

## PROFESSIONAL EXPERIENCE

- 2014 – Present                    **NUCCON, Nuclear Safety and Technology**  
Director
- 2012 – 2014:                    **International Atomic Energy Agency-IAEA, Vienna, Austria**  
Consultant
- 1988 – 2012:                    **International Atomic Energy Agency-IAEA, Vienna, Austria**  
**Department of Nuclear Safety and Security**  
(Senior Safety Assessment Specialist P-5)
- *Development of International Nuclear Safety Standards and Guides for nuclear installations*
  - *Review and Advisory Missions for strengthening capabilities of Member States in nuclear issues*
  - *Management of large International Assistance Projects*
  - *Assessment of National Infrastructure against IAEA Standards for new nuclear power plant projects*
  - *Capacity building for regulatory, operating and technical support staff*
- 1984 – 1988:                    **Nuclear Safety Administration, Ljubljana, Slovenia**  
**Regulatory Body of Slovenia**  
(Deputy Director and Chief Inspector for Nuclear Safety)  
*Regulatory activities:*
- *Organization and staffing of the Regulatory Body*
  - *Development of national legislation and regulatory guides*
  - *Licensing, regulatory inspection and enforcement*
  - *Examination and qualification of NPP operating staff*
  - *Approval of licensing submittals/documentation.*
- 1982 – 1984:                    **Jozef Stefan Institute, Ljubljana, Slovenia**  
**Reactor Engineering Division**  
(Senior Research Fellow)
- *Safety Analyses of nuclear power plants*
  - *Comparison of different nuclear power plant technologies*
  - *Dose calculations for Emergency Planning and siting of nuclear power plants..*
- 1979 – 1982:                    **Reading University, Reading, UK**  
(Post Graduate Research Fellow)
- *Small Angle Neutron Scattering from NIMONIC superalloys*
  - *Reactor Vessel material embrittlement*
- 1977 – 1979:                    **Jozef Stefan Institute, Ljubljana, Slovenia**  
**Reactor Physics Division**  
(Research Fellow)
- *Neutron physics*

## WORKING EXPERIENCE

### ***I. Establishment of an independent regulatory authority in Slovenia:***

From 1984 to 1987 I was the Chief Inspector for Nuclear Safety at the Inspectorate for Energy within the Ministry of Energy of the Republic of Slovenia. In 1986 a small team of experts, including myself, have prepared the relevant legislation, guides and standards, organizational structure, resources and workplans for the establishment of an independent nuclear regulatory authority. This resulted in creation of the Slovenian Nuclear Safety Administration (SNSA) in 1987, which was the first independent regulatory body in the region, and I was appointed the Deputy Director of the SNSA.

### ***II. Responsibilities at the IAEA:***

From 1988 until 2012 I worked in the Safety Assessment Section in the Department of Nuclear Safety and Security of the IAEA. In January 2012 I retired from the IAEA holding a position of the Senior Safety Assessment Specialist (P-5). Since then, I have been working in the same section as a consultant. The main responsibilities during my term at the IAEA can be summarized as follows:

#### **a.) Development of International Nuclear Standards and Guidance Documents**

- *Safety Series*
- *Safety Reports*
- *Technical Reports*

As the Scientific Secretary I had a direct responsibility for structuring and preparation of numerous IAEA standards and publications. Many of them were specifically prepared to reflect the world's best practices and have represented the international consensus in their topical areas. They were prepared with the intention to serve as background for the development of national guides and practices in Member States. Specific technical topical areas published in the IAEA safety and technical reports and for which I was the responsible officer include:

- Deterministic Safety Analyses,
- Combining Insights from Deterministic and Probabilistic Safety Analyses,
- Event Precursor Analyses,
- Event Root Cause Analyses,
- Safety Margins,
- Major plant modifications including Power Upgrades,
- Safety Culture,
- Human-System Interface in Modern Control Rooms,

I was also responsible for the part of the international effort MDEP (Multinational Design Evaluation Programme) which had an objective to achieve the multinational convergence of codes, standards and safety goals. It was the initiative born during the 3<sup>rd</sup> Review Meeting of Contracting Parties under the Nuclear Safety Convention and fostered by the US, French and Finnish regulators to harmonize their national regulations. Later on several other countries joined this effort supported by the OECD/ Nuclear Energy Agency and the IAEA.

