

## PREFACE

On 18 December 1998, Canada deposited its instruments of ratification for the Comprehensive Nuclear-Test-Ban Treaty (CTBT) with the United Nations. Successive Canadian governments for many years have worked diligently toward achieving such an agreement. Constraining the development and qualitative improvement of nuclear weapons as well as the development of new types of nuclear weapons constitutes an effective measure of nuclear disarmament and non-proliferation. As Canada's Foreign Minister, the Honourable Lloyd Axworthy stated:

"The CTBT is an important part of Canada's efforts over the past years to construct an effective international nuclear non-proliferation and disarmament regime. By ratifying, Canada will help to enhance the strength of this regime. I urge all States that have not signed the Treaty to do so immediately and without conditions."

Central to the successful implementation of the CTBT is its verification system. The permanent monitoring systems and other components of the CTBT's verification process constitute a major international undertaking that is commensurate with the importance of this Treaty. The three recent events which constitute the focus of this report provide an important opportunity to gauge in a preliminary way the effectiveness of the nascent and, as yet, incomplete CTBT monitoring systems, particularly the seismic monitoring network. This report concludes that the seismic monitoring network – though still very much in an embryonic form – performed well beyond its design expectations. This provides a strong endorsement for the future ability of the States Party of the CTBT to verify effectively compliance with its obligations. Other conclusions – such as the value of drawing upon non-Treaty sources of data including commercial satellite imagery – are equally significant.

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Department of Foreign Affairs and International Trade  
Ottawa, Ontario, Canada  
December 1998