FRENCH-POLISH SCIENTIFIC YEAR

FRANCE – POLAND
11th ANNIVERSARY OF THE POLONIUM PROGRAMME

Scientific impact of the program (2005-2017)

MESRI-DAEI / MEAE

2019

http://www.enseignementsup-recherche.gouv.fr

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RÉPUBLIQUE FRANÇAISE

MINISTÈRE
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GENERAL PRESENTATION OF THE PROGRAMME

Creation : 2009 (Convention 2008)

The purpose of this programme is to develop excellence scientific and technological exchanges between the French and Polish laboratories, by promoting new scientific collaborations and integrating in the projects young researchers and PhD students.

Total budget (France + Poland) : around 270 000 € / year

>> including budget from the French part : 135 000 € / year

>> including budget from the Polish part : 135 000 € / year

Average budget per project (France + Poland) : 13 000 € / year

Number of new projects per year : around 32

From 2005-2017 :

814 applications submitted

422 projects funded

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DATA SOURCES

Campus France

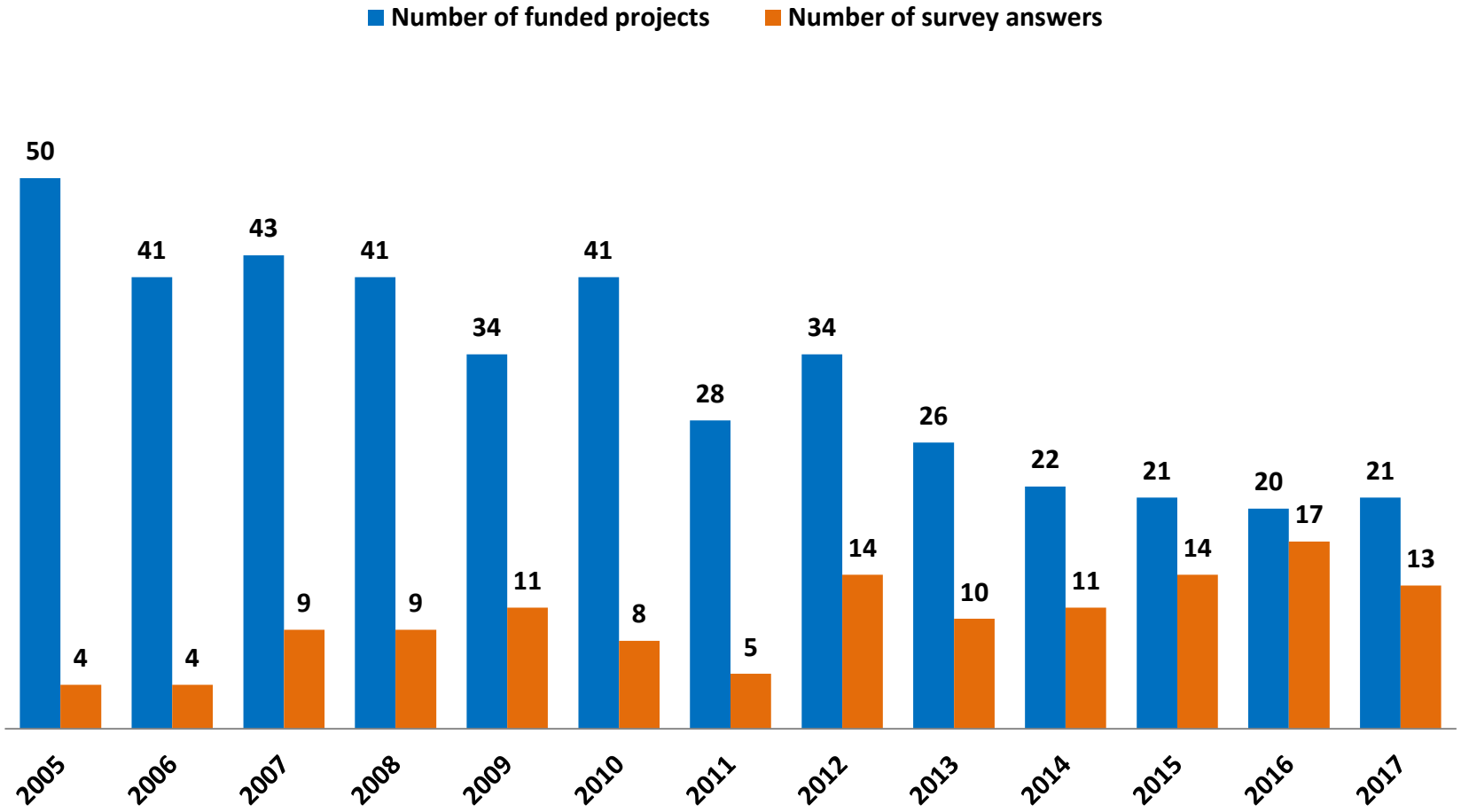
- Information about the PHC Polonium applications
- List of mobilities (from France to Poland and from Poland to France)

Survey

- Target : French Principal Investigators of selected projects between 2005 and 2017
- Survey duration : 5 weeks between March and April 2019
- **31%** response ratio *(*129 *respondents for* 422 *funded projects)*

ANSWERS TO THE SURVEY

Average response rate to the survey : 31 % (129 answers)



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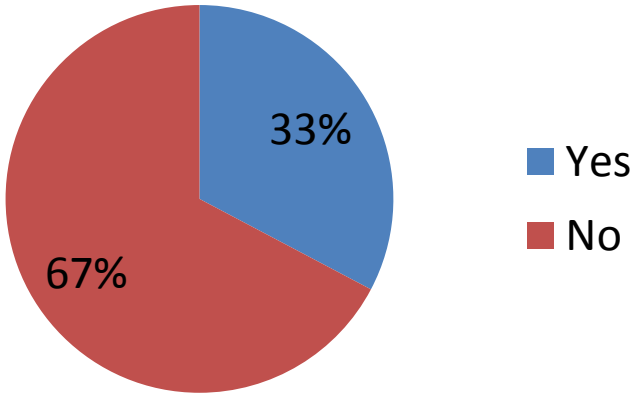
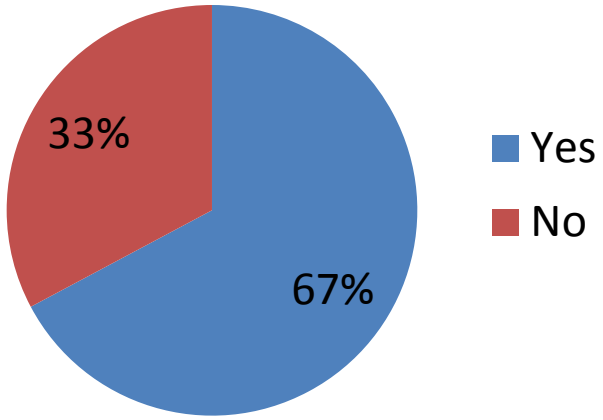
2005-2017
Key Points

BEFORE THE POLONIUM PROJECT (1/2)

Did you already cooperate with Poland in the past ?



If yes, was it with the same partner?

