

NUCLEAR SCIENTISTS AROUND THE WORLD



Amparo GONZÁLEZ ESPARTERO

Amparo González Espartero holds a Bachelor's degree and a PhD in Chemistry (with a specialisation in Analytical Chemistry) from the Universidad Autónoma de Madrid. She began her professional career in 1988 at the Research and Development Centre of the Spanish Navy (CIDA) and she began working for the Division of Nuclear Fission at the Centre for Energy, Environmental and Technological Research (CIEMAT) in 1991. Her work at CIEMAT was focused on R&D activities to characterise low and intermediate-level waste, providing technological support to ENRESA and, as of 1999, to develop actinide partitioning processes for advanced fuel cycles. She has participated in international R&D projects funded by the EC, from III-PM to VII-PM, being responsible for a work package in both, EUROPART and ACSEPT, projects. From 2011 to 2015, she was the Head of Quality Management Unit at CIEMAT and Technical Secretary of the ALINNE platform.

She was supervisor of an International Doctoral Thesis defended at the Universidad Autónoma de Madrid and is the author of several scientific articles published in international peer reviewed journals. She has participated and continues to participate as a lecturer in postgraduate courses specialising on nuclear energy. In January 2015, she began working at the International Atomic Energy Agency (IAEA) as Technical Lead of Spent Fuel Management in the Nuclear Fuel Cycle and Materials Section of the Department of Nuclear Energy. She has recently been the scientific secretary of the International Conference on "Fast Reactors and Related Fuel Cycles" (FR17) in Yekaterinburg (Russia), organised in collaboration with the IAEA's Nuclear Power Technology Development Section.



Technical Lead of Spent Fuel Management in the Nuclear Fuel Cycle and Materials Section of the Department of Nuclear Energy (IAEA)

How long have you been in your current position at the IAEA?

I joined the IAEA in mid-January 2015, so I have been there about two and a half years. The first few months passed by very quickly, getting getting used to my new colleagues, the work environment, the inner workings of the IAEA, while also organising my life in Vienna, looking for an apartment and establishing my daily routine in a city and surroundings that were unfamiliar until then.

Even today, between meetings and business trips, my comings and goings to Madrid and my other daily obligations, I feel like weeks and months pass almost without my realising it.

The past two and a half years have been incredible; I have grown and matured as a professional and as a person. I have adapted well to the IAEA's work en-

vironment, as well as my new personal life, and although I had to make an effort, it was worth it.

What are the main responsibilities of your position?

My job title is "Technical Lead of Spent Fuel Management", which means I head the Spent Fuel Management Unit in the Nuclear Fuel Cycle and Materials Section of the Department of Nuclear Energy. The Unit is comprised of four technical professionals distributed as follows: two nuclear engineers, one project officer and I, head of the Unit.

Our scope of work entails the final stage of the nuclear fuel cycle, before the final disposition of the spent fuel, once it is declared waste. It includes the technical aspects of wet and dry spent fuel storage, the extension of the initial period of interim storage until fi-



At a Consultancy Meeting on Advanced Fuel Cycles for Waste Burden Minimisation during the 14th International Exchange Meeting on Partitioning and Transmutation (OECD/NEA) in San Diego, October 2016, with representatives from France, Rep. of Korea, EC, Sweden, OECD/NEA, UK and USA

nal disposition is available (such as, for example, the establishment of age management programmes for spent fuel storage systems and facilities to demonstrate their safe operation) and the transportation of spent fuel after an extended period of interim storage. In addition to the aspects related to the open fuel cycle option, closed cycle activities are carried out, such as reprocessing spent fuel and recycling recovered nuclear materials, as well as the development of advanced fuel cycles for advanced reactors.

In this framework, our mission is to technically support Member States in the safely and efficiently management of the spent fuel, promoting the transfer of experiences and knowledge and facilitating meetings among professionals to encourage them to share the expertise acquired in the development of their activities. We technically support as well countries that wish to implement a nuclear energy programme. To perform our activities we actively collaborate with the Departments of Nuclear Security and Technical Cooperation as well as with other Sections of the Department of Nuclear Energy.

We also focus our efforts on disseminating information by participating in meetings, giving lectures, organising international conferences and collaborating with other international organisations and international nuclear energy schools for young professionals.

How did the move affect your personal life?

