

# Maintaining IDD elimination in Mongolia

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Mongolia is administratively divided into 21 aimags (provinces) and the capital city of Ulaanbaatar (UB). The aimags form five regions: Western, Khangai, Central, Eastern and UB (Figure 1). In 2014, the population of Mongolia was only 2.97 million, with almost a half (46.5%) living in UB.

## Political commitment

Mongolia's first official goiter studies dating back to the 1960s reported total goiter rates (TGR) of 32–45% among 7–12 year-olds in UB (1). During the 1970s and 1980s, the TGR continued to fluctuate between 23% and 47%. In 1992, the Ministry of Health (MOH) conducted the first national preliminary survey on iodine deficiency with the technical assistance of UNICEF. The results showed that Mongolia's population was at risk of severe iodine deficiency (2). In response to the pledge made by world leaders in the 1992 World Declaration on Nutrition to end all forms of malnutrition, the Government of Mongolia adopted its first four-year National Program on the Elimination of IDD in January, 1996. Iodized salt had been introduced the year before. To promote IDD education, the government declared the first Sunday in September as the "National IDD Day" (Figure 2) (3).

## Securing the legal framework and international support

During the first national IDD program (1996–2010), the government published or revised a series of regulations and standards related to the control of IDD. The key event was the adoption of the Salt Iodization and Prevention of Iodine Deficiency law in 2003, which stipulated that all edible salt must be iodized, and only iodized salt must be imported and distributed in Mongolia, and used in food production. The adoption of this law has spurred a decade of tremendous progress against IDD (4).

**FIGURE 1** Aimags, the largest administrative units of Mongolia, are grouped into five regions.



The government's efforts met with support from the international community. International agencies, including UNICEF, JICA, WHO, IGN, ADB and UNPPA provided material, technical, and financial assistance. Since 1992, UNICEF has been the main technical and financial supporter of the national program. Today, the program's different components are administered by the State Specialized Inspection Agency (SSIA), the Ministry of Health (MOH), and the Ministry of Food and Agriculture (MOFA). SSIA is in charge of external quality control and regulatory monitoring of iodized salt at production, distribution, and sale. The MOH monitors the progress, and the MFA is responsible for iodine provision and legislation. The fortificant KIO<sub>3</sub> is procured with JICA's support.

## Monitoring progress through nutrition surveys

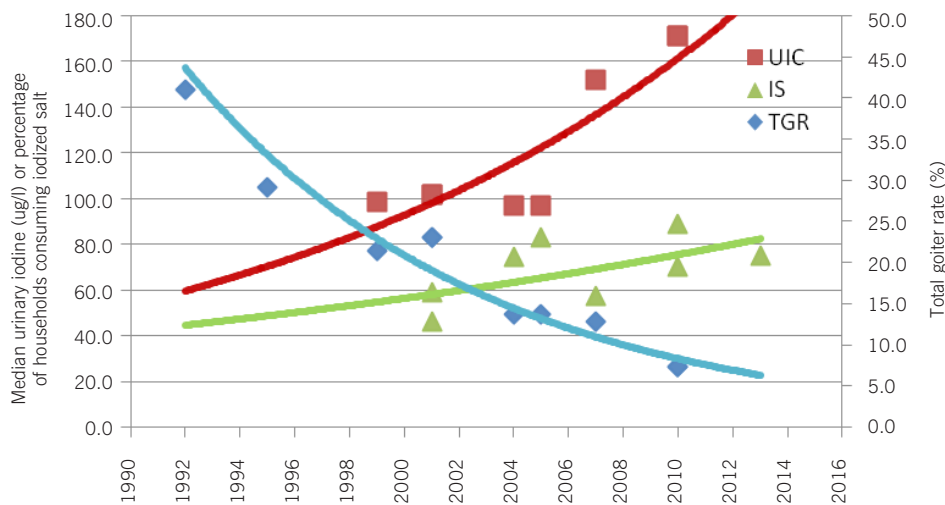
To assess the impact of the IDD program on the population's iodine status, National Nutrition Surveys (NNS) were conducted in 1993–1995, 1999, 2004, and 2010 by the Nutrition Research Center of the Public

Health Institute under the MOH with the support of UNICEF and WHO. The surveys followed the standard design recommended by WHO/UNICEF/IGN and typically included goiter assessment by palpation, urinary iodine (UIC) in school-age children and reproductive-age or pregnant women, IDD awareness, and household coverage of iodized salt measured by titration or other quantitative methods. Neonate TSH was measured as part of NNS2 (1999) and NNS3 (2004). In addition, the National Statistical Office conducted a Multiple

**FIGURE 2** Poster promoting National IDD Day in Mongolia.



**FIGURE 3 Trends in TGR (%) and MUIC (µg/L) in SAC, and household coverage of iodized salt from 1992 to 2013. There is a clear decrease in TGR and a corresponding rise in iodine intake and iodized salt coverage.**



Indicator Cluster Survey (MICS) in 2005, 2010, and 2013 to assess the household coverage of iodized salt using semi-quantitative methods. In 2013, the MICS was combined with two other major nationwide household surveys: the Reproductive Health Survey and the Demographic and Health Survey (DHS), with support of UNICEF and UNFPA.

**Latest survey shows adequate iodine intakes**

The fourth NNS in 2010 enrolled 1120 children aged 7–11 years old, 932 pregnant women, and 1494 breastfeeding women. The median UIC among children has increased to 171.2 µg/L, while the TGR by palpation has decreased to 7.3%. The median UIC among pregnant women is 151.5 µg/L, within the adequate iodine intake range for pregnancy. The coverage of any iodized salt is also high, at 89.1% (Figure 3), although less than 10% of the edible salt available on the market is currently produced by Mongolian enterprises. But the progress has not been equal in all regions: the iodized salt coverage in Khangai and Western regions has been improving at a slower rate, and the TGR remains higher than in other regions.

**Lessons learned**

Passing national legislation and standards, and formalizing the IDD prevention efforts into a national program have helped to create an environment that motivates all government stakeholders to maintain a high

level of commitment. The national surveys are performed by a highly-trained team in cooperation with experts and clinical doctors, and they provide regular, valuable data that allows the government to keep an eye on the goal. The next national survey (scheduled for 2016) should include goiter examination by ultrasound, neonate TSH levels, and an IQ survey to provide even more actionable information on the effectiveness of IDD prevention.

**Challenges ahead**

To sustain the success of the IDD elimination program in the long term, it is essential to maintain the existing political will and commitment to mandatory iodization and educate the population about the benefits of iodized salt. A failure to do so is likely to diminish the government resources allocated to the control of IDD, which in turn will affect the production, control of imports, and monitoring at factory and market levels. Due to the early implementation of salt iodization, Mongolia has been largely unaffected by endemic goiter or cretinism. A new national advocacy

meeting or workshop should be planned to renew the government’s commitment to the control of IDD, to ensure that the country remains free of the most serious consequences of deficiency in the long term.

**Western and Khangai regions**

The Western and Khangai regions of Mongolia have seen the slowest progress to date. Salt production is spread out over the sparsely populated land and is often in the hands of small enterprises, which may be preferred over brands from other regions but may lack the technical capacity to iodize salt. A special project should evaluate the prevalence of IDD across the two regions and propose a strategy to improve their access to iodized salt.

**References**

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**Efforts are needed to reach the sparsely populated and mountainous regions of Mongolia with adequately iodized salt.**