



**MINISTÈRE
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FRANCE – CHILE

**Scientific impact of the program ECOS SUD
(2000-2015)**

MESR-DAEI / MEAE

2021

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

GENERAL PRESENTATION OF THE PROGRAM

Creation : 1992

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

Total budget (France + Chile) : around 600 k€ / year

>> including budget from the French part : around **350 k€ / year (MESR 100k€ ECOS SUD)**

>> including budget from the Chilean part : around **250 k€ / year**

Average budget per project (France + Chile) : around **5400 € / year**

Number of new funded projects per year : around 20

From 2000-2015 :

730 applications submitted

307 projects funded

ECOS SUD Committee (2000-2015)

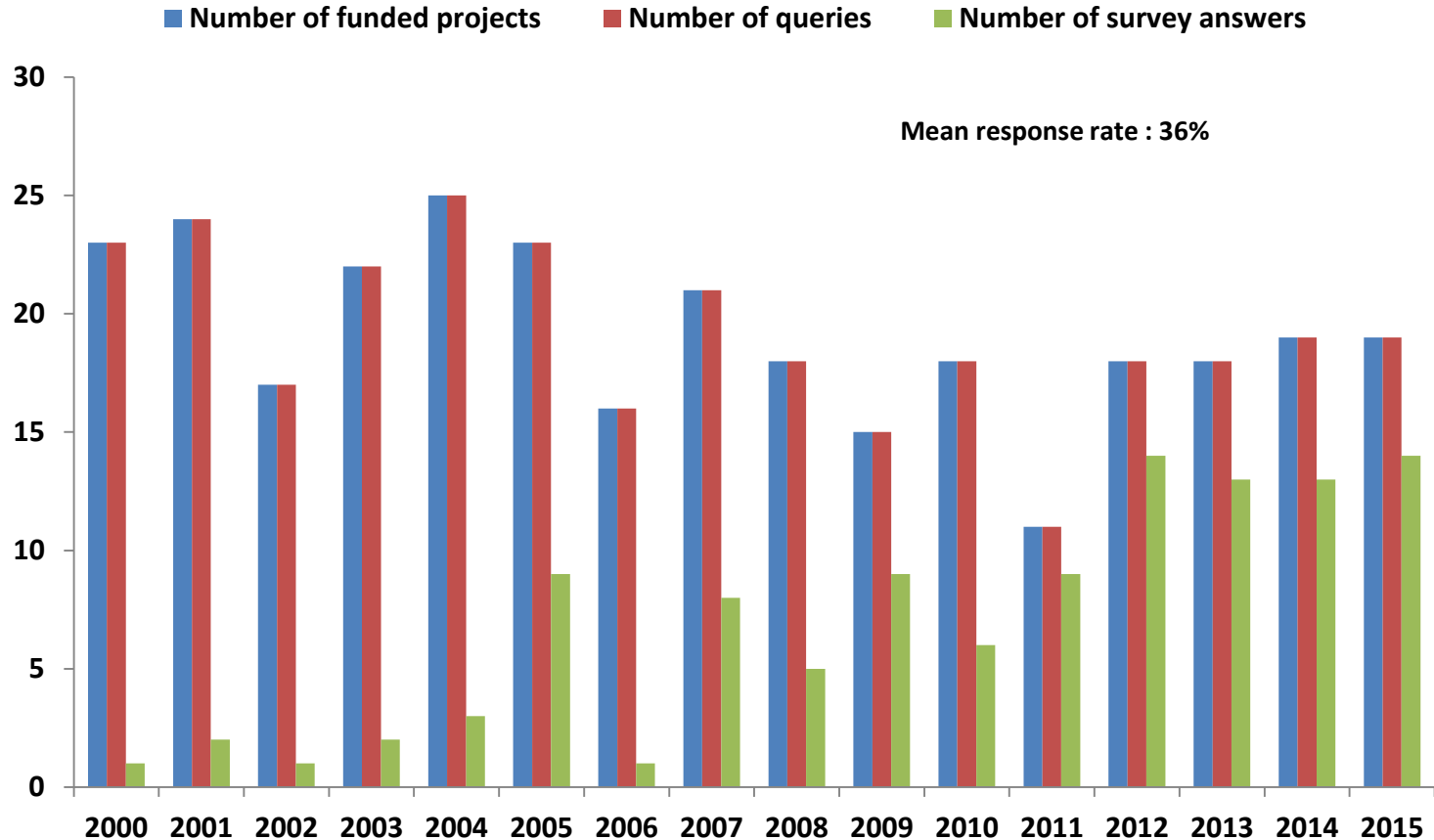
- ECOS SUD Chile applications
- List of scientific mobilities (from France to Chile and from Chile to France)

Survey (2000-2015)

- Target : **French** Principal Investigators of selected projects between 2001 and 2016
- Survey duration : 5 weeks between February and March 2019
- **36%** response rate (110 respondents for 307 queries)

SURVEY RESPONSES

Average response rate to the survey : 36 % (110 answers)





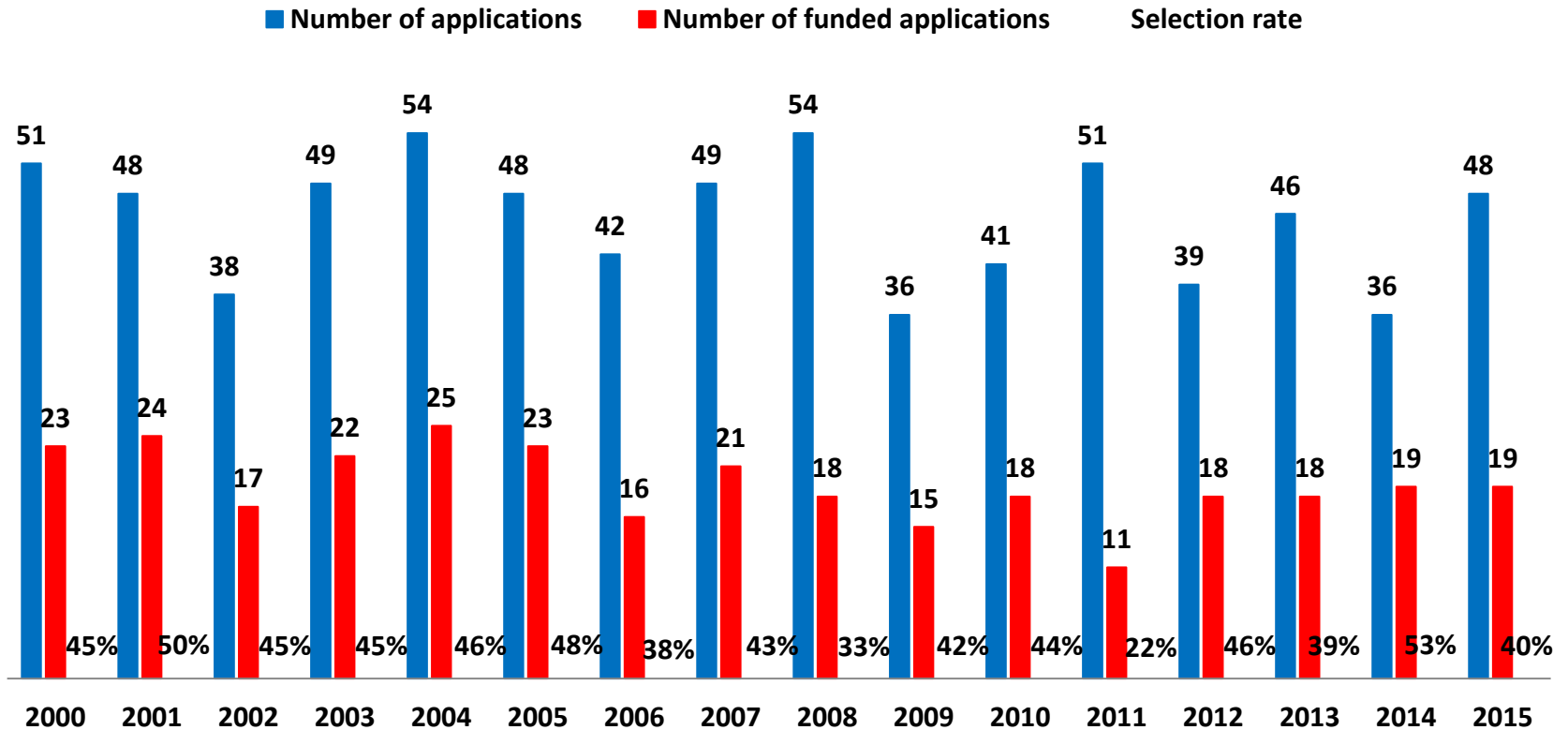
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2000-2015 Key Points

