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## Technology and human resource in operation and maintenance

The International Monitoring System network, the national networks of different countries, consists of various facilities and a variety of equipment and designs deployed in different parts of the globe. The operation and maintenance (O&M) of these facilities in order to achieve the required level of data availability and quality is very challenging and requires resource mobilization, planning, and management for optimization. The sustainment of these facilities requires modern technology, human resource availability, training, management, and sustainability. The advent of modern and new technologies has greatly impacted the dynamics of operations and maintenance, especially in view of the unpredictable climatic and global weather patterns. This presentation aims to discuss the predictive and analytic role of technology, such as machine learning and AI: their contribution to the development of measures and tools that lead to enhanced performance optimization, and also their limitations in the daily O&M activities. These tools help in the innovation and development in the state of health monitoring by station operators, timely notifications, equipment standardization, documentation, storage, and best practices in O&M. We further highlight the critical role of human intervention, the needs of human resources, the new challenges faced and some potential solutions.

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