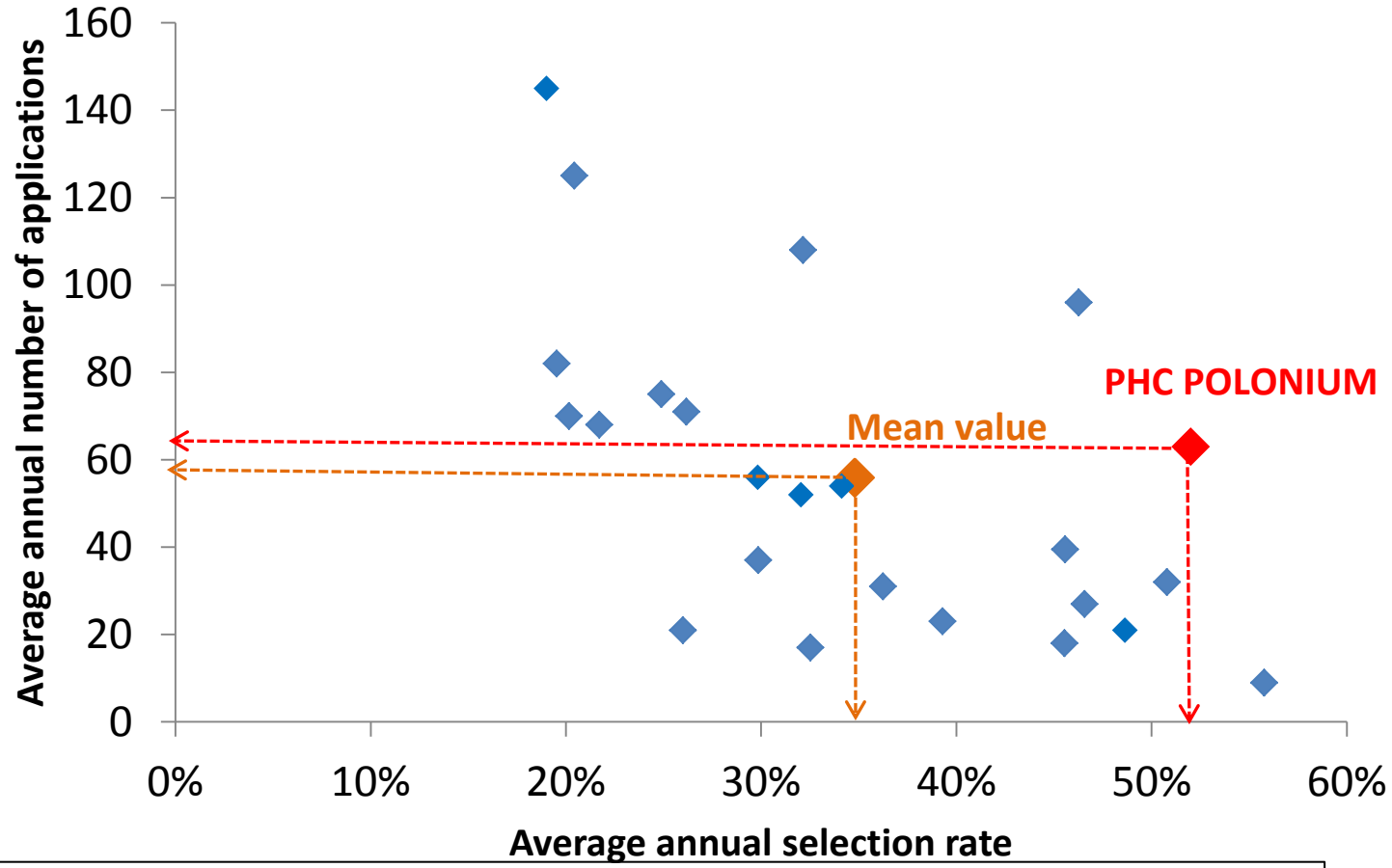


BEFORE THE POLONIUM PROJECT (2/2)

With which scientific collaboration programme ?	
Others (postdoc, publications, meetings…)	61
PHC Polonium	58
European projects (FP7, COST, ECO-NET…)	10
CNRS International Project of Scientific Cooperation (PICS)	5
CNRS Joint research projects (PRC)	4
CNRS International Research Network (IRN ex GDRI)	3
National Research Agency (ANR)	2
Erasmus exchanges	1

NUMBER OF APPLICATIONS VS SELECTION RATE

(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)



Average selection rate for 2005-2017 : 52% vs 35% mean
Average number of applications 2005-2017 : 63 vs 56 mean

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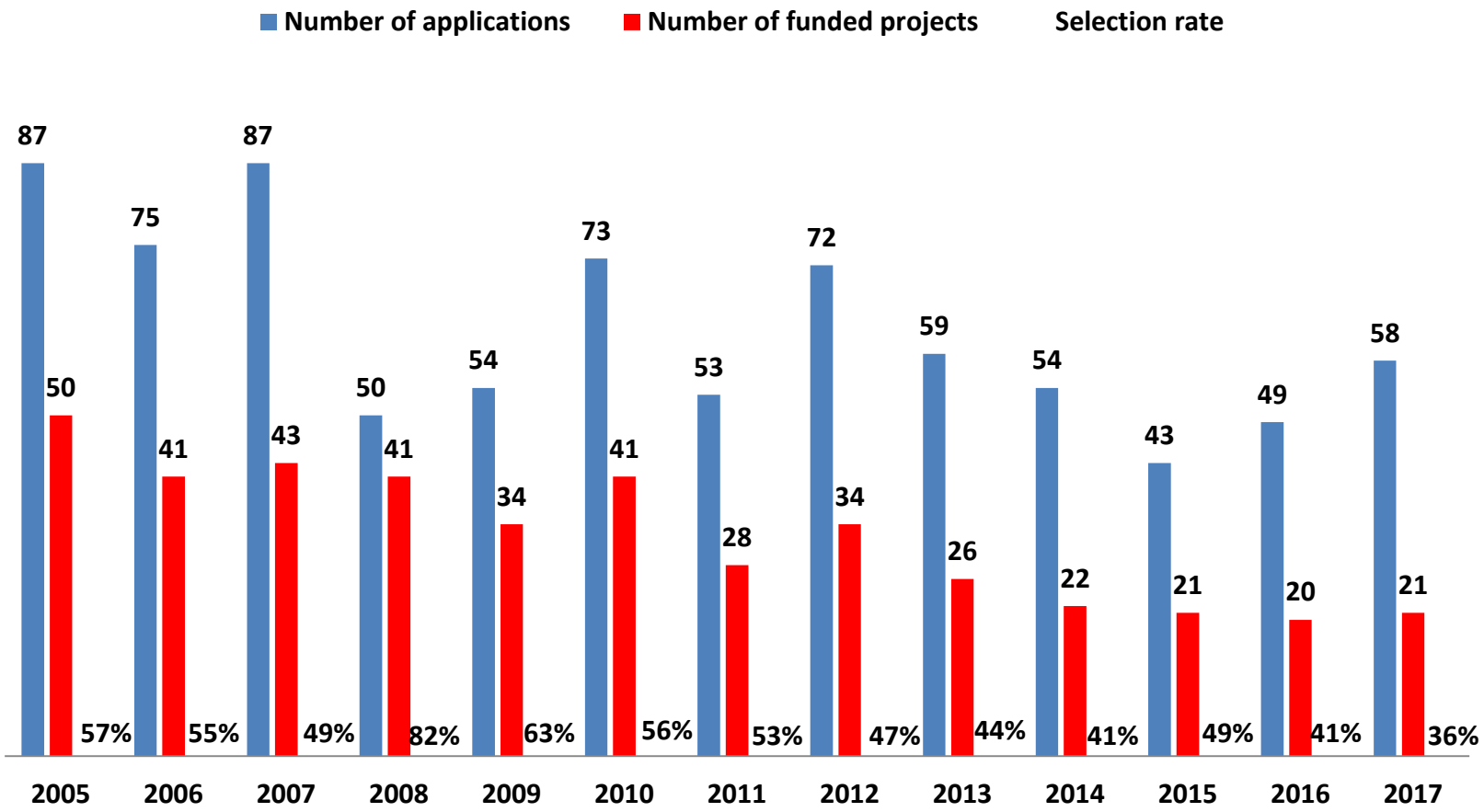
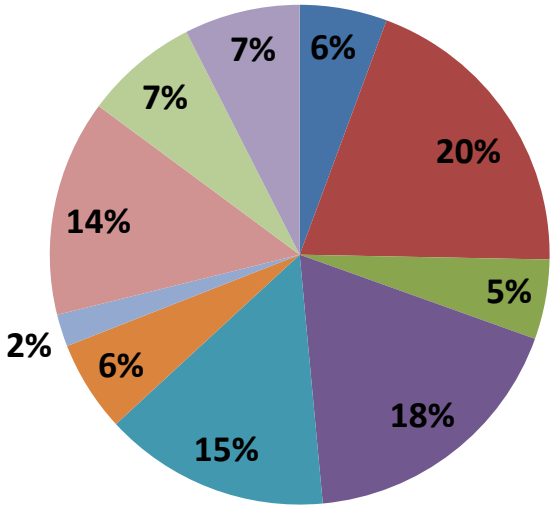
NUMBER OF APPLICATIONS AND SELECTION RATE

Average selection rate from 2005-2017: 52 %

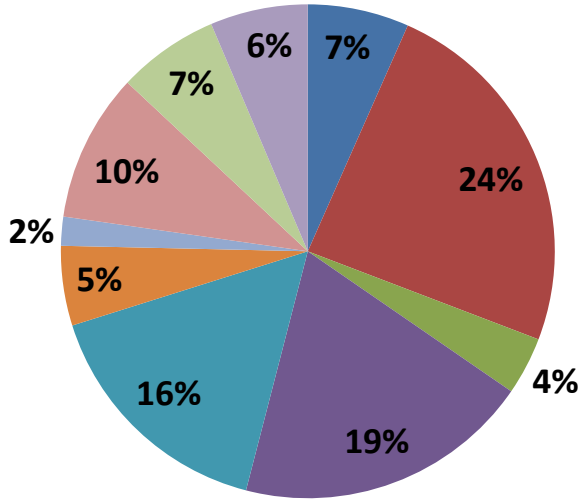


SCIENTIFIC DOMAINS OF PROJECTS

Number of applications : 814



Number of funded projects : 422



Mathematics
Physics
Marine/Earth/Planet Sciences
Chemistry
Biology and Health
Humanities
Social Sciences
Engineering Sciences
Information Technology
Agronomy/Ecology