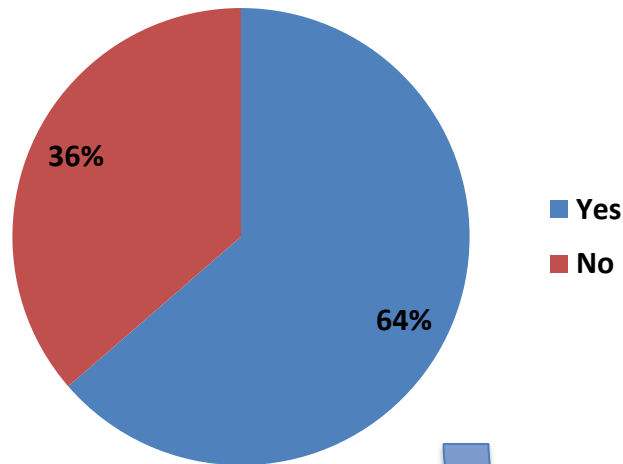
NUMBER OF APPLICATIONS AND SELECTION RATE

Average selection rate from 2000-2015: **42%**



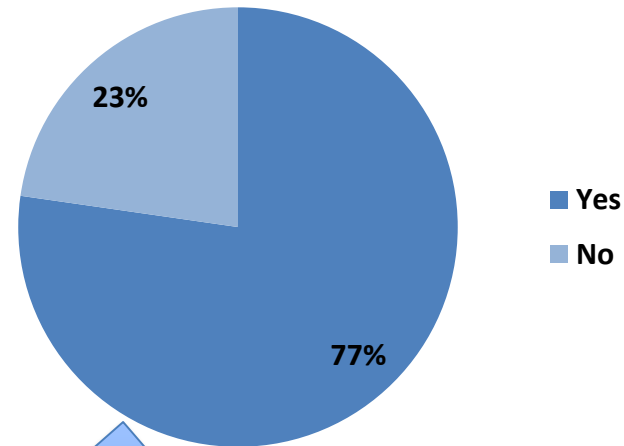
BEFORE JOINING THE ECOS SUD CHILE PROJECT (1/2)

**Did you already cooperate
with Chile in the past ?**



Data from 110 responses

**If yes, was it
with the same
partner?**



Data from 66 responses

BEFORE JOINING THE ECOS SUD CHILE PROJECT (2/2)

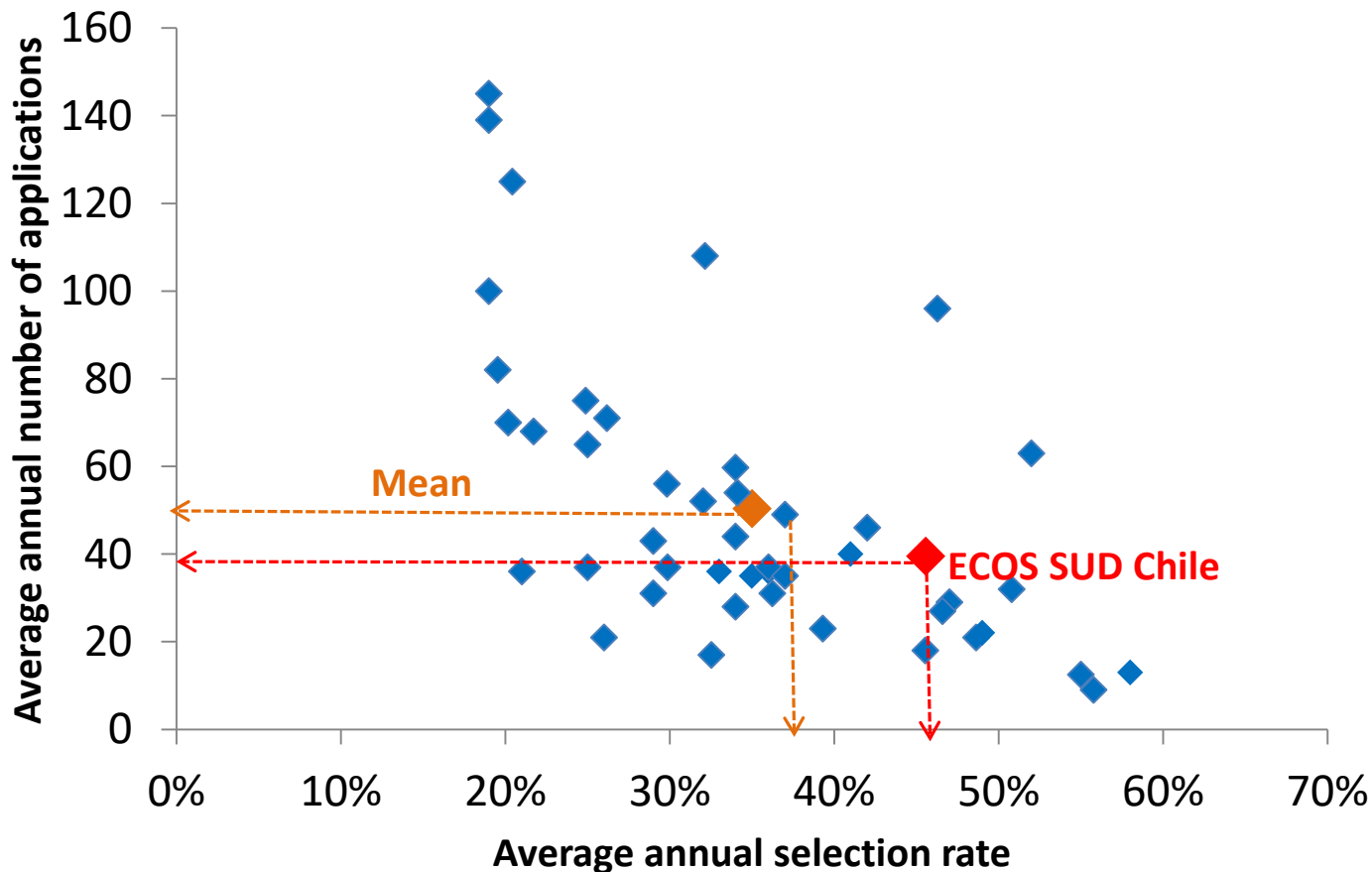
With which of scientific collaboration program ?	
ECOS Sud Chili	50%
CNRS fundings	21%
ANR (French National Research Agency)	3%
Others	26%

Other cooperations include among others CONICYT, Math Amsud, STIC Amsud, INRIA, IRD...

**More than 170 previous cooperation projects based on other exchanges
(e.g., co-publication, meetings, joint PhD...)**

Data from 110 responses

NUMBER OF APPLICATIONS VS SELECTION RATE (COMPARISON BETWEEN 46 DIFFERENT BILATERAL PROGRAMS)

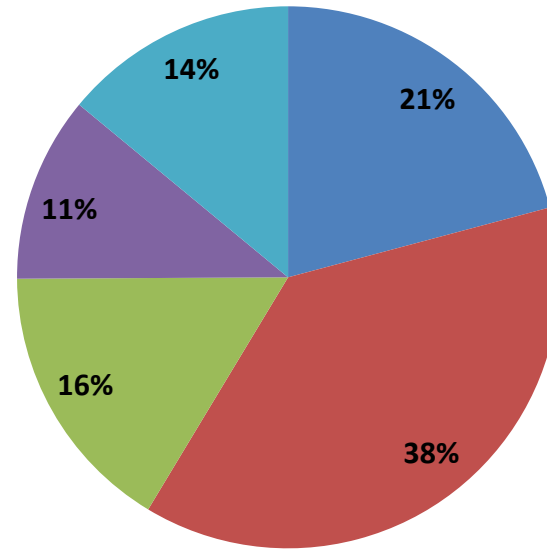
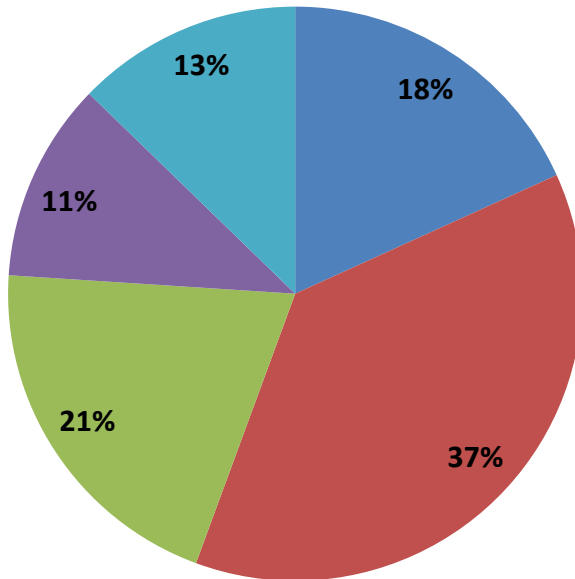


