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FRANCE – PAKISTAN

Scientific impact of the PHC PERIDOT (2015-2022)

MESR-DAEI / MEAE

2025

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

1

DGRI-DGESIP/DAEI B3



Creation : 2015

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

Total budget (France + Pakistan) : around 87 000 € / year

>> including budget from the French part : around 43 500 €/year >> including budget from the Pakistani part : around 43 500 €/year Average budget per project Research Program (France) : around 8 000 €/year Average budget per project Research Program (France + Pakistan) : around 16 000 €/year **Number of new funded projects per year : around 5**

> From 2015-2022 : 226 applications submitted 42 projects funded

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DATA SOURCES

Campus France (2015-2022)

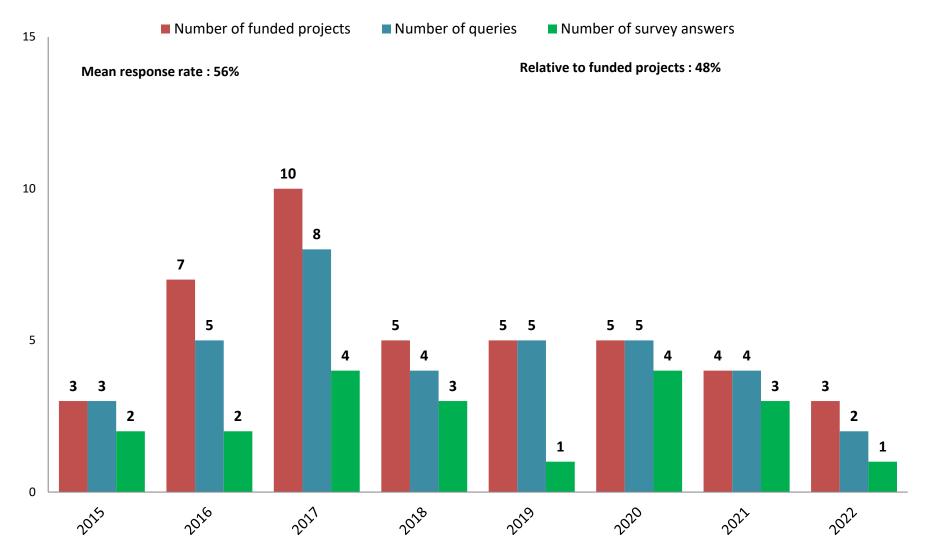
• Information about the PHC PERIDOT applications

Survey (2015-2022)

- Target : French Principal Investigators of selected projects between 2015 and 2022
- French survey duration : from May 27th to July 1st 2024
 56% response ratio (20 respondents for 36 queries)

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ANSWERS TO THE SURVEY Average response rate to the survey : 56 % (20 answers)



42 funded projects between 2015 and 2022, 36 valid email adresses

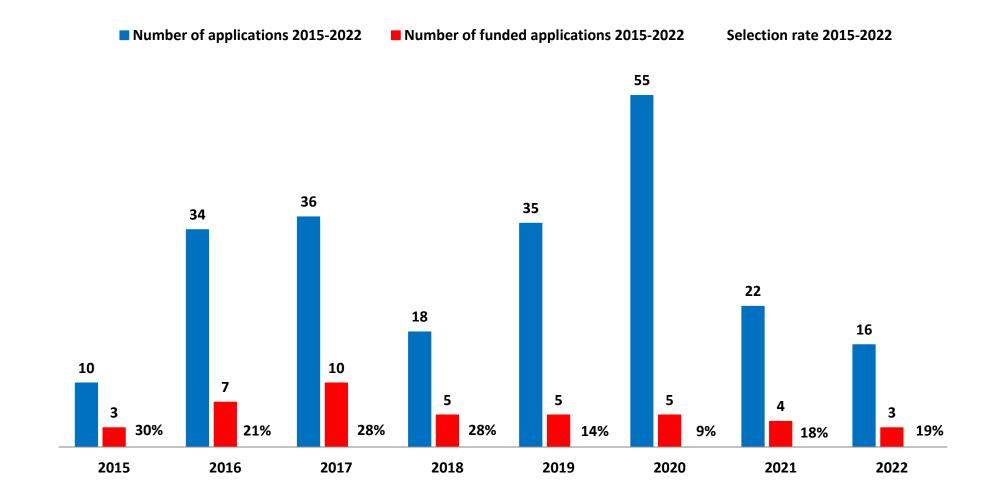
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> 2015-2022 Key Points

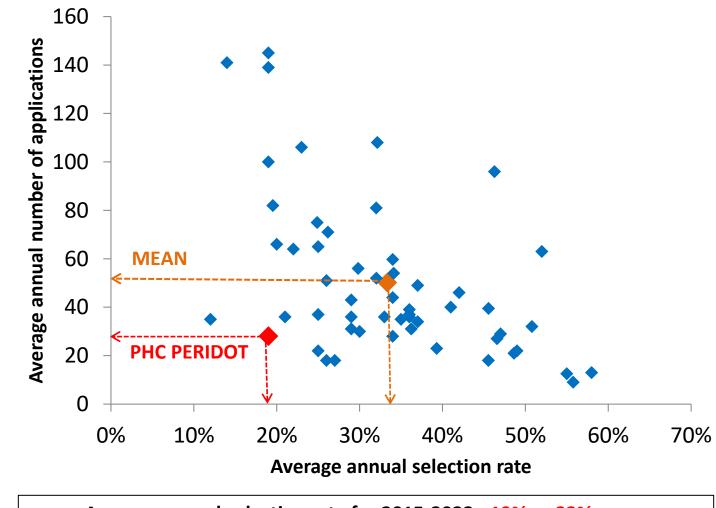


NUMBER OF APPLICATIONS AND SELECTION RATE Average selection rate from 2015-2022: **19%**



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NUMBER OF APPLICATIONS VS SELECTION RATE (COMPARISON BETWEEN 54 DIFFERENT BILATERAL PROGRAMS)



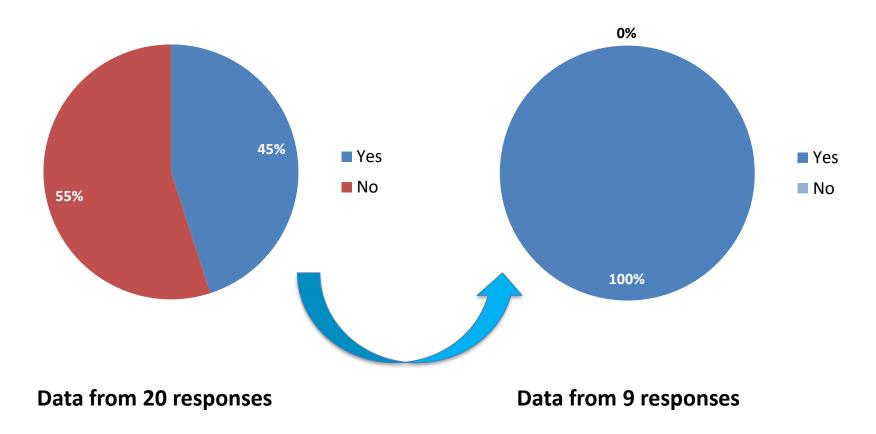
Average annual selection rate for 2015-2022 : 19% vs 33% mean Average annual number of applications 2017-2023 : 28 vs 50 mean



BEFORE THE PERIDOT PROJECT (1/4)

Did you already cooperate with Pakistan in the past ?

If yes, was it with the same partner?





BEFORE THE PERIDOT PROJECT (2/4)

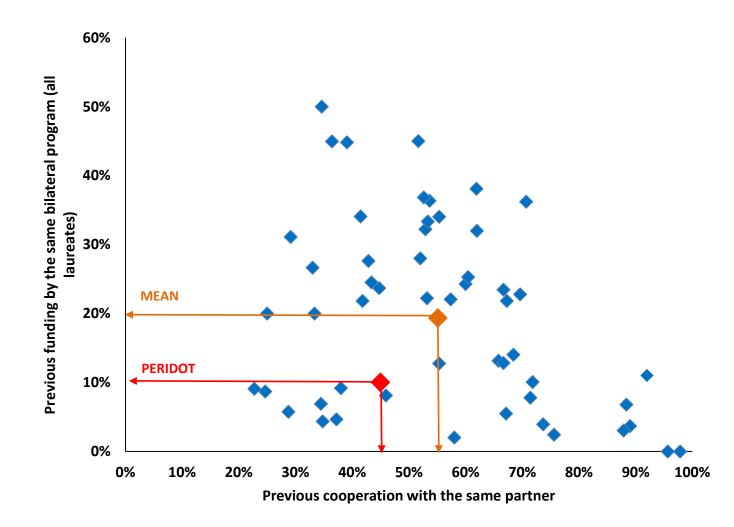
With which scientific collaboration program ?		
PHC PERIDOT	36%	
French Government Grant	14%	
Other	50%	

Other fundings such as Pakistani Ministry, French Ambassy, French Foreign Affairs...

Plus 13 previous cooperations based on other exchanges (scientific coproduction, meetings, joint PhD...)

