



A REVIEW OF IAEA'S TECHNICAL CO-OPERATION PROGRAMME

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The Technical Co-operation (TC) Programme is part of the Agency's mandate "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world." The IAEA's role under this Programme is that of a scientific and technical agency making a discrete but significant contribution to sustainable development goals through the transfer of nuclear science and technology. TC is a high impact programme focusing on development needs with about 800 active projects annually with a budget of over \$70M, 30% of which is targeted on training and capacity building in over 100 Member States. Since 1970, over 80,000 scientists and specialists from developing countries have been trained in nuclear science and technology and in nuclear power and safety.

A number of trends in the world at large will be likely to influence the Agency's TC programme in the next several years:

- The use of nuclear technologies in developing countries is growing as local infrastructures improve and technology transfer increases, especially among developing countries;
- Some countries and institutions are becoming more self-reliant as viable markets develop for nuclear technology, based on an increased awareness of their benefits;
- As facilities age, safe strategies for life extension and for decommissioning are assuming increasing importance, while there is some renewed positive attention to nuclear power in several parts of the world.
- Concern is increasing related to the potential for malicious acts involving nuclear facilities or unsecured nuclear and other radioactive material
- As the nuclear workforce ages, the management of nuclear knowledge is gaining increasing importance, including the need to maintain the safety and security of nuclear installations and their continued reliable operation.

It is difficult to forecast precisely how these trends will influence the assistance requested by Member States, but it is already clear that there will be increased emphasis on some of the areas mentioned above. Among these, particular attention is being paid to the preservation of nuclear knowledge and its management. In this connection, the Agency's task in the medium term will almost certainly be to create or strengthen capabilities at the national level, primarily through the TC Programme, to enable the local institutions to become more self-reliant to take up these challenges. Self-reliance is the endpoint of capacity building. Self-reliance and sustainability of national nuclear institutions in Member States is thus considered to be the key for a successful management and preservation of nuclear knowledge. As such, it is a *long term* challenge; although some Member States and their institutions are well on their way to achieving self-reliance, many countries will continue to rely on technical and financial support from the Agency to help build or improve basic nuclear infrastructure. The Agency will naturally continue to work

with all countries across the full spectrum of development — with the ultimate aim of helping them all to move towards self-reliance in the future. However, through the TC programme and implementation of its Strategy, it is expected to accomplish within five years a high degree of self-reliance and sustainability of national nuclear institutions in most regions through integration of regional efforts for survival and maintainability of these institutions and the establishment of strategic planning for human resources development as an integral part of their management practices.

To this end, we sensitize decision makers and managers in developing countries about the need to change the mind-sets of the staff of nuclear institutions and scientists alike to face more efficiently the new challenges resulting from shifts in priorities as well as globalization. Achieving this goal will require greater precision in identifying those areas where assistance will have the most impact in developing countries, specifically:

- (a) Helping to establish and strengthen national nuclear safety and security, radiation protection and waste management systems as a prerequisite for the development of nuclear energy programmes, mainly through the provision of training and advice, including facilitating educational courses through well established centres of excellence.
- (b) Giving priority, when selecting areas for co-operation, to provision of assistance for capacity building in areas involving basic human needs, such as food and water resources, health, and energy supply, and to the transfer of techniques contributing to environmental protection and sustainable development.
- (c) Promoting education and training in developing countries only in those nuclear techniques which have a clear advantage over other techniques. To this end, comparing nuclear and non-nuclear techniques, taking into account the conditions prevailing in the recipient countries.
- (d) Co-operating with the relevant international organizations in enabling the developing countries in establishing appropriate databases and systematically analysing the economic, health, environmental and climatic impacts of various energy options; including nuclear power.
- (e) Promoting the exchange of information and international discussions with interested Member States, universities and centres of excellence specialising in nuclear science and engineering, and NGOs, with the aim of developing educational and training networks as well as new schemes for financing, constructing and operating nuclear power plants in developing countries.
- (f) Performing global analyses and strategic studies of selected aspects of nuclear power and the fuel cycle, including assurance of supply. The IAEA's future role could be to find more ways of supporting and assisting buyers and to remove obstacles to free choice.

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