Average selection rate for 2000-2015 : **42% vs 35% mean**
Average number of applications 2000-2015 : **46 vs 50 mean**

SCIENTIFIC DOMAINS OF ECOS SUD CHILE PROJECTS (2000-2015)

Number of applications : **730**

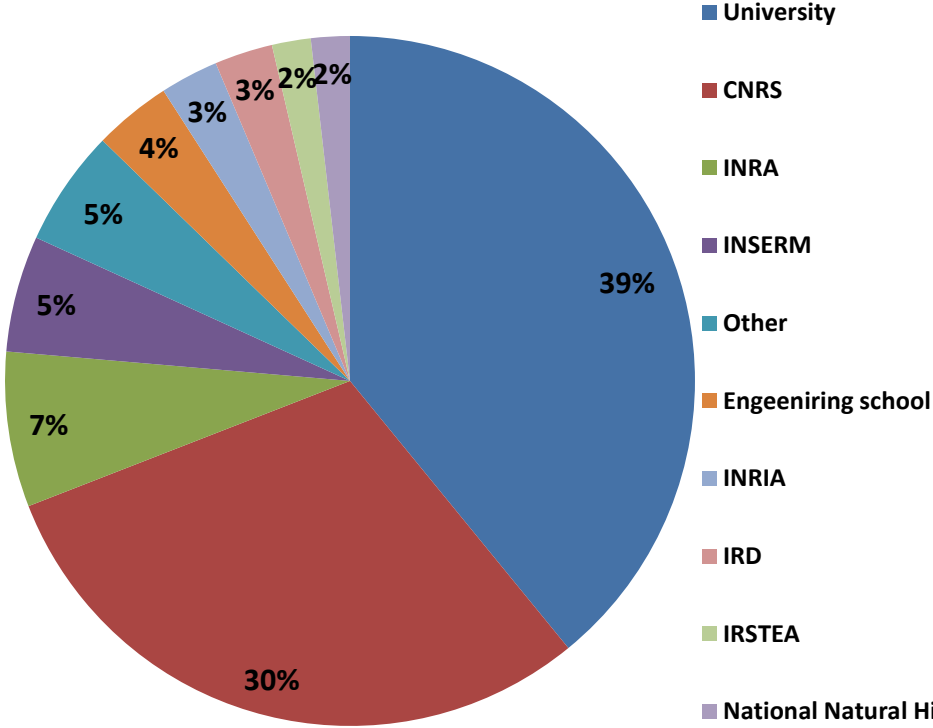
Number of funded projects : **307**



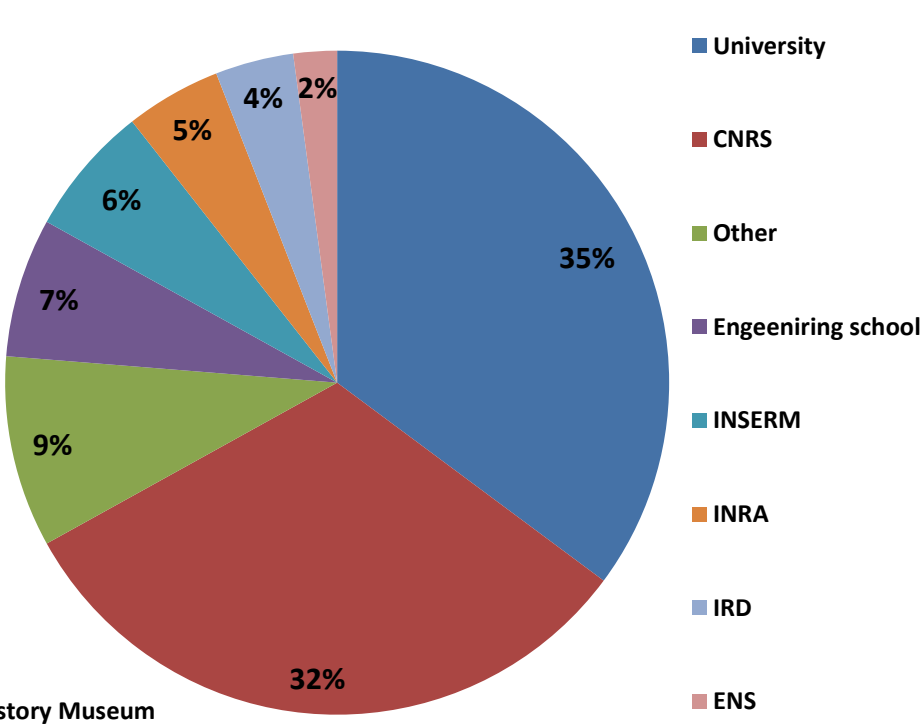
- Life sciences
- Exact sciences
- Humanities
- Health sciences
- Universe sciences

FRENCH PARTICIPATING INSTITUTIONS

PI's employers

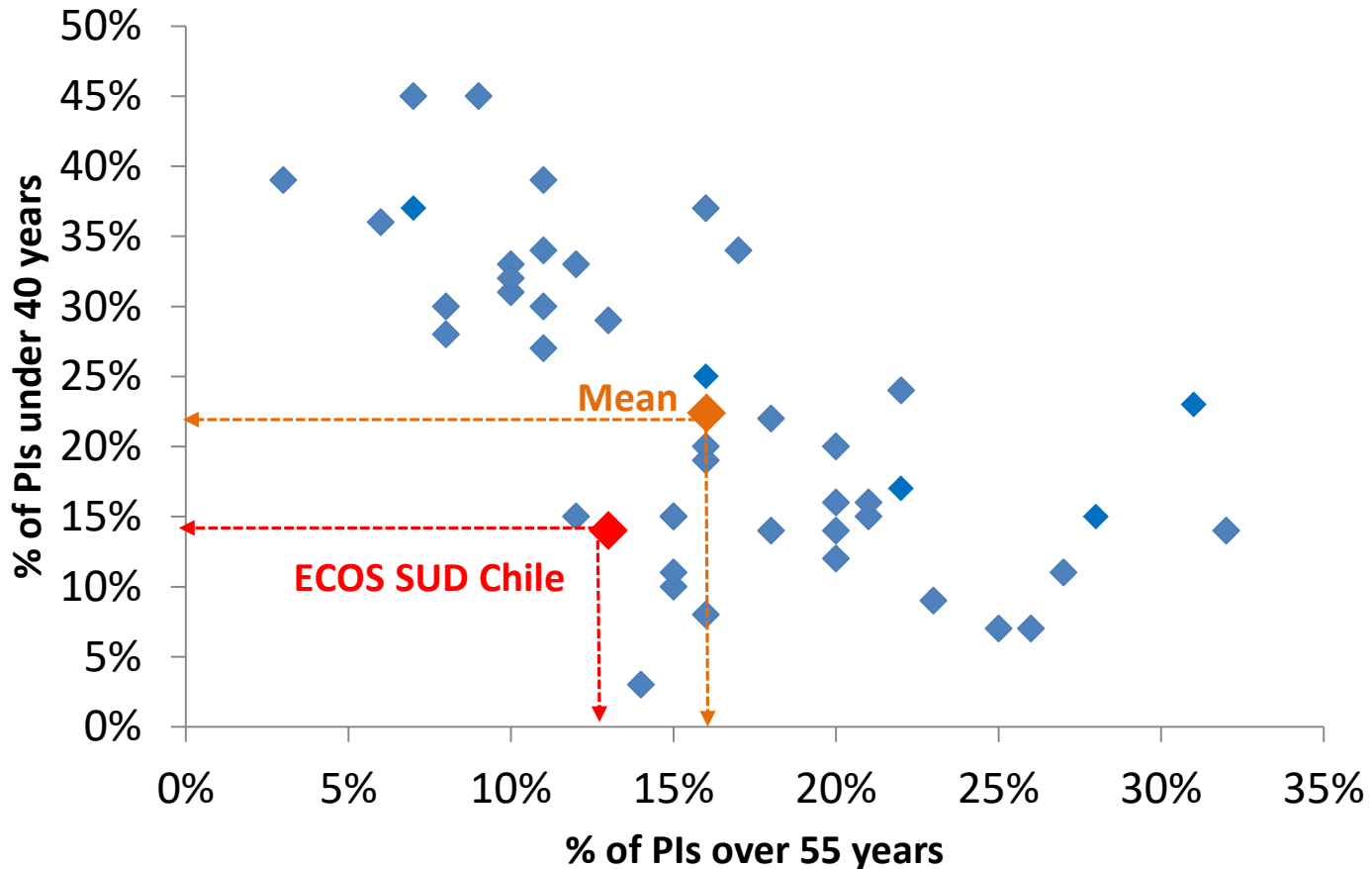


Laboratory authorities



Data from 110 responses

AGE OF PRINCIPAL INVESTIGATORS (PI) (COMPARISON BETWEEN 46 DIFFERENT BILATERAL PROGRAMS)