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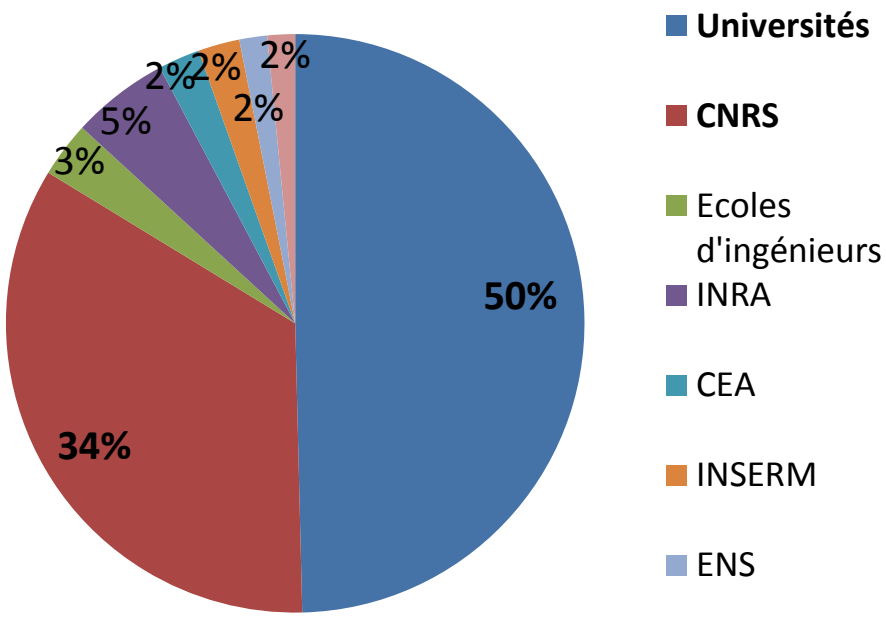
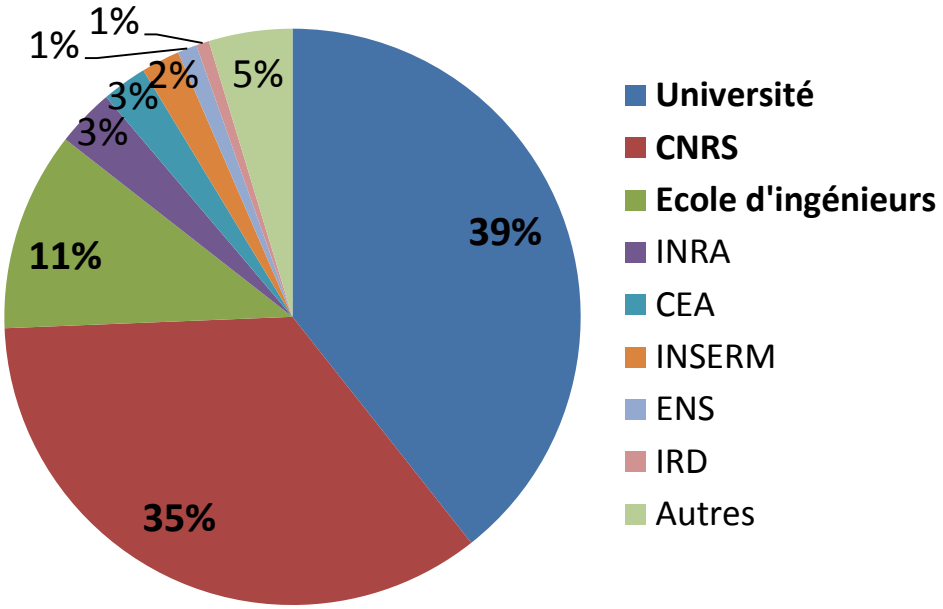
FRENCH PARTICIPATING INSTITUTIONS

PI's employers

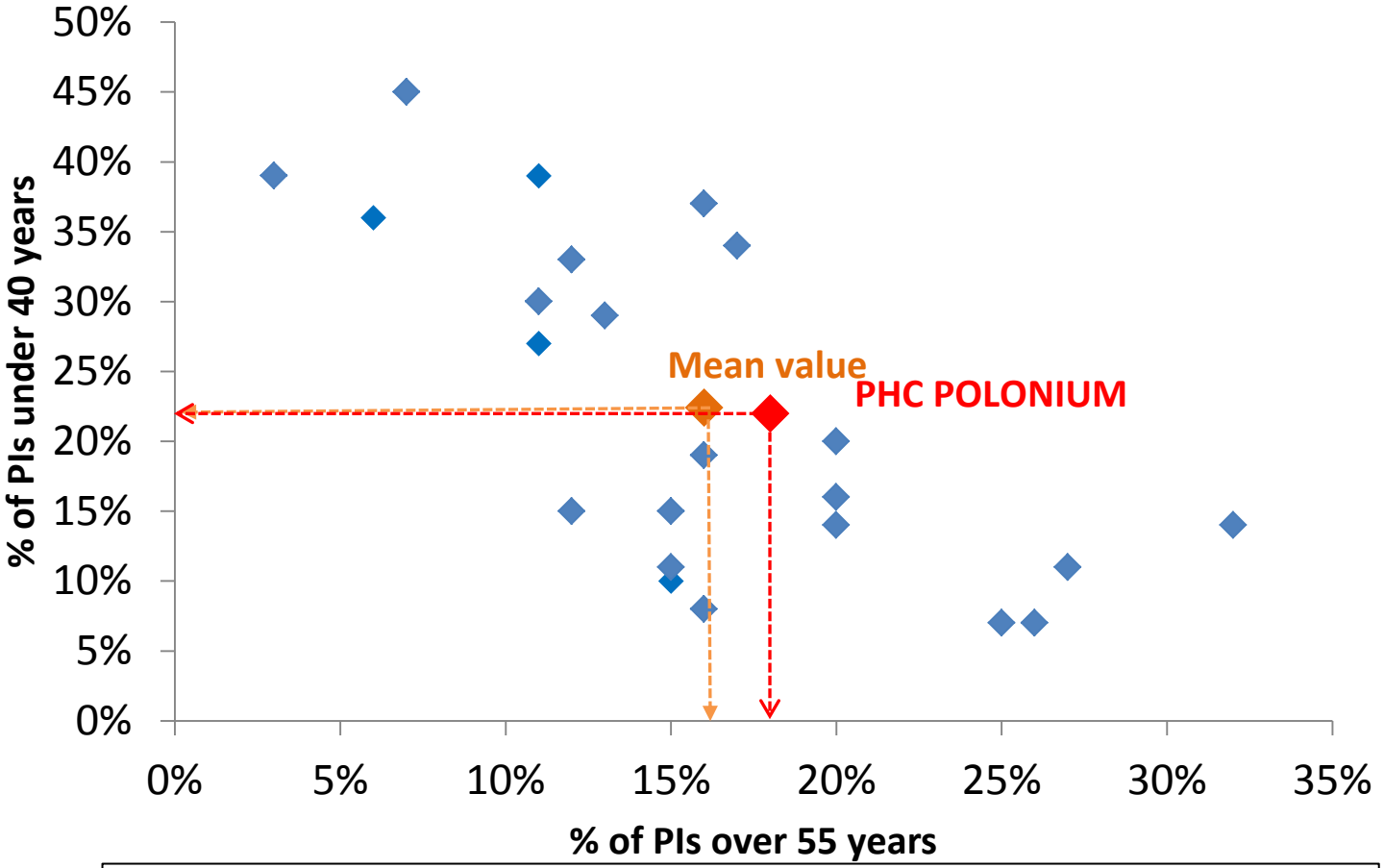


Laboratories authorities



AGE OF PRINCIPAL INVESTIGATORS (PI)

(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)



