

International Atomic Energy Agency Fellows: Where Are They Now?

**The Department of Technical Cooperation's Report on
the Fellowship Survey**



IAEA

International Atomic Energy Agency

EXECUTIVE SUMMARY

In order to assess the impact and the quality of the International Atomic Energy Agency (IAEA) fellowship programme, the Department of Technical Cooperation conducted a survey among former fellows from the years 2001 and 2002. These fellows have all completed the fellowship training, and have had time to judge in what way their training is useful to their work in their home country. As a result of this survey, further surveys could be conducted to serve as a continuous systematic assessment of the fellowship and other programmes.

Former fellows from the years 2001 and 2002 were asked to fill out a questionnaire containing questions regarding the following:

- Where are the former fellows now and what are they doing?
- How did the fellows rate the quality of the fellowship programme?
- How did the fellows rate the impact of the training they received through the fellowship programme, the impact on their home institution, and the impact on the TC project and their home country?

The survey period was 11 February – 4 March 2005.

Reaching a sufficient number of former fellows from the years 2001 and 2002 posed some difficulties. The National Liaison Officers contributed greatly in finding the former fellows' current contact information. Out of the 2067 fellows who were in the field in the years 2001 and 2002, 613 participated in the survey (meaning, 30% of all fellows from those years and 50% of those reached by email or fax). The results of the survey given below represent only the survey participants' opinions, not those of all former fellows from the years 2001 and 2002. To ensure that the results are representative of all fellows, a follow-up study of seven countries is currently being done.

The IAEA fellowship programme contributes successfully to knowledge and technology transfer to fellows' home institutions, their home countries and the TC projects they are involved in, as evidenced by the following survey results:

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One of the most valuable aspects of the fellowship experience was the improvement of my knowledge and skills necessary for my work.

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- 94% of the fellows who participated in the survey returned to their home institution in their home country and apply the skills and knowledge acquired during their training.
- 88% think the ideas and knowledge acquired during the fellowship are useful for their work.
- 96% of participating fellows shared their knowledge with colleagues and students in their home institutions through presentations, workshops, on-the-job training, individual consultations and teaching.
- 70% developed useful contacts during the fellowship, and 74% are still in touch with their host institution, which contributes to on-going knowledge transfer from the host to the home institution.

The quality of the fellowship programme itself is judged very highly, as evidenced by the following results:

- Both the host institution and the training programme are considered suitable or very suitable by 85% of the participating fellows.
- 81% feel that the guidance they received was good or very good.
- 82% of the fellows who participated found the quality and adequacy of the facilities made available to them good or very good.

Participants also included suggestions to improve the IAEA fellowship programme and ideas for enhancing its impact. Among the latter, a systematic follow-up is mentioned frequently; suggestions include the establishment of mechanisms for continuous contact between the home and the host institution and platforms for regional and interregional information exchange.

“

I was able to discuss problems with experts, share lessons learned and evaluate myself (technically). This got me to a higher level as a professional and helps me to accomplish my duties better.

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1 INTRODUCTION

The International Atomic Energy Agency (IAEA) fellowship programme is an important component of the technical cooperation (TC) programme, the other components being equipment procurement, scientific visits, expert services, training courses and meetings. On average (based on the years 2000 through 2004), 956 people from institutions in developing Member States participate in the fellowship programme each year. The fellowship programme accounts for an average of 13% of TC disbursements each year (again, based on the years 2000 through 2004).

Fellowships can be awarded as part of a TC project or on an individual basis as a direct contribution to the human resource development of a country's atomic energy programme. They provide opportunities to train the necessary personnel to undertake the development of atomic energy applications for peaceful purposes in their own countries. Fellowships are normally awarded for periods from one month up to one year, and in certain cases, extensions for further periods may be considered. They are available to university graduates or their equivalent, and to individuals at technician level, mainly through project-oriented on-the-job training¹.

The introduction of results-based management at the IAEA has changed the management of TC projects as well. The main aim of a TC project or programme is now the achievement of impact, not merely the delivery of outputs. In making this change, the TC programme is in concert with major donor institutions and donor countries worldwide.

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It was very useful for me to go to other countries to raise my qualification and to exchange experience.

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¹ Source: <http://tc.iaea.org/tcweb/participation/asfelloworvisitor/default.asp>

The aim of the survey presented here is to assess the impact the fellowship programme has on the former fellows' home institutions, the TC project or programme the fellowship was part of, and the fellows' home countries. This survey thus contributes to greater results-orientation in the management of the TC programme.

The IAEA fellowship programme website can be found at <http://tc.iaea.org>.

The screenshot shows the IAEA website interface. At the top, there is a navigation bar with links for 'Contact Us', 'Help', 'Site Index', and 'Signup for News'. Below this is a secondary navigation bar with 'About IAEA', 'Our Work', 'News Center', 'Publications', and 'Data Center'. The main content area is titled 'Participating in the TC programme as fellow or scientific visitor' and includes a sidebar with navigation options like 'As recipient country', 'As expert', and 'As fellow or scientific visitor'. The central text describes the fellowship program and lists two types: Type I (fully funded) and Type II (provided by Member State). On the right, there are links for 'Download the Nomination Form for Fellowship' in English, French, and Spanish, and a 'Project information' section with a 'Go' button.

2 METHODOLOGY

The objective of this study is to assess the quality and the impact of the IAEA fellowship programme in order to improve the programme, if and where necessary. The aim was to find out where the fellows are now, and how they are using the skills acquired in the course of the fellowship training. The survey was based on data collected from IAEA fellows who were in the field in the years 2001 and 2002. These fellows have all completed the fellowship training they were asked about (although some may have gone on to participate in other fellowships), and have had time to judge in what way their training was or is useful to their work in their home country.