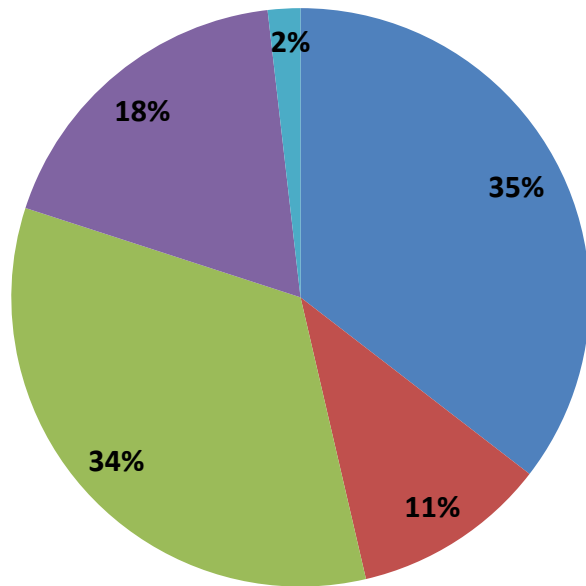


PIs under 40 years old : 14% vs 22% mean
PIs over 55 years old: 13% vs 16% mean
73% of the PIs are between 40 and 55 years old

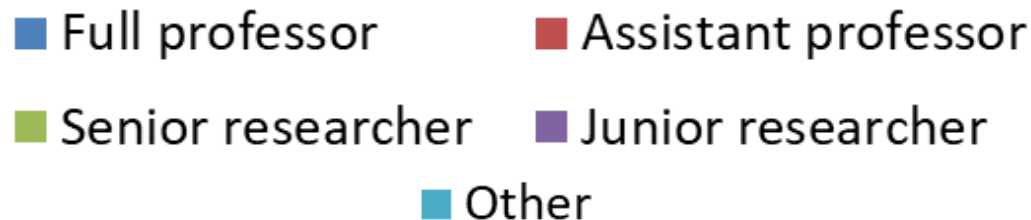
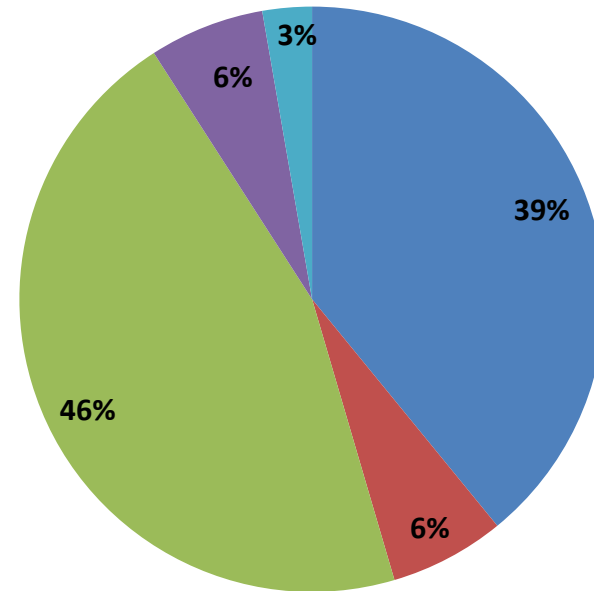
Data from 110 responses

PROFESSIONAL FUNCTION OF FRENCH PRINCIPAL INVESTIGATORS

Previous professional status (at the beginning of the project)