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BEFORE THE PERIDOT PROJECT (3/4) (COMPARISON BETWEEN 54 DIFFERENT BILATERAL PROGRAMS)

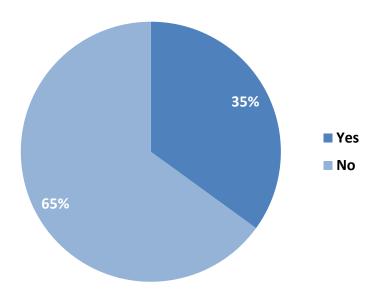


This project is a new cooperation for 55% of laureates For 10% of laureates with previous cooperation with Pakistan (45% of laureates), the previous funding comes from PHC PERIDOT



BEFORE THE PERIDOT PROJECT (4/4)

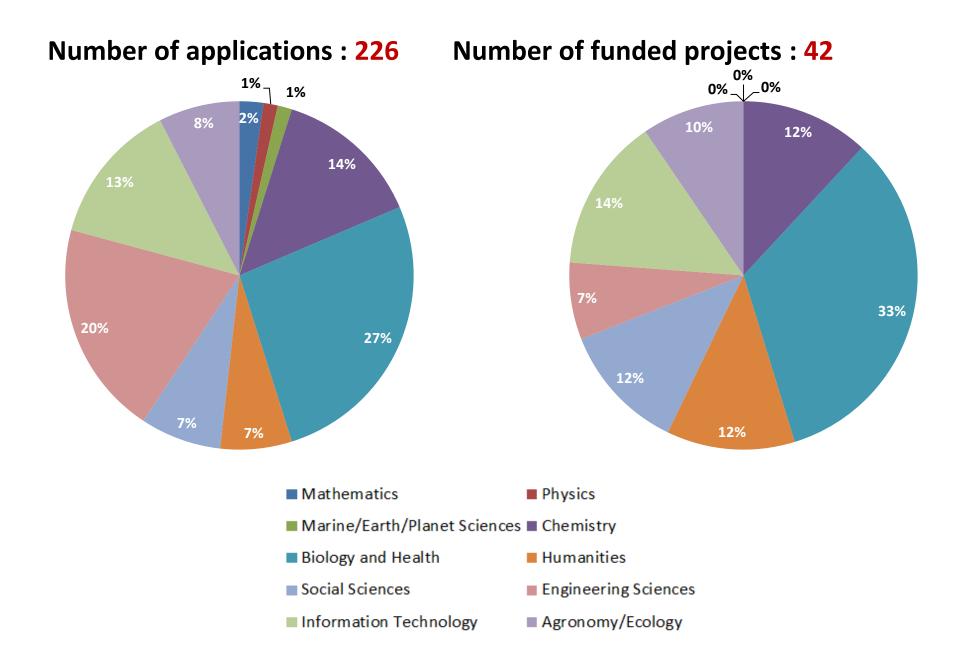
Did you set up this project with a former Pakistani student (alumni) of your team?



Data from 20 responses

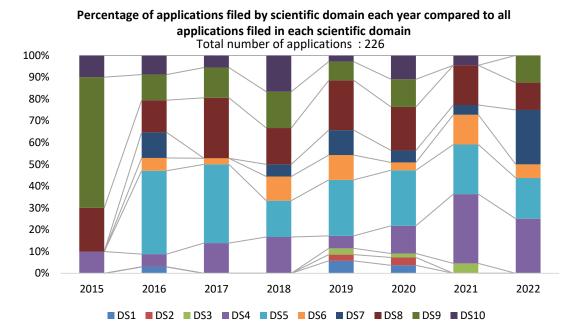


SCIENTIFIC DOMAINS OF PROJECTS (2015-2022)

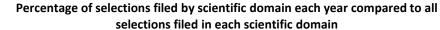


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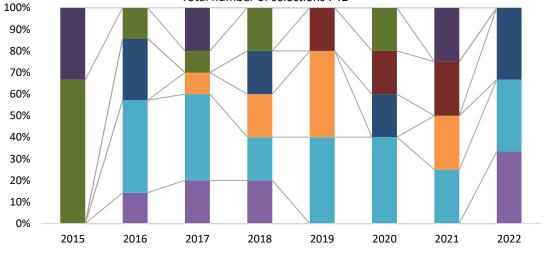
SCIENTIFIC DOMAINS : EVOLUTION 2015-2022



- DS1 : Mathematics
- DS2 : Physics
- DS3 : Marine, Earth, Planet sciences
- DS4 : Chemistry
- DS5 : Biology and Health
- DS6 : Humanities
- DS7 : Social sciences
- DS8 : Engeneering sciences
- DS9 : Information technology
- DS10 : Agronomy/Ecology



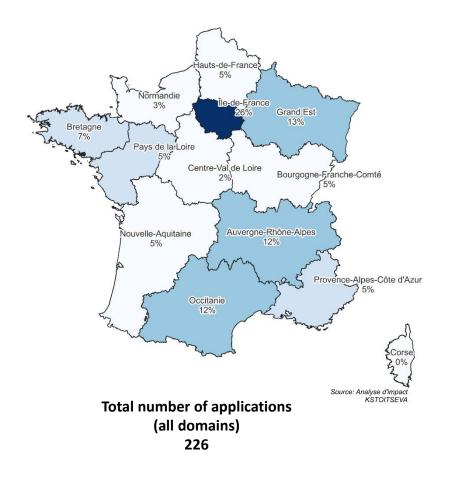
Total number of selections : 42

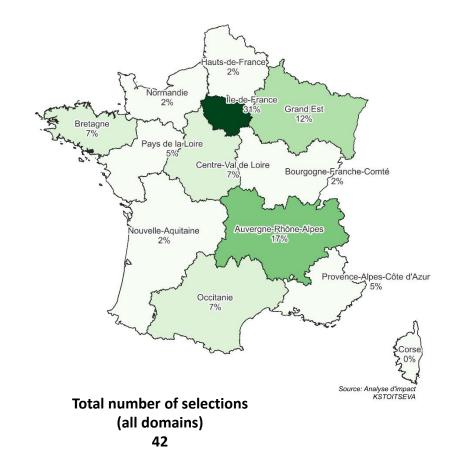




REGIONAL DISTRIBUTION OF SELECTED PROJECTS 2015-2022

PHC PERIDOT Regional percentages of applications and selections 2015-2022

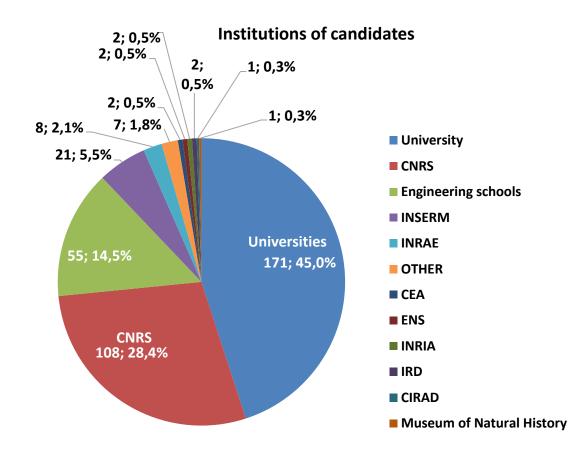


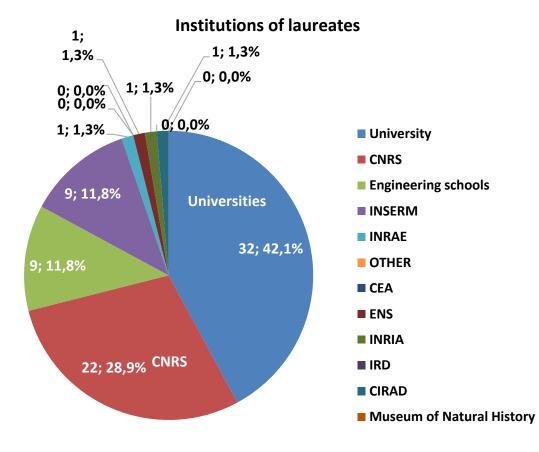


The region Ile de France is the main contributor both for applications and selections followed by Grand Est for applications and Auvergne-Rhône-Alpes for selections



FRENCH PARTICIPATING INSTITUTIONS (SOURCE : DATA FROM CAMPUS FRANCE)

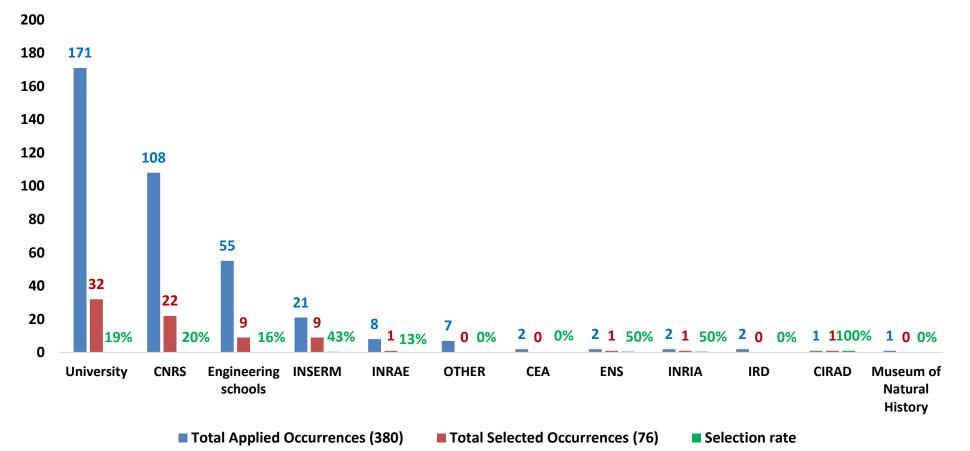






FRENCH PARTICIPATING INSTITUTIONS (SOURCE : DATA FROM CAMPUS FRANCE)

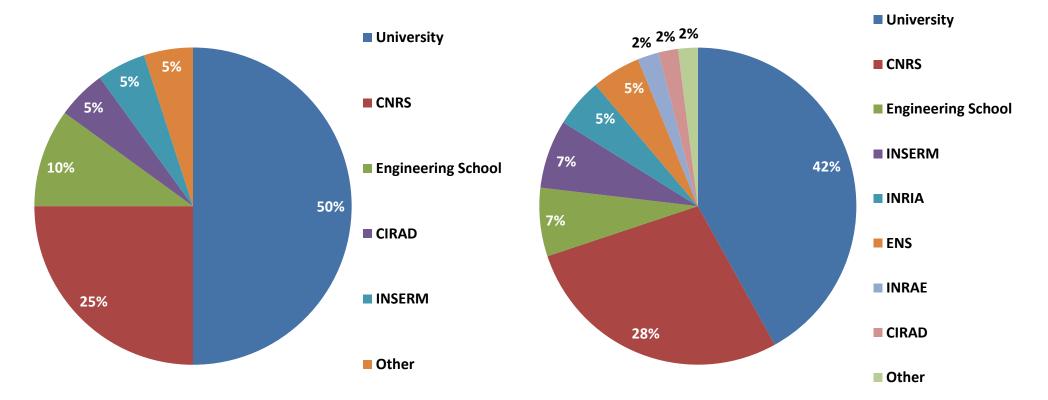
Number of occurences for each institution