All former fellows from the years 2001 and 2002 were asked to fill out a questionnaire online or by fax, containing questions regarding the following:

- Where are the former fellows now and what are they doing?
- How did the fellows rate the quality the fellowship programme?
- How did the fellows rate the impact of the training they received through the fellowship programme, the impact on their home institution, and the impact on the TC project and their home country?

Fellows were asked to submit their responses to the survey within two weeks. After the first deadline, an electronic reminder was sent, extending the deadline by another week. The survey period was 11 February – 4 March 2005, although late replies were considered until 28 April 2005, when the online questionnaire was finally closed.



Fellows working on soil core collection to be used for migration studies (IAEA).

3 PARTICIPATION STATISTICS

Reaching a sufficient number of former fellows from the years 2001 and 2002 posed some difficulties. So far, there is no mechanism to continuously keep former fellows' contact information up to date. National Liaison Officers were asked to assist in obtaining up to date contact information for former fellows. Despite good feedback from

the National Liaison Officers (60% replied and sent updated contact information; specifically 38% response rate from Africa, 63% from Latin America, 71% from Asia and the Pacific to 72% from Europe), not all fellows could be reached by either fax or email, as shown in Table 1 below.

Table 1. Total response rate.

| | | Percentage of total | Percentage of those reached |
|---|------|---------------------|-----------------------------|
| Number of 2001 and 2002 fellowships in total ² | 2067 | 100% | |
| Total number of fellows reached by email or fax | 1238 | 60% | 100% |
| Total number of fellows participating in the survey | 613 | 30% | 50% |

3.1 Participation Statistics by Region

Table 2 contrasts the total number of fellows from each region with those for whom valid contact information (either email or fax) was available and for those who responded to the survey. In no region could all fellows be reached. Email addresses change constantly, and unless a fellow is involved in other TC activities, his/her contact information cannot be kept up to date.

² The number of fellows who were in the field in the years 2001 and 2002 was 2067. Of these, several people participated in the fellowship programme more than once within that time period. Since the aim of this survey is to assess the impact and quality of each individual fellowship experience, this number is used, not the number of individual people who went for a fellowship.

| Region | Total number of fellows from the years 2001 and 2002 | Number of fellows with valid contact information | Number of fellows who replied to the survey ³ | Percentage of fellows who responded to the survey related to the total number of fellows from that region in 2001 and 2002 ⁴ |
|----------------------|--|--|--|---|
| Africa | 646 | 289 | 117 | 18% |
| Latin America | 407 | 253 | 115 | 28% |
| Asia and the Pacific | 679 | 468 | 224 | 33% |
| Europe | 335 | 228 | 131 | 39% |
| Total | 2067 | 1238 | 587 | 28% |

Table 2. Regional breakdown of respondents

In this paragraph, the regional distribution of those fellows who responded to the survey is compared with the regional distribution of all fellows from 2001 and 2002. In general, the regional distribution of those responding to the survey approximately reflects that of all fellows from 2001 and 2002.

Specifically, the Latin American percentage of participation in the survey (20%) represents the respective percentage in the total number of fellows from 2001 and 2002 exactly. The European percentage of participation in the survey (22%) is slightly higher than the respective percentage in the total number of fellows from 2001 and 2002 (16%). Results from Asia and the Pacific region are similar, with a participation rate of 38%, and overall fellows from 2001 and 2002 are 33%.

Comparatively fewer fellows participated from Africa; 20% of the respondents were from Africa, while 31% of all fellows from 2001 and 2002 were from Africa. This can be attributed at least in part to the fact that only about 65% of all African fellows were reached by either

³ The sum of all participants in this table does not add up to 613, since a number of fellows did not give their name or their home country when completing the survey. Their replies were considered nonetheless.

⁴ The total percentage of the fellows who responded to the survey does not match the percentage in Table 1, since some fellows did not give their name or home country in the survey. Their replies were considered nonetheless.

email or fax, compared with 70% to 85% in the other regions. Another factor might be the more limited access to email, the internet and fax machines, making it more difficult for fellows to participate, even if they did receive the invitation to participate in the survey.



Fellow in plant breeding unit at Seibersdorf (Dean Calma/IAEA).

3.2 Participation Statistics by Gender

Of the 2067 fellows from 2001 and 2002, 628 (30%) are female. This percentage of female fellows is perfectly reflected in the number of women who participated in the survey; 180 (31%) of the fellows who responded to the survey are women.

4 RESULTS AND CONCLUSIONS

The following figures and tables summarize the results of the survey. The first section contains information on the distribution of fellowships, the second discusses the respondents' statements regarding the impact of the IAEA fellowship programme, and the third is dedicated to statements from and analysis of the survey responses regarding the quality of the fellowship programme.

The total number of replies varies by question because not all participants replied to every question. Percentages in replies represent the total number of replies to that particular question, not to the total number of participants. However, the variation is considered small enough (less than 10%) for the replies to all questions to be considered representative of all participants.

4.1 Distribution of Fellows Participating in the Survey

In this section, the distribution of fellows participating in the survey is analysed: by home region, by host region, by training language, by field of activity and by the type of home institution.

4.1.1 Distribution of survey participants by home region and by host region

The following figure shows the distribution of survey participants by home region and by host region. The highest number of fellows participating in the survey came from Pakistan, Brazil and United Republic of Tanzania, with 44, 28 and 26 fellows responding to the survey, respectively. Most fellows responding to the survey went to host institutions in Austria (72), the USA (41) and the UK (39), followed by South Africa (28), France and the Czech Republic (both with 27), Germany and Australia (both with 26).