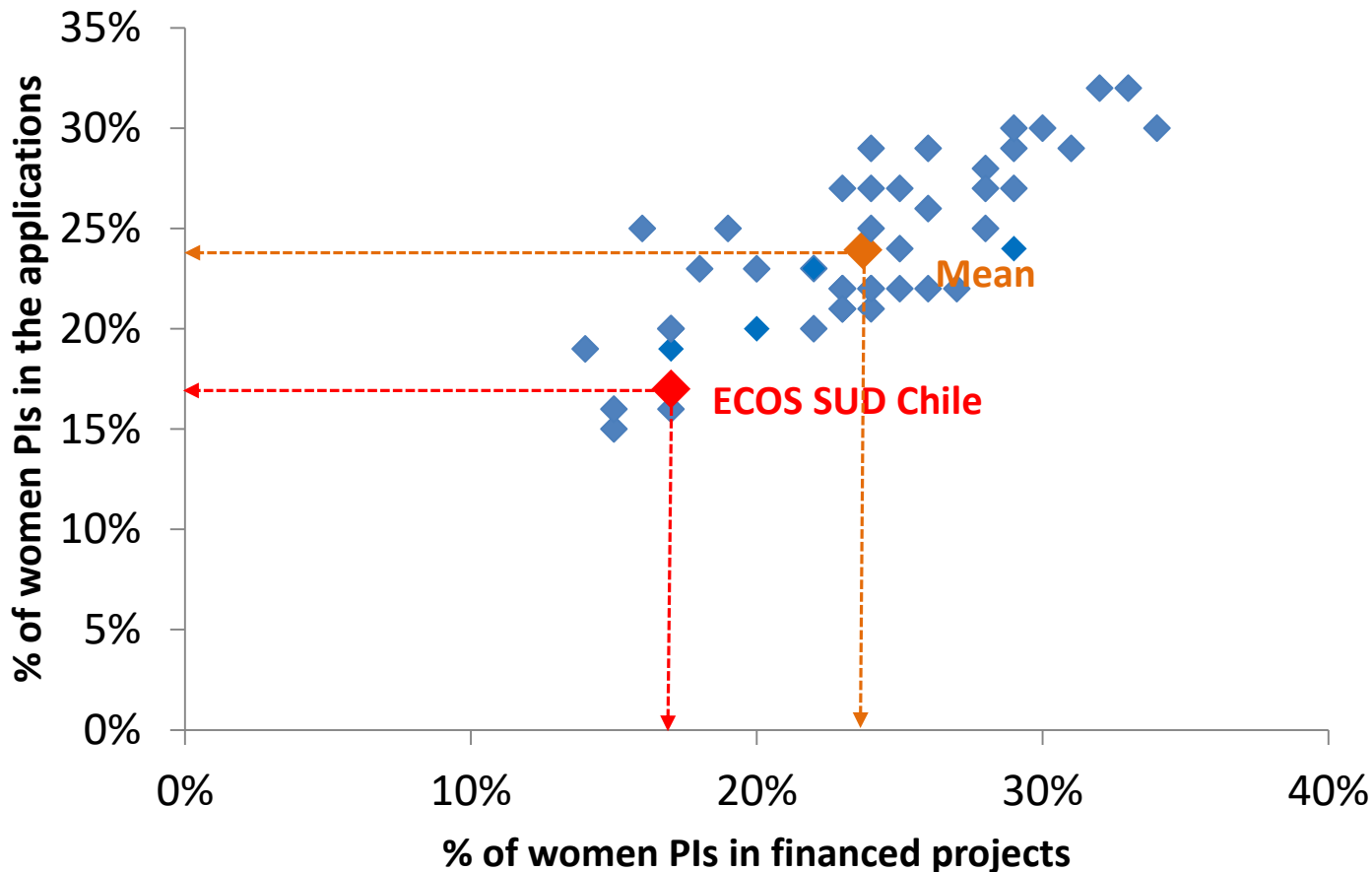


Current professional status



Data from 110 responses

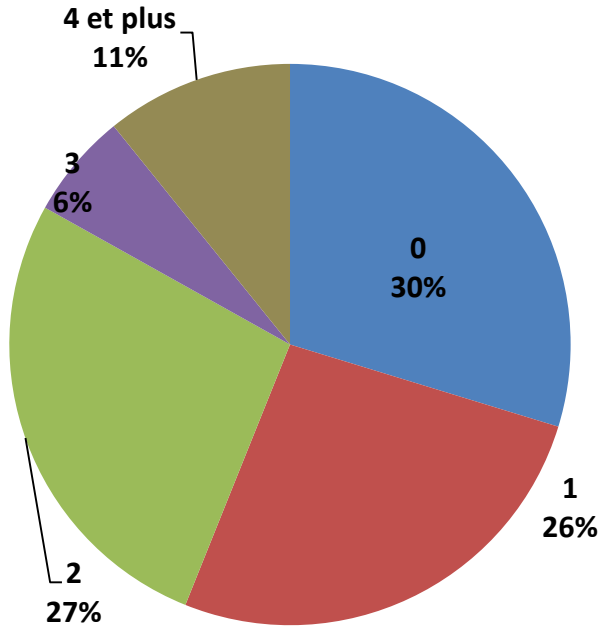
IMPLICATION OF WOMEN (FRANCE) (COMPARISON BETWEEN 46 DIFFERENT BILATERAL PROGRAMS)



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

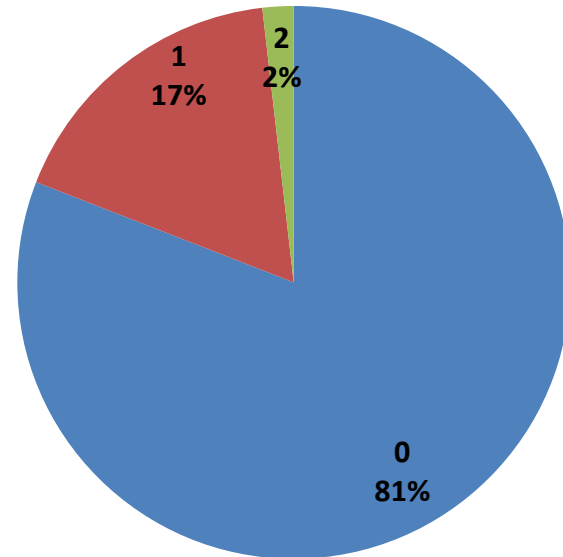
PARTICIPATION OF FRENCH YOUNG RESEARCHERS

Number of PhD students



70% of projects involve at least one PhD student

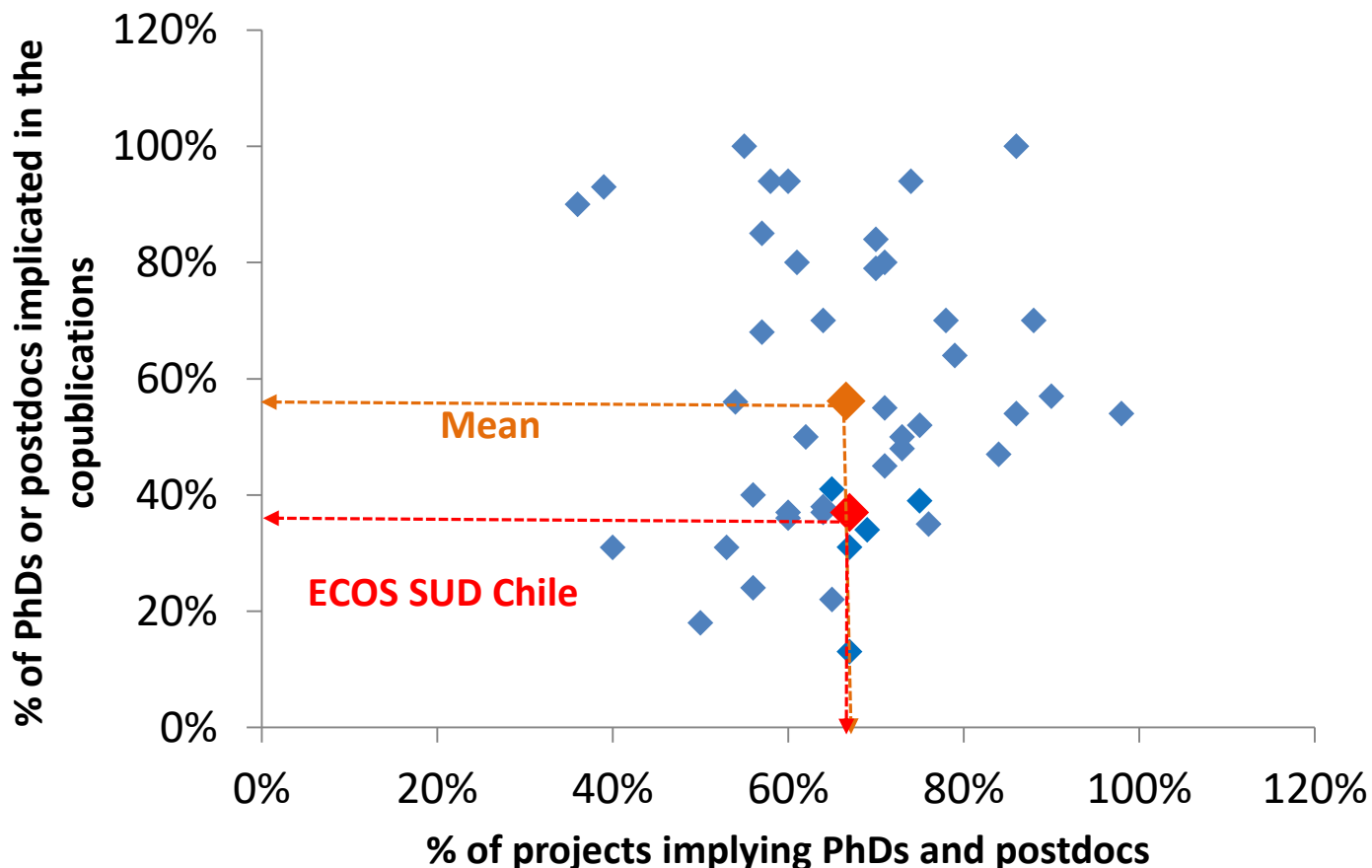
Number of post-doctoral researchers



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

Data from 106 responses

IMPLICATION OF YOUNG RESEARCHERS (COMPARISON BETWEEN 46 DIFFERENT BILATERAL PROGRAMS)



% of projects implying young researchers : 67% vs 67% mean
% of PhD or postdoc implicated in the copublications : 37% vs 56% mean



