Ten years of experience feedback in dissemination of Radiation Protection culture:

1,500 high school students involved in

"Radiation Protection Workshops"
OBJECTIVES

• Initiate a **citizen approach** by sharing knowledge to acquire **scientific and societal bases** in Radiation Protection for high-school students (16 to 18y)

• **Promote** the Radiation Protection culture through a **multidisciplinary approach**: scientific, economic, historical, philosophical ...

• Allow the high-school students to **better know professional world**: training courses and activities in RP to develop expertise and interest in research

2017 - ETRAP Conference, Valencia - Spain
• **Theoretical** part: on the fundamental of RP in classroom carried out by professor with involvement of experts. From September till March, on topic(s) selected with teachers according to local concerns or issues

• **Practical experiments**: manipulations, visits of technical installations, realization of technical experiments organized / facilitated by experts

• **Restitution of the results** taken the form of presentations in plenary sessions at international high school meetings (150 - 200 participants end of March)
METHODOLOGICAL APPROACH OF RADIATION PROTECTION WORKSHOPS

**KNOWLEDGE**
- Scientific,
- Societal,
- Philosophical,
- Historical

**RP PRACTICES**
- Research
- Environmental labs
- Monitoring laboratory,
- Nuclear installations,
- Hospitals,
- National/local authorities,
- Associations...

**APPROACH**
- Transdisciplinarity of RP
- Interaction H-S students / teachers / MSc students in RP / RP experts
- Structured questioning:
  - Local context,
  - Societal issues…

Development of Radiation Protection Culture
HIGH-STUDENTS HAD INTEREST IN ...

- Detection
- Veterinary
- Mathematical
- Physical
- Chemistry
- Psychology
- Sociology
- Environment
- Legislation
- Epidemiology
- Mathematics
- Physic
- Chemistry
- Psychology
- Sociology
- Economy
- Legal aspects
- Veterinary
- Museum
- Legislation
- Epidemiology
- Mathematics
- Physical
- Chemistry
- Psychology
- Sociology
- Environment
- Stem cells
- LHC
- Cyclotron
- Crisis management
- M. Curie
- Robotics
- CERN
- RNA
- Proton
- Radiotherapy
- Immune response
- Radiation protection
- Economy
- Legal aspects
- Psychology
- Sociology
- Management
- Engineering
- Medicine
- Biology
- Radiobiology
- Fukushima
- Chernobyl
- Nuclear
- Immune response
- Radiotherapy
- PET scan
- Ethics
- Metrology
- Storage
- Submarines
- Releases
- Uranium mines
- C14 dating
- FDG
- ICRP
- Emergency response
SOME TOPICS

- Risk estimate for human and environment
- Management of domestic radon exposure
- Biological effects of ionising radiations
- Survey of environmental radioactivity
- Radiation protection of workers and patients in hospital
- Scientific and technical bases of radiation protection (radioactivity, detection of ionising radiations…)
- Radioactive waste management and transportation
- Management of nuclear accidents
- How is the life in the contaminated area around Chernobyl
- Comparison /similarities Chernobyl and Fukushima accidents
- …and 108 more topics
KEY FIGURES

- **Countries:**
  - France (7-10), Ukraine (1-2), Belarus (2), Germany, Moldavia, Japan, Colombia.
  - Previous events: Romania, Italia and Morocco

- **Number:** 150 to 200 participants each year; 1 500 total

- **Language:** 90% in French, ~ 10% English and Russian

- **Programme:**
  - 3 half-day of high-school lectures (15 minutes each)
  - 1 half-day for workshop (radon experiments, calculation, posters…)
  - 1 half-day for visits (nuclear facilities, research labs…)
  - 2 social events

- **Excellent feedback 📢

- ~ 60,000 €
RESULTS: AN EXAMPLE

• Contribution of high-school students from Japan, France, Poland and Belarus is effective.

• 130 co-authors signed a scientific article in Journal of Radiological Protection downloaded 90,068 times!

[Link to the scientific article]

http://iopscience.iop.org/article/10.1088/0952-4746/36/1/49
CONCLUSION AND PERSPECTIVES

• **Conditions for success**
  - Voluntary basis and high-school student are highly motivated
  - Diversity of topics offered by RP (industry, medical, environment)
  - Practical approach in small groups in each high-school
  - ...and for families, disconnected from nuclear operators

• **Evolution from “pilot” action to larger scale project and increase involving stakeholders**

  ETRAP 2017 ➔ Opportunity to:
  - Increase participating countries
  - Create regional “High-school Radiation Protection Workshop” (IRPA?, national RP association?)
SOCIAL EVENTS FOR HIGH SCHOOL STUDENTS

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THANK YOU FOR YOUR ATTENTION!
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