

## Results of MSCA end of fellowship evaluation questionnaires (Horizon 2020) 2024 Update

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Marie Skłodowska-Curie actions

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Directorate-General for Education, Youth, Sport and Culture Directorate C - Innovation, Digital Education and International Cooperation Unit C2 - Marie Sklodowska-Curie Actions

E-mail: EAC-MARIE-SKLODOWSKA-CURIE-ACTIONS@ec.europa.eu

*European Commission B-1049 Brussels* 

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#### Version: 1, Date of release: 14/03/2024

#### 1. Background

After their fellowship, Marie Skłodowska-Curie Actions (MSCA) fellows are requested to complete two short surveys covering various issues including their integration within the host institution and the impact of the fellowship on their skills development, career and employability.

The **evaluation questionnaire**<sup>1</sup> is completed immediately after the end of their fellowship to review their experience, skills acquired and immediate next steps after their MSCA project.

The **follow-up questionnaire**<sup>2</sup> is submitted two years after the fellowship to gather further information on the more mid and long-term impact of the fellowship and the career trajectories of the fellows since.

Some MSCA projects funded under Horizon 2020 (2014-2020) are still ongoing, so the programme continues to receive new responses from researchers and seconded staff following the end of their fellowship. Since 2021, regular reports have been published presenting the updated results and key findings from these questionnaires<sup>3</sup>. This 2024 report provides an update on the results of these surveys, as well as a more specific analysis of the results focused on the different scientific fields.

#### **2. Overview of the sample**

Number of responses by type of actions	Evaluation Questionnaire within three months after end of fellowship (number and share of respondents)		Follow-up Questionnaire two years after end of fellowship (number and share of respondents)	
TOTAL SAMPLE	21 177	(100%)	2 491	(100%)
MSCA Innovative Training Network (ITN)	6 992	(33.0%)	593	(23.5%)
MSCA Individual Fellowships (IF)	1 586	(7.5%)	159	(6.4%)
MSCA Research and Innovation Staff Exchanges (RISE)	10 643	(50.3%)	1 461	(60.2%)

<sup>&</sup>lt;sup>1</sup> https://ec.europa.eu/eusurvey/runner/Evaluation\_for\_MSC\_fellows

<sup>3</sup> https://op.europa.eu/en/publication-detail/-/publication/cae806b5-7d63-11eb-9ac9-01aa75ed71a1/languageen

<sup>&</sup>lt;sup>2</sup> https://ec.europa.eu/eusurvey/runner/MSCA\_Follow-up\_Questionnaire\_2\_years\_after\_end\_of\_fellowship

European Commission	End o	d of fellowship evaluation questionnaire for MSCA fellows: Result		
Doctoral researchers	3 692		487	
Experienced researchers (postdocs and above)	5 234		708	
Non-research staff	845		122	
MSCA COFUND	1 956	(9.2%)	278	(9.9%)
COFUND-DP (Doctoral researchers)	671		85	
COFUND-FP (Experienced researchers)	1176		180	

As of November 2023, there were over 21 000 respondents for the evaluation questionnaire and a smaller sample of nearly 2 500 respondents for the follow-up questionnaire. The difference in the sample size is partly due to the follow-up questionnaire being completed at a later stage than the former, but also to response rates being generally lower two years after the fellowship.

Fellows from all actions are represented in both samples as well as researchers and research professionals at different career stages. All eight MSCA scientific domains are represented in the sample, with some scientific fields being slightly over-represented compared to the share they represent among completed projects (i.e. Life Sciences) and others under-represented among the survey respondents (i.e. Environment and Geosciences).





Altogether in both questionnaires, just under 43% of respondents were women, which mirrors the overall share of women participating in the MSCA under H2020 (42%). The share of female and male respondents varies according to scientific panels, with Physics, Mathematics and Information Science and Engineering having the lowest shares of female researchers.



# 3. Engagement with the non-academic sector in different scientific fields

The MSCA encourage intersectoral mobility and collaboration. The different actions provide various opportunities for fellows to acquire experience and develop skills and network beyond academia, including in business and industry, private non-profit organisations, public administration/government and international organisations.

The share of fellows gaining experience in the non-academic sector has not changed since the previous report in 2023, and remains at around one third, mostly as part of short secondments. The share is highest among ITN (42%) and RISE (34%) respondents, followed by COFUND (18%) and the lowest among IF fellows (14%).

The intersectoral mobility of MSCA fellows also varies according to fields of research. Information Science and Engineering (42%), Life Sciences (36%) and Social Sciences and Humanities (35%) have the highest share of fellows reporting experience in the non-



academic sector. Physics has the lowest share, with 18% of fellows reporting hosting arrangements outside academia.



