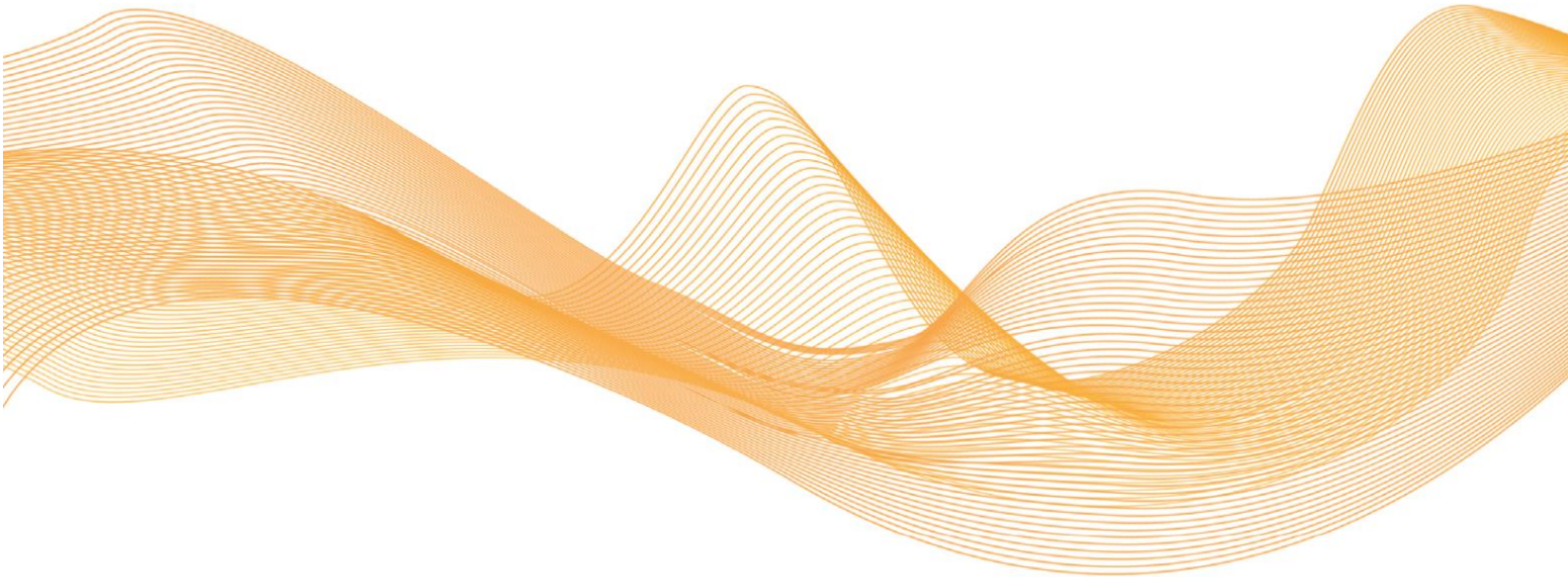
CTBTO
PREPARATORY COMMISSION
preparatory commission for the comprehensive nuclear-test-ban treaty organization

ON-SITE INSPECTION

IFE14

JORDAN الأردن



Frequently asked questions

1. What is IFE14?

Upon entry into force of the Comprehensive Nuclear-Test-Ban Treaty (CTBT), an on-site inspection (OSI) will be the final verification measure conducted to ascertain whether or not a nuclear explosion has taken place. The Integrated Field Exercise IFE14 will simulate nearly all aspects of an OSI. The inspection team will conduct a meticulous search of a clearly defined inspection area to establish whether a nuclear explosion has occurred in violation of the CTBT. The exercise will be in response to a technically realistic and stimulating but fictional scenario. IFE14 will last from 3 November until 9 December 2014 and will be carried out in both Jordan and Austria; the Jordan segment, where all the field activities will be carried out, will begin on 7 November with the arrival of the Inspection Team.

