

Introductory Remarks by the Chairman

Burton G. Bennett

As is well known and has been stressed by speakers in the first session of this conference, the Chernobyl accident was an unprecedented disaster of very large scale. There was widespread radioactive contamination of the environment, harmful consequences to human health, and also substantial social and economic costs. It was the most devastating accident that could ever occur in a nuclear power plant, with total destruction of the reactor core and the release to the environment of enormous quantities of the radioactive materials.

Surely this was a unique event that will never be allowed to occur again. This one accident has given indelible lessons on reactor safety and on how to manage the response to such a catastrophe with effective countermeasures, protective actions, and recovery strategies.

The accident was so serious and consequences so diverse and complex that questions still remain on the actual effects caused by the accident and on what further measures of protection or surveillance might still be needed. Authoritative assessments of the many outstanding issues are needed to guide governments with useful and cost-effective measures to continue to deal with the accident and to advise and reassure the residents of the contaminated areas.

To contribute to better understanding of these issues and more effective management of the limited resources that can or must continue to be directed at the recovery process, the Chernobyl Forum was established as an initiative of the IAEA and sponsored by a number of international organizations.

The Chernobyl Forum has involved representatives of the governments of the affected region, who have been dealing with the social and economic aspects of the accident, and scientists who have experience in evaluating the health and environmental aspects of the accident. There has been a great desire to look back at the experience of the past two decades and then to continue forward in positive and effective ways to improve the health and economic well being of the residents of the three countries. We desperately need to reach consensus on this to make useful and sensible progress in dealing with the issues of the accident that still remain and that require and demand continued attention.

At the beginning of the Forum's activities, we could all agree on the basic issues to be addressed. We all recognized the serious consequences of the Chernobyl accident, both in scope and duration of the distress and disruption that resulted.

We all appreciated the extensive efforts that have gone into the clean-up, remediation, monitoring, and, in general, dealing with the complex impacts on human health and on the environment.

We all understand that complex issues remain, and decisions must be made to ensure further recovery and well being of the affected population. Although radiation exposures are part of the problem, there are many other factors involved, including social disruptions, depressed economic development and psychological stress that detract from the well being of the populations of the affected regions.

We all desire a wider public understanding of the consequences of the accident and clear priorities for further research and to continue to effectively manage the recovery process.

We all hope that the Chernobyl Forum can contribute in a positive way to achieve consensus on disputed issues, to promote public understanding and to make realistic suggestions to help alleviate the lingering consequences of the accident.

Method of work of Forum

Many scientists as well as representatives from UN organizations and governments of affected regions participated in the work of the Chernobyl Forum. Several meetings of the Forum were necessary to initiate the work and monitor the progress of the expert groups. Two expert groups formulated comprehensive reports – one on environmental issues, organized by the IAEA, and one on health issues, organized by the WHO. Experts from throughout the world were invited to contribute to these evaluations. The representatives of governments and the staff of international organizations then reviewed the results of these groups to be sure that the reviews were complete and the evaluations reasonable, so that they could serve as the basis for consensus agreements and effective recommendations for further dealing with the consequences of the accident.

One person was selected as chairman of the Forum. Let me introduce myself. I am Burton Bennett, and at the time of my selection, I was Chairman of the Radiation Effects Research Foundation in Japan, the bi-national US-Japan organization studying the effects of radiation in survivors of the atomic bombings of Hiroshima and Nagasaki. This organization, RERF, is the foremost contributor in the world of understanding radiation effects and establishing the risks of radiation exposures. The epidemiological study at RERF is a lifetime follow-up project. So far, the work has continued for nearly 60 years, starting in 1947 shortly after the bombings. I am happy that RERF staff have been able to apply the knowledge gained there to other situations in need of careful study and evaluation.

I served as chairman of RERF for a four-year term from July 2001 until June 2005. I am thus only recently retired. Prior to my service at RERF, I served as director of the Secretariat for the United Nations Scientific Committee on the Effects of Atomic Radiation. My whole career has been devoted to studying and understanding the sources and effects of radiation. It has been my great pleasure to participate in the Chernobyl Forum.

