

# Radiological risks: How they are communicated by and to educators and trainers

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<http://eagle.sckcen.be>

# The ideal of communication about radiological risks



Is to **support the stakeholders to make informed decisions** and to establish two-way communication and joint problem solving.

To be able to take an informed decision, people need a certain level of issue understanding.



# The ideal of communication about radiological risks



Is to **support the stakeholders to make informed decisions** and to establish two-way communication and joint problem solving.

- Previous research shows that communication related to radiological field will not trigger enough attention to be heard or recalled among people with low levels of knowledge; consequently they will not be able to engage in the decision-making process.

To be able to take an informed decision, people need a certain level of issue understanding.

- Teachers in schools and other people involved in education programs hold an important role in risk communication and public understanding.



# The ideal of communication about radiological risks

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Eagle investigated it :

- Mental models, Workshops, Dialogues and interviews  
Reviews of curriculums...



# Review of IR information provided in schools

- In some countries basic elements on IR are provided from the age of 10-14y and pursued with students 14-18y;
- The subject is not mandatory and the teacher may choose to teach it or not.

- In other countries this topic is approached to a very limited extent in the pre-university levels.

**The Fukushima accident increased the attention to the topics in schools.**



# Review of IR information provided in schools

## Focus of the curriculum differs:

- curricula target the understanding of the sources of IR and their effects, and familiarises the youngster with the IR applications (e.g.: Romania, Poland, Cyprus and Bulgaria - mainly Eastern countries)
- while other countries approach only some of the IR applications; energy production, radioactive waste, medical use. (e.g.: Switzerland, Italy, Slovenia)

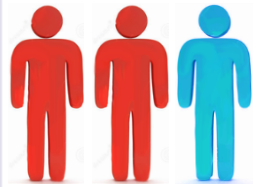


# Public opinion about sufficiency and adequacy of information received in schools

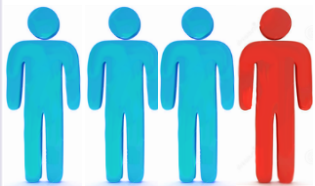
- EU citizens consider the information about energy and nuclear issues provided by schools only slightly more comprehensive than that provided by the media.
- 58% of Europeans states that this information is not sufficient for children to acquire 'a basic knowledge on the risks and benefits of energy choices in general and nuclear energy in particular'.
- 24% of EU citizens think that this information is probably sufficient and only 4% find it certainly sufficient.



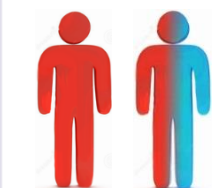
# Low knowledge about ionising radiation



“Exposure to radiation will always lead to radioactive contamination.”



“Radioactive waste is produced only by nuclear power plants.”



“Vegetables grown near a nuclear power plant cannot be safely consumed because of radioactivity.”



# Low knowledge about ionising radiation

- Across nations, knowledge about ionizing radiation is in general population rather limited.
- The results show that people lack knowledge in basic issues related to ionizing radiation.

e.g. Exposure to radiation does not necessarily lead to contamination

(64% of representative population answered incorrectly to this question in Belgium, 88% in France and 81% in Slovenia)



# Decisions about IR are made by heuristics, not knowledge

With the rather low knowledge and increasing complexity of technological innovations (e.g. nuclear medicine), people must rely upon their judgments about

**whom to trust.**



Typically, **academics** are seen as most trustworthy and competent to inform on risks and benefits of nuclear technologies.



# Knowledge about IR in mass media



## Journalists:

- do not get basic education about ionizing radiation at school,
- under economic pressure, journalists' ability to specialize is disappearing
- they have little time to attend informative seminars



In normal times, it is therefore difficult to raise people's interest in complex IR topics.

In crisis times, it is difficult to provide information understandable by under-educated and also, under-informed citizens.



# Conclusions / challenges

- The Fukushima accident increased the attention to the topics in schools.
- Each country has its own education system with specific curriculum.
- Across nations, knowledge about ionizing radiation is in general population rather limited.
- People lack knowledge even in basic issues related to ionizing radiation.
- Challenge: emergency management must rely partly on mass media to communicate with a low educated and under-informed public.