FRENCH PARTICIPATING INSTITUTIONS (SOURCE : DATA FROM THE SURVEY)

PI's employers

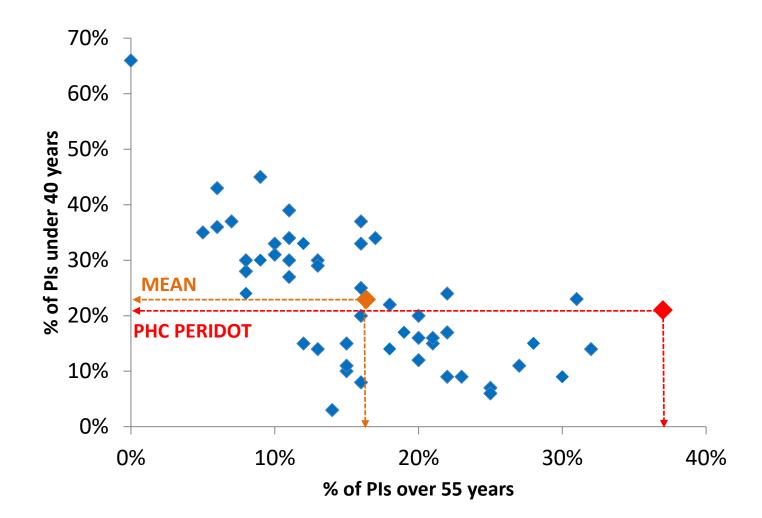


Laboratories authorities

Data from 20 responses

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AGE OF FRENCH PRINCIPAL INVESTIGATORS (PI) 2015-2022 (COMPARISON BETWEEN 54 DIFFERENT BILATERAL PROGRAMS)



Laureates under 40 years : 21% vs 23% mean Laureates over 55 years : 37% vs 16% mean Laureates between 40 et 55 years : 42%

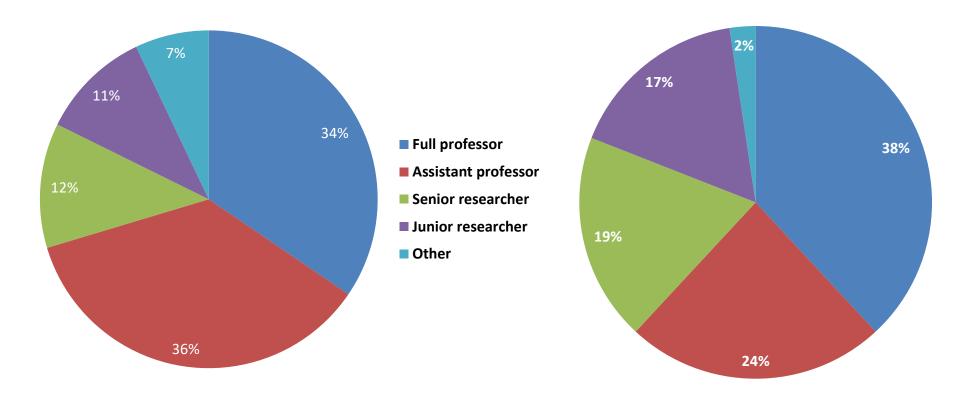


FRENCH PIS (PRINCIPAL INVESTIGATORS) : STATUS 2015-2022

(SOURCE : DATA FROM CAMPUS FRANCE)

Applicants professional status

Laureates professional status



Data from 226 french applicants and 42 french laureates

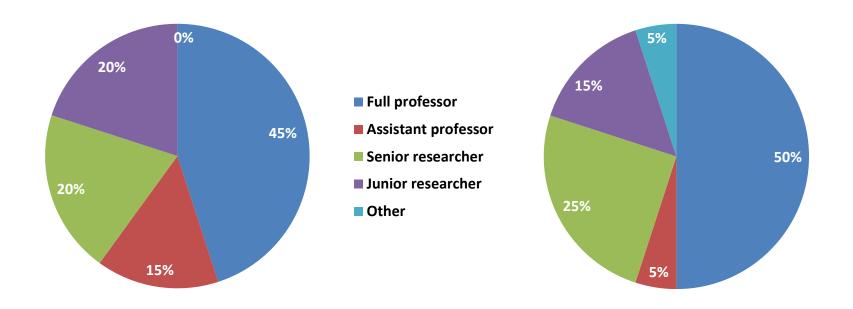
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FRENCH PIS (PRINCIPAL INVESTIGATORS) : STATUS 2015-2022

(SOURCE : DATA FROM THE SURVEY)

Previous professional status (at the beginning of the project)

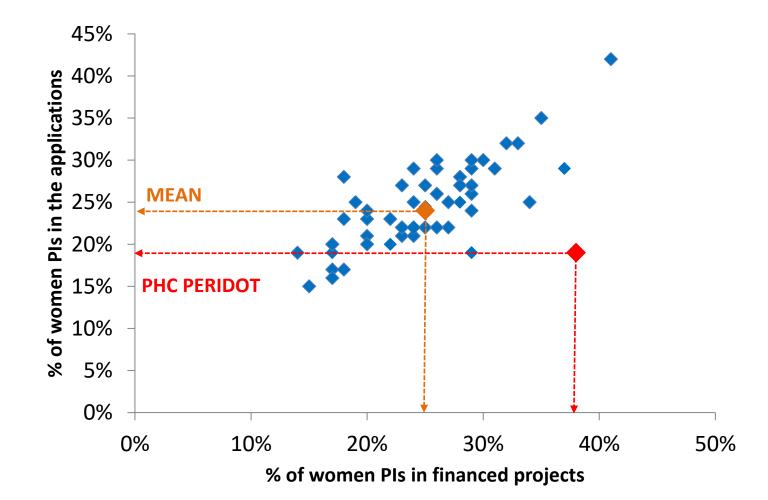
Current professional status



Data from 20 responses

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IMPLICATION OF WOMEN (FRANCE) 2015-2022 (COMPARISON BETWEEN 54 DIFFERENT BILATERAL PROGRAMS)



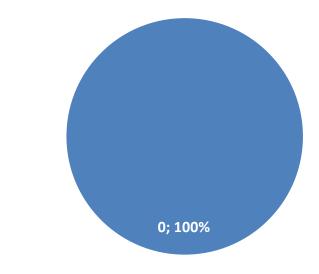
% of women PIs candidates : 19% vs 24% mean % of women PIs laureates : 38% vs 25% mean



PARTICIPATION OF FRENCH YOUNG RESEARCHERS 2015-2022

Number of French PhD students

2; 5% 5; 25% 0; 70% 0; 70% Number of French postdoctoral researchers



30% of projects involve at least one French PhD student

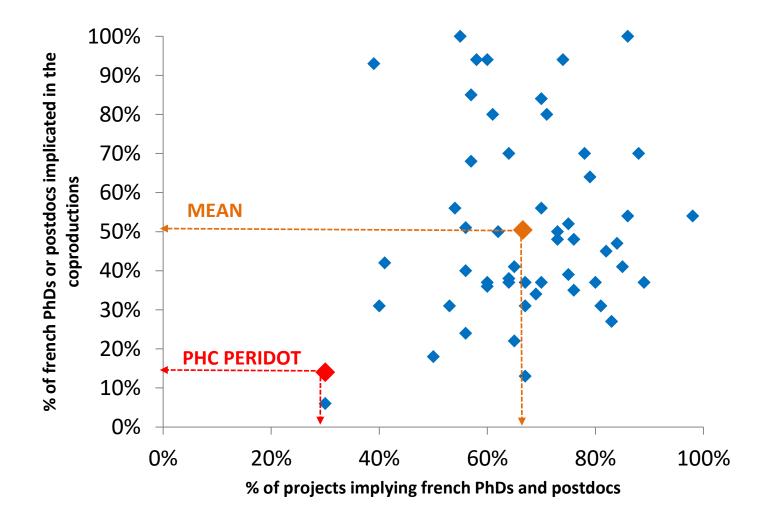
0% of projects involve at least one French post-doctoral researcher

Overall, 30% of projects involve at least one French young researcher

Data from 20 responses

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IMPLICATION OF FRENCH YOUNG RESEARCHERS IN THE PUBLICATIONS 2015-2022

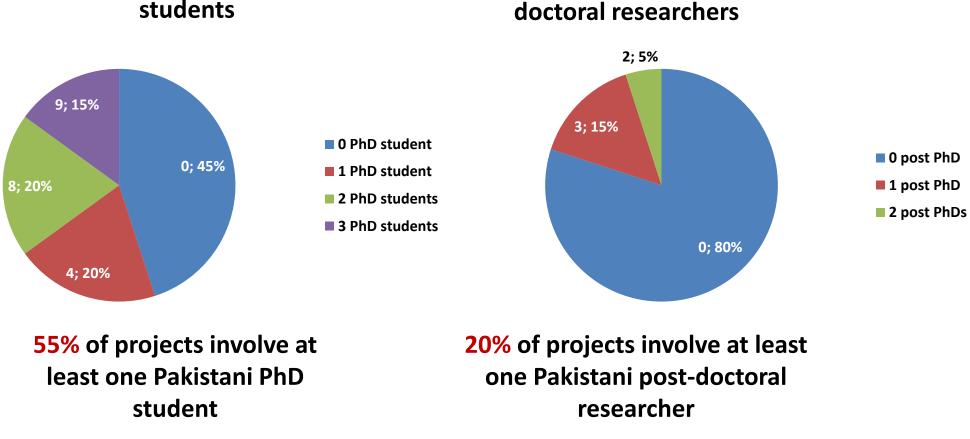


% of projects involving french young researchers : 30% vs 67% mean % of french PhDs or postdocs involved in the coproductions : 14% vs 50% mean



