Rolling list of upcoming workshops, training and exercises organized by the PTS

Disclaimer: The information was last updated on 2 August 2019. This list is updated on a regular basis.

For the latest up-to-date information, please consult the web sites for "Calendar of Events" (http://www.ctbto.org/the-organization/calendar-of-events/) and "Workshops, Training and Exercises" (http://www.ctbto.org/the-organization/workshops-training-and-exercises/)

2019

Dates	*Venue*	*Meeting/Event*	*Target audience/participants*	*Background / Objectives*	*Lead Division(s)*
9 – 13 September	Kuala Lumpur, Malaysia	East Asia NDC Workshop 2019	Invited States should nominate participant(s) who are involved in the use of IMS Data and IDC Products (waveform and radionuclide). Preference would be given to NDC operators and NDC's customers. This Workshop is dedicated to the following countries: Australia, China, Indonesia, Japan, Republic of Korea, Malaysia, Mongolia, Philippines, Russian Federation, Singapore, Thailand, United States of America and Viet Nam	Objectives: • To strengthen the knowledge of the CTBT and the work of the Commission; • To further build-up the capacity of the CTBT State Signatories to participate in the implementation of the verification regime and assess how participants are making use of IMS data and IDC products; • To encourage NDCs within the region to undertake a joint exercise for the analysis of waveform and radionuclide data and compare their results; and • To promote the exchange of experience and expertise among the NDCs.	IDC
11 – 20 September	VIC, Vienna, Austria	Field Test and Expert Meeting on Deep Geophysical Techniques	A limited number of external experts who have expertise in this field and PTS staff	Objective: • To assess and validate the functionality and specifications of hardware, acquisition software and procedures for the inspection techniques listed in paragraph 69, sub-paragraphs (f) and (g) of Part II of the Protocol to the CTBT.	OSI

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12 – 13 September	Quito, Ecuador	CTBT: Science and Technology Conference	Scientists, technologists, academics, students, CTBTO policy makers, members of the media and representatives of organizations involved in research and development that is relevant to all aspects of Treaty verification; representatives of Permanent Missions.	Objectives: • To broaden and strengthen the engagement of the scientific communities working in test ban monitoring, including young scientists, and to enhance the geographic and gender representations of broader scientific communities; • To identify opportunities and possible solutions to continuously improve nuclear test monitoring and verification; • To identify how scientific developments and cooperation can support national needs and frame policy objectives in support of the CTBT; and • To promote the wider civil and scientific applications of techniques and data used for test ban verification.	LEGREL
16 – 20 September	VIC, Vienna, Austria	Technical Training for Station Managers with Stations Operating under PCA Contracts	Individuals with managerial and planning responsibility at certified IMS stations with PCA contracts in place or PCA contracts to be concluded in 2019. Invited States Signatories should nominate participant(s) who are station managers involved in the operation and maintenance of the following stations: Brazil: RN11, PS07, IS09; Canada: PS08, PS09, PS10, IS10, RN14, RN15, RN16, RN17; Cameroon: RN13; Cote D'Ivoire: PS15; Denmark: IS18; Germany: RN33, PS19, IS26, IS27; Iceland: RN34; Japan: RN37, RN38; Mexico: RN44; Malaysia: RN42; Kazakhstan: PS23, IS31; Norway: PS27, PS28, IS37, RN49; Panama: RN50; Papua New Guinea: RN51;	Objectives: • To provide Station Managers with the knowledge and technical understanding of the PTS procurement process, how to initiate a change in the station budget, and how to plan for operations and maintenance at IMS stations under PCA contracts.	IMS

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16 – 20 September	VIC, Vienna, Austria	Technical Training for Station Managers with Stations Operating under PCA Contracts (continued)	Portugal: RN53, IS42, HA07; Tanzania: RN64; Thailand: RN65, PS41; Turkey: PS43; United Kingdom: IS51 Nominated individuals shall be directly related to the management of PCA contracts. The selected participants should complete the following e-learning modules before the start of the course: EN-MON07, 08, 10, 13, 14 and 15. The participation of station managers of IMS stations not listed above will be subject to availability of places in the training course.		IMS
22 September – 2 October	Ottawa, Canada	On-Site Inspection Additional Overflight Course of the Third Training Cycle (AOF-3TC)	On-site inspection (OSI) third training cycle surrogate inspector trainees	Objectives: • To provide competencies via hands-on training on Airborne Additional Overflight Techniques during an OSI with a view to enabling the participants to: ➢ Plan appropriate flights for MSI, GRM and MAG in response to questions set in ITF; ➢ Install MSI, GRM and MAG equipment on an airframe in line with procedures; ➢ Navigate an overflight mission using PTS equipment; ➢ Operate MSI, GRM and MAG equipment in-flight; ➢ Uninstall MSI, GRM and MAG equipment; and ➢ Process overflight data in line with procedures and upload data products to GIMO	OSI
25 September	United Nations Headquarters, New York, United States of America	Tenth Conference on Facilitating the Entry into Force of the CTBT (Article XIV Conference)	High-level, preferably ministerial level, representatives attending the United Nations General Assembly, including Signatory and non-signatory States, as well as intergovernmental organizations, Group of Eminent Persons (GEM) and CTBTO Youth Group (CYG).	Objectives: • To promote entry into force of the CTBT.	LEGREL

