



ID: I02-718

Type: **Invited talk**

## CTBT Hydroacoustic Network at 25 years

*Wednesday 30 June 2021 11:30 (12 minutes)*

This presentation addresses the history of the CTBT hydroacoustic network, from its broad definition during negotiations of the Treaty through its establishment over the 25 years following the opening for signature of the CTBT.

Hydroacoustic network discussions during the negotiation of the CTBT will be addressed, including rationale for decisions that were made. The network concept was further solidified during the early years of the CTBTO, leading to the first Hydroacoustic Operational Manual.

The early work on establishing the hydrophone stations required innovative thinking to establish stations that would work as specified, be highly reliable, and be as maintainable as possible.

The progressive build-up of the hydroacoustic network has led to its current status of being the only fully certified technology in the CTBT network. It is a unique global observatory which is providing data not just for CTBT purposes, but also data for various civil and scientific uses. The underwater location of major elements of the hydrophone stations causes difficulties in sustaining them. Underwater repairs/replacement are very expensive, complex, and time consuming which provides a challenge in both installing highly reliable equipment and dealing with failure when it does occur.

### Promotional text

**Primary author:** Mr LAWRENCE, Martin (Sydney Institute of Marine Science, Sydney, Australia)

**Co-authors:** Mr HARALABUS, Georgios (CTBTO Preparatory Commission); Mr ZAMPOLLI, Mario (CTBTO Preparatory Commission); NIELSEN, Peter Loring (CTBTO Preparatory Commission); Mr STANLEY, Jerry (CTBTO Preparatory Commission)

**Presenter:** Mr LAWRENCE, Martin (Sydney Institute of Marine Science, Sydney, Australia)

**Session Classification:** The 25th anniversary for opening the CTBT for signature: invited talk on Hydro-acoustic technology

**Track Classification:** Backbone elements