PIs under 40 years : 22% vs 22% mean

PIs over 55 years : 18% vs 16% mean

70% of the PIs are between 40 and 55 years

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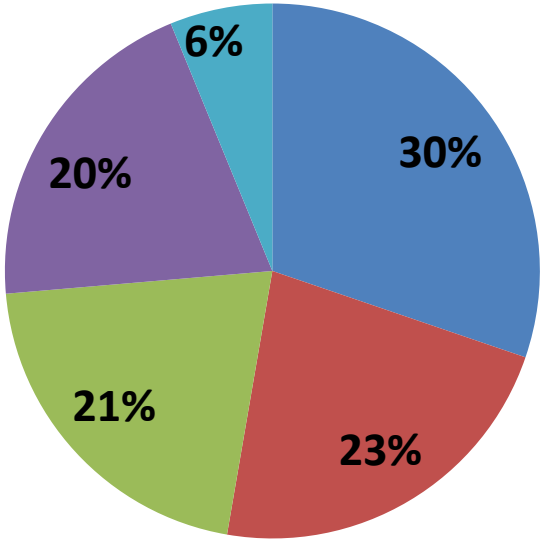
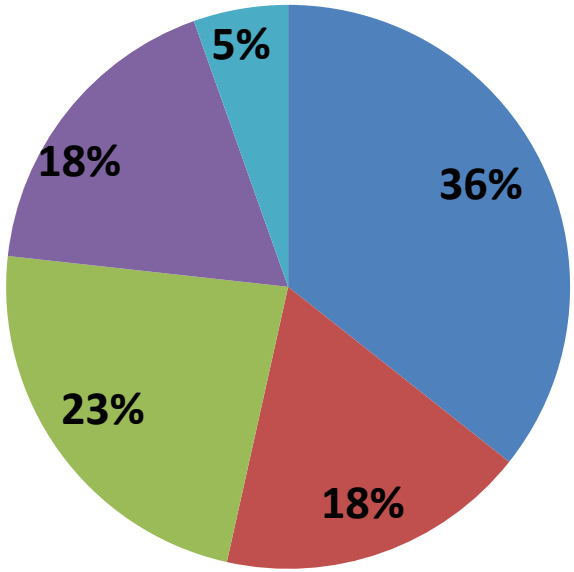
FRENCH PIS (PRINCIPAL INVESTIGATORS) : STATUS

Previous professional status (at the beginning of the project)



Current professional status



Full professor
Assistant professor
Senior researcher
Junior researcher
Other

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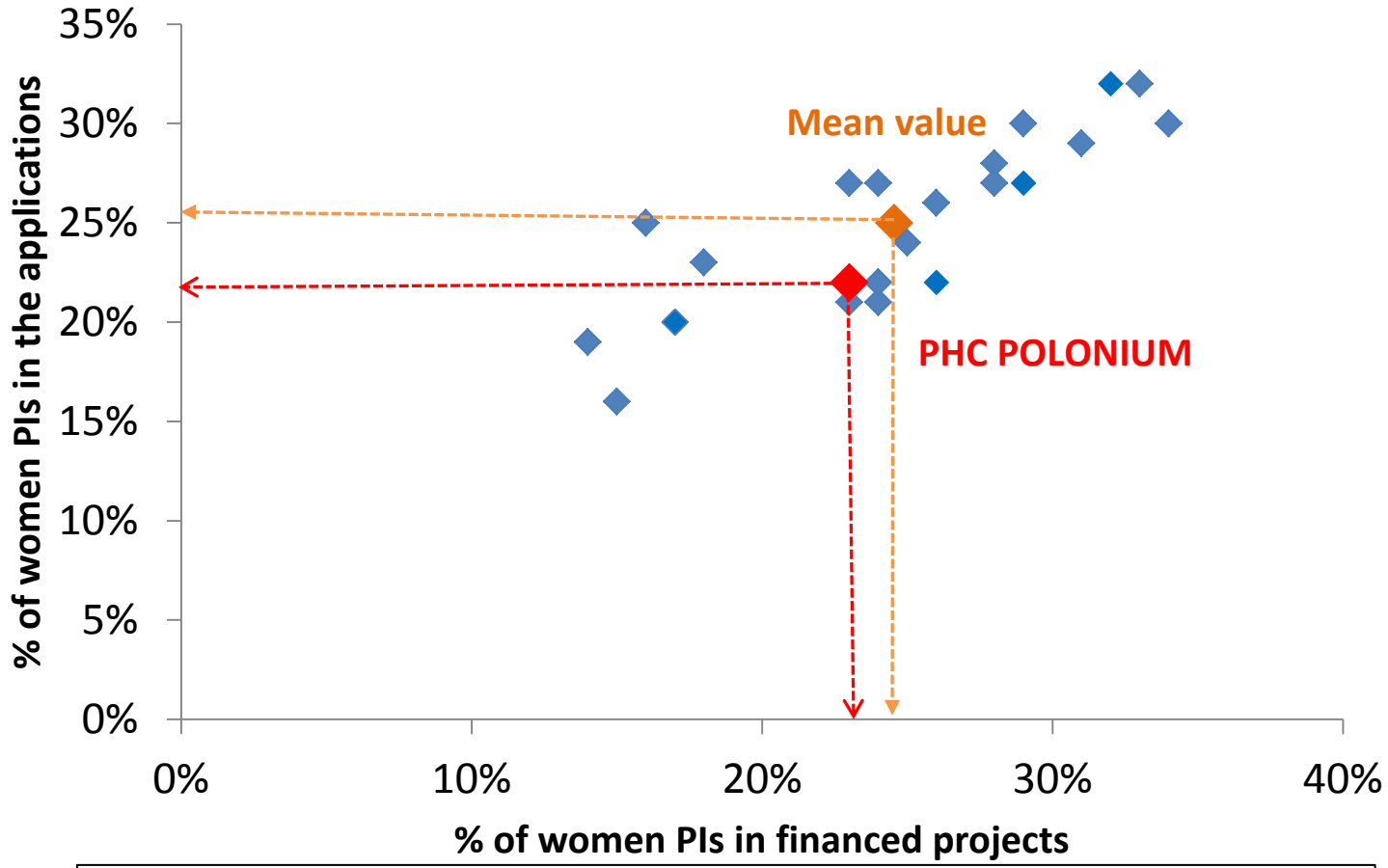
IMPLICATION OF WOMEN (FRANCE)

(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)



% of women PIs in the applications : 22% vs 25% mean

% of women PIs in the selected projects : 23% vs 25% mean

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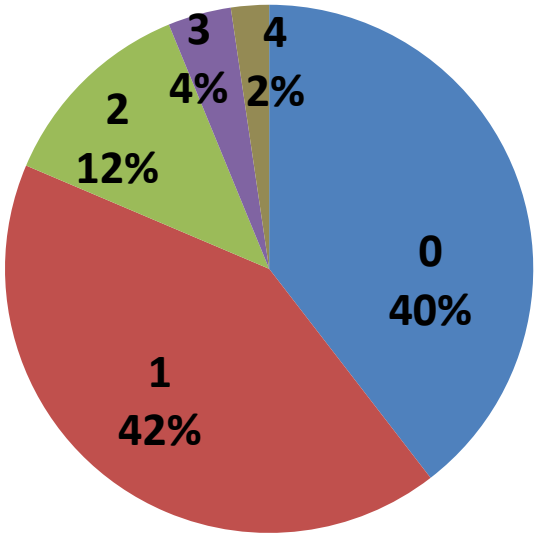
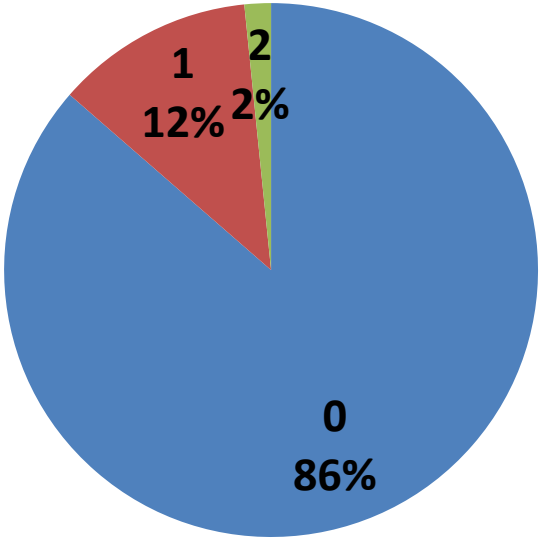
PARTICIPATION OF FRENCH YOUNG RESEARCHERS

