

# **FRANCE – BRAZIL CAPES-COFECUB - 40th ANNIVERSARY**

## **Scientific impact of the program (2003-2018)**

### **MESRI-DAEI / MEAE**

### **2019**

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



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

# GENERAL PRESENTATION OF THE PROGRAM

**Creation : 1979**

**The purpose of this program** is to start or develop the scientific cooperation and the relations between the research centres and the universities of the two countries, through the support for research joint projects of excellence, implying the mobility of researchers by giving a priority to the formation on the levels doctoral and post-doctoral.

**Total budget (France + Brazil) : around 1 130 000 € / 4 years**

>> including budget from the French part : 565 000 € / 4 years

>> including budget from the Brazilian part : 565 000 € / 4 years

**Average budget per project (France + Brazil) : 12 300 € / year**

**Number of new projects per year : around 35**

**From 2005-2016 :**

**1 291 applications submitted**

**415 projects funded**

# DATA SOURCES

## Campus France

- List of mobilities (from France to Brazil and Brazil to France)

## CAPES-COFECUB committee

- Informations about the CAPES COFECUB program applications

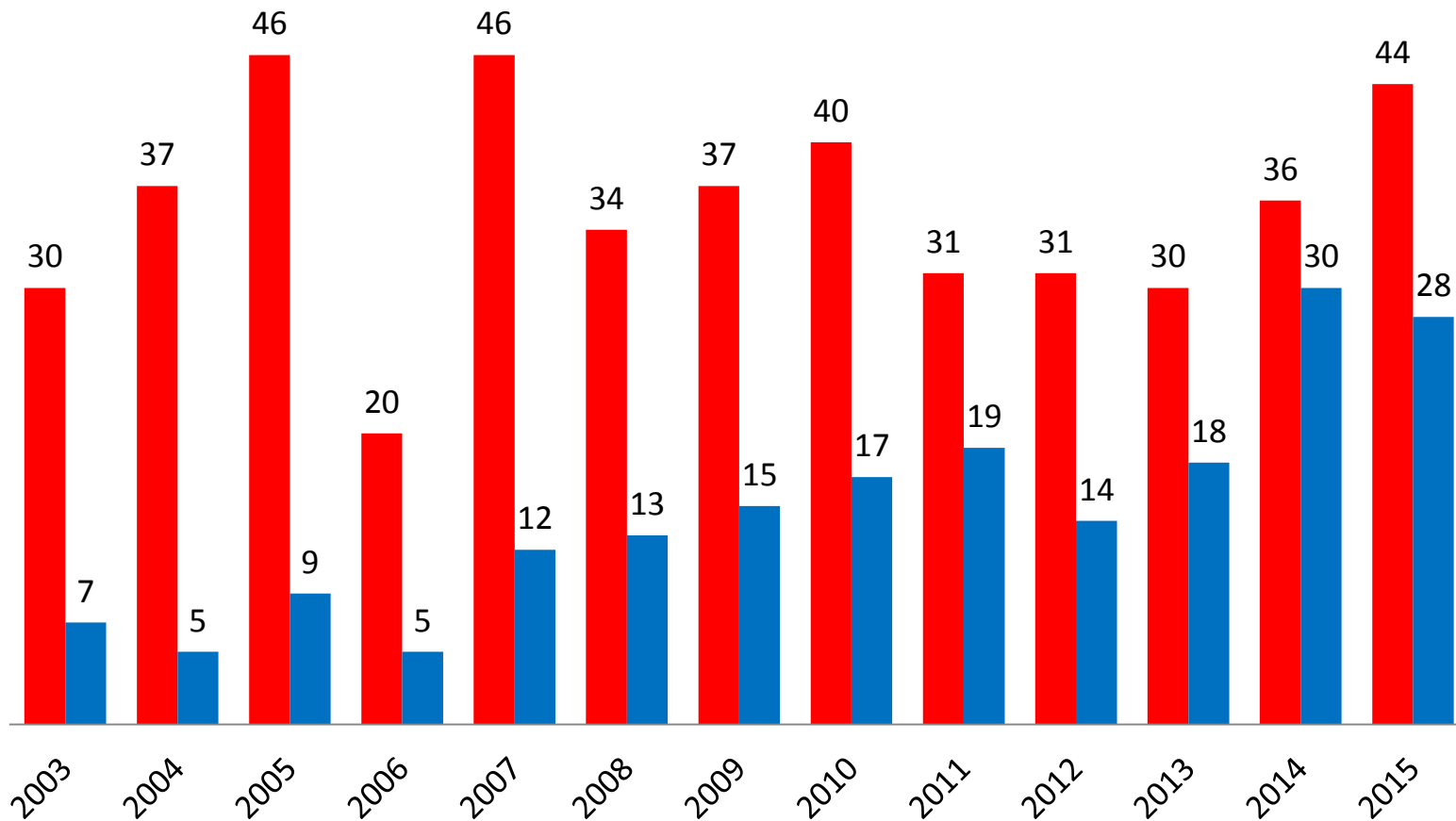
## **Survey** *(conducted by the French Ministry of Higher Education, Research and Innovation and Ministry for Europe and Foreign Affairs)*

- Target : French Principal Investigators of selected projects between 2003 and 2015
- Survey **duration : 7 weeks between January and March 2019**
- **42%** response ratio *(192 respondents for 462 funded projects)*

# ANSWERS TO THE SURVEY

Average response rate to the survey : **42 % (192 answers)**

■ Number of funded projects    ■ Number of survey answers



**COFECUB  
Committee  
& Survey  
data**

# 2003-2018 KEY POINTS

# BEFORE CAPES-COFECUB PROJECT

## (1/3)

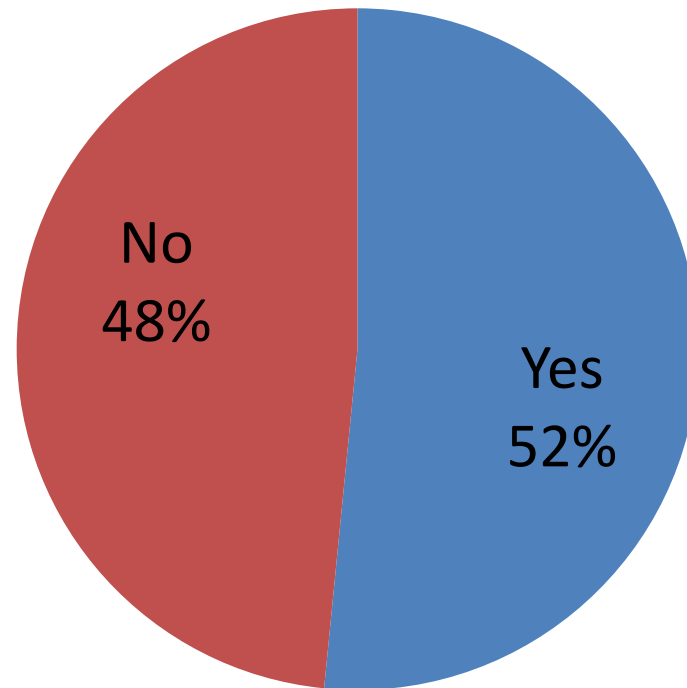
**69%** of French PIs have already collaborated with the same Brazilian partner

Which history of that collaboration	
Stay of a researcher in the laboratory partner	39%
Co-publication	35%
Management of students or trainees	25%
Former Project CAPES-COFECUB	22%
Joint supervision of PhD thesis	15%
Joint project funded by another way	15%
Other	11%
CNRS CNPQ	4%
Former project USP-COFECUB	3%

**Survey  
data**

# BEFORE CAPES-COFECUB PROJECT (2/3)

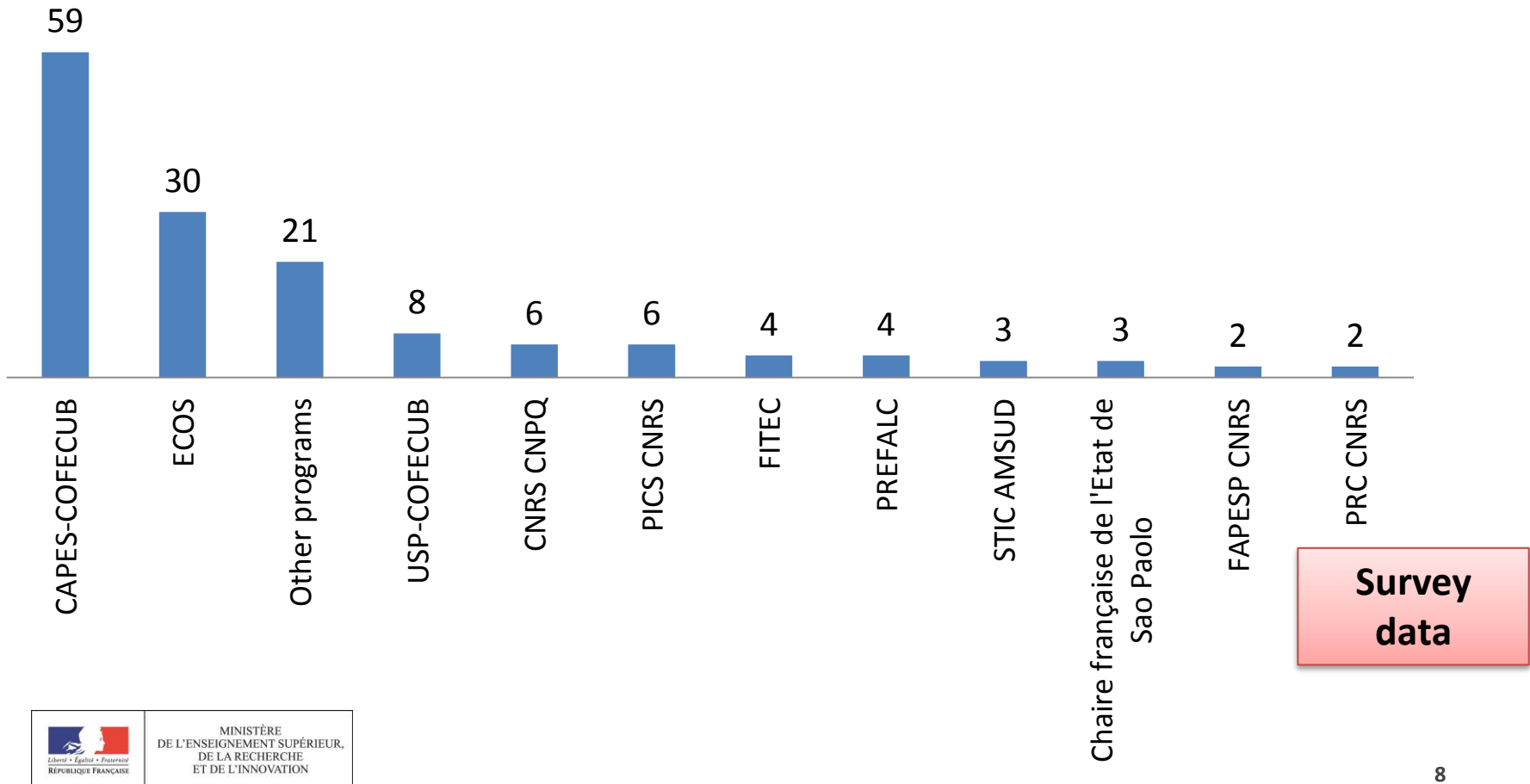
**Previous participation to another funded cooperation program supported by France in Latin America**



