

Foreword

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The Chernobyl accident has demonstrated that radioactive contamination of the atmosphere knows no frontiers and that a few days after the catastrophe, the air activity concentration and ground deposition of radionuclides in some European localities thousands of kilometers apart, were not too different from those near the burning nuclear reactor. Tiny amounts of radiocaesium from Chernobyl were detected even at the South Hemisphere islands of Tahiti and La Reunion and at the South Pole. The Chernobyl lesson demonstrated that the national radiological monitoring networks operating at the time were more or less adequate to the needs of the situation. However, international exchange of information on the radiological situation and the remedial measures taken in particular countries was not organised nor coordinated well enough. Information was exchanged mainly through private channels, and by *ad hoc* initiatives of IAEA, UNSCEAR, WHO, etc. An enormous amount of monitoring data were collected in the aftermath of the accident, however not always of proper quality or relevance.

One of the consequences of the Chernobyl lesson was the establishment of the Early Notification Convention, and of the Emergency Response Centre, at the IAEA head-

-quarters in Vienna, Austria. It also became obvious that systematic improvement of radiation monitoring methods and systems is needed to ensure the safety of populations exposed in a large-scale radiological emergency. Of prime importance in this area are early warning systems and monitoring networks able to detect rapidly both minor and major changes in the activity of airborne particles.

In the wake of these developments intensive work was carried out in Europe during the past fifteen years. Some of this work has been documented in a series of International Meetings on Low-Level Air Radioactivity. In this issue of NUKLEONIKA we publish sixteen papers which were presented at the third of such meetings, held in Dąbrowno near Nidzica, Poland, between 25th and 29th September, 2000. Two previous meetings in this series were held in Kościuszki, Poland, in January 21–25, 1991, and in Mądralin, Poland in February 14–18, 1994. Fifty eight scientists from fifteen European countries and two international organisations (International Atomic Energy Agency and the Comprehensive Nuclear Test Ban Treaty Organisation) took part in the third meeting. This meeting provided an opportunity for exchanging information on recent developments in the equipment, methods, measurement results, monitoring systems, and their automation.