Number of PhD students



60% of projects involve at least one PhD student

Number of post-doctoral researchers



14% of projects involve at least one post-doctoral researcher

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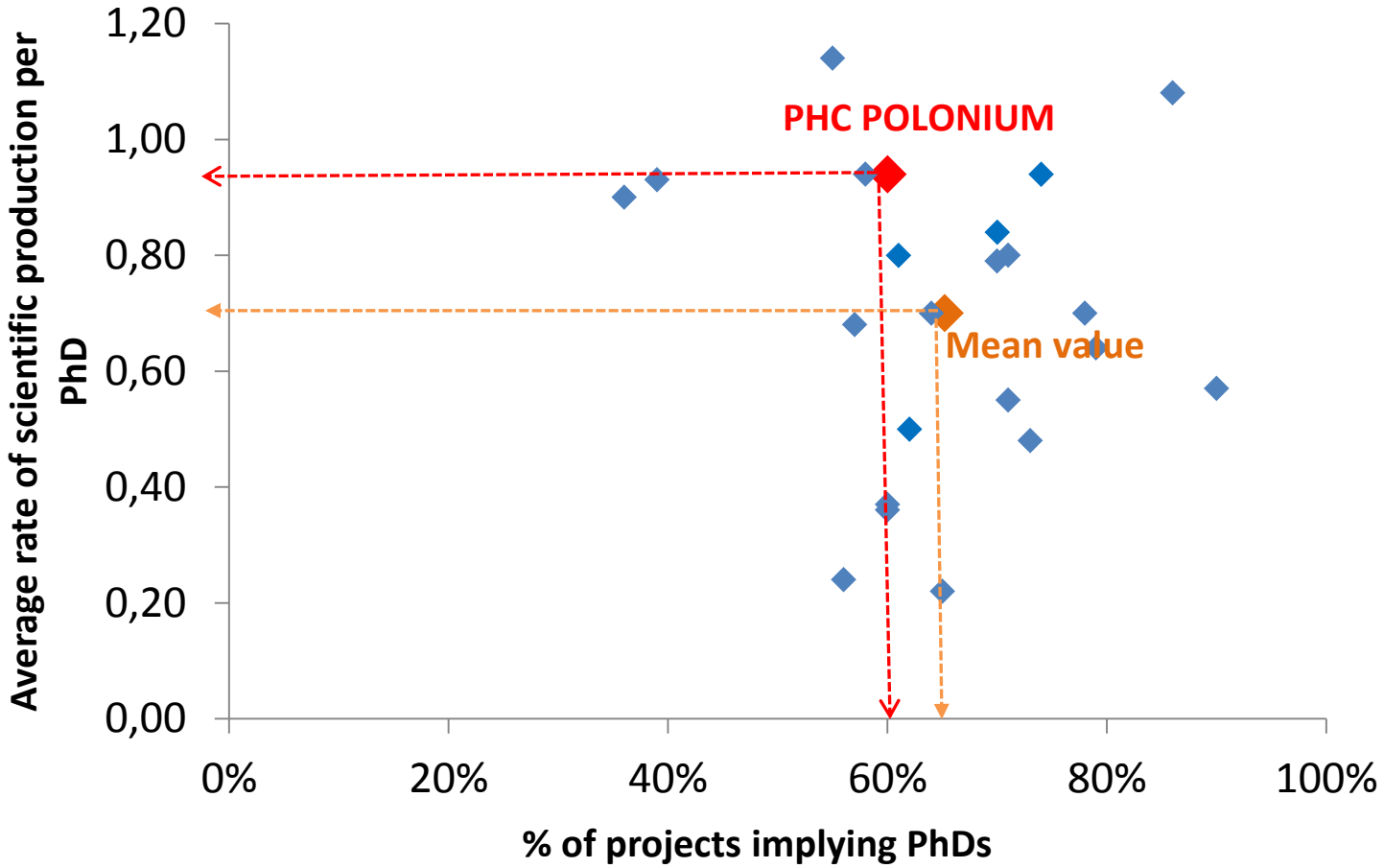
IMPLICATION OF PhDS

(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)

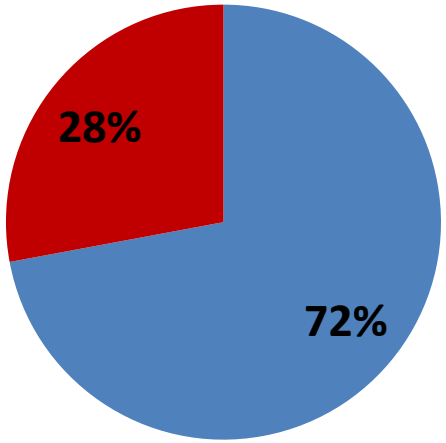


% of projects implying PhDs : 60% vs 65% mean
Average rate of scientific production per PhD : 0,94 vs 0,70 mean

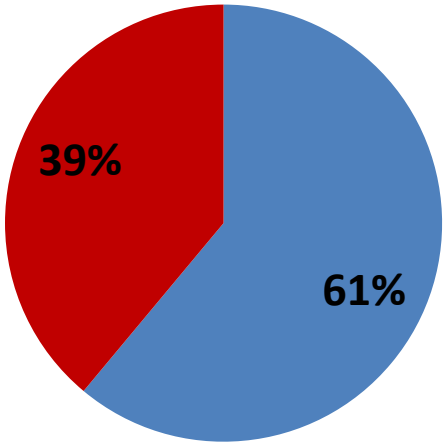
MOBILITY

MOBILITY : GENDER DISTRIBUTION

France → Poland



Poland → France



Men Women

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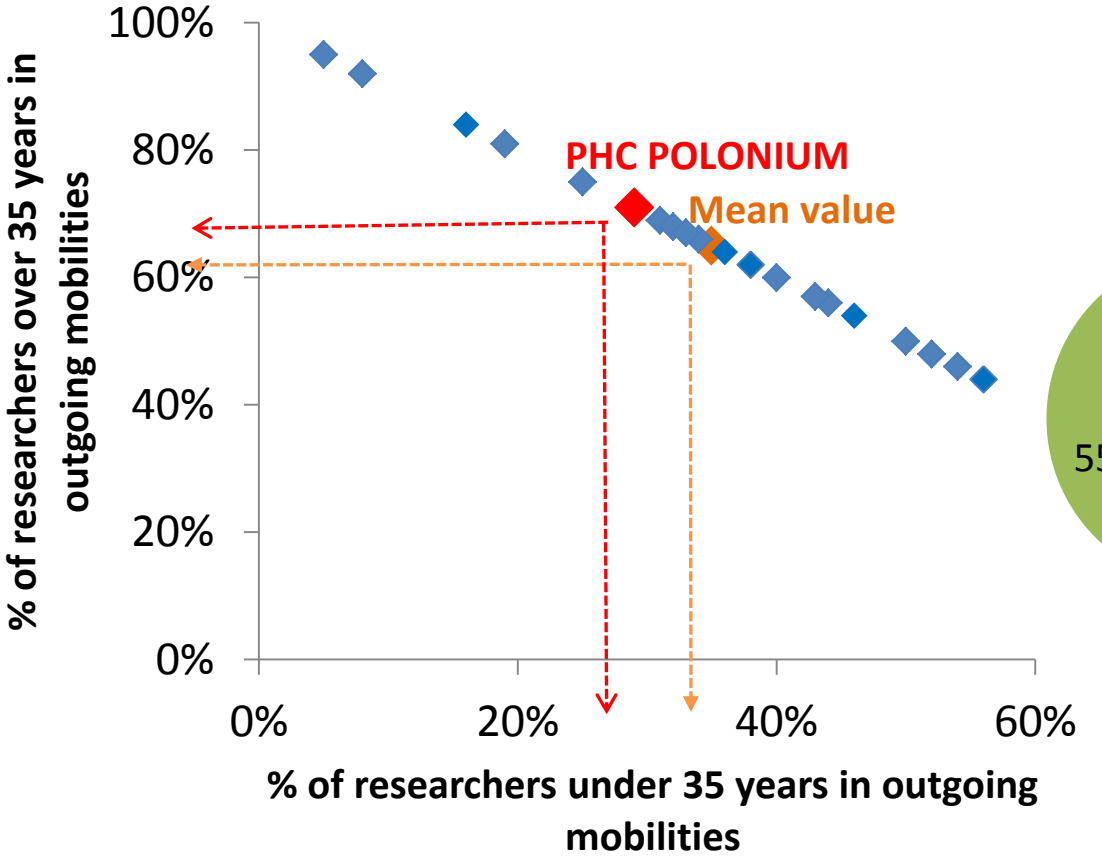
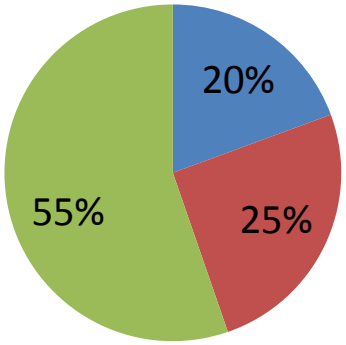
MOBILITY FRANCE – POLAND

(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)





carried out by PhD students (<28 years old)

carried out by post-doctoral researchers (28<=age<=35 years old)

carried out by permanent researchers (>35 years old)