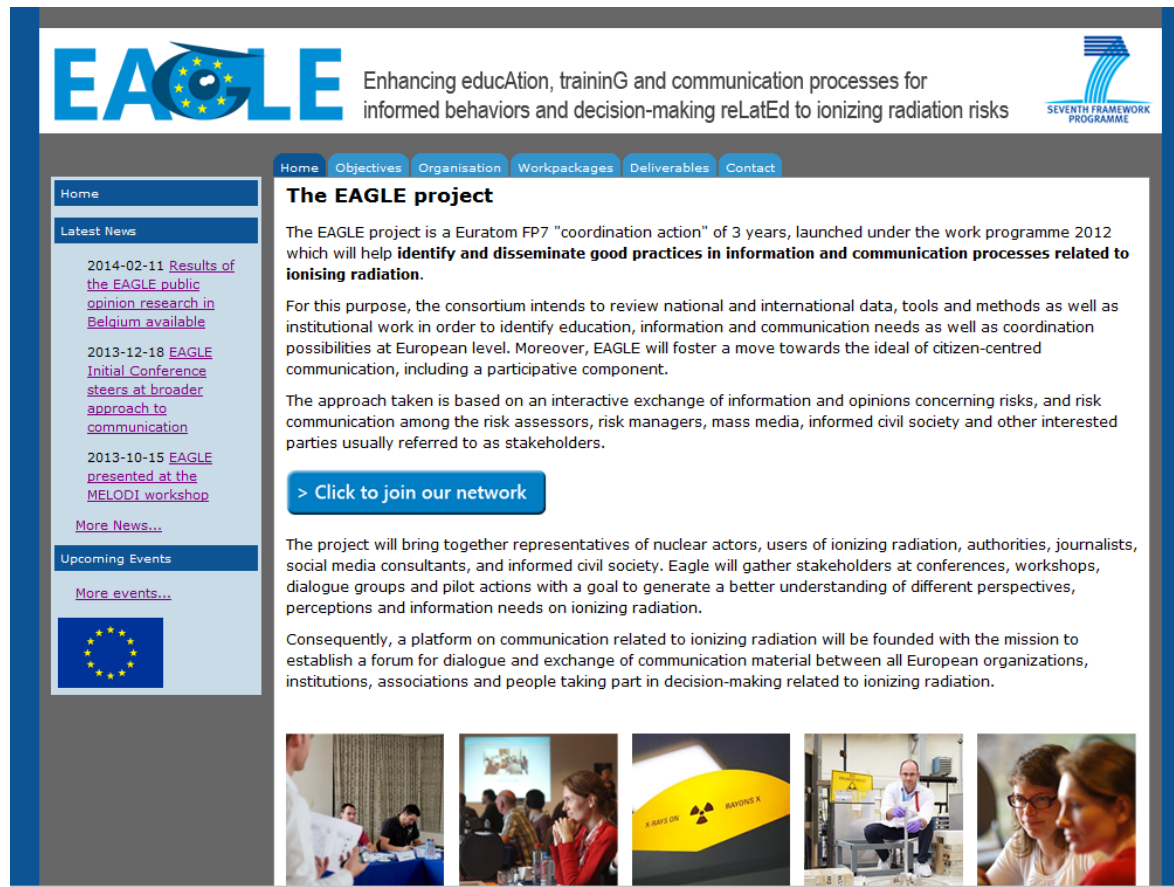
# Conclusions / some solutions

- Pay enough efforts to convince Ministry of education to introduce in national curricula relevant elements about IR and nuclear.
- For journalists who write about IR, would be useful to attend seminars where they could obtain basic knowledge on IR.
- The institutions dealing with IR should be interested to organize such seminars, adapted to the needs of journalists, as this would help them disseminate knowledge on IR.



# Want to know more about the results?

Go to [www.eagle.sckcen.be](http://www.eagle.sckcen.be)  
and become a member of the EAGLE network.



The screenshot shows the EAGLE project website. The header features the EAGLE logo with the tagline "Enhancing educAtion, trainiNG and communication processes for informed behaviors and decision-making reLAtEd to ionizing radiation risks" and the Seventh Framework Programme logo. A navigation bar includes links for Home, Objectives, Organisation, Workpackages, Deliverables, and Contact. The main content area is titled "The EAGLE project" and describes the project as a Euratom FP7 "coordination action" of 3 years, launched under the work programme 2012, aimed at identifying and disseminating good practices in information and communication processes related to ionising radiation. It details the project's purpose, approach, and mission. A blue button labeled "> Click to join our network" is prominently displayed. The left sidebar contains a "Latest News" section with three entries: "2014-02-11 Results of the EAGLE public opinion research in Belgium available", "2013-12-18 EAGLE Initial Conference steers at broader approach to communication", and "2013-10-15 EAGLE presented at the MELODI workshop", followed by a "More News..." link. Below this is an "Upcoming Events" section with a "More events..." link and a European Union flag. The bottom of the page features a row of five small images: a meeting, a group of people, a radiation warning sign, a person in a lab coat, and two women looking at a screen.

**EAGLE** Enhancing educAtion, trainiNG and communication processes for informed behaviors and decision-making reLAtEd to ionizing radiation risks

SEVENTH FRAMEWORK PROGRAMME

Home Objectives Organisation Workpackages Deliverables Contact

### The EAGLE project

The EAGLE project is a Euratom FP7 "coordination action" of 3 years, launched under the work programme 2012 which will help **identify and disseminate good practices in information and communication processes related to ionising radiation**.

For this purpose, the consortium intends to review national and international data, tools and methods as well as institutional work in order to identify education, information and communication needs as well as coordination possibilities at European level. Moreover, EAGLE will foster a move towards the ideal of citizen-centred communication, including a participative component.

The approach taken is based on an interactive exchange of information and opinions concerning risks, and risk communication among the risk assessors, risk managers, mass media, informed civil society and other interested parties usually referred to as stakeholders.

[> Click to join our network](#)

The project will bring together representatives of nuclear actors, users of ionizing radiation, authorities, journalists, social media consultants, and informed civil society. Eagle will gather stakeholders at conferences, workshops, dialogue groups and pilot actions with a goal to generate a better understanding of different perspectives, perceptions and information needs on ionizing radiation.

Consequently, a platform on communication related to ionizing radiation will be founded with the mission to establish a forum for dialogue and exchange of communication material between all European organizations, institutions, associations and people taking part in decision-making related to ionizing radiation.

2014-02-11 [Results of the EAGLE public opinion research in Belgium available](#)

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[More News...](#)

Upcoming Events

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