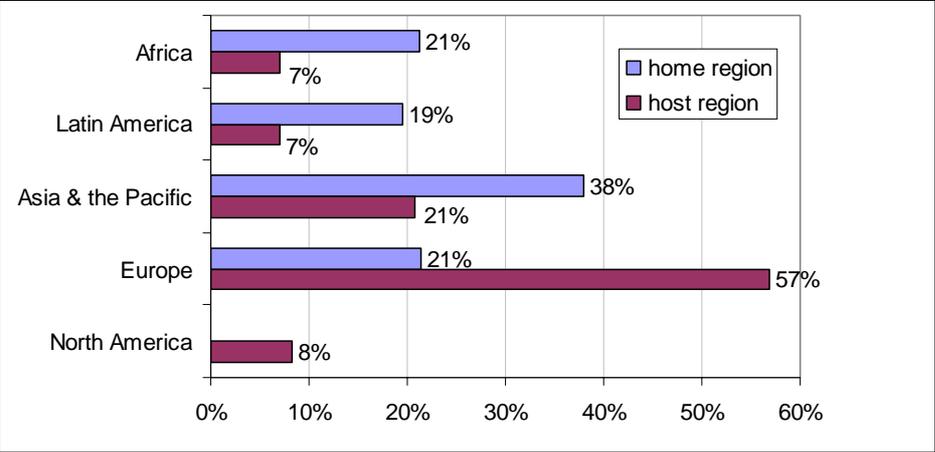


Figure 1. Distribution of fellowships by home and by host region.

Forty-eight percent of the respondents did their fellowships at host institutions in their home region. This ratio varies widely by region (see Table 3), from 28% for the responding fellows from Africa up to 86% for those from Europe. Technical cooperation among developing countries (TCDC) through the fellowship programme manifests itself in fellows participating in fellowship training in developing countries (rather than developed) within their region. This was the case for 32% of all survey participants, with the number slightly varying by region.

Table 3. TCDC through the fellowship programme.

| Region ⁵ | Percentages of fellows participating in the survey | | Percentages of all fellows in the field in 2001 and 2002 | |
|----------------------|--|--|--|--|
| | Who were trained in their home region | Who were trained in a developing country in their region | Who were trained in their home region | Who were trained in a developing country in their region |
| Africa | 28% | 28% | 32% | 32% |
| Latin America | 31% | 31% | 47% | 47% |
| Asia and the Pacific | 43% | 28% | 43% | 33% |
| Europe | 86% | 35% | 90% | 38% |
| Total | 48% | 32% | 48% | 36% |

The percentages considering only those fellows who participated in the survey approximately reflect the respective numbers when considering all fellows from the years 2001 and 2002 (see Table 3). The average percentage of fellows whose fellowship training took place within their home region for all fellows from 2001 and 2002 is 48%, which is reflected in the survey results exactly. Regarding TCDC, the survey results also approximately reflect the numbers concerning all fellows from the years 2001 and 2002.

In considering these percentages, it has to be taken into account that in Africa and Latin America, all countries are considered developing, whereas in Asia and Europe, fellows who did their training within their region could nonetheless do it in a developed country.

⁵ In this table, TC regions refer to those defined as of 1 January 2005.

This is an indication that TCDC through the IAEA fellowship programme can be promoted further, in particular in Africa and Latin America.

4.1.2 Distribution by language in which the training was conducted

Figure 2 below shows in which language the fellows responding to the survey did their training. Of those checking the 'other' box, six fellows specified languages of former Yugoslavia (Bosnian, Croatian, Serbian, Slovenian), three each specified German and Italian, two each specified Arabic, Polish and Portuguese, and one each specified Burmese, Japanese, Lithuanian, and Romanian.

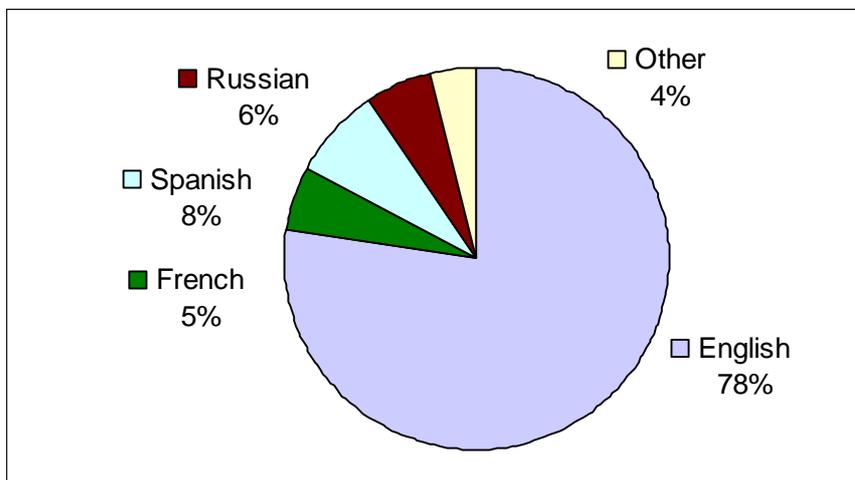


Figure 2. Distribution by language in which the training was conducted.