#### **b.) Creation and Implementation of the IAEA review and advisory services**

- *ASSET (Analysis of Safety Significant Events Team)*
- *ASCOT (Assessment of Safety Culture in Organizations Team)*
- *Services for Capacity Building*

I was leading the creation and later implementation of the IAEA review and advisory services, namely ASSET and ASCOT. As part of the event investigation efforts I led numerous missions to help towards the enhancement of safety worldwide. Many elements of these missions were transferred into national structures and practices. On the other hand, best practices identified in various countries have been fed back into the IAEA documents and standards. ASCOT services were the first to promote the concept of safety culture throughout the nuclear community worldwide. A number of Seminars and other events were organized to reach that objective. From 1993 onwards, I was the Team leader for more than 30 missions and seminars that were organized in almost all countries with operating nuclear power plants worldwide.

**c.) Management of large International Assistance Projects**

- *IAEA Technical Cooperation (TC) Projects*
- *European Commission (EC) – Ukraine Project*

The IAEA assistance to Member States in the establishment and review of nuclear infrastructure and regulatory requirements for new nuclear projects - being in addition to the existing units or as the first NPP project - is performed mostly through the TC Projects that run for several years.

I was the technical officer for several IAEA TC projects. Management of such project would involve gap analysis against set criteria, formulation of the project, development of the work-plan and the project implementation oversight. Notable issues addressed through some of those projects include:

- Resolution of safety issues at the operating nuclear power plants
- Capacity building for the new units.
- Development of the regulatory competence for assessing significant plant modifications including power uprates.

*I was also responsible for the Management of a part of the highly visible project that was financed by the European Commission on the review of the design, operation, regulatory infrastructure and waste management of all 15 operating NPPs in Ukraine against the new IAEA safety standards.*

**d.) Assistance in the establishment and review of nuclear infrastructure and regulatory requirements for new nuclear projects:**

- *New Technologies assistance*
- *Regulatory and infrastructure support*

**New Technologies Assistance:**

*Assistance to P.R. of China for power uprates and for new builds within the IAEA extra-budgetary programme for Asia:*

- Quinshan NPP, P.R. of China,
- Guangdong Nuclear Power Corporation, Shenzhen , P.R. of China – for Ling Ao Phase II Project,

- China Power Investment Corporation, Haiyang site, Yantai, P.R. of China – for 6 Westinghouse AP1000 units.

*Assistance to Slovenia:*

- Establishing a New NPP at Krsko site, Slovenia – AP 1000, EPR

**Regulatory and Infrastructure Support:**

*Assistance to Bulgaria:*

To strengthen the capabilities of the national regulator, tailored towards their needs for the new Belene nuclear power plant project.

*Assistance to Vietnam and Egypt:*

To assess the progress in national arrangements made in 19 topical areas from the IAEA NS-G-3.1 Guide “Milestones in the Development of a National Infrastructure for Nuclear Power”.

*Assistance to Algeria, United Arab Emirates and Malaysia:*

To assist in creating synergy among safety, security and safeguards

**d.) Training of Utility, Technical Support and Scientific Organizations (TSSO) and Regulatory staff:**

*Workshops, Training Courses*

Over the years I structured, managed and implemented specific activities aiming at strengthening the capabilities of utilities, technical support and scientific organizations and regulators on nuclear issues. Hundreds of young specialists worldwide enhanced their skills and knowledge through **Workshops and Training Courses on:**

- **Deterministic and Probabilistic Safety Analyses,**
- **Advanced Safety Assessment Methods (Best Estimate plus Uncertainty – BEPU, Computational Fluid Dynamics (CFDs), Coupled Codes)**
- **Safety Assessment of Advanced (GEN III+, GEN IV) NPPs**
- **Emergency Operating Procedures (EOPs),**
- **Severe Accident Management Guidelines (SAMGs) and Programmes,**
- **Safety Margins for DBA and BDBA,**
- **Plant modifications including power uprates,**
- **Precursor and Root Cause Analyses of Operational Events,**
- **Specific topics like regulatory approaches, licensing, regulatory enforcement and regulatory application of safety analyses.**

I am currently holding the position of Assistant Professor for Ecotechnology at the Jozef Stefan International Postgraduate School in Ljubljana, Slovenia.