FRANCE – EGYPT

Scientific impact of the programme IMHOTEP (2009-2020)

MESRI-DAEI / MEAE

2020

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

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RÉPUBLIQUE FRANÇAISE
MINISTÈRE
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DE LA RECHERCHE
ET DE L'INNOVATION

GENERAL PRESENTATION OF THE PROGRAMME

Creation : 2005

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

Total budget (France + Egypt) : around 250 000 € / year

>> including budget from the French part : around 105 000 € / year

>> including budget from the Egyptian part : around 145 000 € / year

Average budget per project (France + Egypt) : around 11 600 € / year

Number of new funded projects per year : around 10

From 2009-2020 :

447 applications submitted

153 projects funded

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DATA SOURCES

Campus France (2009-2020)

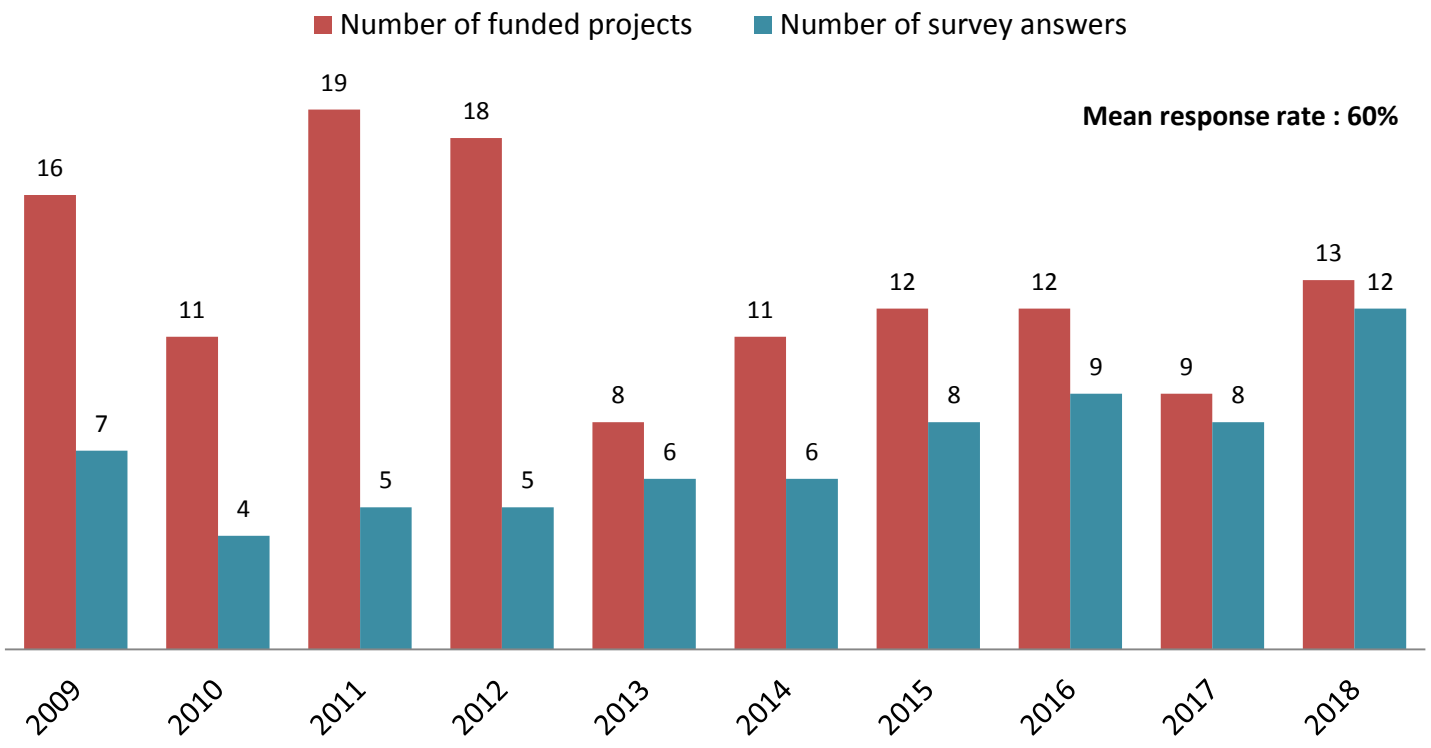
- Information about the PHC Imhotep applications
- List of mobilities (from France to Egypt and from Egypt to France)

Survey (2009-2018)

- Target : French Principal Investigators of selected projects between 2009 and 2018
- Survey duration : 10 weeks between april and may 2020
- **60%** response ratio (70 respondents for 115 valid emails)

ANSWERS TO THE SURVEY

Average response rate to the survey : 60% (70 answers)

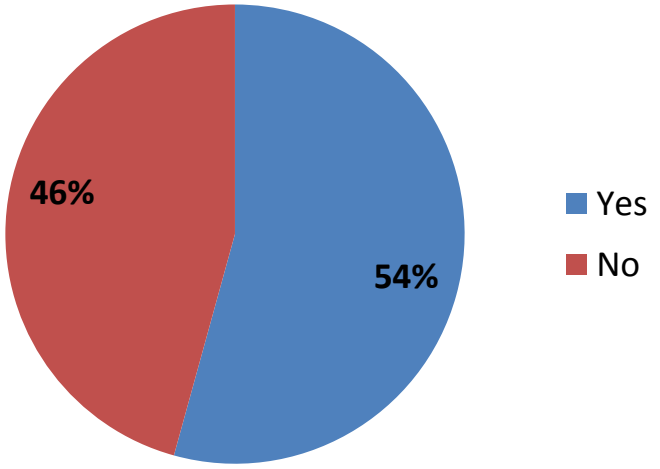


129 funded projects between 2009 and 2018, 115 valid email adresses

2009-2020
Key Points

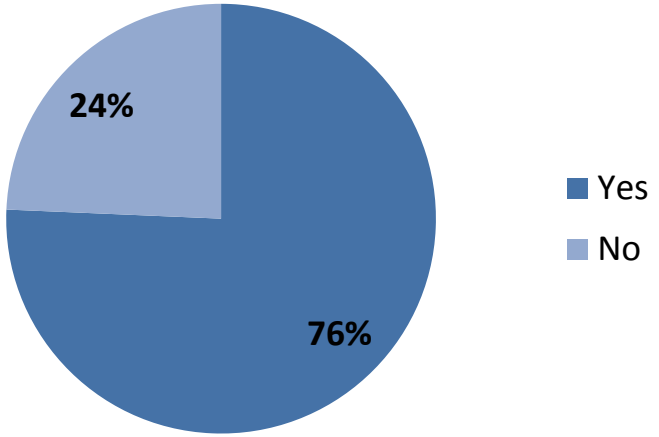
BEFORE THE IMHOTEP PROJECT (1/2)

Did you already cooperate with Egypt in the past ?



Data from 70 responses

If yes, was it with the same partner?



Data from 37 responses

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BEFORE THE IMHOTEP PROJECT (2/2)

