

FRANCE – REPUBLIC OF KOREA

**Scientific impact of the programme STAR
(2005-2019)**

MESRI-DAEI / MEAE

2020

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

GENERAL PRESENTATION OF THE PROGRAMME

Creation : 2003

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

Total budget (France + Republic of Korea) : 480 000 € / year

>> including budget from the French part : around 240 000 € / year

>> including budget from the Korean part : around 240 000 € / year

Average budget per project (France + Republic of Korea) : around 16 000 € / year

Number of new funded projects per year : around 15

From 2005-2019 :

654 applications submitted

224 projects funded

DATA SOURCES

Campus France (2005-2019)

- Information about the PHC Star applications
- List of mobilities (from France to Korea and from Korea to France)

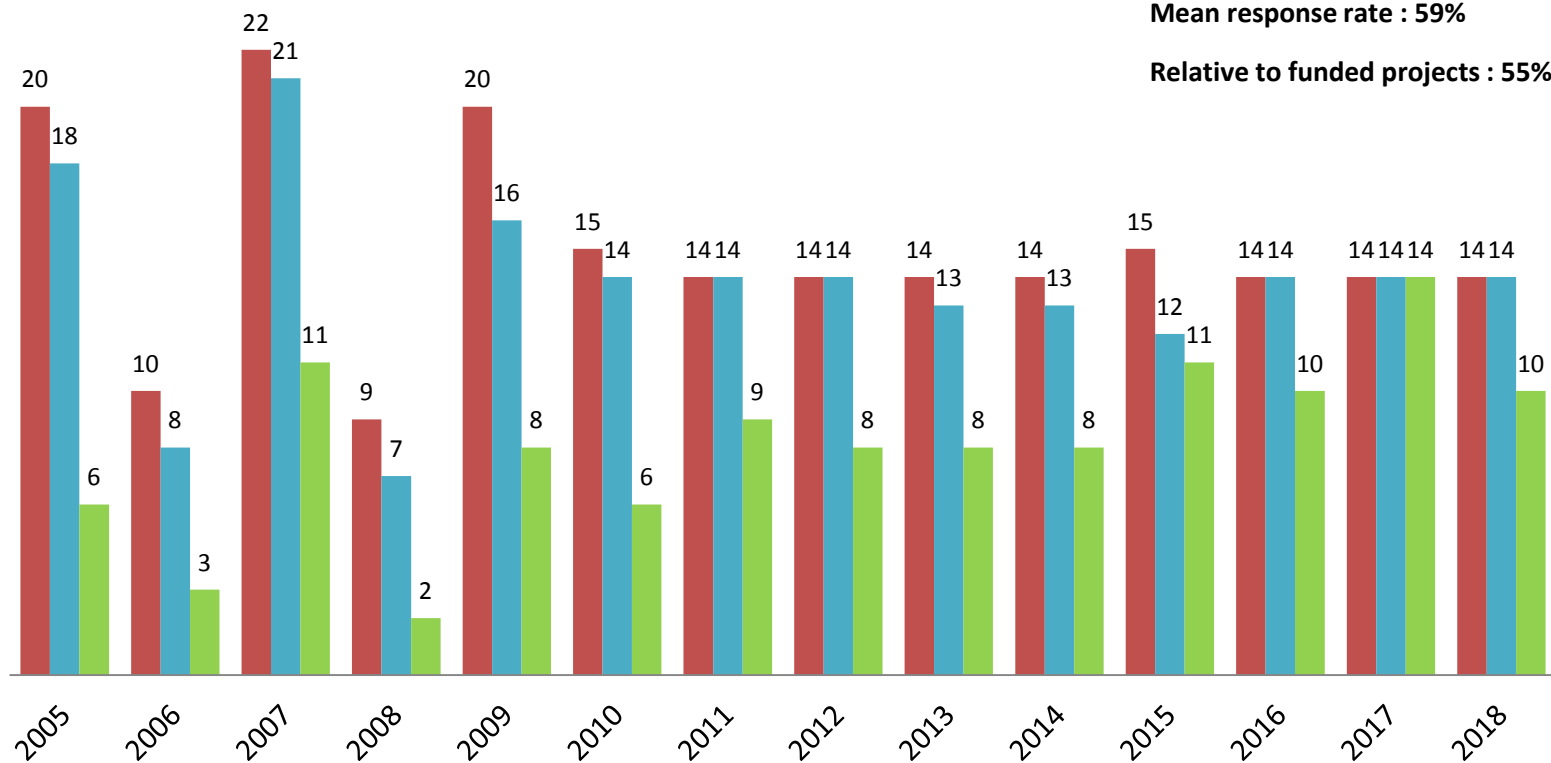
Survey (2005-2017)

- Target : French Principal Investigators of selected projects between 2005 and 2017
- Survey duration : 6 weeks between May and June 2020
- **59%** response ratio (114 respondents for 192 queries)

ANSWERS TO THE SURVEY

Average response rate to the survey : **59 % (114 answers)**

■ Number of funded projects ■ Number of queries ■ Number of survey answers



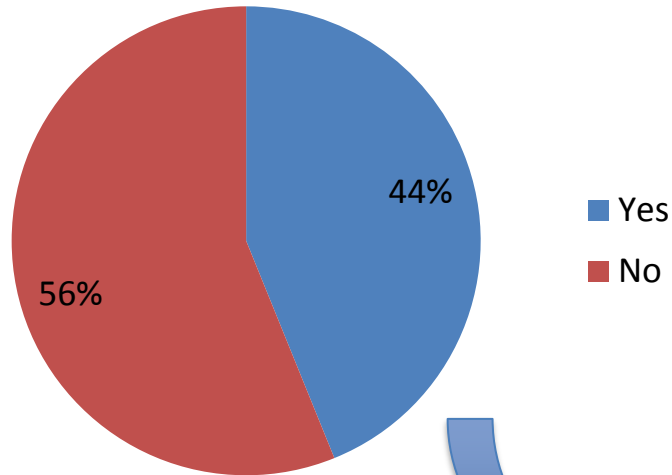
209 funded projects between 2005 and 2018, 192 valid email addresses

2005-2019

Key Points

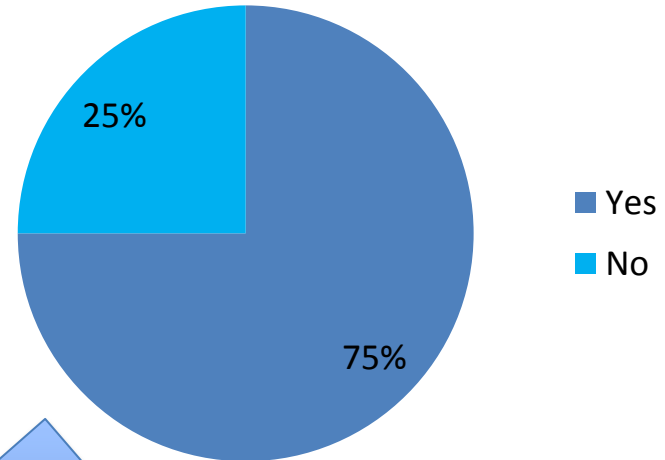
BEFORE THE STAR PROJECT (1/2)

Did you already cooperate with Korea in the past ?



Data from 114 responses

If yes, was it with the same partner?



Data from 48 responses

BEFORE THE STAR PROJECT (2/2)

