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VOICES

The CTBT: Helping to make the world a safer place

BY GUNNAR BRAGI SVEINSSON
MINISTER FOR FOREIGN AFFAIRS
AND EXTERNAL TRADE OF ICELAND

enter into force. It is therefore deeply disappointing that some Annex 2 States have not even signed the Treaty and others, who are signatories, have not concluded ratification.

Located halfway between Washington and Moscow, Reykjavík, the capital of Iceland, played host to the summit between U.S. President Ronald Reagan and Soviet General Secretary Mikhail Gorbachev in October 1986. The leaders discussed the reduction of nuclear weapons and even raised the possibility of their elimination. Ultimately, no commitments were made. Nevertheless, the summit has been described as one of the most dramatic and potentially productive summits in the history of nuclear disarmament. It also turned out to be of great significance for global peace and security as well as for future disarmament and arms control measures. Based on the momentum gained in Reykjavík, a year later the United States and the Soviet Union signed the Intermediate Range Nuclear Forces Treaty, for the first time eliminating an entire class of nuclear weapons. In 1991 the two States signed the Strategic Arms Reduction Treaty, and in 1996 the Comprehensive Nuclear-Test-Ban Treaty (CTBT) was opened for signature.

HALTING AND REVERSING THE DEPENDENCY ON WEAPONS OF MASS DESTRUCTION

Iceland has a long record of commitment and integrity on nuclear issues. It is also a strong supporter of the CTBT, having signed it on 24 September 1996 and ratified it on 26 June 2000. Nuclear testing has been regarded as the engine of nuclear proliferation. It is imperative that the CTBT enters into force to halt and reverse the dependency on weapons of mass destruction. Furthermore, it is abundantly clear that all non-proliferation efforts are critical in tackling the threat of terrorists acquiring nuclear weapons. A fully ratified and implemented CTBT is an indispensable building block for these efforts.

In spite of strong global aspirations, manifested in 183 signatures and 159 ratifications, this important Treaty has not yet entered into force. Without the signature and ratification of all the 44 states listed in its Annex 2, the CTBT cannot

THE INTERNATIONAL MONITORING SYSTEM: HELPING ENHANCE INTERNATIONAL SECURITY

One of the main aims of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) is to develop the International Monitoring System (IMS) based on a network of 337 monitoring stations. These facilities help enhance international security by monitoring the globe for evidence of a nuclear explosion and must all be in place when the Treaty enters into force. Over 85% of the IMS stations worldwide are already fully operational and transmitting data to the International Data Centre (IDC) in Vienna.

Iceland supports the CTBTO by contributing to the IMS with an auxiliary seismic station in Borgarnes, on the west coast of Iceland (AS38), and a radionuclide station in Reykjavík (RN34). AS38 was one of the IMS seismic stations that detected signals from the nuclear test carried out by the

Democratic People's Republic of Korea on 12 February 2013, and sent data to the IDC in Vienna for analysis.

HELPING MITIGATE THE EFFECTS OF NATURAL OR MAN-MADE DISASTERS

While the CTBT's primary purpose is to ensure that no nuclear test goes undetected, data generated by stations can also help mitigate the effects of natural or man-made disasters. On 22 March 2011, RN34 became the first IMS radionuclide station in Europe to detect iodine-131 originating from the accident at the Fukushima Daiichi nuclear power plant 11 days earlier. Tests by scientists from the Icelandic Radiation Safety Authority (IRSA) showed that the radioactivity posed absolutely no risk to public health. This played an important role in alleviating concerns in Europe. The IRSA concluded that CTBTO data can serve as a powerful tool for analyzing the global distribution of radionuclides from a nuclear accident.

IMS seismic and hydroacoustic stations can also detect earthquakes that can cause tsunamis. The CTBTO provides the data in near real-time to tsunami warning centres, particularly those covering the Pacific and Indian Oceans, to help them issue more timely and precise warnings. Ten tsunami warning centres in high-risk areas currently receive data from around 60 CTBTO stations. When the 8.9 magnitude earthquake struck the north-east coast of Japan on 11 March 2011, triggering a massive tsunami that also caused the accident at Fukushima, CTBTO data helped Japanese authorities issue timely tsunami warnings. The data from about 20 seismic and hydroacoustic stations were sent directly and in real time to seven warning centres in the region, including Japan and the United States.

MONITORING VOLCANIC ACTIVITY

The potential use of CTBTO data to monitor volcanic eruptions is of great interest to Iceland. The volcanic activity in our country is well known and caused major disruptions to air traffic across Europe during the eruption of



Technical Training Course for Radionuclide Station Operators, Reykjavik, Iceland, 5-9 August 2013. Photo courtesy of Guillaume Beziat

Eyjafjallajökull in April 2010. Data from the CTBTO's seismic stations can, for example, indicate that a volcanic eruption is imminent and infrasound stations can monitor volcanic activity by registering the very low frequency sound waves that eruptions emit.

On-site inspections (OSI) are the final verification measure to establish whether or not a nuclear explosion has taken place. The CTBTO routinely convenes workshops, training and exercises to develop its OSI operational capabilities. The CTBTO concluded its first integrated field exercise in Kazakhstan in 2008 and is currently preparing for another one in Jordan next year.

A RANGE OF CAPACITY BUILDING OPPORTUNITIES

In addition to the obvious political benefits and the civil and scientific applications of the monitoring data, CTBTO membership offers capacity building opportunities. Every year hundreds of technical experts who are engaged in test-ban verification acquire pertinent skills to keep them abreast of the latest developments in verification technologies. Iceland actively participates in these activities and organized Technical Training Programme Courses for Radionuclide Station Operators in Reykjavik in October 2009 and August 2013, in collaboration with the CTBTO.

The courses provided station operators with the basic knowledge and technical understanding necessary for the operation, maintenance and management of an IMS station using radionuclide technology. Iceland is proud of these contributions to the activities of the CTBTO.

What may have been a distant dream at the 1986 Reykjavik summit has become a realistic working goal. Previous champions of nuclear weapons have become advocates of non-proliferation and are calling for the entry into force of the CTBT. We have a responsibility to future generations to make the world a safer place by eliminating the threat of nuclear destruction. By banning all nuclear explosions, the CTBT in force will move the world one step closer to making this dream a reality.

BIOGRAPHICAL NOTE

GUNNAR BRAGI SVEINSSON

has been the Minister for Foreign Affairs and External Trade of Iceland since May 2013. He has been a Member of the Althingi, the Icelandic Parliament, since May 2009. He was also the Chairman of the parliamentary group of the Progressive Party between 2009 and 2013. Prior to this he held various positions on behalf of local municipalities, also working in commerce and marketing and as a managing director, the editor of a district newspaper, and the political advisor to the Minister of Social Affairs.