4.1.3 Distribution of fellows responding to the survey by field of activity

Technical cooperation projects are categorized into the following ten fields of activity:

- General Atomic Energy Development
- Nuclear and Atomic Physics
- Nuclear Chemistry and Radiochemistry
- Fuel Cycle Activities and Waste Management
- Nuclear Engineering and Technology
- Application of Isotopes and Radiation in Food and Agriculture
- Radiation Medicine and Health
- Application of Isotopes and Radiation in Biology and Environmental Studies
- Isotope Hydrology and Applications of Isotopes and Radiation in Industry
- Nuclear and Radiation Safety and Nuclear Security

The survey participants' fields of training and the field of their current work are distributed in the following figures. Figure 3 below shows the distribution of the respondents' fields of work. Several of the responding fellows who chose the category 'other' for their field of work are currently pursuing academic degrees. They did not specify in which field they are getting their degrees.

Figure 3. Distribution of fellows responding to the survey by field of work.

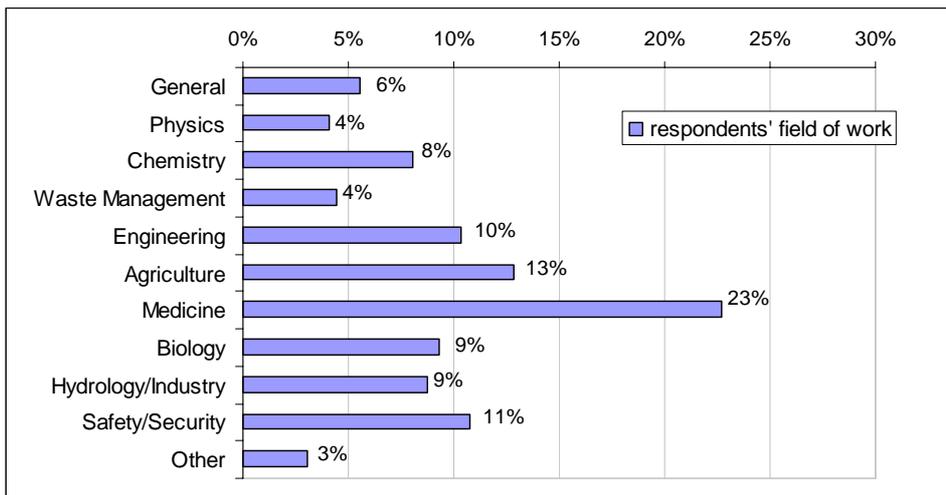
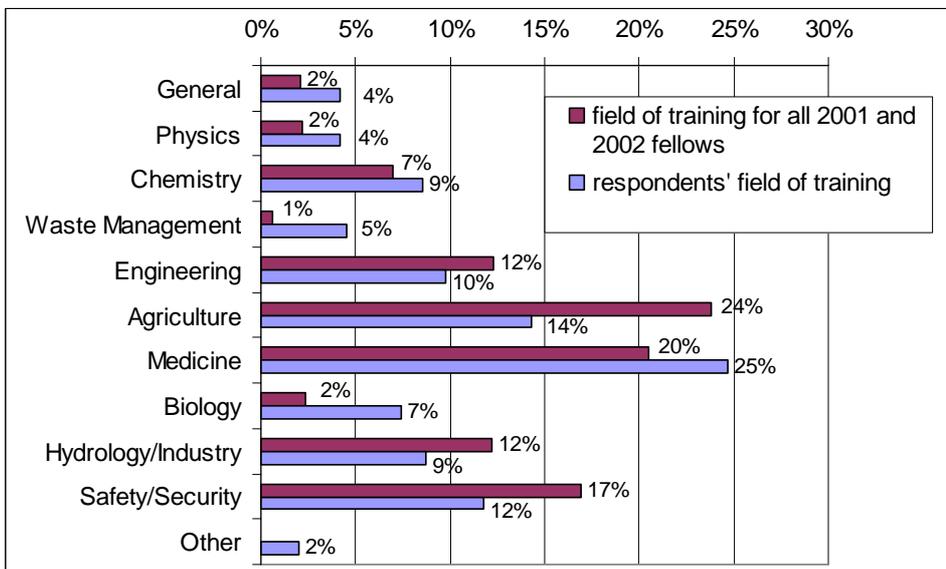


Figure 4 compares the respondents' field of training with the fields of training for all 2001 and 2002 fellows. It demonstrates that the overall distribution of former fellows' fields of training is fairly well represented by that of the fellows who responded to the survey. Explanations for the discrepancies in some specific fields of training may be found through the in-depth study currently being conducted.

Figure 4. Distribution of fellowships by field of training.



Of the fellows who responded to the survey, 79% are now working in the same field in which they received their training, applying their new knowledge and skills acquired during the fellowship in their work. Thus, the fellowship programme contributes to knowledge and technology transfer, and capacity building in their institutions.

4.1.4 Distribution by type of home institution

The following figure shows what type of institution the fellows participating in the survey are working in now. Most of the fellows are working in either government ministries/agencies or in universities, research institutions, i.e., in the public sector.

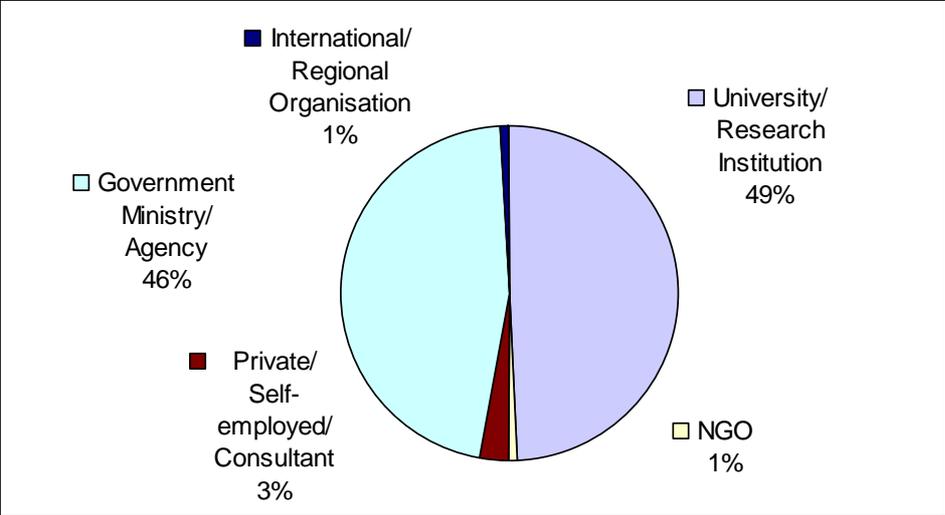


Figure 5. Distribution of fellows by type of employing institution.

