

IMPROVING PERFORMANCE AND EFFICIENCY

HIGHLIGHTS IN 2018

Further development and consolidation of the Quality Management System

Enhancement of the performance monitoring tool and refinement of key performance indicators

Technical evaluation of IDC progressive commissioning and progress in the operationalization of OSI capability

2018 National Data Centre Workshop (Algeria).

At all stages of the process of establishing the Treaty verification system, the Commission aims for effectiveness, efficiency, sustainability, client (i.e. States Signatories and NDCs) orientation and continual improvement. The implementation of the Quality Management System (QMS) is meant to ensure that work to establish the verification regime complies with the requirements of the Treaty, its Protocol and the relevant guidance of the Commission and enhances performance monitoring.

Establishing the QMS is a continual process towards the fulfilment of the goals and objectives set out in the Quality Policy of the Commission and, in particular, instilling a quality culture in the PTS.

Quality Management System

To ensure continuous provision of high quality data, products and services, the Commission pursued further improvement of the QMS in 2018. The QMS is a living system that can be adjusted in line with the emphasis placed by the Commission on the needs of States Signatories and NDCs and on continual improvement.

Advances were made in promoting the QMS and staff awareness of the use of QMS products. The procedure for controlling and coding QMS documents was consolidated, and use of the document management system significantly increased. With more than 2300 documents filed, the QMS provides the functionality to univocally locate the latest approved versions of documentation.

The Commission provided States Signatories with the first compilation of terms that supplement the glossary of verification terms. The compilation contains more than 1000 terms gathered from internal documents that contain a glossary. Work on a supplement to the glossary of verification terms aims to manage and share a common vocabulary as an aid for ensuring the consistency and quality of products and services. This fosters PTS cross-functional alignment and helps all members of the organization to better understand the context and usage of terms. It intends to serve as a basis for strengthening the quality of the work done at the PTS.

The Quality Policy of the Commission emphasizes client orientation. Therefore the Commission continued to prioritize feedback from NDCs, which are the main users of its products

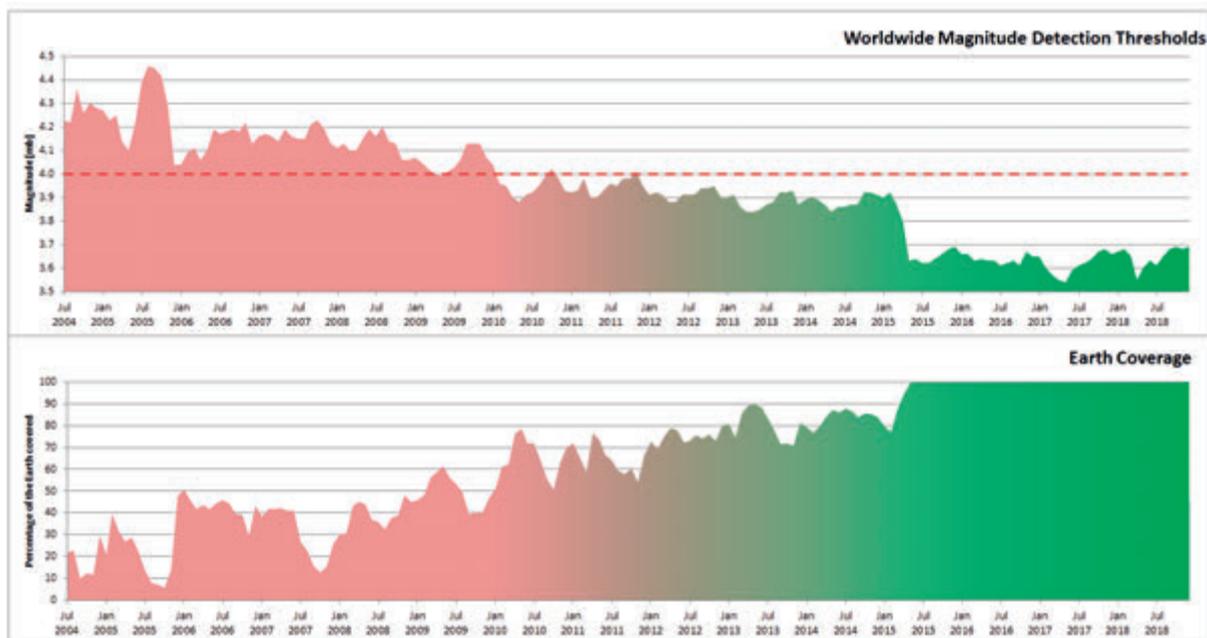
and services, and to encourage them to actively contribute through the established channels to review the implementation of recommendations. The 2018 NDC Workshop in Algeria provided an opportunity for the PTS and NDCs to report on and discuss progress achieved.