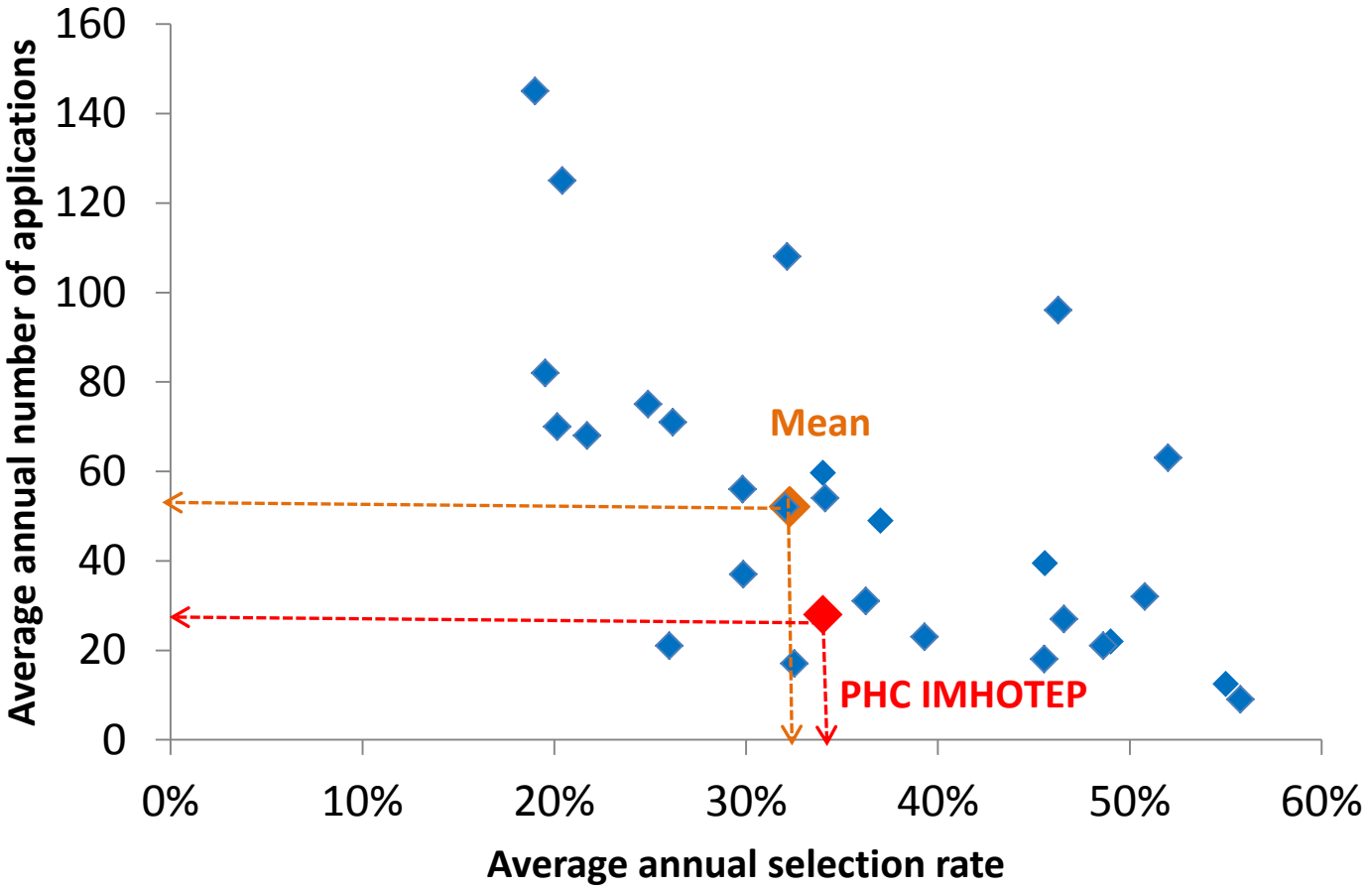
With which scientific collaboration programme ?	
PHC Imhotep	36%
Others (postdoc, publications, meetings…)	23%
French government grants (BGF)	13%
STDF-IRD programme	9%
French National Research Agency (ANR)	6%
Egyptian institutions	4%
Private sector	4%
FP7 European projects	4%

Data from 32 responses

Plus 33 previous cooperations based on other exchanges (co-publication, meetings, joint PhD…)

NUMBER OF APPLICATIONS VS SELECTION RATE

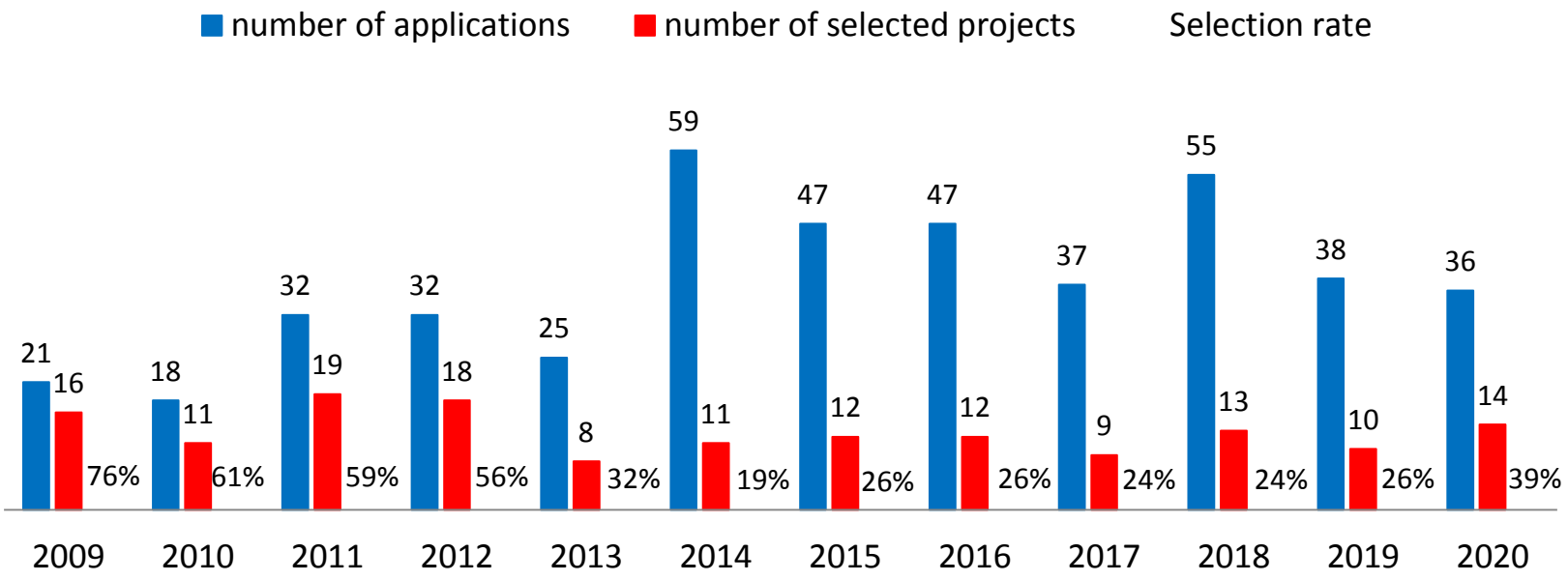
(COMPARISON BETWEEN 29 DIFFERENT BILATERAL PROGRAMMES)



Average selection rate for 2009-2020 : 34% vs 32% mean
Average annual number of applications 2009-2020 : 28 vs 52 mean

NUMBER OF APPLICATIONS AND SELECTION RATE

Average selection rate from 2009-2020: 34%



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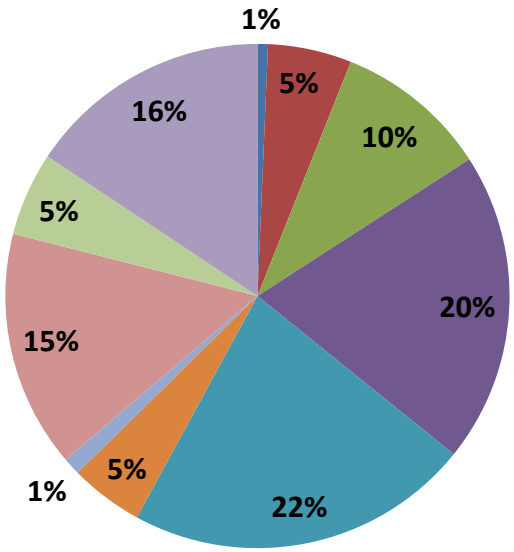
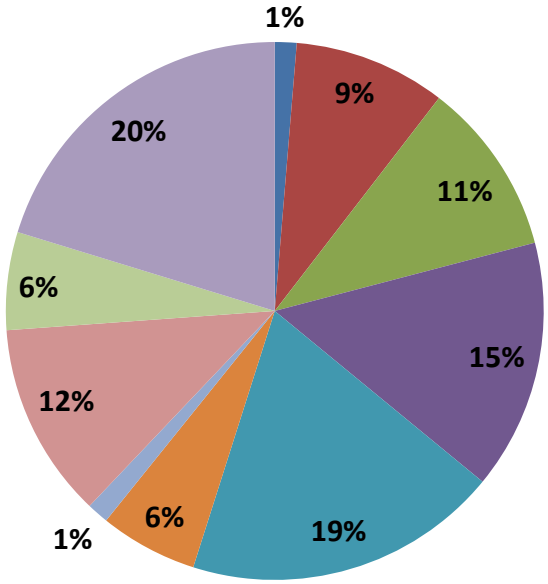
SCIENTIFIC DOMAINS OF PROJECTS