4.2 Impact of the IAEA Fellowship Programme

In this section, it will be investigated how the fellows, their home countries, their home institutions and their TC projects benefit from the fellowship training.

Ninety-seven percent of the participating fellows returned to their home country, and 94% returned to their home institution after the training. In interpreting the results, it must be considered that former fellows who could not be reached might have left their home institution to work at another institution.

Nonetheless, *at least* 28% of all fellows⁶ returned to their home institution after training, thus contributing to knowledge and technology transfer from the host to the home institution. The 35 former fellows (6%) who did not return gave the following reasons for the change of employer (multiple replies were allowed):

- The current job offers better career prospects than the previous job (43%).
- The current job is better suited to the fellow's improved knowledge and skills (34%).
- The current job is more challenging (29%).
- The fellow is in the process of getting an advanced degree such as a Master's degree or a Ph.D. (23%).

The knowledge transfer through the fellowship programme is enhanced by the fact that in addition to applying their additional knowledge and skills in their home institutions, the vast majority of fellows responding to the survey (96%) share their knowledge with colleagues in their home institutions through individual consultations, presentations, on-the-job training, workshops and teaching. This is known as the multiplier effect.

“

I have helped my home institute and maximized the knowledge I received by sharing it with my colleagues.

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⁶ Ninety-four percent of the fellows participating in the survey, which constituted 28% of all fellows who were in the field in 2001 and 2002.



Fellows at low-level sampling in water sedimentation (IAEA).

4.2.1 Impact of the fellowship on the fellow's career and their home institution

The IAEA fellowship programme provides opportunities to train personnel needed for the development of atomic energy applications for peaceful purposes in developing Member States. Its primary effect is on the trained fellows themselves. In this section, the participating fellows' opinions of how the training programme affected their careers will be summarized. The following numbers will also be an indication of the fellowship programme's aim of contributing to knowledge and technology transfer to developing countries.

By returning to the home institution that sent them for the fellowship programme, the fellows contribute to improving the home institutes' performance. Responses from the survey show that 88% of the fellows think they gained ideas and knowledge that are useful or very useful for their job (2% thought of them as 'not useful').

The development of useful contacts for on-going information exchange after the fellowship programme is an important factor both for the fellows' career and for the development of the home institution. Of the fellows responding to the survey, 70% developed useful

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It is important to continue communication with the supervisor and the host institute after the training to facilitate exchange of information and experience.

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contacts during their fellowship training (4% did not), and 60% are still in contact with their host institution or their fellowship supervisor regularly, 24% are in touch occasionally, and 9% only very rarely or not at all.

Responses to the survey showed that 87% of the fellows feel a substantial increase in their confidence in performing their work after having been trained as a fellow (1% do not feel more confident at all). Sixty-three percent of the respondents thought the improvement of their language skills was an important benefit of the fellowship programme, while 4% did not. The latter may in many cases be due to the fact that these fellows did the training in their mother tongue.

Just below 70% of the fellows feel their enhanced skills were recognized in their organisation, while 5% feel they were not. The recognition of enhanced skills in the organisation manifested itself in a higher progression in the same job for 50% of the fellows, higher mobility across jobs for 37%, and higher income for 14%. Fifteen percent of the fellows did not progress in their job after the fellowship training, 17% felt they were no more mobile across jobs than before, and 37% did not experience an increase in their income after the fellowship programme.

4.2.2 Impact of the fellowship on the TC project

All the fellows' home institutions are involved in TC projects. Hence, the fellows' returning to work there contributed to the impact of the fellowship on the TC project. The fellows' improved knowledge and skills as well as contacts to their host institution help to advance the success of the respective TC project, as well as other projects with which the home institution is involved. Supporting this statement, 81% of the responding fellows feel their enhanced skills are relevant or very relevant to the needs of the TC project under which the fellowship was funded. Just 1% felt the skills learned during the fellowship were not relevant to the TC project.

4.2.3 Impact of the fellowship on the country

Of the fellows responding to the survey, 86% think their enhanced skills are highly relevant to their home country's needs (2% thought they were not relevant). The vast majority (95%) of participants went back to work in the public sector, namely government ministries/agencies or universities/research institutions. Their improved knowledge and contacts benefit the development of these organisations and thus contribute to the country's advancement in nuclear science and technology.

4.2.4 Links with other IAEA activities

Of the respondents, 71% have been involved in other IAEA activities besides the fellowship programme, either in TC activities or in Regular Budget activities. Figure 6 below identifies how the respondents participated in other IAEA activities.

