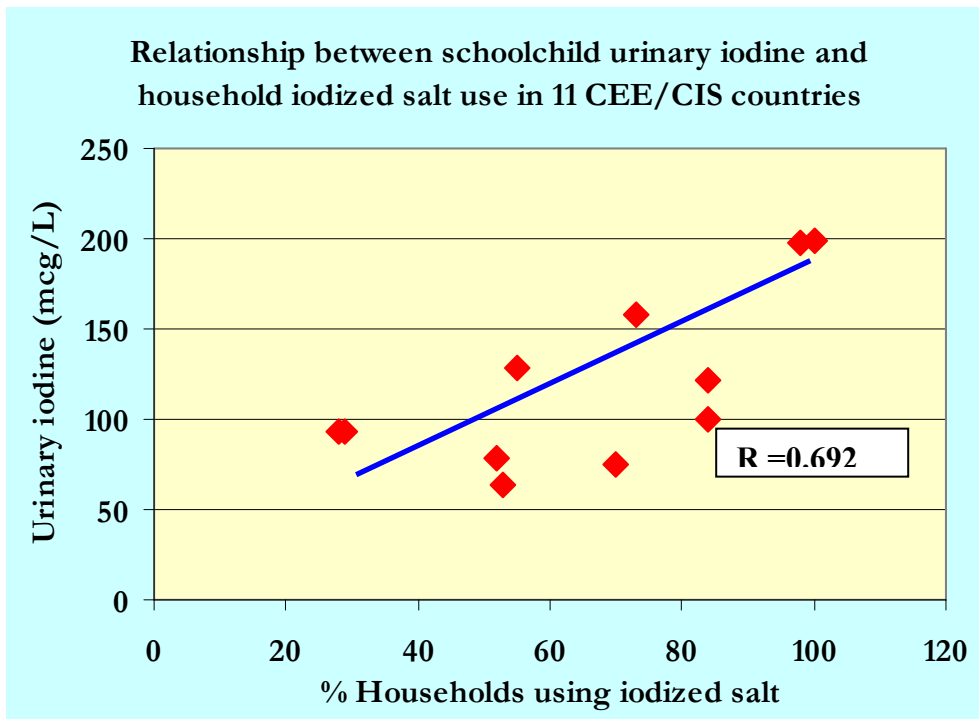
UNICEF initial role to establish rapid increase of salt iodization has slowly been shifting towards addressing sustainability concerns and national ownership, taking into account the lessons learned worldwide. The momentum built in CEE/CIS/BS creates an excellent opportunity to achieve elimination of iodine deficiency in more countries of the region, and thus ensure learning ability of the future generation within the next few years to come. Continued support is required to achieve these objectives.

Annex 1: Percentage of households in CEE/CIS/BS using adequately iodized salt

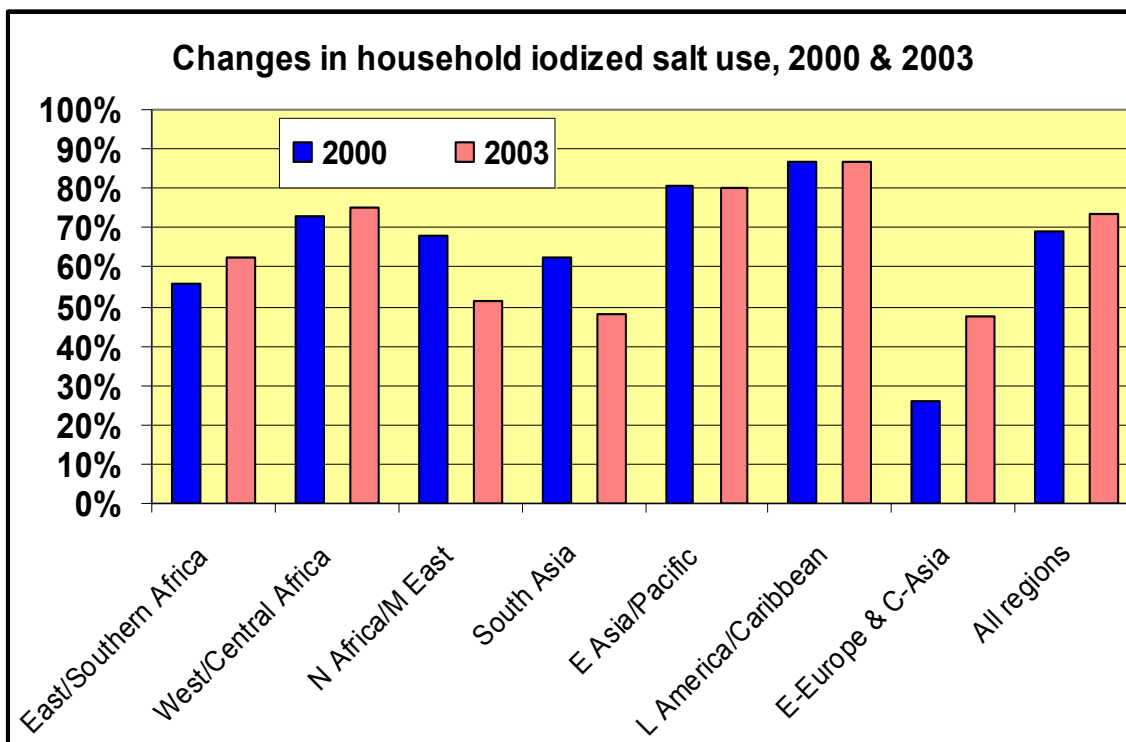
% of households using adequately iodized salt in CEE/CIS (survey based)