Number of applications : 447



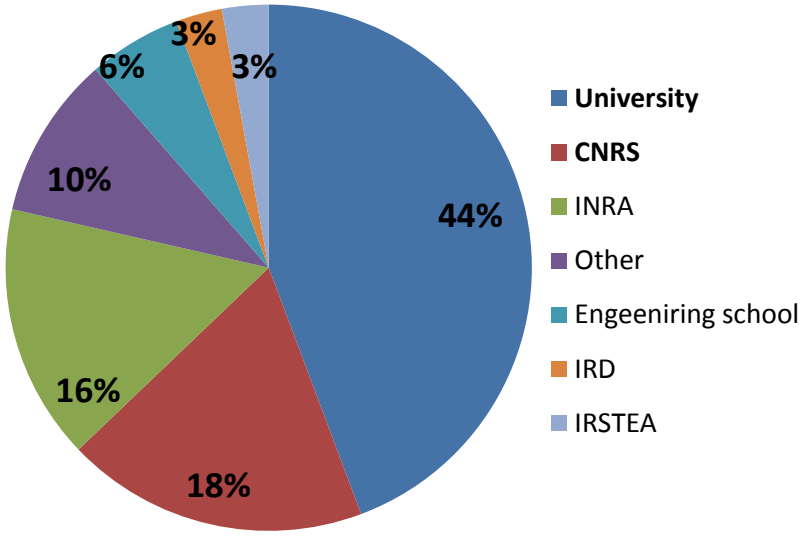
Number of funded projects : 153



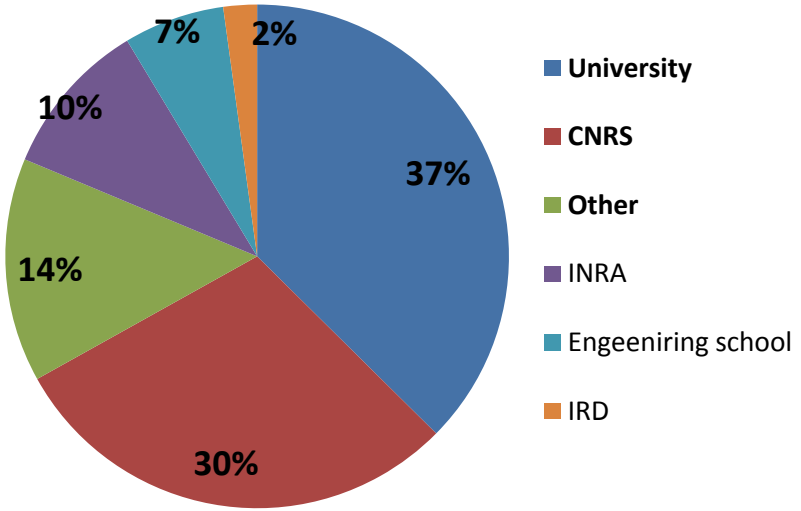
Mathematics
Physics
Marine/Earth/Planet Sciences
Chemistry
Biology and Health
Humanities
Social Sciences
Engineering Sciences
Information Technology
Agronomy/Ecology

FRENCH PARTICIPATING INSTITUTIONS

PI's employers



Laboratories authorities



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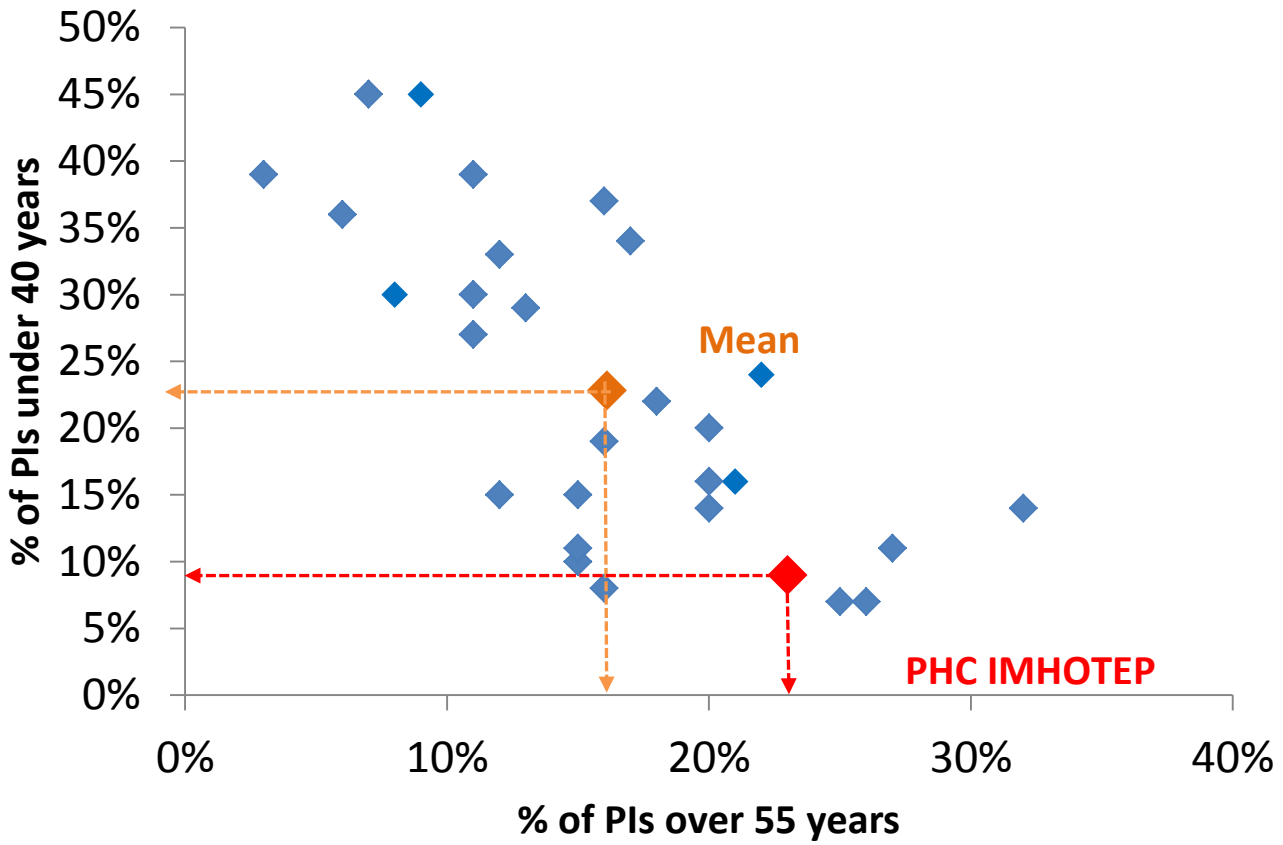
Data from 70 responses

AGE OF PRINCIPAL INVESTIGATORS (PI)
(COMPARISON BETWEEN 29 DIFFERENT BILATERAL PROGRAMMES)



PIs under 40 years : 9% vs 23% mean
PIs over 55 years : 23% vs 16% mean
68% of the PIs are between 40 and 55 years

Data from 70 responses

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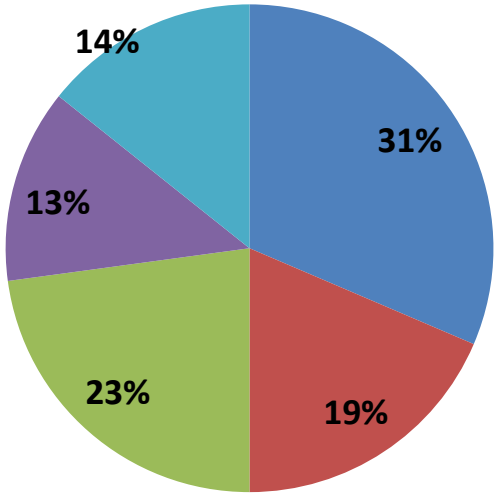
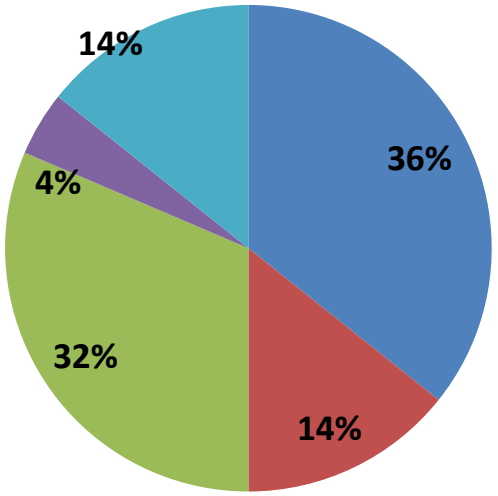
FRENCH PIS (PRINCIPAL INVESTIGATORS) : STATUS