PARTICIPATION OF PAKISTANI YOUNG RESEARCHERS 2015-2022

Number of Pakistani post-

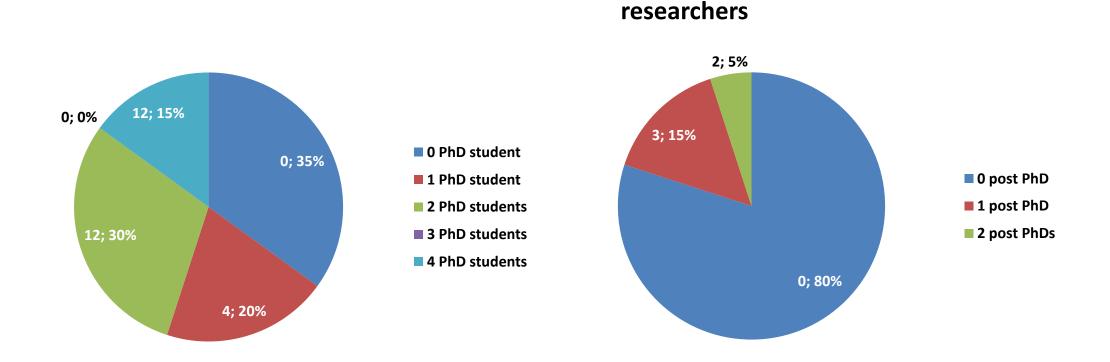


Number of Pakistani PhD students

Overall, 70% of projects involve at least one Pakistani young researcher

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PARTICIPATION OF BOTH FRENCH AND PAKISTANI YOUNG RESEARCHERS



65% of projects involve at least one PhD student

Number of PhD students

20% of projects involve at least one post-doctoral researcher

Number of post-doctoral

Overall, 75% of projects involve at least one French or Pakistani young researcher

Data from 20 responses

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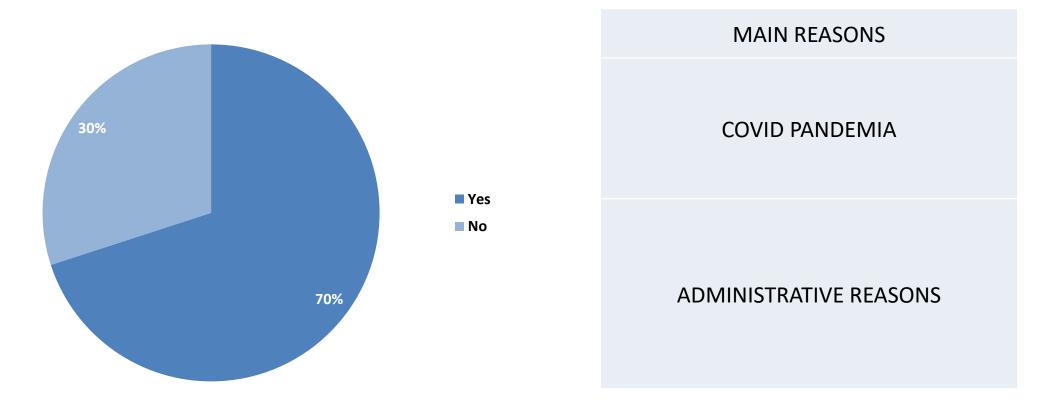
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MOBILITY



MOBILITIES 2015-2022

Did you encounter difficulties, or impossibilities, in carrying out the missions planned for Pakistan?

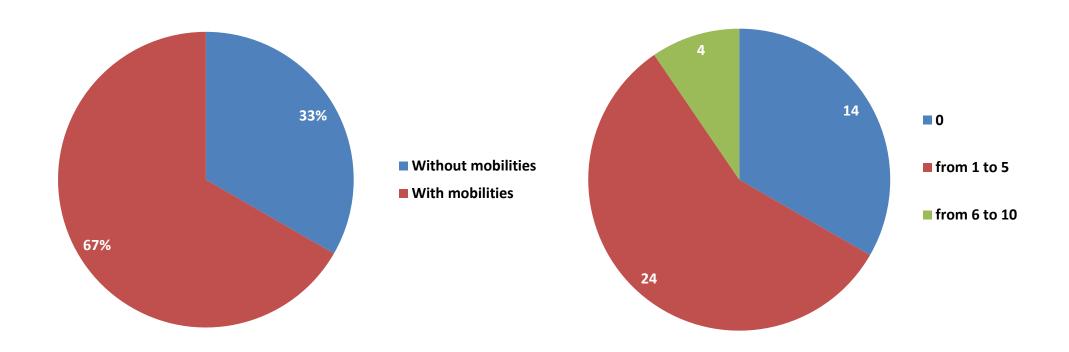


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MOBILITIES 2015-2022 (SOURCE : DATA FROM CAMPUS FRANCE)

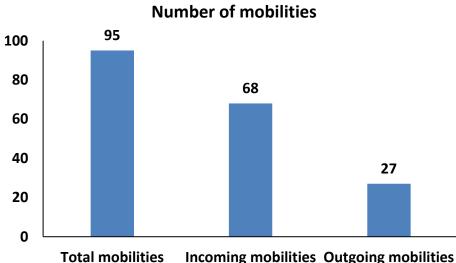
Projects with/without mobilities

Number of mobilities per project

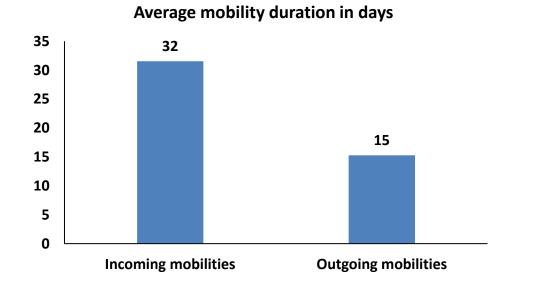


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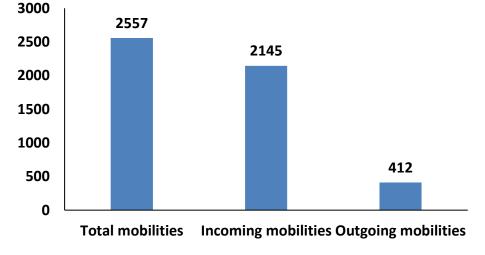
MOBILITIES 2015-2022



Incoming mobilities Outgoing mobilities

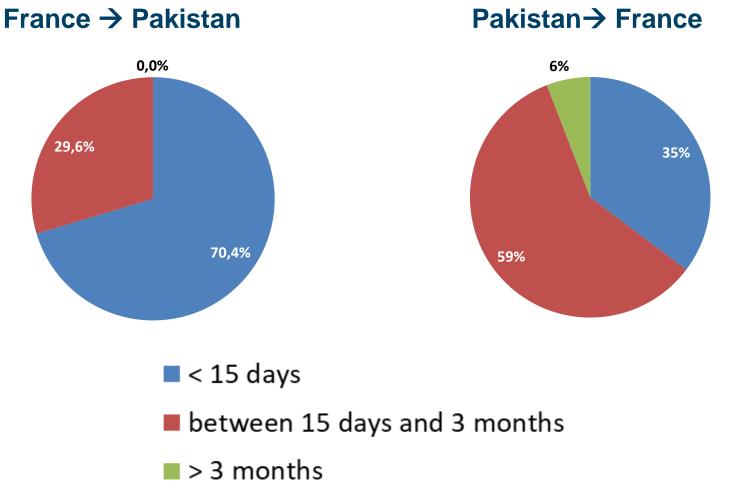








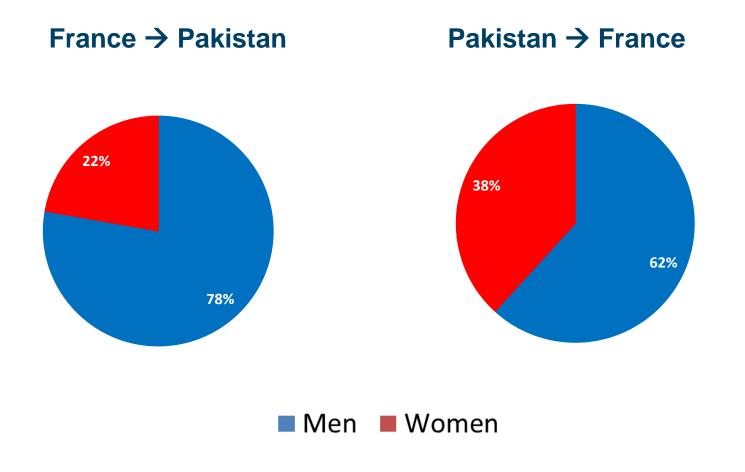
MOBILITY : DURATION (2015-2022) (SOURCE : DATA FROM CAMPUS FRANCE)