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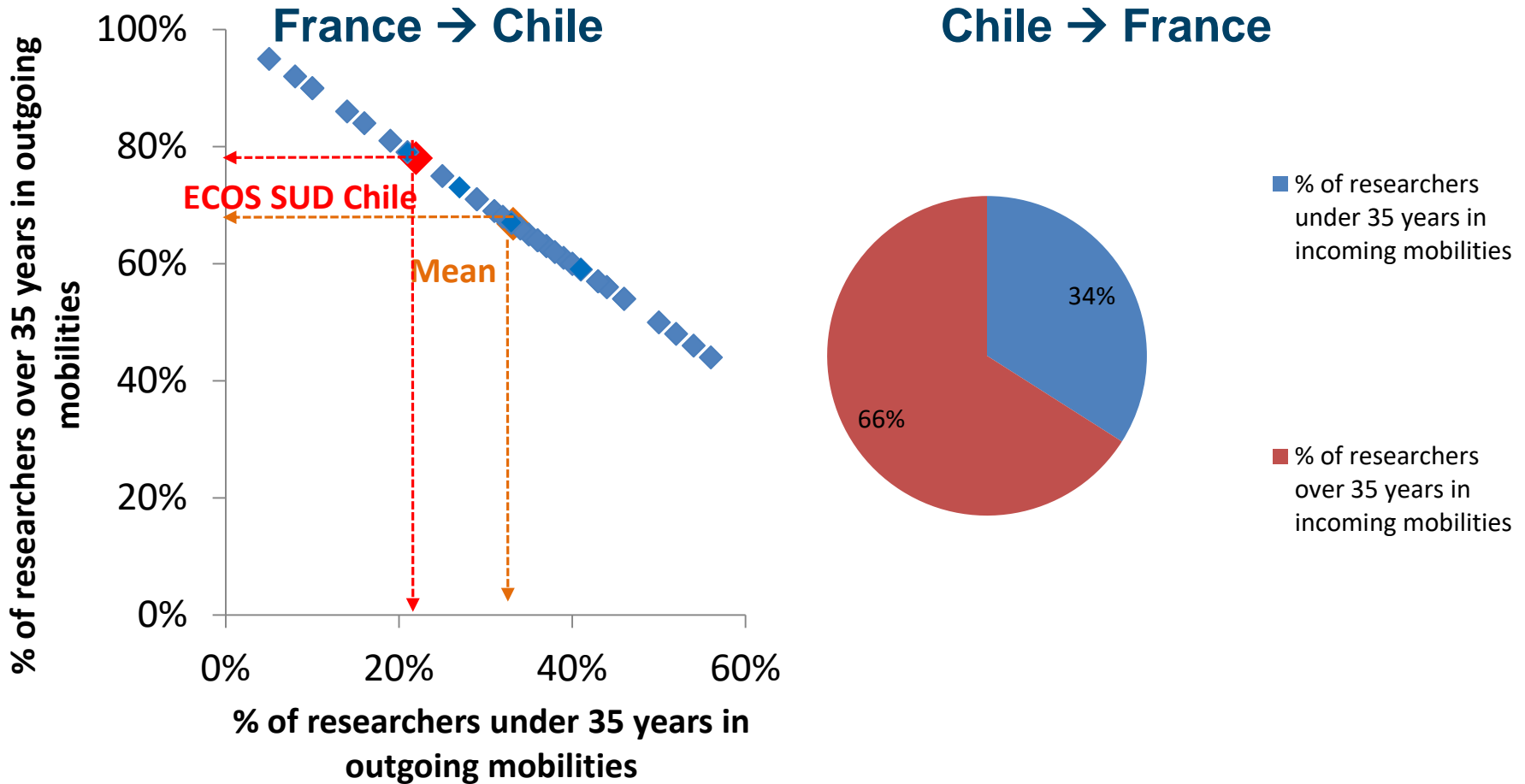
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MOBILITY

YOUNG RESEARCHERS MOBILITY

FRANCE – CHILE

(COMPARISON BETWEEN 46 DIFFERENT BILATERAL PROGRAMS)



% of french young researchers in outgoing mobilities : 22% vs 33% mean
% of chilean young researchers in incoming mobilities : 34%



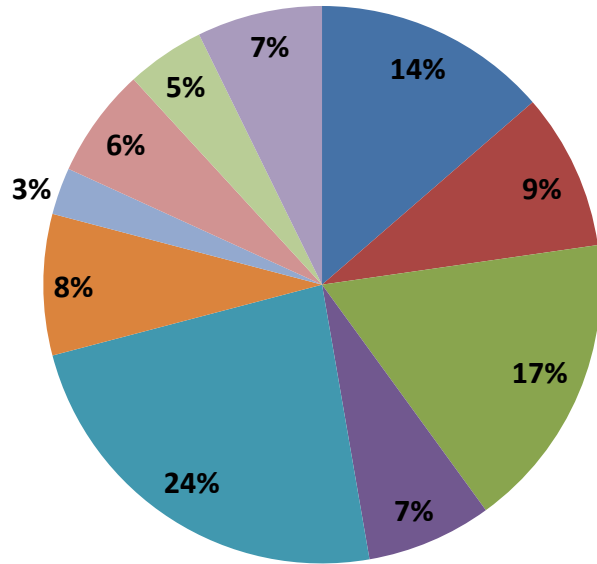
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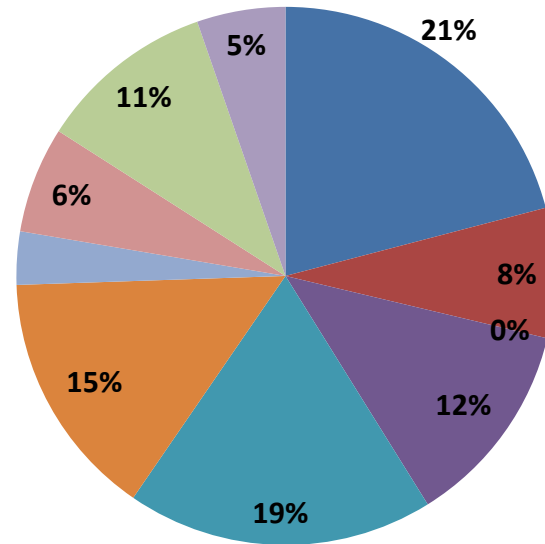
SCIENTIFIC PRODUCTION (2000-2015)

SCIENTIFIC OUTPUT (1/2)

Number of funded projects from the survey : **110**



Percentage of co-publications



- | | |
|---|---|
| ■ 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 110 funded projects

	Number of financed projects in the survey	Average number of co-publications per project
Mathematics	15	3,93
Physics	10	2,20
Marine/Earth/Planet Sciences	19	0,00
Chemistry	8	4,38
Biology and Health	26	2,00
Humanities	9	4,67
Social Sciences	3	3,00
Engineering Sciences	7	2,57
Information Technology	5	6,00
Agronomy / Ecology	8	1,88
TOTAL	110	2,56

Overall average **annual** number of co-publication per project : **0,85 vs 0,90 mean**

77% of funded projects led to one co-publication at least

7% of co-publications include at least 1 PhD or PostDoc

37% of young researchers cited as participants to the projects are implicated in the copublications

Average annual publication rate for young researchers : **0,12**

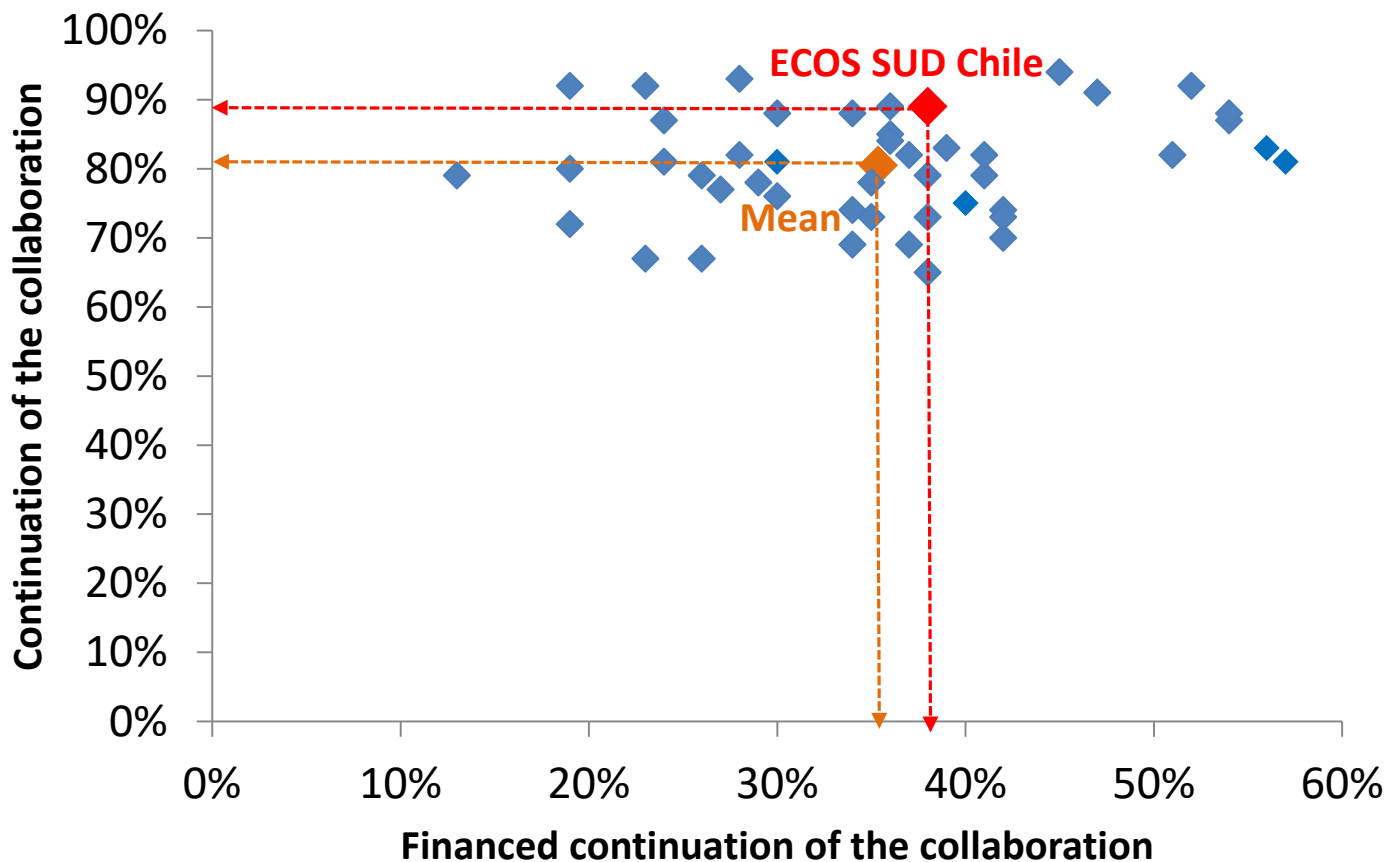


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WHAT HAPPENS AFTER JOINING THE ECOS SUD CHILE PROGRAM ?