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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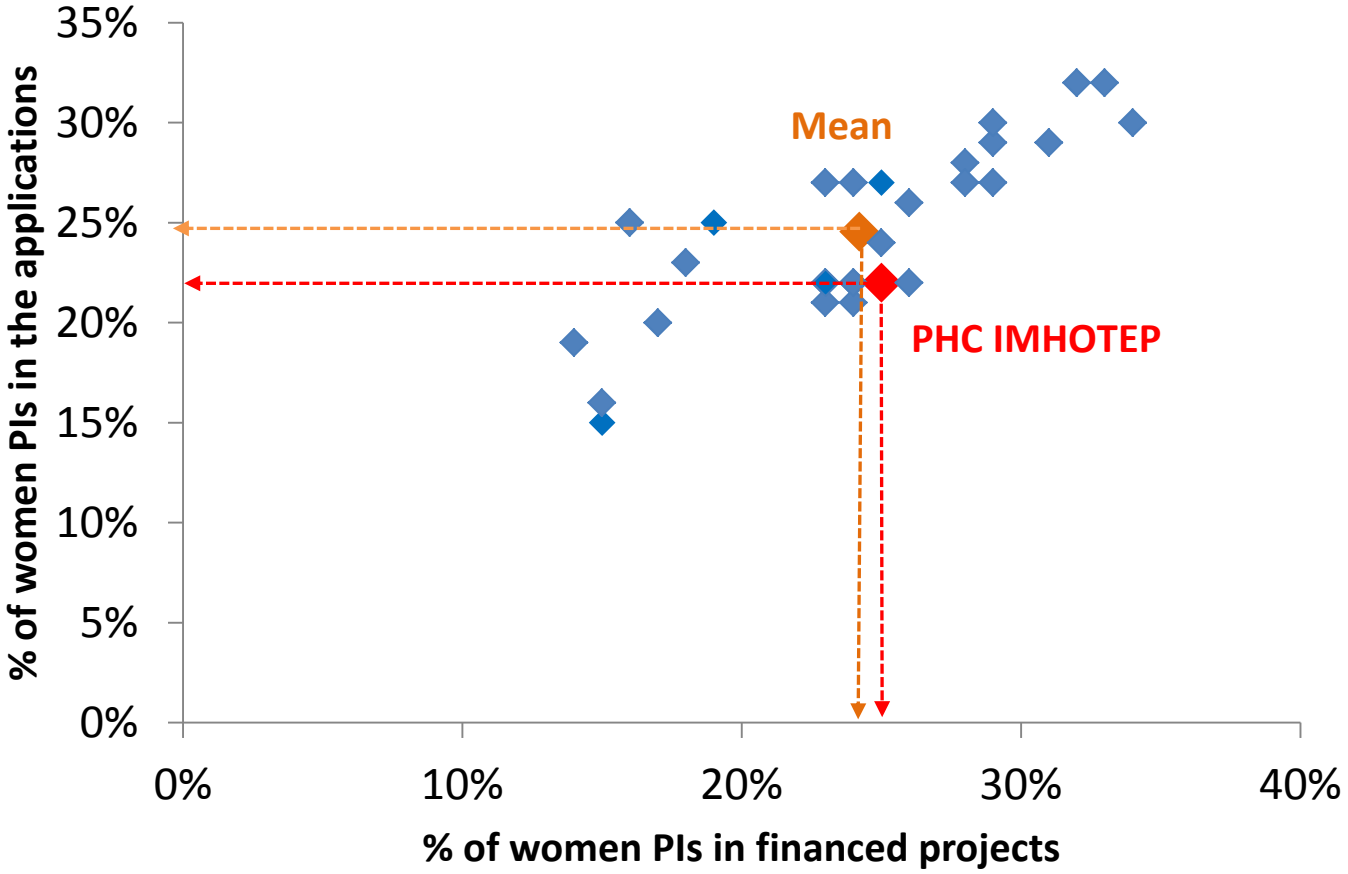
Data from 70 responses

IMPLICATION OF WOMEN (FRANCE)

(COMPARISON BETWEEN 29 DIFFERENT BILATERAL PROGRAMMES)



% of women PIs in the applications : 22% vs 25% mean (total of 447 applicants)
% of women PIs in the selected projects : 25% vs 24% mean (total of 153 laureates)

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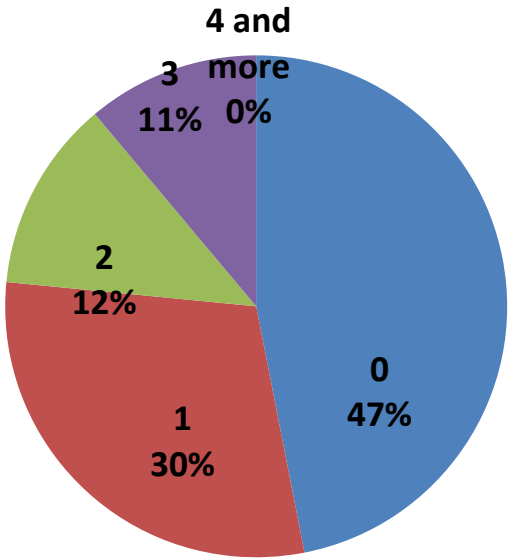
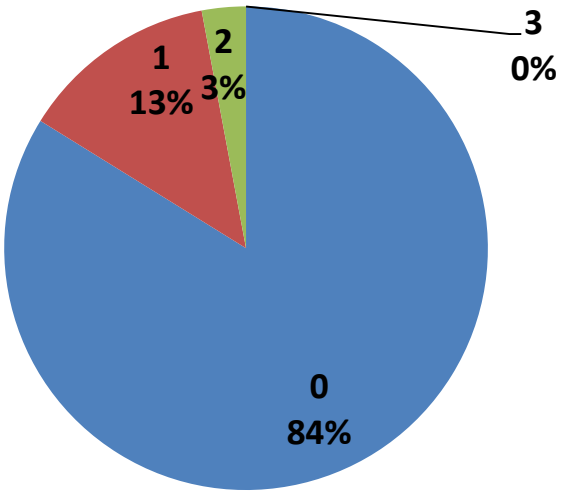
PARTICIPATION OF FRENCH YOUNG RESEARCHERS

Number of PhD students



49% of projects involve at least one PhD student

Number of post-doctoral researchers



19% of projects involve at least one post-doctoral researcher

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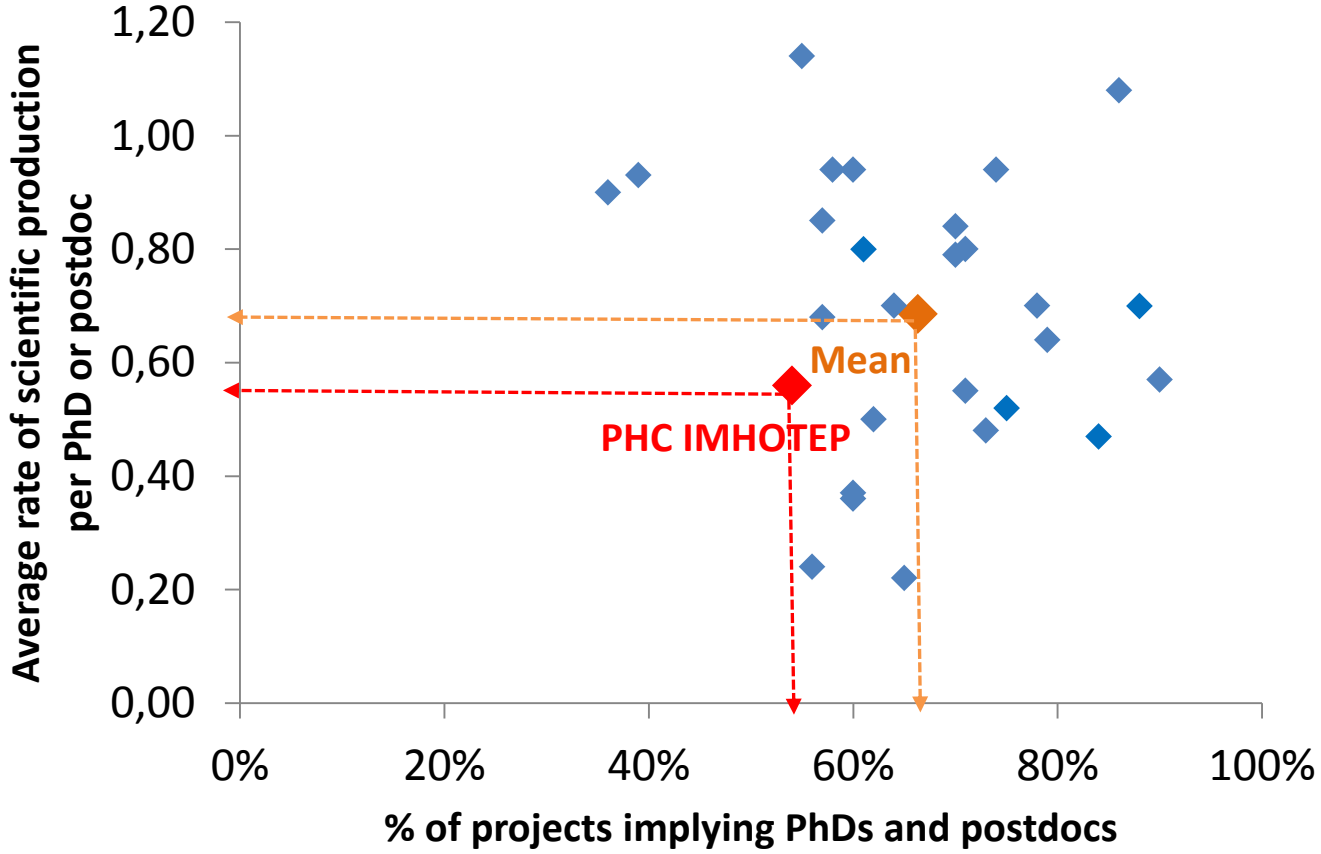
Data from 70 responses

