

**FRANCE – INDONESIA**

**Scientific impact of the programme NUSANTARA  
(2009-2020)**

**MESRI-DAEI / MEAE**

**2021**

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

# GENERAL PRESENTATION OF THE PROGRAMME

**Creation : 2009**

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

**Total budget (France + Indonesia) : around 130 000 € / year**

>> including budget from the French part : around 65 000 € / year

>> including budget from the Indonesian part : around 65 000 € / year

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

**Number of new funded projects per year : around 8**

**From 2009-2020 :**

**276** applications submitted

**64** projects funded

# DATA SOURCES

## Campus France (2009-2020)

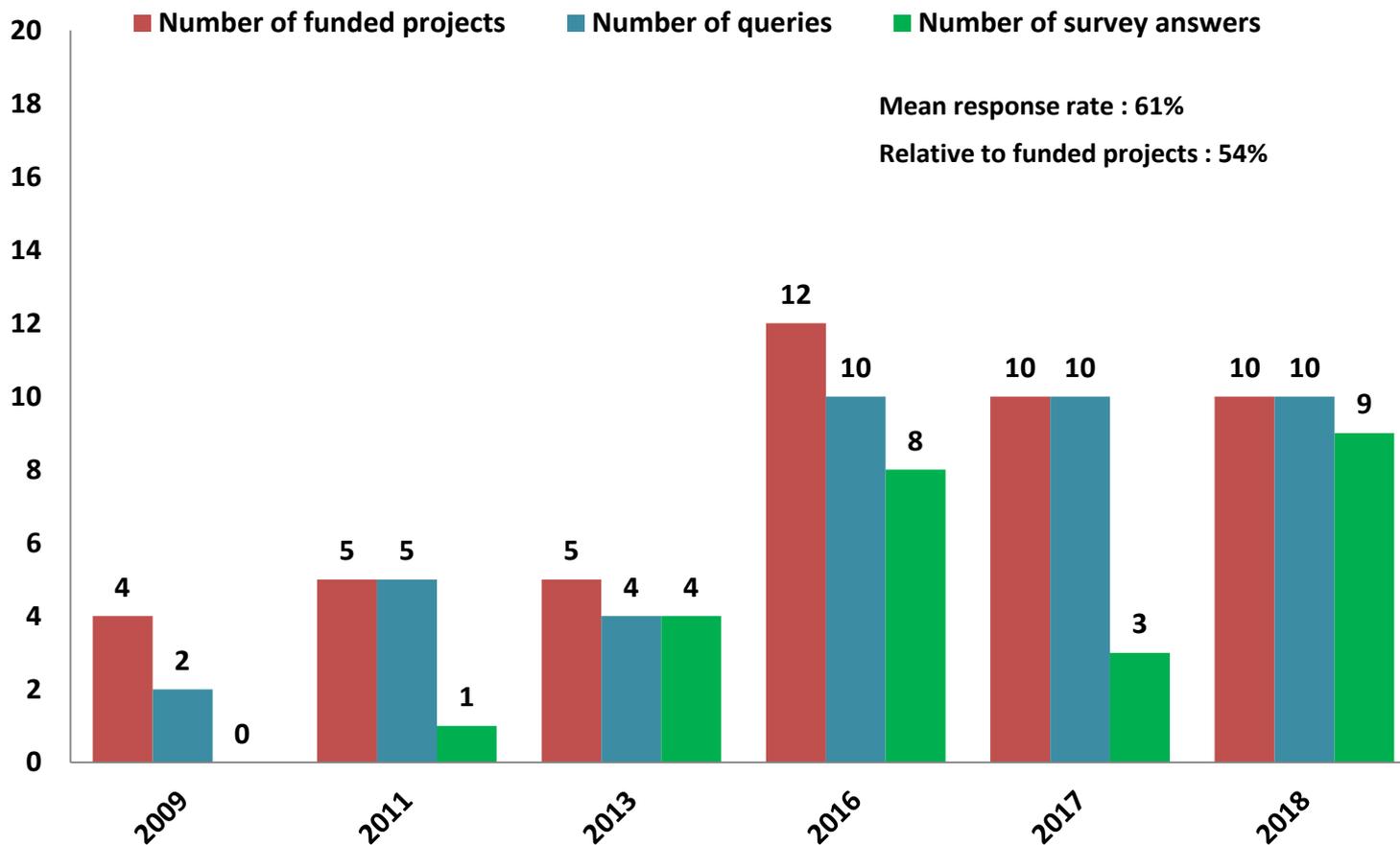
- PHC Nusantara applications
- List of scientific mobilities (from France to Indonesia and from Indonesia to France)

## Survey (2009-2018)

- Target : **French** Principal Investigators of selected projects between 2009 and 2018
- Survey duration : 6 weeks between October and November 2020
- **61%** response rate (25 respondents for 41 queries)

# SURVEY RESPONSES

Average response rate to the survey : **61 % (25 answers)**

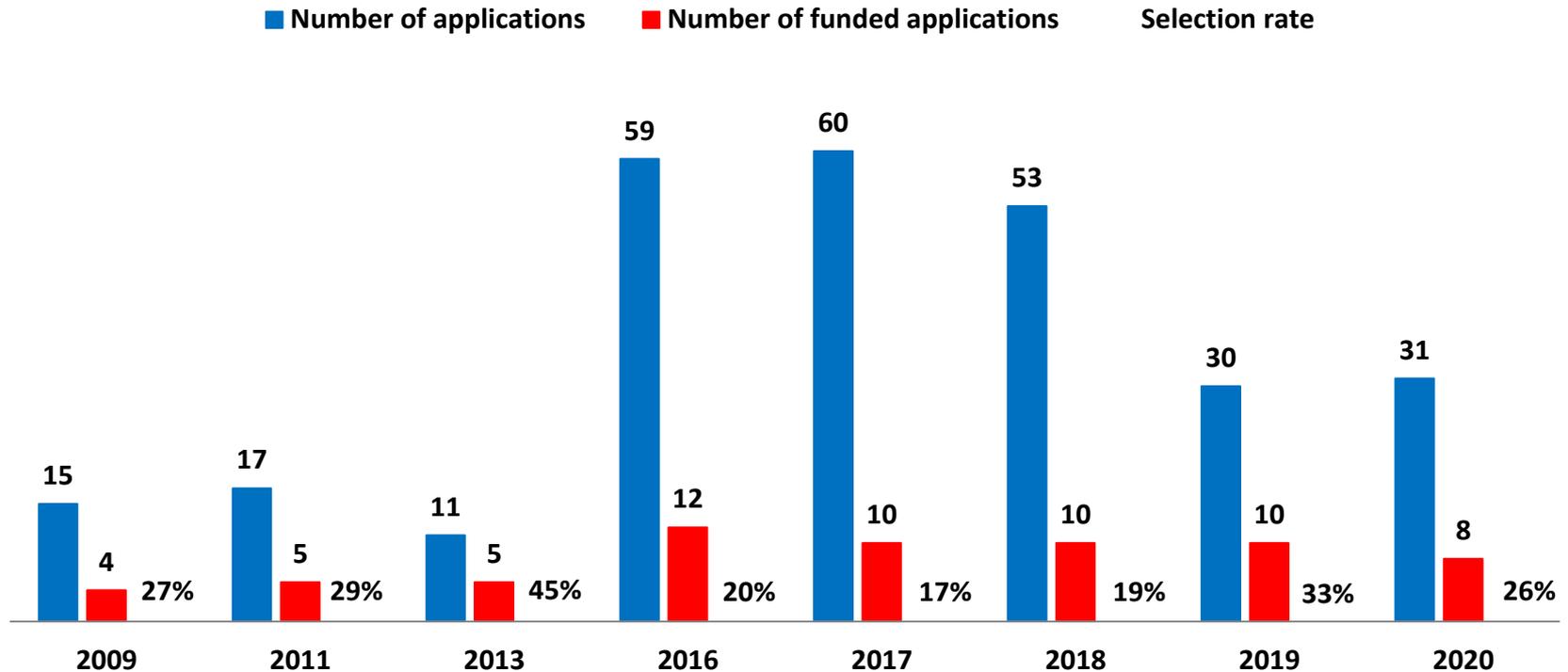


46 funded projects between 2009 and 2018, 41 valid email addresses

# 2009-2020 Key Points

# NUMBER OF APPLICATIONS AND SELECTION RATE

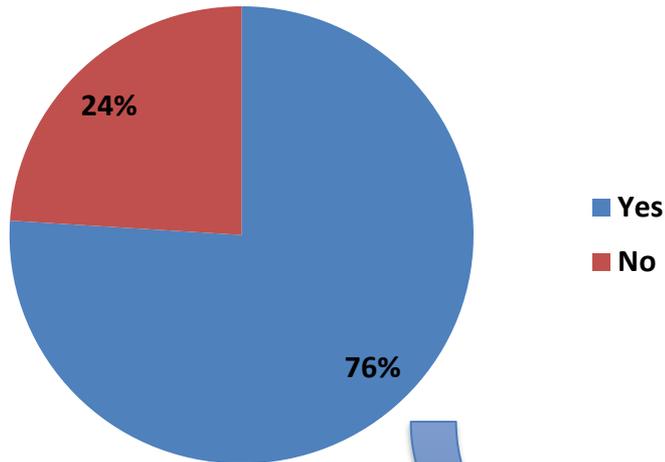
Average selection rate from 2009-2020: **23%**



