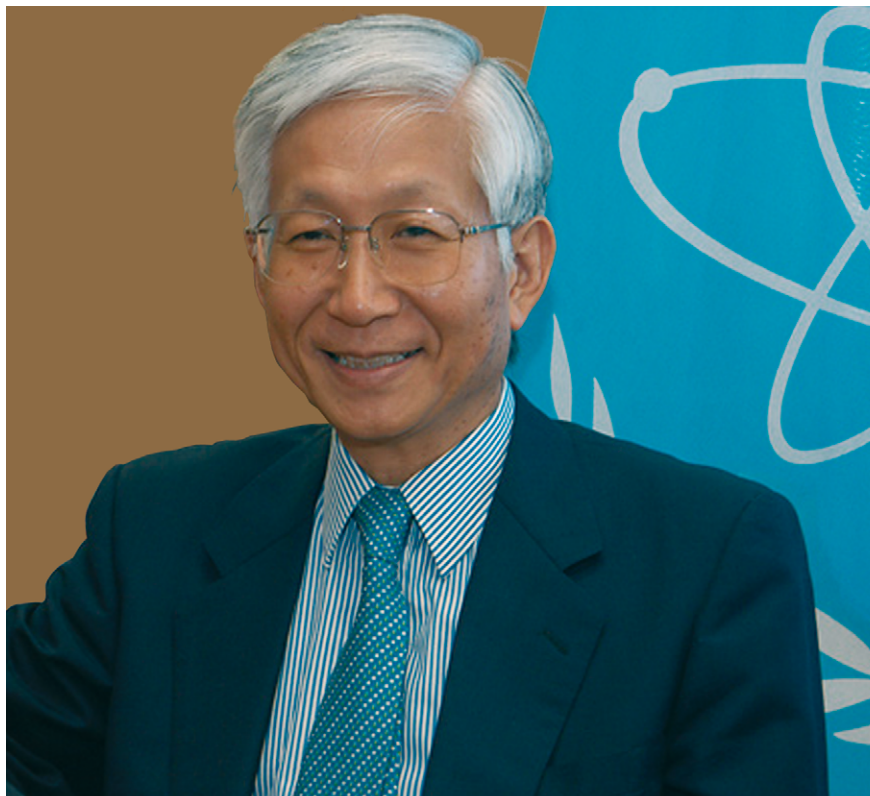




An Interview with

Tomihiro Taniguchi

Deputy Director General and Head of the Department of Nuclear Safety and Security, International Atomic Energy Agency

Mr. Taniguchi graduated from the University of Tokyo with a major in nuclear engineering in 1968 and joined the Ministry of International Trade and Industry in 1968. During his thirty year career there, he contributed to establishment and development of regulatory regime to enhance the efficiency and the safety of nuclear energy utilization. As Deputy Director General in charge of nuclear policy, he was the Japanese Government's chief administrative officer on all aspects of commercial use of nuclear energy, including safety and regulation.

Mr. Taniguchi's career at MITI included 12 years overseas working in international organizations and research institutions, including senior-level management and advanced research activities in the areas of energy, technology, and industry.

Prior to his appointment to Deputy Director General for Nuclear Safety at the IAEA in August 2001, Mr. Taniguchi was the Executive Director of the Nuclear Power Engineering Corporation (NUPEC), supporting MITI and the nuclear industry in the areas of safety and technology. He was also a Visiting Professor at the Graduate School of Engineering of the University of Tokyo from 1998 to 2001.

What is your perception of the nuclear safety situation in the world today?

The safety record of the nuclear community for the last 10 to 15 years has been very good. Even with this safety record, however, there continue to be concerns about the safety of nuclear activities. It is important not to become complacent. The experiences of other industries show us that we must continually improve if we are to avoid this complacency.

There is also talk of a nuclear renaissance, with new nuclear power reactors being considered in many countries. However, it is important to remember that nuclear safety and security are prerequisites to using nuclear technology and we must maintain, and in many cases, rebuild the nuclear safety infrastructure to effectively manage this growth. Today, nuclear activities are being treated as financial investments as opposed to investing in basic infrastructure, with the resulting pressures for constant return on investments.

