

### Background

In 2005, PISA organised proactive meetings of reflection groups on involvement in decision making, expert culture and ethical aspects of radiation protection.

### Objectives

All reflection group meetings address particular targeted audiences while the output publication in book form is put forward

### Principal results

Most meetings were set-up within different universities in collaboration with academic research. Two workshops on Risk Management and Safety Culture were linked to PISA PhD promotions in 2004. Other focussed on actualities such as nuclear terrorism and ICRP proposals on basic safety standards (BSS). Finally Belgian local nuclear waste partnerships for ongoing European network research were brought together into a dialogue on community involvement.

The workshops (VUB, ULg, UCL, UGent and SCK•CEN) have succeeded in generating interesting discussions, valorising and enriching SCK•CEN competences. They were a learning experience in transdisciplinarity for the PISA researchers while they involved at the same time also a number of technical staff members of SCK•CEN.

1. At VUB four lunch talks on nuclear terrorism and proliferation challenges were set up with the Permanent Education Department (UPV) and the Philosophy of Science Department (Prof. G. Cornelis). Experts introduced different aspects of nuclear terrorism and proliferation and were, on their turn, confronted with discussants. The threat of dirty bombs, its risk assessment and the impact for emergency preparedness were analysed. Recent evolutions on proliferation were considered in an historical, organisational as well as legal context. Philosophy students summarised the outcoming ethical challenges for society. A panel of multidisciplinary experts introduced the debate and expressed concern on human rights. The presentations were reviewed for publication as a book by VUB Press (2006). A broad public shared great interactive interest.
2. At ULg the PhD thesis of Isabelle Fucks (defended in 2004) was presented to an audience of regulators, utilities and university researchers. It was situated within a broader context, paying attention to gas distribution safety (accident case Ghislenghien, Belgium) as well as to nuclear safety management in general. Both the approach of EdF (being the most important European electricity producer) as IAEA expertise were confronted with the results of the PhD work. Particular attention was given to informal aspects of safety culture, group dynamics at all levels and the skills of workforce. As safety culture exists independently of management initiatives, it is important to identify existent subcultures in order to build a bottom-up approach. Some requirements (management commitment, follow-up, evaluation and viewpoints) have yielded an added value in the improvement of safety culture as structured at IAEA level. A final debate allowed to associate the Senate chairperson Ms. A.M. Lizin, mayor of Tihange, as one of the involved actors. Within SCK•CEN (BR2/BR3) safety culture experience could be used for incident feedback and improved communication. These research results should also be integrated in future in nuclear engineering education initiatives such as ENEN.
3. At UCL, a two day international workshop on justification and optimisation proposals of ICRP was set up with CITES (Prof. B. Feltz and Dr. A. Gosseries). The role and challenges of responsibility, ethical choices, precaution and soft law were analysed and extended to the transgenerational dimension in genetic effects and nuclear waste issues. Invited international experts such as O. Godard (Fr), C. Vlek (NL), St. Gardiner (USA), Chr. Dessaintes (EC), M.Cl. Cantone (It), P. Wikman (Sw) and others were challenged by PISA and academic or agency experts. The proceedings of the workshop will be available in 2006. SCK•CEN was invited to transfer its reflection results to the University of Milano, the interdisciplinary initiative Crosstalks of VUB, as well as to the Dutch Health Council, preparing a report on precaution. An international post-doc proposal was developed with UCL and the Royal Institute of Technology (Stockholm) on the link of justification with precaution.

4. As a preparation to the European COWAM network seminar in Ljubljana, the Belgian Partnerships on low level waste management, researchers studying the subject and local actors were brought together in the reflection group *'Involvement'* at SCK•CEN in order to exchange Belgian experiences and to report them to the European level. Particular social dynamics at Fleurus-Farciennes were considered with local politicians involved in the local partnership PaloFF.
5. At UGent, the PhD thesis of Gunter Bombaerts (defended in 2004) was introduced to a broader audience of nuclear waste management actors and academic philosophers. The impact of group think mechanisms and changing context elements on nuclear waste decision making was analysed, re-situating the theoretical frame of risk assessment. The sociological concepts of local partnerships in their Belgian variety set-up, on demand of the nuclear waste agency NIRAS/ONDRAF, were discussed and confronted with new governance challenges such as representativity and the critical role of the expert. Particular attention was given to the RISCOM (RISK COMMunication) model. In collaboration with its Swedish authors, this model for transparency in risk communication was tested to the case of the Belgian partnerships. Referring to the model, it is clear that the role of stretchers and guardians has to be clarified within the Belgian processes.
6. The viWTA study on the history of nuclear controversies in Belgium (carried out by PISA) was distributed in 2005 and reported to the Parliament and different audiences, in particular to the Master of Science Communication Programme of the University of Milano. Dossiers were prepared by PISA with regard to the ethical committee of SCK•CEN related to the selection criteria. The report on ethical and legal issues of ICRP for the Art 31 group of EC was finalised with experts of FANC/AFCN and UCL.

#### Contact

Gilbert Eggermont, [gilbert.eggermont@sckcen.be](mailto:gilbert.eggermont@sckcen.be)