2. Why is IFE14 important?

This simulation will test and demonstrate the CTBTO's capabilities to conduct an on-site inspection under tight Treaty timelines and realistic conditions. It will help identify gaps in our capabilities in order to close them. It will reinforce confidence in our Member States that the Comprehensive Nuclear-Test-Ban Treaty is effectively verifiable, that no nuclear explosion can go undetected.

3. Why does it take place in Jordan?

In a competitive process, the CTBTO's Member States selected Jordan from a number of other countries offering to host the exercise. The rich variety of geological features in Jordan's Dead Sea area allow for realistic and challenging conditions. Jordan has been able to provide an area of approximately 1,000 square kilometres, which is the maximum size allowed for an on-site inspection, and has proven to be a dedicated and most hospitable host.

4. What does the Jordanian government say about IFE14?

The exercise is under the patronage of His Majesty King Abdulla II of Jordan.

Jordan's Prime Minister Abdullah Ensour described the proliferation of nuclear weapons as "a threat of nightmarish proportions for regional and global security" and stressed Jordan's active support for the CTBT and its organization by hosting IFE14. "It fills me with pride that the other 182 CTBTO Member States chose Jordan to host IFE14 in a competitive process. The Dead Sea provides the perfect topography and geology for a realistic and challenging on-site inspection simulation." – see article by Prime Minister Ensour in the CTBTO Spectrum magazine issue 22.

5. What does the CTBTO say about IFE14?

"I would like to express my deep appreciation to the Jordanian government for its generous support. By hosting IFE14, Jordan underscores its role as an anchor of stability in the region and

sends a positive political signal for international nuclear disarmament and non-proliferation efforts." - *Executive Secretary Lassina Zerbo*

"IFE14 will prove that CTBT on-site inspections are a viable deterrent against would-be Treaty violators. With a range of new techniques envisaged by the CTBT but never used before in on-site inspection-related tests and exercises, IFE14 will take our capabilities to a new level." - *Oleg Rozhkov, Director of the On-Site Inspection Division and the IFE14 Project Executive*

6. Is this the first such exercise?

The first integrated field exercise, IFE08, was conducted in 2008 in Kazakhstan, at the former Soviet nuclear test site of Semipalatinsk. During IFE08, only eight of 17 OSI inspection activities and techniques were tested, compared to 15 of 17 inspection techniques in IFE14. Significant advances have also been made in the field of logistics and communications. We now have an Intermodal Rapid Deployment System – airfreight-compatible containers that allow for field equipment, sensors or generators to be used straight from the containers. Preparations have been much more intense, with a total of 28 weeks of preparatory build-up exercises and training, compared with approximately seven weeks prior to IFE08.

In terms of inspection techniques, only two of the 17 techniques foreseen under the Comprehensive Nuclear-Test-Ban Treaty will not be exercised:

- Resonance seismometry (measuring underground seismic tremors which can help to identify underground cavities) and

- Drilling which involves obtaining samples from the actual site of the suspected explosion (mainly for financial reasons since it would require investments similar to those needed for an oil exploration).

For more information see this article by IFE14 Exercise Manager Gordon MacLeod and OSI Division Coordinator Matjaz Prah in CTBTO Spectrum issue 22.

7. When will an OSI take place for real, not only as an exercise?

OSIs can only be conducted after the Comprehensive Nuclear-Test-Ban Treaty has entered into force. For this to happen, the remaining eight countries defined as nuclear technology holders in the Treaty, must sign and ratify: China, Egypt, India, Israel, Iran, North Korea, Pakistan and the United States. Of these, all but India, Pakistan and North Korea have already signed the CTBT and are thus members of the CTBTO.

Once the CTBT has entered into force, any Member State can request an on-site inspection, which must then be approved by the organization's main executive organ, the future Executive Council, with the support of at least 30 of the total 51 members.

8. Why the need for OSIs when the IMS network has proven its ability to detect even small underground nuclear tests?

Indeed the CTBTO's network of stations has exceeded the expectations laid out at the time of its conception in the mid-1990s. Although still not complete, the network detected all three nuclear tests announced by North Korea swiftly and precisely. Yet it is conceivable that a country might try to evade detection by mine masking (detonating simultaneously with a mine blast) or using a large underground cavern to decouple a nuclear test, or by other means. While we are confident that our system would detect such an event in any case, the country in question might claim that it was due to natural causes. An OSI will uncover the truth.