Since Chernobyl, I have seen increasing support for a global nuclear safety regime. This includes international legal instruments, such as the Convention on Nuclear Safety and the Code of Conduct on the Safety and Security of Radioactive Sources, as



medicine and industry is rapidly expanding and we are working to ensure that these developments make full use of the Safety Standards and security guidance.

Which brings me to the fourth issue. Since nuclear security was put under the responsibility of my department, we have been identifying opportunities to integrate safety and security. We are not fully satisfied with the results to date and we continue to look for ways to further improve the synergy between safety and security.

Finally, we are working to improve incident and emergency preparedness and response, both in-house and in our Member States.

You have mentioned a global regime. What do you mean by this?

Let's start with the goals of nuclear safety, which are firstly the prevention of serious accidents and secondly the continuous improvement of safety performance. A serious accident anywhere in the world will call into question the safety of every nuclear facility in the world. We are all passengers in the same boat. To me, it is therefore natural to look at safety in a global sense, to make a safety improvement anywhere a safety improvement everywhere. All of this leads to the idea of the Global Nuclear Safety Regime. We must keep in mind that the prime responsibility for safety rests with the users of the technology and national governments. A strong and effective national safety infrastructure is therefore at the heart of

the Global Nuclear Safety Regime. This infrastructure must include users, nuclear regulatory authorities, designers, operators, research institutes and technical support organizations.

The Agency's main contribution to the Regime is a comprehensive, coherent and authoritative suite of universally accepted safety standards that are a reference for the high level of safety required for nuclear activities. Developed with Member States' assistance, the standards reflect, in a consensual way, national regulatory rules and guidelines and embody good, and often best, practices. The Agency's many safety services use the standards as the basis for evaluation and appraisal, ensuring both quality and consistency. It is important to note that peer review is an important part of these services. We are now developing more integrated, but customized, services based on modules. The IAEA Statute requires that the Department's own activities and the services it provides comply with the IAEA Safety Standards. We are now promoting an integrated safety approach, which includes using feedback from these activities to assess the adequacy of the Standards.

We are also promoting the sharing of knowledge through the IT-based networks I mentioned earlier. The idea with these networks is to create centres in each participating country which serve as the repository for the national nuclear safety knowledge. Using the internet, the national centres are linked so that information, such as experiences, lessons learned and training material, can be shared. It is my hope that one day, every country in the world

will be participating in one or more regional safety network.

There is much talk of a nuclear renaissance with additional reactors being built and even new reactor designs. What is your Department doing to help countries with these new reactor designs.

One of the key elements is the Agency's International Project on Innovative Nuclear Reactors and Fuel Cycles, or INPRO, which provides a forum for the coordination of research and development programmes in Member States. The interesting point regarding INPRO is that it is looking at the entire fuel cycle, not just the nuclear reactor. With this next generation of reactors, the goal is to look at the current safety, security and safeguards requirements and incorporate them into the design.

Earlier, I mentioned the Agency's Safety Standards as part of the Global Nuclear Safety Regime. We are now considering additional standards which will be "technology-neutral", so that designers and operators will be able to include the latest safety standards into their design and operation.

Of course, the IAEA also brings together experts from around the world to discuss safety and security and we will continue to do this. Upcoming conferences organized by the IAEA include the International Conference on the Safety of Radioactive Waste Disposal to be held in Tokyo starting on October 3, 2005, the International Conference on Operational Safety Performance in Nuclear Installations to be held in Vienna starting November 30, 2005 and the International Conference on Effective Nuclear Regulatory Systems-Facing Safety and Security Challenges to be held in Moscow starting February 27, 2006.

Chairman Diaz of the USNRC has been championing the idea of an international design certification process for nuclear power plant designs, stating that current international standards do not provide enough guidance. Can you comment on this?

I'm happy that Chairman Diaz has raised this issue. This is an example of the type of thinking the nuclear industry needs. We must always question whether we are doing enough

well as the Agency's safety standards and services.

Finally, following the events of September 11, 2001 and other terrorist actions, including those in Spain and more recently in Great Britain, nuclear security has emerged as a global issue. Although there is a desire to exploit the synergy between safety and security, it is taking time. In the longer term, I see that an integrated global regime, covering both safety and security, will emerge.