**Survey  
data**

# BEFORE CAPES-COFECUB PROJECT (3/3)

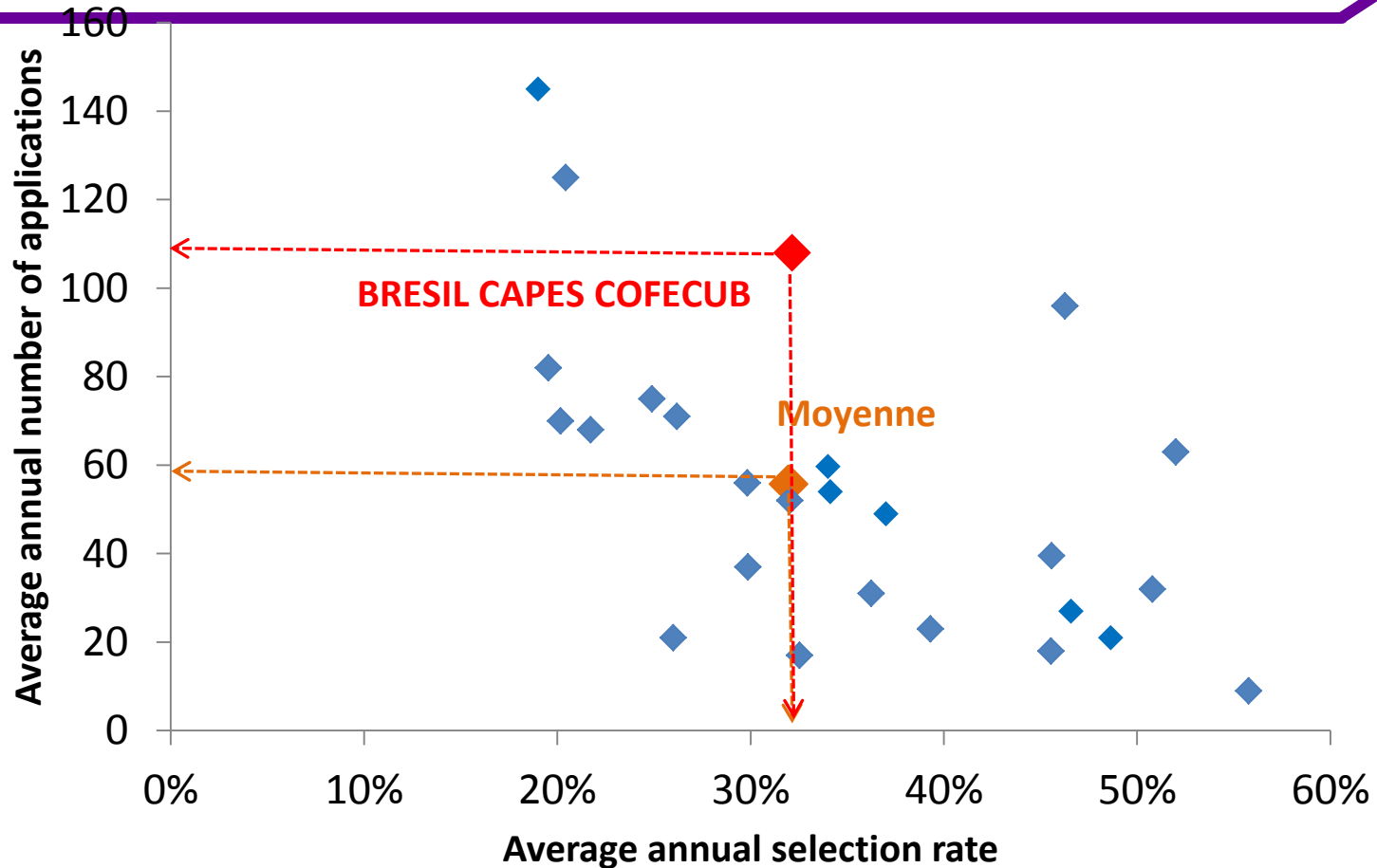
**Previous participation to another funded cooperation program supported by France in Latin America**





# NUMBER OF APPLICATIONS VS SELECTION RATE

## (COMPARISON BETWEEN 26 DIFFERENT BILATERAL PROGRAMMES)

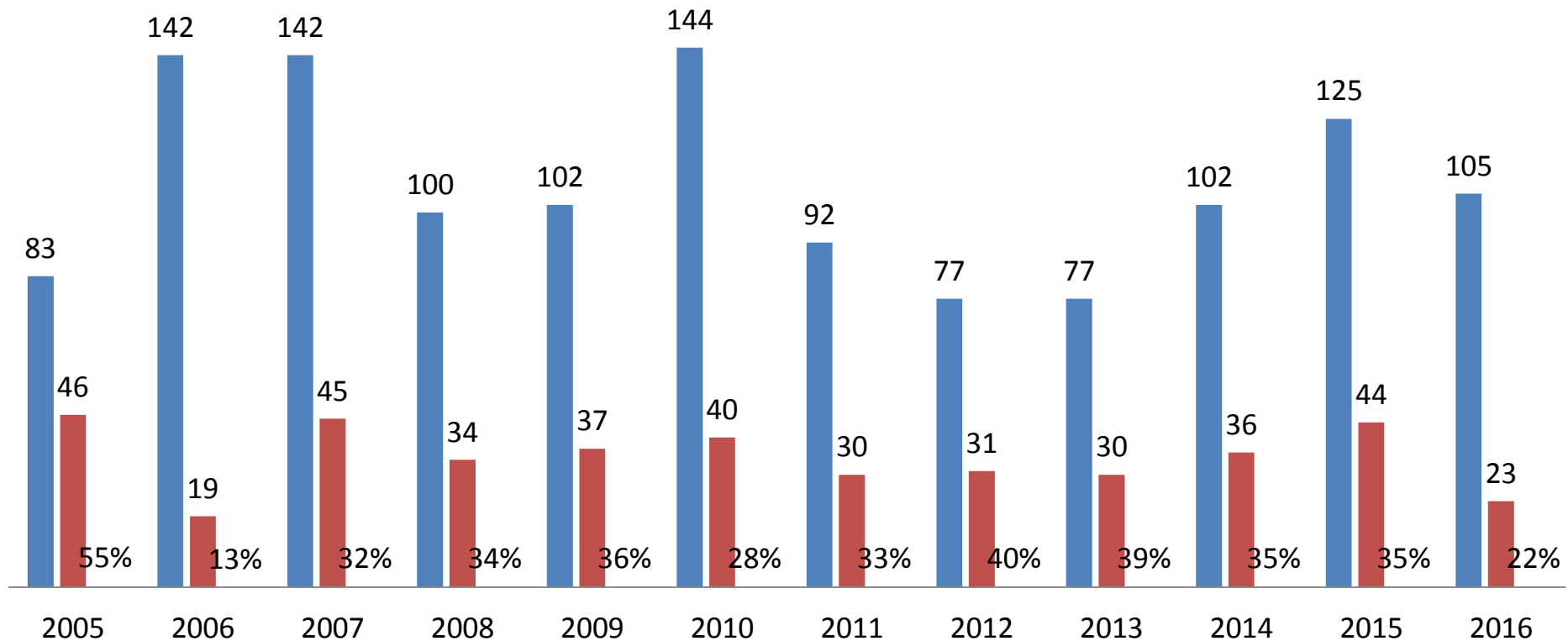


Average selection rate for 2005-2017 : **32% vs 32% mean**  
Average number of applications 2005-2017 : **108 vs 56 mean**

# SUCCESS RATE

Average selection rate from 2005-2016: **32 %**

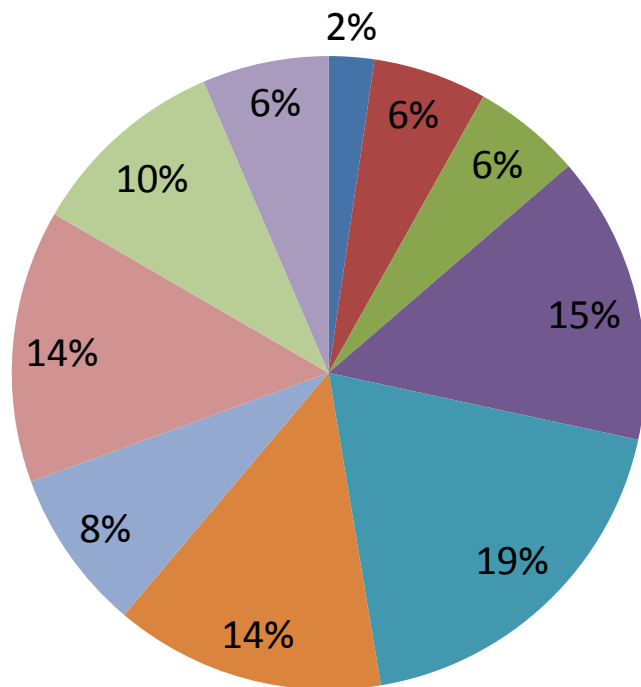
■ Number of applications ■ Number of funded projects Selection rate



