International Organization for Standardization

ISO/TC 85/SC 2
« Radiological protection»

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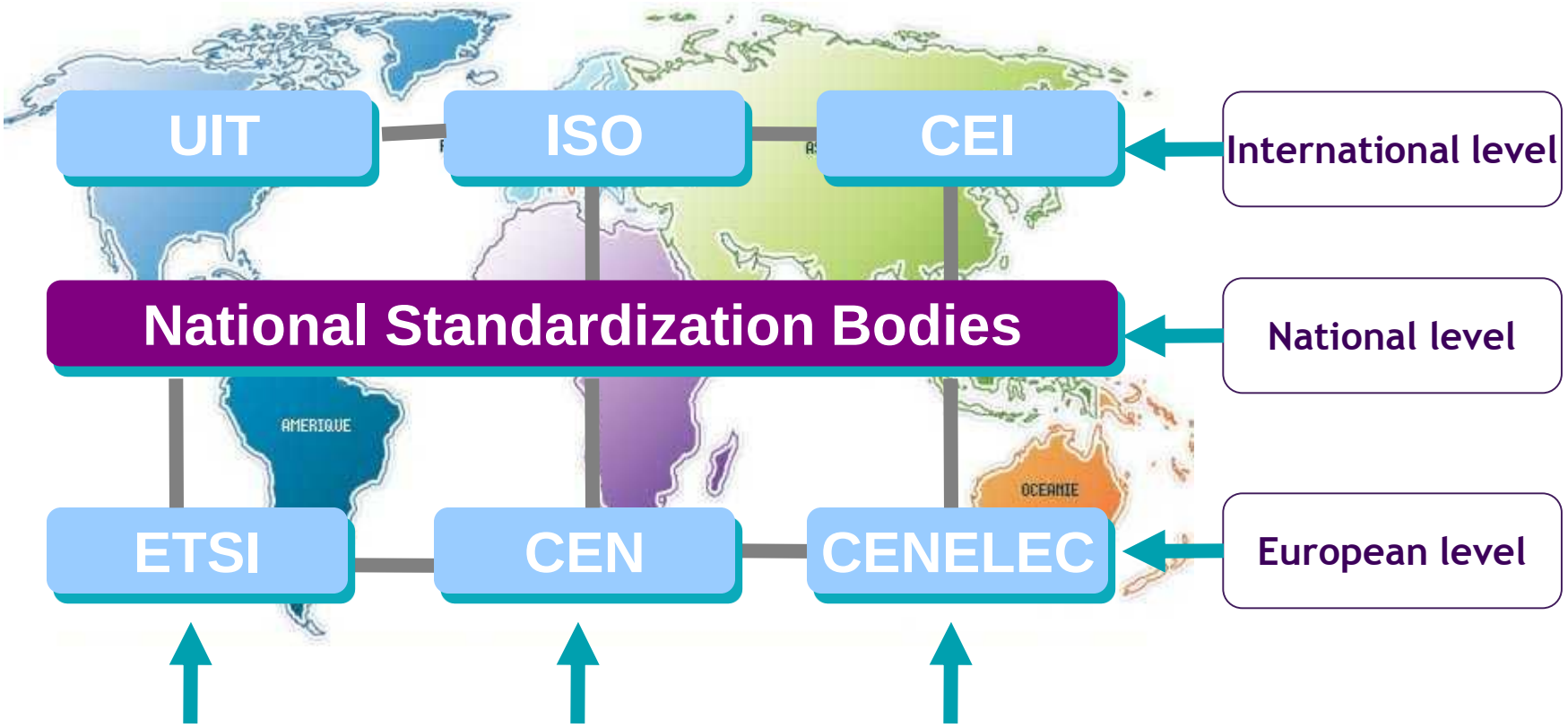
afnor NORMALISATION

The ISO system

- **Network of 163 national standardization bodies**
- **ISO develops International standards for products, services, processes, materials and systems and for conformity assessment, managerial and organizational practice**
  - A standard is a document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context

