

THE ROLE OF NETWORKING FOR NUCLEAR EDUCATION

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Nuclear knowledge is the basis for almost all nuclear activities, and education and training are the most fundamental means to transfer knowledge from one generation to the next. Understanding means and trends in knowledge transfer through education and training thus deserves a closer examination.

In the past years, a number of trends and questions in nuclear knowledge, education and training have emerged. With declining student enrolment numbers and a general stagnation of the use of nuclear power in some of the IAEA's Member States, the issue of a slow erosion of the knowledge base and the possibility of losing knowledge has become increasingly important, in particular if seen against the background of a possible renaissance of nuclear power in the future. In other Member States, an expansion of nuclear power is expected, with a corresponding need for human resources. As a result, in many Member States education and training of the next generation and succession planning have become key issues. Several actions are being taken in the nuclear education and training sector, ranging from governmental programs to industry recruitment efforts, but most importantly a trend to increased networking and sharing of resources and facilities has become apparent.

This paper starts with a working definition of "nuclear knowledge" and a review of the history of nuclear knowledge, its accumulation over past decades and trends in its dissemination – either favouring networking and sharing knowledge, e.g. for sustainable development, or restricting such sharing, e.g. in the case of commercially used knowledge. It then examines the present trend to and motivation for increased networking of nuclear education and training as a part of transfer of that knowledge from one generation to the next. After a brief overview about the theory of networking, it can be said that networking can contribute to efficiency, sharing of resources, the effectiveness of programs, the timeliness of responses, to quality control, and to stabilisation and flexibility in the nuclear human resource sector. After an analysis of different types and characteristics of networks, the paper presents selected networks in nuclear education and training as examples, including the IAEA initiative *Asian Network for Education in Nuclear Technology* (ANENT).

It can be concluded that networking already is a key element in shaping the nuclear educational sector, both on national and regional levels, and that networking nuclear education and training can be expected to become even more important in the future.