The number of applicants has decreased between 2018 and 2020

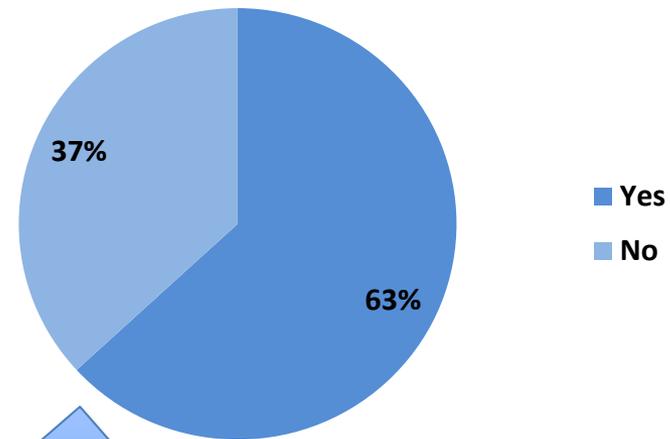
# BEFORE JOINING THE NUSANTARA PROJECT (1/2)

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



Data from 25 responses

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



Data from 19 responses

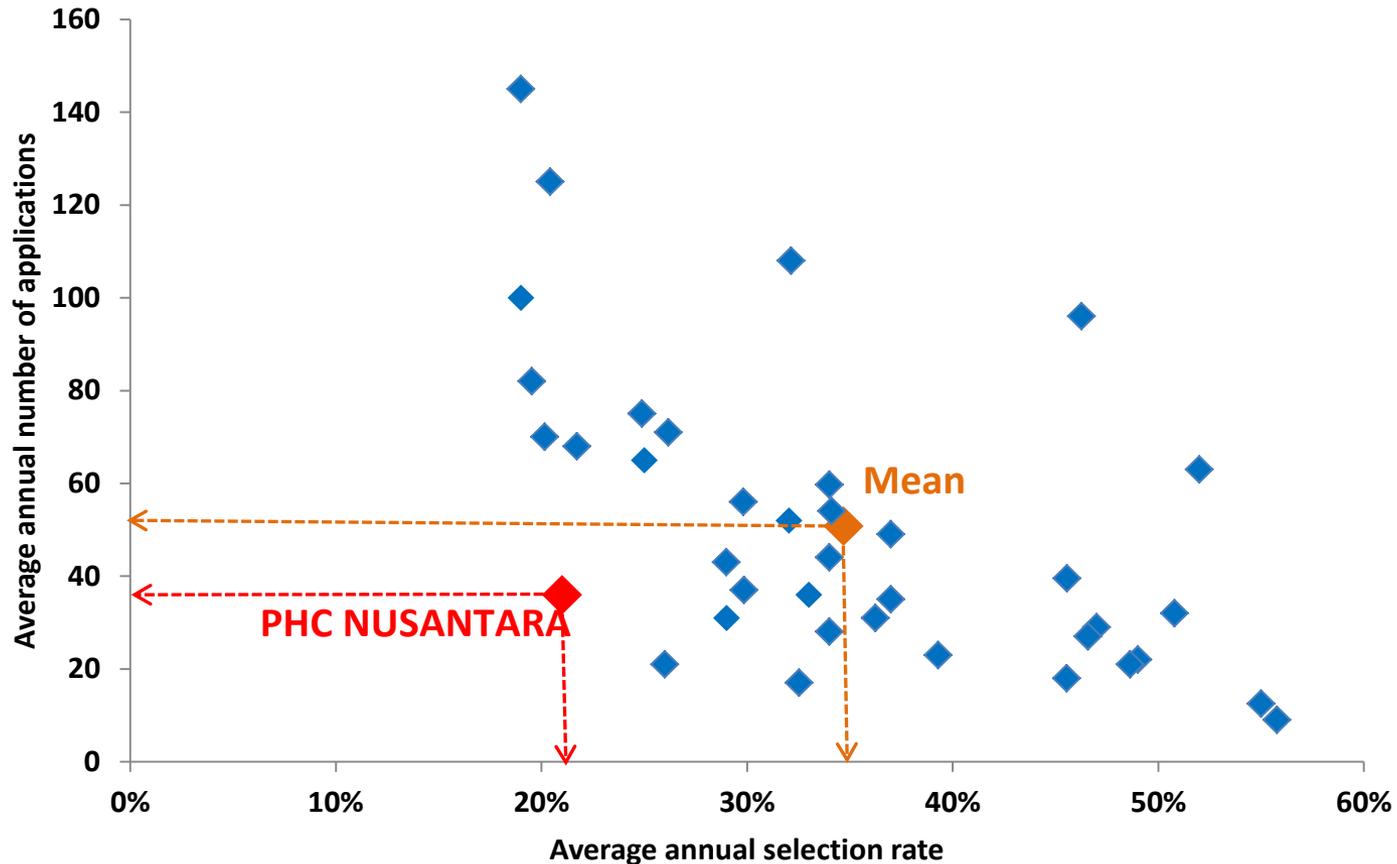
# BEFORE JOINING THE NUSANTARA PROJECT (2/2)

<b>With which of scientific collaboration programme ?</b>	
Co-funding with Indonesian institutions	24%
PHC Nusantara	21%
ANR (French National Research Agency)	15%
BGF (French government grants)	9%
Private sector	6%
CNRS fundings	6%
European fundings (FP7)	3%
Others	18%

**More than 38 previous cooperation projects based on other exchanges (e.g., co-publication, meetings, joint PhD...)**

Data from 25 responses

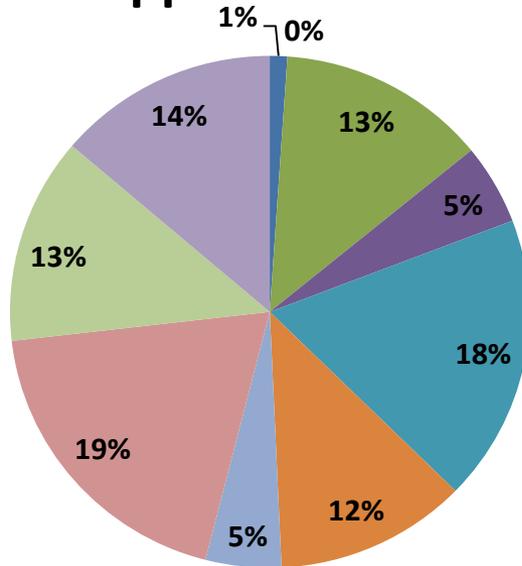
# NUMBER OF APPLICATIONS VS SELECTION RATE (COMPARISON BETWEEN 38 DIFFERENT BILATERAL PROGRAMMES)



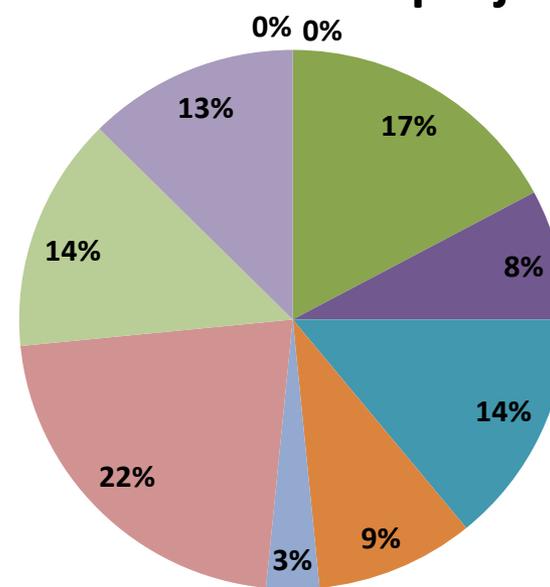
**Average selection rate for 2009-2018 : 21% vs 35% mean**  
**Average number of applications 2009-2018 : 36 vs 51 mean**