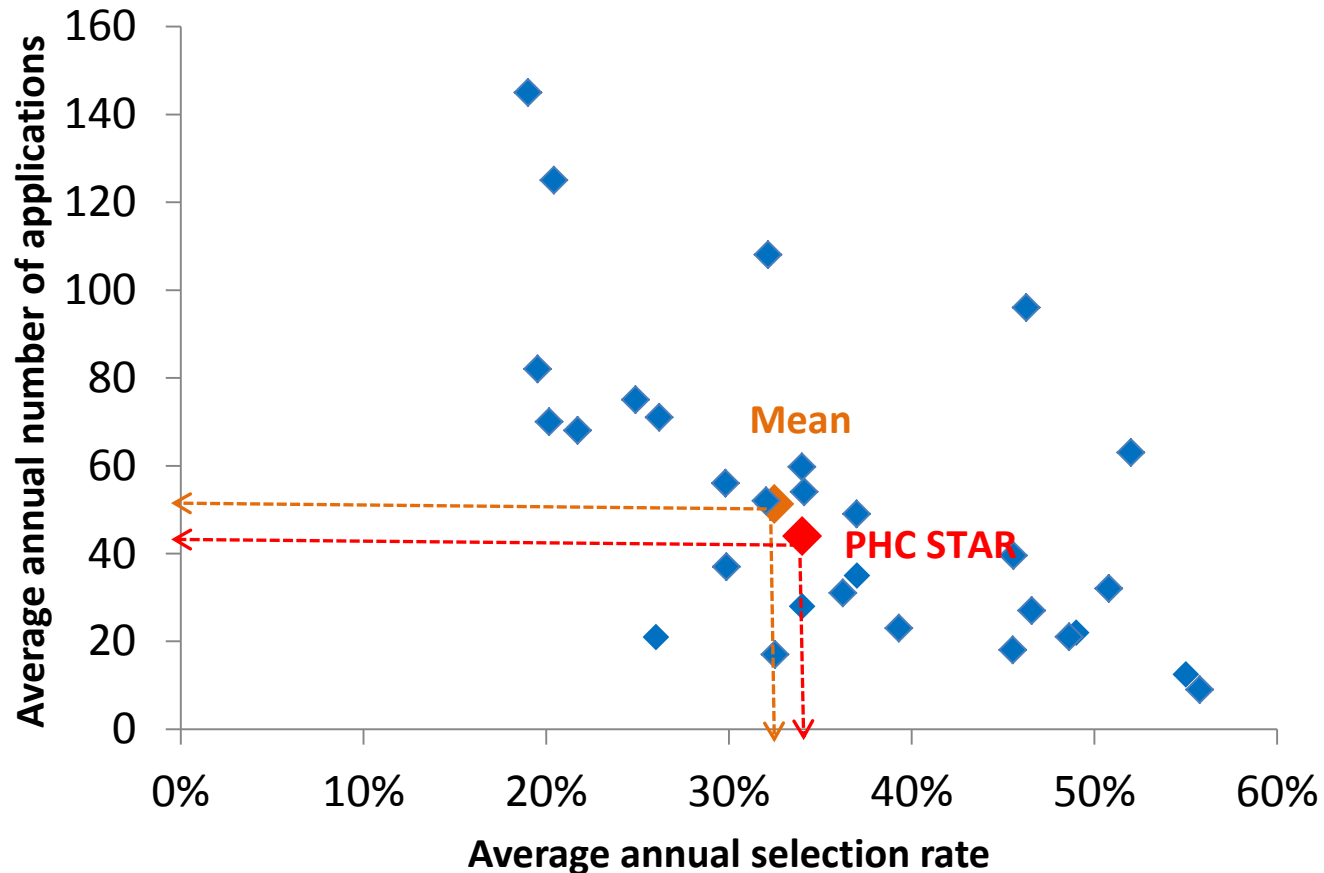
With which scientific collaboration programme ?

PHC Star	36%
Others	27%
CNRS fundings	18%
Korean institutions	11%
Private sector	7%
BGF (French government grants)	2%

Data from 45 responses

Plus 67 previous cooperations based on other exchanges (co-publication, meetings, joint PhD...)

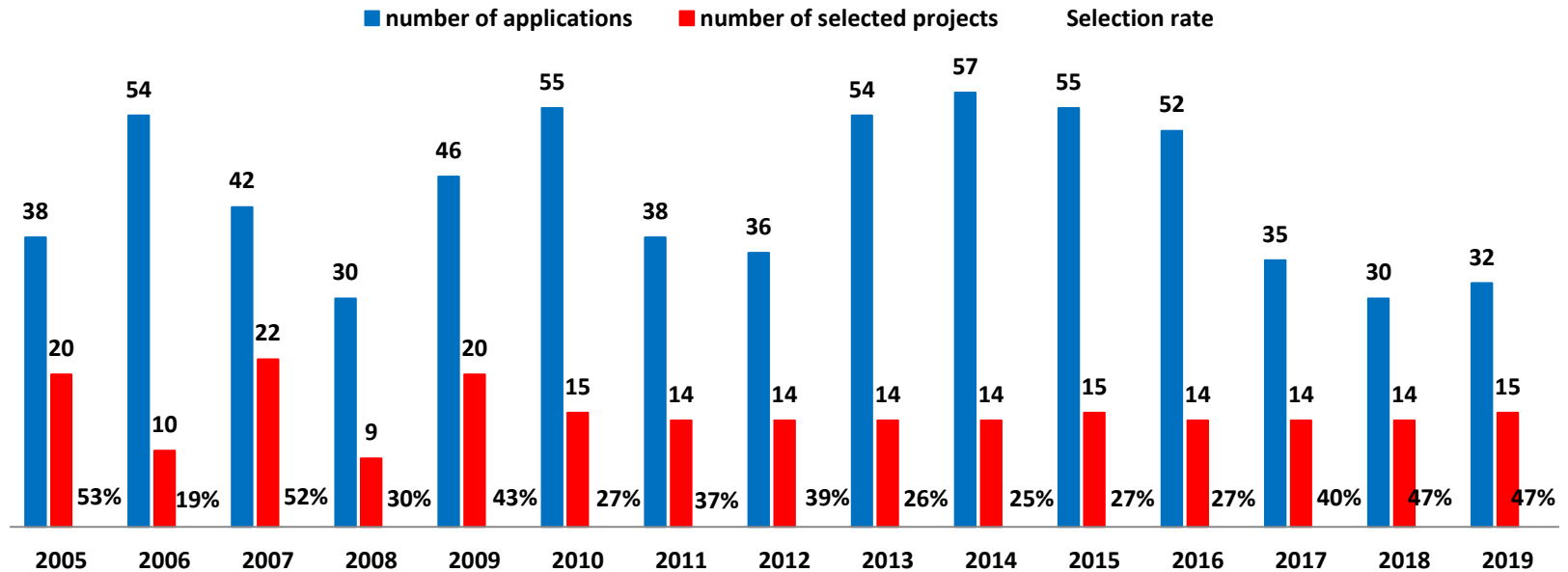
NUMBER OF APPLICATIONS VS SELECTION RATE (COMPARISON BETWEEN 31 DIFFERENT BILATERAL PROGRAMMES)



Average selection rate for 2005-2018 : 34% vs 32% mean
Average number of applications 2005-2018 : 44 vs 51 mean

NUMBER OF APPLICATIONS AND SELECTION RATE

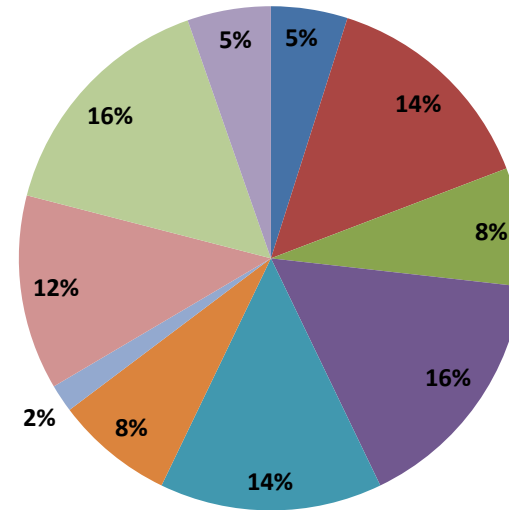
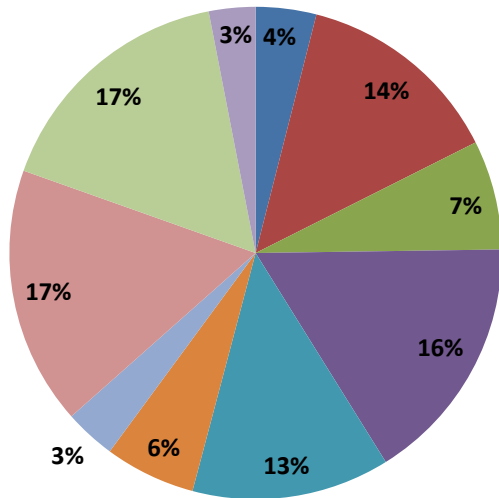
Average selection rate from 2005-2019: **34%**