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30 September – 2 October	VIC, Vienna, Austria	Expert Meeting on Advances in Waveform Processing and Special Studies	Experts from NDCs and research establishments that are involved in testing, applying and developing waveform methods that may be suitable for inclusion into the IDC waveform automatic processing pipeline, or may be applicable to Special Studies and Expert Technical Analysis.	Objectives: • To explore advances to waveform processing that may improve the IDC waveform pipeline processing, including tools and methodologies for testing and validation; and • To discuss waveform Special Studies and Expert Technical Analysis - methods, use of data and content of UEB and SRMR.	IDC
2 – 4 October	VIC, Vienna, Austria	Scenario Task Force Expert Meeting	A limited number of external experts who are members of the Build-Up Exercise Task Force and PTS staff	Objective: • To develop the exercise scenarios for the Build-Up Exercises contained in the OSI Exercise Plan 2016 – 2020.	OSI
3 – 4 October	VIC, Vienna, Austria	Second Expert Meeting on Special Studies and ETA with RN and ATM Methods	Experts from NDCs and research establishments that are involved in applying and developing radionuclide and ATM methods that may be suitable for Special Studies and Expert Technical Analysis.	Objectives: • To review methods that may be suited for Special Studies and ETA; • To discuss the possible content of the URR and SRMR; • To explore the potential use of various non-IMS data for SRMR; and • To advance common understanding of methods to be developed for the SSREB, URR, SRMR and NDC responsibilities.	IDC
7 – 11 October	TBD	On-Site Inspection Leadership Course of the Third Training Cycle (LSP-3TC)	• On-site inspection (OSI) third training cycle surrogate inspector trainees who will take the roles of : ➢ the inspection team leader, ➢ the deputy team leader, ➢ technical subject leaders; and ➢ all technical surrogate inspectors who may serve as field team leaders.	Objective: • To provide leadership training suited to complex OSI situations, focusing on the roles and tasks of OSI leadership, team management, negotiations with the ISP, planning and decision making during an OSI, adaptive training (training others), critical thinking and report writing for non-scientific audience.	OSI
13 – 25 October	TeST Centre, Seibersdorf, Austria	On-Site Inspection Radionuclide and Noble Gas Course of the Third Training Cycle (RNNG-3TC)	On-site inspection (OSI) third training cycle surrogate inspector trainees	Objectives: • To acquire competencies required to perform advanced activities related to paragraphs 69(c-d) of the protocol; • To obtain practical knowledge and hand-on capabilities on all equipment related to radionuclide and noble gas sampling, handling and analysis; and • To validate the pertinent Standard Operating Procedures and Work Instructions.	OSI

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14 – 15 October	La Havana, Cuba	Science Diplomacy Conference	Government officials, including those from the Ministries of Foreign Affairs, Science and Technology, and Emergency Response; participants to *International Convention on Science, Technology and Innovation*, taking place in Habana.	Objective: • To enhance the understanding of the Treaty by relevant actors in Cuba who could eventually contribute to Treaty signature and ratification, by highlighting the synergies between science and policy/diplomacy and focusing on the potential contribution of CTBT data and technologies to civil and scientific applications as well as on the consistency between Cuba's position in nuclear non-proliferation and disarmament and the Treaty's objectives.	LEGREL
14 – 18 October	Fairfax, Virginia, United States of America	Technical Training for Radionuclide Station Operators with RASA Systems	Invited State Signatories should nominate participant(s) who are station operators involved in the operation and maintenance of the following stations with RASA systems: Brazil: RN11 Canada: RN15 Chile: RN18, RN19 Ecuador: RN24 Germany: RN33 Japan: RN37, RN38 Kuwait: RN40 United Kingdom: RN66 The participants should have basic Linux knowledge. Applicants are encouraged to complete the following e-learning modules: EN-MON04, EN-MON06, EN-OSI04	Objective: • To provide hands-on training and practical lessons to Station Operators on the operation, maintenance and repair of the RASA equipment.	IMS
14 – 18 October	VIC, Vienna, Austria	NDC Waveform Training Course Using SeisComP3	The training is open only to the CTBT States Signatories, in particular to those participating in the Capacity Building Program. Target participants would be technical staff/authorized users involved or to be involved in the use of IMS data and IDC products. NDC staff is the main target group. The participants should have experience in waveform data analysis.	Objective: • To strengthen the capacity of the States Signatories' participation in the verification regime and to enhance their use of PTS data and products for civil and scientific applications using SeisComP3	IDC