CONTINUATION OF THE COLLABORATION (1/5) (COMPARISON BETWEEN 46 DIFFERENT BILATERAL PROGRAMS)



Continuation of the collaboration : 89% vs 81% mean
Continuation of the collaboration with other grants: 38% vs 34% mean

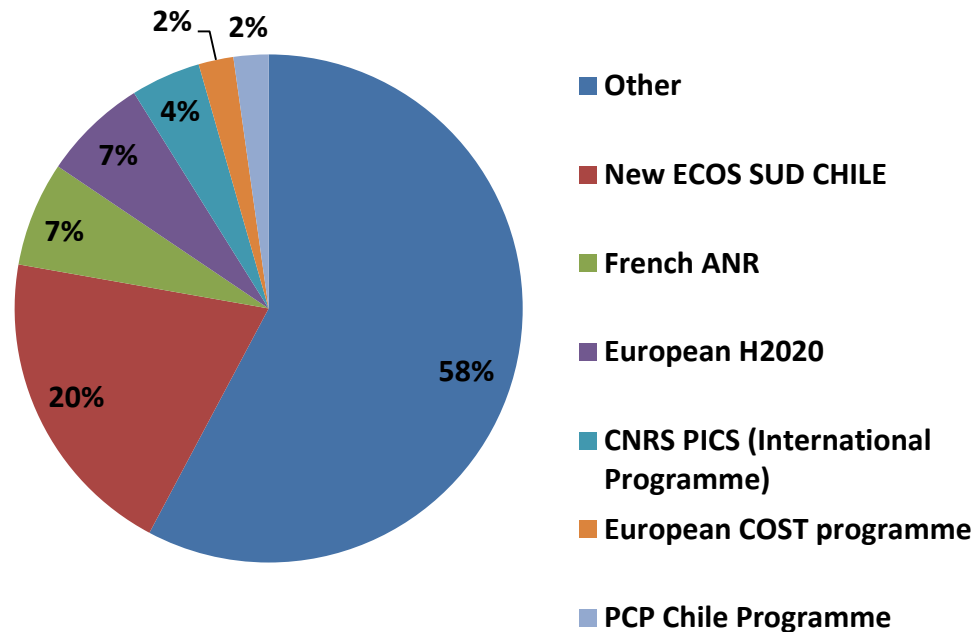
CONTINUATION OF THE COLLABORATION (2/5)

89% of the collaborations continued after the ECOS SUD Chile project

Which activities?	
Collaborative research	72%
Co-publications	64%
Researchers mobility	57%
PhD mobility	41%
Joint participation to conferences	35%
Co-organisation of scientific events	26%
Joint participation at PhD thesis	24%
Joint diplomas (Master, PhD...)	0%
Others	15%

CONTINUATION OF THE COLLABORATION (3/5)

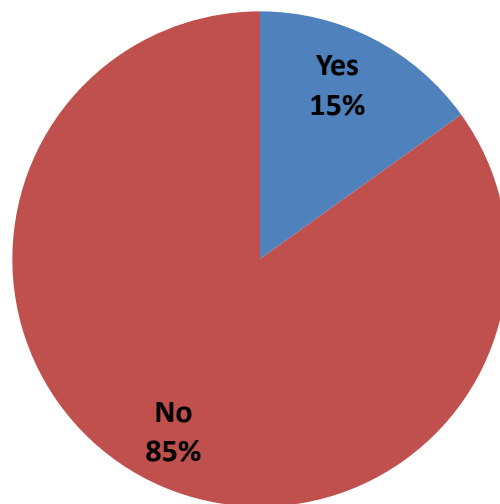
What kind of funded collaborations after the ECOS SUD Chile project ?



Other fundings : CONYCIT (3), MEC (2), LIA (5), Mathamsud (2), Prefalc (1), Others (9)

CONTINUATION OF THE COLLABORATION (4/5)

Has the ECOS SUD Chile project led to the set-up of joint structures?

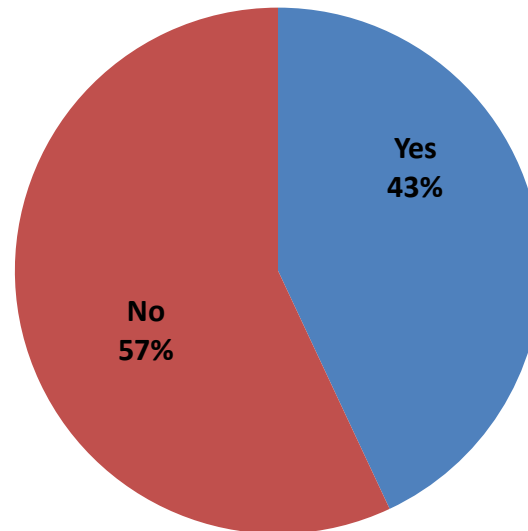


11 CNRS International Associated Laboratories (LIA)
2 CNRS Mixed International Laboratories (LMI)
1 CNRS Mixed International Unit (UMI)
1 INSERM LIA

Data from 19 responses

CONTINUATION OF THE COLLABORATION (5/5)

Has the French-Chilean collaboration involved new partners?

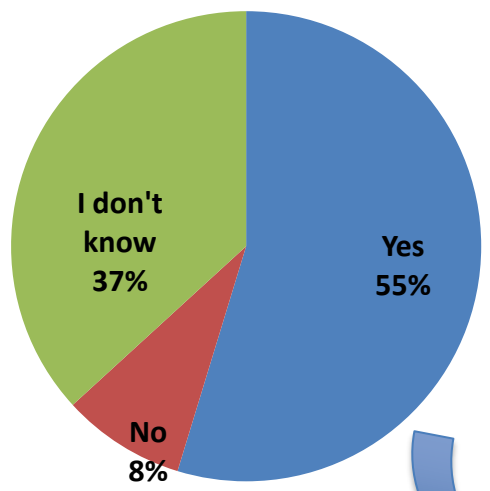


For a total of 46 new partners from 12 different countries

Data from 86 responses

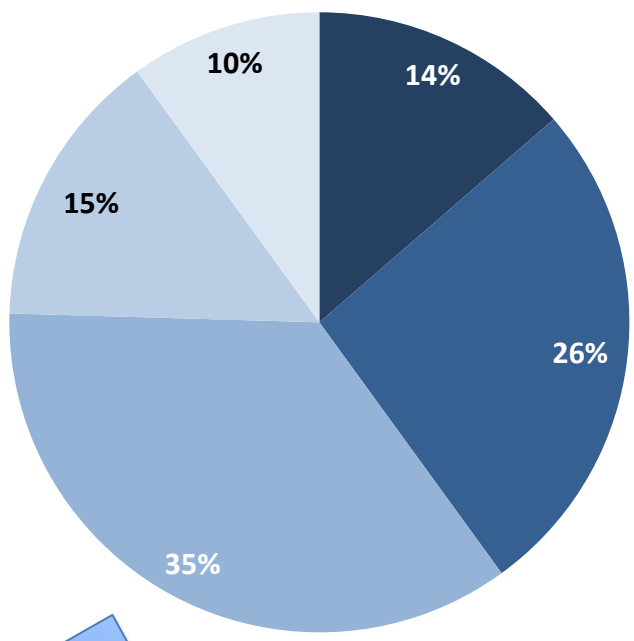
IMPACT ON YOUNG RESEARCHERS' CAREER (1/2)

Was young researchers' career impacted by the ECOS SUD Chile program ?