An OSI is essentially a deterrent to assure that no Treaty violation will go undetected. As with any deterrent, it needs to be effective in order to be credible. As with the challenge inspections under the Chemical Weapons Convention, we hope that this deterrent will never have to be used.

9. How can a realistic on-site inspection scenario be crafted in the absence of a real nuclear test?

First you must ask yourself what would the CTBTO's International Monitoring System measure and the International Data Centre identify as a suspicious event – a physical event that would be the basis for the on-site inspection request. While it will obviously not be a real nuclear explosion, it might show characteristics of an event that requires further investigation.

You then need to apply this logic to the exercise venue: what physical changes would such an event make? The exercise area is carefully prepared so that it is scientifically credible, with certain physical, man-made features, and even simulating radiation areas, and geophysical anomalies. All this will enable the inspection team to carry out its fact finding mission in a realistic manner.

10. What would be different in a real OSI?

In a real OSI, which will be possible once the Comprehensive Nuclear-Test-Ban Treaty has entered into force, only an inspection team of max. 40 inspectors will be present in the inspected country. For the purposes of this exercise and in order to provide a wider audience access to this important field activity, IFE14 will encompass various participant groups. Now we will have over 200 participants also representing control and evaluation teams, inspected State Party and observers.

11. Can an OSI discover evidence of other nuclear activities, such as uranium enrichment?

The collection of evidence, including the detection of radioactive isotopes, is strictly limited to what is relevant to the ambiguous event. Accordingly, stringent procedures are in place to ensure the security, integrity and confidentiality of all information and samples. As part of these measures, inspectors can only identify specific radionuclides that are relevant to an OSI. Overall,

the Treaty's provisions for conducting an on-site inspection strike a careful balance between an effective inspection and the protection of the inspected State Party's national security interests.

12. Total costs for IFE14? Borne by whom?

The total cost of IFE14 including 3 years of preparations amounts to U.S. $ 10.3 million, equivalent to around 8% of the CTBTO's annual budget of US$ 130 million. The exercise is supported through a multi-year fund provided by the CTBTO's Member States. Nine CTBTO States Signatories as well as the European Union have made in-kind voluntary contributions and provided equipment for this exercise. The following States have made contributions for IFE14: Canada, Czech Republic, China, Hungary, Italy, Japan, Sweden, the United Kingdom, the United States and the European Union through two Council Decisions in 2010 and 2012, respectively.

13. Is the investment of over U.S. $ 10 million of taxpayers' money wisely placed, given that the CTBT is unlikely to enter into force anytime soon?

By investing in this exercise, the CTBTO's Member States strengthen one of the key pillars of the nuclear disarmament and non-proliferation regime. A strong and credible CTBT verification regime is, in turn, a precondition for making progress on the Treaty's entry into force. As the discussions in the United States, for example, have shown, verifiability was a key consideration when the CTBT was first considered and not adopted by the U.S. Senate in 1999. At that time, the CTBT's verification regime as a whole was not much more than an untested blueprint. Since then, the verification regime has evolved and proven its effectiveness in a number of instances such as detecting the three North-Korean tests. IFE14 represents a unique opportunity to demonstrate the on-site inspection regime pillar of the verification regime in a credible fashion.

14. Do security concerns play a role when organizing the exercise?

Security is taken very seriously in all planning phases and throughout the exercise itself. Special security and health & safety guidelines have been elaborated in close cooperation with Jordanian security authorities and the United Nations Department for Security and Safety.

15. Where can I get updates on IFE14 during the exercise?

CTBTO website: www.ctbto.org/IFE14

Twitter: https://twitter.com/ctbto_alerts - hashtag #IFE14

Videos: http://www.ctbto.org/videos/

Images: https://www.flickr.com/photos/ctbto

16. Media opportunities in Jordan during the exercise?

Media will be invited to participate in parts of the VIP day programme on 15 November. There will also be a dedicated media day on 16 November with the opportunity to see field teams at work and visit the base of operations.