







IAEA Technical Cooperation Fellows 2009–2014: Where are they now?

A Report on the Fellowship Survey 2009–2014

IAEA Department of Technical Cooperation



Technical Cooperation Programme

# INTRODUCTION

Consistent with its goal to help Member States establish and strengthen capacities for the safe, peaceful and secure use of nuclear technology for sustainable socioeconomic development, the IAEA supports a variety of fellowship placements through its technical cooperation (TC) programme. These fellowships usually form an integral part of the implementation of a technical cooperation project in a development field of high national priority. They provide:

- practical, guided, on-the-job training; or
- long term academic training; or
- specialized qualifications in the use of nuclear techniques in a relevant field.

The main objective of an IAEA fellowship is to help fellows improve their professional competence to enable them to address scientific and technical problems related to their country's development. Since the inception of the IAEA's technical cooperation programme in 1956, 49 493 fellowships have provided young professionals with an opportunity to gain practical work experience, benefit from training, or achieve academic qualifications in the peaceful application of nuclear technology.

Between 2009 and 2014, 6435 fellowships were offered through IAEA technical cooperation projects, an average of 1073 people per year.



# METHODOLOGY

In 2017, IAEA technical cooperation fellows for the period 2009–2014 were invited to evaluate their individual experiences in the fellowship component of the IAEA's TC programme. This evaluation took the form of a web survey covering a range of fellowship-related topics, including:

- factors informing former fellows' decisions to apply;
- former fellows' assessment of various aspects of their placements;
- where former fellows reside following completion of the fellowship;
- the extent to which the fellowship contributed to fellows' career advancement; and
- the extent to which the fellowship contributed to addressing national development priorities.

Of the 6435 people who completed a fellowship placement in this period, 4902 were sent an initial e-mail on 5 April 2017. A reminder was sent to a subset of 3379 former fellows on 15 May 2017. Additionally, a dedicated web link was created and provided to recipients who reported difficulties answering the survey via the invitation e-mail, to improve accessibility and canvass the widest possible audience. In total, the period for responses extended from 5 April 2017 to 18 July 2017.

1848 responses were received during the submission period. That corresponds to 40.3% of fellows reached via e-mail.

## **DEMOGRAPHIC STATISTICS**



## AGE OF PARTICIPANTS

Fellowships are available to university graduates or their equivalent and to individuals at technician level in the requested field. Fellows in the 2009–2014 cohort tended to be younger professionals: 21.5% of respondents were between 20 and 29 years of age at the time of training, and 48.6% were between 30 and 39.

## **PARTICIPATION BY GENDER**

The IAEA strives for gender equality, and the TC programme strongly encourages female participation in the programme. Member States are encouraged to nominate female National Liaison Officers, meeting and workshop participants, fellows and scientific visitors, and counterparts.

34.3% or 634 survey respondents were women. This percentage slightly overrepresents the total population (32.0%) of women who completed fellowships over the period.



## **REGIONAL REPRESENTATION**



The IAEA's TC programme operates in four geographic regions: Africa, Asia and the Pacific, Europe and Latin America and the Caribbean. The pie chart above illustrates the distribution of fellows by home region. A large number of survey respondents (40.0%) from the 2009–2014 cohort reported Africa as their home region, an increase from 34.7% for the

period 2005–2008. This was followed by Europe, at 19.0% (19.8% in 2005–2008); Latin America and the Caribbean, at 19.0% (19.8% in 2005-2008); and Asia and the Pacific, at 18.0% (25.7% in 2005–2008).

4.0% of respondents selected "Other" as their home region, with most specifying their home region as North America or the Middle East.



## HISTORY OF FELLOWSHIP PARTICIPATION

Nearly 60.0% of survey respondents reported having completed one IAEA-sponsored fellowship during their professional careers. The continued IAEA support to the 40.0% who reported completing additional placements reflects the IAEA's commitment to long term national development goals through increased staff specialization, the fostering of durable partnerships, and support to sustainability through human capacity building.

## **APPLICANTS' MOTIVATIONS**

Survey respondents were presented with the four following statements, and asked to select a maximum of two options corresponding to their motivation(s) for participating in the fellowship programme:

- "I saw it as an excellent means to help my country and institute, and an opportunity to enhance my knowledge and experience for the benefit of my host institute and country." 1195 or 72.7% of respondents selected this option.
- "*The training was vital for my home institute*." 648 or 39.4% of survey respondents selected this option.
- "*My country and people were in critical need of the know-how and expertise I could gain from the fellowship training.*" 451 or 27.4% of survey respondents selected this option.
- "*I saw it as a good opportunity to gain international experience*." 357 or 21.7% of survey respondents selected this option.
- "*I saw it as a good starting point for better job opportunities and prospects in life.*" 58 or 3.5% of survey respondents selected this option.

# **FELLOWSHIP FEEDBACK**

## LENGTH OF FELLOWSHIP PLACEMENTS



Fellowship placements under IAEA TC projects are normally awarded for a period of up to one year. In the period from 2009 to 2014, 92.9% of respondents completed placements of less than a year's duration, with a majority (58.1%) of those surveyed concluding placements of between 1 to 3 months.

## **NATURE OF FELLOWSHIP PLACEMENTS**



Most respondents (44.7%) characterized their placements as providing on-the-ground or technical training, e.g. participation in daily operations in one of the host institution's facilities. 26.7% of former fellows completed placements to obtain specialized qualifications in the use of nuclear techniques in a relevant field, while 22.9% pursued academic training at the host institute.