# SCIENTIFIC DOMAINS OF NUSANTARA PROJECTS (2009-2020)

Number of applications : **276**



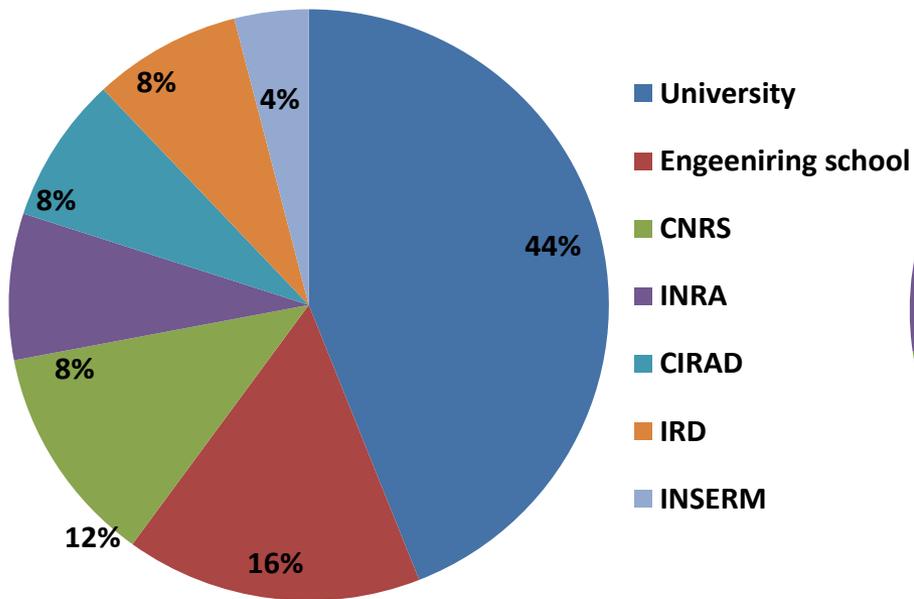
Number of funded projects : **64**



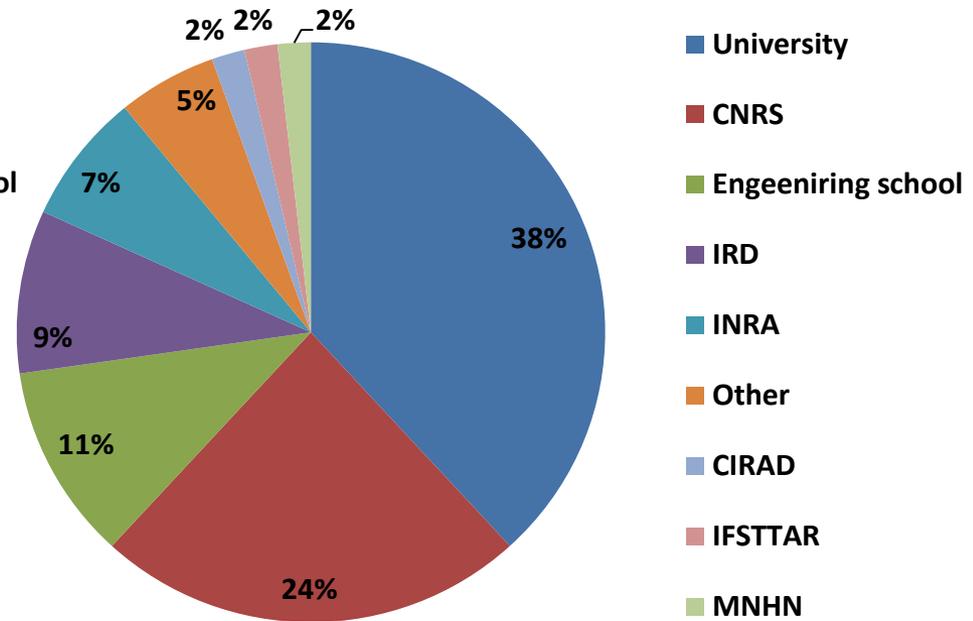
- Mathematics
- Marine/Earth/Planet Sciences
- Biology and Health
- Social Sciences
- Information Technology
- Physics
- Chemistry
- Humanities
- Engineering Sciences
- Agronomy/Ecology

# FRENCH PARTICIPATING INSTITUTIONS

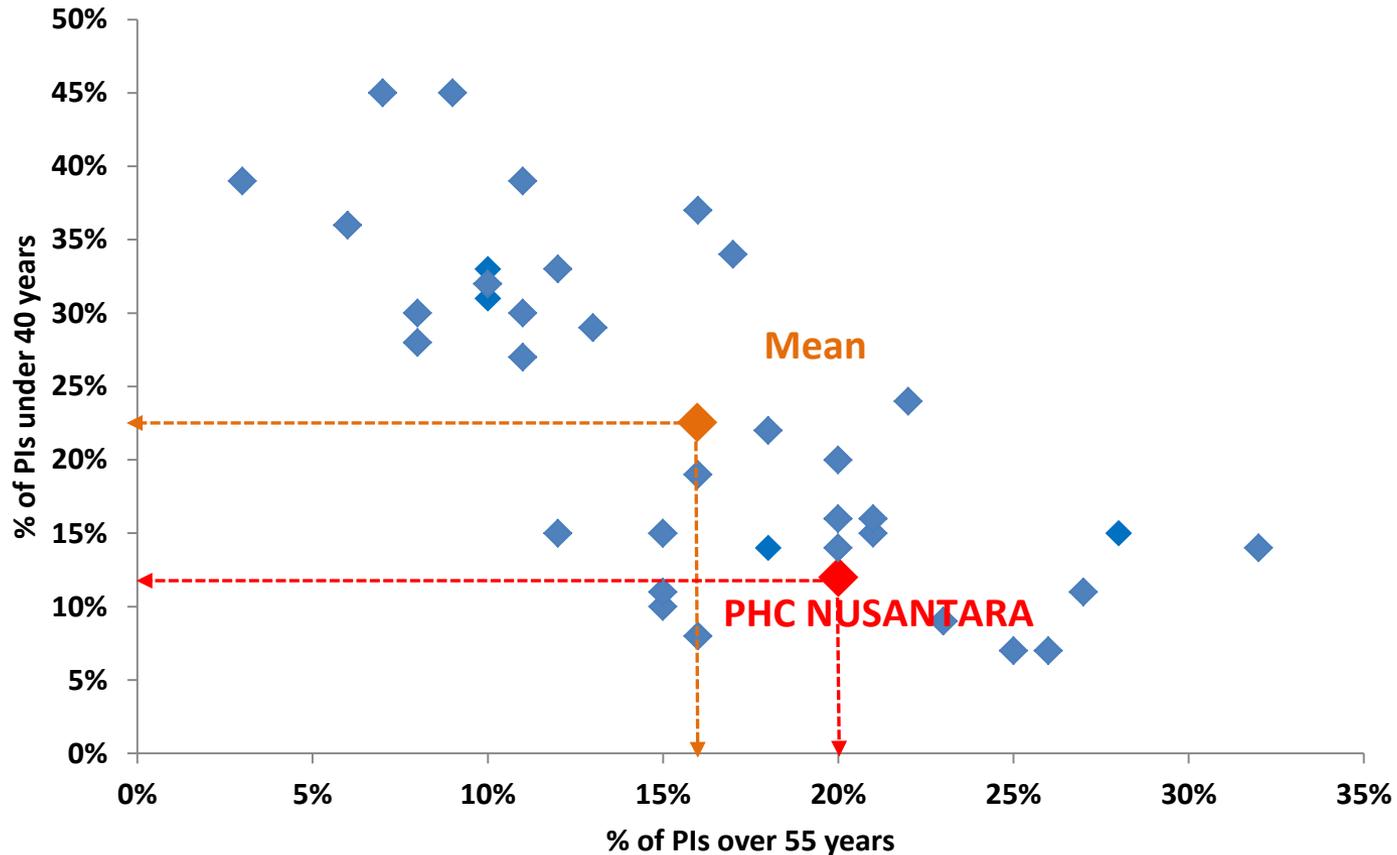
## PI's employers



## Laboratory authorities



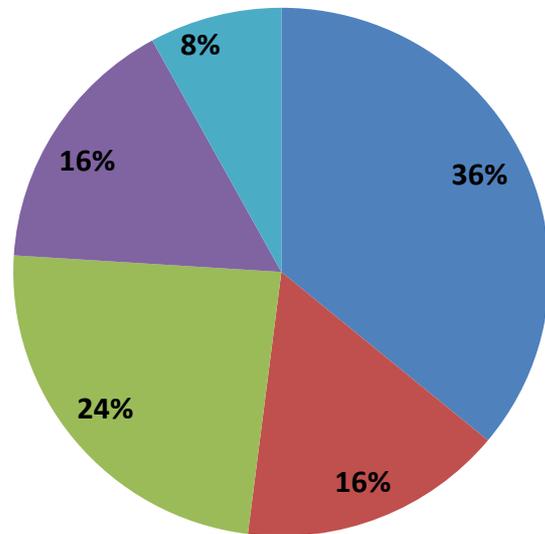
# AGE OF PRINCIPAL INVESTIGATORS (PI) (COMPARISON BETWEEN 38 DIFFERENT BILATERAL PROGRAMMES)