There is no doubt that living away from home means you inevitably lose many

of the details of everyday activities, but fortunately nowadays we have technologies that enable us to be on-line whenever we want and to stay up to date with family life in Spain. I have learned to take full advantage of the short number of hours that I have when I spend a weekend in Madrid and the holidays that I spend with my family. It is important that everyone is willing and very flexible so that the different aspects of family life can come together, something which we have finally achieved. To do so, we have to be more organised than before and we have to plan family activities in advance and with fewer opportunities for improvisation. Over time I realise that I was not as necessary as I thought and that my family gets along very well without me around. It's an exercise in maturity for all the family.

Do you keep in touch with Spaniards in the city and in the country?

In the particular case of working for the IAEA, it is easy to keep in touch with Spaniards living in Vienna and Austria. The Spanish Embassies, both the Spain-Austria Bilateral Embassy and the Embassy to the United Nations, regularly organise and support meetings and activities that promote contact and communication among Spaniards who are living in Vienna and Austria. Moreover, Spaniards are quite gregarious; for example, we have the Spanish-speaking table at the VIC canteen, where Spanish speakers working for the United Nations usually come together to have lunch. The "table" always welcomes colleagues who come from Spain to carry out some type of activity, and whom we thank for their first-hand news about what is happening over there.

What are the most significant aspects about your work at the IAEA?

In addition to the technical aspects I mentioned earlier, I would like to emphasise the global dimension of this job, with the opportunity to have leading experts, who are responsible for managing spent fuel in their countries, participating in our activities.

Another important aspect is the ability to promote the global coordination of the R&D activities related to the management of spent fuel developed in each Member State, supporting the



At the Plaza at United Nations site with national representatives participating in the Technical Working Group on Nuclear Fuel Cycle Options and Spent Fuel Management (April 2017)



Visiting Dürnstein (Wachau Valley, Austria)

establishment of synergies and mutual understanding among experts. This allows them to better know their skills and experiences, which leads to stronger partnerships and international alliances.

One of the activities that gives me the greatest satisfaction is organising, as scientific secretary, the annual meeting of the group of international experts on spent fuel management that advises the Director of the Department of Nuclear Energy. At this meeting, experts that officially represent their respective countries share information on the status of their nuclear programmes and discuss and share their experiences and lessons learned in developing different strategies for the management of spent fuel. Topics of interest to the countries are identified as a result of these discussions and the IAEA then gives priority attention to them when establishing the IAEA programmatic activities.

What are some things you miss from Spain?

Luckily, I don't spend too much time away from Spain because I travel to Madrid often, but, while it may seem trivial, I do miss being able to buy fresh fish at a good price and the bright days in Madrid. Life in Vienna is very pleasant and I think it is very easy to live with the Viennese because they are very polite and respectful. They are, however, very independent and

distant and it is a bit hard to earn their trust. Most of my colleagues at the IAEA are foreigners, very open to socialising and with an interest in showcasing their cultures, so it is easy to find people to make plans and share pleasant moments. Fortunately this makes you feel like you are not alone. Every time someone new arrives, the rest of the group tries to make their transition simple and easy so that they quickly feel at home. In general, everyone tries to help.

I was surprised at how much the Spanish culture and customs are admired and appreciated by the rest of the world, especially our cuisine, our character and the weather.

Do you encourage young people to broaden their professional horizon beyond our borders?

Without a doubt, I believe that it is fundamental to spend some time outside our country in order to experience other ways of conceiving society and personal and labour relations, as well as valuing and appreciating what we leave behind in Spain, which, when seen from a different perspective and at a distance, isn't so bad.

We all have to leave our comfort zone at some point to face new challenges and situations that allow us to grow and evolve personally and professionally.

I believe that it is in Spain's interest to have professionals who have been abroad return and enrich Spanish in-



Visiting the Aube disposal facility for very low-level radioactive waste (CIRES) managed by ANDRA in France, during the Technical Meeting on Fuel Cycle Strategies and Options for the Management of Spent Fuel and Radioactive Waste for Countries Embarking on the Use of Nuclear Power (Troyes, November 2016)

stitutions and society with new points of view and perspectives, incorporating the new knowledge, experiences and work methods that they have acquired. ■



With the Director General of the IAEA during the Department of Nuclear Energy's Christmas Party (December, 2016)