SCIENTIFIC DOMAINS OF PROJECTS

Number of applications : **654**

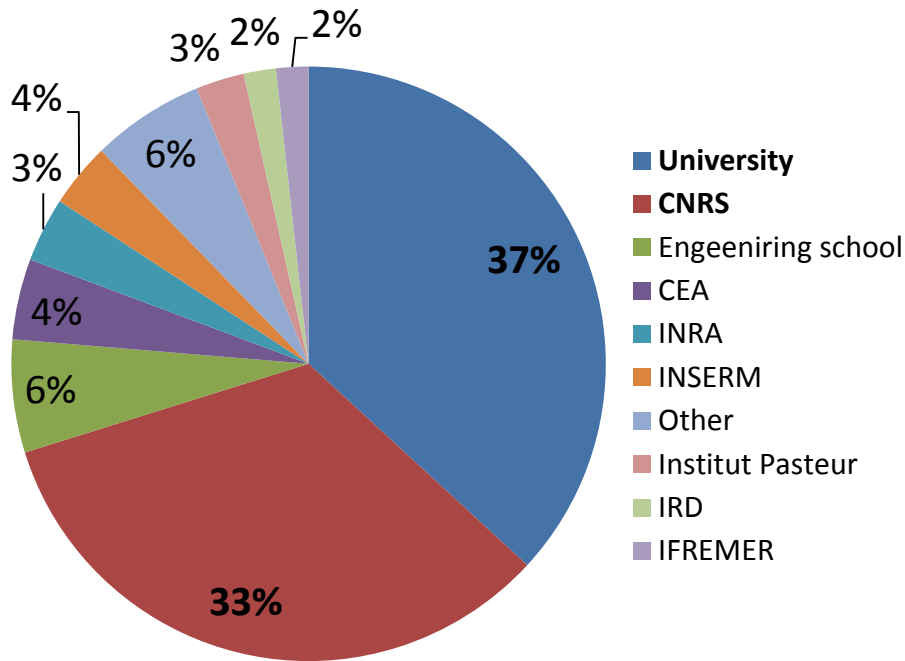
Number of funded projects : **224**



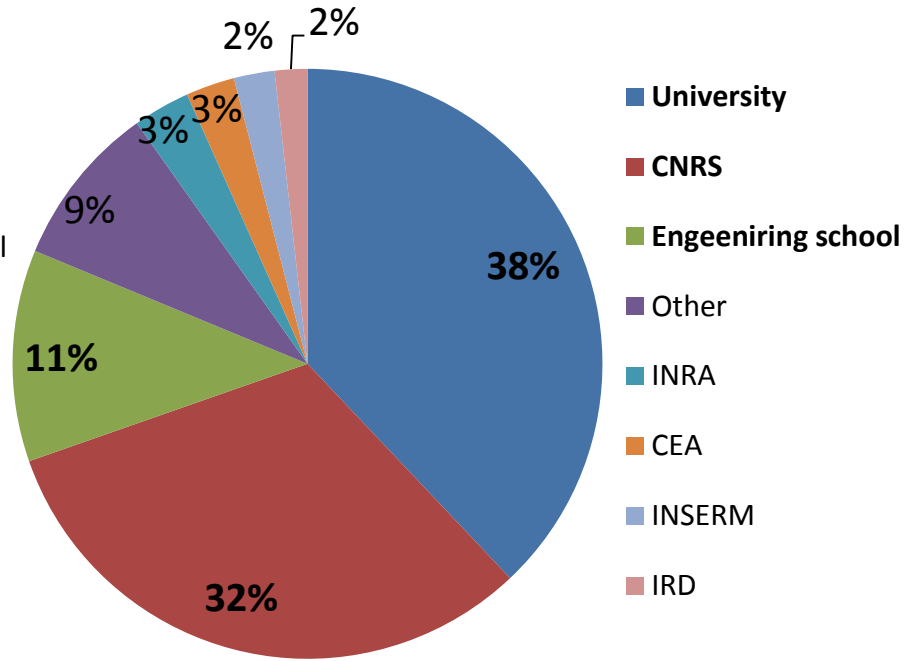
- Mathematics
- Physics
- Marine/Earth/Planet Sciences
- Chemistry
- Biology and Health
- Humanities
- Social Sciences
- Engineering Sciences
- Information Technology
- Agronomy/Ecology

FRENCH PARTICIPATING INSTITUTIONS

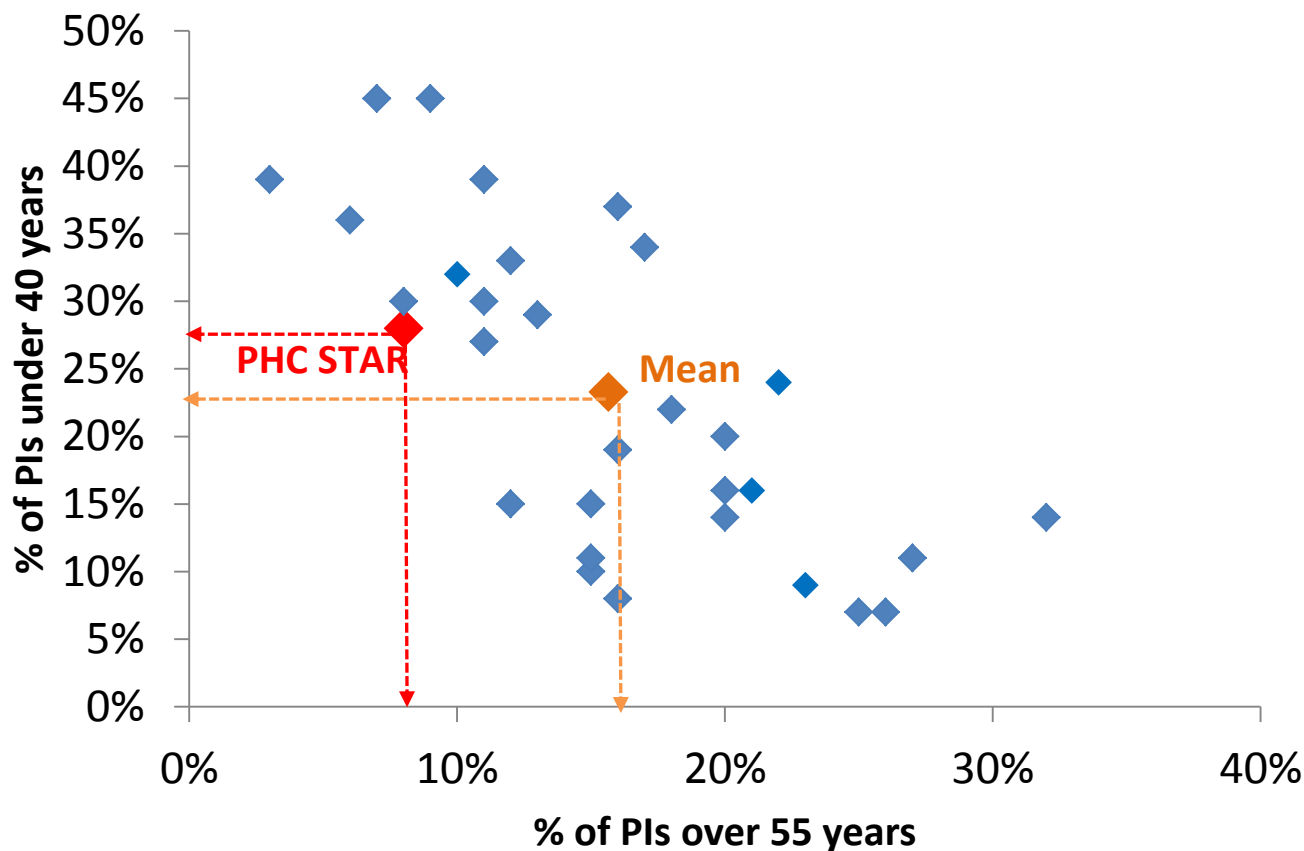
PI's employers



Laboratories authorities



AGE OF PRINCIPAL INVESTIGATORS (PI) (COMPARISON BETWEEN 31 DIFFERENT BILATERAL PROGRAMMES)



PIs under 40 years : 28% vs 23% mean

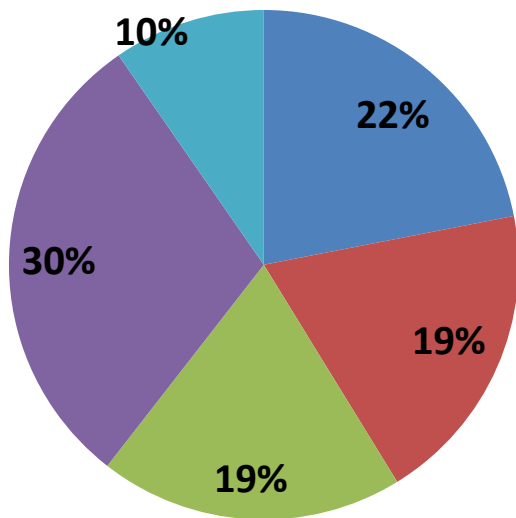
PIs over 55 years : 8% vs 16% mean

64% of the PIs are between 40 and 55 years

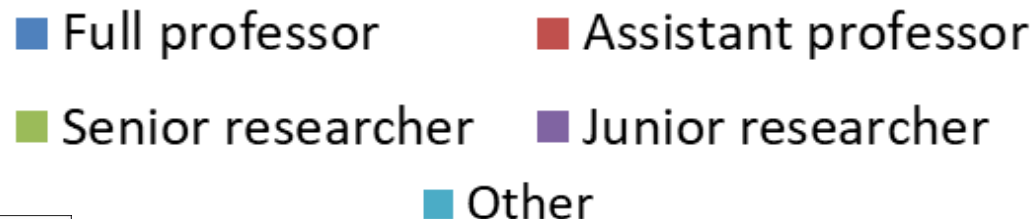
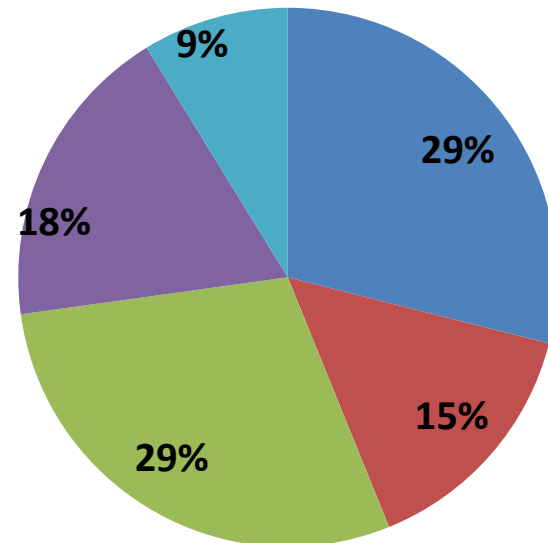
Data from 114 responses

