For information

Legislative Council Panel on Security

International Atomic Energy Agency Ministerial Conference on Nuclear Safety held in Vienna in June 2011

Purpose

This paper briefs members on the proceedings and outcome of the Ministerial Conference on Nuclear Safety organised by the International Atomic Energy Agency (IAEA) in Vienna on 20-24 June 2011, the way forward for enhancing the global nuclear safety framework and the relevance to Hong Kong.

Proceedings

- 2. The Conference was attended by over a thousand delegates representing 123 Member States and over 20 specialised agencies of the United Nations, other Intergovernmental Organisations and Non-governmental Organisations. Officers from the Security Bureau, Environment Bureau, and professional departments of the Hong Kong Special Administrative Region Government joined the Chinese delegation as members to attend the Conference.
- 3. The Conference is to launch a process to enhance the global nuclear safety framework based on the lessons learned in the Fukushima nuclear accident. It comprised a Plenary Session for Heads of Delegations to give the formal views of Members States, agencies and organisations, as well as three Working Sessions for all participants to discuss the following topics in greater detail
 - Preliminary Expert Assessment of the Fukushima Accident and Actions for Safety Improvements.
 - Emergency Preparedness and Response Initial Response and Lessons Learned.
 - The Global Nuclear Safety Framework Review of International Conventions and Possible Ways for Strengthening the Framework.

Outcome

4. A Ministerial Declaration (copy at *Annex*) was adopted and issued. Salient points covered by the Conference are outlined below.

Fukushima nuclear accident

5. The Conference examined two preliminary reports on the Fukushima nuclear accident submitted respectively by Japan and the IAEA International Fact-Finding Mission¹. As the accident has yet to be fully resolved, further assessment will continue for the preparation of comprehensive reports by Japan and the IAEA.

Role of the IAEA

6. There is a general call on the IAEA to enhance its role and capacity in facilitating the peaceful use of nuclear energy, promoting nuclear safety and coordinating the efforts of Members States as well as relevant agencies and organisations such as the World Health Organisation, the Food and Agriculture Organisation and the World Meteorological Organisation.

IAEA safety standards

7. It is important to call for Member States' universal application of the IAEA Safety Standards as international benchmark for protecting people and the environment from harmful effects of radiation. In the light of the Fukushima nuclear accident, relevant safety standards, in particular those pertaining to multiple severe hazards and effective preparedness, should be reviewed and strengthened.

Systematic safety reviews of nuclear power plants

8. There should be systematic and regular reviews by Member States on the safety of their nuclear power plants. It was also proposed that the reviews could be supplemented by international expert or peer reviews covering operational safety, emergency preparedness, and the effectiveness of the regulatory systems.

¹ Report of the Japanese Government to the IAEA Ministerial Conference on Nuclear Safety - The Accident at TEPCO's Fukushima Nuclear Power Stations, and Report of IAEA International Fact Finding Expert Mission of the Fukushima Dai-Ichi NPP Accident Following the Great East Japan Earthquake and Tsunami.

National nuclear regulatory bodies

9. National nuclear regulatory bodies should be independent, adequately funded, and staffed by well-trained personnel to ensure that they are as effective as possible.

Emergency preparedness and response

10. There should be improvement of emergency preparedness and response to nuclear accidents, both within countries and at the regional and international levels. This may include the possible creation of rapid reaction capacity, development of training in crisis management, further cooperation among national authorities, technical safety organisations, and operators and among relevant intergovernmental and non-governmental organisations, and the IAEA strengthening its role in emergency preparedness and response.

Communication with the public

11. It is acknowledged that the Fukushima nuclear accident has shaken public confidence in the safety of nuclear energy. It is considered necessary to enhance public understanding on nuclear energy, radiation and other nuclear issues, and maintain good communication with the general public in order to rebuild their confidence.

Information transparency

12. It is considered important to provide timely, factually correct and objective information and assessments of nuclear accidents and their radiological consequences to meet the high level of public expectation. Notably the IAEA is seeking ways to improve the International Nuclear and Radiological Event Scale (INES)². There should also be adequate, prompt and continuous information sharing in the case of a nuclear accident and transparency and exchange of best practices among States in all aspects of nuclear safety. The IAEA may also consider expanding its role to include providing accident consequence analysis.

Legal framework

13. It is important to call for universal adherence to and the effective implementation and continuous review of the relevant international instruments

² The INES system classifies incidents on a seven-point scale, the higher the number given the more serious an incident. Although the estimated amount of radioactive substances released in the Fukushima accident is roughly ten times in order of magnitude <u>less</u> than that released in the Chernobyl accident, both accidents are classified as a Level 7 event. Many consider this inappropriate in keeping governments and the general public posted of the degree of seriousness of the Fukushima accident.

on nuclear safety³, and consider the possibility of strengthening the international legal framework in this area.