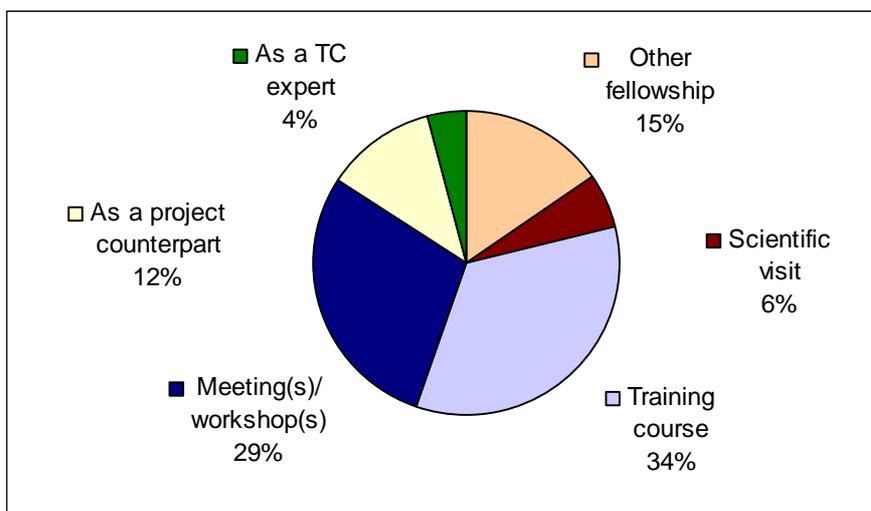


Figure 6. Respondents' involvement in other IAEA activities.

Twenty-seven percent of these fellows attended the fellowship before participating in other TC activities, and 30% attended after other TC activities. The remainder participated in other TC activities both before and after the IAEA fellowship programme. This means that for almost a third of the respondents, the fellowship constituted an opportunity for subsequent involvement in IAEA activities. For the other two-thirds, the fellowship was one in a sequence of several IAEA activities in which they were involved.

A number of fellows took part in IAEA activities organized outside of the TC programme. These activities include conferences, symposia, research contracts, workshops, and technical meetings. This information points to the fact that many former fellows keep in touch with IAEA Technical Departments as well as with the Department of Technical Cooperation.

4.3 Quality of the IAEA Fellowship Programme

In this section, the survey results regarding the quality of the IAEA fellowship programme – in terms of the content of the training as well as the administration of the programme – are summarized. In the third sub-section, those aspects that the participating fellows considered most valuable are described.

4.3.1 Quality of the content of the fellowship programme

Eighty-five percent of the fellows responding to the survey considered the host institution chosen for their training suitable or very suitable (3% considered it not suitable at all). The training programme undertaken was thought suitable or very suitable by 85%, while 3% thought it not suitable at all. The quality of the guidance received by the responding fellows was felt to be good or very good by 81% (3% felt it to be not good at all). The quality and adequacy of the facilities made available to them were considered good or very good by 82% of the fellows, while 3% thought the facilities were not good or adequate.

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My host institution was an excellent place to improve and increase my working knowledge.

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Just more than 20% of the responding fellows explicitly commented on the suitability and good quality of their host institution. Twelve percent mentioned that the guidance, supervision and support they received were excellent. The follow-up to the fellowship programme was considered good by 16% of the survey participants. Many more of the participants feel, however, that the follow-up could be improved (see suggestions in Section 5).

Six of the responding fellows commented that they had only limited access to facilities and/or tools due to security or other reasons. Four participants felt their instructor(s) lacked the knowledge required for training fellows. Twelve fellows did not receive the guidance they had expected, eight of these due to the fact that host institution staff did not have enough time for them. Of the fellows responding to the survey, 34 (6%) thought the fellowship period too short, and 4% (27) would have liked more hands-on or practical training.

Six percent of the former fellows had negative experiences after the completion of the fellowship programme. They listed the termination of their contract and a change in their area of work as the main negative experiences.



Fellows learning about low-level radiation monitoring (IAEA).

4.3.2 Quality of the administration of the fellowship programme

The living arrangements were considered very good by 73% of the survey participants, adequate by 21% and lacking by 5%. Assistance from the IAEA was ranked as good or very good by 86%, while 2% thought it lacking.

Assistance received from host authorities was rated as very good by 78% of the responding fellows, as adequate by 14% and as lacking by 3%. The assistance received from home was thought of as very good by 70% of the respondents, 18% thought it adequate, while 7% thought it lacking.

Several survey participants gave their reasons for not rating the quality of the administration of the fellowship programme highly as the following: problems regarding the travel arrangements, the stipend (too low, payment too late) and the housing conditions were mentioned most frequently.

4.3.3 Most valuable aspects of the fellowship experience

The survey participants were asked to list three aspects of their fellowship experience that they found most valuable⁷. Improvement of their knowledge or skills was listed by 44% of the respondents as one of the most valuable aspects. Seventeen percent considered getting to know new technologies, techniques and methods most valuable. The development of new contacts and the exchange of information and experience with other experts in their field were thought most valuable by 18% and 16%, respectively.

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I could exchange with well-known specialists and learned from their valuable experience.

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Gaining more and new experiences and the fact that the knowledge and skills acquired were up to date and useful were each considered most valuable by 13% of the responding fellows. Eleven percent mentioned the interaction with people from other cultures and living abroad as one of the most valuable aspects. For 10%, the working atmosphere and hospitality at the host institution and the attention of the supervisor and host institution staff were most valuable, and for 9% it was the opportunity of working in such a good host institution.

⁷ Only those aspects which were mentioned by four or more responding fellows are listed here.

