

**FRANCE – BELGIQUE
PHC TOURNESOL
Scientific impact of the program (2005-2018)**

MESRI-DAEI / MEAE

2019

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

GENERAL PRESENTATION OF THE PROGRAMME

Creation : 1985

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

Two PHC in BE : with Fédération Wallonie Bruxelles (FWB) and with Flemish

Total budget 2019-2020 (France + Belgium) : around 92 000 € /year

- **FWB :** 26 000 € FR + 26 000 € FRS FNRS
- **Flemish :** 20 000 € FR + 20 000 € FWO

GENERAL PRESENTATION OF THE PROGRAMME

From 2005 to 2018 (*14 calls for offer*) :

1 054 applications submitted
(*~75 projects submitted every years*)

402 projects funded

FWB

762 applications submitted
260 projects funded

FL

292 applications submitted
142 projects funded

DATA SOURCES

Campus France (2005-2018)

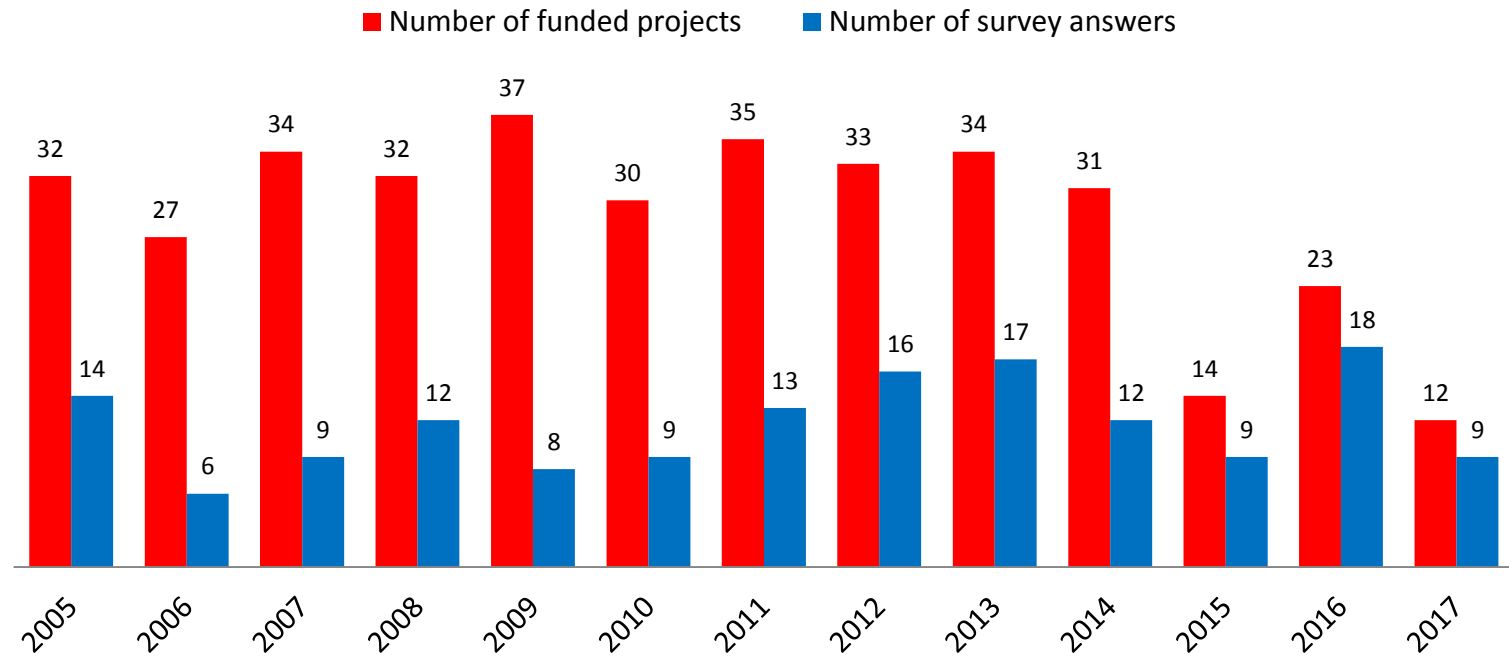
- Information about the PHC Tournesol applications
- List of mobilities (from France to Belgium)