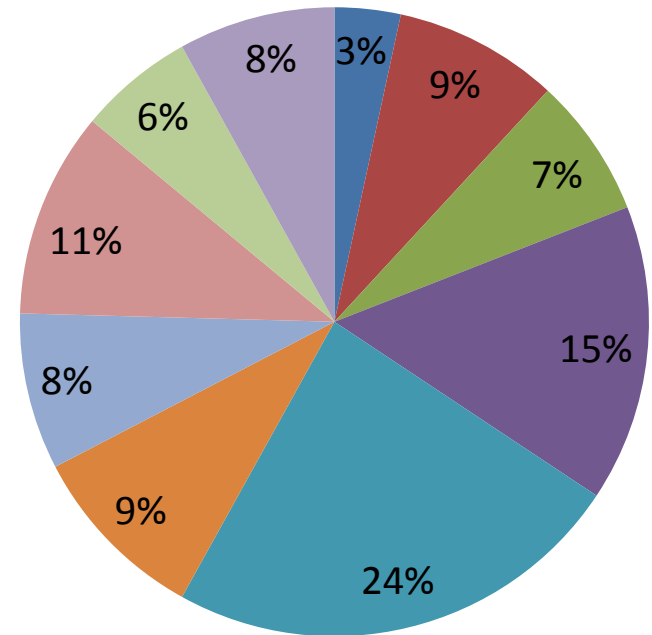
**COFECUB  
Committee  
data**

# SCIENTIFIC DOMAINS

## Applications



## Funded projects

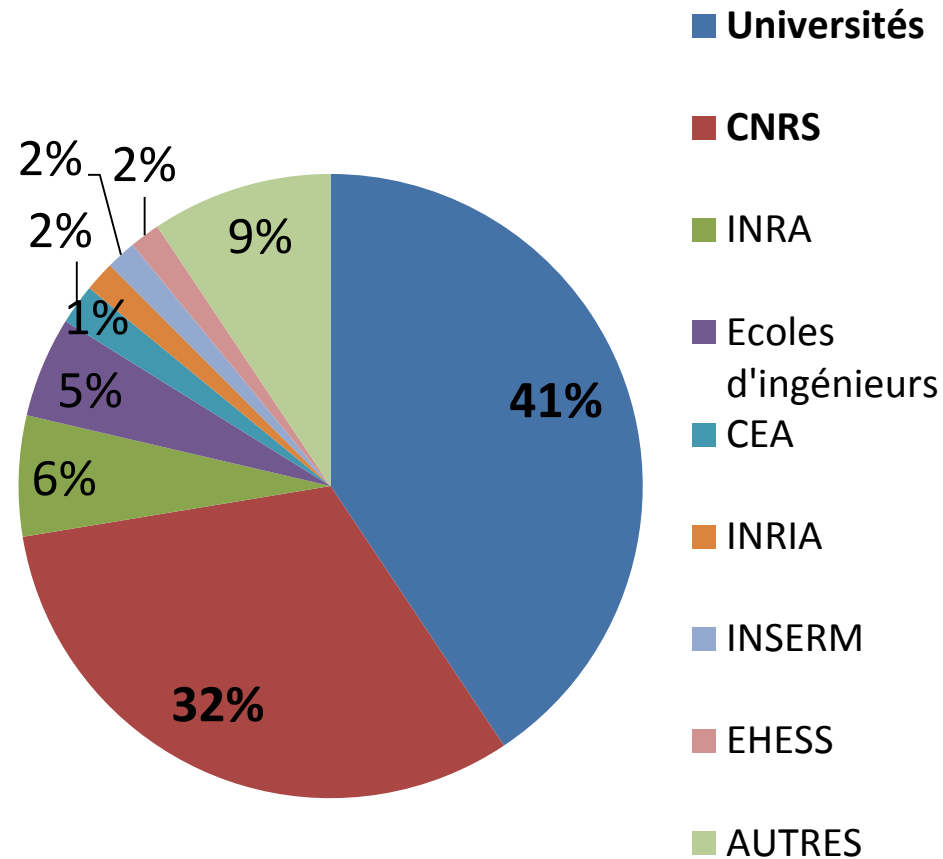


- Mathematics
- Physics
- Marine / Earth / Planet Sciences
- Chemistry
- Biology and Health
- Humanities
- Social Sciences
- Engineering Sciences
- Information Technology

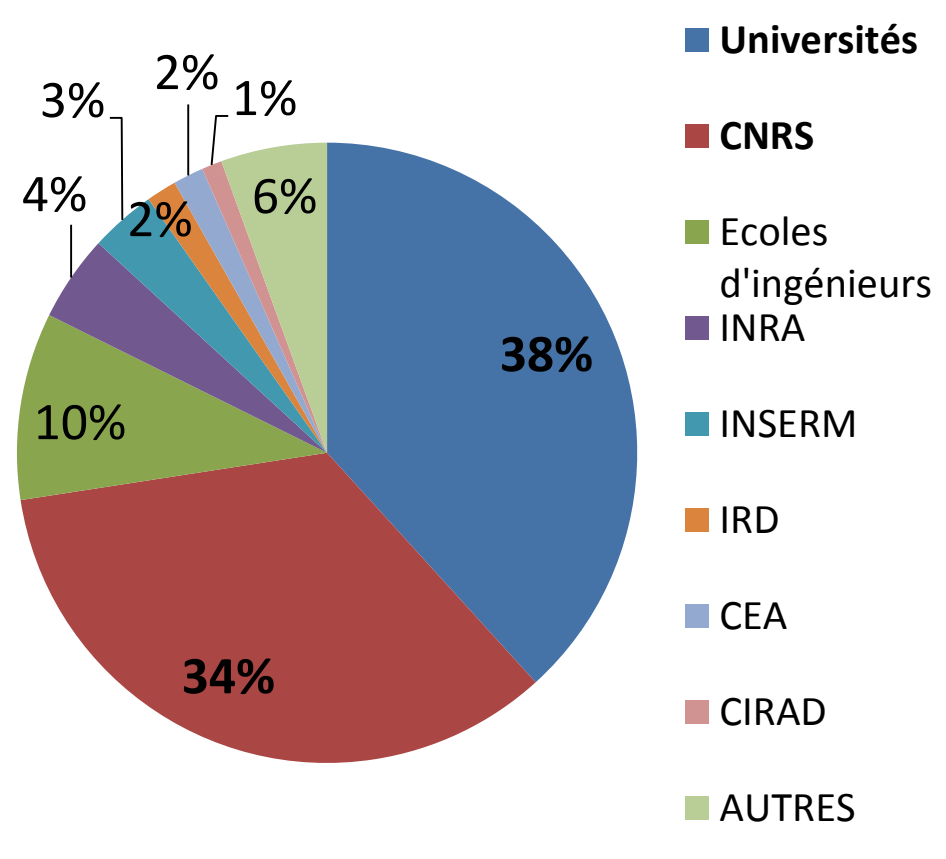
**COFECUB  
Committee  
data**

# FRENCH PARTICIPATING INSTITUTIONS

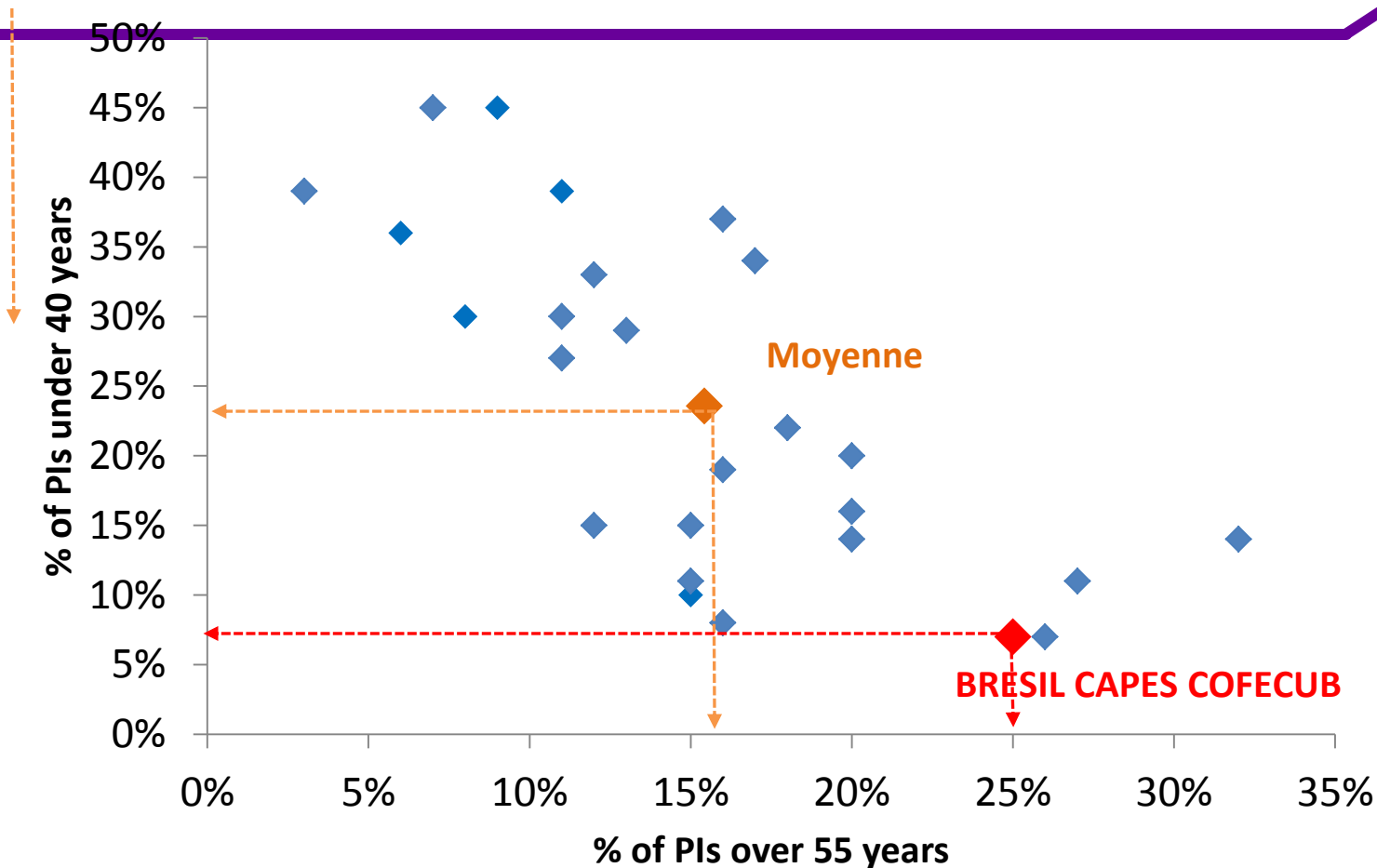
## PI's employers



## Laboratories authorities



# AGE OF PRINCIPAL INVESTIGATORS (PI) (COMPARISON BETWEEN 26 DIFFERENT BILATERAL PROGRAMMES)



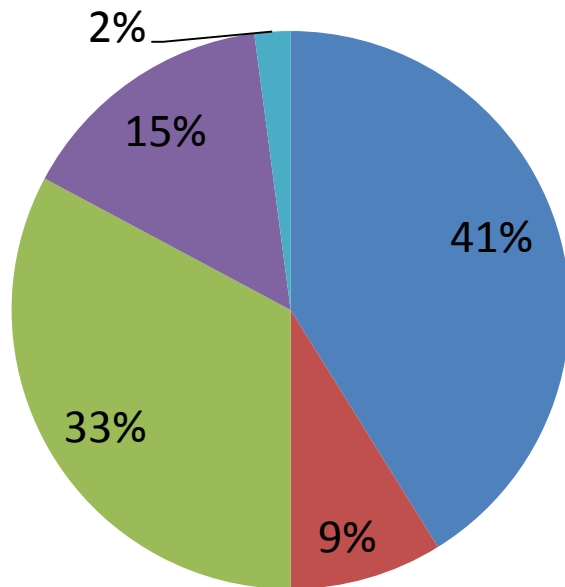
PIs under 40 years : **7% vs 23% mean**

PIs over 55 years : **25% vs 15% mean**

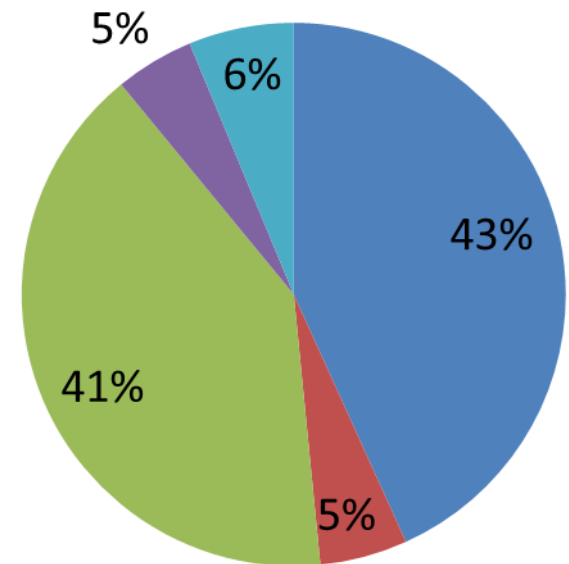
**68% of the PIs are between 40 and 55 years**