Data from 27 outgoing mobilities and 68 incoming mobilities



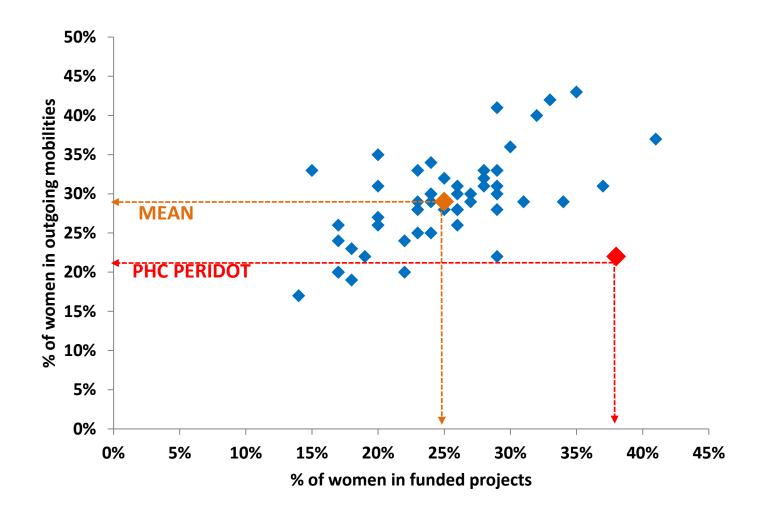
MOBILITY : GENDER DISTRIBUTION (2015-2022) (DATA FROM CAMPUS FRANCE)



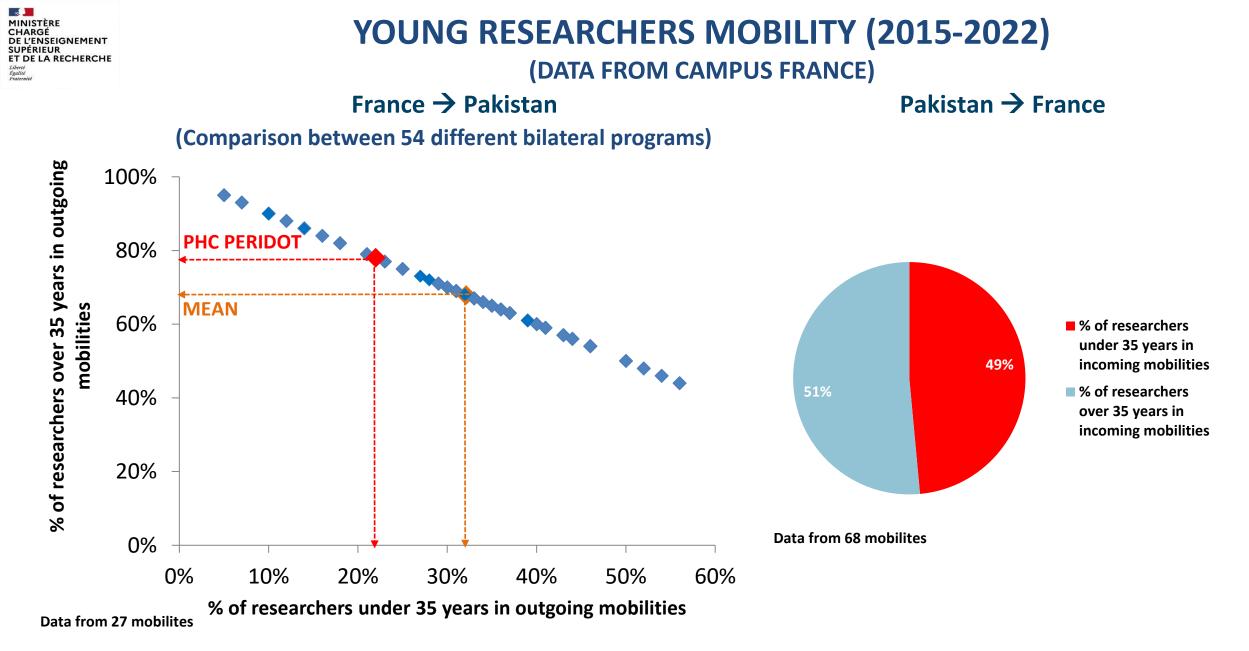
Data from 27 outgoing mobilities and 68 incoming mobilities

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WOMEN MOBILITY FRANCE – PAKISTAN (COMPARISON BETWEEN 54 DIFFERENT BILATERAL PROGRAMS)



% of women PIs in the funded projects : 38% vs 25% mean % of women PIs in outgoing mobilities : 22% vs 29% mean



% of young french researchers in outgoing mobilities : 22% vs 32% mean % of young romanian researchers in incoming mobilities : 49% (mean non available) MINISTÈRE CHARGÉ DE L'ENSEIGNEMENT SUPÉRIEUR ET DE LA RECHERCHE Liberté

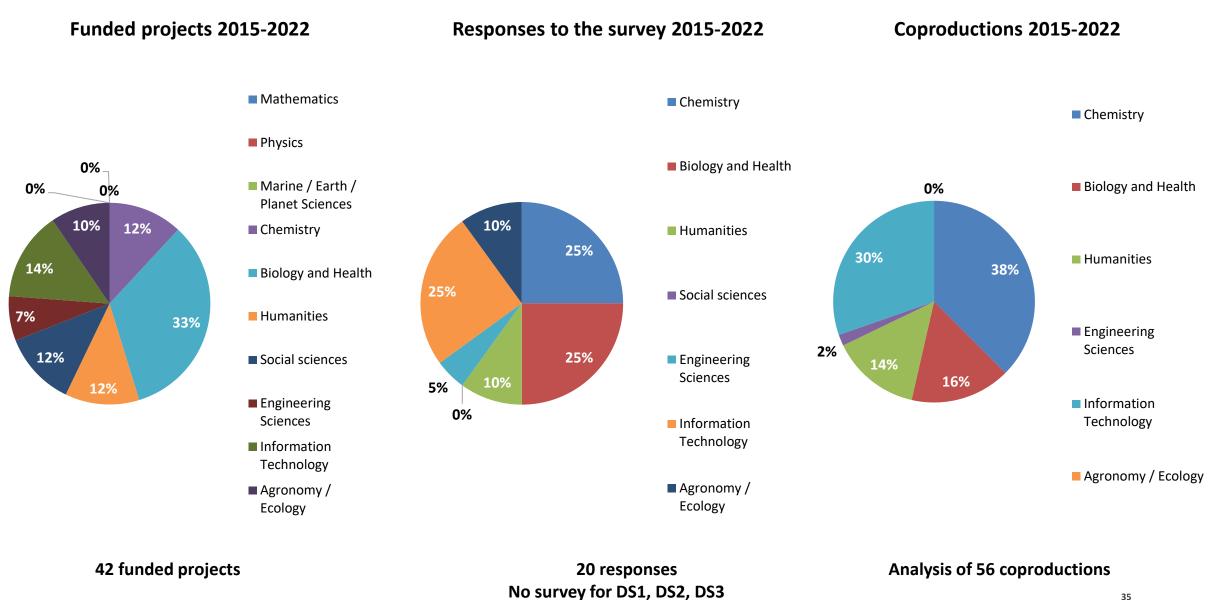
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> SCIENTIFIC PRODUCTION (2015-2022)

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SCIENTIFIC PRODUCTION 2015-2022 (1/2)

(SOURCE : DATA FROM CAMPUS FRANCE AND SURVEY)



No responses for DS7

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SCIENTIFIC OUTPUT 2015-2022 (2/2)

(DATA FROM THE SURVEY)

	Number of financed projects in the survey	Average annual number of scientific co- productions per project
Mathematics	0	
Physics	0	
Marine/Earth/Planet Sciences	0	
Chemistry	5	2,1
Biology and Health	5	0,9
Humanities	2	2,0
Social Sciences	No response	
Engineering Sciences	1	0,5
Information Technology	5	1,7
Agronomy / Ecology	2	0,0
TOTAL	20	1,4

Overall average annual number of scientific coproductions per project : 1,4 vs 0,96 mean

55% of funded projects led to one scientific coproduction at least 9% of coproductions include at least 1 French PhD or PostDoc and 59% 1 Pakistani PhD or PostDoc The average annual rate of publication for French young researchers involved in the projects is 0,36 and 0,63 for Pakistani young researchers Each young French researcher involved in the publications has published 2,50 publication per year

Each young Pakistani researcher involved in the publications has published 2,06 publication per year

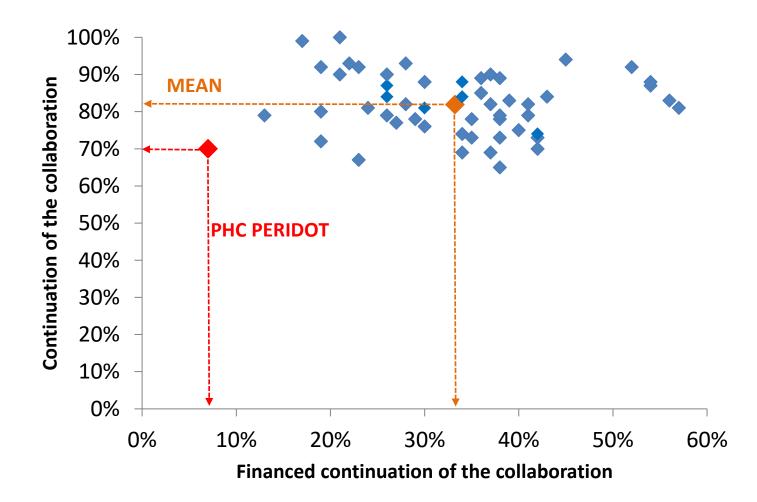
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WHAT HAPPENS AFTER A PHC PERIDOT PROJECT ?

