



**HAL**  
open science

## Comparative analysis of the perception of nuclear risk among two populations (expert/non-expert) in France

Sandra Perez, Christophe den Auwer, Thierry Pourcher, Sandra Russo, Cyril Drouot, Maria Rosa Beccia, Gaëlle Greff, Franck Fiorelli, Audrey Leriche, Frédéric Castagnola, et al.

### ► To cite this version:

Sandra Perez, Christophe den Auwer, Thierry Pourcher, Sandra Russo, Cyril Drouot, et al.. Comparative analysis of the perception of nuclear risk among two populations (expert/non-expert) in France. 3e conférence internationale NRBCE Recherche et innovation, May 2019, Nantes, France. hal-02294874

**HAL Id: hal-02294874**

**<https://hal.science/hal-02294874v1>**

Submitted on 23 Sep 2019

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

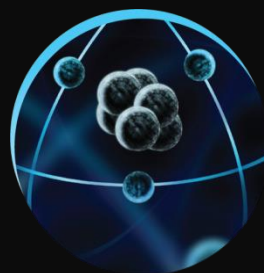
L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

# Comparative analysis of the perception of nuclear risk among two populations (expert/non-expert) in France

Sandra Pérez ESPACE, Christophe Den Auwer ICN, Thierry Pourcher TIRO-MATOS, Sandra Russo GREDEG, Cyril Drouot URE Transitions, Maria Rosia Beccia ICN, Gaelle Creff ICN, Franck Fiorelli SDIS 06, Audrey Leriche SDIS 50, Frédéric Castagnola SDIS 06, Pascale Steichen GREDEG, Georges F. Carle TIRO-MATOS, Nicolas Glaichenhaus IPMC, Hervé Michel ICN, Denis Josse SDIS 06, Nicolas Pottier JAD, Damienne Provitolo GEOAZUR



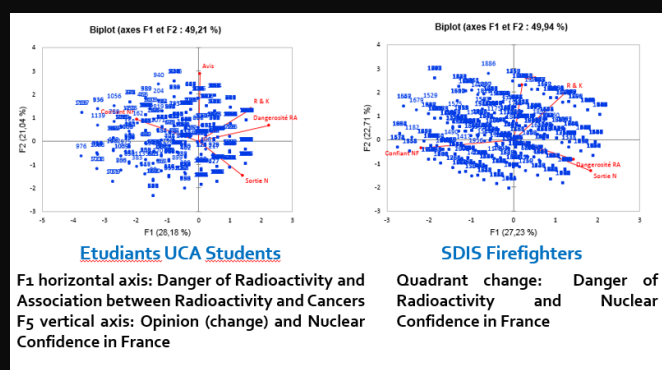
As part of the UCA<sup>JEDI</sup> IDEX program, the NR2P2\* project brought together a multidisciplinary team to interview 2315 people via an online survey to assess their perception of nuclear risk via 33 questions.



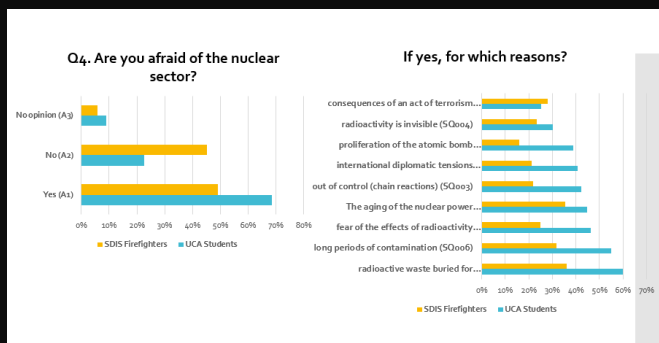
The results reveal differentiated profiles between the 2 populations (expert/non-expert) in terms of the association between exposure to radioactivity and the occurrence of cancers, and in the level of confidence in nuclear energy in France.