Basis for Forum assessment

The work of the Chernobyl Forum did not materialize from a clean slate of absent information and unknown facts. Of course, we have built on the work of other efforts to review and assess the consequences of the Chernobyl accident. It was a tribute to the Soviet scientists to have an assessment ready for international presentation here in Vienna by August of 1986, just a few months after the accident. This started an effort to be open and factual with information then available.

The first assessment of the accident was published by UNSCEAR in 1988. Good estimates could be made at that time from numerous measurements in countries throughout Eastern and Western Europe and in other countries of the northern hemisphere of the amounts of radioactive materials released and their spread throughout the hemisphere. The experience in treating the highly exposed workers could also be described in the 1988 UNSCEAR report.

In 1990 and 1991 the International Atomic Energy Agency conducted the International Chernobyl Project, in which scientists from many countries who were experts on environmental and health aspects of radiation met with their counterparts in the Soviet Union to compare methods of evaluating radiation exposures and to conduct an extensive screening of health effects in the exposed population. This was an ambitious and highly successful project from the scientific point of view. Dr. Itsuzo Shigematsu served as chairman of the International Chernobyl Project. Dr. Shigematsu at the time was serving as chairman of the Radiation Effects Research Foundation. I am following him both at RERF and in the international Chernobyl evaluations. I would like to pay tribute to the very capable leadership of Dr. Shigematsu of the International Chernobyl Project. As he is attending this conference, I would like to ask him to stand and accept a tribute from all of us for his outstanding efforts in Japan and in the world to understand radiation effects. Thank you Dr. Shigematsu.

The person at IAEA who was most responsible for the conduct of the International Chernobyl Project and has been very much involved in supporting international efforts to establish radiation protection guidelines and advice was Dr. Abel Gonzales. He always gave us energy and inspiration to devote our very best efforts to our endeavours. I would like to thank Abel for his leadership of IAEA Chernobyl work over so many years until his retirement earlier this year.

Many of my colleagues, as did I, participated in the International Chernobyl Project, and these physicians and scientists continue to contribute their experience and expertise to the Chernobyl Forum. We will soon hear from three of them: Dr. Lynn Anspaugh, who will present the findings of the Expert Group on environment and Dr. Fred Mettler and Dr. Elizabeth Cardis, who will present the findings of the Expert Group on health. I would like to recognize these individuals as representatives of the many physicians and scientists who have been contributing for many years to Chernobyl evaluations.

During the time of the International Chernobyl Project and for some years after, the Sasakawa Foundation of Japan provided substantial support for Chernobyl projects, especially the IPHECA project of WHO. Many Japanese experts were able to contribute to the international work through this project, including Dr. Shigenobu Nagataki, my immediate predecessor as chairman of the Radiation Effects Research Foundation during 1997-2001. He was active in contributing to thyroid evaluations, his specialty, in giving overall support to the international efforts.

This conference happens to be an occasion for a reunion of chairmen the Radiation Effects Research Foundation in Japan. Dr. Shigematsu and Dr. Nagataki, who preceded me as chairmen, are here. Let me introduce the newly appointed chairman of RERF who succeeded me, Dr. Toshiteru Okubo. Dr. Okubo became chairman on July 1 this year. Prior to this he was President of the University of Industrial and Occupational Health in Kitakyushu, Japan. Dr. Okubo is attending this conference, and I would like to encourage his participation in international radiation assessment work.

Let me conclude my introduction by saying once again thank you to all of the scientists and physicians who participated in the Expert Groups, who have prepared the basis for our conclusions and recommendations. I would like to turn now to the presentations of the findings of the expert groups.