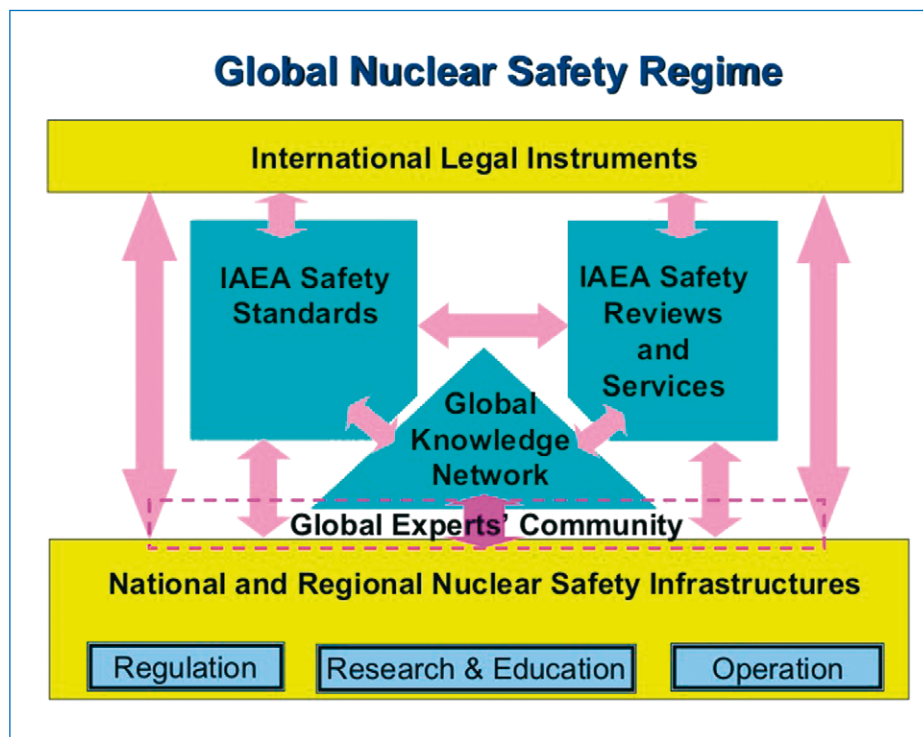
How does the IAEA and, in particular, the Department of Nuclear Safety and Security fit?

Most of the media reports referring to the Agency are related to its role as the world's watchdog against nuclear proliferation. However, the work of the Agency is based on three pillars: verification, nuclear technology and safety and security. Obviously, my Department is responsible for the safety and security pillar. It's important to remember that, in addition to nuclear power plant safety and security, the Department also works in the research reactor and fuel cycle applications, as well as occupational radiation protection, patient radiation safety, protection of the environment, decommissioning, safety and security of radioactive sources, safety of transport of radioactive materials and emergency preparedness and response.

The Department's major activities include developing international safety standards and security guidance, helping our Member States apply these standards and guidance effectively, supporting the international legal instruments I just mentioned, and providing opportunities for experts to share and create new information through conferences, workshops. We are also managing, for the moment, two IT based safety networks, the Asian Nuclear Safety Network and the Ibero-American Radiation Safety Network. I take this opportunity to thank the Government of Spain for its support of both these networks. It is my hope that these knowledge-based networks will eventually be part of a global network of nuclear safety knowledge.

What are the top five issues your department is addressing at this point?

Probably the fundamental issue we are addressing is immature or ageing



safety infrastructures. Weak links in the chain determine the overall strength of the global regime. Many of our Members States are only now developing the infrastructure needed to manage modern nuclear technology safely. This includes having the necessary legislative authority and an independent and capable regulatory authority, but it extends to technical support organizations and the other essential elements, such as research and educational institutes.

Another issue we are working on is long-term operation of existing nuclear

power plants. Although some countries are opting to close their nuclear power plants early, others are considering extending the life of their NPP. We continue to devote resources to this important area.

Thirdly, a number of countries are constructing, or planning to construct, new reactors. We are working with these countries so that the design of these facilities complies with the IAEA Safety Standards and security guidance. However, it goes beyond reactors. The use of nuclear technology in



and whether we are doing the right things.

The IAEA has been involved in these discussions from the beginning and will continue to be involved. I believe it is important that countries with major nuclear power programmes cooperate to help build the capacity of those countries seeking to use nuclear power. It is also important to consider the entire life cycle, not just the design of the plant. Operating experience shows that the construction and operation phases of nuclear power plants are a major source of problems.