Survey (2005-2017)

- **Target** : French Principal Investigators of selected projects (2005-2018)
- Survey **duration** : from March to April 2019
- **Response ratio** : **41%** (FR + FL)
 - **FL** : **37%** (*47 respondents for 126 funded projects*)
 - **FWB** : **42%** (*105 respondents for 248 funded projects*)

ANSWERS TO THE SURVEY

Average response rate to the survey : **41 % (152 answers)**

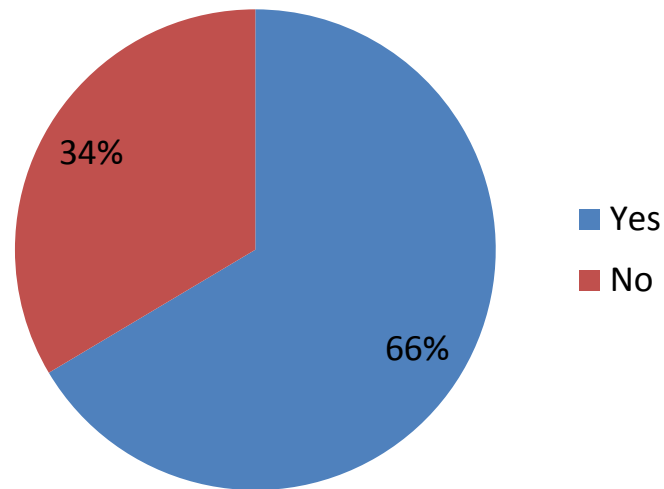


2005-2018