Annex 2: Relationship between schoolchild urinary iodine and household iodized salt use in 11 CEE/CIS countries

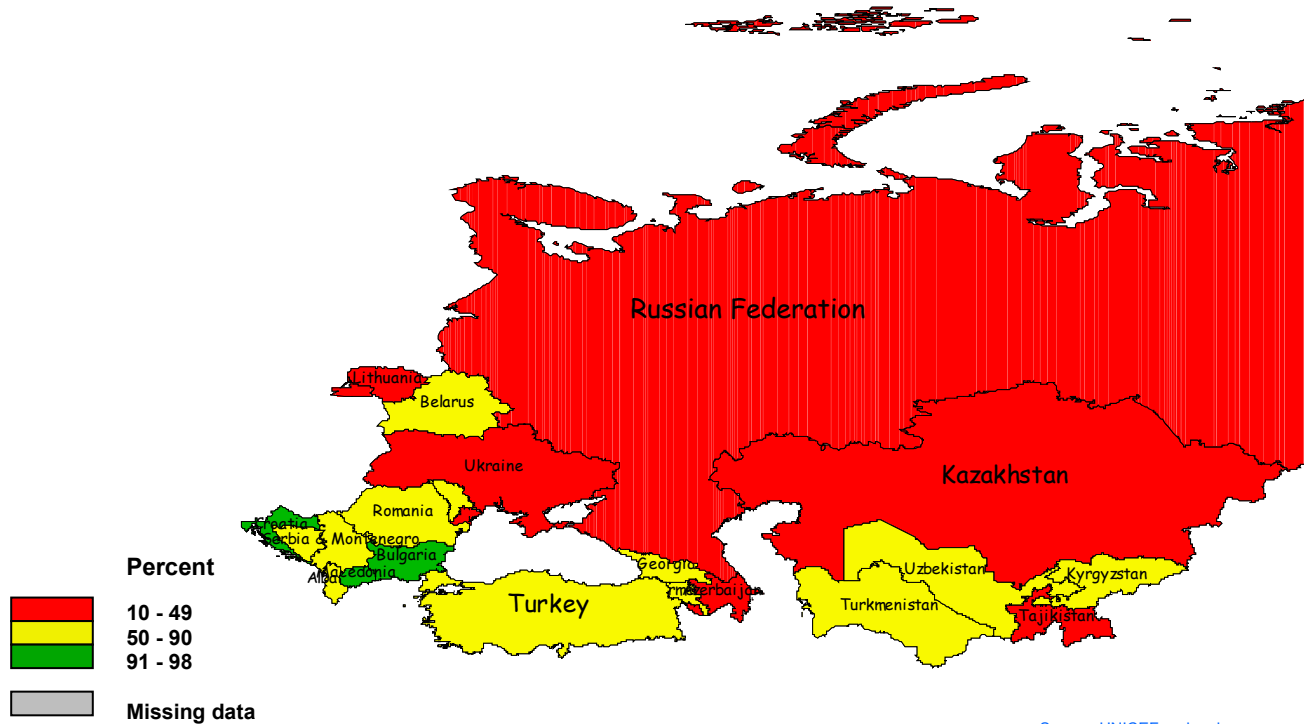


Annex 3: Change in household iodized salt use between 2000 and 2003 for all UNICEF regions