FRENCH PIS (PRINCIPAL INVESTIGATORS) : STATUS

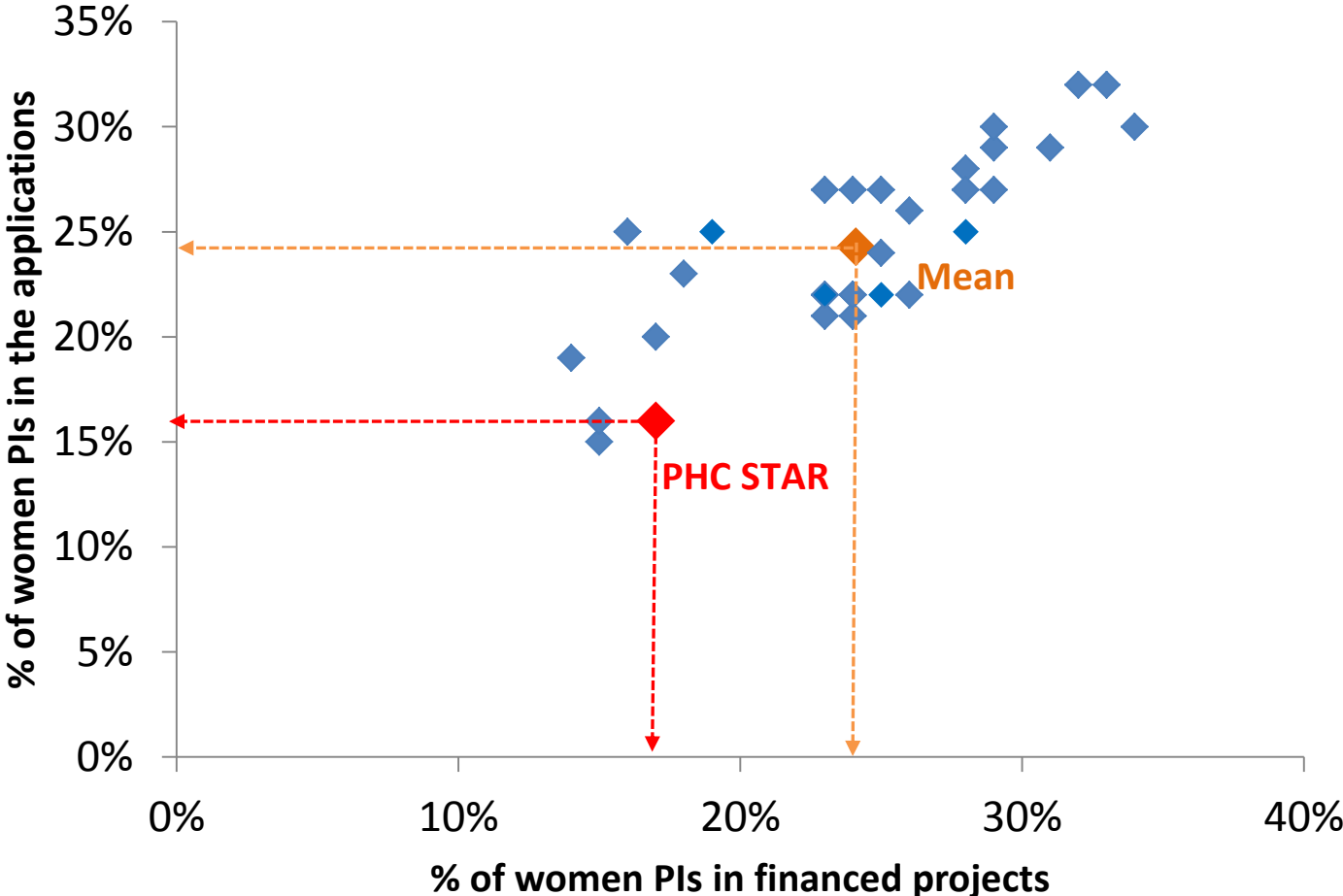
**Previous professional status
(at the beginning of the project)**



Current professional status



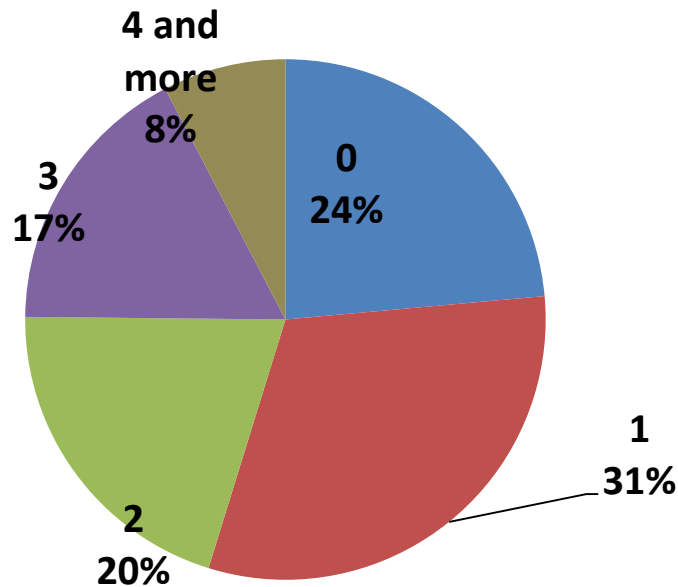
IMPLICATION OF WOMEN (FRANCE) (COMPARISON BETWEEN 31 DIFFERENT BILATERAL PROGRAMMES)



% of women PIs in the applications : 16% vs 24% mean
% of women PIs in the selected projects : 17% vs 24% mean

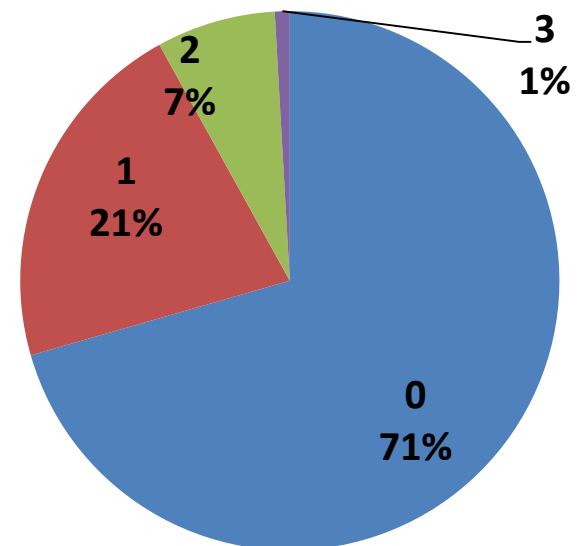
PARTICIPATION OF FRENCH YOUNG RESEARCHERS

Number of PhD students



68% of projects involve at least one PhD student

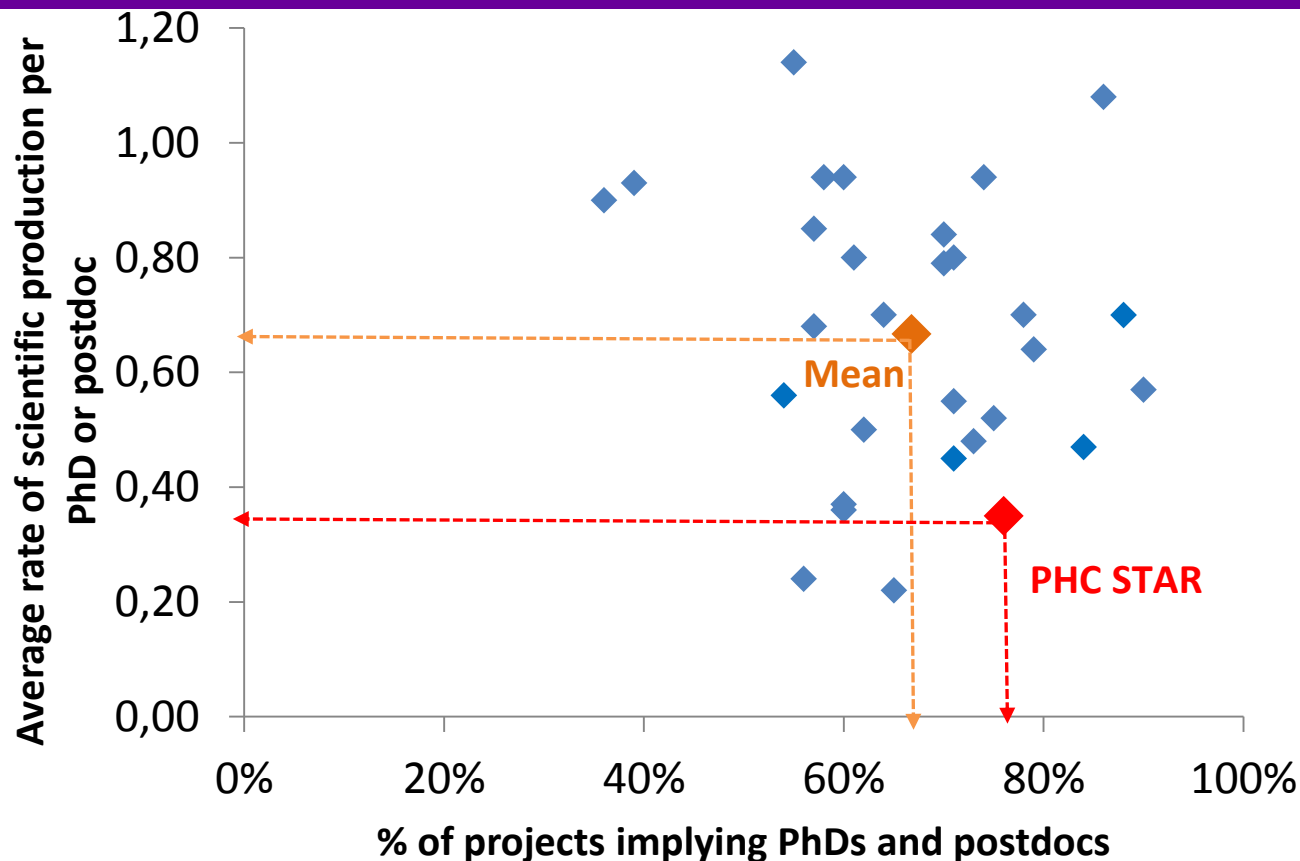
Number of post-doctoral researchers



30% of projects involve at least one post-doctoral researcher

Data from 113 responses

IMPLICATION OF YOUNG RESEARCHERS (COMPARISON BETWEEN 31 DIFFERENT BILATERAL PROGRAMMES)