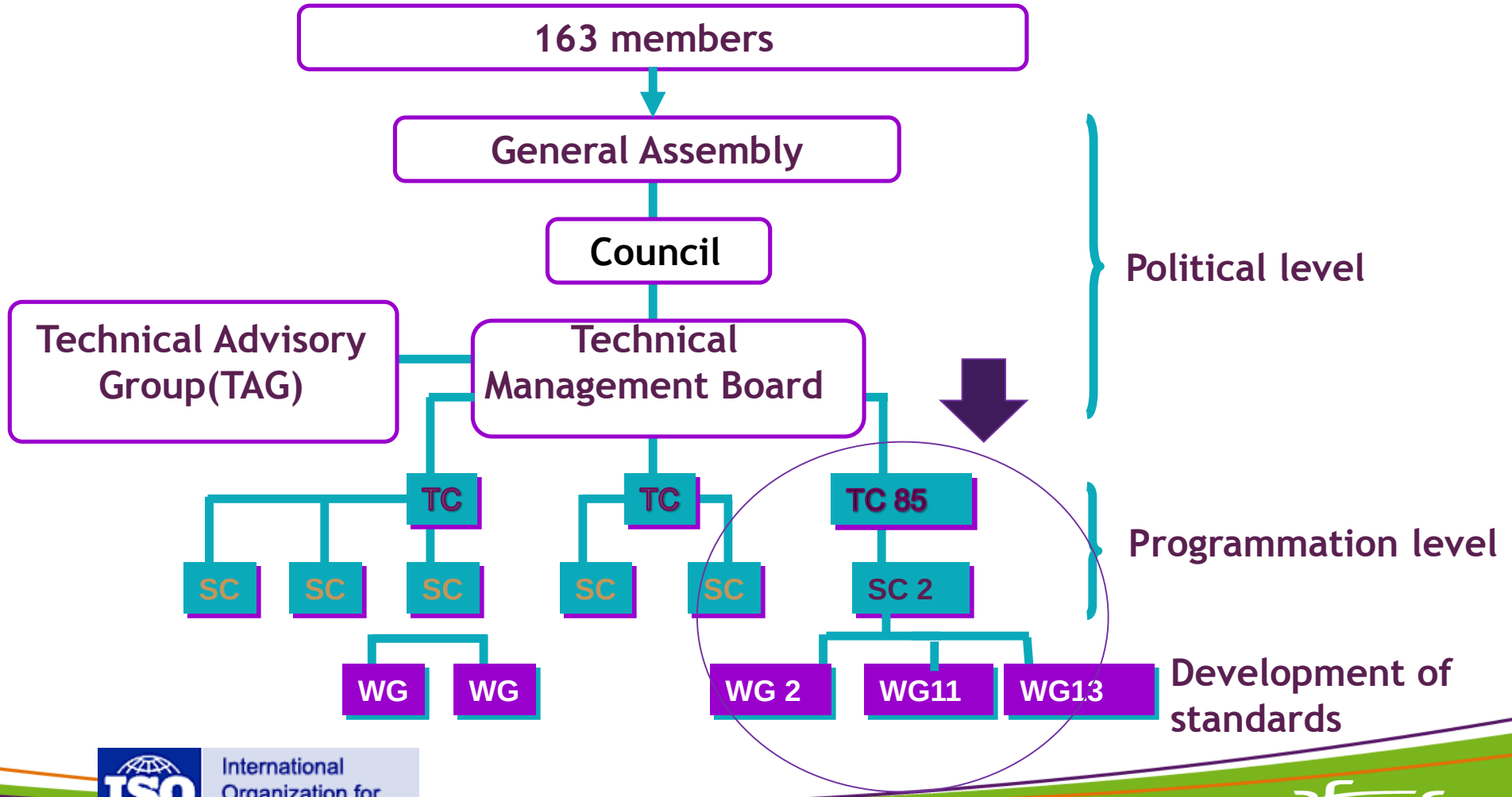
International, European and National Standardization

International standards: integration on a volontary basis



European standards : mandatory integration

ISO Organization Chart



Scope

- Within TC 85 “Nuclear energy, nuclear technologies and radiological protection”,

- SC 2 develops standards to protect :
  - people (workers, patients, members of the public)
  - the environment

  against all sources of ionising radiations in planned, existing or emergency exposure situations linked to nuclear activities, medical activities, industrial activities, research activities and natural radiation sources (radon, cosmic radiation).