Between 6% and 8% thought their increased confidence in performing their work and their increased ability to think critically, their professional development and growth, the quality of the lectures and the training, and the improvement of their language skills were the most important aspects of the fellowship experience. Other aspects mentioned frequently in the responses are the impact of the TC programme (the transfer of knowledge and technology, the exchange between countries, the development of TC projects), increased motivation for work and developing new ideas, the acquisition of books and other materials and the good administration of the fellowship programme. Several fellows listed the reflection on development needs of their home countries, the contribution of the knowledge acquired to getting an advanced degree, the establishment of on-going contacts and cooperation, team work and the quality of the accommodation as most valuable. Five fellows (1%) considered the fellowship a satisfying personal experience and ranked this as the most valuable aspect.

5 SUGGESTIONS FOR IMPROVEMENT OF THE IAEA FELLOWSHIP PROGRAMME

In this chapter, the suggestions made by survey participants regarding the IAEA fellowship programme are summarized⁸.

5.1 Suggestions Regarding the Content of the IAEA Fellowship Programme

The fellows participating in the survey made the following suggestions regarding the host institutions:

- The host institution should have great experience in the field of interest of the fellow.
- It should have state-of-the-art equipment required for the fellow's training, and make it available to him/her.
- It should have adequate training facilities.

⁸ Only those suggestions made by four or more fellows are listed.

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The host institution must be well equipped, with active research projects and experience in solving the problems of interest to the fellow.

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It is important to prepare a training plan or programme together with the fellow in advance, and to follow that plan during the training.

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- More materials should be made available to the fellow (e.g. books, journals, access to websites).
- Internet access should be provided to the fellow as a source of relevant information.
- More emphasis should be given to hands-on, practical training.

Concerning the guidance or supervising, the following suggestions were made:

- The training programme, curriculum or work plan should be prepared with the fellow in advance, based on his/her needs. During the training, this programme should be adhered to.
- The supervisor and host institution staff should have more time for the fellow. This might be achieved by giving the supervisor a specific budget for the training.
- The supervisor should have great experience and technical knowledge in the fellow's field of interest, as well as in teaching and training. He/she should be willing to share not only technical, but also cultural expertise.
- Supervisor and staff should be able to communicate with the fellow in a common language. They should treat the fellow as part of the host institution, not just as an observer.

With regard to the follow-up after completion of the fellowship programme, fellows made the following suggestions:

- Relations between the fellow, the home institution and the host institution should be continued and strengthened. This is seen as the IAEA's responsibility by some of the participants. Additional collaboration between the home and the host institution should be supported, e.g. via joint projects, joint publications or exchange of staff.
- The IAEA should establish a discussion forum as a network for exchange, both regional and interregional.
- Systematic, regular follow-up, e.g. through refresher courses, further and follow-up training or follow-up visits to the host institution, would be helpful, as would participation in workshops, meetings or scientific visits.
- The IAEA should keep in touch with former fellows, e.g. via surveys of this type.
- Regular, periodic evaluation and assessment of the training impact should be done.



Fellow analyzing rice growth related to water supply (Dean Calma/IAEA).

5.2 Suggestions Regarding the Administration of the IAEA Fellowship Programme

The following suggestions were made on the administration of the IAEA fellowship programme:

In selecting the host institution

- Suggestions made by the future fellows should be considered.
- The needs of the TC project, the home institution and the home country should be taken into account.
- The possibility of host institutions in developing countries or countries in transition should be considered more (e.g. India or Brazil).
- It should be ensured that the fellow fully understands the language of the host institution.

During the fellowship

- The IAEA should keep in contact with the fellow.
- Communication between the IAEA and the fellow is sometimes slow; travel and other arrangements should be made on time, and the stipend should not be sent too late.
- The supervisor should be monitored, and host institutions should be evaluated regularly.

In preparation for and after completion of the fellowship programme

- Information on TC actions and on future training courses should be available electronically.
- A website informing fellows about the different host institutions available and their fields of expertise would be helpful.
- The fellow should be properly informed and prepared before he/she goes on the fellowship.
- Care should be taken to ensure adequate, safe accommodation, preferably close to the host institute.

Regarding the IAEA fellowship programme in general, 34 (6%) of the responding fellows felt that the fellowship period was too short, and 2% thought the stipend should reflect the actual cost of living, i.e. it was considered too low. Two percent also suggested the IAEA should support studies towards higher degrees (M.Sc. or Ph.D.), and improve the recognition of IAEA training programmes by home countries. The IAEA should also encourage Member States' commitment to the fellowship programme; in particular, retention and motivation of fellows and should be improved to ensure the transfer of knowledge and technology to the home institution.

Among the suggestions, the fellows also included positive remarks about the fellowship programme, which – in as much as they have not been mentioned before – are summarized in the following remarks: the importance of the fellowship programme, its usefulness and the wish that others should also participate in it were stressed by 3% of the respondents. Another 19 participants (3%) explicitly expressed thanks to the IAEA in general, and the TC programme in particular.

As a follow-up to the survey presented here, an in-depth study of seven countries is now being conducted to ensure that the results of the survey are representative of all fellows who were in the field in the years 2001 and 2002.

“

It was great to interact with people from other cultures and to make personal contact with foreign experts.

”

6 APPENDIX: FELLOWSHIP SURVEY QUESTIONNAIRE

IAEA Fellowship Programme Evaluation

Welcome to the Questionnaire for all 2001/2 Fellows!

By completing the following survey, you will help us to evaluate and improve the IAEA Fellowship Programme.