Annex 4: Map of CEE/CIS/BS region by % households using iodized salt

Percent of households using adequately iodized salt

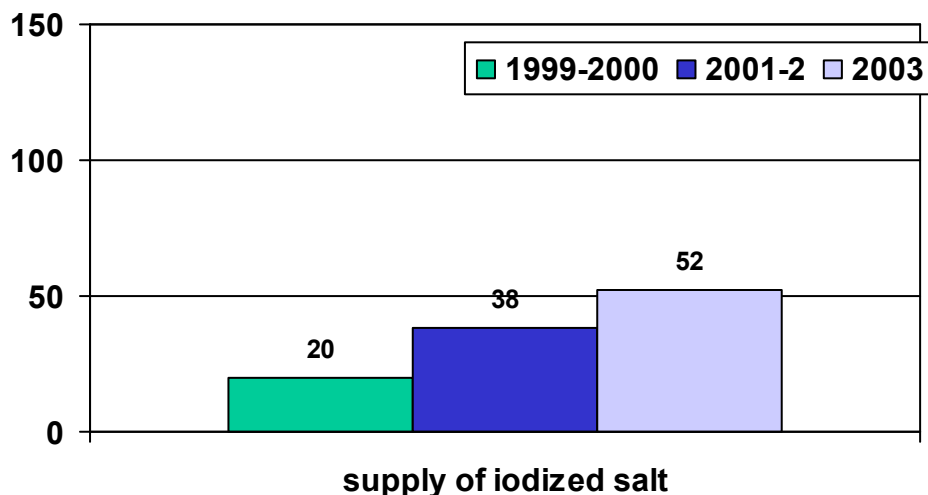


Annex 5: Trend in supply of iodized salt in CEE/CIS/BS from 1999 to 2003

Trend in supply of iodized salt in CEE/CIS/BS

iodized salt as % of total salt required

(± 3.5 kg per person per year)



Annex 6: Household use of iodized salt (%) and protected new born children in CEE/CIS/BS, by country