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14 – 18 October	VIC, Vienna, Austria	NDC Waveform Training Course Using SeisComP3 (continued)	Experience with UNIX/Linux operating system and SQL would also be beneficial.		IDC
14 – 18 October	Bruyères-Le-Chatel, France	NDC Advanced Training on Infrasound Data Analysis	NDC staff with technical background on waveform technologies. Prior participation in PTS infrasound trainings such as NDC Infrasound Data Analysis Training or Regional infrasound trainings (ARIWIT or LACRIWIT), and participation in the intermediate level infrasound training is an asset.	Objectives: • To improve the National Data Centre capabilities; • To provide participants with sufficient knowledge for understanding infrasound sources and atmospheric propagation; and • To provide practical experience in processing and analyzing IMS infrasound data with NDC-in-a-Box tools.	IDC
21 – 24 October (an additional date, on 25 October, for trainees from RN13 and RN33)	Olen, Belgium	Technical Training for Radionuclide Station Operators Canberra Equipment	Invited States Signatories should nominate participant(s) who are station operators involved in the operation and maintenance of the following stations: Argentina RN03 Cameroon RN13 Canada RN14, RN16, RN17 Cook Island RN23 Ecuador RN24 Fiji RN26 Germany RN33 Mongolia RN45 Kiribati RN39 Mauritania RN43 New Zealand RN46, RN47 Panama RN50 Philippines RN52 UK RN66 The participants should have basic Linux knowledge. Applications from other stations using Canberra detector equipment may be considered on a space available basis. Applicants are encouraged to complete the following e-learning modules: EN-MON04, EN-MON06, EN-OSI04	Objectives: • To provide hands-on training and practical lessons to Station Operators on the operation, maintenance and repair of the Canberra Gamma Detector System manufactured by Canberra Industries Inc.	IMS

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27 – 30 October	VIC, Vienna, Austria	Expert Meeting on Radionuclide and Noble Gas OSI Verification	A limited number of external experts in these techniques and PTS staff	Objective: • To review the status of development of the OSI Radionuclide and Noble Gas techniques and activities that are permitted under paragraph 69, sub-paragraphs (c) and (d) of Part II of the Protocol to the CTBT and to identify gaps and provide recommendations for future developments.	OSI
28 – 29 October	VIC, Vienna, Austria	NDC-in-a-Box ATG (Alpha Tester Group) Technical Meeting	• ATG members, who should be experienced users of SeisComp3 and should have an overview of the tools, protocols and processes their NDC uses to obtain and process IMS and non-IMS waveform data. • ATG members must have access to event bulletins spanning and extended amount of time to train the system. • In order to be effective in the work envisaged for the Meeting, it is recommended that each participating NDC nominate only one person for ATG membership and that the ATG as a whole should not exceed 8 members with broad geographical representation.	Objectives: • To report on test results following the execution of the tests as laid out in the test plan; • To identify areas of future improvements; and • To provide guidance on activities to support the roll-out of the new capabilities to NDCs.	IDC
28 October – 1 November	Chiang Mai, Thailand	NDC Capacity Building Workshop and Regional Seismic Travel Time (RSTT) in combination with Data Sharing and Integration Training	Participants should be involved in the use of IMS data and products, in particular NDC analysts, scientific staff from seismological observatories, and/or tsunami warning centres or researchers from academic institutions with seismological background and experience. Participants should have an advance degree in seismology and/or geophysics, a good command of English language and have worked in areas related to tomography, receiver functions, regional seismic studies and earthquake data processing.	Objectives of the Workshop: • To strengthen participants' knowledge of the CTBT and the work of the Preparatory Commission; • To further build up the national and regional capacities in implementing the Treaty and participating in the verification regime, as well as to promote the civil and scientific application of verification technologies, in particular to promote the importance of Ground-Truth (GT) event locations in defining regional seismic velocity structures and models; and • To share data and to develop the RSTT in Asia through the acquisition of GT seismic locations.	IDC