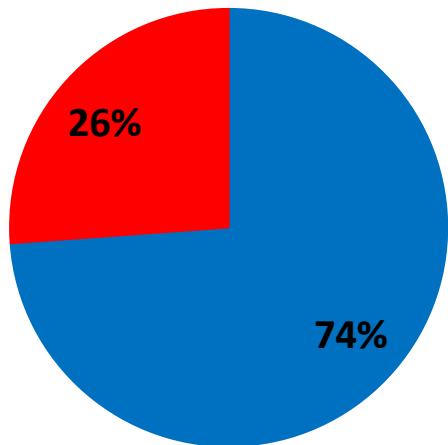
% of projects implying young researchers : 76% vs 67% mean
Average rate of scientific production per young researcher : 0,35 vs 0,67 mean



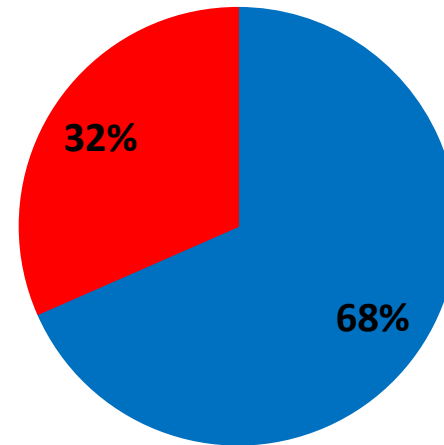
MOBILITY

MOBILITY : GENDER DISTRIBUTION

France → Korea



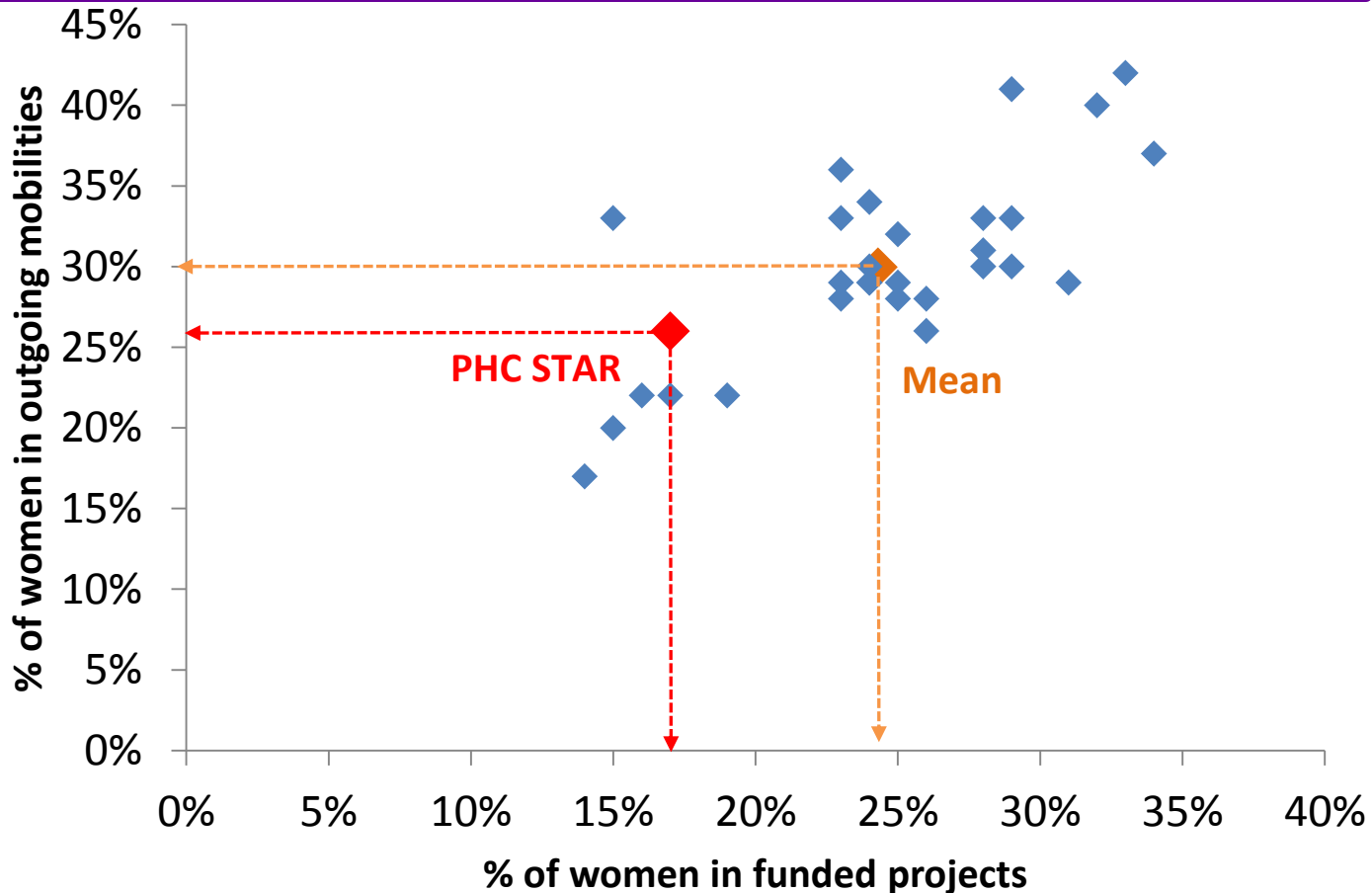
Korea → France



■ Men ■ Women

WOMEN MOBILITY FRANCE – KOREA

(COMPARISON BETWEEN 31 DIFFERENT BILATERAL PROGRAMMES)



% of women researchers in the selected projects : 17% vs 24% mean

% of women researchers in outgoing mobilities : 26% vs 30% mean

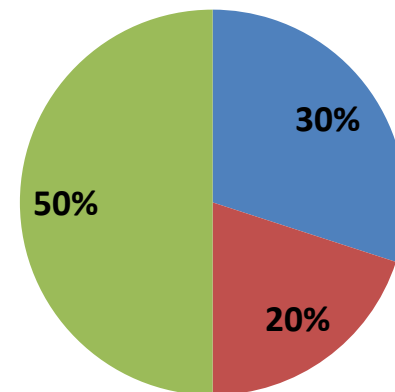
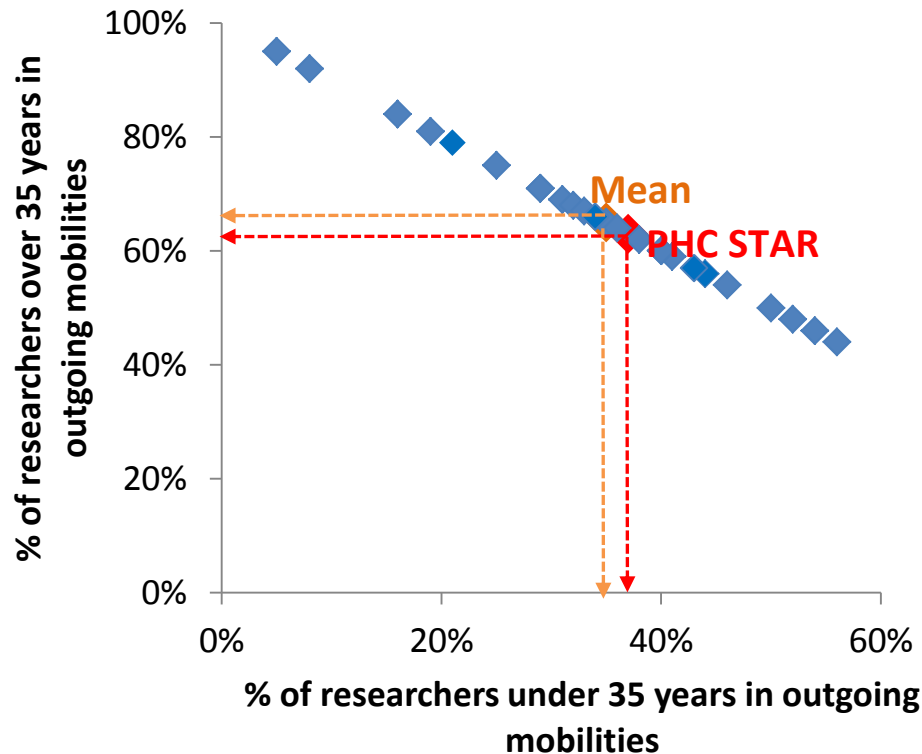
YOUNG RESEARCHERS MOBILITY