1) Fellowship Number:

2) Contact Information

Last Name:

First Name:

Home Address:

Institution Name

Institution Address:

Home Phone:

Office Phone:

Fax:

E-mail:

Home Information

3) Please mark the area under which your field of training falls:

| | |
|--|--|
| General Atomic Energy Development | |
| Nuclear and Atomic Physics | |
| Nuclear Chemistry and Radiochemistry | |
| Fuel Cycle Activities and Waste Management | |
| Nuclear Engineering and Technology | |
| Application of Isotopes and Radiation in Food and Agriculture | |
| Radiation Medicine and Health | |
| Application of Isotopes and Radiation in Biology and Environmental Studies | |
| Isotope Hydrology and Applications of Isotopes and Radiation in Industry | |
| Nuclear and Radiation Safety and Nuclear Security | |
| Other (please specify) | |

4) Please mark the area in which you are currently working:

| | |
|--|--|
| General Atomic Energy Development | |
| Nuclear and Atomic Physics | |
| Nuclear Chemistry and Radiochemistry | |
| Fuel Cycle Activities and Waste Management | |
| Nuclear Engineering and Technology | |
| Application of Isotopes and Radiation in Food and Agriculture | |
| Radiation Medicine and Health | |
| Application of Isotopes and Radiation in Biology and Environmental Studies | |
| Isotope Hydrology and Applications of Isotopes and Radiation in Industry | |
| Nuclear and Radiation Safety and Nuclear Security | |
| Other (please specify) | |

5) Please indicate your country of residence:

6) Is this your home country? Yes No

7) If yes, are you still working in the same institution that endorsed your fellowship training?
Yes No

8) If no, why not? Please check as many as apply:

| | | |
|---|------------------------------|-----------------------------|
| unable to apply skills acquired from training | | |
| current job is more challenging | | |
| current job suits my additional knowledge better | | |
| better career prospects than in previous employment | | |
| Is the change directly related to your fellowship? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Other (please specify) | | |

9) Type of organization you work for:

- University/Research Institution
- NGO
- Private
- Government Ministry/Agency
- International/Regional Organisation
- Self-Employed/Consultant

Quality of Fellowship Programme

10) In order to improve the administration of our fellowship programme, we would appreciate your rating and comments on the following points:
Please rate on a progressive scale of 1 to 6 your level of satisfaction, where **1 is the minimum** and **6 is the maximum**. If you feel that a question does not apply to you, or that you do not have enough information to express an opinion, please fill in the "no opinion" option represented by **X**.

| | 1 | 2 | 3 | 4 | 5 | 6 | x |
|---|---|---|---|---|---|---|---|
| 1. Suitability of the host institution chosen for your training | | | | | | | |
| 2. Suitability of the training programme undertaken | | | | | | | |
| 3. Quality of the guidance you received | | | | | | | |
| 4. Quality and adequacy of the facilities made available to you | | | | | | | |
| 5. Living arrangements | | | | | | | |
| 6. Assistance received from the IAEA | | | | | | | |
| 7. Assistance received from host authorities | | | | | | | |
| 8. Assistance received from home | | | | | | | |
| 9. On-going contact with the host institution/supervisor | | | | | | | |

11) Indicate the country of the host institution:

12) In which language did you do your training?
English French Spanish Russian Other (please specify)

13) Please add any other comments about the host institution you would like to make here:

Benefits of the Training Obtained

14) To be able to assess the impact of the IAEA fellowship programme, we would appreciate your rating and comments on the following points:
*Please rate the benefits below on a progressive scale of 1 to 6, where **1 is the minimum** and **6 is the maximum**. If you feel that a question does not apply to you, or that you do not have enough information to express an opinion, please fill in the "no opinion" option represented by **X**.*

| | 1 | 2 | 3 | 4 | 5 | 6 | x |
|--|---|---|---|---|---|---|---|
| Extent to which you gained ideas/knowledge that are useful in your job | | | | | | | |
| Recognition for your enhanced skills in your organization | | | | | | | |
| Relevance of the enhanced skills to the needs of the TC project under which your fellowship was funded | | | | | | | |

| | | | | | | | | |
|---|--|--|--|--|--|--|--|--|
| Relevance of the enhanced skills to your country's needs | | | | | | | | |
| Extent to which you developed useful contacts during the study period | | | | | | | | |
| Improvement in your confidence about performing your work | | | | | | | | |
| Improvement of language skills | | | | | | | | |

15) How were your enhanced skills recognized in your organization?

Please rate according to the same scale as above in question 14.

| | 1 | 2 | 3 | 4 | 5 | 6 | x |
|------------------------------------|---|---|---|---|---|---|---|
| Higher progression in the same job | | | | | | | |
| Higher mobility across jobs | | | | | | | |
| Higher income | | | | | | | |

16) Did you disseminate the know-how obtained through the fellowship among your colleagues?

Yes No

17) If yes, how? Please check all that apply:

Presentation(s) Workshop(s) On the job-training Individual consultation(s)

Other (please specify):

18) Were there any unintended negative effects you experienced upon completion of the fellowship programme? Yes No

19) If yes, which ones?

20) Have you participated in other IAEA activity (ies)? Yes No

21) If yes, in which IAEA TC activity (ies) did you participate? Please check all that apply:

Other fellowship

Scientific visit

Training course

Meeting(s)/workshop(s)

As a project counterpart

As a TC expert

22) If you have participated in any non-TC IAEA activities, please specify which ones:

23) If you have participated in other IAEA activities, when was the fellowship attended?

Before other TC Activities

After other TC Activities

24) Please provide us with your suggestions on further expanding the TC Programme outreach, regarding:

| | |
|------------------|--|
| Host institution | |
| Guidance | |
| Follow-up | |
| Other | |

25) Please comment on the 3 most valuable aspects of your experience:

| | |
|----|--|
| 1) | |
| 2) | |
| 3) | |

26) Please add any other comments you may want to make here:

Thank you for taking the time to complete this questionnaire!



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