The IAEA is in a good position to help with this cooperation. We should build on the IAEA Safety Standards and we have much experience through design review services that we have offered for many years. Our recent experience includes review services for the Bushehr plant in Iran, and plants in China and Pakistan. We also have considerable experience with the upgrading of nuclear power plants in eastern Europe.

The OSART programme has been a major success and has been in place for some time. Do you have any plans for changing OSART or for introducing any new services?

OSART is one of the most recognized services the Department offers and I am very proud of its history and the important work that it does. We are, in fact, constantly updating OSART. After each mission, we look at the results and the process and decide what enhancements should be made for the next mission. The planning for upcoming missions relies very heavily on the work done during previous missions. Every two years, we also review the programme and this provides another opportunity for us to fine-tune the process. Anyone requesting an OSART mission can be assured that it will use the latest technology available.

The same is also true for PROSPER service, a peer review of Operating Experience programme. In this regard, I am pleased for the Spain invitation to held a PROSPER in Santa Maria de Garoña NPP in October this year. PROSPER is also appropriate for Corporate organizations. For example, a Corporate PROSPER mission was held for EDF Corporate operating experience organization.

One service that we offer that I would like to see more use of is the International Regulatory Review Team, or IRRRT. This service looks at the regulatory body and can provide interesting insights and ideas for improving the function of the regulatory body. At the 3rd Review Meeting of the Convention on Nuclear Safety in April, I was pleased to see the support and hear that many countries were considering an IRRRT mission. Since then France, Germany and Spain have requested IRRRT missions. As with OSART, IRRRT missions rely heavily on experts from our Member States and use the Agency Safety Standards as the basis for assessment. We are starting to see more interest from countries with long-established nuclear programmes, although up to now, newer regulatory bodies have taken the most advantage of the IRRRT services.

As far as other new services go, we are starting to modularise our services so that customized appraisals and assessments can be provided based on Member State desires and needs.

At the beginning of 2005, the Director General established the Incident and Emergency Centre. The IEC is the Agency's focal point for responding to nuclear or radiological incidents and emergencies and for promoting improvement in Member States' emergency response and preparedness. It provides an integrated system through which States, their competent authorities, international organizations, technical experts and the Secretariat can effectively share information and experience, and coordinate the provision of assistance for response to or preparedness for incidents or emergencies. The IEC, which reports directly to me, incorporates functions related to responding to and preparing for nuclear and radiological emergencies, and incident reporting (INES/NEWS). The IEC also coordinates prompt assistance to requesting States in the case of a nuclear security incident and provides coordinated technical support to the Agency public information function in the case of an event of safety or security concern to the media.

Are IAEA and OECD/NEA activities coordinated? Are IAEA and OECD/NEA activities focusing in the same direction?

It is important to remember that the Agency and the NEA serve different purposes. The IAEA has 135 Member States, from the smallest to the largest, and offers its services to all of these countries. The countries that belong to the NEA, on the other hand, all have well-established economies, government institutions and infrastructures.

Having said that, there is no doubt in my mind that both organizations are focused on the same goals of preventing serious accidents and continuously improving nuclear safety. We work closely with the NEA to ensure that our activities do not conflict with each other. There are many cases where the two organizations actively cooperate, such as in the decommissioning and waste storage areas. And NEA representatives participate in the Agency's Commission on Safety Standards and in all of the Safety Standards Committees and frequently cosponsor Agency Safety Standards. Agency staff also participate in many NEA meetings and activities.

How do you see the future of nuclear energy?

As far as nuclear energy goes, I am cautiously optimistic. With global warming and energy supply security questions being asked almost daily, I believe that nuclear energy has a role to play. However, an adequate level of nuclear safety and security is a prerequisite to using nuclear technology. This remains a challenge, especially in developing countries with limited infrastructure, both in the regulatory sense and in the basic technology sense. If we broaden the question to consider nuclear technology, there is no doubt in my mind that it will continue to expand. The number of medical and industrial users and uses of nuclear technology increases daily and this will continue as more and more countries obtain this technology.

Safety and security are prerequisites to the effective use of nuclear technology. I will do my best to see that the IAEA, through Department of Nuclear Safety and Security, continues to support Member States as they move forward.