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CONTINUATION OF THE COOPERATION 2015-2022 (1/6) (COMPARISON BETWEEN 54 DIFFERENT BILATERAL PROGRAMS) (DATA FROM THE SURVEY)



Continuation of the cooperation : 70% vs 82% mean Financed continuation of the cooperation : 7% vs 33% mean



CONTINUATION OF THE COOPERATION 2015-2022 (2/6) (DATA FROM THE SURVEY)

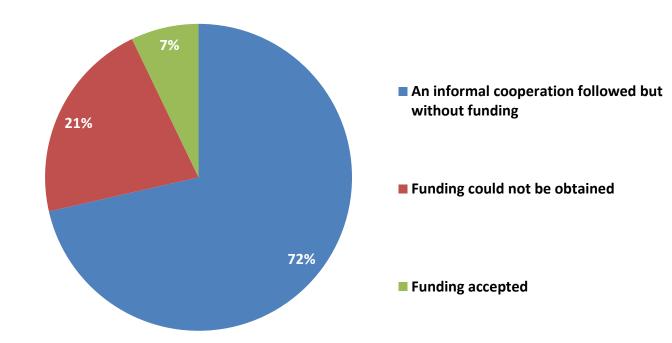
70% of the cooperations continued after the PHC PERIDOT project

Which activities?	
Scientific co-productions	79%
Cooperative research	64%
Researchers mobilities	29%
Joint participation to conferences	29%
Co-organisation of scientific events	21%
PhD mobilities	14%
Joint participation to PhD thesis	7%
Joint diplomas (Master, PhD)	7%
Cooperative European Project	7%
Other	7%



CONTINUATION OF THE COOPERATION 2015-2022 (3/6) (DATA FROM THE SURVEY)

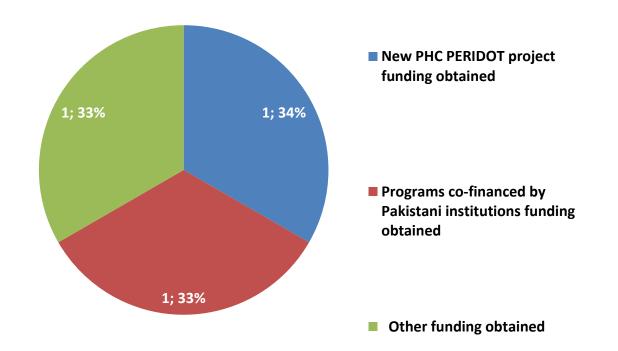
7% of cooperations have been funded following the project





CONTINUATION OF THE COOPERATION 2015-2022 (4/6) (DATA FROM THE SURVEY)

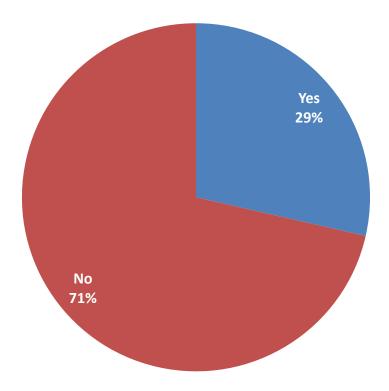
What kind of funded collaborations after the PHC PERIDOT project ?





CONTINUATION OF THE COOPERATION 2015-2022 (5/6) (DATA FROM THE SURVEY)

Has the French-Pakistani cooperation involved new partners?

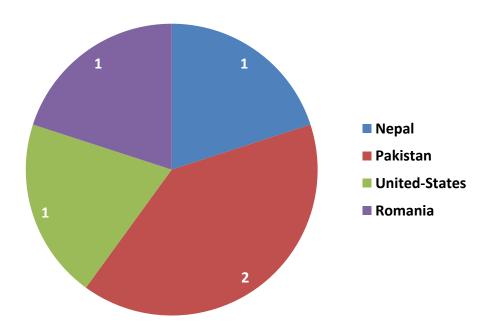


Data from 14 responses



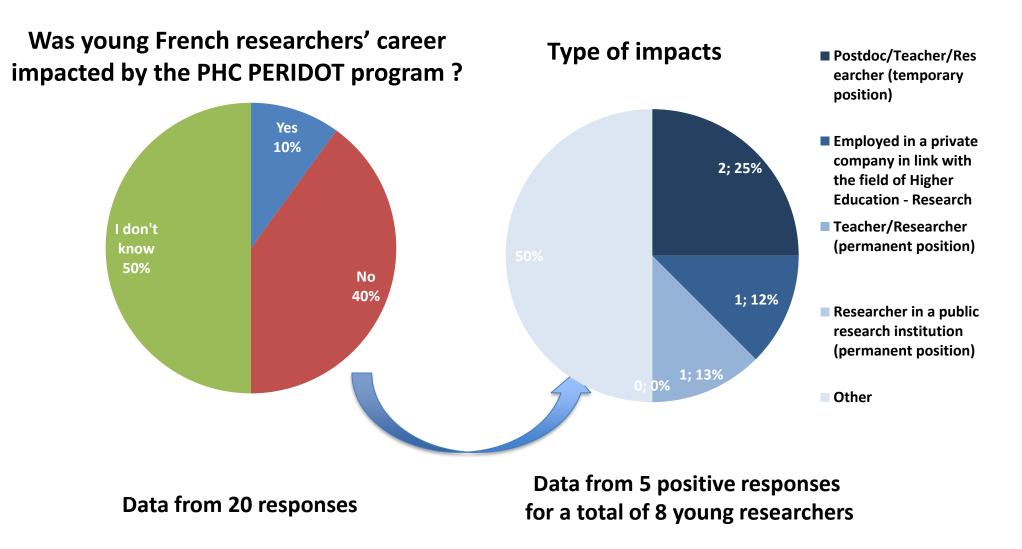
CONTINUATION OF THE COOPERATION 2015-2022 (6/6) (DATA FROM THE SURVEY)

If the French-Pakistani cooperation involves new partners, list with which countries



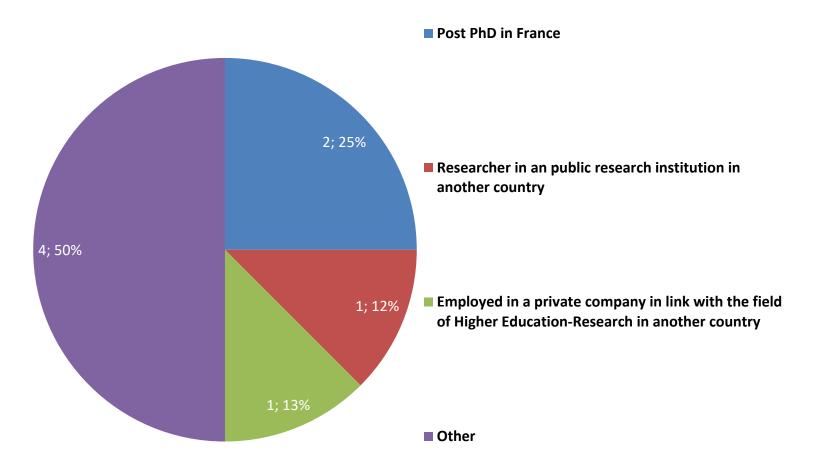


IMPACT ON YOUNG FRENCH RESEARCHERS' CAREER (2015-2022) (1/2) (DATA FROM THE SURVEY)





IMPACT ON YOUNG FRENCH RESEARCHERS' CAREER 2015-2022 (2/2) (DATA FROM THE SURVEY)



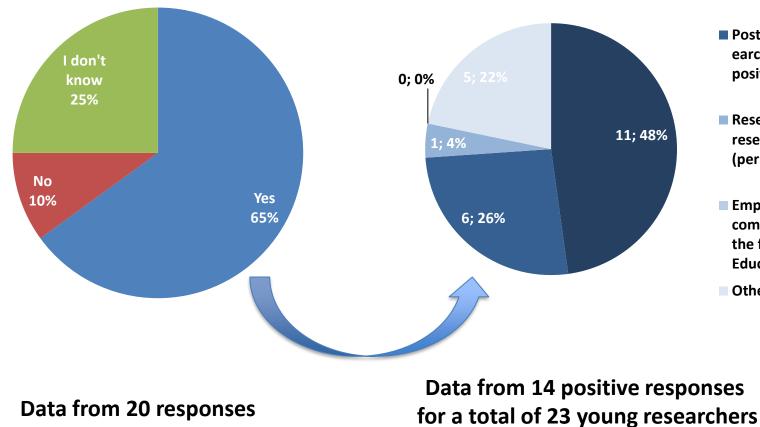
Data from 5 positive responses for a total of 8 young researchers



IMPACT ON YOUNG PAKISTANI RESEARCHERS' CAREER (2015-2022)(1/2)(DATA FROM THE SURVEY)

Type of impacts

Was young Pakistani researchers' career impacted by the PHC PERIDOT program ?



Teacher/Researcher (permanent position)

Postdoc/Teacher/Res earcher (temporary position)

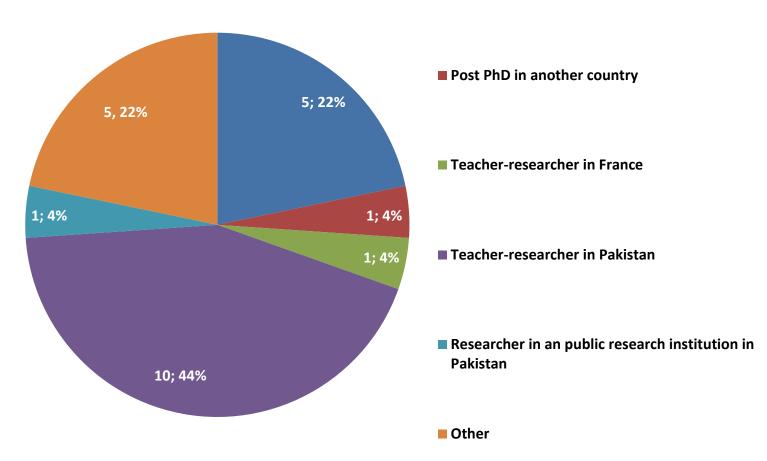
Researcher in a public research institution (permanent position)

Employed in a private company in link with the field of Higher **Education - Research**

Other



IMPACT ON YOUNG PAKISTANI RESEARCHERS' CAREER 2015-2022 (2/2) (DATA FROM THE SURVEY)