These results mirror to some extent findings from other studies looking at the training of researchers in different scientific fields<sup>4</sup>. Most STEM<sup>5</sup> fields have tended to be identified as domains where intersectoral mobility has been more common as part of the training of researchers, particularly in Engineering, with fewer and more recent opportunities and intersectoral mobility schemes in other fields. Existing schemes within or outside Europe have also tended to involve predominantly industry, with more limited options for other sectors, such as public administration<sup>6</sup>.

These observations tend to indicate that the MSCA have promoted intersectoral mobility in fields and with sectors where there are generally fewer opportunities. But differences are still observed across MSCA projects from different scientific fields in the researchers' intersectoral training and experiences.

Under Horizon Europe, the MSCA programme has introduced novelties to further strengthen intersectoral collaboration and mobility of researchers within its different actions. These changes include simplifications and new incentives in MSCA Doctoral Networks and a new option to undertake a non-academic placement as part of a MSCA Postdoctoral Fellowship. The results will need to be assessed, including the effect of these measures for different scientific fields and sectors' involvement.

<sup>&</sup>lt;sup>4</sup> See for instance:

https://op.europa.eu/en/publication-detail/-/publication/eb88a755-437b-11e8-a9f4-01aa75ed71a1/language-en/format-PDF/source-300690128 ;

https://euraxess.ec.europa.eu/sites/default/files/policy\_library/more4\_final\_report.pdf (p.67 on phd training) ; https://op.europa.eu/en/publication-detail/-/publication/d4a669f9-00c0-11ed-b94a-01aa75ed71a1/language-en

<sup>&</sup>lt;sup>5</sup> Science, Technology, Engineering and Mathematics (STEM)

<sup>&</sup>lt;sup>6</sup> See https://op.europa.eu/en/publication-detail/-/publication/eb88a755-437b-11e8-a9f4-

<sup>01</sup>aa75ed71a1/language-en/format-PDF/source-300690128



Two years later, nearly all fellows (96%) who undertook at least part of their fellowship outside academia considered that the experience positively contributed to their career afterwards. Indeed, 54% considered that the experience outside academia had been to a very large or large extent beneficial for their career since the fellowship.

The programme has been very successful in fostering mobility and collaboration with the non-academic sector. However, the level of participation still varies according to scientific fields and sectors. Novelties under Horizon Europe can contribute to address some of these gaps to further strengthen the MSCA intersectoral reach.

#### 4. Impact of fellowship on skills development

Overall, 85% of respondents rated the training provided as good or very good, with another 11% considering it of fair quality. There are no or very limited changes from the previous report regarding the differences by action and career stages of the respondent<sup>7</sup>. The results are also similar from the previous report regarding the positive impact of the fellowship on a range of key skills, including research skills and expertise and quality of scientific outputs, as well as on other transferable skills, such as communication, international and intersectoral collaboration or project management. Among the options provided in the questionnaire, knowledge of Intellectual Property Rights (IPR) and teaching skills are the ones least acquired through the MSCA project.



<sup>7</sup> See 2023 report here https://op.europa.eu/en/publication-detail/-/publication/cae806b5-7d63-11eb-9ac9-01aa75ed71a1/language-en





The skills acquired during the MSCA project that fellows reported applying most in their career were networking, particularly for international collaborations, presentation and communication skills, as well as the quality of their scientific output.

The comparison by scientific fields tends to show mostly marginal variations in the level of overall satisfaction with the training provided (see graph below). The difference across scientific fields is slightly more pronounced for the training on IPR. On average just over 60% of fellows increased their knowledge of IPR as part of their fellowship. This share is higher than average among former Information Science and Engineering and Chemistry fellows (65%), and lowest among former Mathematics fellows (48%).

Two years later, 98,4% of fellows have used the skills acquired during the MSCA fellowship in their career since. Over two thirds of respondents (67%) used the skills they developed to a large or very large extent, with the highest share being among former Chemistry fellows (71%) and lowest among Physics and Social Sciences and Humanities fellows (63%)<sup>8</sup>.

Fellows report high satisfaction with the quality of training in MSCA and use the skills acquired in their career afterwards. Some transferable skills could be further addressed in MSCA training. Under Horizon Europe, the MSCA fellows' training will cover new emerging skills required for research careers, including in open science practices and related to the twin green and digital transitions.

<sup>&</sup>lt;sup>8</sup> For this question, the analysis by scientific field excludes Economics and Mathematics as the samples remain small for both disciplines.