Way Forward

- 14. Based on the outcome of the June 2011 Ministerial Conference, the IAEA secretariat will prepare a report and a draft Action Plan, facilitate consultations among Member States on the draft Action Plan, and present this report and the draft Action Plan covering nuclear safety, emergency preparedness and response and radiation protection of people and the environment, as well as the relevant international legal framework, to the IAEA Board of Governors and General Conference at their forthcoming meetings in September 2011.
- 15. A series of meetings are being lined up for 2012 to review progress on implementation of the future Action Plan measures, including an extraordinary meeting of Member States to the Convention on Nuclear Safety (August), the General Conference of IAEA (September) and an international follow-up conference to be hosted by Japan together with the IAEA (towards year end) which should take stock of all material developments since the Fukushima nuclear accident and consider the way forward for the sustained use of nuclear energy.

Relevance to Hong Kong

- 16. The major outcomes of the Conference that are of relevance to Hong Kong include the need of benchmarking with IAEA safety and technical standards, enhancement of emergency preparedness, enhancement of communication with the public and information transparency.
- 17. The Daya Bay Contingency Plan (DBCP) has been drawn up in full compliance with the international safety standards regarding emergency preparedness and response. Besides, according to the experience shared by Member States during the working sessions on their practices in handling the Fukushima nuclear accident, it is noted that our overall responses including radiation monitoring, the handling of imported food and goods and dissemination of information to the public compared favorably with theirs. Notwithstanding this, we are conducting a comprehensive review of the DBCP. We will monitor closely the ongoing deliberations of the IAEA in reviewing the relevant international safety standards and ensure that the DBCP will progress with time and follow the prevailing nuclear safety principles, requirements and guidance promulgated by the IAEA. In this regard, we will keep a close

³ Such as the Convention on Nuclear Safety, Convention on Early Notification of a Nuclear Accident and Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency.

watch on the forthcoming IAEA report and draft Action Plan that will be presented at the IAEA General Conference in September 2011.

- 18. On emergency preparedness and response in the case of a nuclear accident, we are committed to undertaking a large-scale exercise in Hong Kong after completion of the review of the DBCP and the subsequent issue of a revised plan. We will explore further to see how best Hong Kong may possibly benefit from the IAEA's resources and expertise, for example, by seeking various technical advice and inviting experts from international organisations to observe the exercise in Hong Kong. We will also promote community understanding of the DBCP and involve the public in participating in the future exercise, so as to ensure general awareness of our emergency preparedness and response in dealing with nuclear contingencies and appreciation of any countermeasures that might be necessary.
- 19. In enhancing the communication with the public, we are committed to promoting public understanding of issues related to nuclear safety. In collaboration with professional departments such as the Department of Health, Electrical and Mechanical Services Department and Hong Kong Observatory, we will enhance public education on radiation and nuclear safety in our everyday life. Where appropriate, we will draw on the wealth of information on nuclear energy, radiation, nuclear plant safety and other nuclear issues published by the IAEA and other international organisations.
- 20. As regards information transparency, we will continue to encourage operators of nuclear power stations in Daya Bay to increase transparency in daily operations. In reviewing the DBCP, we will also pay particular attention to the strategy and arrangements for dissemination of accurate, timely and appropriate information to the public in the event of a nuclear accident that might affect Hong Kong.

Security Bureau July 2011

Declaration by the IAEA Ministerial Conference on Nuclear Safety in Vienna on 20 June 2011

We, the Ministers of the Member States of the International Atomic Energy Agency (IAEA), gathered in Vienna in light of the serious consequences of the nuclear accident at the Fukushima Daiichi Nuclear Power Station caused by the Great East Japan Earthquake and Tsunami to direct, under the leading role of the IAEA, the process of learning and acting upon lessons to strengthen nuclear safety, emergency preparedness and radiation protection of people and the environment worldwide,

- 1. Express sympathy for and solidarity with Japan in connection with the unprecedented earthquake and tsunami of 11 March 2011, which caused much loss of life and severe damage, and the accident at the Fukushima Daiichi Nuclear Power Station; and emphasize the resolve of the international community to continue to assist Japan in its efforts to mitigate and overcome the consequences of the disaster and the accident;
- 2. Recognize the efforts of the international community to enhance knowledge in nuclear safety and radiation protection and strengthen international standards in nuclear safety, emergency preparedness and response and radiation protection of people and the environment and the need to draw the lessons from the accident at the Fukushima Daiichi Nuclear Power Station;
- 3. Recognize that some States consider nuclear power as a viable option in meeting their energy needs, while other States have decided not to use or to phase out nuclear energy;
- 4. Recognize that nuclear accidents may have transboundary effects and raise the concerns of the public about the safety of nuclear energy and the radiological effects on people and the environment; and emphasize the importance of adequate responses based on scientific knowledge and full transparency, should a nuclear accident occur;
- 5. Underline that States with nuclear power programmes have a central role in ensuring the application of the highest standards of nuclear safety; and emphasize the responsibility of these States for providing a timely, transparent and adequate response to nuclear accidents in order to minimize their consequences;
- 6. Emphasize the importance of implementing enhanced national and international measures to ensure that the highest and most robust levels of nuclear safety are in place, based on IAEA safety standards, which should be continuously reviewed, strengthened and implemented as broadly and effectively as possible and commit to increase bilateral, regional and international cooperation to that effect;
- 7. Commit to strengthening the central role of the IAEA in promoting international cooperation and in coordinating international efforts to strengthen global nuclear safety, in providing expertise and advice in this field and in promoting nuclear safety culture worldwide;