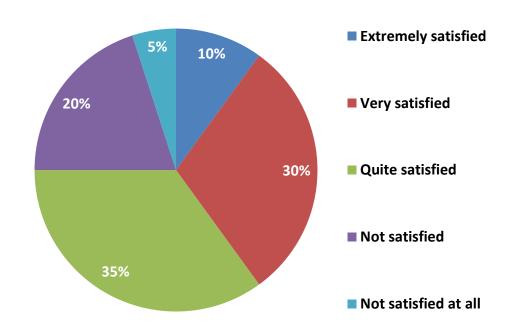
Post PhD in Pakistan

Data from 14 positive responses for a total of 23 young researchers



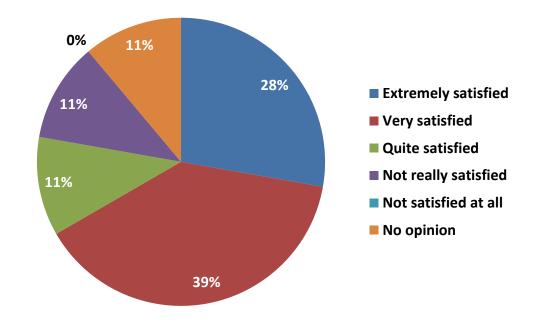
GENERAL OPINION OF FRENCH PIS ON THE PROGRAM 2015-2022 (DATA FROM THE SURVEY)

75% of French principal investigators are satisfied



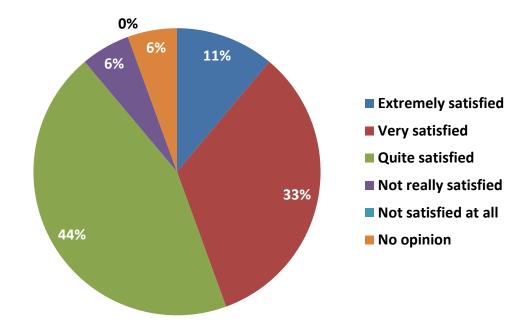
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OPINION OF FRENCH PIS ABOUT FRENCH EMBASSY HELP 2015-2022 (DATA FROM THE SURVEY)



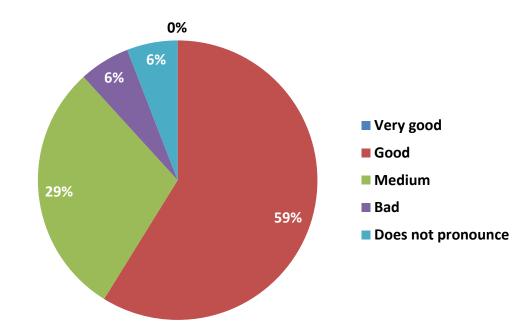
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OPINION OF FRENCH PIS ABOUT ADMINISTRATIVE MANAGEMENT 2015-2022 (DATA FROM THE SURVEY)





OPINION OF FRENCH PIS ABOUT UNDERSTANDING THE ROLE OF THE DIFFERENT FRENCH ACTORS IN THE PROGRAM 2015-2022 (DATA FROM THE SURVEY)





GENERAL OPINION OF FRENCH PIS ON THE PROGRAM 2015-2022 POSITIVE COMMENTS



Strengths of this program	Number of occurencies (out of 89)	% of funded projects
Fostering an international research cooperation	14	70%
Simplicity of the project application process	11	55%
Fostering researchers' mobility	11	55%
Fostering the training of the young researchers	11	55%
Fostering exchanges enabling scientific production	8	40%
Helping to know the partner country	6	30%
Sufficient financial means for the mobility costs	5	25%
Sufficiently long duration of the projects	4	20%
Easy implementation (administrative flexibility)	4	20%
Good scientific-added value on financial investment	3	15%
Sufficient amount of mobility time given to collaborate	3	15%
Financial autonomy towards your institution	3	15%
Transparency of the selection process	2	10%
Timetable for implementation	2	10%
Helpful to initiate other fundraising	1	5%
Flexibility of the program for actions co-financed with the Pakistani partner	0	0%
Other	1	5%
Total number of occurencies	89	



GENERAL OPINION OF FRENCH PIS ON THE PROGRAM 2015-2022 NEGATIVE COMMENTS



Weaknesses of this program	Number of occurencies (out of 68)	% of funded projects
Insufficient financial means to cover a project	10	50%
Difficult to continue the cooperation	7	35%
Heaviness of the process of applications	6	30%
Insufficient communication on the evaluation's results	5	25%
Administrative heaviness of the missions management	5	25%
Lack of transparency in the selection process	4	20%
Financial means insufficient for the expenditure of mobility (transport)	4	20%
Financial means insufficient for the expenditure of mobility (per diem)	4	20%
Length of support too short	4	20%
Too short duration of mobilities	4	20%
Timetable for implementation	4	20%
Financial autonomy towards your institution	3	15%
Too low number of mobilities	2	10%
Flexibility of the program for actions co-financed with the partner	0	0%
Too long duration of mobilities	0	0%
Other	6	30%
Total number of occurencies	68	

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PRELIMINARY CONCLUSIONS

Preliminary conclusions suggest that the funding scheme has efficiently contributed to create (or to maintain) fruitful and long-term cooperation.

Implication of young researchers candidates (21%) close to the general mean (23%) Ratio of women laureates (38%) better than the general mean (25%) 70% of funded projects with the participation of at least one pakistani young researcher Average annual scientific coproductions per project better than the average of the other programs (1,4 vs 0,96)

Correct rate of annual average publications for young researchers involved in the scientific coproductions (French young researchers : 2,50 ; Pakistani young researchers : 2,06)

Decrease in the number of applications over the last years Only 55% of new cooperations 100% of the cooperations with the same previous pakistani partner Only 30% of the projects involve a french young researcher Only 14% of french young researchers involved in the scientific coproductions 45% of the projects with no scientific coproduction Rather low implication of young researchers in the mobilities Continuation of the cooperation (70%) below the general mean (82%) with only 7% with new fundings versus 33% for the general mean





PRELIMINARY RECOMMANDATIONS

- > Act to increase the number of applications
- Encourage new cooperations
- > Favor the participation of french young researchers to the applications
- Increase the number of selected projects leading to a scientific coproduction
- Increase the association of young researchers to the scientific coproductions
- Promote outgoing mobilities of french young researchers (only 28% of the outgoing mobilities) and incoming mobilities for romanian young researchers (only 37% of the incoming mobilities

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French national ministries (MESR / MEAE) will provide a complete analysis of the survey. It will be sent to the recipients of the funding who participated in this survey and attendants to this symposium.

CONTACTS

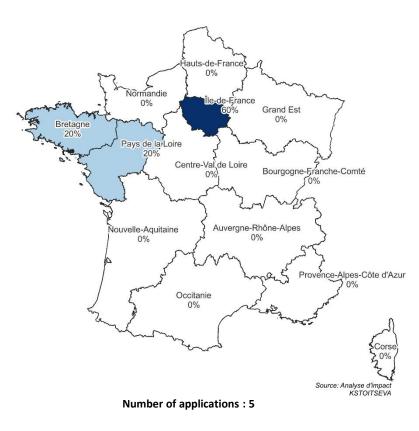
christophe.delacourt@recherche.gouv.fr <u>robert.gardette@recherche.gouv.fr</u> <u>kristiana.stoitseva@recherche.gouv.fr</u> <u>benoit.talleu@recherche.gouv.fr</u> MINISTÈRE CHARGÉ DE L'ENSEIGNEMENT SUPÉRIEUR ET DE LA RECHERCHE Liberté Égalité

Fraternité

ANNEX 1 REGIONALISATION AND SCIENTIFIC DOMAINS (CARTOGRAPHIES)



PHC PERIDOT Regional percentages of applications and selections *Mathematics* 2015-2022

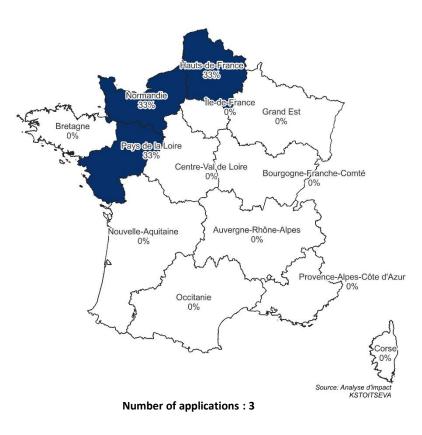




Three regions are concerned for applications with Ile-de-France ahead. No project selected



PHC PERIDOT Regional percentages of applications and selections *Physics* 2015-2022

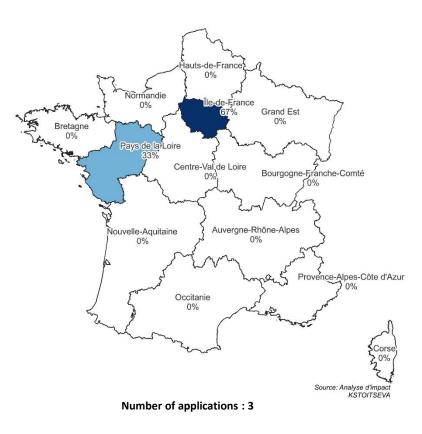




Three regions are concerned for applications. No project selected



PHC PERIDOT Regional percentages of applications and selections *Marine, Earth, Planet Sciences* 2015-2022