% of french young researchers in outgoing mobilities : 29% vs 35% mean

% of polish young researchers in incoming mobilities : 45%

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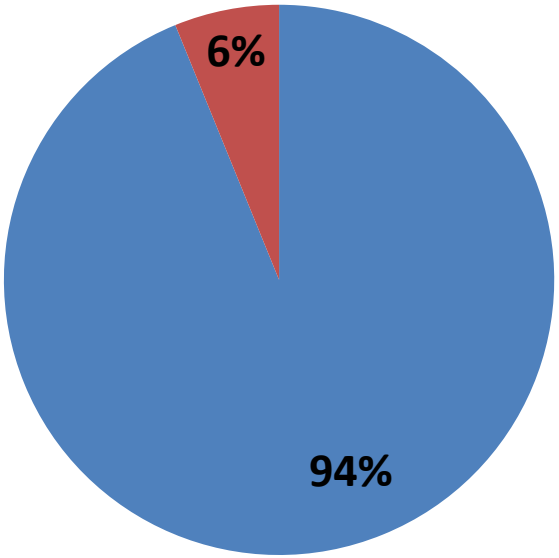
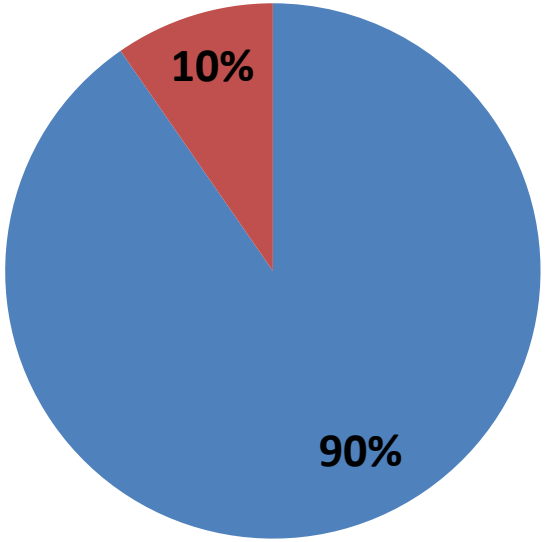
MOBILITY : DURATION

France → Poland



Poland → France



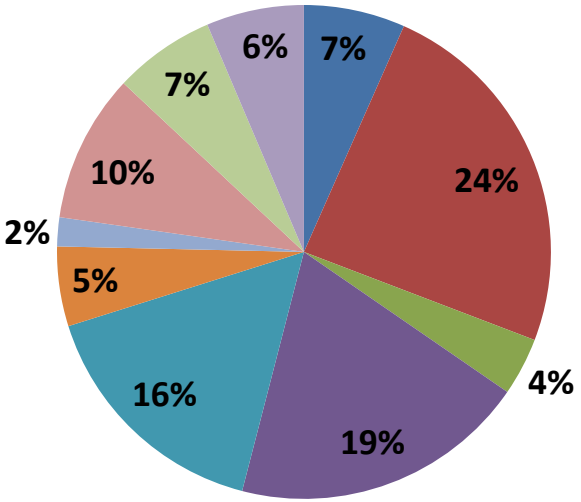
< 15 days

between 15 days and 3 months

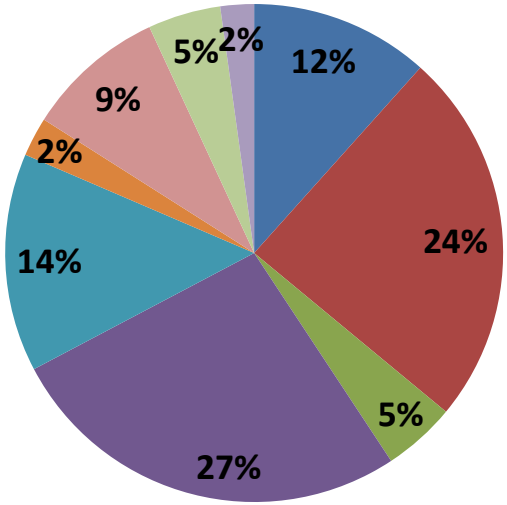
SCIENTIFIC PRODUCTION

SCIENTIFIC OUTPUT (1/2)

Number of funded projects : 422



Percentage of copublications



- Mathematics
- Physics
- Marine/Earth/Planet Sciences
- Chemistry
- Biology and Health
- Humanities
- Social Sciences
- Engineering Sciences
- Information Technology
- Agronomy/Ecology

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SCIENTIFIC OUTPUT (2/2)

Data from 126 funded projects

	Number of financed projects in the survey	Average number of co-publications per project
Mathematics	32	3,6
Physics	67	2,5
Marine/Earth/Planet Sciences	13	2,2
Chemistry	73	2,6
Biology and Health	39	2,3
Humanities	7	1,8
Social Sciences	0	0,0
Engineering Sciences	25	2,5
Information Technology	13	1,9
Agronomy / Ecology	6	0,9
TOTAL	**275**	**2,4**

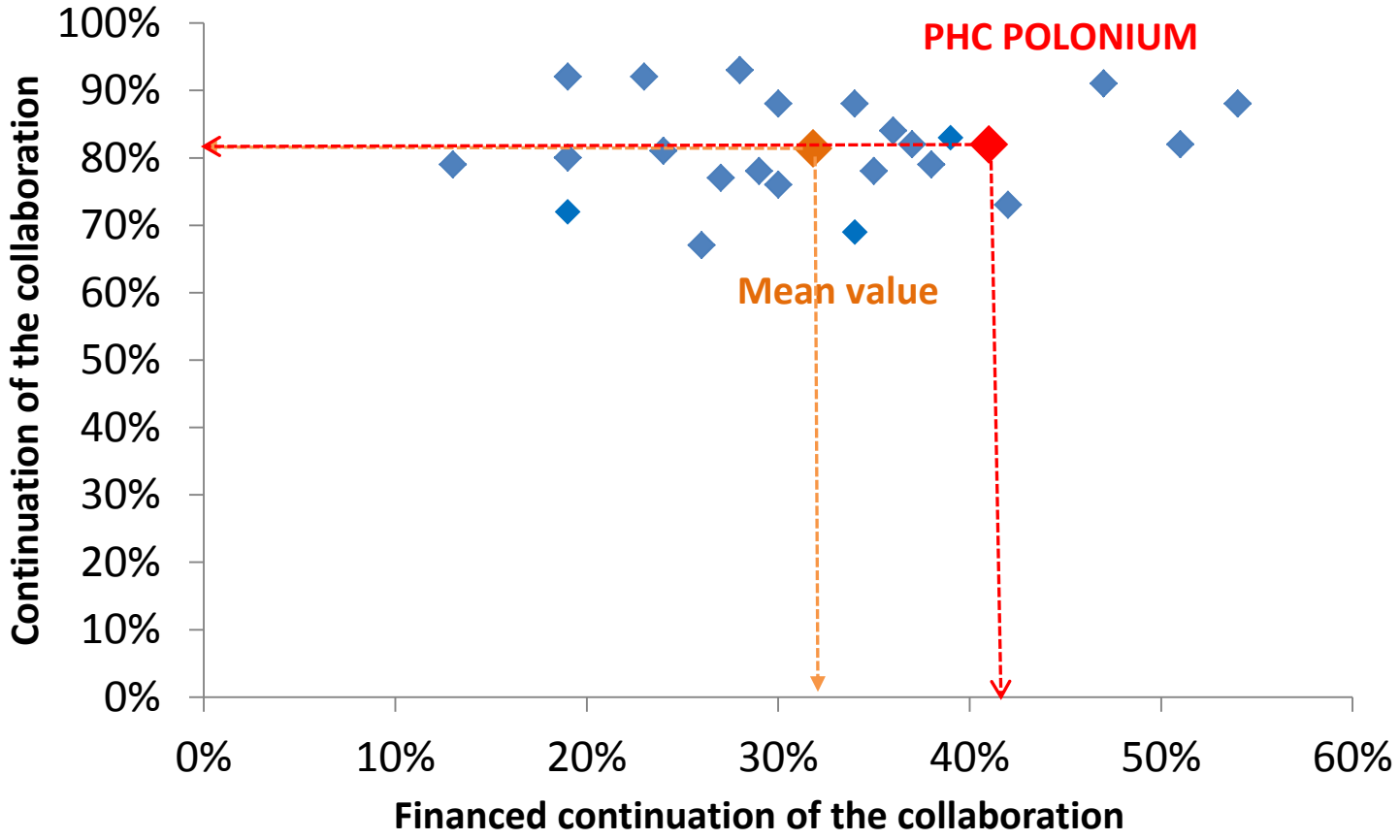
Overall average annual number of copublications per project : 1,2 vs 0,9 mean

70% of funded projects led to one co-publication at least

34% of copublications include at least 1 PhD or PostDoc

WHAT HAPPENS AFTER A POLONIUM PROJECT ?