FRANCE – KOREA

(COMPARISON BETWEEN 31 DIFFERENT BILATERAL PROGRAMMES)

France → Korea

Korea → France



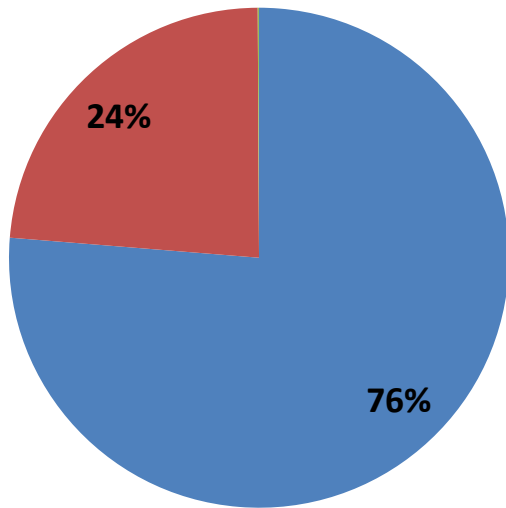
- carried out by PhD students (<28 years old)
- carried out by post-doctoral researchers (28<=age<=35 years old)
- carried out by permanent researchers (>35 years old)

% of french young researchers in outgoing mobilities : **37% vs 35% mean**

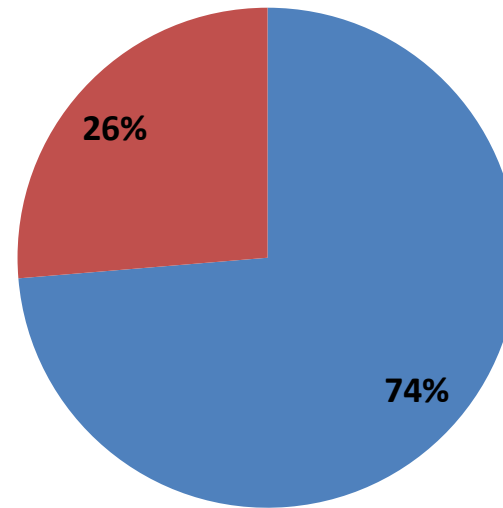
% of korean young researchers in incoming mobilities : **50%**

MOBILITY : DURATION

France → Korea



Korea → France



■ < 15 days

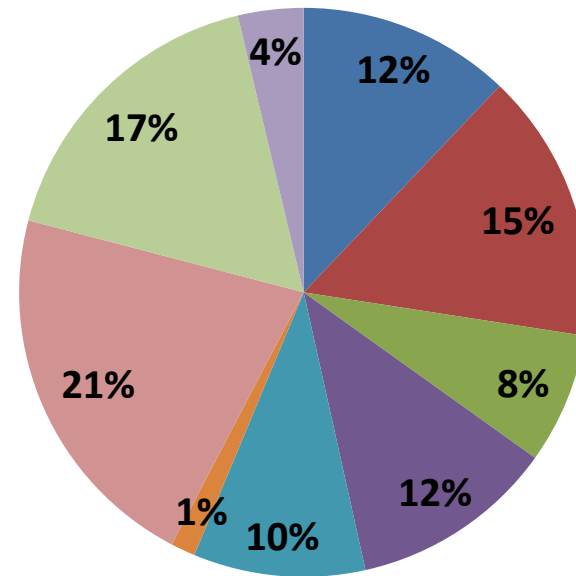
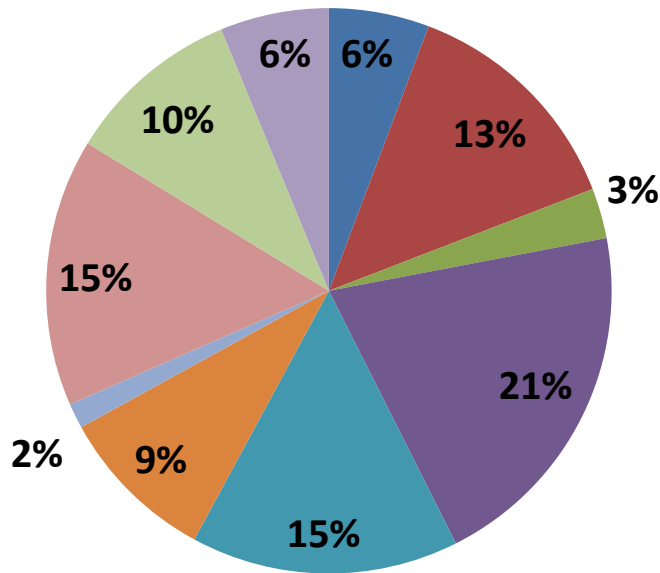
■ between 15 days and 3 months

SCIENTIFIC PRODUCTION

SCIENTIFIC OUTPUT (1/2)

Number of funded projects : **224**

Percentage of copublications (114 responses)



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

SCIENTIFIC OUTPUT (2/2)

Data from 114 funded projects

	Number of financed projects in the survey	Average number of co-publications per project
Mathematics	7	3,7
Physics	13	2,5
Marine/Earth/Planet Sciences	12	1,3
Chemistry	18	1,4
Biology and Health	17	1,2
Humanities	2	1,5
Social Sciences	3	0,0
Engineering Sciences	18	2,6
Information Technology	18	2,1
Agronomy / Ecology	6	1,3
TOTAL	114	1,9

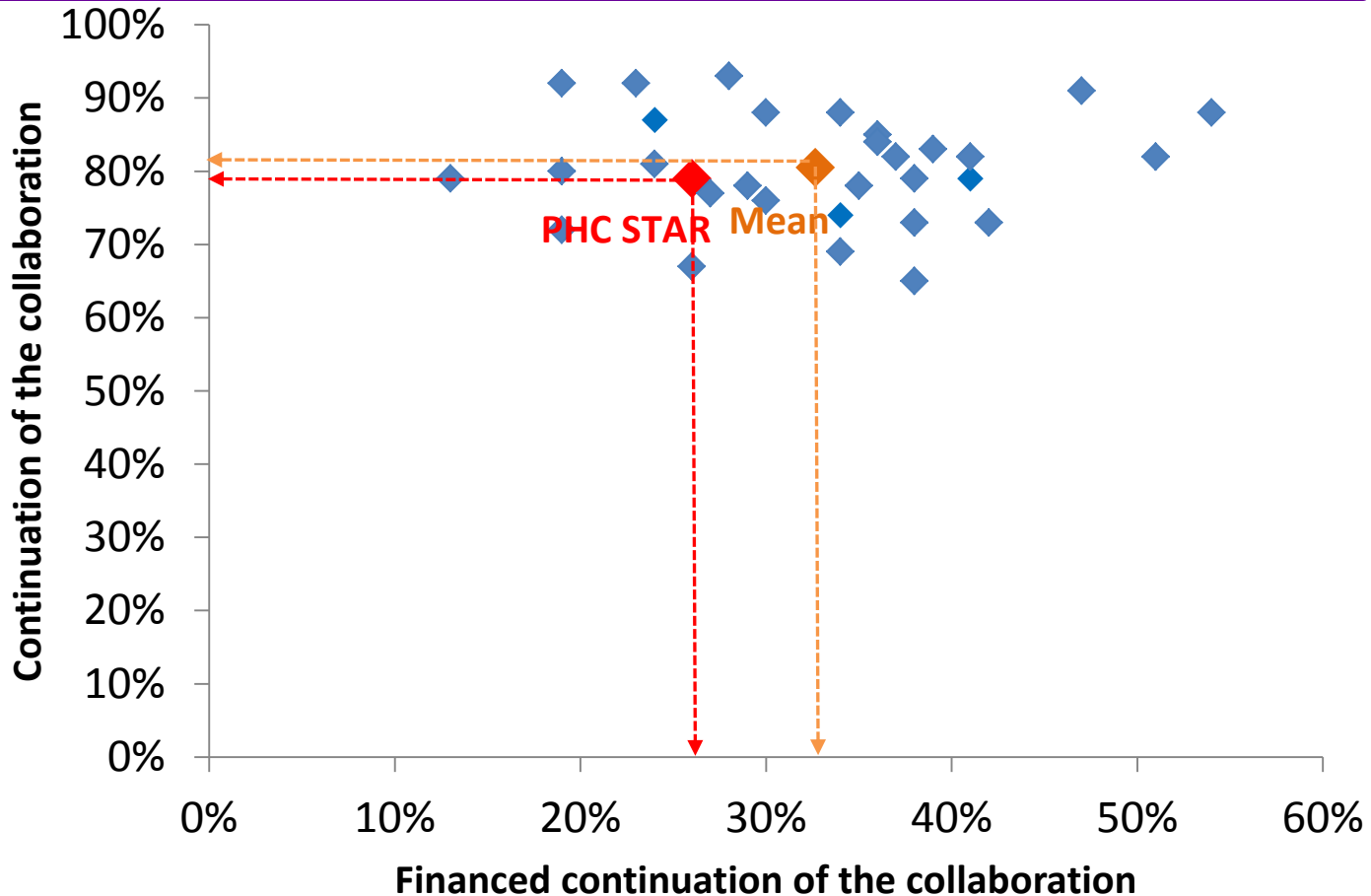
Overall average annual number of copublications per project : 1,00 vs 0,93 mean

69% of funded projects led to one co-publication at least

34% of copublications include at least 1 PhD or PostDoc

WHAT HAPPENS AFTER A PHC STAR PROJECT ?