Key Points

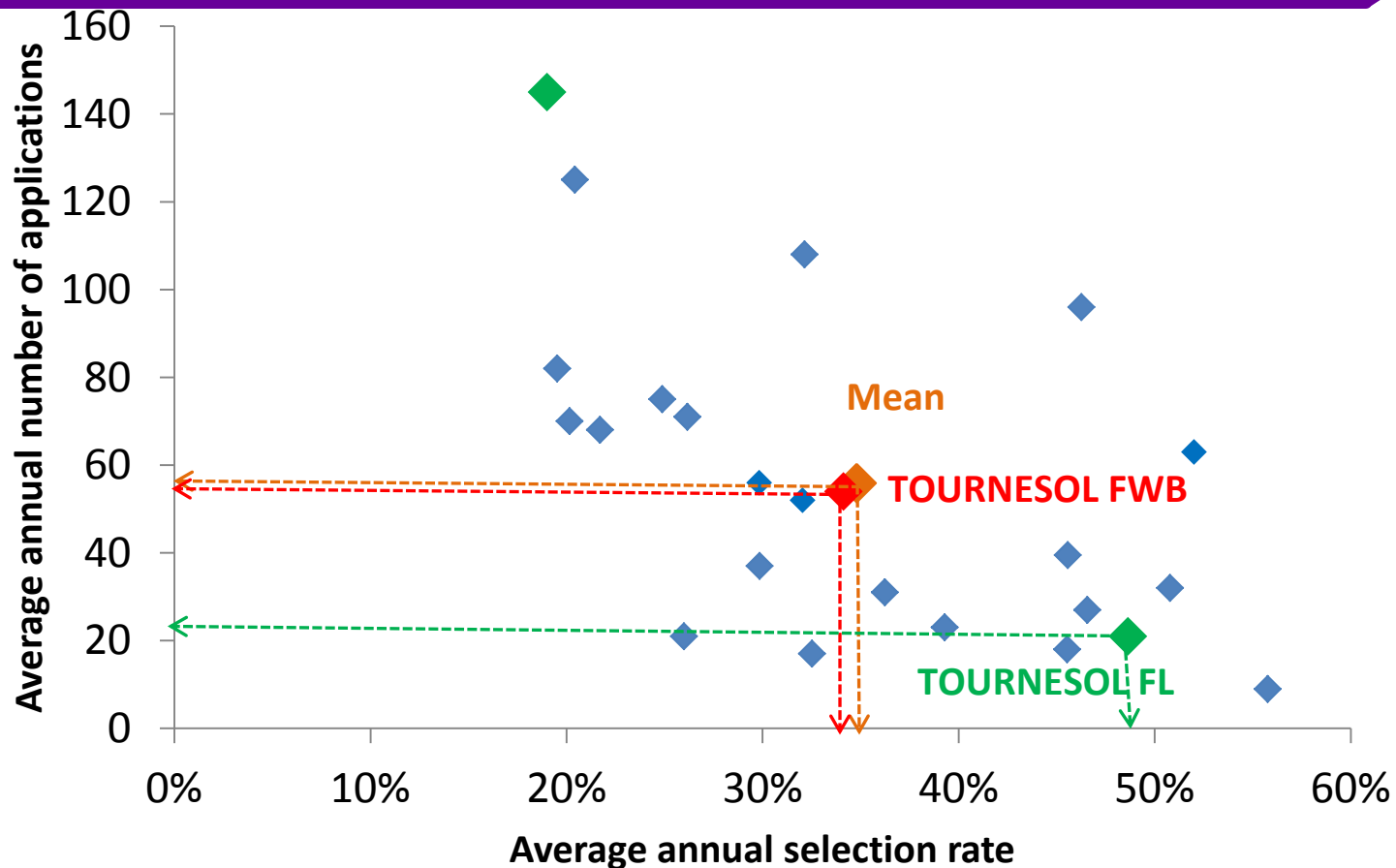
BEFORE THE PHC TOURNESOL PROJECT

Did you already cooperate with the belgium partner in the past ? (FWB + FL)



32% FWB ; 36% FL

NUMBER OF APPLICATIONS VS SELECTION RATE (COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMS)

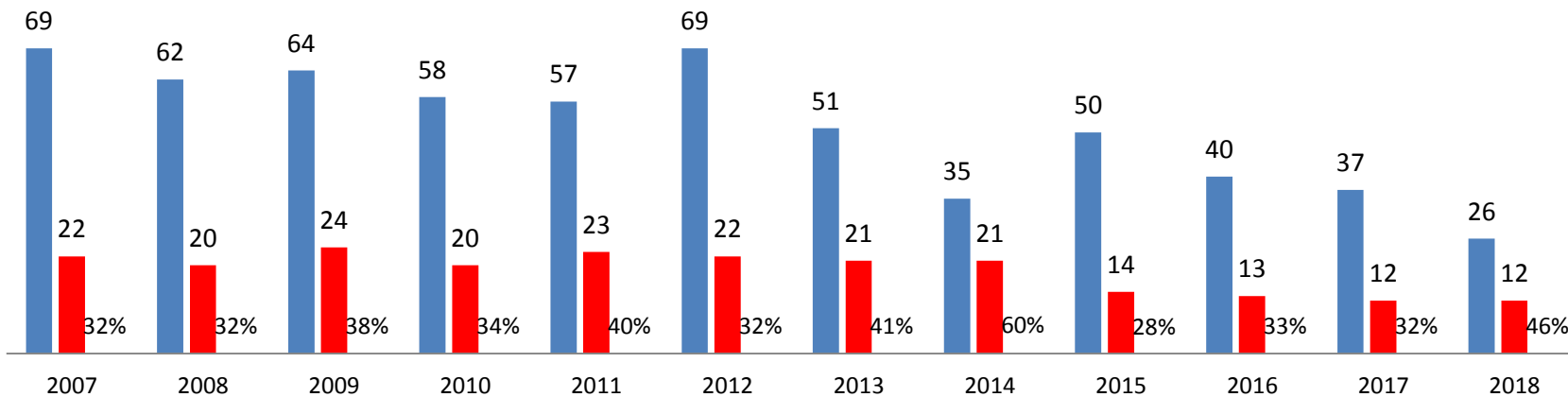


Average selection rate for 2005-2018 : 49% FL ; 34% FWB vs 35% mean
Average number of applications 2005-2018 : 21 FL ; 54 FWB vs 56 mean