# FRENCH PIS (PRINCIPAL INVESTIGATORS) : STATUS

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



**Current professional status**

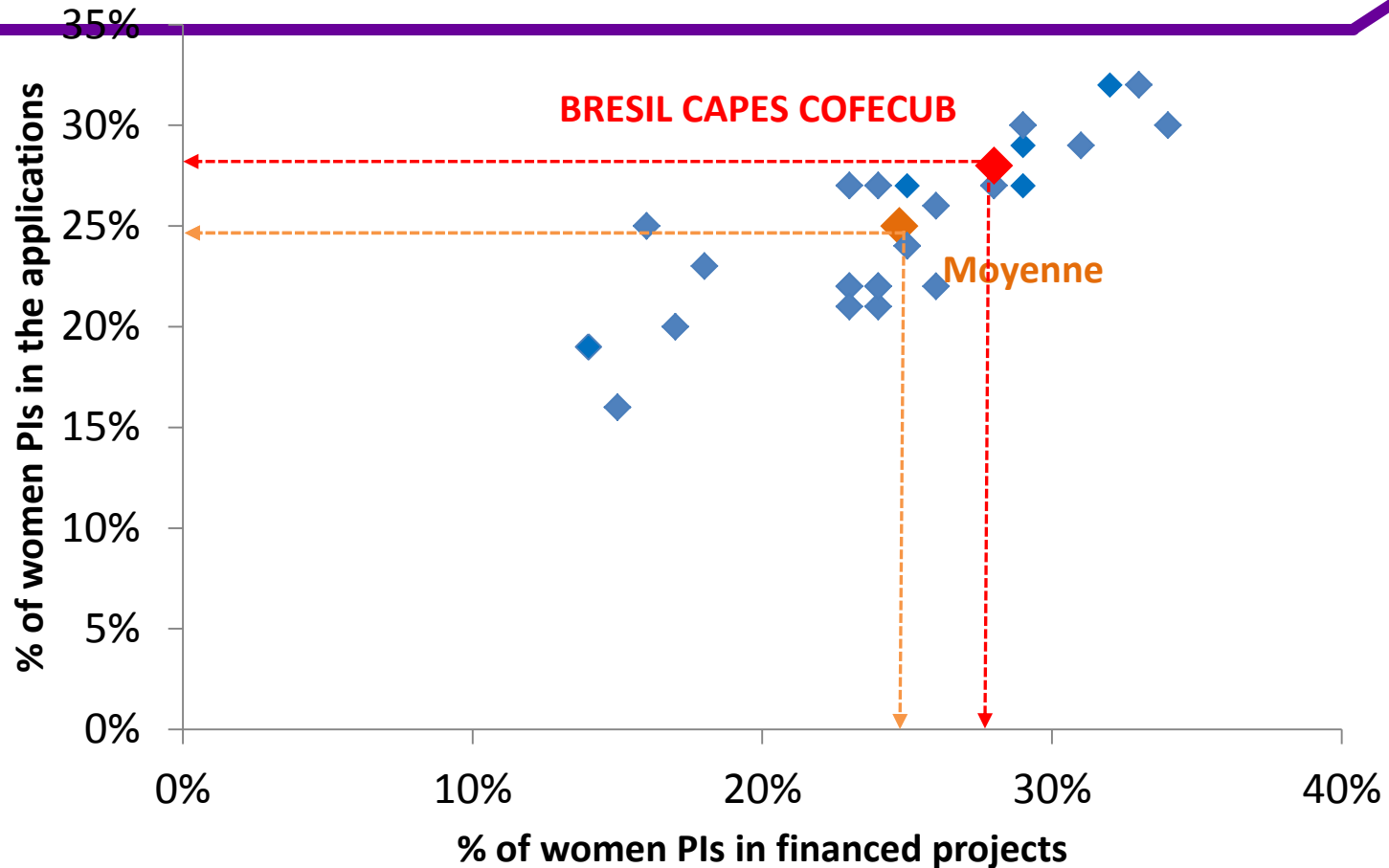


- Full professor
- Assistant professor
- Senior researcher
- Junior researcher
- Other

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data**

# IMPLICATION OF WOMEN (FRANCE)

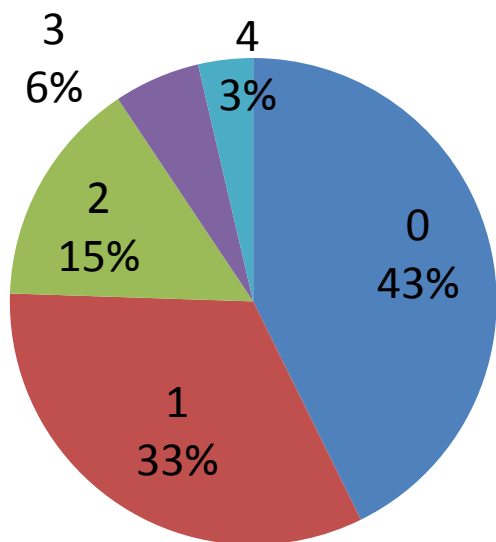
## (COMPARISON BETWEEN 26 DIFFERENT BILATERAL PROGRAMMES)



% of women PIs in the applications : **28% vs 25% mean**  
% of women PIs in the selected projects : **28% vs 25% mean**

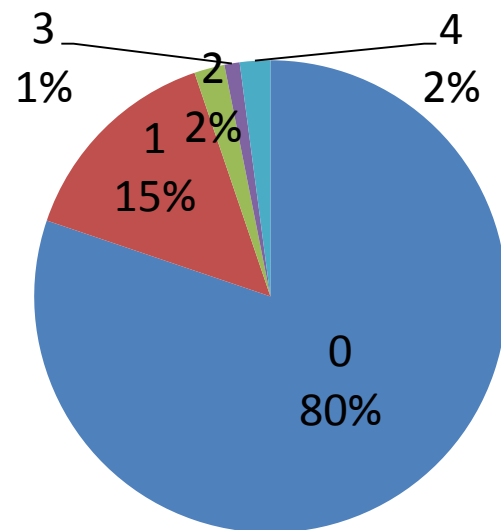
# PARTICIPATION OF FRENCH YOUNG RESEARCHERS

## Number of PhD students



**57%** of projects involve at least one PhD student

## Number of post-doctoral researchers

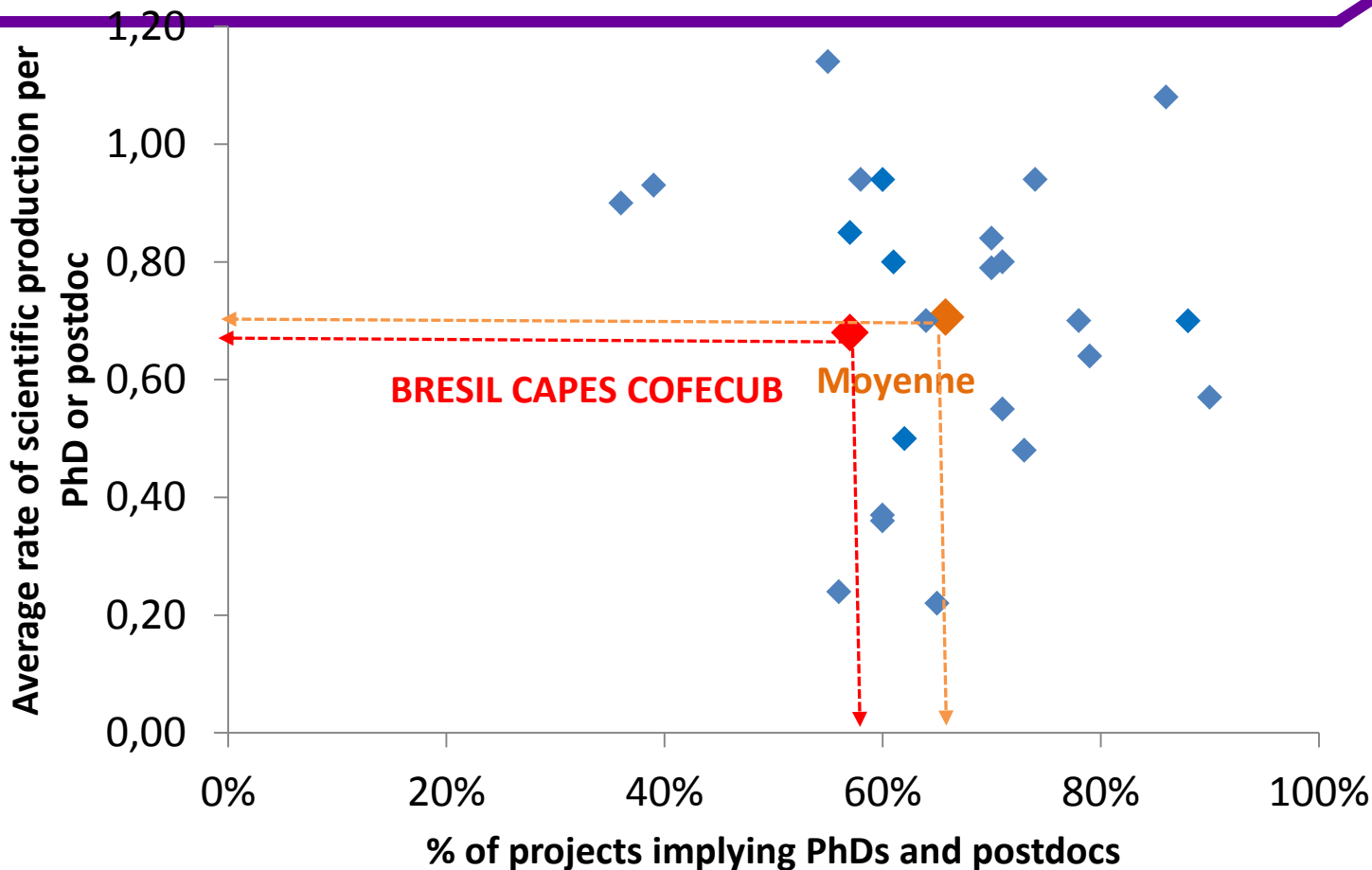


**20%** of projects involve at least 1 post-doctoral researcher



# IMPLICATION OF PhDs

## (COMPARISON BETWEEN 26 DIFFERENT BILATERAL PROGRAMMES)

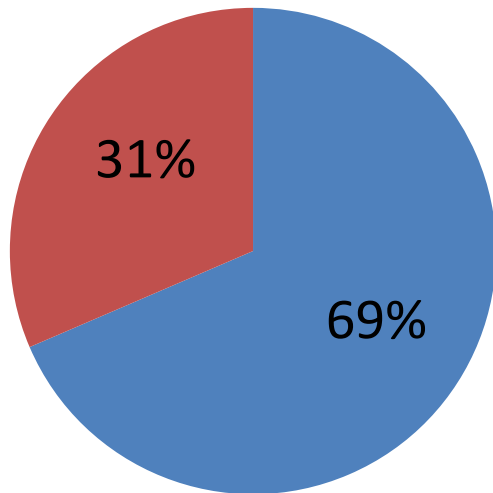


**% of projects implying PhDs : 57% vs 65% mean**  
**Average rate of scientific production per PhD : 0,68 vs 0,70 mean**