CONTINUATION OF THE COLLABORATION (1/5) (COMPARISON BETWEEN 31 DIFFERENT BILATERAL PROGRAMMES)



Continuation of the collaboration : 79% vs 81% mean

Continuation of the collaboration with other sources of subvention : 26% vs 33% mean



MINISTÈRE
DE L'ENSEIGNEMENT SUPÉRIEUR,
DE LA RECHERCHE
ET DE L'INNOVATION

Data from 113 responses (continuation) and 85 responses (financing)

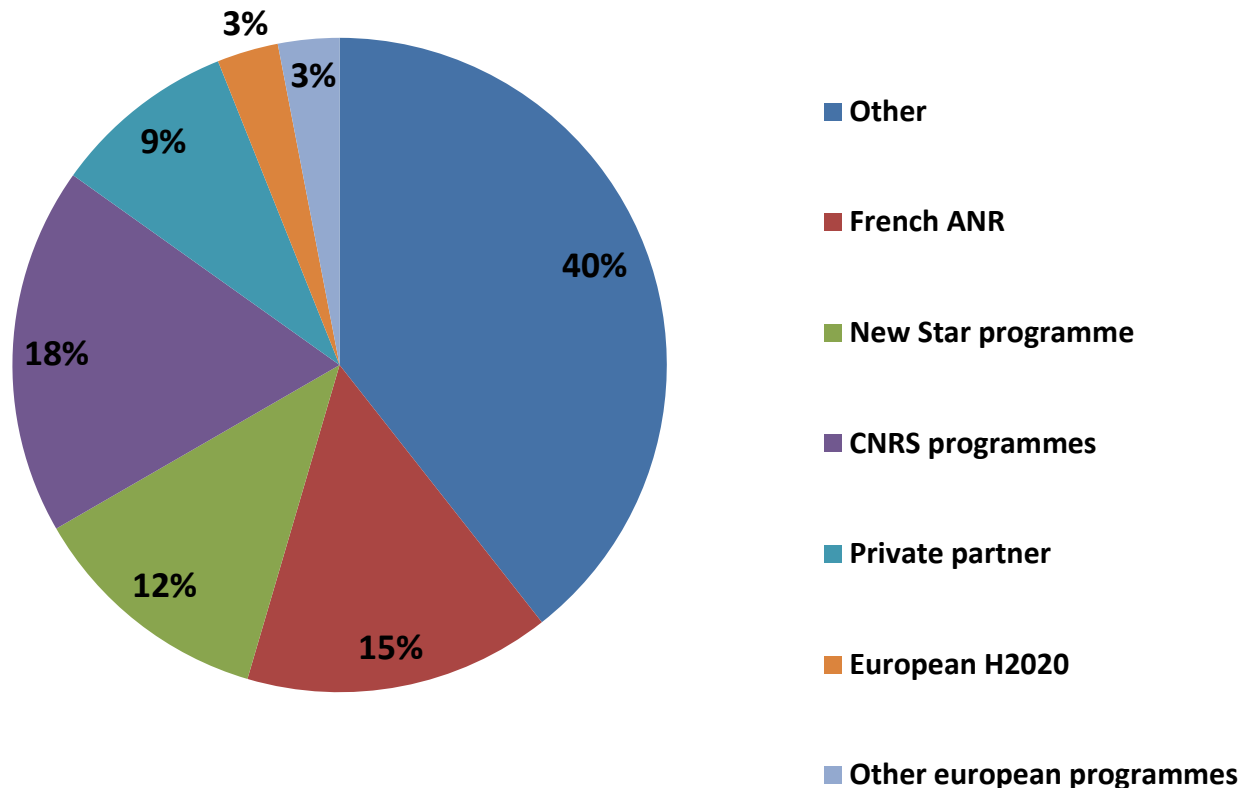
CONTINUATION OF THE COLLABORATION (2/5)

79% of the collaborations continued after the Star project

Which activities?	
Collaborative research	62%
Co-publications	60%
Joint participation to conferences	48%
Researchers mobility	37%
PhD mobility	27%
Co-organisation of scientific events	21%
Others	15%
Joint participation to PhD thesis jury	11%
Joint diplomas (Master, PhD...)	1%

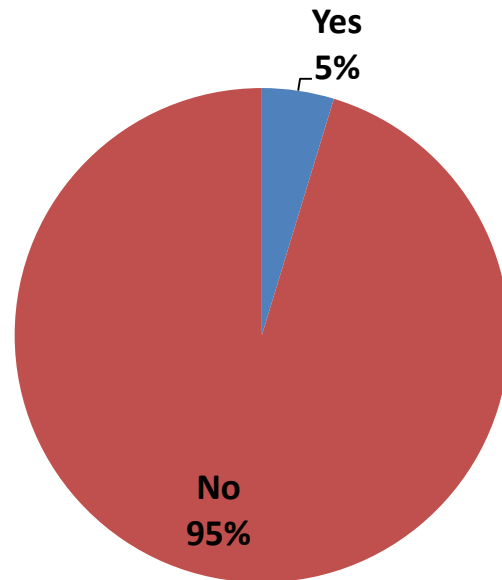
CONTINUATION OF THE COLLABORATION (3/5)

What kind of funded collaborations after the Star project ?



CONTINUATION OF THE COLLABORATION (4/5)

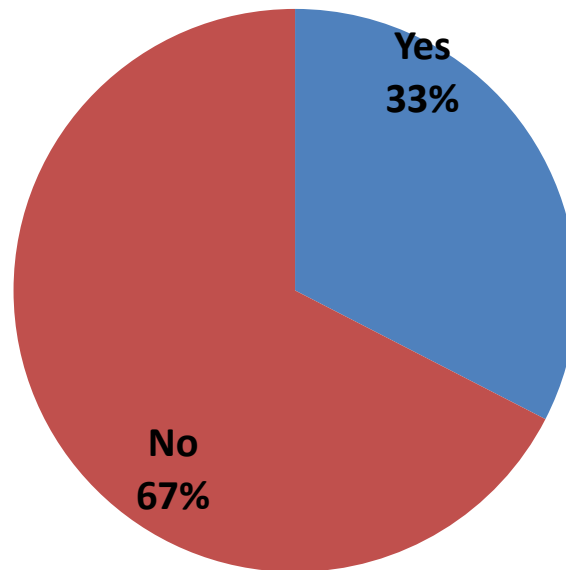
Has the Star project led to the set-up of joint structures?



- 4 CNRS Associated International Laboratories (LIA)
- 1 CNRS International Research Network (IRN)
- 1 INRA Associated International Laboratories (LIA) in project

CONTINUATION OF THE COLLABORATION (5/5)

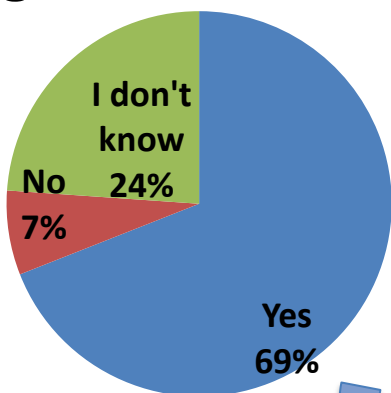
Has the French-Korean collaboration involved new partners?



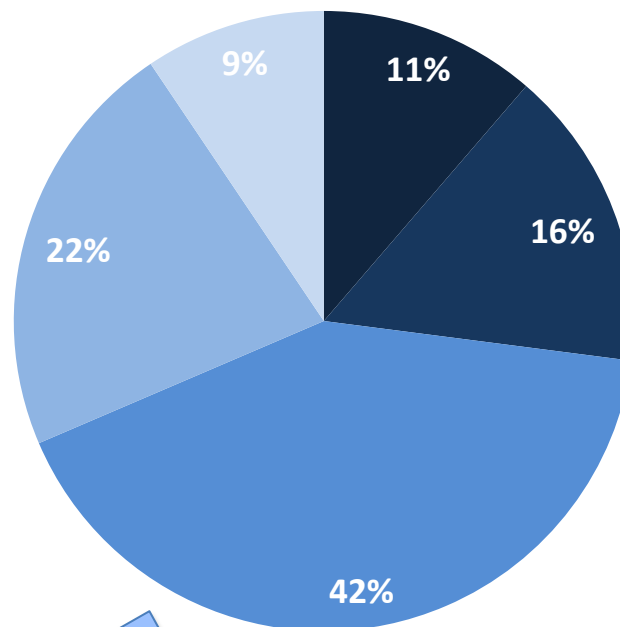
For a total of 45 new partners from 15 different countries

IMPACT ON YOUNG RESEARCHERS' CAREER (1/2)

Was young researchers' career impacted by the Star programme ?



