

Instrumentation

IARO analysis of soundscapes relies upon accurate recording of sound from infrasound to the top of the audible frequencies. This allows post-capture analysis that is not limited by industry-standard metrics, which make many assumptions as to how sound affects human health.

Sound recordings must reach a professional standard, be calibrated to industry standard and at a realistic cost.

Sound Recording and Analysis System

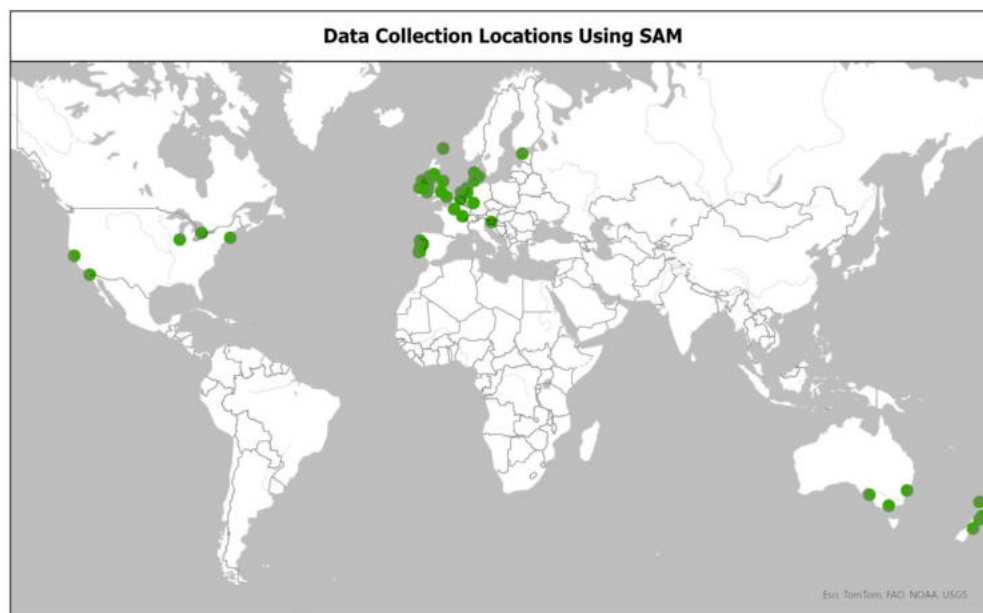
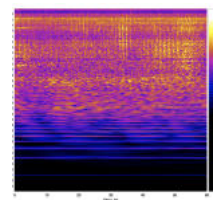
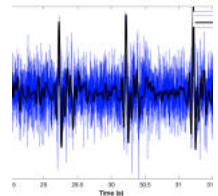
The SRA system (often called SAM) is used extensively by IARO members to record sound for later analysis. This system also forms part of the CSI-ACHE (Citizen Science Initiative for Acoustical Analysis of Human Environments) to provide citizens with lower-cost, professional-quality equipment for recording sound.

The system was chosen as it has been designed for stereo, professional-grade recording that includes the infrasound region. It is much less expensive than the more limited sound level meters used in acoustics measurement.

The main features of the SRA system include:

- dual, balanced microphones for stereo recording
- 0.1 Hz to 20 kHz audio capture
- uncompressed WAV recording format with digital signature for chain of evidence
- GPS-derived location and time
- 20 dB gain for quiet environments
- windshields and 1 Hz filter for windy conditions
- Type 1 calibrator
- choice of 11, 22 and 44.1 kHz sampling rates
- continuous recording for weeks (or months with an external hard drive)

Below shows the locations where the SRA system has been used to collect acoustic environmental data.



The SRA system is available from Soundscape Analytics Ltd, in New Zealand. Please see www.smart-technologies.co.nz or contact the IARO Secretariat for further information.

Contact: secretariat@iaro.org.nz

