

55TH RASSC MEETING

REPORT ISO/TC85/SC2
RADIOLOGICAL PROTECTION

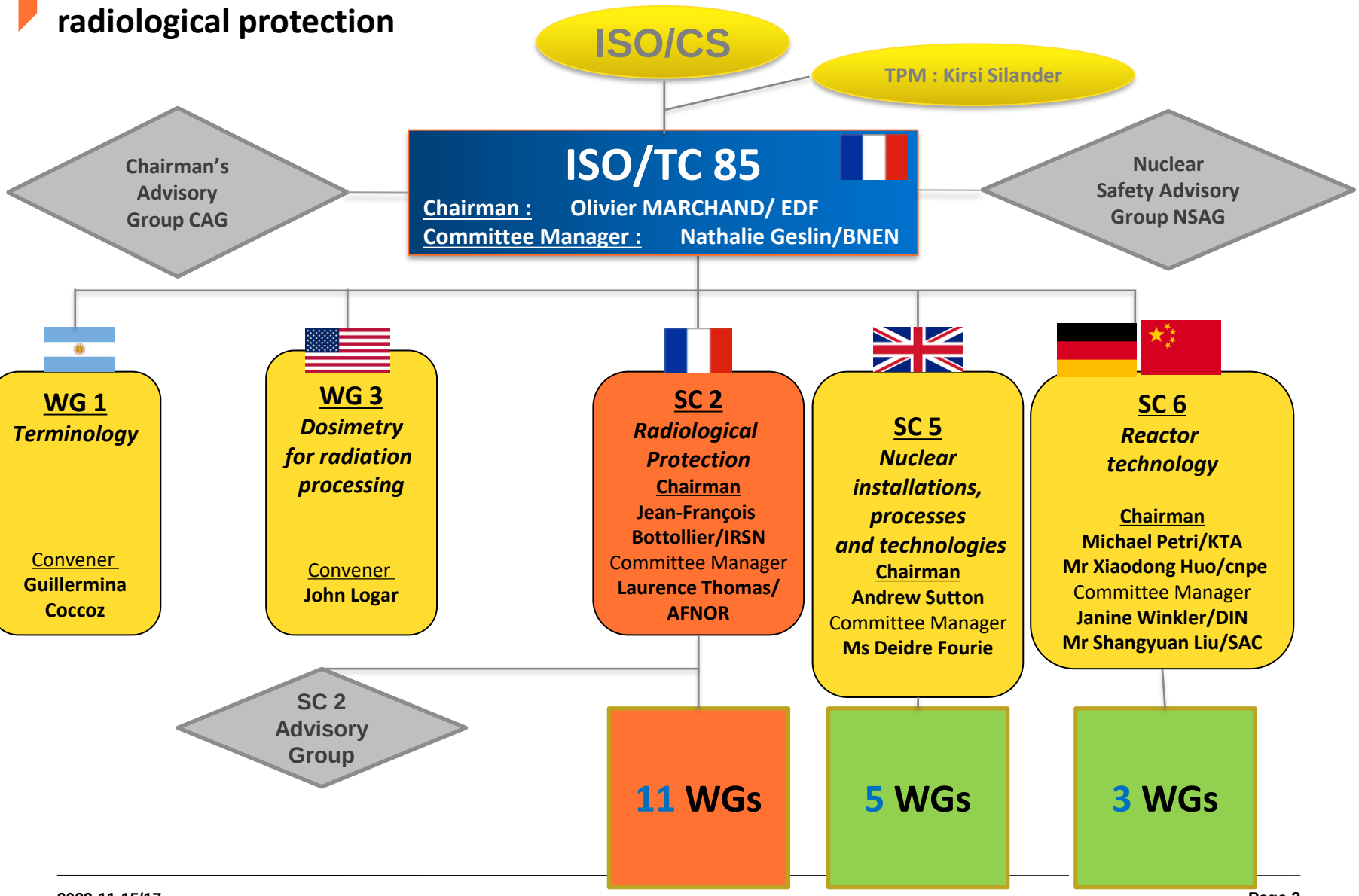
IAEA, VIENNA, AUSTRIA
NOVEMBER15-17, 2023

Jean-François BOTTOLLIER-DEPOIS
Chairman, ISO/TC 85/SC 2

Laurence THOMAS
Secretariat, ISO/TC 85/SC 2

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STRUCTURE OF ISO/TC 85 - Nuclear energy, nuclear technologies and radiological protection



ISO/TC 85/SC 2 - SCOPE

Sub-committee 2 “radiological protection” develops standards to protect:

- ✓ **individuals (workers, patients, members of the public)**
- ✓ **the environment**

against all sources of ionising radiations in planned, existing or emergency exposure situations

linked to nuclear industry, medical applications, industrial activities, research activities and natural radiation sources (radon, cosmic radiation, …)

KEY FIGURES FOR SC 2

- **28** Participating countries
- **11** Observing countries
- **12** International organizations in liaison
- **11** WGs, **1** advisory group
- **300/350** experts involved
- **123** standards in the Portfolio
- **24** draft standards are under development (11 are revisions)
- **25** items at the stage of preliminary work/discussion