Type of impacts



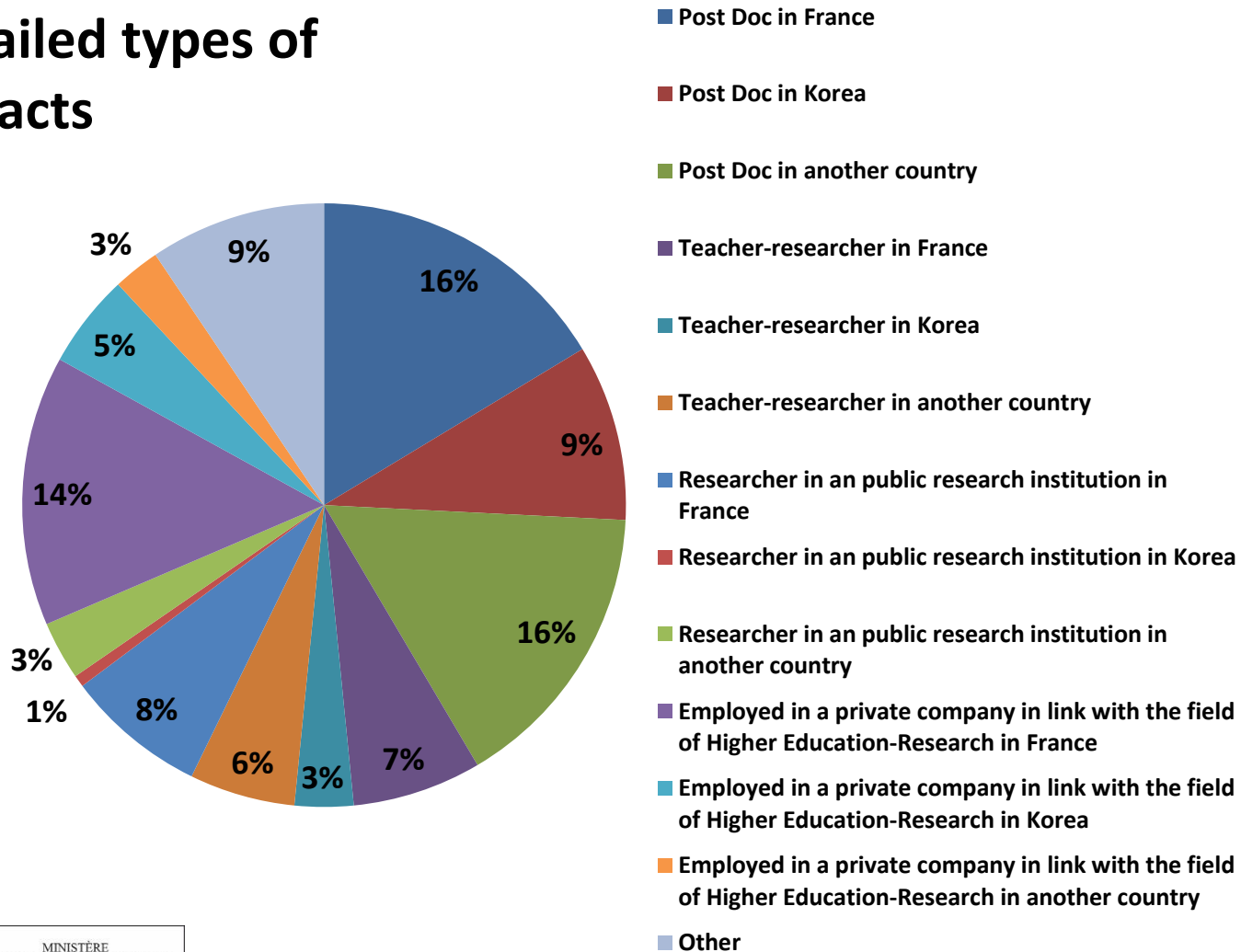
- Researcher in a public research institution (permanent position)
- Teacher/Researcher (permanent position)
- Postdoc/Teacher/Researcher (temporary position)
- Employed in a private company in link with the field of Higher Education - Research
- Other

Data from 113 responses

Data from 78 positive responses for a total of 159 young researchers

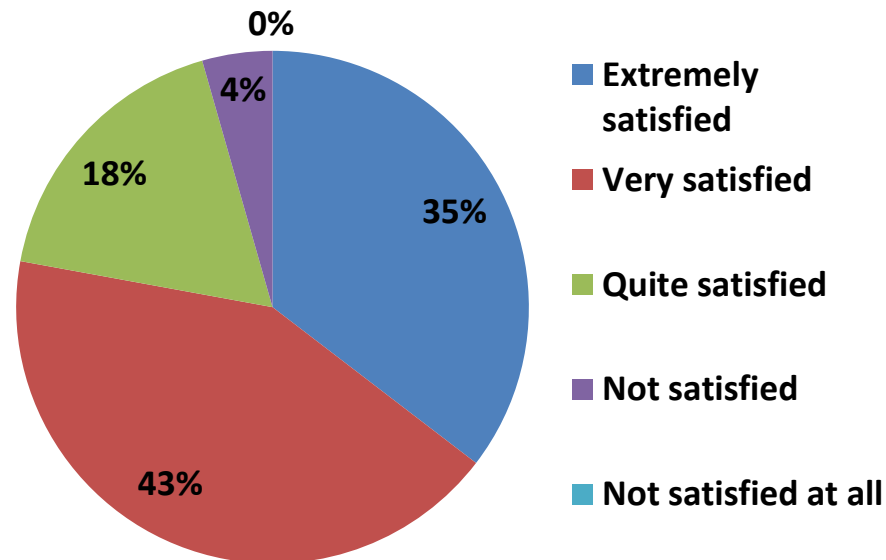
IMPACT ON YOUNG RESEARCHERS' CAREER (2/2)

Detailed types of impacts



GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME

96% of French principal investigators are satisfied



Data from 113 responses

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

SURVEY OF 113 FUNDED PROJECTS



Strengths of this program	Number of occurrences (out of 812)	% (out of 113)
Allows the mobility of the researchers	98	87%
Allows an international scientific collaboration	96	85%
Simplicity of the application process	78	69%
Allows the training of the young researchers	75	66%
Easy implementation (administrative flexibility)	70	62%
Allows exchanges which allow a scientific production	67	59%
Allows a knowledge of the country partner	67	59%
Financial means sufficient for the expenditure of mobility	62	55%
Financial autonomy towards your institution	60	53%
Good scientific appreciation compared to the financial investment	37	33%
Duration of mobilities adapted to the needs	31	27%
Is used as starting for raising other funds	26	23%
Sufficiently long duration of the projects	21	19%
Timetable for implementation	12	11%
Transparency of the methods for selecting the projects	10	9%
Others	2	2%
No strenght point	0	0%
<i>Total number of occurrences</i>	<i>812</i>	

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

SURVEY OF 113 FUNDED PROJECTS



Weaknesses of this program	Number of occurrences (out of 269)	% (out of 113)
No funding of the operation and capital expenditures	45	40%
Difficult perpetuation of collaboration	45	40%
Too short duration of the projects	38	34%
Lack of transparency on the methods of projects selection	24	21%
Insufficient communication on the evaluation's results	21	19%
Timetable for implementation	18	16%
Other	14	12%
Too short duration of mobilities	11	10%
No weakness	10	9%
Too low number of mobilities	10	9%
Heaviness of the process of applications	8	7%
Financial means insufficient for the expenditure of mobility (transport)	8	7%
Financial means insufficient for the expenditure of mobility (per diem)	8	7%
Administrative heaviness of the missions management	4	4%
Flexibility of the programme for actions co-financed with the partner	4	4%
Financial autonomy towards your institution	1	1%
Too long duration of mobilities	0	0%
Number of occurrences	269	

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”.

Star programme initiates 56% of new collaborations

Quite high percentage of young PIs (28%) as compared to the mean of 23%

High percentage of projects implying young researchers (76%)

Mobilities of young Korean researchers (50%)

Scientific production comparable to the mean (1,00 vs 0,93)

Participation of women PIs should be encouraged

31% of funded projects with no co-publications

Insufficient rate of scientific production (0,35) and outgoing mobilities (37%) for french young researchers

Only 34% of co-publications include at least one young researcher



PRELIMINARY RECOMMENDATIONS

RECOMMENDATIONS

- ***Promote more new cooperations***
- ***Explore new financial supports after the Star funding***
- ***Promote co-publications (33% of projects with no co-publications)***
- ***Encourage PIs to increase the implication of young researchers in the publications and the mobilities***
- ***Encourage women researchers to apply***
- ***Consider a “STAR +” programme 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.

CONTACTS

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Thank you for your attention