CONTINUATION OF THE COLLABORATION (1/5)
(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)



Continuation of the collaboration : 82% vs 81% mean
Continuation of the collaboration with other sources of subvention : 41% vs 32% mean

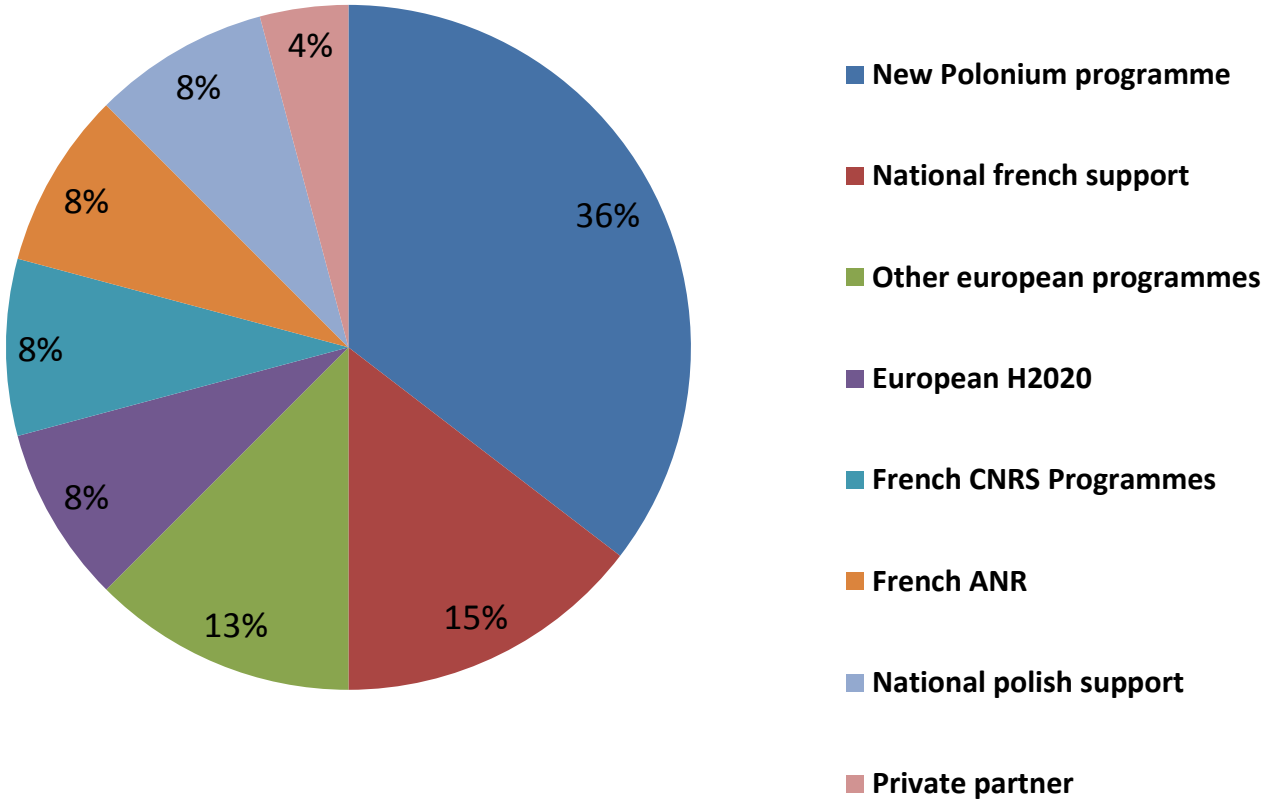
CONTINUATION OF THE COLLABORATION (2/5)

82% of the collaborations continued after the Polonium project

Which activities?	
Co-publications	74%
Collaborative research	71%
Researchers mobility	57%
Joint participation to conferences	43%
PhD mobility	32%
Co-organisation of scientific events	21%
Joint participation to PhD thesis jury	18%
Master students mobility	17%
Others	7%

CONTINUATION OF THE COLLABORATION (3/5)

What kind of funded collaborations after the Polonium project ?



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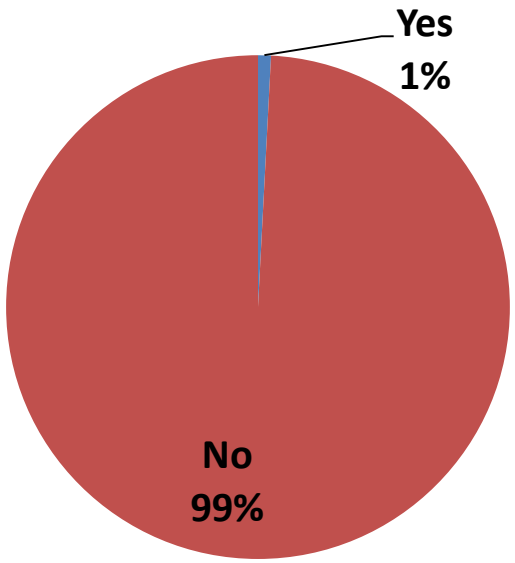
CONTINUATION OF THE COLLABORATION (4/5)

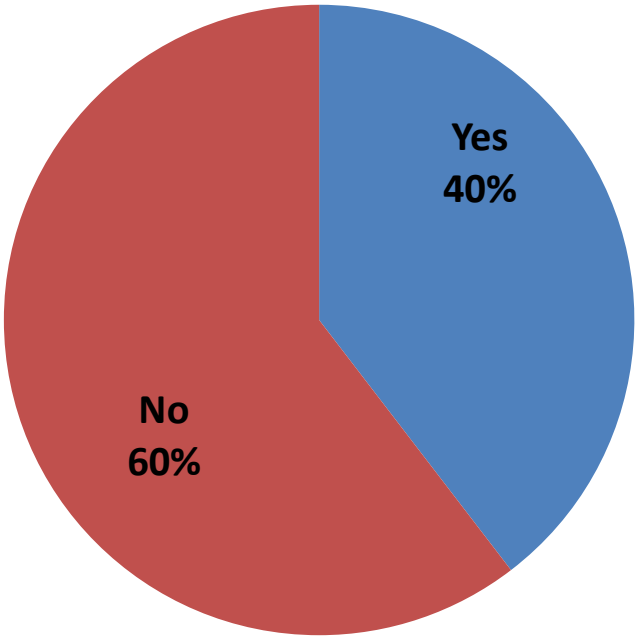
Has the Polonium project led to the set-up of joint structures?



1 CNRS IRN (International Research Network)

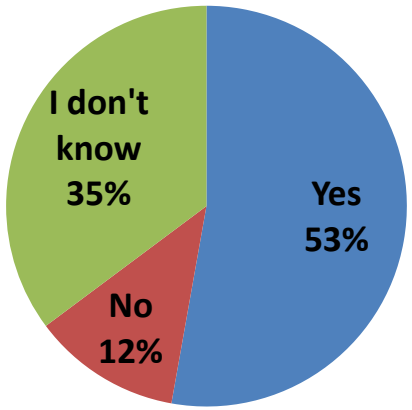
CONTINUATION OF THE COLLABORATION (5/5)

Has the French-Polish collaboration involved new partners?

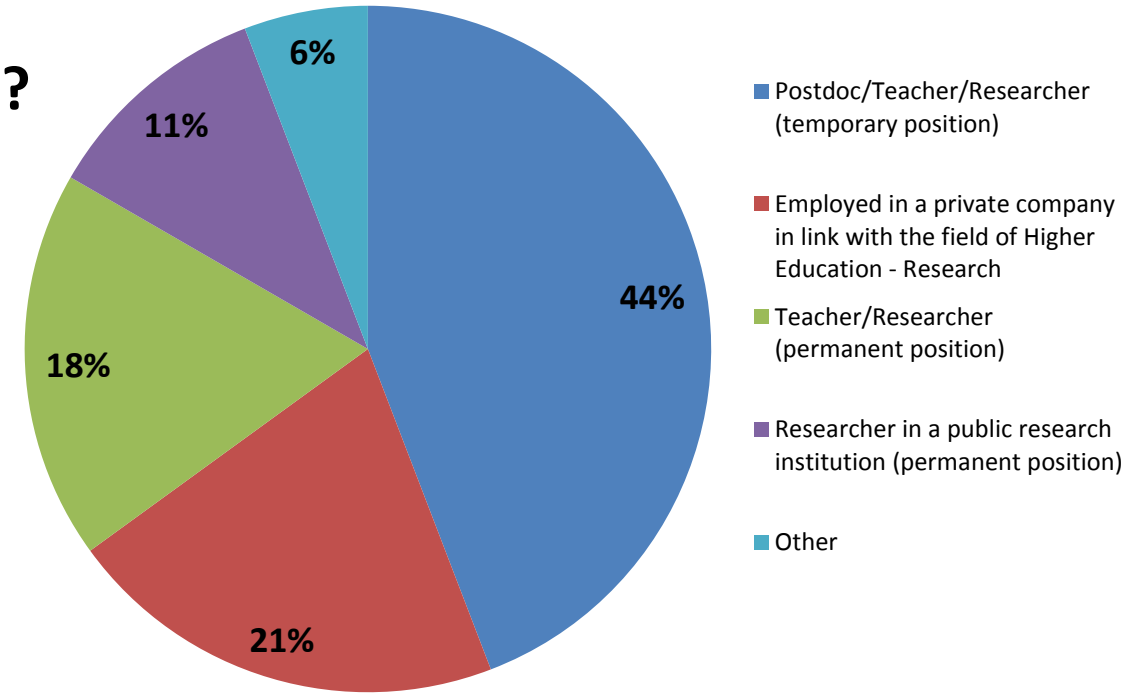


IMPACT ON YOUNG RESEARCHERS' CAREER (1/2)

Was young researchers career impacted by the Polonium programme ?