Performance Monitoring

The PTS continued to enhance the performance reporting tool (PRTool) for monitoring of the quality of processes, data and products related to the development and provisional operation of the verification regime. A major version of PRTool with significantly improved functionality was released in 2018, followed by two additional releases that included new metrics, on threshold monitoring of the seismic network and on the minimum detectable concentration per station of ^{133}Xe as measured at IMS stations. Documentation accompanying the new releases includes revisions of the associated Process Metrics Manual to ensure full consistency between the definitions of the metrics and the reported information.

The figure below shows the continuous assessment of the global detection capability of the primary seismic network from 2004 to 2018. The top graph displays the worldwide averaged median body wave magnitude (mb) able to be detected at 90% confidence level. The bottom graph represents the percentage of the total surface of the earth for which events of magnitude $m_b=4.0$ can be detected at 90% confidence level. The value of $m_b=4.0$ (dashed line) roughly corresponds to a 1 kilotonne underground nuclear test.

2004-2018 Continuous Assessment of Global Seismic Detection Capacity



Top: time evolution of worldwide magnitude detection thresholds.

Bottom: time evolution of the percentage of the total surface of the earth for which events of magnitude $m_b=4.0$ can be detected at 90% confidence level.



2018 National Data Centre Workshop (Algeria).

The Quality Management and Performance Monitoring (QMPM) Section continued to use the OSI recommendation tracking module of the Evaluation Information Management System (EIMS) and its link to the CTBTO Organizational Management Programme Achievement Status System (COMPASS) project management tool for the purposes of monitoring the further development of OSI capability through the implementation of the OSI action plan.

Evaluation

As part of its preliminary preparations for the evaluation of the next series of BUEs, the QMPM Section continued to improve the functionality of the EIMS, which is intended to be used by the evaluation team during the BUEs and afterwards to generate the evaluation reports.

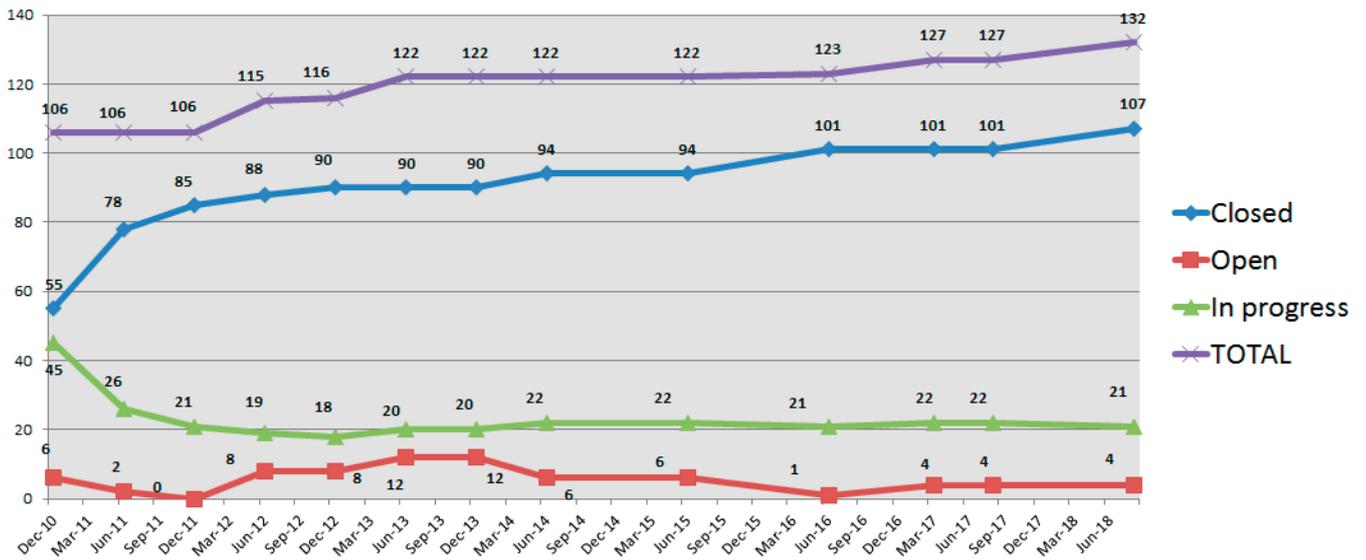
In preparation for the forthcoming evaluation of the next series of three BUEs, the QMPM Section developed a strategic level evaluation concept blueprint covering the period 2018-2021.