IMPLICATION OF PhDs AND POSTDOCS
(COMPARISON BETWEEN 29 DIFFERENT BILATERAL PROGRAMMES)



% of projects implying PhDs and postdocs : 54% vs 66% mean
Average rate of scientific production per young researcher : 0,56 vs 0,69 mean

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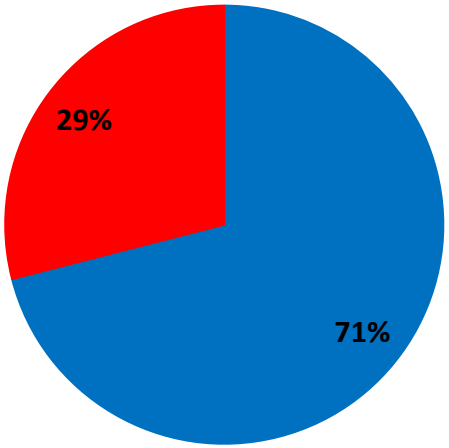
Data from 70 responses

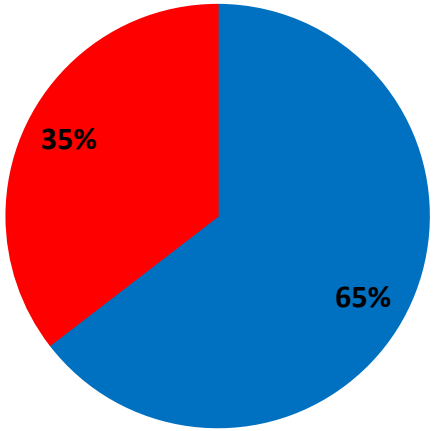
MOBILITY

MOBILITY : GENDER DISTRIBUTION

France → Egypt



Egypt → France



Men Women

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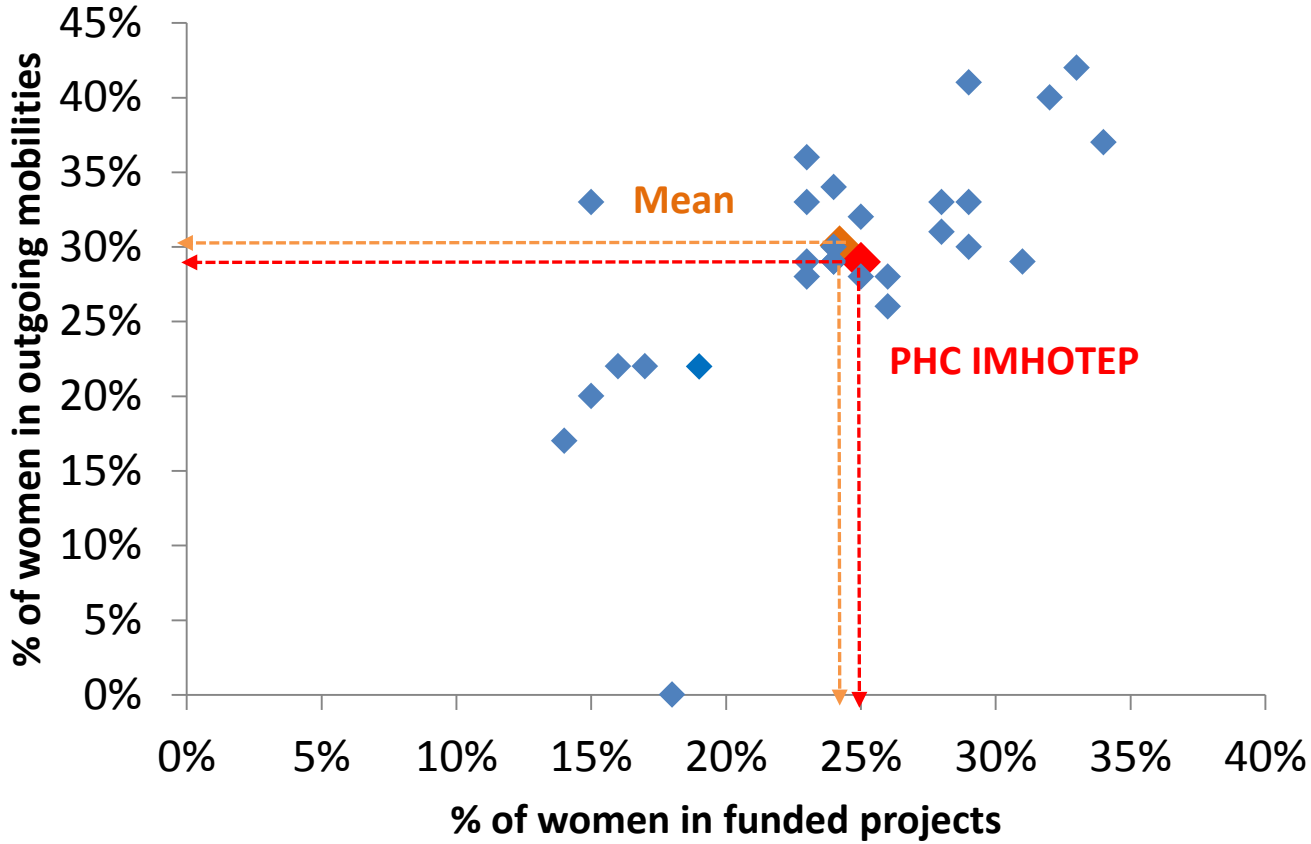
Data from 153 funded projects

WOMEN MOBILITY
FRANCE – EGYPT
(COMPARISON BETWEEN 29 DIFFERENT BILATERAL PROGRAMMES)



% of women researchers in the selected projects : 25% vs 24% mean
% of women researchers in outgoing mobilities : 29% vs 30% mean

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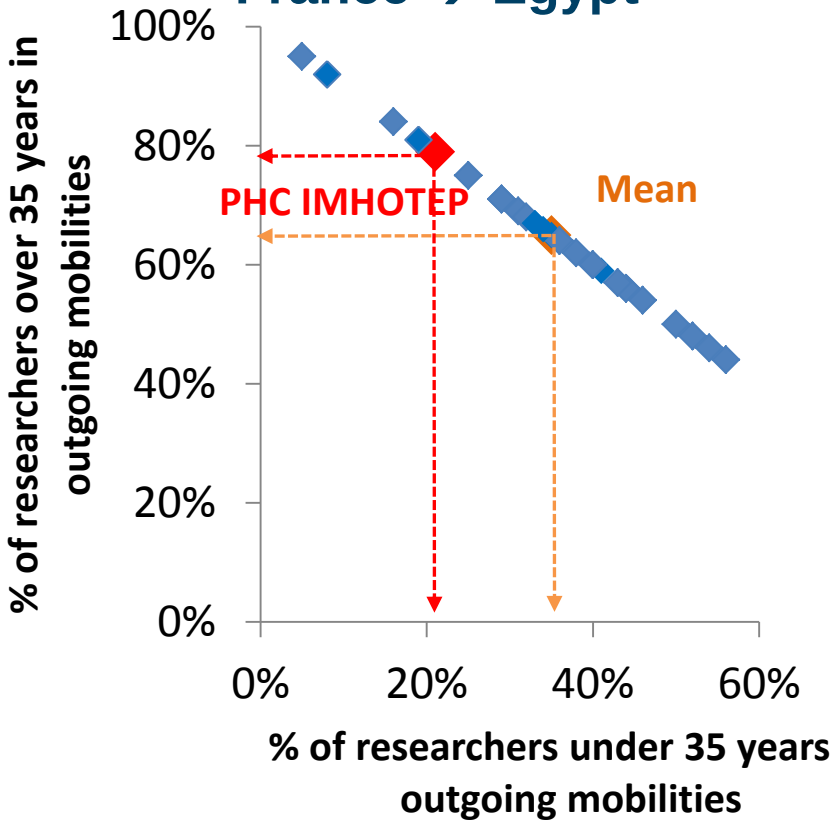
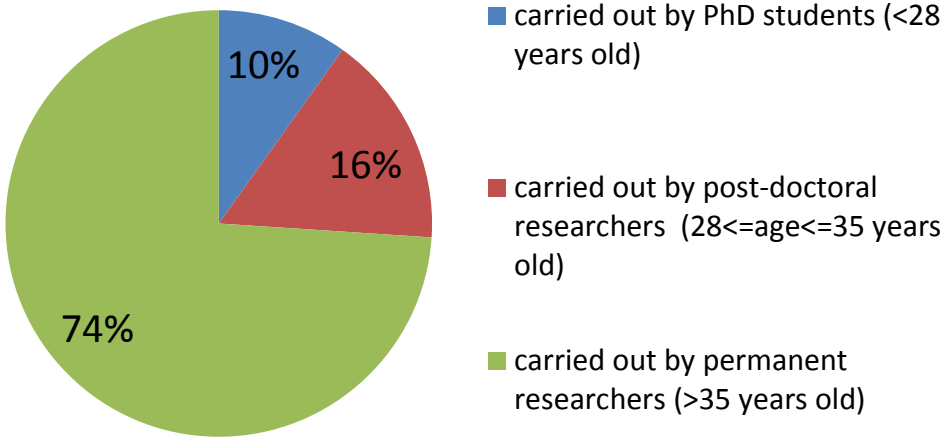
Data from 153 funded projects

