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**What the Commission Report says on:**

PEACEFUL USES OF NUCLEAR ENERGY: SHARING THE BENEFITS AND  
AVOIDING THE RISKS

**Sharing the Benefits.** One of the three cornerstones of the Nuclear Non-Proliferation Treaty (NPT) – along with the disarmament and non-proliferation – is its recognition, in Article IV, of the “inalienable right” of all parties to use of nuclear energy for peaceful purposes, in conformity with their other treaty obligations, and the need of all parties to cooperate in its provision: assisting states in this respect is part of the International Atomic Energy Agency’s core mission. There is not universal support, particularly in civil society, for this pillar of the NPT, but it is inconceivable that states’ commitment to non-proliferation could be maintained, let alone strengthened, without it.

There are also very good reasons in their own right for supporting the cooperative sharing of the benefits of nuclear energy. In a world ever-anxious about energy security, an increase in the share of nuclear energy to reduce dependence on imported oil and gas has many attractions for many states. And, more importantly still, while situations vary from country to country, it is almost impossible now to argue, from a global perspective, that civil nuclear energy is anything other than an indispensable element of the energy policy mix. The global recognition of the need for suppression of greenhouse-gas emissions significantly increases the attractiveness of nuclear power as the only low-carbon electricity generation technology with proven capability for large-scale supply – expensive up front, but economical in the long run. Whether nuclear energy will increase its total share of electricity generation in a period of major and continuing demand increases may be questioned, but simply maintaining it would by itself be a major contribution to climate policy.

[For a full discussion of the likely scale of the civil nuclear energy “renaissance” and the proliferation risks associated with it see Section 5 of the report.]

Beyond energy generation, nuclear technologies and techniques are demonstrably valuable for improving human well-being, especially in fighting disease, helping to grow food, addressing food security and safety, and managing safe water and other natural resources. In health care, nuclear medicine and radiation therapy will continue to be important in providing earlier, more accurate diagnoses and safer, more effective treatments. In food security and safety, nuclear techniques have also contributed significantly in integrating pre- and post-harvest pest-control measures such as food irradiation and area-wide application of the Sterile Insect Technique (SIT) to protect crops and livestock from pests. Techniques for diagnosing trans-boundary animal diseases will be increasingly important for early and rapid detection in both the laboratory and the field.

And nuclear techniques have a significant role to play in hydrology, important as the growing scarcity of water resources and the dramatic lack of sustainable access to water and sanitation in developing countries become major impediments to sustainable development, wealth creation and the eradication of poverty. The Commission supports additional resources for the IAEA’s Technical Cooperation Programme, to assist developing states to take full advantage of peaceful nuclear energy for human development.

**Safeguards, Security and Safety.** If peaceful nuclear energy is to play the role it should, it is critical that it be managed in a way that reduces, and does not add to, the world’s problems.

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The full text of *Eliminating Nuclear Threats: A Practical Agenda for Global Policymakers*, Report of the International Commission on Nuclear Non-proliferation and Disarmament, Co-chairs Gareth Evans and Yoriko Kawaguchi (November 2009), is available at [www.icnnd.org](http://www.icnnd.org)

The first indispensable dimension of that effective management is safeguards i.e. ensuring that there is no diversion of nuclear material from civil to military purposes. [Safeguards are fully discussed in Sections 8, 9,10 and Part IV of the report].

The second is security, most immediately relevant in the context of counter-terrorism strategy [discussed in Section 13 of the report].

The third is safety. As the Chernobyl disaster in 1986 showed, a nuclear accident anywhere is a nuclear accident everywhere. If the number of nuclear power plants around the world is to grow substantially without increasing the total risk of a nuclear accident, the risk of an accident at any given reactor must continue to be reduced. As additional countries build nuclear power plants, it is essential that they establish strong safety measures, including competent, effective, and independent national regulators, and that the global safety regime that emerged after Chernobyl is being maintained and continuously improved.

The IAEA develops and publishes crucially important safety standards, recommendations, and guides: it serves as the depository for nuclear safety conventions, and helps to develop new instruments as necessary; it organizes international reviews of the safety of particular facilities at the request of member states, which have led to major improvements in safety at many facilities; it helps coordinate assistance to member states in improving safety measures and exchanges of best practices, experience, and lessons learned; it collects and analyzes a wide range of international data important for safety; and it organizes studies and discussions of key safety issues.

The “three Ss” (safeguards, security and safety) are the three most immediately important factors involved in long-term effective management of nuclear energy. At the 2008 Hokkaido Toyako G8 Summit an initiative for international cooperation on nuclear energy infrastructure was launched with a view to raising awareness of their importance worldwide and assisting countries concerned in developing the relevant measures.

**Other Risk Avoidance Strategies.** Other relevant factors are the development of proliferation-resistant technology and stronger industry–government cooperation [discussed in Section 14 of the report], and efforts to multilateralise the fuel cycle [discussed in Section 15].

*Recommendations:*

The use of nuclear energy for peaceful purposes should continue to be strongly supported as one of the three fundamental pillars of the NPT, along with disarmament and non-proliferation. Increased resources should be provided, including through the IAEA’s Technical Cooperation Programme, to assist developing states in taking full advantage of peaceful nuclear energy for human development.

Support should be given to the initiative launched at the 2008 Hokkaido Toyako G8 Summit for international cooperation on nuclear energy infrastructure, designed to raise awareness worldwide of the importance of the three Ss – safeguards, security and safety – and assist countries concerned in developing the relevant measures.

Proliferation resistance should be endorsed by governments and industry as an essential objective in the design and operation of nuclear facilities, and promoted through both institutional and technical measures – neither is sufficient without the other.

Nuclear industry, and government-industry collaboration, will need to play a greater role in mitigating the proliferation risks associated with a growing civilian nuclear sector worldwide. Industry should become a more active partner with governments in the drafting of regulations and treaties that affect its activities, to ensure that they make operational sense and to encourage compliance.

*[Section 14, Recs 32-34, 38]*