In the context of ecological change and the fight to reduce CO<sub>2</sub> emissions, nuclear energy can appear to be an efficient energy source, or at least essential from the perspective of energy diversification. However, it suffers from a poor image and a lack of knowledge among the population, and among young people in particular, who favor the development of renewable energy. We wanted to know exactly what was happening in one of the most nuclearized countries in the world, France. To do this, we interviewed a young, student, "non-expert" population about their knowledge and perceptions of nuclear risk and compared the results with a so-called "expert" population: firefighters, most of whom had received training in radiation protection.

Thus, in response to the question "Are you afraid of the nuclear sector?" 68% of students answered yes compared to 49% of firefighters. The reasons for fear are sometimes similar (radioactive waste, contamination over long periods, ageing of power plants), and sometimes divergent due to the better knowledge of the firefighters who had undergone radiological training (out of control, fear of the effects of radioactivity).



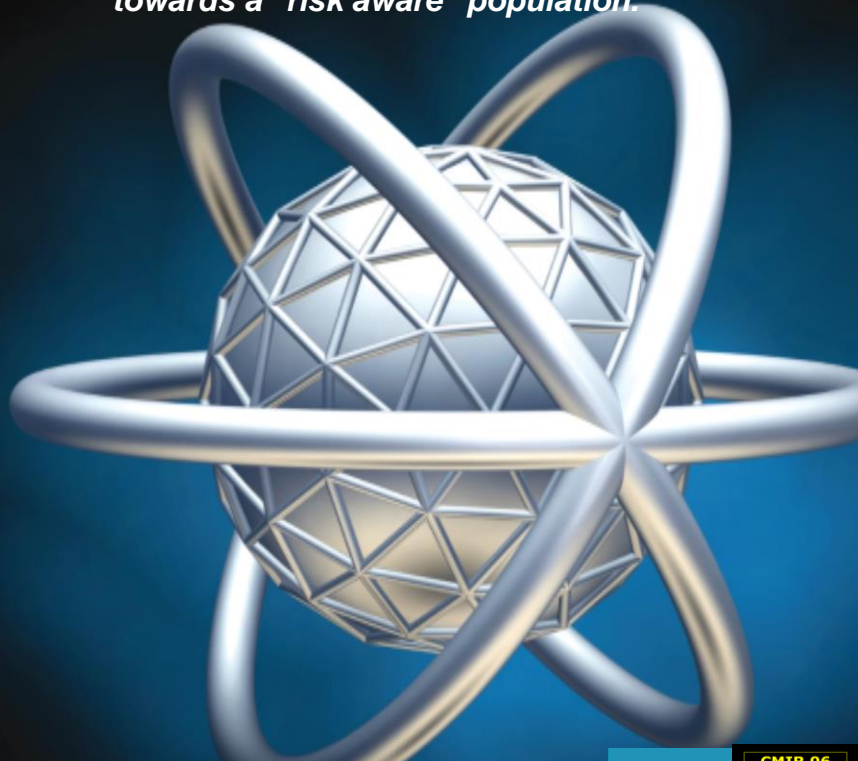
Improved awareness of the knowledge and perceptions of groups within the population must lead to targeted and adapted prevention messages in order to progress towards a "risk aware" population.



Science students differed from other students by being more in favor of a partial exit from nuclear power (50%, compared to 12% for students from other disciplines), and by indicating that they were more open than others to the possibility of changing their minds if they had more knowledge on the subject (43%).

In terms of behavior, the gaps are, as expected, wide between the 2 populations (students/firefighters): less than half (44%) of students adopt the right reflexes (seeking a confined space, sealing ventilation), 55% would prepare for an evacuation and 84% would keep themselves informed, not through social networks as we might think, but through a state organization in charge of managing the nuclear sector.

If an alert were to occur, students report that they would be anxious (42%), frightened (12%) or even panicked (25%), unlike firefighters who would of course behave as expected, be more reasoned, and much less panicked (difference of 21%), although half of them admit that they would still be anxious.



\* Nuclear risks, from radioisotopic (bio)chemistry to public perception  
Financed by the UCA<sup>JEDI</sup> IDEX - Academy 3