The technical evaluation report on Experiment 2 of the IDC Progressive Commissioning Plan was issued. Of the 31 validation tests performed during the experiment, 20 tests were successfully implemented. The remaining 11 tests were only partially implemented, resulting in 25 recommendations to improve system performance.

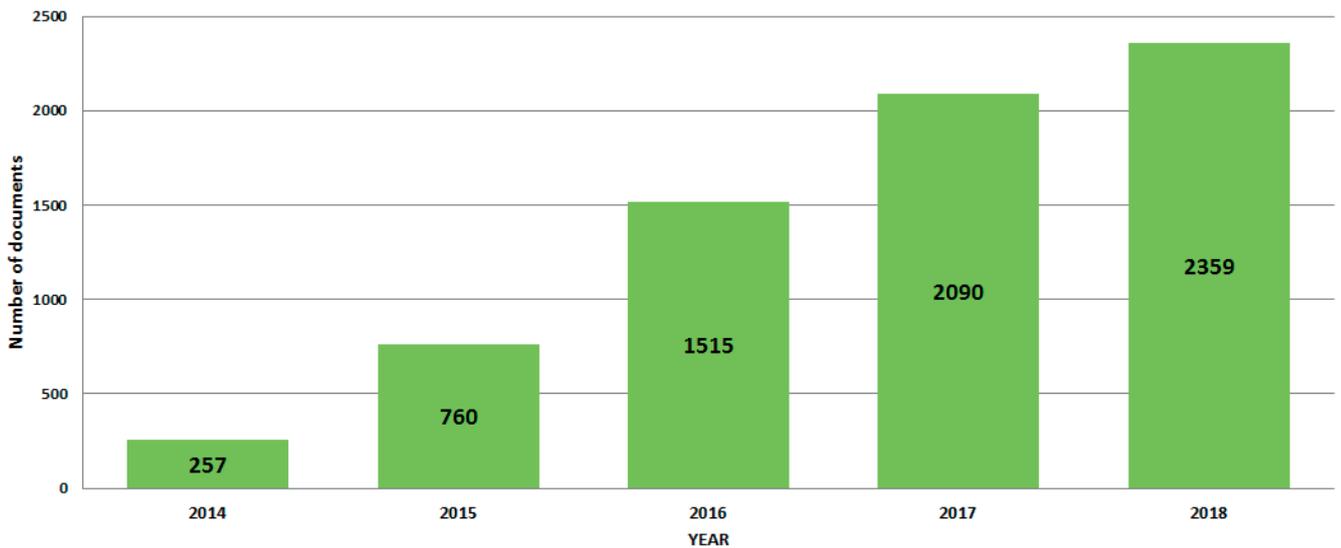
In preparation for Experiment 3 and taking into consideration the lessons learned from previous experiments, the QMPM Section developed an evaluation framework for a comprehensive evaluation of the conduct and outcome of future experiments.

This approach was initiated during the implementation of Experiment 3 from 23 September to 6 October 2018. An external evaluation team, comprising four evaluators from States Signatories, assisted the QMPM Section in a comprehensive evaluation of the experiment and in the elaboration of the final evaluation report.

Recommendations from National Data Centre Workshops



Number of Documents in the Quality Management System Repository



Distribution of Quality Management System Documents