Concluding Statement

Burton G. Bennett, Chairman

I would like to bring this conference to a close with a few brief statements. First of all, I would like to thank those who participated in the presentations and discussions of the past two days. The assessments of the continuing environmental levels of radioactive contamination, the health consequences of radiation exposures received by workers, evacuated persons and by those who continue to live in contaminated areas and also the social and economic issues were very clearly presented. These sound, scientific evaluations form the basis for sensible, practical recommendations that could be adopted by governments to manage the public health problems that will be faced for still some time as a legacy of the accident.

We owe a great debt of gratitude to the specialists who prepared the expert reports that formed the basis of the conclusions and the recommendations of the Chernobyl Forum. These reports incorporate the latest scientific findings on the consequences of the accident. A careful review of social and economic issues has also been prepared to serve as a basis for new national and international initiatives to help the recovery process. This material was constructed on the already solid foundation of numerous studies, international reviews and evaluations that have been conducted over the past 20 years. Together this knowledge forms a solid basis for our present observations and recommendations.

The Chernobyl accident was a disaster that required massive response. The former Soviet Union and the successor countries reacted with heroic efforts to limit the contamination of the environment and exposures of the public. The protective measures were extremely effective. We can truly say that except for the high exposures received by workers on the night of the accident and for many children who very unfortunately received high exposure to radioactive iodine released in the accident and who later incurred thyroid cancer, the accident was a low dose event.

The majority of workers who participated in the cleanup efforts, the many thousands of persons evacuated during the early days following the accident, and all those who continued to live in contaminated areas received radiation doses from Chernobyl-released radionuclides that were relatively low and unlikely to lead to widespread and serious health effects. The doses to these individuals are comparable to those caused by naturally occurring radionuclides that produce a background level of radiation to which everyone in the world is exposed. Some notable regions of high background radiation exist in several countries that are caused by higher concentrations of thorium or uranium radionuclides in the beach sands or in soil or water. The Chernobyl exposures are not unlike these naturally occurring areas that are not associated with discernable radiation health effects.

Many of the health effects in the population of the Chernobyl-affected regions are caused by other factors than radiation. That is not to belittle the possible consequence of radiation exposures, but it is to recognize the harm done by smoking, excessive alcohol consumption, poor diet, or inadequate health care or advice. It may make sense to address these other issues at the same time or even instead of the radiation threats to achieve the best progress in improving public health and well being in the Chernobyl countries. Let us resolve to see things in wide perspective and to accept proper priorities to improve public health in the region.

I would like to stress that our conclusions are more than just valid, objective, scientific statements. They are a consensus of all of the scientists, international organization staff and

representative of governments who participated in the Chernobyl Forum and this conference. All of us agree on the basic underlying facts. We agree with the evaluations of the health and environmental effects. We accept the characterization of the social and economic problems engendered by the accident, and we acknowledge the critique of the response thus far to the existing issues by the governments and the public.

We are speaking with one voice on the various issues. Even in the complex situation that we have now and the uncertainties that we face going forward, we are starting out now with consensus views on the issues. We have reached agreement on the recommendations to guide our continuing efforts to ensure the well being of the populations of the affected areas and contribute to the economic recovery of the region.

These consensus views cannot be taken lightly now and then disregarded sooner or later when other statements would seem to be more expedient or would perhaps attract more attention. If we do not hold to these agreements, the disputes will reemerge. The problems will continue of ineffective government measures to deal with public health problems, and the public will continue to feel that their concerns are not being heard and dealt with. It will also be difficult for international organizations to work effectively with governments to initiate widely supported measures to improve public health and lead to economic stability and prosperity. We must speak with one voice now and with one voice as we go forward.

The stakes are high for disregarding our consensus views and the agreements we have just concluded. We would revert to continuing disputes and ill will, waste large sums of money and be unable to attract international assistance that is still required. But the prospects are high for going forward in a positive way, utilizing the consensus evaluations for dispelling unfounded views on the consequences of the accident, redirecting our limited resources in the most effective ways, and restoring the trust of the public that is so essential to resolve the problems that are still faced as residual features of the accident.