| UNICEF region | Country | 2003 Population (millions) | | Household salt iodized | | 2003 Annual births (thousands) | | | | % of region's unprotected in IDD affected countries |
|--------------------------------------|--------------------|----------------------------|----------------------|------------------------|------|--------------------------------|--------------|------------------|--------------------|---|
| | | Total | Protected against ID | % | Year | per 1,000 population | Total | number protected | number unprotected | |
| East Europe, CIS, and Baltics | | | | | | | | | | |
| CEE/CIS | Russian Federation | 145.5 | 43.7 | 30 | | 10 | 1,455 | 437 | 1,019 | 38% |
| CEE/CIS | Turkey | 71.2 | 49.8 | 70 | 2003 | 22 | 1,566 | 1,096 | 470 | 17% |
| CEE/CIS | Ukraine | 47.8 | 14.8 | 31 | 2002 | 8 | 382 | 119 | 264 | 10% |
| CEE/CIS | Uzbekistan | 25.7 | 14.4 | 56 | 2003 | 20 | 514 | 288 | 226 | 8% |
| CEE/CIS | Romania | 21.6 | 11.4 | 53 | 2002 | 10 | 216 | 114 | 102 | 4% |
| CEE/CIS | Kazakhstan | 14.8 | 4.3 | 29 | 1999 | 15 | 222 | 64 | 158 | 6% |
| CEE/CIS | Tajikistan | 6.6 | 1.8 | 28 | 2003 | 19 | 125 | 35 | 90 | |
| CEE/CIS | Azerbaijan | 8.2 | 3.4 | 41 | 2000 | 14 | 115 | 47 | 67 | |
| CEE/CIS | Belarus | 9.9 | 5.4 | 55 | 2003 | 9 | 89 | 49 | 40 | |
| CEE/CIS | Serbia/Montenegro | 10.7 | 7.8 | 73 | 2000 | 12 | 128 | 94 | 34 | |
| CEE/CIS | province of Kosovo | 2.0 | 1.7 | 84 | 2002 | | | | | |
| CEE/CIS | Kyrgyz Republic | 5.0 | 3.4 | 67 | 2003 | 20 | 100 | 67 | 33 | |
| CEE/CIS | Lithuania | 3.5 | | 10 | 2003 | 9 | 32 | 3 | 28 | |
| CEE/CIS | Moldova | 4.3 | 2.2 | 52 | 2003 | 9 | 39 | 20 | 19 | |
| CEE/CIS | Albania | 3.1 | 1.7 | 56 | 2000 | 16 | 50 | 28 | 22 | |
| CEE/CIS | Latvia | 2.3 | | | | 9 | 21 | | 21 | |
| CEE/CIS | Georgia | 4.7 | 3.2 | 68 | 2003 | 9 | 42 | 29 | 14 | |
| CEE/CIS | Turkmenistan | 5.7 | 5.7 | 100 | 2004 | 19 | 108 | 108 | 0 | |
| CEE/CIS | Bosnia/Herzegovina | 3.9 | 3.0 | 77 | 2003 | 10 | 39 | 30 | 9 | |
| CEE/CIS | Armenia | 3.2 | 2.7 | 84 | 2000 | 14 | 45 | 38 | 7 | |
| CEE/CIS | Croatia | 4.3 | 3.9 | 90 | 2000 | 9 | 39 | 35 | 4 | |
| CEE/CIS | Bulgaria | 7.5 | 7.3 | 98 | 2003 | 8 | 60 | 59 | 1 | |
| CEE/CIS | TFYR Macedonia | 2.1 | 2.1 | 100 | 2003 | 13 | 27 | 27 | 0 | % new borns protected |
| | Total | 413.6 | 192.5 | 48% | | 13.2 | 5,414 | 2,787 | 2,627 | 51% |

Annex 7: UNICEF Role in CEE/CIS/BS, by country

| IDD elimination stage | Country | Achieving USI & eliminate IDD | | | | | | | Sustaining USI & IDD elimination | | | | | | |
|-----------------------|--------------------|-------------------------------|------------------|----------------|------|----------------|--------------|---------|----------------------------------|------------------|----------------|------|----------------|--------------|---------|
| | | Polical Comm | Monitor & Enforc | Prod. & supply | Comm | Manage & Coord | partner ship | Sustain | Polical Comm | Monitor & Enforc | Prod. & supply | Comm | Manage & Coord | partner ship | Sustain |
| 2004 | Bulgaria | | | | | | | | | | | | | | |
| | Croatia | | | | | | | | | | | | | | |
| | TFYR Macedonia | | | | | | | | | | | | | | |
| | Turkmenistan | | | | | | | | | | | | | | |
| 2005 | Armenia | | | | | | | | x | x | | x | x | | x |
| | Serbia/Montenegro | x | x | | x | | | | | x | | x | x | x | x |
| | Bosnia/Herzegovina | | | | | | | | | | | | | | |
| | Kazakhstan | | x | | x | x | | | x | x | | x | x | | x |
| | Province of Kosovo | x | x | | x | x | x | | x | x | | x | x | x | |
| 2006 | Albania | x | x | | | | | x | | x | | x | x | | |
| | Azerbaijan | | | | | | | | | | | | | | |
| | Georgia | x | x | | x | x | | | x | x | | x | x | | x |
| | Kyrgyz Republic | x | x | | x | x | x | x | x | x | | x | x | | x |
| | Lithuania | | | | | | | | | | | | | | |
| | Moldova | | | | | | | | | | | | | | |
| | Romania | | | | | | | | | | | | | | |
| | Turkey | x | x | x | x | | | | x | x | x | x | x | | x |
| 2007 | Belarus | x | x | | x | x | x | | x | x | | x | x | x | |
| | Latvia | | | | | | | | | | | | | | |
| | Tajikistan | | | | | | | | | | | | | | |
| | Uzbekistan | | | | | | | | | | | | | | |
| 2008 | Russian Federation | x | | x | x | | x | | | x | | x | x | | |
| | Ukraine | | | | | | | | | | | | | | |