YOUNG RESEARCHERS MOBILITY
(COMPARISON BETWEEN 29 DIFFERENT BILATERAL PROGRAMMES)

France → Egypt



Egypt → France



% of french young researchers in outgoing mobilities : 21% vs 35% mean
% of egyptian young researchers in incoming mobilities : 26%

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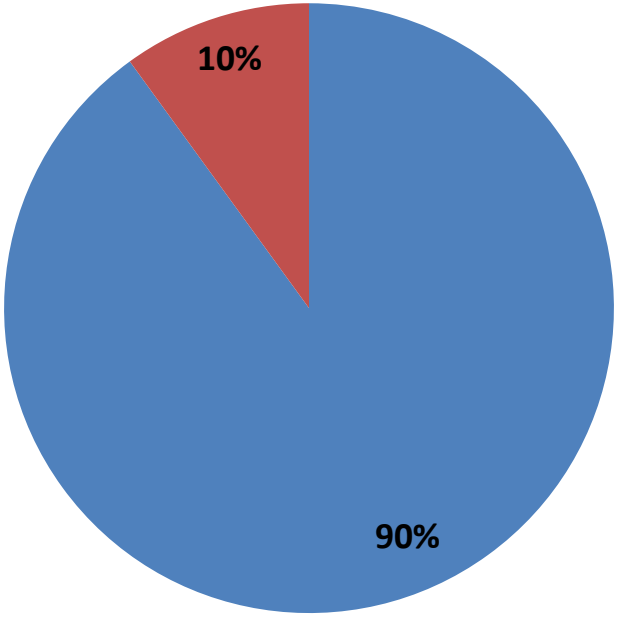
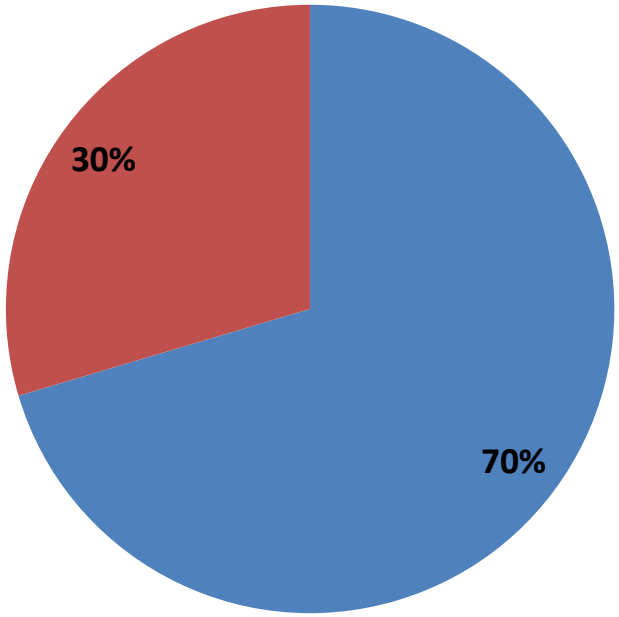
Data from 153 funded projects

MOBILITY : DURATION

France → Egypt



Egypt → France



< 15 days

between 15 days and 3 months

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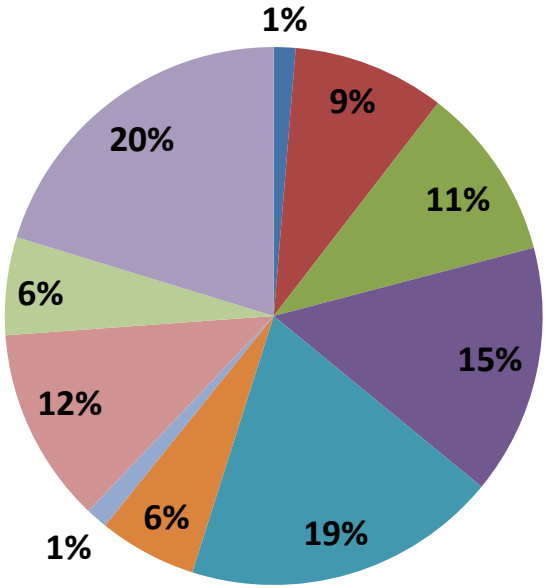
Data from 153 funded projects

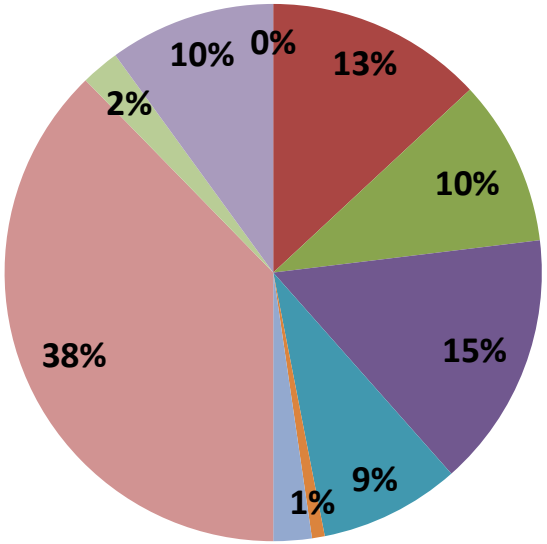
SCIENTIFIC PRODUCTION

SCIENTIFIC OUTPUT (1/2)

Number of funded projects : 153



Percentage of copublications (70 responses)



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

SCIENTIFIC OUTPUT (2/2)

Data from 70 funded projects

	Number of financed projects in the survey	Average number of co-publications per project
Mathematics	0	0
Physics	6	2,8
Marine/Earth/Planet Sciences	8	1,6
Chemistry	14	1,4
Biology and Health	11	1
Humanities	2	0,5
Social Sciences	1	3
Engineering Sciences	7	7
Information Technology	2	1,5
Agronomy / Ecology	19	0,7
TOTAL	**70**	**1,9**