Context

- A need to harmonize and promote standards supporting professionals and regulators in the context of
  - Increasing demand for the protection of the patient, the public and the workers as well as the protection of the environment
  - Huge number of users (more or less educated in R.P.), and more and more sophisticated technologies in the different fields (in the medical field in particular)
  - Radiation protection general recommandations and standards are developed at the international level:
    - *ICRP, ICRU*
    - *IAEA, European Commission, WHO…*

Participation

- **28 Participating countries**

  Argentina, Austria, Belgium, Bulgaria, Canada, China, Czech Republic, Finland, France, Germany, Hungary, India, Italy, Iran, Japan, Kenya, Korea, the Netherlands, Norway, Pakistan, Poland, Russian Federation, Spain, Sweden, Switzerland, Ukraine, UK, USA

- **4 Observing countries**

  Mongolia, Romania, Slovakia, South Africa

- **International organizations**
  - EC, IAEA, ICRP, ICRU, ILO, ISSPA, UNSCEAR, WHO, OIML
  - IACRS (FAO, IAEA, ILO, NEA, UNSCEAR, PAHO, WHO)
  - IEC (SC 45B and SC 62C)

1 advisory Group and 12 working groups (1)

- Advisory Group
- Dosimetry, metrology
  - WG 2 : Reference radiations fields
  - WG 19 : Individual monitoring of external radiation
  - WG 21 : Dosimetry for exposures to cosmic radiation in civilian aircraft
- Equipments
  - WG 11 : Sealed sources
  - WG 23 : Shielding and confinement systems for protection against ionizing radiation
  - WG 24 : Remote handling devices for nuclear applications

1 advisory Group and 12 working groups (2)

- Measurements methods
  - WG 14 : Air control and monitoring
  - WG 17 : Radioactivity measurements
  - WG 20 : Illicit trafficking in radioactive material (dormant)
- Radiobiological analysis
  - WG 13 : Monitoring and dosimetry for internal exposure
  - WG 18 : Biological dosimetry
- Medical activities
  - WG 22 : Dosimetry and related protocols in medical applications of ionizing radiation

SC2 in figures

- 4 to 6 new standards published each year
- 67 standards issued so far by SC 2
- 31 standards are under development or revision
- 15 projects are in discussion
- ≈ 200 experts are involved

Focus on recent topics

- **Publication in March 2011 of ISO 27048 on dose assessment for the monitoring of workers for internal radiation exposure**
- **Finalization of a series of 11 standards on the measurement of radon (publication next June)**
- **Revision of**
  - ISO 21909 on passive personal neutron dosemeters
  - ISO 15382 to consider the dosimetry of the extremities and the lens of the eye in order to respond to the new ICRP recommendation
- **Approval of new projects**
  - Characterization of pulsed radiation fields
  - Radiation protection rules for installations with medical accelerators
  - Determination of activity for dose assessment in patients treated with iodine 131 for thyroid diseases

Needs and perspectives

- **Needs for standards in emergency situations**
  - On site, for the characterization of the environment and products, and for the monitoring of individuals
  - At borders, for the control of contaminated materials and goods (including food, feed, cosmetics)
- **Discussion on the needs for standards on the competence and qualifications of individuals and organizations (industrial radiography, etc.)**
- **Increasing needs for guidelines and protocols in the medical field**

Conclusions

- **Radiation protection is extremely regulated and is governed by numerous international bodies**
  - ISO/TC85/SC2 contributes to radiological protection in the fields where the standard may have a role to play
- **Participation of experts contributing to the production and maintenance of standards in radiological protection is a key issue!**

Further information

- Next ISO/TC 85/SC 2 meetings : 4 - 8 June 2012, Paris
- ISO website (public access)
  - ISO
  - ISO/TC 85 Nuclear energy, nuclear technologies, and radiological protection
    (Secretary: eric.balcaen@afnor.org)
  - ISO/TC85/SC 2 Nuclear energy - Radiological protection
    (secretary: laurence.thomas@afnor.org)

THANK YOU FOR YOUR ATTENTION