PARTICIPATION IN SC2

- **28 Participating countries**

  Argentina, Austria, Belgium, Bulgaria, Canada, China, Czech Republic,, France, Germany, Hungary, India, Iran, Israel, Italy, Japan, Kenya, Korea, the Netherlands, Poland, Russian Federation, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey, UK,, USA

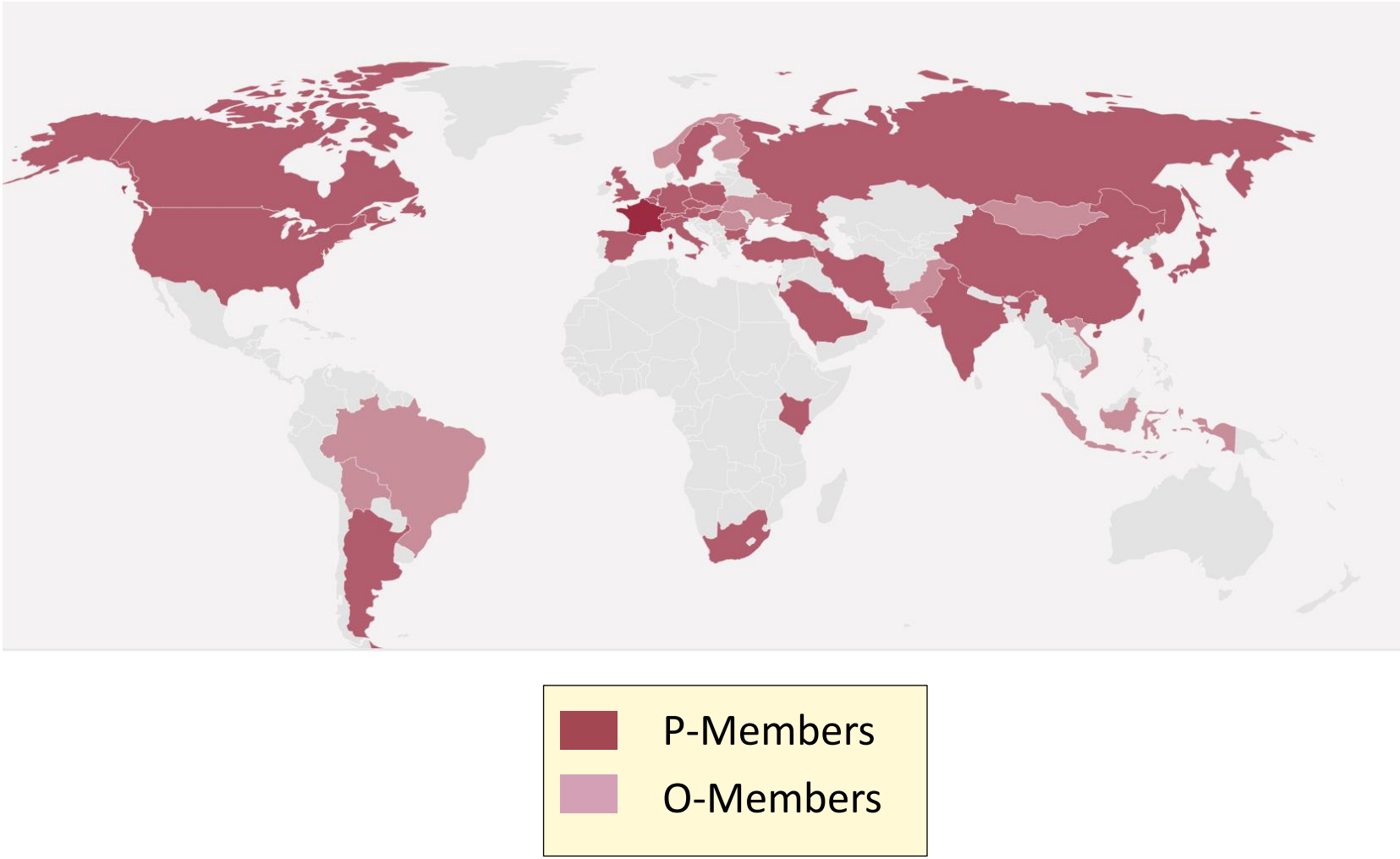
- **11 Observing countries**

  Bolivia, Brazil, Finland, Indonesia, Mongolia, Norway, Pakistan, Romania, Slovakia, Ukraine, Vietnam

- **International organizations in liaison**

  - **BIPM, EANM, EC, EURADOS, IAEA, ICRP, ICRU, ISSPA, OIML, WHO, WNA**
  - **IACRS (FAO, IAEA, ILO, NEA, UNSCEAR, PAHO, WHO)**
  - **IEC (SC 45B Radiation protection instrumentation and SC 62C Equipment for radiotherapy, nuclear medicine and radiation dosimetry)**