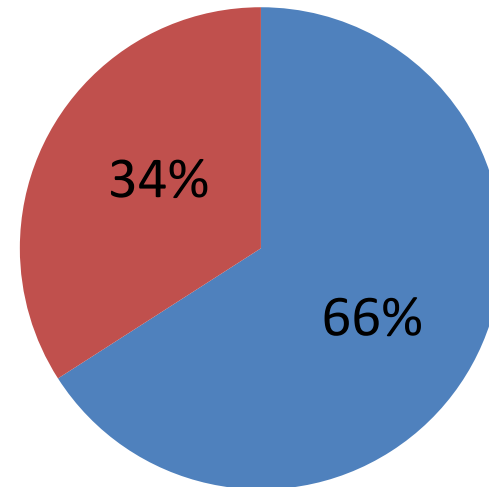
# Mobility

# MOBILITY : GENDER DISTRIBUTION

France → Brazil



Brazil → France

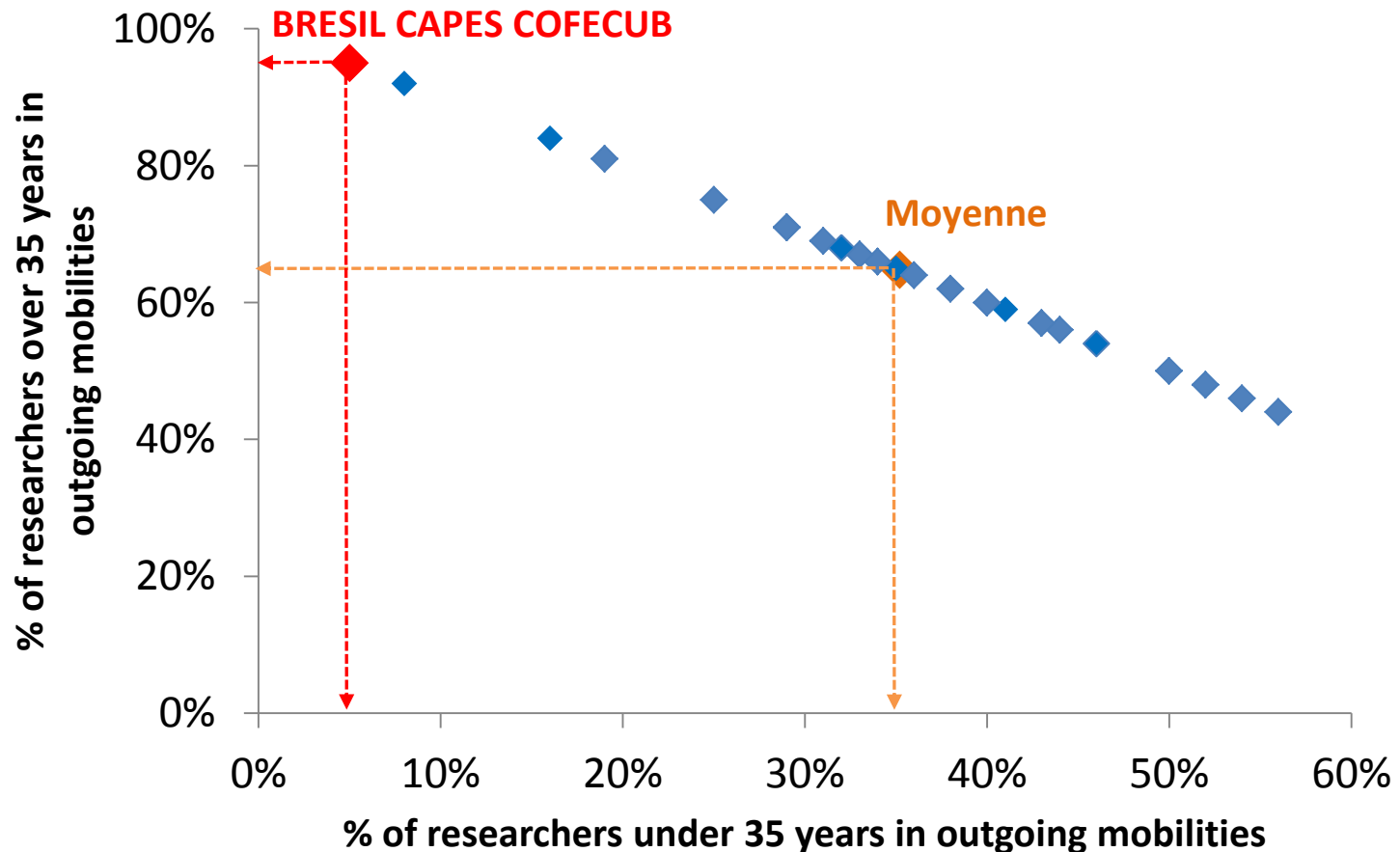


■ Men ■ Women

Campus  
France  
data

# MOBILITY FRANCE – BRAZIL

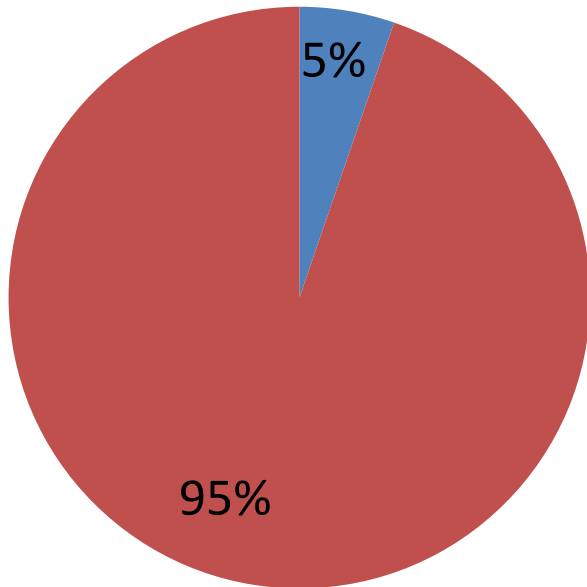
## (COMPARISON BETWEEN 26 DIFFERENT BILATERAL PROGRAMMES)



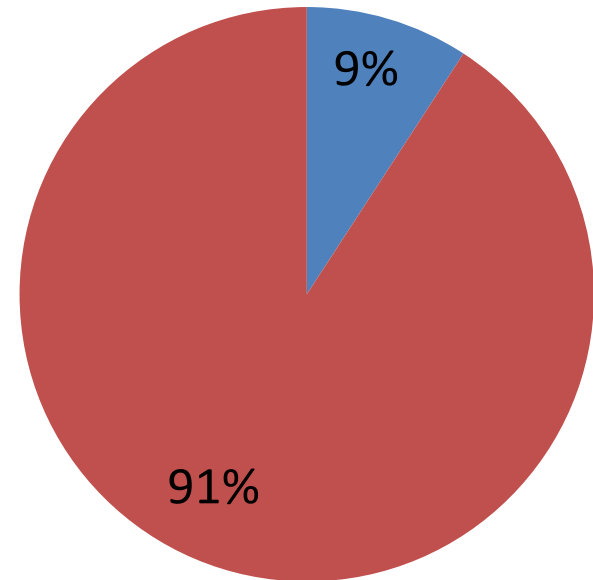
% of french young researchers in outgoing mobilities : **5% vs 35% mean**

# MOBILITY : STATUS

France → Brazil



Brazil → France

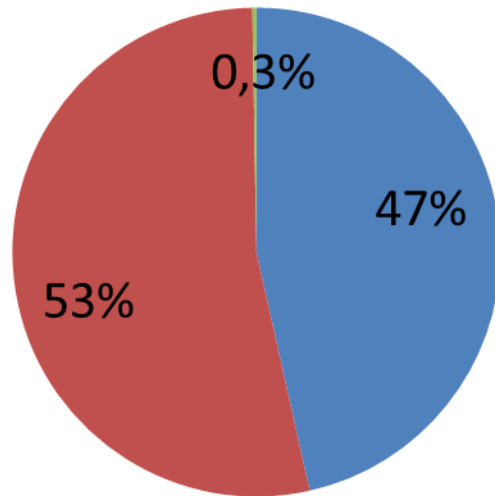


- carried out by PhD students and post-doctoral researchers
- carried out by permanent researchers