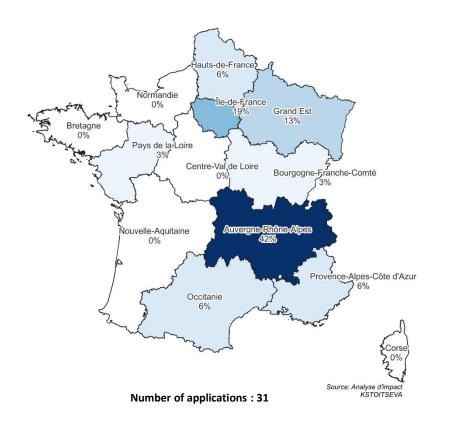


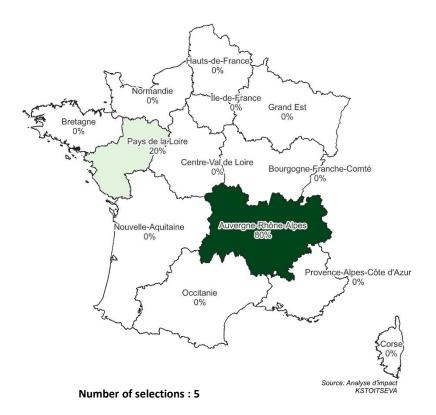


Two regions are concerned for applications. No project selected



PHC PERIDOT Regional percentages of applications and selections *Chemistry* 2015-2022

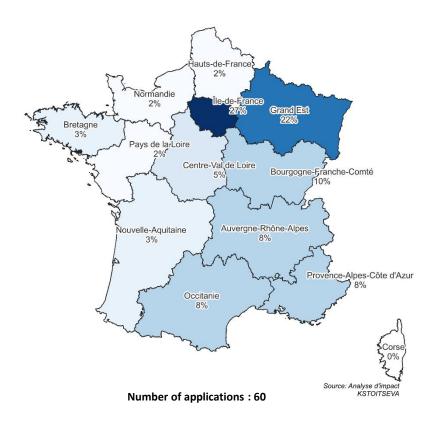


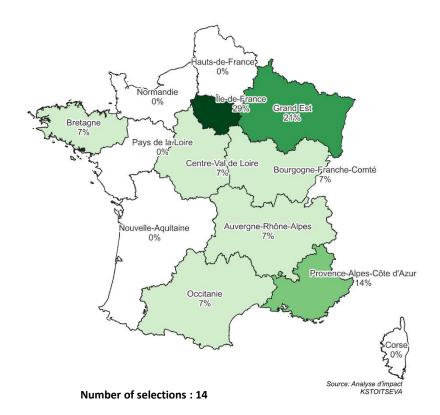


Eight regions are concerned for applications with Auvergne-Rhône-Alpes ahead. Only two regions benefit selections with Auvergne-Rhône-Alpes still ahead



PHC PERIDOT Regional percentages of applications and selections Biology and Health 2015-2022

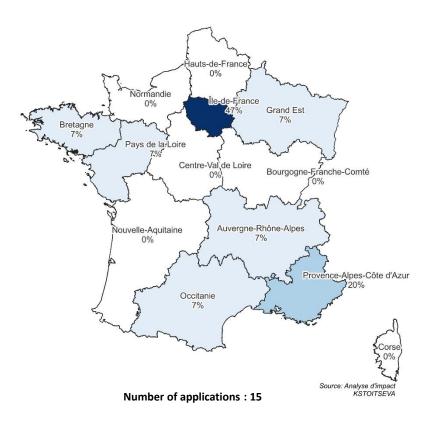


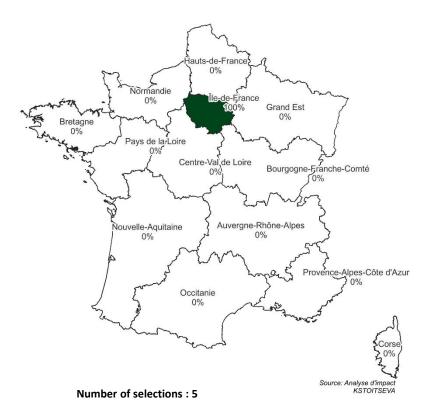


Twelve regions are concerned for applications with Ile-de-France ahead but only eight benefit selections (with Ile-de-France still ahead)



PHC PERIDOT Regional percentages of applications and selections *Humanities* 2015-2022

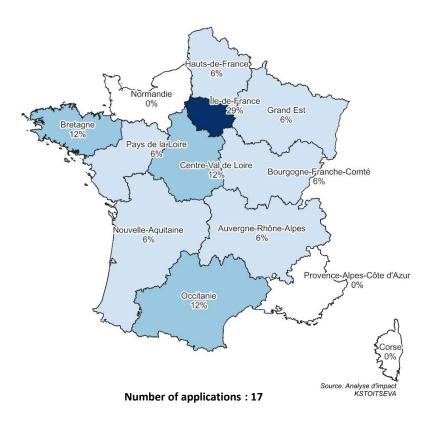


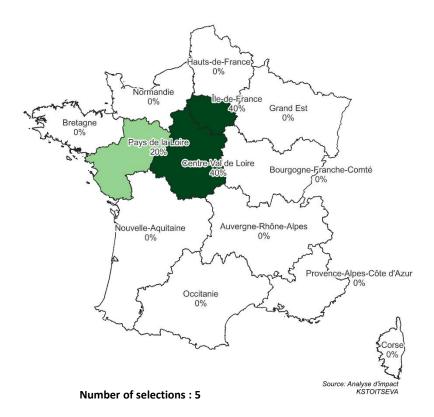


Seven regions are concerned for applications with Ile-de-France ahead but only Ile-de-France benefits selections



PHC PERIDOT Regional percentages of applications and selections Social Sciences 2015-2022

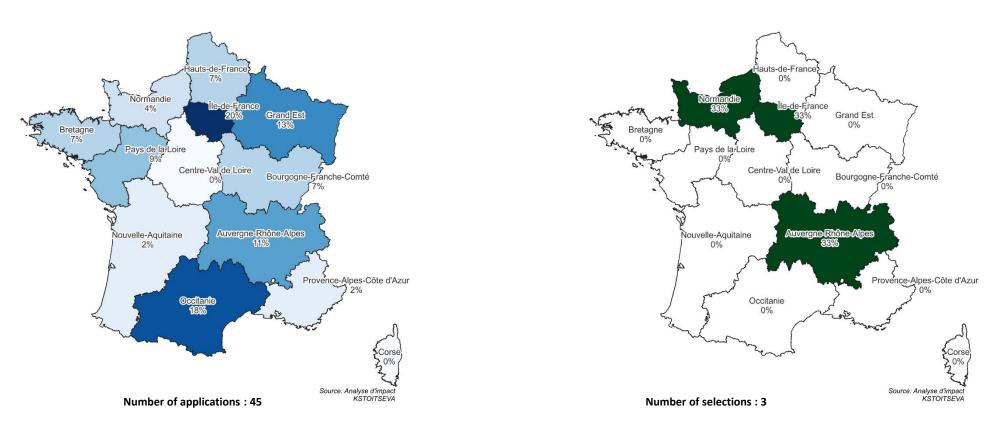




Ten regions are concerned for applications with Ile-de-France ahead but only three benefit selections



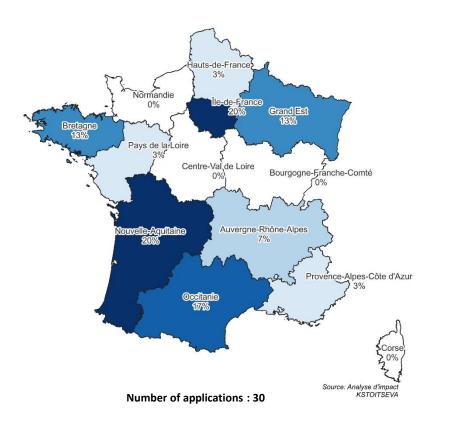
PHC PERIDOT Regional percentages of applications and selections *Engineering Sciences* 2015-2022

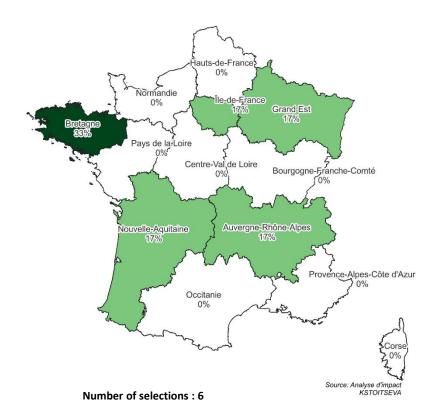


Eleven regions are concerned for applications with Ile-de-France ahead. Only three regions benefit selections



PHC PERIDOT Regional percentages of applications and selections Information technology 2015-2022

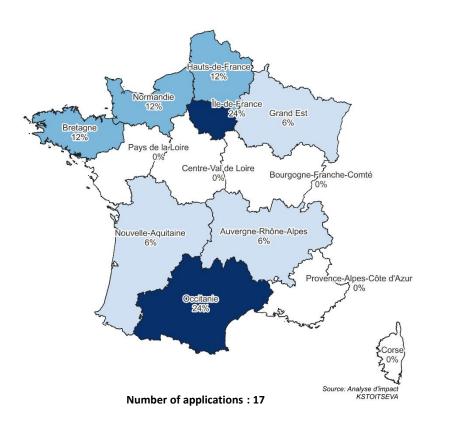


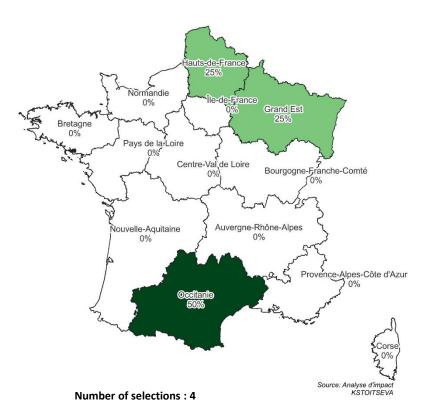


Nine regions are concerned for applications with Ile-de-France and Nouvelle-Aquitaine ahead. Only five benefit selections (with Bretagne ahead)



PHC PERIDOT Regional percentages of applications and selections Agronomy/Ecology 2015-2022





Eight regions are concerned for selections with Ile-de-France and Occitanie ahead. Only three benefit selections (with Occitanie ahead)