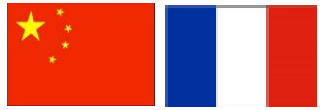
COUNTRIES INVOLVED IN SC 2 ACTIVITIES



ISO/TC 85/SC 2 – 11 WORKING GROUPS + 1 AG (1/2)

		WG convenors
AG	Advisory Group	
WG 2	Reference radiations fields	
WG 13	Monitoring and dosimetry for internal exposure	
WG 14	Air control and monitoring	
WG 17	Radioactivity measurements	
WG 18	Biological dosimetry	

ISO/TC 85/SC 2 – 11 WORKING GROUPS + 1 AG (2/2)

		WG convenors
WG 19	Individual monitoring of external radiation	
WG 20	Illicit trafficking in radioactive material	
WG 21	Dosimetry for exposures to cosmic radiation in civilian aircraft	
WG 22	Dosimetry and related protocols in medical applications of ionizing radiation	
WG 23	Shielding and confinement systems for protection against ionizing radiation	
WG 25	Radiation monitoring of the population and responders in nuclear/radiological emergencies	

NEW STANDARDS (1/2)

Number and date	Title
ISO 16659-1:2022 Edition 1	Ventilation systems for nuclear facilities — In-situ efficiency test methods for iodine traps with solid sorbent — Part 1: General requirements
ISO 19461-2:2022 Edition 1	Radiological protection — Measurement for the clearance of waste contaminated with radioisotopes for medical application — Part 2: Management of solid radioactive waste in nuclear medicine facilities
ISO 20041-1:2022 Edition 1	Tritium and carbon-14 activity in gaseous effluents and gas discharges of nuclear installations — Part 1: Sampling of tritium and carbon-14
ISO 20044:2022 Edition 1	Measurement of radioactivity in the environment — Air: aerosol particles — Test method using sampling by filter media
ISO 23547:2022 Edition 1	Measurement of radioactivity — Gamma emitting radionuclides — Reference measurement standard specifications for the calibration of gamma-ray spectrometers
ISO 23588:2023 Edition 1	Radiological protection — General requirements for proficiency tests for in vivo radiobioassay
ISO/TR 24422:2022 Edition 1	Development of a water equivalent phantom to measure the physical characteristics of specific radiosurgery treatment devices

NEW STANDARDS (2/2)

Number and date	WG
ISO 20043-2:2023 Edition 1	Measurement of radioactivity in the environment — Guidelines for effective dose assessment using environmental monitoring data — Part 2: Emergency exposure situation
ISO 20045:2023 Edition 1	Measurement of the radioactivity in the environment — Air: tritium — Test method using bubbler sampling
ISO 20956:2023 Edition 1	Radiological protection — Low dose rate calibration of instruments for environmental and area monitoring

NEW PROJECTS (1/2)

Project	Title	Project leader
ISO 18990	Measurement of radioactivity in urine-238Pu, 239Pu and 240Pu- Test method using alpha spectrometry and ICP-MS	Mr Yang WU, China
ISO 20041-2	Tritium and carbon-14 activity in gaseous effluents and gas discharges of nuclear installations — Part 2: Determination of tritium and carbon-14 activities by bubbling method	Mrs Andrea HECKEL (Germany)
ISO 18510-1	Measurement of the radioactivity in the environment — Bioindicator — Part 1: Part 1: General guide for the sampling, conditioning and pre-treatment	Mr Fabrice LEPRIEUR (France)
ISO 16659-2	Ventilation systems for nuclear facilities — In-situ efficiency test methods for iodine traps with solid sorbent — Part 2: Radioactive CH3I method	Mr Eloi BAUDUIN (France)
ISO 16659-3	Ventilation systems for nuclear facilities — In-situ efficiency test methods for iodine traps with solid sorbent — Part 3: Cyclohexane method	Mr Jie YU (China)

NEW PROJECTS (2/2)

Project	Title	Project leader
IEC 63465	Calibration and quality control in the use of radionuclide calibrators	Under IEC lead
ISO 18518	Requirements to the safety systems raised by the application of the superconducting technology in nuclear fusion facilities	Mr Yuntao SONG (China)

SC2 PLENARY MEETINGS

- 2010 – Jeju, Korea
- 2011 – Niagara Falls, Canada
- 2012 – Paris, France
- 2013 – IAEA, Vienna - Austria
- 2014 – Moscow, Russia
- 2015 – Boras, Sweden
- 2016 – New Delhi, India
- 2017 – Worcester, MA, USA
- 2018 – Helsinki, Finland
- 2019 – Okayama, Japan
- 2020 – Virtual meeting
- 2021 – Virtual meeting
- 2022 – Virtual meeting
- **2023 – Stockholm, Sweden, Hybrid meeting May 23 - May 26**
- 2024 – to be defined

FURTHER INFORMATION

ISO website

- ISO
- ISO/TC85/SC 2 Nuclear energy, nuclear technologies and radiological protection – Radiological protection

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THANK YOU FOR YOUR ATTENTION

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