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28 October – 1 November	Chiang Mai, Thailand	NDC Capacity Building Workshop and Regional Seismic Travel Time (RSTT) in combination with Data Sharing and Integration Training (continued)		Objectives of the Training: • To understand and learn how RSTT can help regional networks achieve more precise event locations; • To learn how RSTT can be interfaced with current locators used in daily earthquake location procedures; • To recognize the importance of obtaining better regional locations for future tomographic studies; and • To stimulate regional cooperation in data exchange through the NDCs and/or regional network operators.	IDC
4 – 29 November	VIC, Vienna, Austria	NDC Capacity Building: NDC Waveform Analyst Training Course	NDC technical staff/authorized users (preferably Principal User or Regular User) Seismologists with an advanced degree who operate or have access to regional and local seismic network data and the means of processing that data to provide accurate phase pick information; The participants should have experience in waveform data analysis and/or similar experience related to nuclear test ban verification as well Linux background and some SQL experience.	Objectives: • To understand the roles of NDCs in the verification regime; • To build and/or improve the NDC capabilities; • To provide participants with sufficient knowledge for accessing and using IMS data and IDC products; and • To provide practical experience in analyzing IMS data.	IDC
5 – 7 November	Oak Ridge, United States of America	Technical Training for Radionuclide Station Operators with ORTEC Equipment	Invited States Signatories should nominate participant(s) who are station operators involved in the operation, maintenance and repair of the following stations, with ORTEC gamma detector systems manufactured by AMETEK. RN04, RN05, RN06, RN07, RN08, RN09, RN11, RN19, RN22, RN34, RN37, RN38, RN42, RN51, RN53,RN63, RN67, RN68	Objectives: • To provide a hands-on training and practical lessons to station operators on the operation, maintenance and repair of the ORTEC gamma detector system manufactured by AMTEK.	IMS

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5 – 7 November	Oak Ridge, United States of America	Technical Training for Radionuclide Station Operators with ORTEC Equipment (continued)	Applicants are encouraged to complete the following e-learning modules: EN-MON04 EN-MON06 EN-OSI04 Candidates must be proficient in English.		IMS
10 – 14 November	Aqaba, Jordan	Infrasound Technology Workshop (ITW) 2019	The workshop is aimed towards all scientists, engineers, Station Operators, staff from National Data Centres and other persons involved in infrasound technology and related fields.	Objective: • To create an international forum for presenting and discussing recent advancements in infrasound research and operational capabilities of global and regional networks.	IDC
11 – 15 November	VIC, Vienna, and TeST Centre, Seibersdorf, Austria	Build-Up Exercise – Launch Phase	Third Training Cycle inspectors, selected First and Second Training Cycle inspectors, external experts and PTS staff	Objective: • To test OSI processes, procedures and techniques related to the launch phase of an On-Site Inspection and to validate training provided to inspectors.	OSI
18 – 22 November	VIC, Vienna, Austria	Technical Training for PKI Operators for RN and Waveform Stations	Invited State Signatories should nominate participant(s) who are PKI operators at the following stations: Argentina: RN01 Australia: PS02, IS07, RN04, RN05, RN06, RN07, RN08, RN09, RN10 Brazil: PS07, IS09 Canada: PS09, RN14, RN16, RN17 Germany: PS19, IS26, IS27 Israel: AS048, AS049 Japan: PS22, AS051, AS052, AS053, AS054, AS055, IS30 Malaysia: RN42 New Zealand: RN46, RN47 Niger: PS26 Norway: PS27, PS28, AS072, AS073, IS37 Portugal IS42	Objectives: • To provide PKI Operator with the basic knowledge and technical understanding on Data Authentication, Public Key Infrastructure (PKI) concepts and terminology and Data Surety, how to generate key pairs and submit certificate requests, and how to retrieve and install certificates for radionuclide and waveform station systems such as SSI, Guralp, Nanometrics.	IMS

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18 – 22 November	VIC, Vienna, Austria	Technical Training for PKI Operators for RN and Waveform Stations (continued)	Russian Federation: PS32, PS33, PS34, PS36, PS37, AS082, IS43, I S44, IS45, IS46, RN56, RN57, RN58, RN59, RN60, RN61 Spain: PS40 Sweden: AS101 Switzerland: AS102 Tanzania: RN64 Tunisia: PS42, IS48 United Kingdom: RN67, RN68 Ukraine: PS45 The participation of PKI Operators of IMS stations not listed above will be subject to availability of places in the training course. Applicants are encouraged to complete the following e-learning modules: EN-POL01, 03 and 04 EN-MON18		IMS
27 – 29 November	VIC, Vienna, Austria	Expert Meeting on Resonance Seismometry	A limited number of external experts in these techniques and PTS staff	<u>Objectives:</u> • To study the potential application of resonance seismometry and develop a concept of operations; and • to consider initial operational capabilities for resonance seismometry including equipment requirements.	OSI
2 – 6 December	Freiburg, Germany	International Noble Gas Experiment (INGE) Workshop 2019	All scientists, engineers and other persons involved in Noble Gas monitoring related to the verification of the CTBT.	<u>Objective:</u> • To present and evaluate the most recent advances in noble gas monitoring in support of the CTBT.	IDC