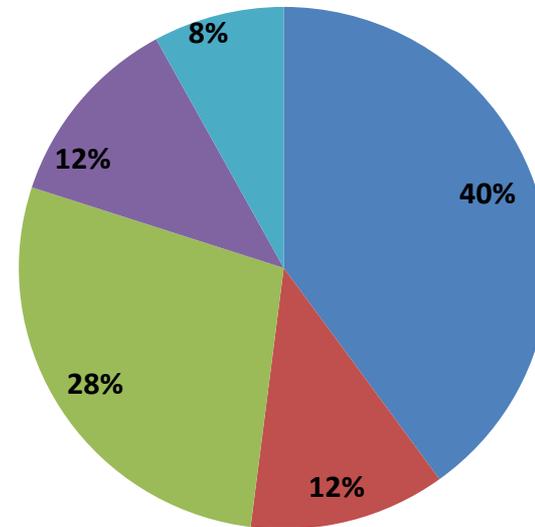
**PIs under 40 years old : 12% vs 23% mean**  
**PIs over 55 years old: 20% vs 16% mean**  
**68% of the PIs are between 40 and 55 years old**

# PROFESSIONAL FUNCTION OF FRENCH PRINCIPAL INVESTIGATORS

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

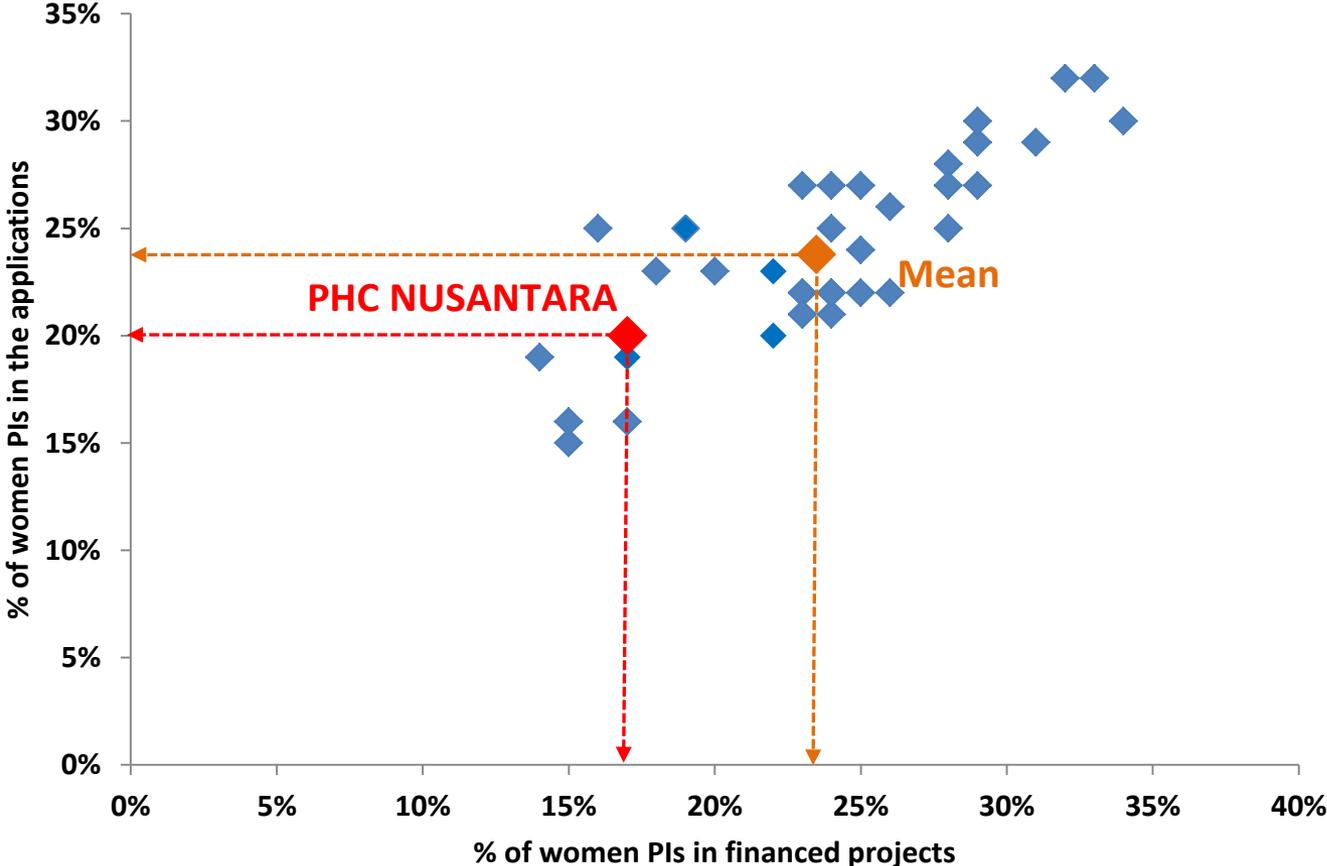


**Current professional status**



# IMPLICATION OF WOMEN (FRANCE)

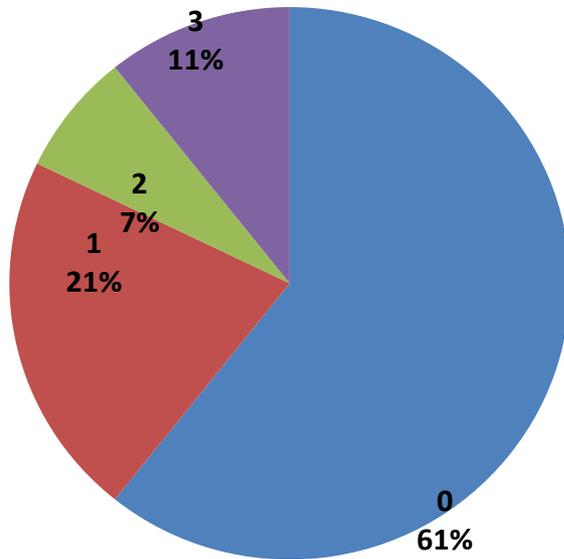
## (COMPARISON BETWEEN 38 DIFFERENT BILATERAL PROGRAMMES)



**% of women PIs in the applications : 20% vs 24% mean**  
**% of women PIs in the selected projects : 17% vs 23% mean**

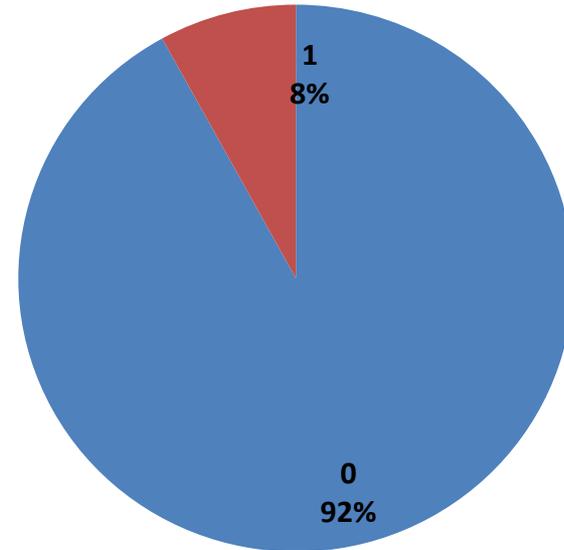
# PARTICIPATION OF FRENCH YOUNG RESEARCHERS