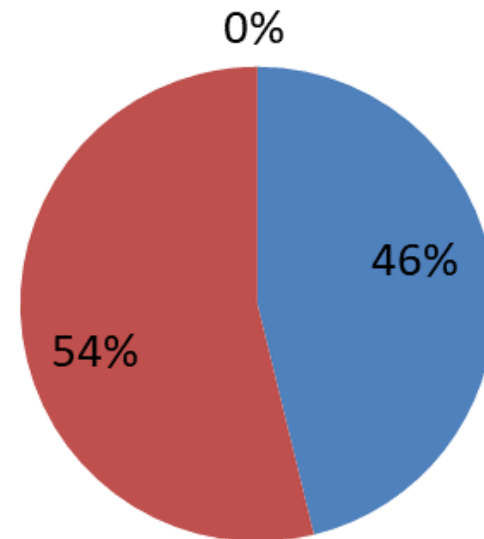
Campus  
France  
data

# MOBILITY : DURATION

France → Brazil



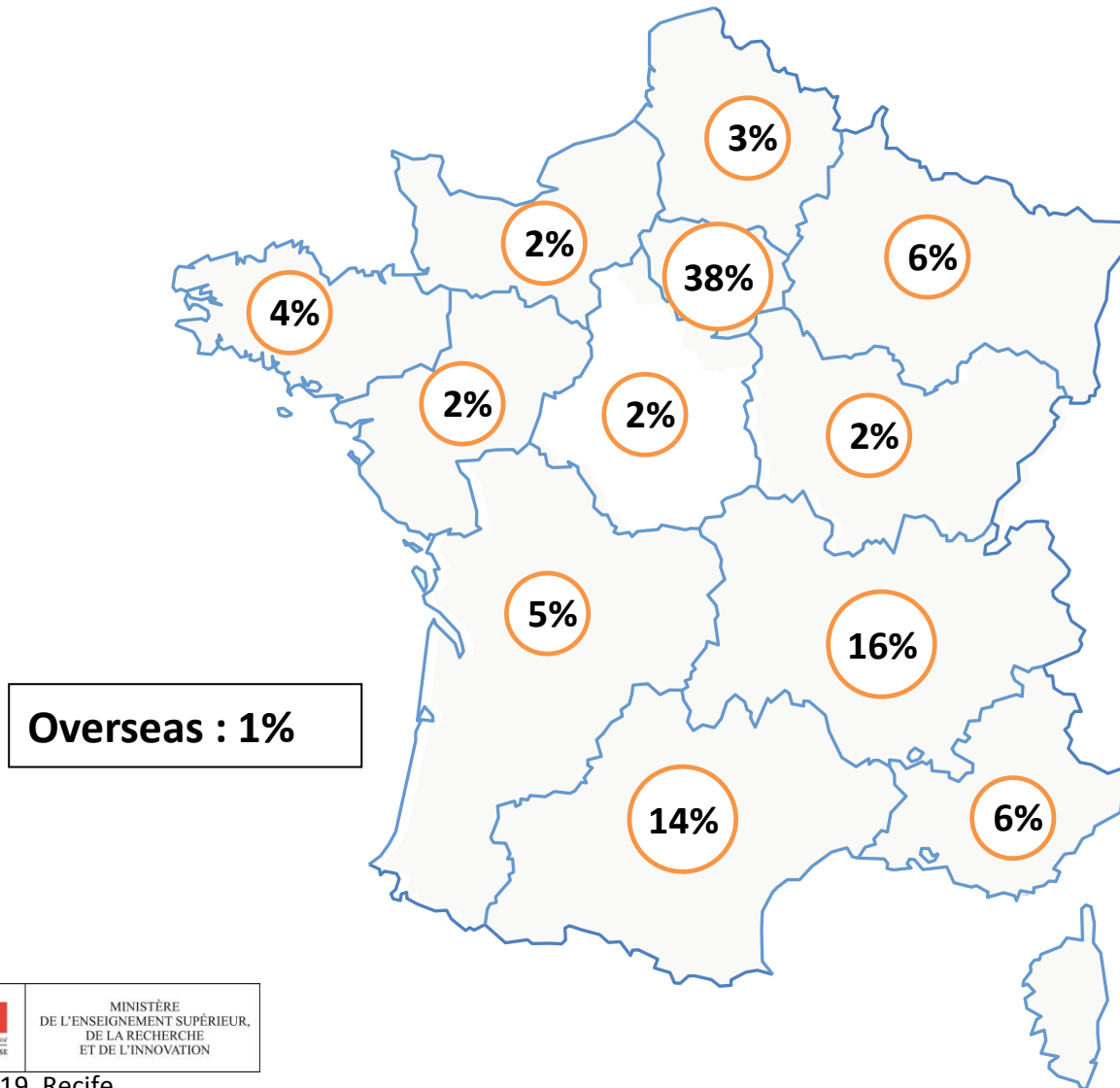
Brazil → France



- < 15 days
- between 15 days and 3 months
- > 3 months

Campus  
France  
data

# DISTRIBUTION OF PROJECTS ACROSS FRENCH REGIONS



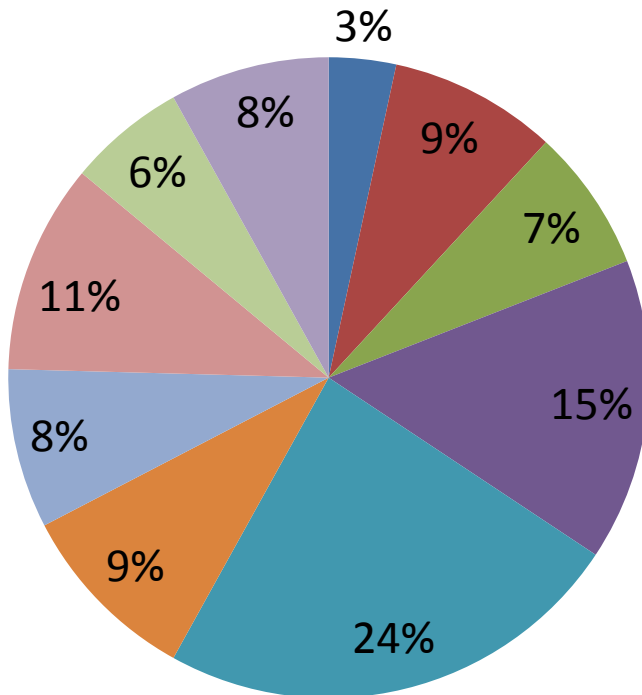
Campus  
France  
data

# Scientific production



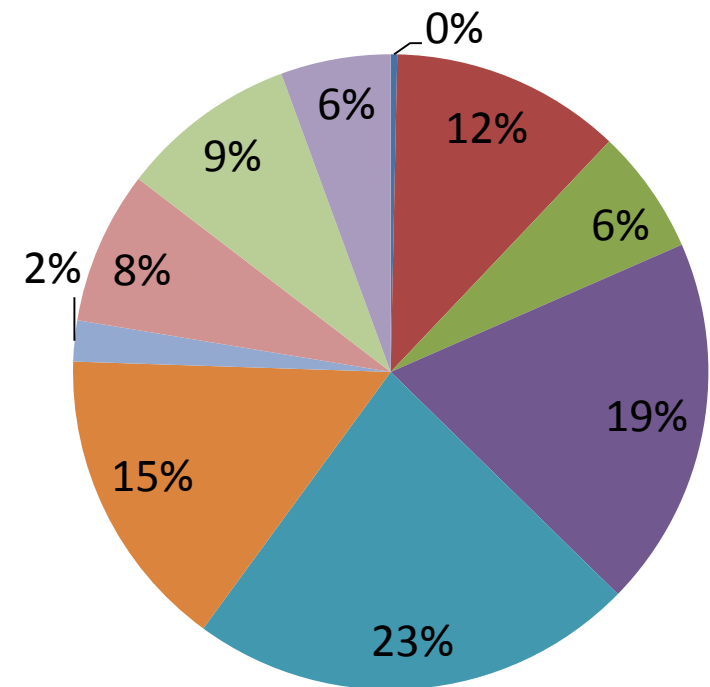
# SCIENTIFIC OUTPUT : % OF FUNDED PROJECTS AND CO-PUBLICATIONS

## Funded projects



**Campus France data**

## Co-publications



**Survey data**

# SCIENTIFIC OUTPUT

**74%** of funded projects led to one co-publication at least

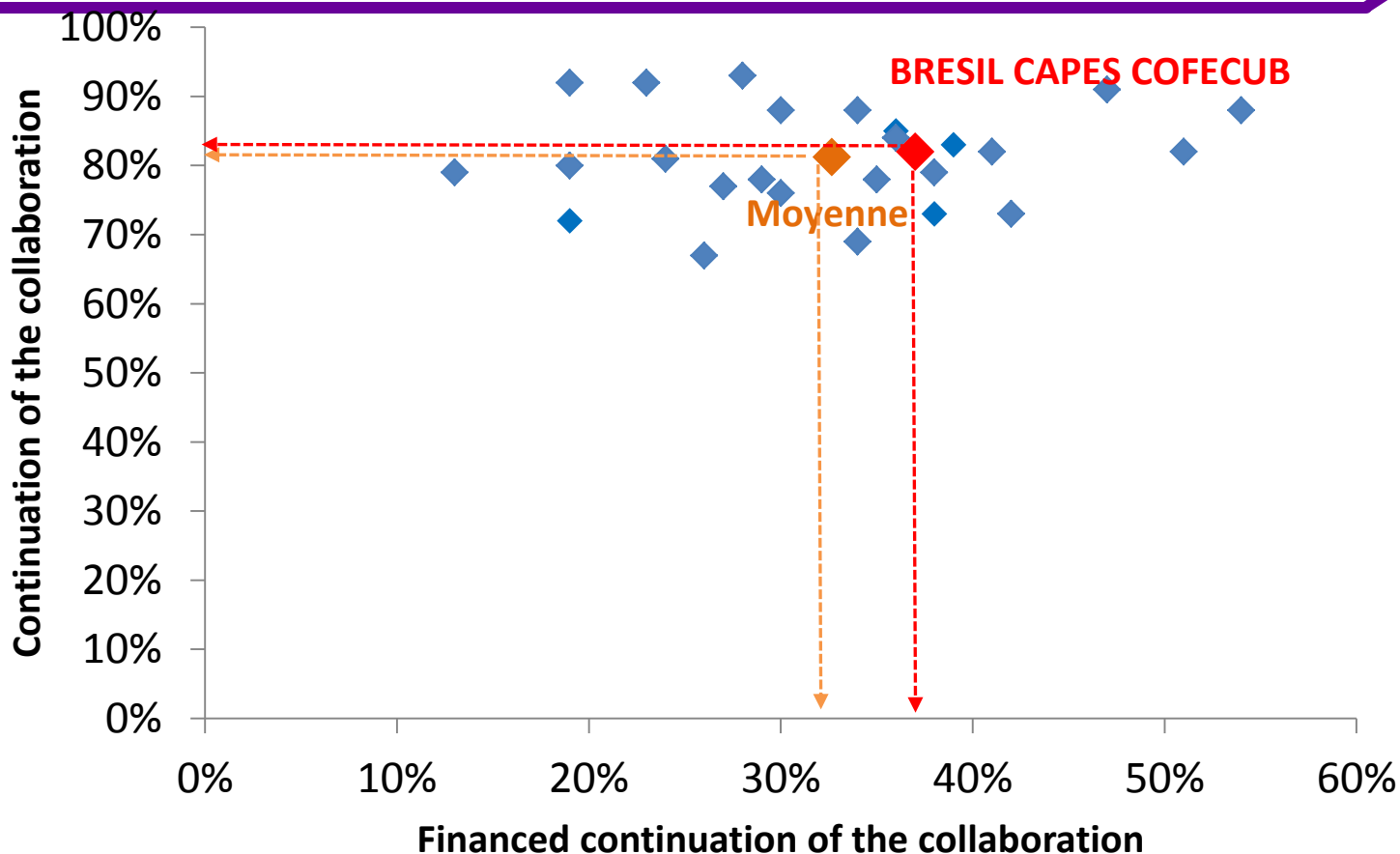
**15%** of copublications include at least 1 PHD or PostDoc

	Number of funded projects by thematic area	Ratio of funded projects by thematic area	Number of co-publications	Ratio of co-publications by thematic area	Ratio of funded projects by thematic area that led to one co-publication at least	Average number of co-publications per project
Mathematics	6	3%	3	0%	50%	0,5
Physics	23	12%	107	12%	74%	4,7
Marine / Earth / Planet Sciences	18	9%	58	6%	67%	3,2
Chemistry	25	13%	172	19%	88%	6,9
Biology and Health	42	22%	207	23%	83%	4,9
Humanities	26	14%	141	15%	58%	5,4
Social Sciences	9	5%	19	2%	44%	2,1
Engineering Sciences	20	10%	71	8%	80%	3,6
Information Technology	13	7%	82	9%	69%	6,3
Agronomy / Ecology	10	5%	51	6%	100%	5,1
<b>TOTAL</b>	<b>192</b>	<b>100%</b>	<b>911</b>	<b>100%</b>	<b>74%</b>	<b>4,7</b>

Survey  
data

# What happens after a CAPES-COFECUB project?

## CONTINUATION OF THE COLLABORATION (1/4) (COMPARISON BETWEEN 26 DIFFERENT BILATERAL PROGRAMMES)



Continuation of the collaboration : **82% vs 81% mean**

Continuation of the collaboration with other sources of subvention : **37% vs 33% mean**