### **OPPORTUNITIES FOR NETWORKING**

62.2% of respondents served at institutes hosting more than one IAEA fellow during their tenure. However, one quarter (25.7%) of these fellows reported having had no interactions with the other fellows at the host institute during the placement. This indicates an area for improvement, as 21.0% of respondents cited improved networks as one of the most important benefits of their fellowships.

38.3% of respondents reported maintaining contacts with their host institutes frequently or regularly, with a further 41.0% reporting semi-regular contact.

#### **FELLOWSHIP BENEFITS**

Fellows were asked to select five programme benefits from a list of 21 options. The five principal benefits selected were:

- Improved technical skills (66.3%)
- Improved know-how and expertise (61.0%)
- Opportunities to exchange information and experiences with other experts in the same technical field (54.1%)
- An improved ability to contribute to the development needs of one's home country (51.3%)
- Opportunities for professional development and growth (44.6%)

These benefits largely correspond with the most commonly cited personal motivations for undertaking the fellowship (see above).

#### **KNOWLEDGE ACQUISITION AND TRANSFER**

88.5% of fellowship alumni who responded either agreed or strongly agreed that their placements fully met both their professional expectations and the specific needs of their home institutes. Consistent with this finding, 91.4% of former fellows either agreed or strongly agreed that they were able to fully apply their new skills at their home institutes, and 90.8% either agreed or strongly agreed that these new skills were relevant for the IAEA TC project under which their fellowships were funded. Finally, 92.8% of respondents reported having shared and continuing to share the expertise and knowledge acquired over the course of the fellowship with colleagues and other peers and students in their home countries.

#### **HOST INSTITUTE PERFORMANCE**

87.4% of respondents either agreed or strongly agreed that the support they received from their host institutes, including living arrangements, met their needs.



## **OVERALL QUALITY OF FELLOWSHIP TRAINING PROGRAMME**

Programme alumni were largely positive in their assessments of the overall quality of their placement, with 40.3% of respondents characterizing the fellowship as 'excellent' and a further 48.9% characterizing it as 'very good'.

## **POST-FELLOWSHIP DEVELOPMENT**

## **RESIDENCE IN HOME COUNTRY AND WORK IN SAME FIELD**

Building and strengthening Member States' human resource capacity for the safe, peaceful and secure use of nuclear technology for sustainable socioeconomic development is one of the IAEA's primary objectives. As indicated above in the section on participants' motivations, former fellows share this commitment to the development of their home countries. At the time the survey was conducted, 91.4% of respondents were still residing in the same country from which they applied for IAEA fellowship training. 88.7% of respondents were still working in the field of their IAEA fellowship training, where they contribute to the local knowledge base and provide institutional memory for ongoing IAEA and national activities.

#### INVOLVEMENT WITH HOME INSTITUTE

99.2% of survey respondents returned to their home institutes immediately upon completion of the fellowship training. Their subsequent terms of service were of varying length, though a majority reported staying with the home institution for more than four years following completion of their fellowship.



## **CAREER ADVANCEMENT**

When asked about career development, 1373 or 84.6% of respondents reported having advanced in their careers—90.2% of them at their home institutes. Nearly 92.0% of respondents either agreed or strongly agreed that the IAEA fellowship helped them advance in their careers.

## **FURTHER IAEA ACTIVITIES**

Fellows continued to be involved in IAEA activities after their fellowship placements. 52.0% of respondents reported participating in IAEA meetings or workshops, and 51.7% reported attending a training course. 14.9% of those surveyed reported participating in scientific visits, and 14.7% reported undertaking another fellowship. 63.0% of respondents characterized their further IAEA activities as a follow up to or part of their fellowship training.

In a demonstration of the IAEA's achievements in building human capacity, 21.0% of fellows later served as TC project counterparts and 7.0% as TC experts or lecturers.

## FELLOWSHIP STRENGTHS, WEAKNESSES, AND RECOMMENDATIONS FOR IMPROVEMENT

Survey respondents were provided an opportunity to provide comments on what they saw to be the primary strengths and weaknesses of their fellowship placements, and invited to suggest improvements. For the purposes of this report, only the most frequently cited points are detailed.

## **STRENGTHS**

Fellowship alumni highlighted the quality of host institute experts, praising them for their knowledge, experience and instructional methods. Fellows also appreciated the opportunities for hands-on training with different pieces of equipment in state-of-the art

laboratories. To cite one anonymous respondent, "The major strength of the IAEA fellowship programme is that it places individuals in a situation which directly correlates to the training needs of the individual and home institute."

## WEAKNESSES

The duration of fellowships was the issue most frequently raised by respondents. Some respondents indicated that, due to time constraints, they were unable to cover the full programme curriculum. Some respondents compared this to what they described as a quite lengthy period between fellowship application and acceptance. Ten former fellows encountered difficulty obtaining the required visas for their placements.

## **SUGGESTIONS FOR IMPROVEMENT**

In keeping with the weaknesses identified above, fellowship alumni suggested fellowships of greater duration. A number of respondents also called for language to be a higher priority when determining placements with host institutes. "It is important for the IAEA to send the trainee to a host country where the trainee and trainer can easily communicate in a common language so that the trainee and the home nation would derive maximum benefit after the training is completed."

## HAVE YOU BEEN A IAEA TECHNICAL COOPERATION FELLOW?

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