## Number of PhD students



**32%** of projects involve at least one PhD student

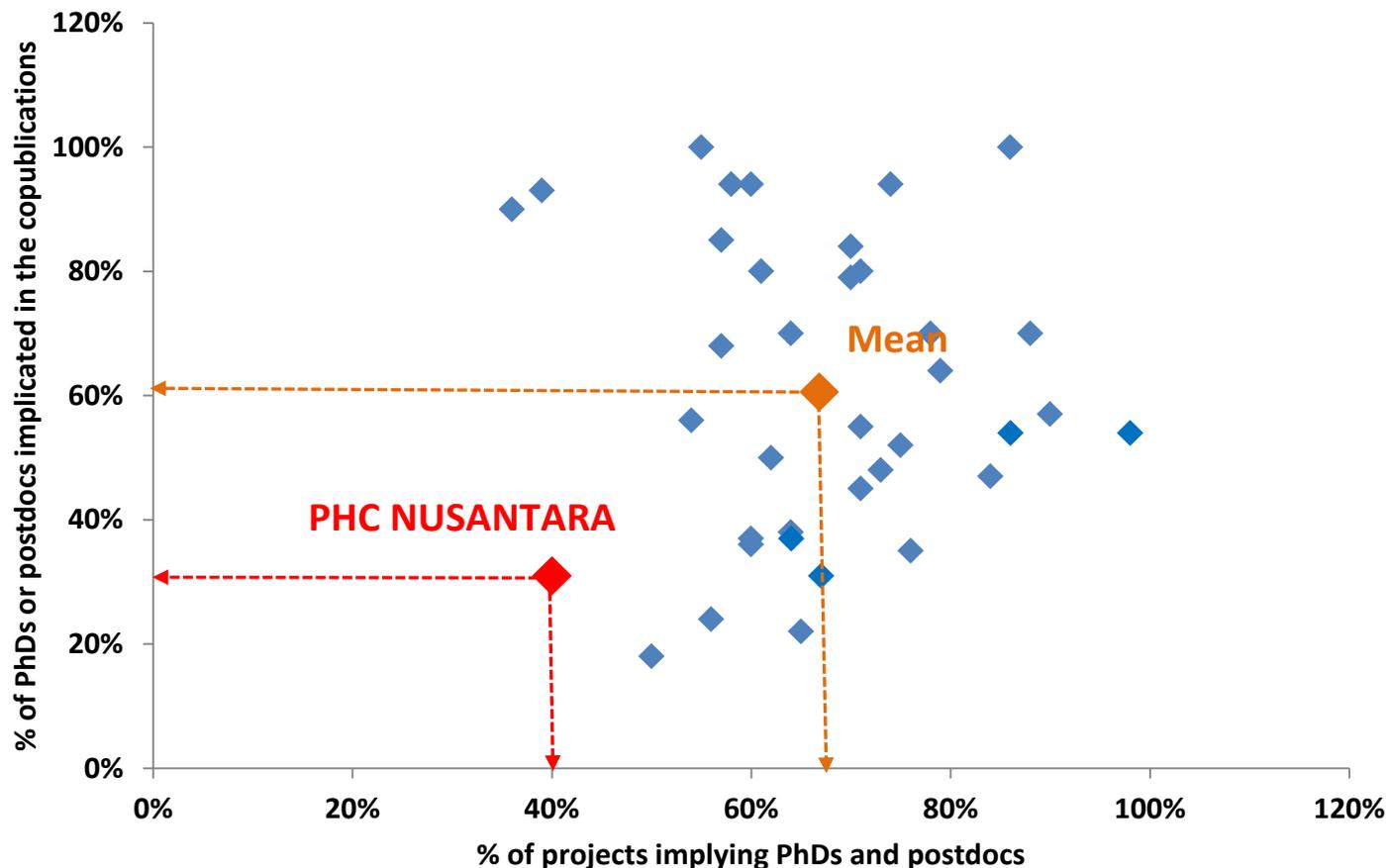
## Number of post-doctoral researchers



**8%** of projects involve at least one post-doctoral researcher

Data from 25 responses

# IMPLICATION OF YOUNG RESEARCHERS (COMPARISON BETWEEN 38 DIFFERENT BILATERAL PROGRAMMES)



**% of projects implying young researchers : 40% vs 67% mean**

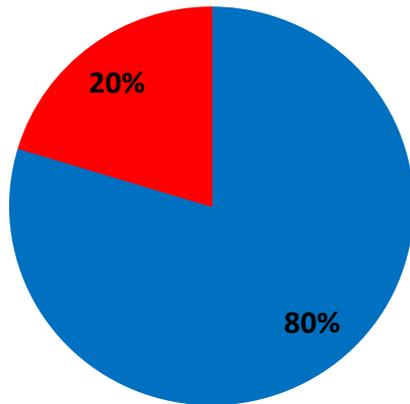
**% of PhD or postdoc implicated in the copublications : 31% vs 61% mean**



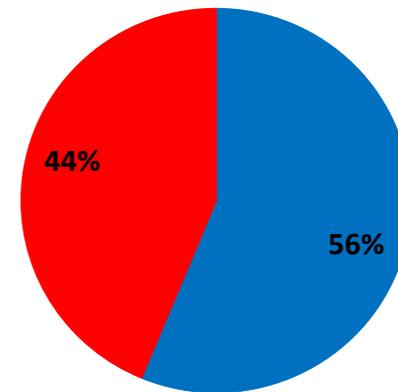
# MOBILITY

# MOBILITY : GENDER DISTRIBUTION

France → Indonesia



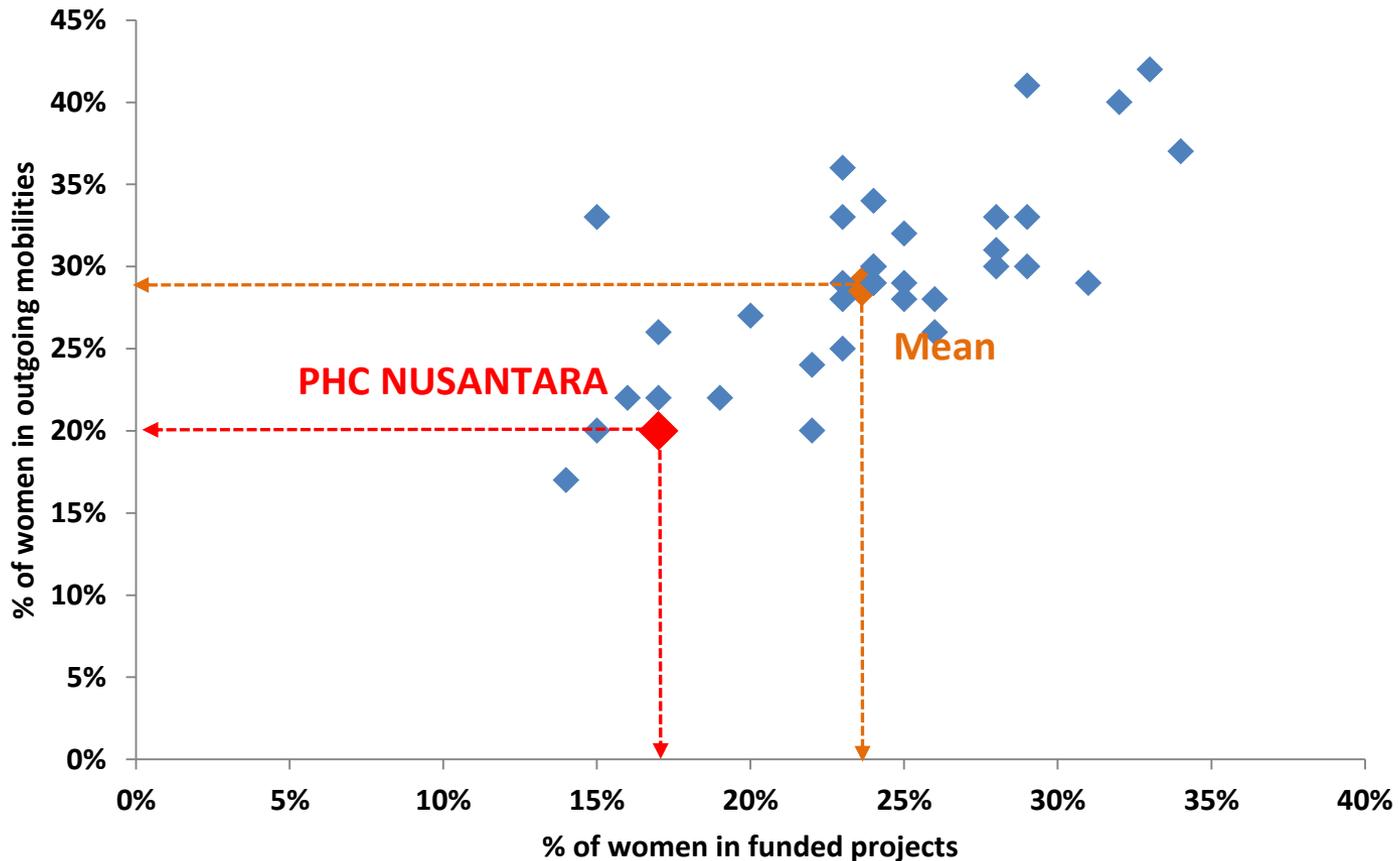
Indonesia → France



■ Men ■ Women

# WOMEN MOBILITY FRANCE – INDONESIA

(COMPARISON BETWEEN 38 DIFFERENT BILATERAL PROGRAMMES)