# CONTINUATION OF THE COLLABORATION (2/4)

**82%** of the collaborations continued after the project

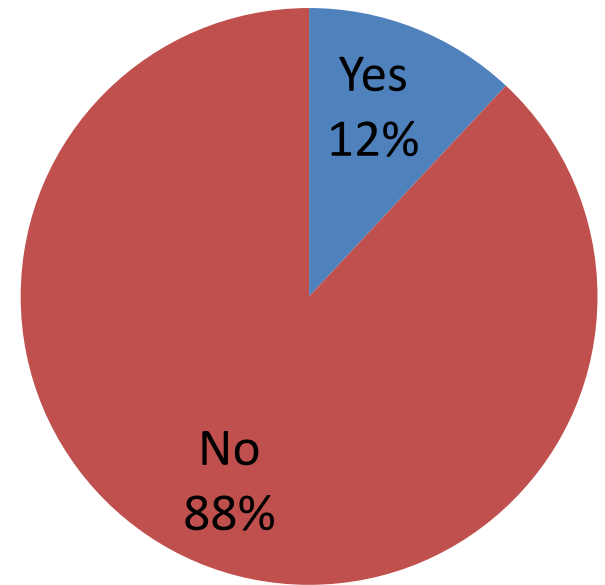
Which activities?	
Collaborative research	55%
Co-publications	55%
Researchers mobility	49%
Joint participation to conferences	38%
PhD mobility	33%
Joint supervision of PhD thesis	30%
Co-organisation of scientific events	19%
Others	8%
International Associate laboratory	2%

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data**

# CONTINUATION OF THE COLLABORATION (3/4)

Has the program CAPES-COFECUB  
led to the set-up of **joint  
structures?**

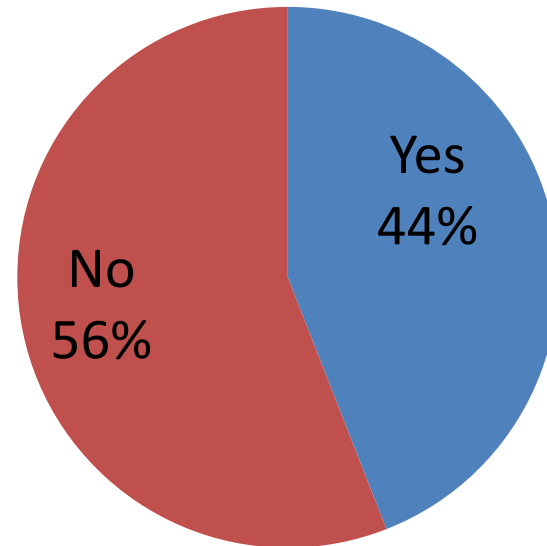
9 CNRS / LIA (international associated laboratory)  
3 CNRS International research network  
2 Mixt international laboratories  
1 CNRS / PRC (joint research project)  
1 CNRS / UMI (mixt international unit)  
+ 9 other joint structures



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data

# CONTINUATION OF THE COLLABORATION (4/4)

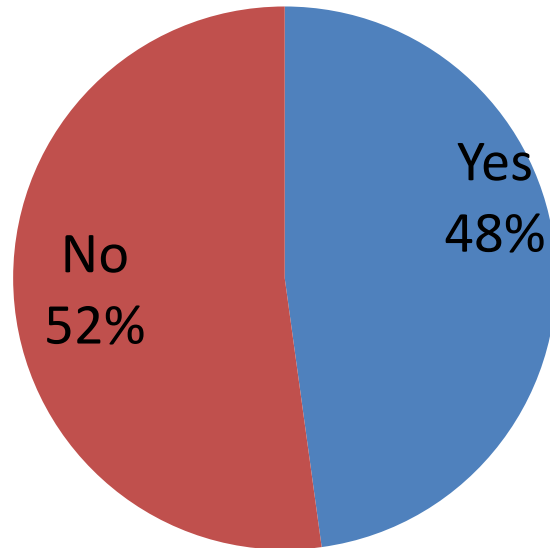
**Has the French-Brazilian  
collaboration involved new  
partners?**



**Survey  
data**

# IMPACT ON YOUNG RESEARCHERS' CAREER (1/2)

**% of young researchers whose career was impacted by the CAPES-COFECUB program**

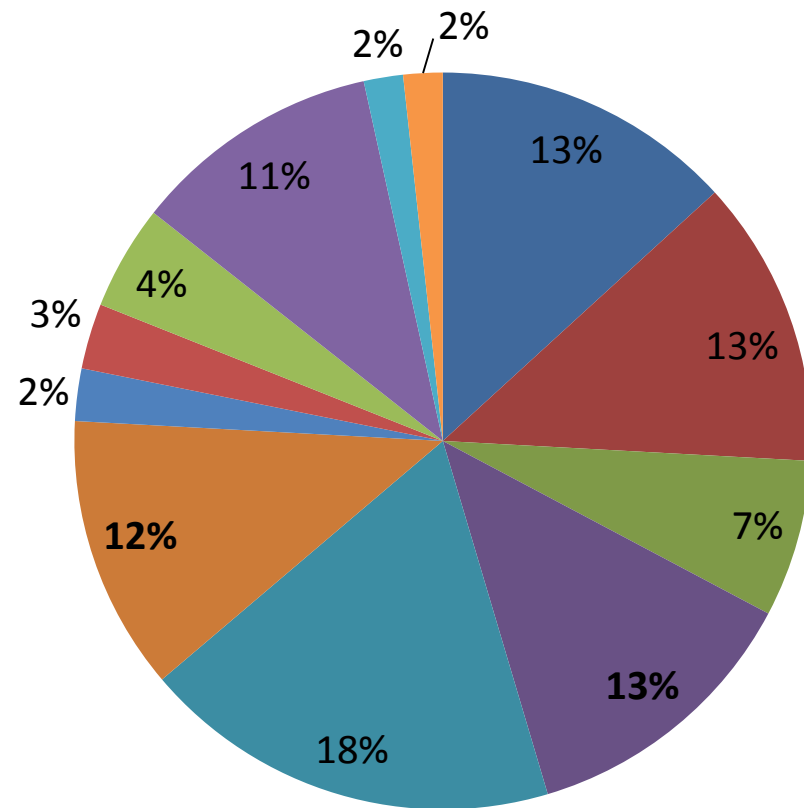


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data**



# IMPACT ON YOUNG RESEARCHERS' CAREER (2/2)

## Type of impacts

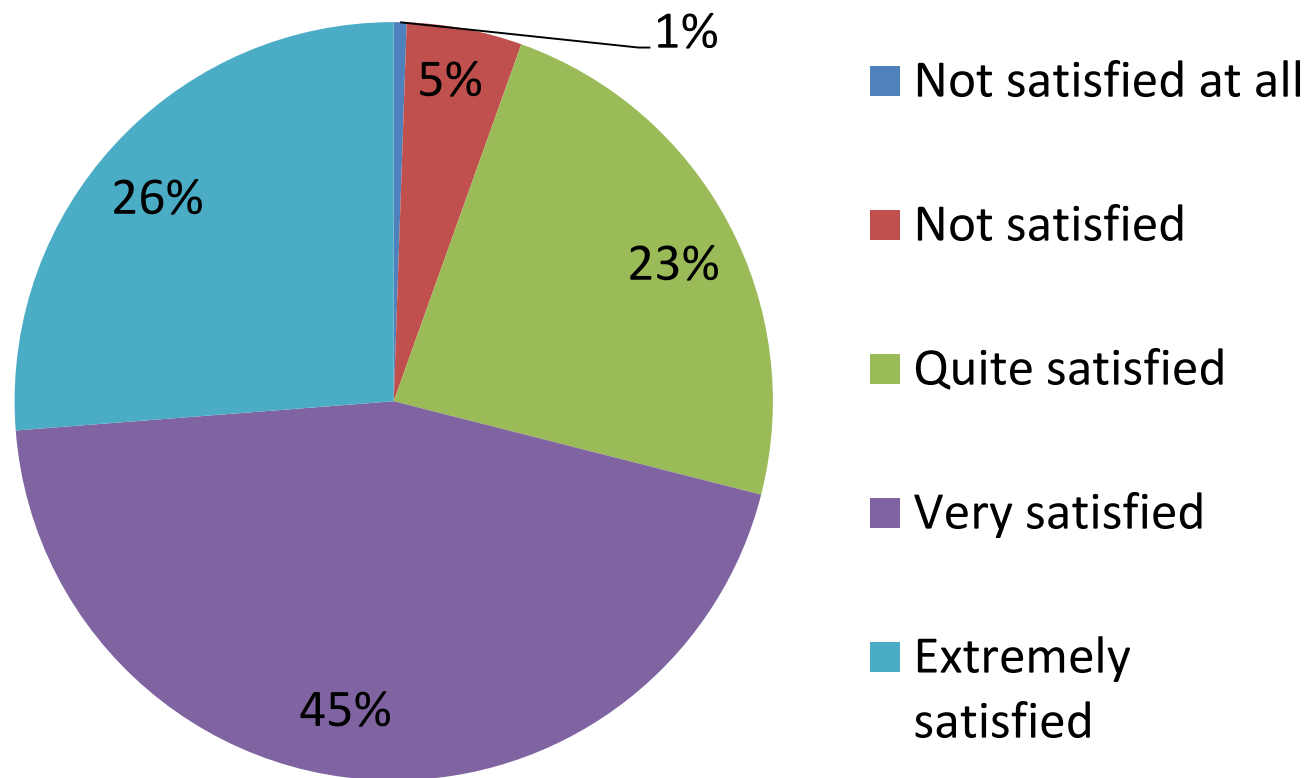


- Post PhD in Brasil
- Teacher-researcher in Brasil
- Researcher in an public research institution in France
- Employed in a private company in link with the field of Higher Education-Research in France
- Post PhD in France
- Post PhD in another country
- Teacher-researcher in another country
- Employed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

**Survey data**

# GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME

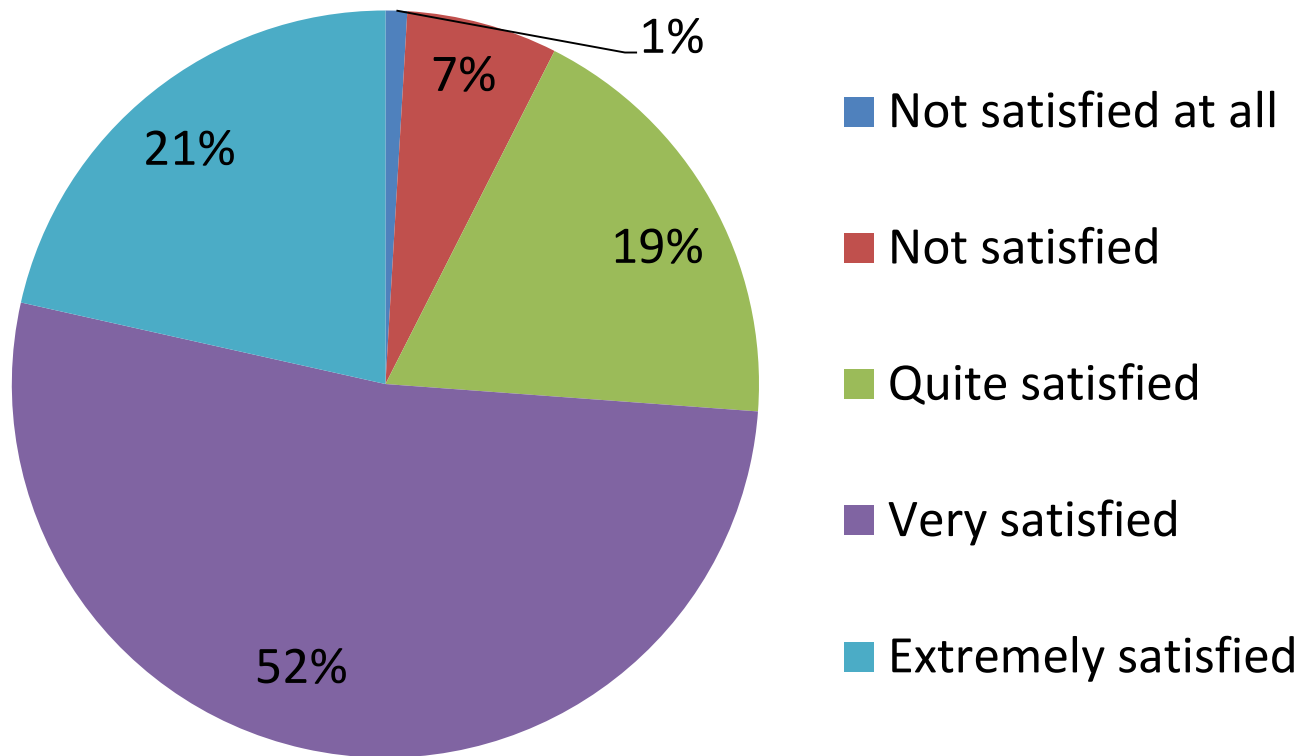
**94%** of French principal investigators are satisfied