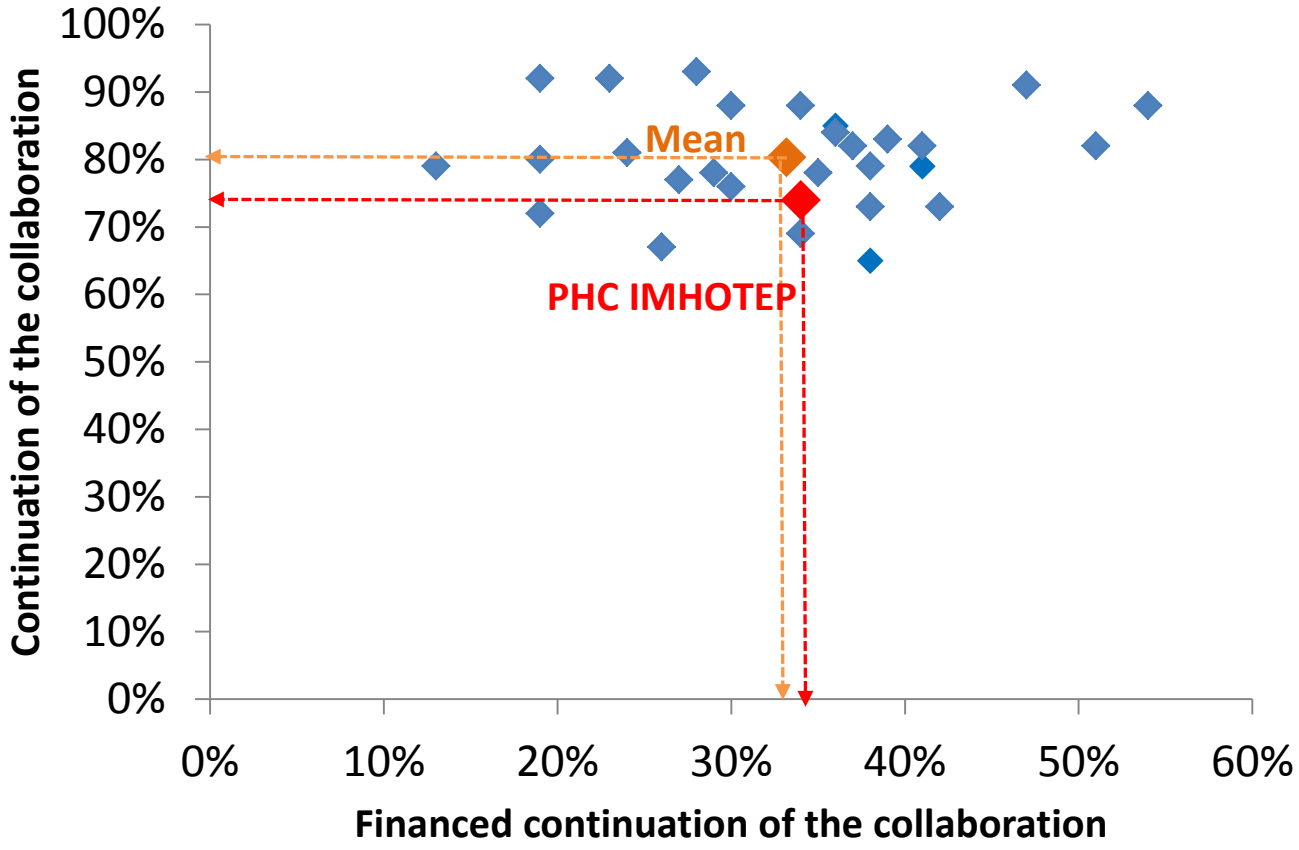
Overall average annual number of copublications per project : 0,95 vs 0,92 mean

64% of funded projects led to one co-publication at least (general mean : 63%)

26% of copublications include at least 1 PhD or PostDoc (general mean 42%)

WHAT HAPPENS AFTER A IMHOTEP PROJECT ?

CONTINUATION OF THE COLLABORATION (1/5)
(COMPARISON BETWEEN 29 DIFFERENT BILATERAL PROGRAMMES)



Continuation of the collaboration : 74% vs 80% mean
Continuation of the collaboration with other sources of subvention : 34% vs 33% mean

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Data from 68 responses

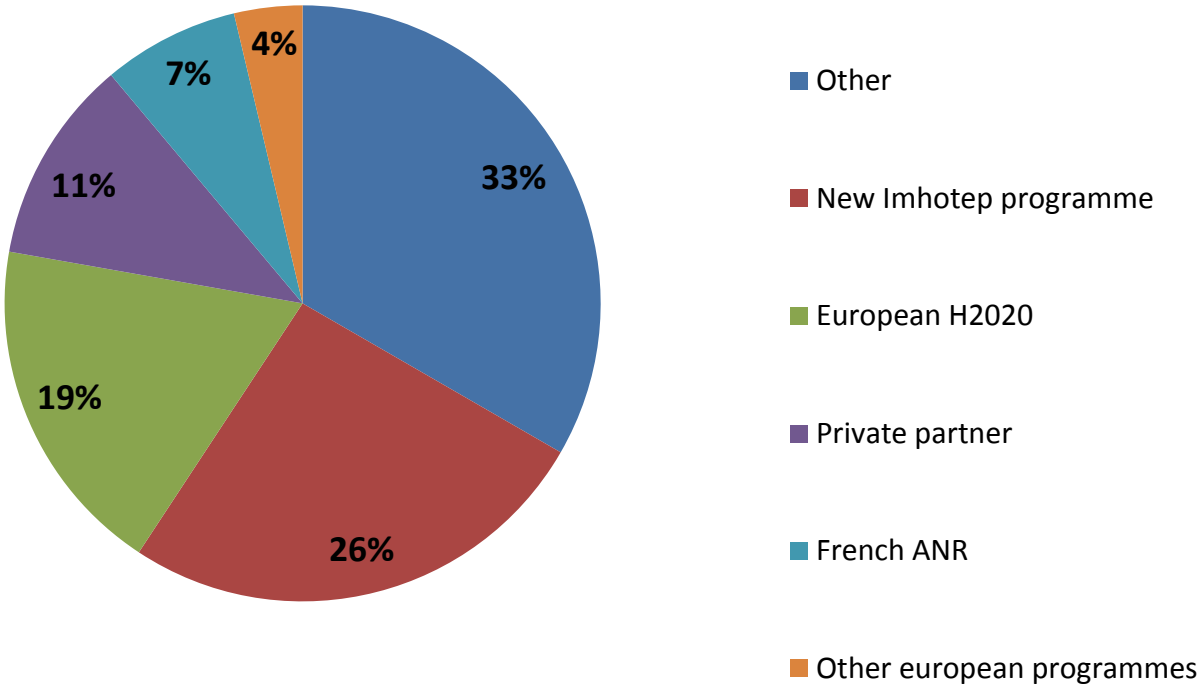
CONTINUATION OF THE COLLABORATION (2/5)

74% of the collaborations continued after the Imhotep project

Which activities?	
Co-publications	66%
Collaborative research	58%
Researchers mobility	42%
Joint participation to conferences	32%
Co-organisation of scientific events	16%
PhD mobility	14%
Others	14%
Joint participation to PhD thesis jury	12%

CONTINUATION OF THE COLLABORATION (3/5)

What kind of funded collaborations after the Imhotep project ?



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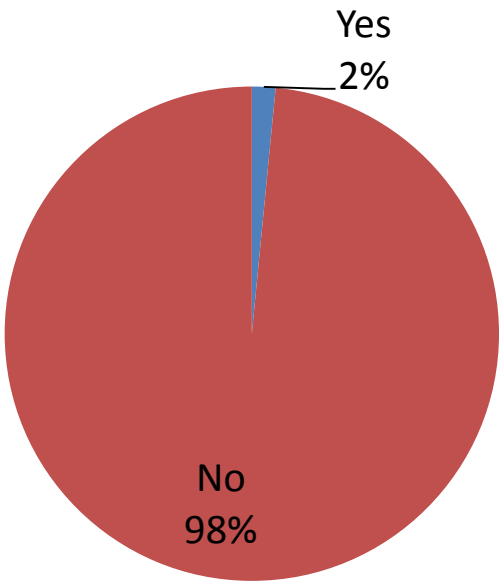
Data from 27 responses

CONTINUATION OF THE COLLABORATION (4/5)

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



4 positive responses but only one real joint structure (CNRS/LAI)

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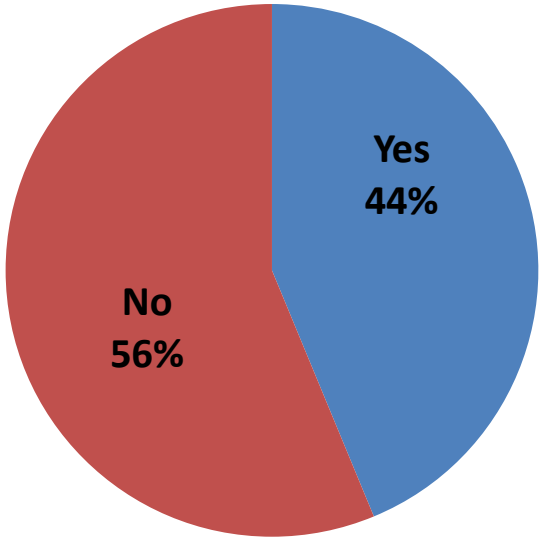
Data from 65 responses

CONTINUATION OF THE COLLABORATION (5/5)

Has the French-Egyptian collaboration involved new partners?



