
PIANOFORTE Travel Grant 2024 – Summary

Report of Participation in a Scientific Course

This report summarises Cansu Özcan Kılcan’s attendance at a course taught by the Norwegian University of Life Sciences (NMBU) in Ås, Norway, between June 17 and 28, 2024. The course title is ‘Assessing Risk to Humans and the Environment’, part of an ongoing MSc and PhD programme in Environmental Nuclear Sciences.

As a Junior Research Fellow and a PhD student in the research group of Dr. Alan Tkaczyk at the University of Tartu, Estonia, Cansu has been studying a methodology directly related to risk assessment due to naturally occurring ionising radiation. Her PhD thesis is based on a comprehensive framework named Life Cycle Assessment (LCA)-Naturally Occurring Radioactive Materials (NORM), which models an industrial symbiosis between aluminium and cement industries with integrated LCA and NORM impact assessment models. The output of Cansu’s thesis will be the estimation of the total impact of this new practice on the non-human biota and human health in terms of naturally occurring ionising radiation hazard.

Especially since analysing the impact on non-human ecosystem components requires thorough knowledge and hands-on practice with the corresponding theoretical background information as well as the ability to use relevant advanced tools, this course was a good opportunity for Cansu to understand more about how she can integrate the best available methodologies, techniques, and tools in her work.

Throughout the 2 weeks of learning, various topics, widely ranging from ecological risk assessment and data management to philosophical and social aspects, were discussed with highly competent lecturers from both the Norwegian University of Life Sciences (NMBU) and several renowned universities in the UK (i.e., University of Cambridge, University of Manchester, Lancaster University) and Europe (i.e., Stockholm University). Additionally, comprehensive practical sessions were held by two experts from the Norwegian Radiation and Nuclear Safety Authority and a Swedish consultancy company, which provided almost all significant answers to most of the open questions in mind. Moreover, the participants were involved in the learning process in a way that enabled an interactive practices, which was performed by working on a case study. As expected, the course gave Cansu a good overview and confidence to continue her thesis.

Cansu attended all the lectures, self-study sessions and social events without missing any to benefit from them in every aspect. At the end of the course, she completed her tasks and was awarded 5 ECTS by the NMBU course organisers (please kindly find attached Cansu’s certificate).

Even though there is no written output as a result of this course yet, participating in it gave Cansu a solid foundation for contributing to her thesis and her future publications. Furthermore, positive contact was established with many competent scientists and experts in the field. Cansu is convinced that her knowledge and experiences would support concrete outputs in the future as becoming one of the promising scientists in the radiation protection community.

This partnership has received funding from the European Union’s “EURATOM” research and innovation program under the 101061037 grant agreement.