- 8. Encourage the close cooperation and coordination among the relevant intergovernmental and non-governmental organizations on nuclear safety related matters;
- 9. Stress the importance that the IAEA should be further enabled to meet the high level of public expectation to provide timely, factually correct and objective information and assessments of nuclear accidents and their radiological consequences;
- 10. Welcome the reports submitted by Japan and the IAEA International Fact-Finding Mission to Japan, which include preliminary assessments of the accident at the Fukushima Daiichi Nuclear Power Station;
- 11. Stress the need to receive from Japan and the IAEA a comprehensive and fully transparent assessment of the Fukushima Daiichi Nuclear Power Station accident in order for the international community to be able to draw and act upon the lessons learned, including a review of IAEA safety standards that are relevant to the accident, in particular those pertaining to multiple severe hazards:
- 12. Underline the benefits of strengthened and high quality independent international safety expert assessments, in particular within the established IAEA framework, through periodic reviews and evaluation missions assessing national regulatory frameworks, emergency preparedness and response and nuclear power plant operation in order to ensure continuous improvement of the safety of nuclear installations on the basis of internationally agreed rules and procedures;
- 13. Encourage States with operating nuclear power plants to conduct, as a response to the accident at the Fukushima Daiichi Nuclear Power Station, comprehensive risk and safety assessments of their nuclear power plants in a transparent manner;
- 14. Emphasize the responsibility of the nuclear industry and operators in the implementation of nuclear safety measures and call upon them and their associations to fully support and actively contribute to international efforts to enhance nuclear safety by, inter alia, furthering transparency and prioritizing safety considerations;
- 15. Commit to further strengthening the authority, competence and resources of national regulatory authorities, including through appropriate technical and scientific support and to continuously ensure their effective independence;
- 16. Reiterate the importance of universal adherence to and the effective implementation and continuous review of the relevant international instruments on nuclear safety, consider the possibility of strengthening the international legal framework in this area; and recognize the Agency's enhanced efforts to that effect;
- 17. Underline further the importance of adequate, prompt and continuous information sharing in the case of an accident, transparency and exchange of best practices among States in all aspects of nuclear safety;
- 18. Underline that the freest possible flow and wide dissemination of safety related technical and technological information enhances nuclear safety, which is essentially

- technical in nature and of global concern; and note the role that innovative technologies can play in improving nuclear safety;
- 19. Emphasize the need to improve national, regional and international emergency preparedness and response to nuclear accidents, including through the possible creation of rapid reaction capacity and the development of training in the field of crisis management at the regional and international levels, as well as to strengthen cooperation among national authorities, technical safety organizations, operators and among relevant intergovernmental and non-governmental organizations; and call for a strengthened role of the IAEA in emergency preparedness and response by promoting and possibly expanding existing IAEA response and assistance capabilities;
- 20. Underline the need for States operating nuclear power programmes and the IAEA to promote capacity building, including education and training for both regulators and operators;
- 21. Underline the need for States planning to embark on a nuclear power programme to create an appropriate nuclear safety infrastructure based on IAEA safety standards and relevant guidance and assistance, using, among others, effective IAEA technical cooperation mechanisms for supporting the safe and secure use of nuclear technologies;
- 22. Recognize the need for a global nuclear liability regime that addresses the concerns of all States that might be affected by a nuclear accident with a view to providing appropriate compensation for nuclear damage;
- 23. Request the IAEA Director General to prepare a report on the June 2011 IAEA Ministerial Conference on Nuclear Safety and a draft Action Plan, building on this Declaration and the conclusions and recommendations of the three Working Sessions, and the expertise and knowledge available therein; and to promote coordination and cooperation, as appropriate, with other relevant international organizations to follow up on the outcomes of the Conference, as well as facilitate consultations among Member States on the draft Action Plan;
- 24. Request the IAEA Director General to present this report and the draft Action Plan covering all the relevant aspects relating to nuclear safety, emergency preparedness and response and radiation protection of people and the environment, as well as the relevant international legal framework, to the IAEA Board of Governors and General Conference at their forthcoming meetings in 2011;
- 25. Call upon the IAEA Board of Governors and the General Conference to reflect the outcome of this Conference in their decisions and to support the effective, prompt and adequately resourced implementation of the Action Plan.

Vienna, 20 June 2011