PRESIDENT'S SUMMARY

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The need for the remediation of legacy sites resulting from nuclear weapons testing, nuclear accidents, poorly operated practices and abandoned facilities became evident after the end of the Cold War in 1989. Since then, the full extent of the global remediation problem has become clear and, in response, the International Atomic Energy Agency (IAEA) organized several radiological assessments of major affected sites around the world. In 1999, the IAEA held the International Conference on the Restoration of Environments with Radioactive Residues in Arlington, USA. The Arlington Conference was mainly focused on the remediation of areas affected by nuclear weapons testing and nuclear accidents and on the issue of radiological criteria to guide clean-up decisions. By 2009, the emphasis had moved to the remediation of uranium mining and milling legacy sites and the technology for use in site remediation. These are the main topics of this week's conference in Astana, Kazakhstan.

The Conference has attracted participants from all over the world and presentations from many countries and organizations, but the emphasis of our discussions this week has been on the problems caused by uranium mining and milling legacy sites in the countries of Central Asia.

The conference addressed the important issue of international regulatory standards for remediation and noted the progress being made towards incorporating regulatory requirements and guidance for remediation into the revised International Basic Safety Standards on Radiation Protection (BSS). The revised BSS will include a radiological protection framework for remediation which allows criteria for remediation to be developed by a process of optimization, taking due account of national and local circumstances.

In the context of regulations, the Norwegian Radiation Protection Authority (NRPA) announced a plan during the Conference to assist in the regulatory supervision of legacy sites in the Central Asian Republics. Based on its previous experience in the Russian Federation, in which it helped to improve the regulatory capabilities of the nuclear regulator, the NRPA proposes to assist the countries of the Central Asian Republics by improving regulatory infrastructures and, in particular, providing training to the regulatory body in procedures and regulatory supervision. It was also suggested that IAEA might wish to become involved, for example, by hosting meetings of the coordination forum.

Many of the old uranium mines were developed in an era in which efficiency of uranium production was the only concern - with no attention being given to the damage inflicted on the environment or to the residues left behind. The environmental consequences of the first phase of uranium mining and milling were therefore often significant and could have been avoided. This has prompted concern that the same mistakes might be repeated in the new wave of uranium mining. The Conference supported the strategy of avoiding the creation of future legacy sites by proper planning (life cycle planning) and good operating practices and by promoting an environmental protection culture among the mining companies. It was also recognized that much could be achieved by establishing appropriate regulations and a strong regulatory body in the country in which the mining operations are conducted.

Many of the countries with legacy uranium mining sites share common problems, such as, a lack of funds to deal with the problem, a lack of local expertise and equipment and, as a result, inadequately characterized sites. Furthermore, the radiological conditions of people living near to the sites may not be known.

In most of the major industrialized uranium producing countries of the world, the uranium mining sites have been successfully remediated. During the conference the experience obtained in attempting to transfer this experience to developing countries was shared with the participants. Some of the key points were:

- It is necessary to build capacity through training so that the local organizations become capable of managing and regulating their own remediation activities.
- In many countries, resources are limited and the remediation solutions which have been used in industrialized countries may not be ideally suited to the application; usually, simple rather than sophisticated solutions are to be preferred.
- It is necessary to involve local stakeholders and to be sensitive to their concerns; sometimes it may not be appropriate to apply the most effective technical solutions because of social considerations, such as, maintaining the wellbeing of local people and securing their employment.
- Precautions may need to be taken to ensure the long term viability of supplied equipment, for example, by providing spares and arrangements for maintaining and servicing it.

New and innovative technologies were discussed at the Conference and information was provided on such technologies for application to monitoring, assessing and restricting the movement of radionuclides in soil and ground water.

The Conference gave strong support to ENVIRONET - a new initiative of the IAEA which has the aim of promoting mutual interests and the sharing of information in the area of environmental remediation.

Many presentations dealt with the characterization and radiological assessment of sites. In most of the cases considered, there are chemical (metals) hazards as well as those due to ionizing radiation and these must be taken into account in any assessment – too often only radiological hazards are considered.

A number of posters were displayed throughout the week describing studies additional to those presented in the oral sessions; they were mainly related to uranium mining and milling. All of the conference papers and posters will be useful and a help to persons wishing to learn from the experience of others.

The involvement in the Conference of many international organizations is a reflection of the importance being given to this problem. The World Bank, the United Nations Development Fund, the North Atlantic Treaty Organization, the World Health Organization, the European Bank for Reconstruction and Development, the Organization for Security and Cooperation in Europe, the European Commission and the IAEA have all been represented and almost all have made presentations. The aims of most of these organizations are similar in that they wish to provide assistance in the remediation of uranium mining and milling legacy sites in the countries of Central Asia. Most of them favour a regional approach and see the need for a well defined road map before proceeding with any project. They recognize the importance of developing regulatory capabilities in the countries and agree on the need to have well defined indicators of success. It is evident that they are already in contact with each other, but this conference has shown more clearly that there is a need for increased coordination between them.

In this context the IAEA has a special role. It is the only one of the organizations with formal international responsibilities and specialized knowledge in the areas of radiation protection and radioactive waste management. For this reason, if such a joint regional project were to be established, the IAEA would be the appropriate international organization to provide the technical safety justification for it on the basis of its safety standards.

The discussions at the Conference have resulted in a number of initiatives and proposals being put forward for cooperative action at the regional level; these are elaborated in the Session Summaries of the conference. It is now up to the international organizations to deliberate on these and to decide if and when to take action, taking into account the demands from other sectors.

I am sure that you have all benefitted from the exchange of information which has been possible during this conference and that you have made many useful contacts. These are often the main benefits from such meetings.