Data from 106 responses

Type of impacts

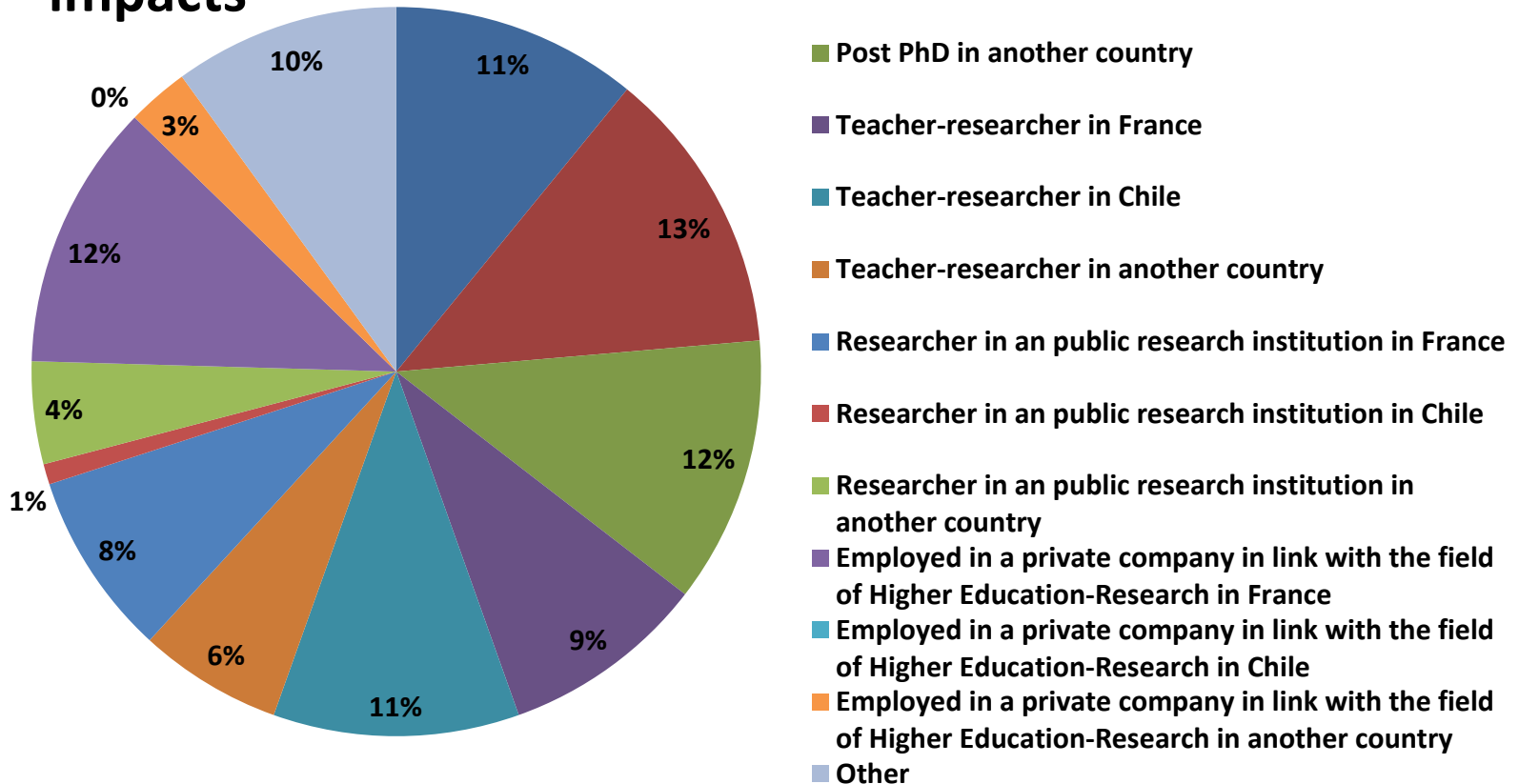


- Researcher in a public research institution (permanent position)
- Teacher/Researcher (permanent position)
- Postdoc/Teacher/Researcher (temporary position)
- Employed in a private company in link with the field of Higher Education - Research
- Other

Data from 58 positive responses for a total of 110 young researchers

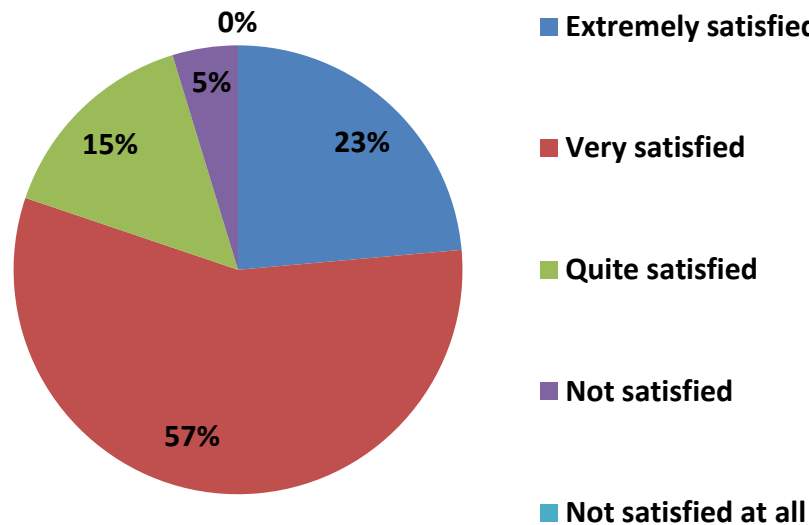
IMPACT ON YOUNG RESEARCHERS' CAREER (2/2)

Detailed types of impacts



GENERAL OPINION OF FRENCH PIS ON THE PROGRAM

95% of French principal investigators are satisfied



Data from 106 responses

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

SURVEY OF 106 FUNDED PROJECTS



Strengths of this program	Number of occurrences (out of 670)	% (out of 106)
Allows the mobility of the researchers	93	85%
Allows an international scientific collaboration	91	83%
Allows exchanges which allow a scientific production	77	70%
Allows the training of the young researchers	73	66%
Simplicity of the application process	71	65%
Allows a knowledge of the country partner	48	44%
Sufficiently long duration of the projects	41	37%
Easy implementation (administrative flexibility)	37	34%
Duration of mobilities adapted to the needs	35	32%
Good scientific appreciation compared to the financial investment	33	30%
Financial means sufficient for the expenditure of mobility	29	26%
Is used as starting for raising other funds	22	20%
Transparency of the methods for selecting the projects	14	13%
Others	6	5%
<i>Total number of occurrences</i>	<i>670</i>	

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



SURVEY OF 106 FUNDED PROJECTS

Weaknesses of this program	Number of occurrences (out of 262)	% (out of 106)
No funding of the operation and capital expenditures	54	49%
Financial means insufficient for the expenditure of mobility (per diem)	32	29%
Difficult perpetuation of collaboration	32	29%
Too low number of mobilities	24	22%
Financial means insufficient for the expenditure of mobility (transport)	19	17%
Administrative heaviness of the missions management	19	17%
Insufficient communication on the evaluation's results	17	15%
Lack of transparency on the methods of projects selection	15	14%
Too short duration of mobilities	13	12%
Too short duration of the projects	7	6%
Heaviness of the process of applications	5	5%
Too long duration of mobilities	3	3%
Other	22	20%
Number of occurrences	262	

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”.

Stable and consequent number of applications since 2000

Useful program to reinforce a previous cooperation (64% have already cooperate with the Chilean partner)

60% of the projects involve at least one PhD student

Average scientific production close to the mean (0,85 vs 0,90)

Continuation of the cooperation (89%) often with a sustained funding (38%)

Set-up of joint structures higher than the mean

Capacity of involving new partners during continuation of the cooperation

Positive impact on young researchers career (40% with a permanent position)

A low score of young researchers (14%) and women (17%) applicants

Tow low implication of postdocs (19% vs general mean : 23%) in the projects

Insufficient implication of french young researchers in the scientific production (37% vs general mean 61%) and low annual rate of co-publications for young researchers (0,12)

Only 7% of co-publications include at least one young researcher

PRELIMINARY RECOMMENDATIONS FOR FRENCH PIS

RECOMMENDATIONS

- **Increase the scientific co-production**
- **Increase the participation of young researchers, especially postdocs, in the projects**
- **Encourage PIs to increase the implication of young researchers in the publications**
- **Encourage women researchers to apply**
- **Encourage young researchers to apply**

French national ministries (MESR / 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

robert.gardette@recherche.gouv.fr

marie-pierre.macian@recherche.gouv.fr

christophe.delacourt@recherche.gouv.fr

Thank you for your attention