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# OPINION OF FRENCH PIS ABOUT FRENCH EMBASSY HELP

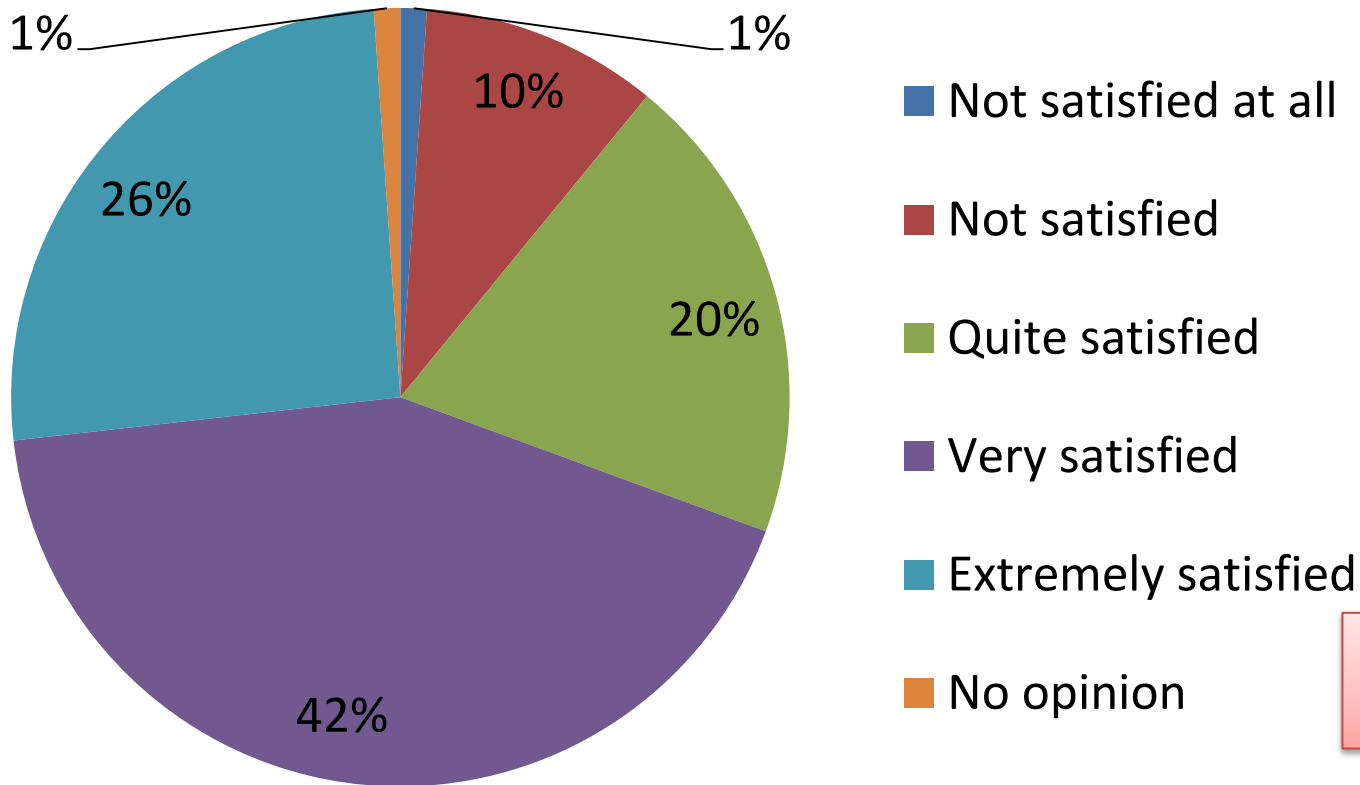
**92%** of French principal investigators are satisfied



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# OPINION OF FRENCH PIS ABOUT COFECUB COMITEE HELP

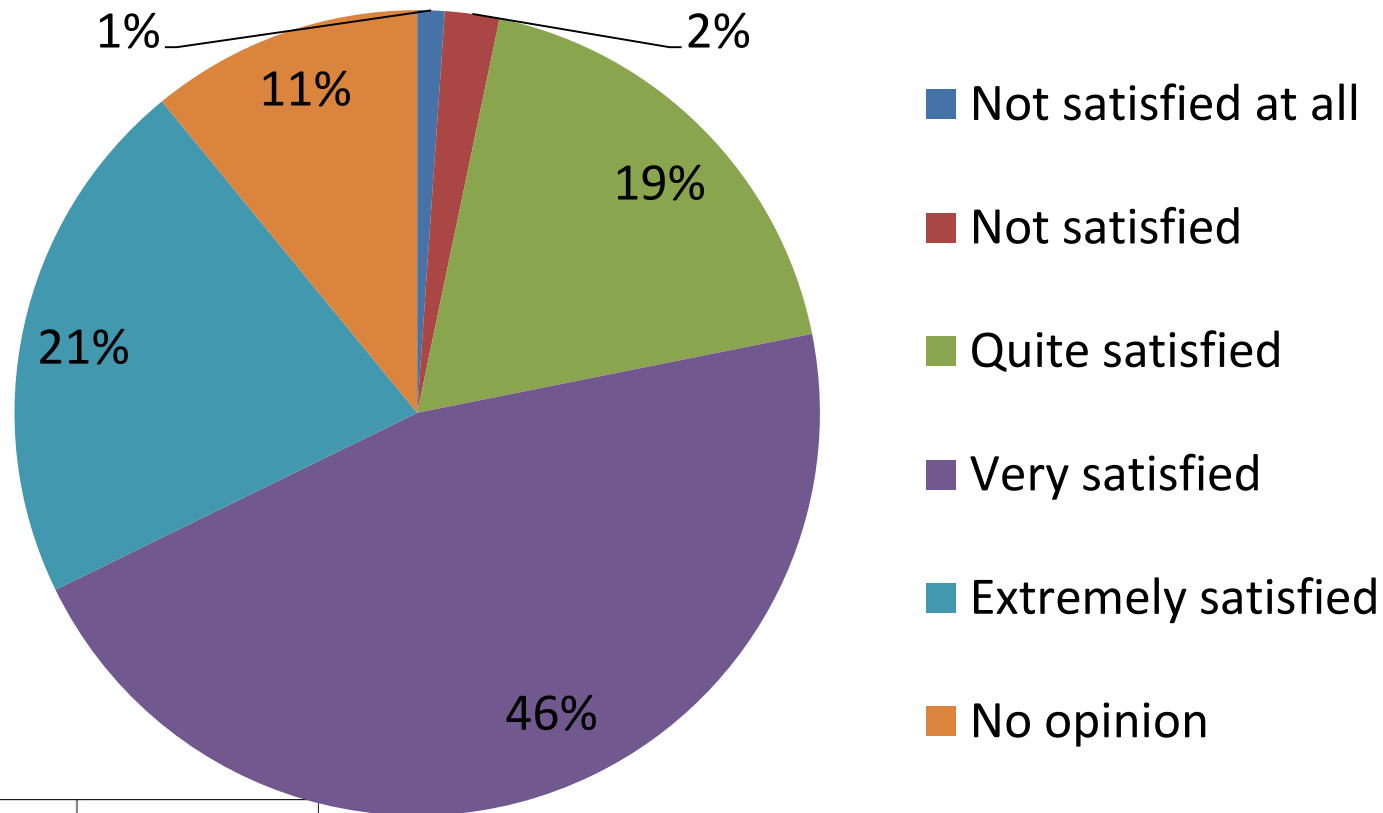
**88%** of French principal investigators are satisfied



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# OPINION OF FRENCH PIS ABOUT CAMPUS FRANCE HELP

**86%** of French principal investigators are satisfied



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# GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME (+)

Strengths of this program	%
Allows an international scientific collaboration	84%
Allows the mobility of the researchers	81%
Allows the training of the young researchers	70%
Allows exchanges which allow a scientific production	65%
A light/flexible application process	59%
Allows a knowledge of the country partner	46%
long-enough duration of the projects	44%
Easy setting-up (administrative flexibility)	39%
Duration of mobilities meeting the needs	32%
Good scientific added-value compared to the financial investment	30%
Sufficient financial means for the expenditure of mobility	26%
Is used as a means for raising other funds	20%
Transparency of the methods for selecting the projects	9%
Other	3%

**Survey  
data**

# GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME (-)

Weaknesses of this program	%
No funding for the operation and capital expenditures	56%
Deficit in communication about the evaluation's results	34%
Lack of transparency about the methods of projects selection	33%
Trouble in the collaboration sustainability	29%
Insufficient Financial means for the expenditure of mobility (per diem)	25%
Insufficient Financial means for the expenditure of mobility (flights)	16%
Heaviness of the process of applications	11%
Too short duration of mobilities	11%
Too low number of mobilities	11%
Other	10%
Too short duration of the projects	8%
Administrative heaviness of the missions management	8%
Too long duration of mobilities	5%

**Survey  
data**

# PRELIMINARY CONCLUSIONS

**Preliminary conclusions suggest that the funding scheme has efficiently contributed to develop & maintain fruitful and long-term cooperation, despite the relatively low financial support, which is to be considered as “seed money”.**

**Involvement of young researchers and selection rate could be improved.**



# PRELIMINARY RECOMMENDATIONS

- Promote NEW collaborations (69% of French PI have already collaborated before CAPES-COFECUB project)
- Promote young french PIs (7 % of young researchers)
- Promote young researcher's mobilities (5% of the mobilities)
- Improve COFECUB committee feedback toward candidates
- Improve success rate (10,5% in 2018) – Change the project duration ?
- *Improve per diem's amount for staying in Paris, and also for staying in Brazil*
- *Soften the constraint of number of days for the missions*

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

## **Contacts**

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