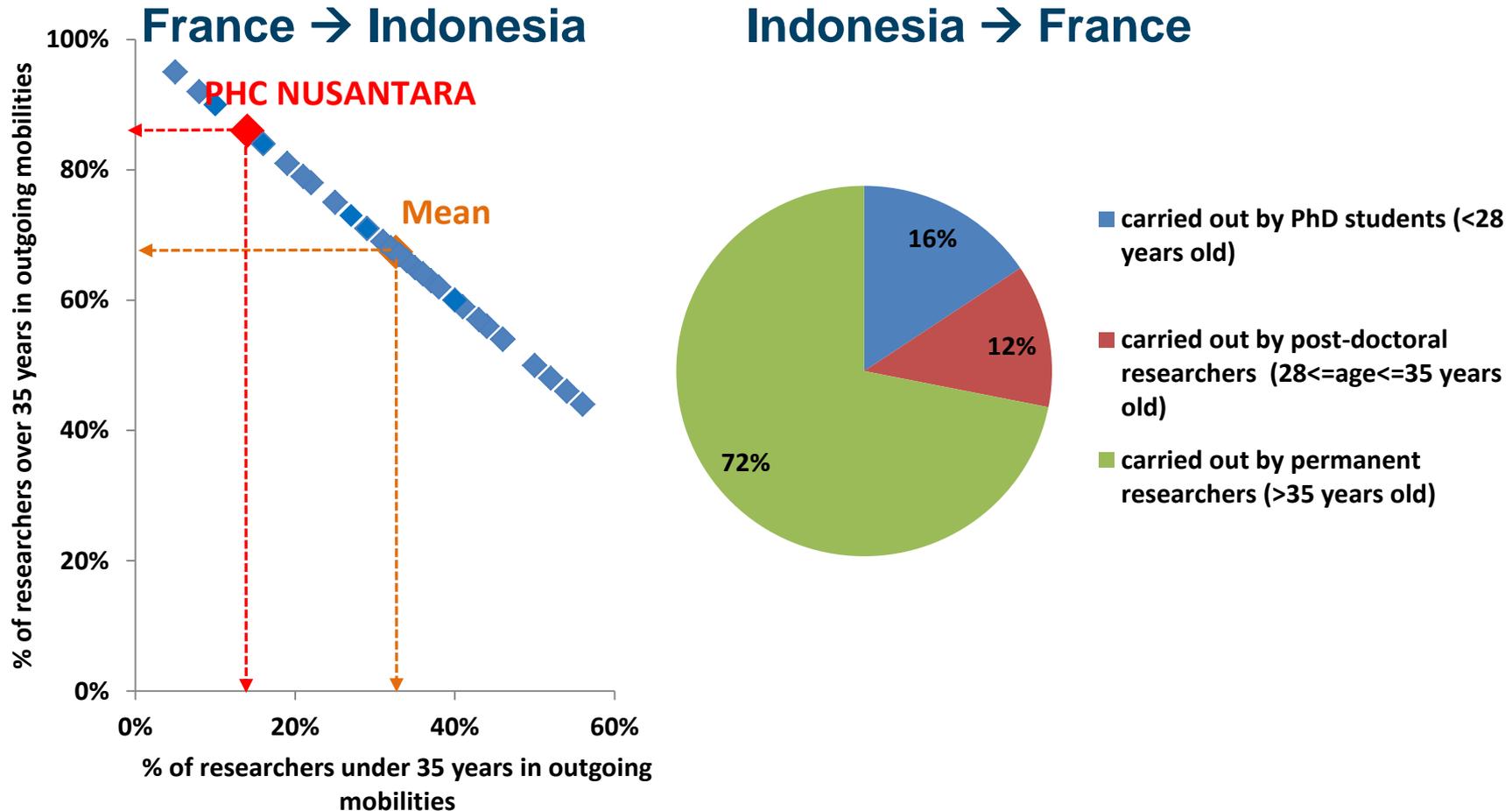
**% of women researchers in the selected projects : 20% vs 24% mean**

**% of women researchers in outgoing mobilities : 17% vs 23% mean**

# YOUNG RESEARCHERS MOBILITY

## FRANCE – INDONESIA

(COMPARISON BETWEEN 38 DIFFERENT BILATERAL PROGRAMMES)

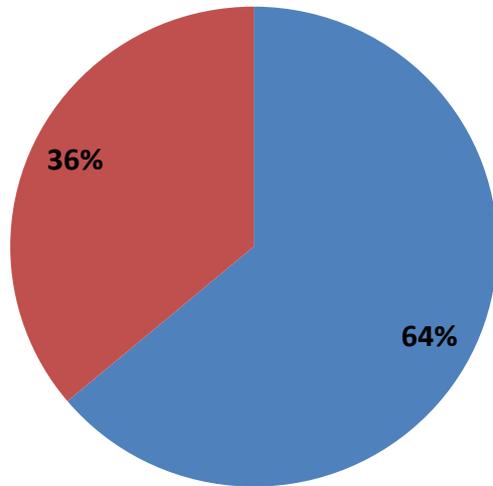


**% of french young researchers in outgoing mobilities : 14% vs 33% mean**

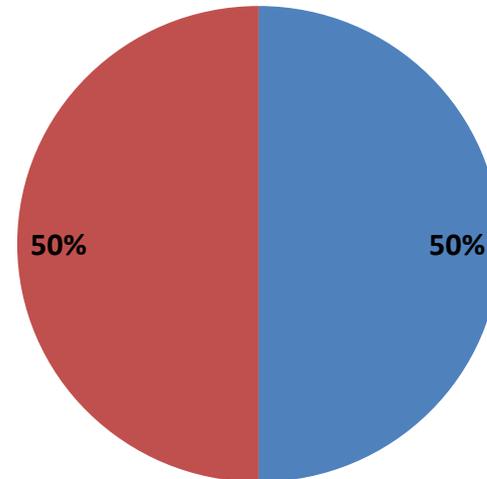
**% of indonesian young researchers in incoming mobilities : 28%**

# MOBILITY : DURATION

## France → Indonesia



## Indonesia → France



■ < 15 days

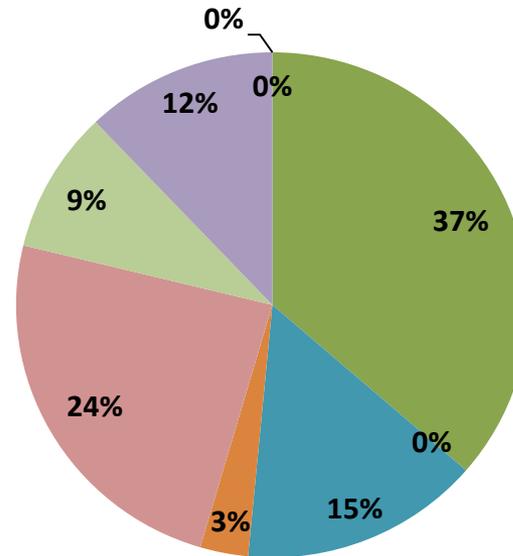
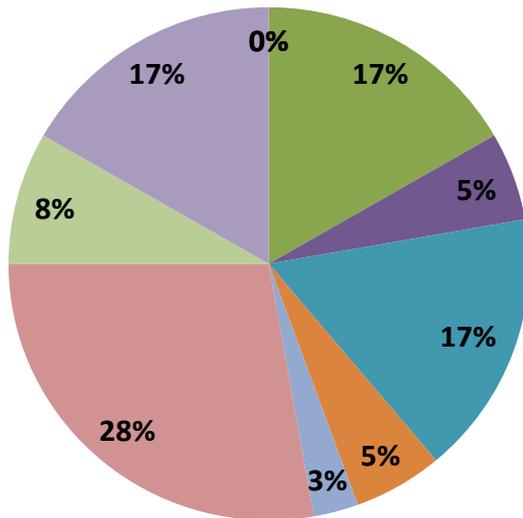
■ between 15 days and 3 months

# SCIENTIFIC PRODUCTION (2009-2017)

# SCIENTIFIC OUTPUT (1/2)

Number of funded projects : **36**

Percentage of co-publications (25 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 25 funded projects

	Number of financed projects in the survey	Average number of co-publications per project
Mathematics	0	-
Physics	0	-
Marine/Earth/Planet Sciences	6	3
Chemistry	2	0
Biology and Health	6	1,25
Humanities	2	1
Social Sciences	1	0
Engineering Sciences	10	1,14
Information Technology	3	0,75
Agronomy / Ecology	6	1,33
<b>TOTAL</b>	<b>36</b>	<b>1,32</b>

Overall average **annual** number of co-publication per project : **0,66 vs 0,90 mean**

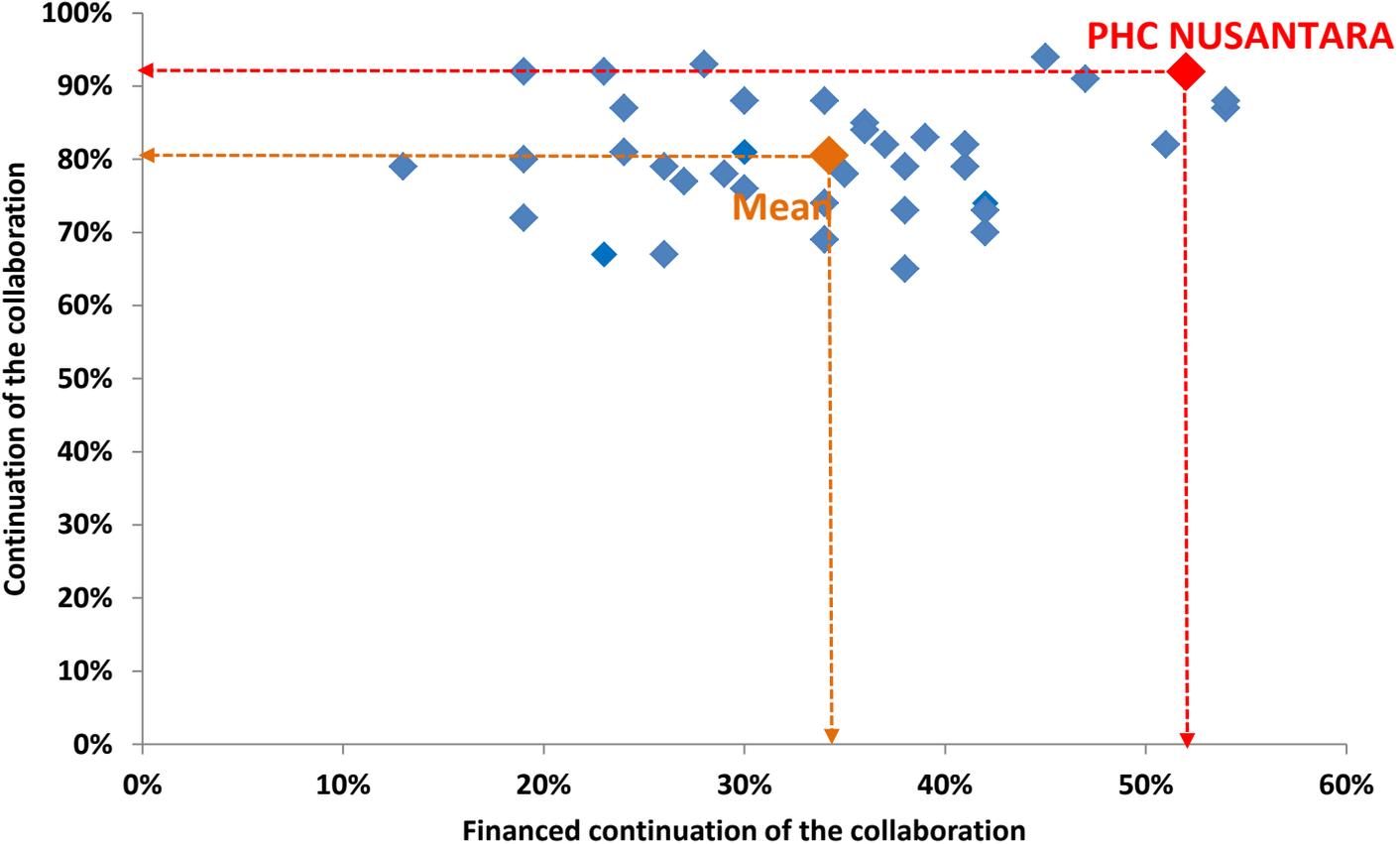
**44%** of funded projects led to one co-publication at least

