

## ***Preparing to decommission nuclear facilities in Europe***

### ***The challenge...***

Europe is home to a broad range of research reactors at different stages of their life cycles, as well as several nuclear power plants that are approaching the end of their designed lifetime. An increasing number of nuclear facilities are expected to close down in the next few decades and these will have to be decommissioned. The first step in decommissioning is planning, entailing a comprehensive and systematic consideration and evaluation of safety, technological, financial and social factors in order to select the optimum decommissioning strategy for a specific facility. This may be direct dismantling, deferred dismantling or entombment. Member States in the Europe region require assistance in drafting decommissioning plans and in preparing for decommissioning in the short and medium terms.

### ***The project...***

Building on a predecessor project, a regional technical cooperation project provided advice to Member States on planning and preparing for the decommissioning of nuclear facilities in Eastern Europe. Starting with the preparation of preliminary decommissioning plans for nuclear power plants and research reactors, the project then broadened its scope of assistance to address all aspects of planning and implementing the decommissioning of nuclear facilities.

More than 40 training events were delivered through the project to over 300 participants over the period 2009–2011, including training courses, workshops and group scientific visits. Member States received expert advice and were offered opportunities to observe equipment demonstrations and actual decommissioning activities in the field.

The project also facilitated some activities for the International Decommissioning Network (IDN), established under the auspices of the IAEA, which in turn has played an important role in facilitating the project's training activities.



*Demonstrating a hand laser, Workshop on Cutting Technologies for Decommissioning, Germany, 2011.*

### ***The impact...***

All reactors in the participating countries have now a preliminary decommissioning plan in place. In many Member States, decommissioning cost estimates are in progress or have been completed, and funding mechanisms have been established and funds are being collected.

Field experiences and exercises offered by the IAEA in cooperation with IDN countries with developed decommissioning programmes provided both regulators and operators with a realistic understanding of the technical challenges posed and the appropriate safety measures to address them.

A network of confident and self-reliant professionals willing and able to assist each other in solving the most difficult technical problems matured through the project, which attracted participants from all over the world. Lessons learned spanned a broad range of technical, safety, managerial and socio-economic factors, all of which can help manage the change which is a key aspect of the transition and subsequent decommissioning of a facility.