For a total of 50 new partners from many different countries

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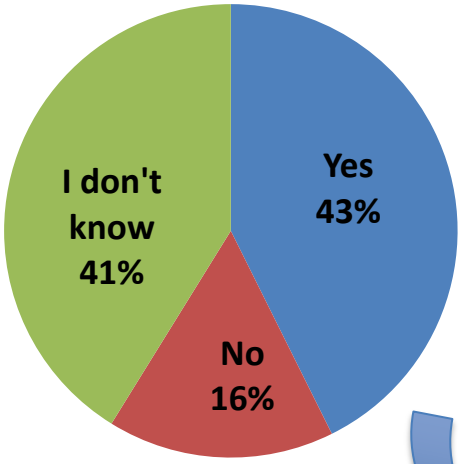
Data from 48 responses

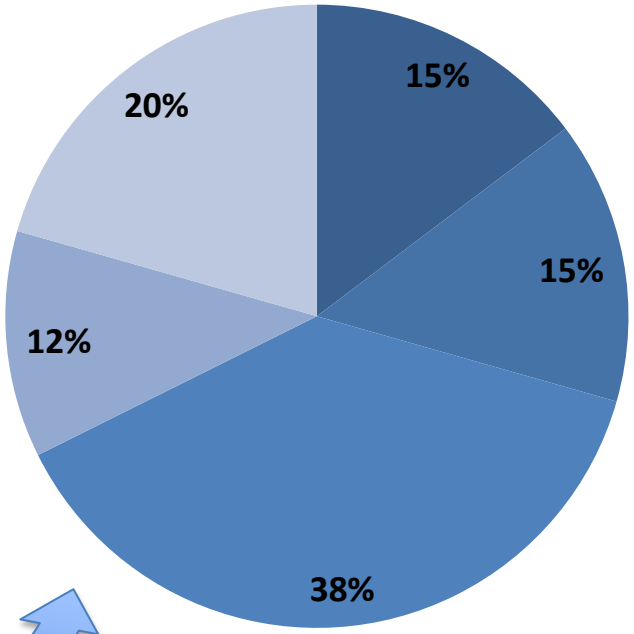
IMPACT ON YOUNG RESEARCHERS' CAREER (1/2)

Was young researchers' career impacted by the Imhotep programme ?



Data from 68 responses

Type of impacts



- Researcher in a public research institution (permanent position)
- Teacher/Researcher (permanent position)
- Postdoc/Teacher/Researcher (temporary position)
- Employed in a private company in link with the field of Higher Education - Research
- Other

Data from 34 responses for a total of 68 young researchers

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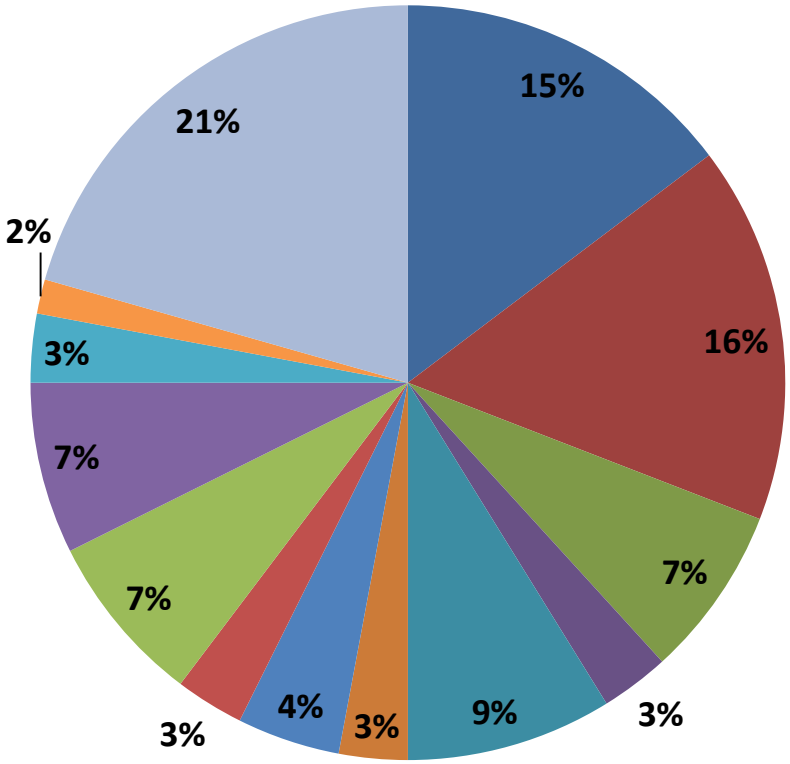
IMPACT ON YOUNG RESEARCHERS' CAREER (2/2)

Detailed types of impacts



- Post Doc in France
- Post Doc in Egypt
- Post Doc in another country
- Teacher-researcher in France
- Teacher-researcher in Egypt
- Teacher-researcher in another country
- Researcher in an public research institution in France
- Researcher in an public research institution in Egypt
- Researcher in an public research institution in another country
- Employed in a private company in link with the field of Higher Education-Research in France
- Employed in a private company in link with the field of Higher Education-Research in Egypt
- Employed in a private company in link with the field of Higher Education-Research in another country
- Other

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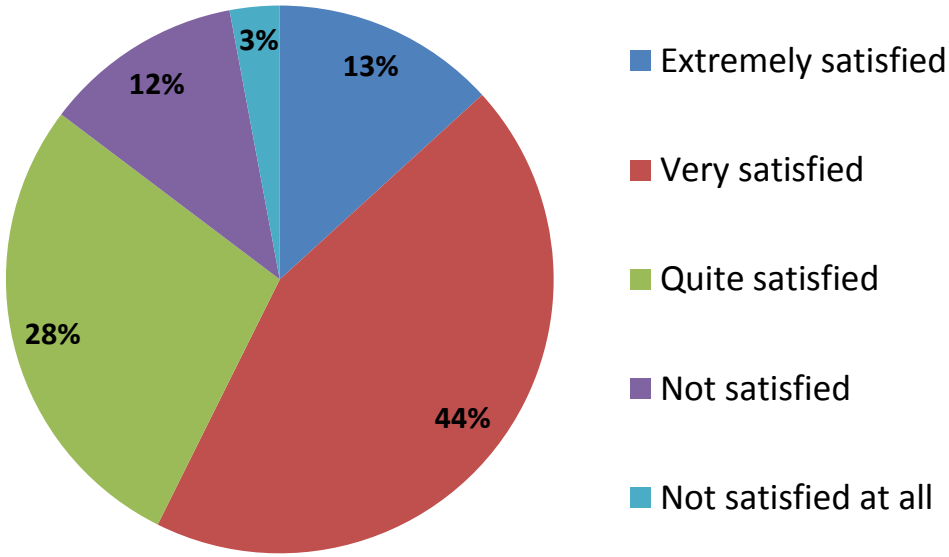
GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME

85% of French principal investigators are satisfied with the programme



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Data from 68 responses

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

SURVEY OF 70 FUNDED PROJECTS

Strengths of this program	Number of occurencies (out of 361)	% (out of 70)
Allows the mobility of the researchers	56	80%
Allows an international scientific collaboration	53	76%
Simplicity of the application process	47	67%
Allows a knowledge of the country partner	41	59%
Allows exchanges which allow a scientific production	38	54%
Allows the training of the young researchers	37	53%
Financial means sufficient for the expenditure of mobility	19	27%
Easy implementation (administrative flexibility)	17	24%
Is used as starting for raising other funds	16	23%
Good scientific appreciation compared to the financial investment	13	19%
Transparency of the methods for selecting the projects	9	13%
Duration of mobilities adapted to the needs	8	11%
Sufficiently long duration of the projects	7	10%
Total number of occurencies	*361*	

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

SURVEY OF 70 FUNDED PROJECTS

Weaknesses of this program	Number of occurencies (out of 192)	% (out of 70)
No funding of the operation and capital expenditures	48	69%
Too short duration of the projects	20	29%
Difficult perpetuation of collaboration	20	29%
Too short duration of mobilities	16	23%
Financial means insufficient for the expenditure of mobility (per diem)	15	21%
Lack of transparency on the methods of projects selection	13	19%
Too low number of mobilities	13	19%
Insufficient communication on the evaluation's results	10	14%
Other	12	17%
Financial means insufficient for the expenditure of mobility (transport)	11	16%
Administrative heaviness of the missions management	9	13%
Heaviness of the process of applications	5	7%
Too long duration of mobilities	0	0%
Total number of occurencies	*192*	

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".

However, some features could be improved :

The overall average annual number of copublications per project is better than the mean (0,95 vs 0,92)
Implication of women is in the mean but could be improved (22% of candidates and 25% of laureates)

Imhotep programme is an opportunity to initiate new collaborations (46%) but too many projects come from a previous collaboration (54%)
Only 46% of the projects involve at least one PhD student
Mobility of young researchers is low (around 25%)
French PIs young researchers are only 9 % of laureates
The rate of scientific production per young researcher (only 0,56)
The average co-publications rate including at least 1 PhD or PostDoc (26% vs 42% mean).

PRELIMINARY RECOMMENDATIONS

RECOMMENDATIONS

- ***Explore new financial supports after the Imhotep funding***
- ***Promote co-publications (36% of projects with no co-publications)***
- ***Promote number of co-publications per project***
- ***Encourage PIs to increase the implication of young researchers***
- ***Encourage the mobility of young researchers (21% of all mobilities)***
- ***Promote REAL new cooperations***
- ***Consider a "IMHOTEP +" to help PIs at the end of their financing to develop a 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.

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Thank you for your attention