**18%** of co-publications include at least 1 PhD or PostDoc

**Average annual publication rate for young researchers : 0,23**

# WHAT HAPPENS AFTER JOINING THE NUSANTARA?

# CONTINUATION OF THE COLLABORATION (1/5) (COMPARISON BETWEEN 38 DIFFERENT BILATERAL PROGRAMMES)



**Continuation of the collaboration : 92% vs 81% mean**

**Continuation of the collaboration with other grants: 52% vs 34% mean**

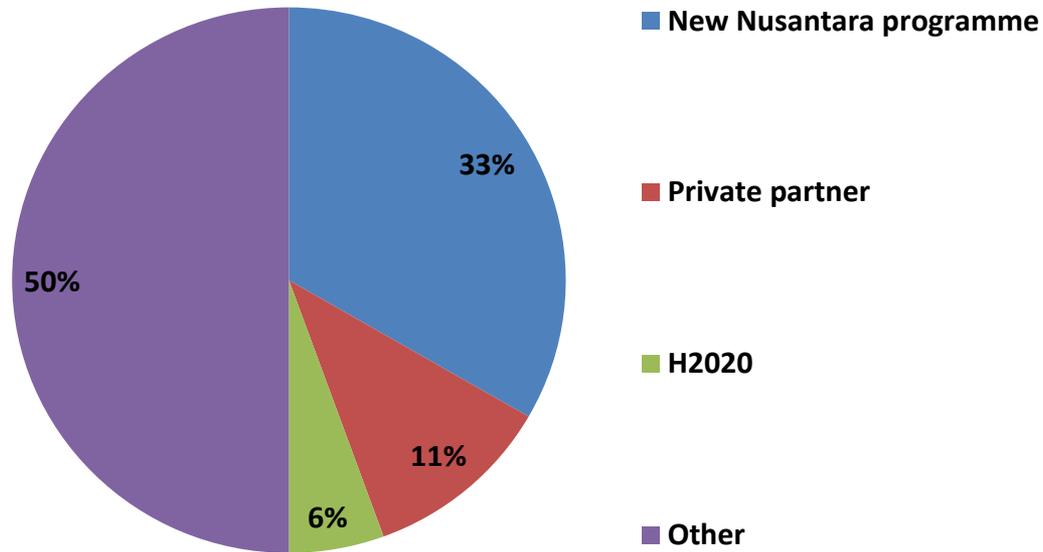
## CONTINUATION OF THE COLLABORATION (2/5)

**92%** of the collaborations continued after the Nusantara project

Which activities?	
Collaborative research	74%
Co-publications	74%
Researchers mobility	70%
Joint participation at conferences	43%
PhD mobility	35%
Co-organisation of scientific events	30%
Joint participation at PhD thesis	17%
Joint diplomas (Master, PhD...)	13%
Others	13%

# CONTINUATION OF THE COLLABORATION (3/5)

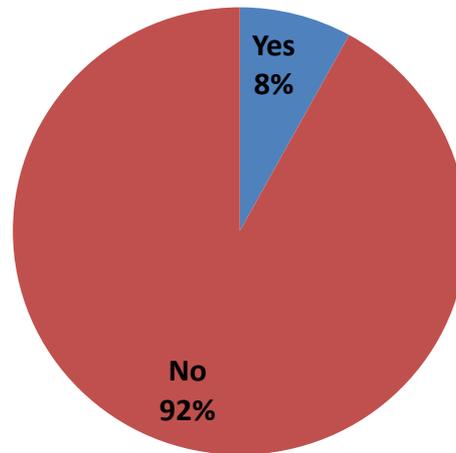
What kind of funded collaborations after the Nusantara project ?



Other fundings : Indonesian fundings (4), IRD (2), Bioasie (1), European (1)

# CONTINUATION OF THE COLLABORATION (4/5)

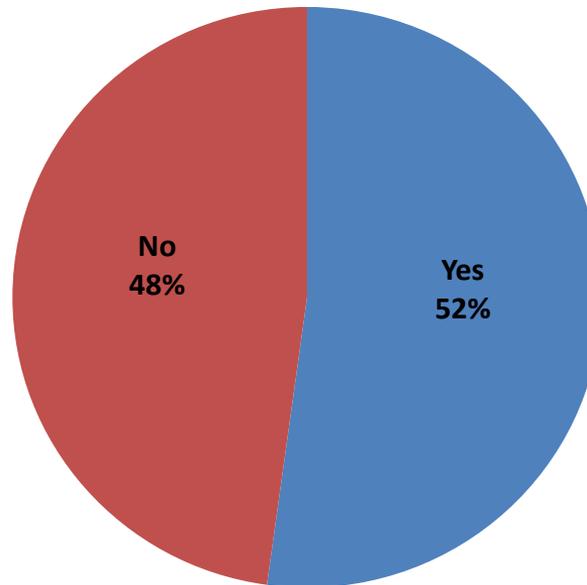
Has the Nusantara project led to the set-up of joint structures?



1 International Associated Laboratory (LMI)

# CONTINUATION OF THE COLLABORATION (5/5)

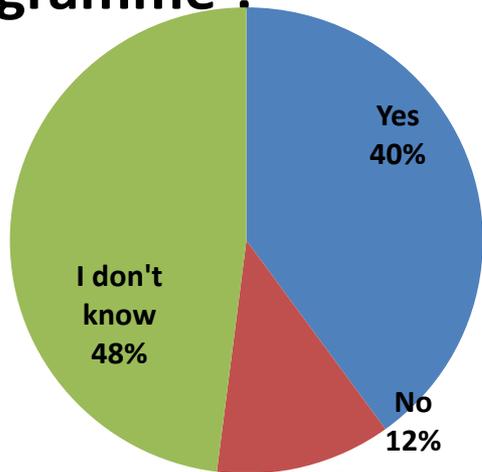
Has the French-Indonesian collaboration involved new partners?



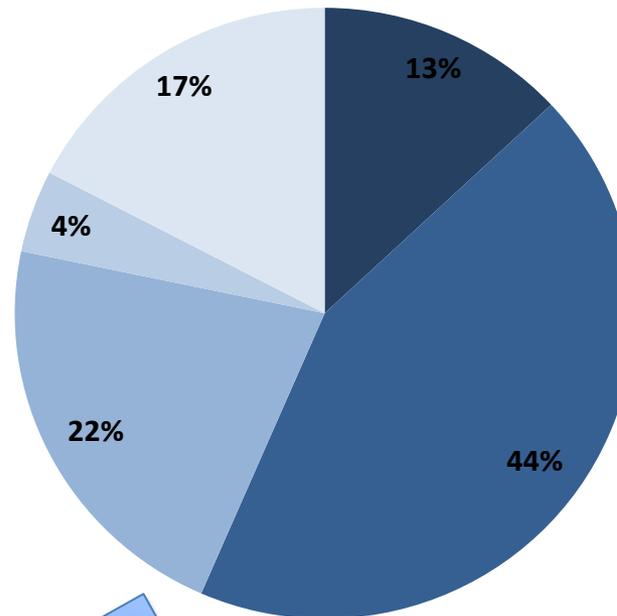
For a total of 16 new partners from 12 different countries

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

Was young researchers' career impacted by the Nusantara programme ?