#### **5.** Career trajectory after the MSCA

Compared to the previous report, the evaluation questionnaire continues to indicate a significant impact of the fellowships on the professional development of fellows. Over 90% of former fellows consider that the MSCA fellowship had a good or very good impact on their professional development<sup>9</sup>. The figures on employment status of former ITN, COFUND and IF fellows' have not significantly changed since the previous report.

The previous report had already indicated variations in employment status according to career stages. Therefore, figures on the employment status of former ITN, COFUND and



#### Employment status of IF and COFUND MSCA <u>postdoctoral</u> fellows at the end of their fellowship by scientific fields



<sup>&</sup>lt;sup>9</sup> See 2023 report here https://op.europa.eu/en/publication-detail/-/publication/cae806b5-7d63-11eb-9ac9-01aa75ed71a1/language-en



IF fellows<sup>10</sup> in different scientific fields are provided for both doctoral and postdoctoral researchers separately. As shown in the graphs above, there are some variations in employment status of respondents immediately after the fellowship according to scientific fields. Mathematics, Physics and Information Science and Engineering have the highest shares of employment both among doctoral and postdoctoral researchers.

Two years later, the share of former fellows in employment is significantly higher in all scientific fields, with an unemployment rate at around 4% (7% for former doctoral candidates and 1% for experienced researchers). The scientific fields with the highest shares of unemployed fellows are Physics and Social Sciences and Humanities for both career stages, with respectively 6% and 5% of respondents unemployed.

The follow-up questionnaire indicates that the large majority of employed respondents continue to work in the subject field of their MSCA fellowship two years later. The highest share is among Social Sciences and Humanities (92%), Life Sciences (91%) and Information Science and Engineering (91%) fellows who continue to work mainly in these subject areas, with the lowest share being among Environment and Geosciences fellows (77%)<sup>11</sup>.

The majority of former ITN, COFUND and IF fellows continue to work in academia after their MSCA project. Among those employed, 70% work within academia immediately after the fellowship and 63% two years later. Social Sciences and Humanities have particularly high shares of former fellows working in academia both immediately after the fellowship (81%) and two years later (79%) compared to other scientific fields. By contrast, Information Science and Engineering and Chemistry have a higher share than average working in the non-academic sector afterwards, with respectively 41% and 32% of employed former fellows working outside academia immediately after the fellowship and 42% two years later in both fields.

Among former ITN, IF and COFUND fellows working outside academia, the main employers immediately after the fellowship were large enterprises (45%), SMEs (25%), other sectors (i.e. international organisations, hospitals, museums, etc.) (12%), private non-profit (9%), public administration (9%). The breakdown however varies significantly according to scientific fields. For instance, public administration is the main sector of employment of Economics (35%) and Social Sciences and Humanities (29%) fellows working outside academia, while a majority of Mathematics (64%), Information Science and Engineering (59%) and Physics (55%) fellows working outside academia are in large enterprises.

The follow-up questionnaire's sample remains too small to draw conclusions on the sectors of employment by scientific fields.

<sup>&</sup>lt;sup>10</sup> Due to the specificity of the action, RISE participants were exempt from the question on employment status, in the evaluation questionnaire. RISE supports secondments of already recruited staff members. Their employment is therefore irrespective of the MSCA project and the secondment period.

<sup>&</sup>lt;sup>11</sup> For this question, the analysis by scientific field excludes Economics and Mathematics as the samples remain small for both disciplines.



The MSCA have a strong, positive impact on the career trajectories of fellows and their employability. Under Horizon Europe, the programme continues to promote sustainable and intersectoral research careers, by providing researchers with the necessary skills and experience, as well as adequate career guidance.

#### 6. Level of overall satisfaction

The overall satisfaction level is high among former fellows, with 92% rating their overall satisfaction with the fellowship as good or very good. As highlighted in the 2023 report, there are some variations according to MSCA actions, with a higher-than-average satisfaction rate in IF (96%) and slightly lower rates in ITN (87%) and COFUND (89%). Variations across scientific panels are more limited, ranging from 95% among former Mathematics and Economics fellows to 90% among Life Sciences fellows.

The high level of satisfaction is sustained over time with 91% of respondents to the follow-up questionnaire rating their overall satisfaction as good or very good.

Based on comments provided as part of the follow-up questionnaire, the fellows particularly valued the opportunities for networking and collaborations, the international exposure and the skills developed both as part of the project's training programme and the training-through-research experience. Dissatisfaction among former fellows tended to be related to the duration of the funding, particularly for doctoral researchers; issues with the supervision/mentorship received at host institutions; challenges linked to mobility (i.e. visa, work-life balance and family requirement), particularly when there is limited administrative support provided by their host institution; as well as to changes in the planned activities, such as secondments' schedules during the implementation of the project.