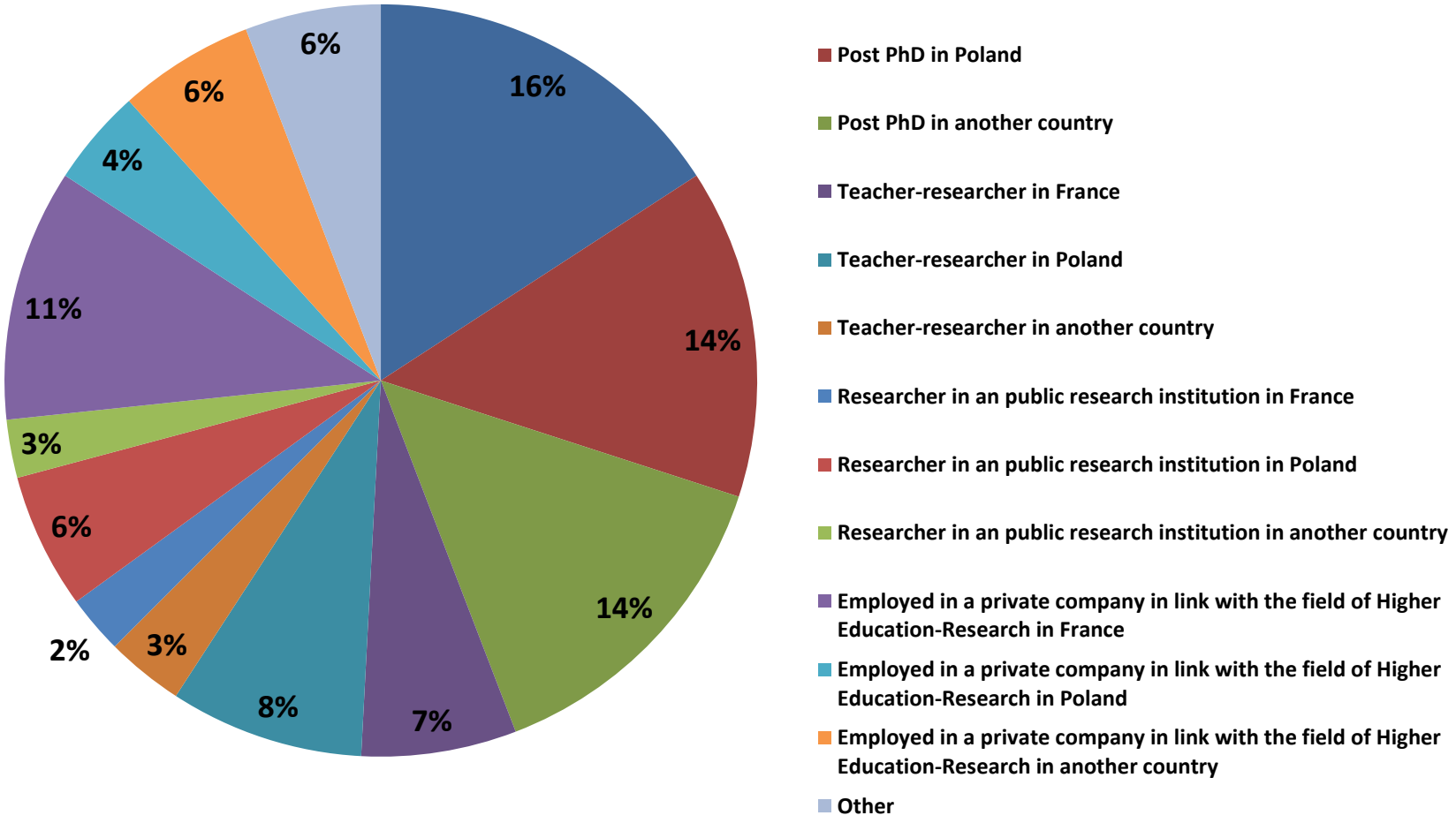


Type of impacts



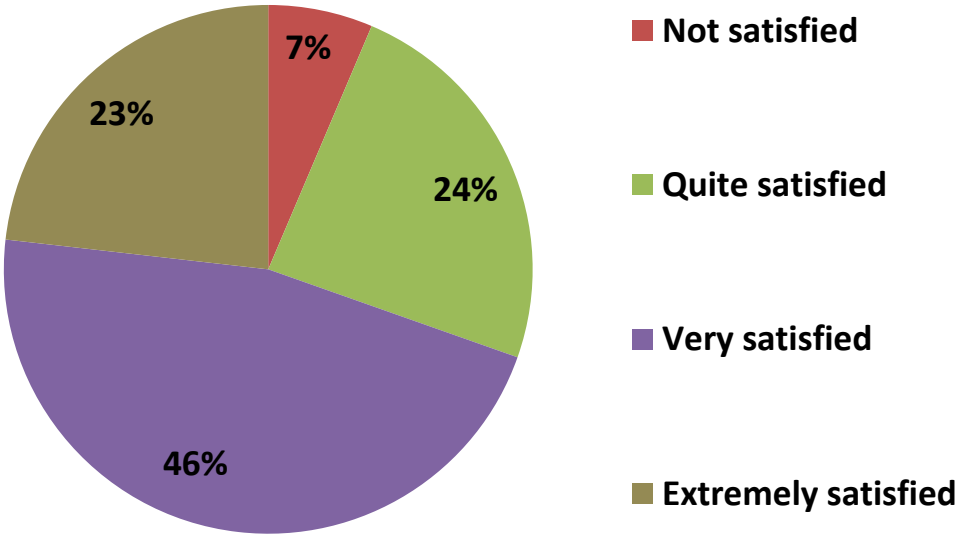
IMPACT ON YOUNG RESEARCHERS' CAREER (2/2)

Type of impacts



GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME

93% of French principal investigators are satisfied



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GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME (2/3) POSITIVE COMMENTS

SURVEY OF 125 RESPONSES

Strengths of this program	Number of occurencies (out of 125)	% (out of 125)
Allows an international scientific collaboration	104	81%
Simplicity of the application process	97	75%
Allows the mobility of the researchers	95	74%
Allows exchanges which allow a scientific production	75	58%
Allows the training of the young researchers	71	55%
Easy implementation (administrative flexibility)	55	43%
Allows a knowledge of the country partner	54	42%
Financial means sufficient for the expenditure of mobility	39	30%
Good scientific appreciation compared to the financial investment	32	25%
Is used as starting for raising other funds	30	23%
Duration of mobilities adapted to the needs	20	16%
Sufficiently long duration of the projects	13	10%
Transparency of the methods for selecting the projects	12	9%
Others	0	0%
Nombre total d'occurences	*697*	

GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME (3/3) NEGATIVE COMMENTS

SURVEY OF 119 RESPONSES

Weaknesses of this program	Number of occurencies (out of 119)	% (out of 119)
No funding of the operation and capital expenditures	69	53%
Too short duration of the projects	44	34%
Difficult perpetuation of collaboration	32	25%
Lack of transparency on the methods of projects selection	30	23%
Too short duration of mobilities	29	22%
Financial means insufficient for the expenditure of mobility (per diem)	23	18%
Insufficient communication on the evaluation's results	22	17%
Too low number of mobilities	18	14%
Financial means insufficient for the expenditure of mobility (transport)	12	9%
Other	10	8%
Administrative heaviness of the missions management	6	5%
Heaviness of the process of applications	6	5%
Too long duration of mobilities	0	0%
Number of occurencies	*301*	

PRELIMINARY CONCLUSIONS

Preliminary conclusions suggest that the funding scheme has efficiently contributed to create (or to maintain) fruitful and long-term cooperation, despite the relatively low financial support, which is to be considered as "seed money".

- **Polonium programme is an opportunity to initiate new collaborations (67%)**
- **Good average rate of scientific production per PhD (0,94)**
- **Only 60% of the projects involve at least one PhD student**
- **French PIs young researchers are only 22 % of laureates**
- **Too many applications to Polonium programme after a Polonium funding (36%)**
- **Average co-publications rate including at least 1 PhD or PostDoc is too low (34% vs 41% mean).**

PRELIMINARY RECOMMENDATIONS

RECOMMENDATIONS

- Explore new financial supports after the Polonium funding
- Promote co-publications (30% of projects with no co-publications)
- Promote number of co-publications per project
- Encourage PIs to increase the implication of PhDs
- Encourage the mobility of young researchers (29% of all mobilities)
- Promote REAL new cooperations
- Consider a “POLONIUM +” to help PIs at the end of their financing to construct an european application ?

French national ministries (MESRI / MEAE) will provide a complete analysis of the survey. It will be sent to the recipients of the funding and participants in this symposium.

CONTACTS

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Thank you for your attention