In the past, we have experienced a disparity in the views of the scientists, who evaluated the health and environmental issues, and the views of the politicians who felt that different conclusions would be more likely to win international sympathy and humanitarian aid. We know so well that it does not work for us to go our separate ways. We must speak with one voice if we are to overcome the problems that we still face. Let us resolve to help each other to bring clarity to all aspects of the issues related to the Chernobyl accident and to bring efficiency and success to our efforts to deal with the continuing problems.

We will certainly be challenged as we go forward. Nobody said it would be easy to transform the recommendations of the Chernobyl Forum into practical measures that can be enacted by governments to contribute to a better future of their countries. The contamination will not go away, even if we understand the transfers of radionuclides in the environment and realize the countermeasures that are most effective for dealing with this. The stress and worry of the public about radiation effects will only slowly dissipate, even with good information and clear presentation of the real risks and dangers. The economy will not respond quickly to new initiatives, even if these seem in the long term to be most sensible and effective for fostering economic development.

We must understand these difficulties, but we must face realistically and resolutely the challenges before us. We must be patient with the long recovery, but let us be steadfast in our resolve to deal with the issues in a sincere and truthful way, so that the efforts of government, international organizations, and the public will be united and coordinated, and all will be

satisfied that we are doing our utmost to recover from the serious consequences of the Chernobyl accident.

On behalf of organizers and sponsors of this conference, I would all like to express our gratitude for the many specialists from many countries, who compiled the expert reports that form the basis of the conclusions and recommendations of the Chernobyl Forum. The expert reports were prepared in a remarkably short timeframe. Obviously those involved made considerable effort to complete their work in a timely fashion. They addressed the most important issues related to the accident and the recovery process, and they produced the most complete and useful compilation of information and results available at present. Their clarity and objective presentation have enabled not only scientists but also government representatives and politicians to accept the conclusions. The Chernobyl Forum will be judged successful in large part from the good work of the expert groups.

The Chernobyl Forum will also be judged successful from the participation all along of government representative of Belarus, the Russian Federation, and Ukraine. Their good will and understanding have ensured that there will be wide acceptance of the Forum's recommendations and effective measures will be taken with the encouragement of international organizations. We all have great expectations for progress and continued alleviation of the consequences of the accident, for the economic development of the whole region, and for the improvement in public health that we all aspire and strive for.

Finally I would like to thank the International Atomic Energy Agency for organizing the Chernobyl Forum. In that regard, I should thank Mr. ElBaradei personally for the original initiative that he proposed to bring agreement from disputes, to bring concerted and coordinated efforts to measures still needed to improve public health and to bring consensus as the basis for future actions.

I thank the many other international organizations that have joined with IAEA in sponsoring the Chernobyl Forum. The World Health Organization and the United Nations Development Programme made substantial, direct contributions to the work of the Forum and the presentations at this conference. I thank all those who have participated in and contributed to the success of the Chernobyl Forum.

Especially for the persons directly affected by the accident, I wish that our work of preparing informative materials and of presenting the findings at this international conference will be translated into effective actions that will benefit them directly and improve their health and well being and their prospects for productive and fulfilling lives. They are the ones who deserve and expect the fruits of our efforts and the good that may come from our effective actions.

I now declare closed the activities of the Chernobyl Forum. After having looked back, let us now go forward together and join in our efforts to transform discussions into actions. Let us cooperate to make concerted efforts to inform the public of the measures still needed to avoid further radiation exposures from radionuclides released by the accident, to formulate reasonable and fair measures to compensate for injuries and disruptions of lives, and utilize our limited resources most effectively for the common good. Let us turn the Chernobyl accident from a disaster unfolding into a public health issue diminishing and an economic potential expanding. The crisis that befell the region needs now solutions that will erase the damage and disruption and bring forth better prospects for the health and prosperity of all those involved. Let our problems be solved, and let our hopes and aspirations become reality.

Thank you for your participation in this conference and your efforts hitherto to make our work successful. I will thank you in advance for your continuing willingness to contribute to a better future for the Chernobyl region.