Type of impacts



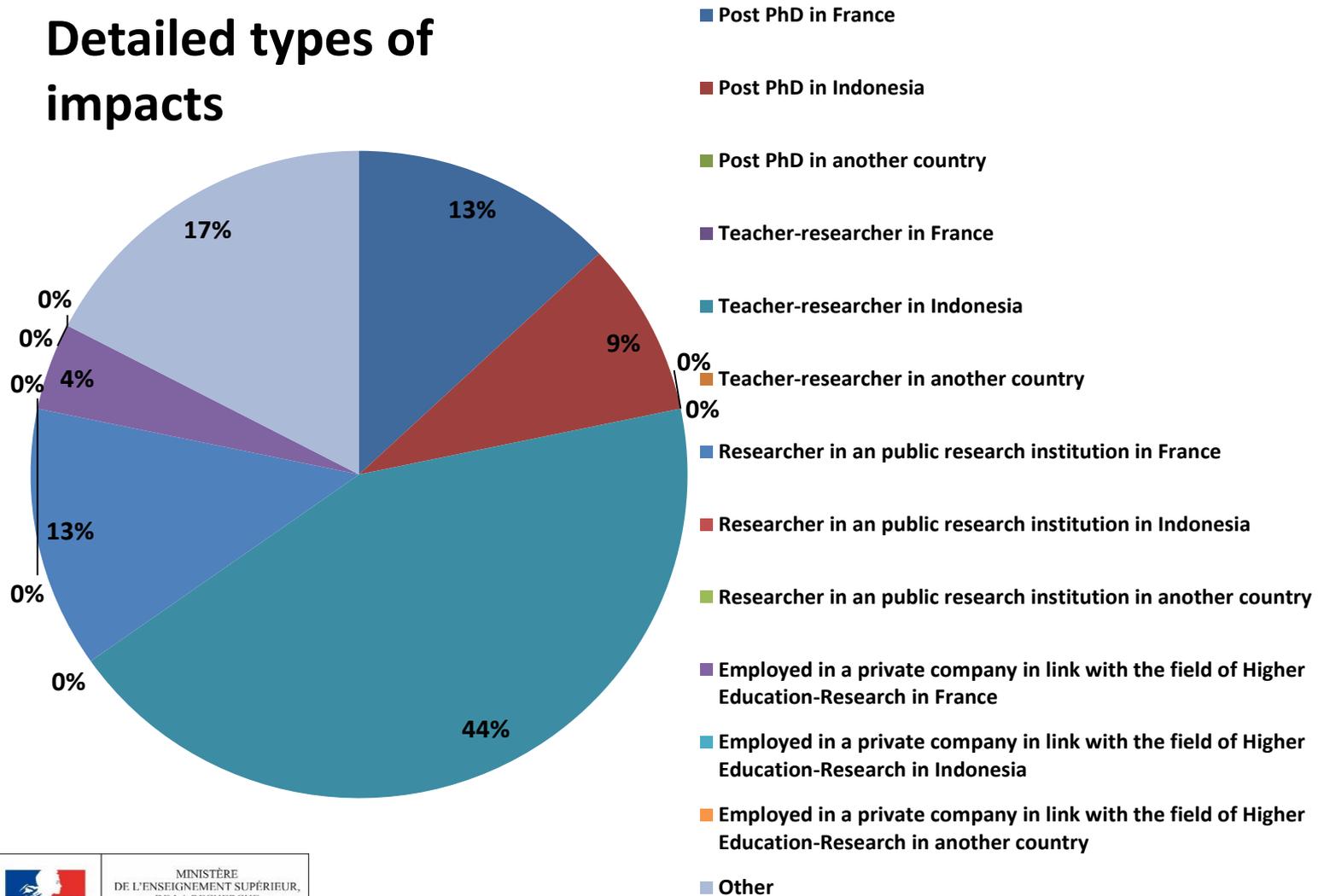
- Researcher in a public research institution (permanent position)
- Teacher/Researcher (permanent position)
- Postdoc/Teacher/Researcher (temporary position)
- Employed in a private company in link with the field of Higher Education - Research
- Other

Data from 25 responses

Data from 10 positive responses for a total of 23 young researchers

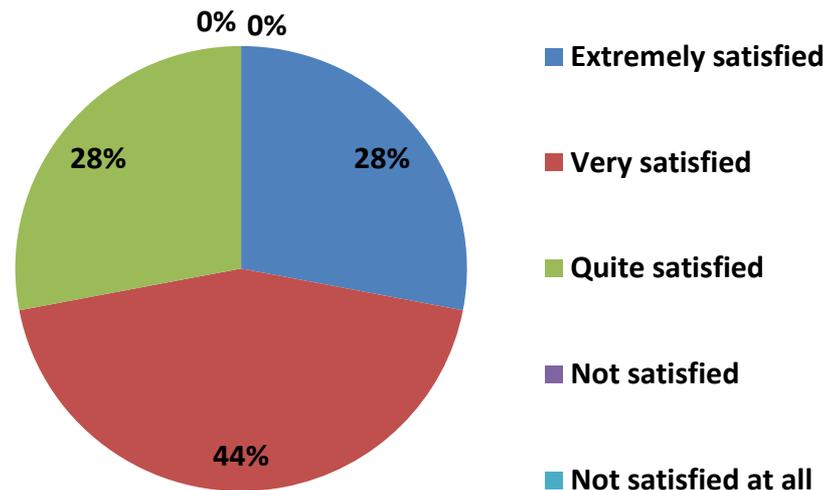
# IMPACT ON YOUNG RESEARCHERS' CAREER (2/2)

## Detailed types of impacts



# GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME

**98%** of French principal investigators are satisfied



Data from 25 responses

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

## SURVEY OF 25 FUNDED PROJECTS



Strengths of this program	Number of occurrences (out of 177)	% (out of 25)
Allows the mobility of the researchers	24	96%
Simplicity of the application process	21	84%
Allows an international scientific collaboration	21	84%
Allows exchanges which allow a scientific production	15	60%
Allows a knowledge of the country partner	15	60%
Easy implementation (administrative flexibility)	15	60%
Financial means sufficient for the expenditure of mobility	12	48%
Good scientific appreciation compared to the financial investment	11	44%
Financial autonomy towards your institution	10	40%
Allows the training of the young researchers	9	36%
Is used as starting for raising other funds	8	32%
Duration of mobilities adapted to the needs	5	20%
Timetable for implementation	4	16%
Transparency of the methods for selecting the projects	3	12%
Sufficiently long duration of the projects	3	12%
Others	1	4%
No strenght point	0	0%
<b>Total number of occurrences</b>	<b>177</b>	

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

## SURVEY OF 25 FUNDED PROJECTS



Weaknesses of this program	Number of occurrences (out of 62)	% (out of 25)
No funding of the operation and capital expenditures	19	76%
Too short duration of the projects	7	28%
Too short duration of mobilities	6	24%
Difficult perpetuation of collaboration	4	16%
Lack of transparency on the methods of projects selection	3	12%
Insufficient communication on the evaluation's results	3	12%
Financial means insufficient for the expenditure of mobility (transport)	3	12%
Too low number of mobilities	3	12%
No weakness	2	8%
Heaviness of the process of applications	2	8%
Financial autonomy towards your institution	2	8%
Financial means insufficient for the expenditure of mobility (per diem)	1	4%
Flexibility of the programme for actions co-financed with the partner	1	4%
Too long duration of mobilities	0	0%
Administrative heaviness of the missions management	0	0%
Timetable for implementation	0	0%
Other	6	24%
Number of occurrences	62	

# 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”.

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Participation of women PIs close to the the mean but below the mean for the selections and should be encouraged

High percentage of new fundings after a Nusantara project (52% vs 34% mean), especially from new funds (67% of new fundings)

Capacity of involving new partners during continuation of the cooperation

Positive impact on young researchers career (57% with a permanent position)

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**Nusantara programme initiates only 24% of new collaborations**

**Low implication of both PhDs (32% vs general mean : 67%) and postdocs (8% vs general mean : 23%) in the projects and in the mobilities (14% vs 33%)**

**Insufficient implication of french young researchers in the scientific production (31% vs general mean 61%) and low annual rate of co-publications for young researchers (0,26)**

**Average scientific production below the mean (0,66 vs 0,90)**

**Only 18% of co-publications include at least one young researcher**

**Low percentage of young PIs applications (12%) as compared to the mean of 23%**

# PRELIMINARY RECOMMENDATIONS FOR FRENCH PIS

## **RECOMMENDATIONS**

- Beware of the persistent decrease of candidates : necessity to think of renewing the call to make it more attractive
- Promote more new cooperation
- Increase the scientific co-production
- Increase the participation of young researchers 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
- Consider a “NUSANTARA +” programme to help PIs at the end of their project to apply to new funding programmes (Europe...) ?

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

robert.gardette@recherche.gouv.fr

than-truc.vu@recherche.gouv.fr

christophe.delacourt@recherche.gouv.fr

*Thank you for your attention*