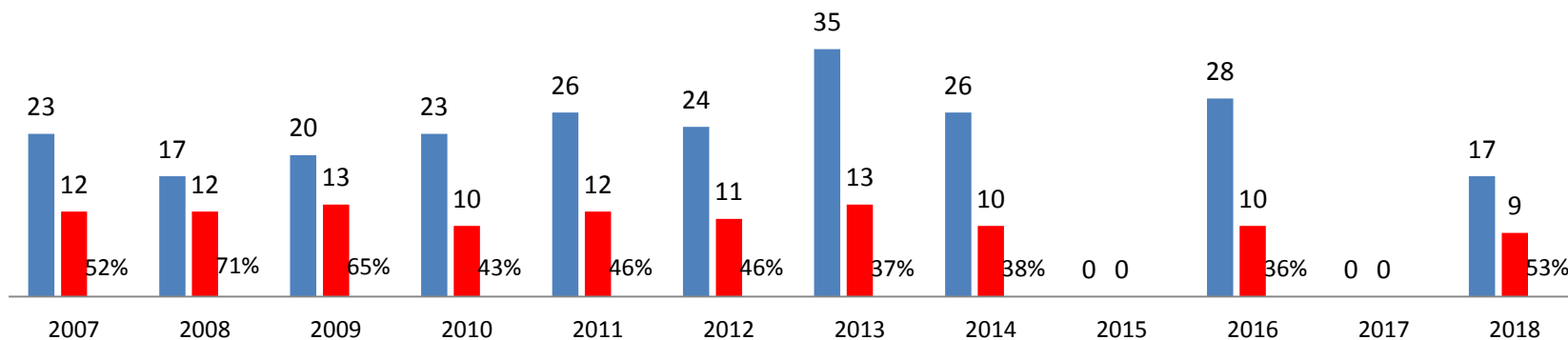
NUMBER OF APPLICATIONS AND SELECTION RATE

■ Nombre de candidatures ■ Nombre de dossiers sélectionnés Taux de sélection

FWB



FL

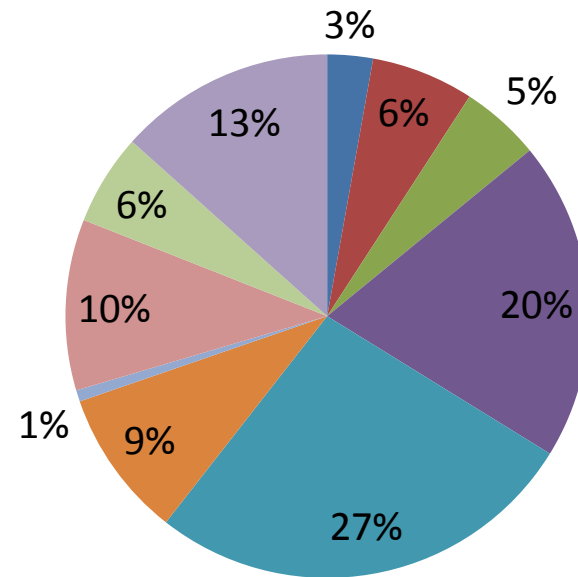
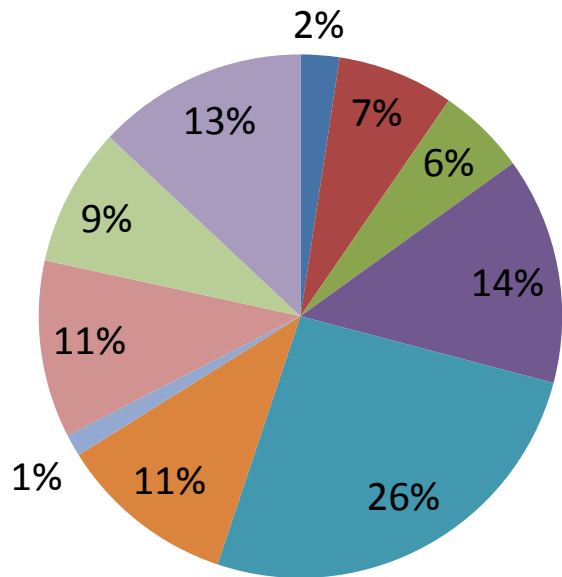


SCIENTIFIC DOMAINS OF PROJECTS

FR - FLEMISH

Number of applications : **292**

Number of funded projects : **142**



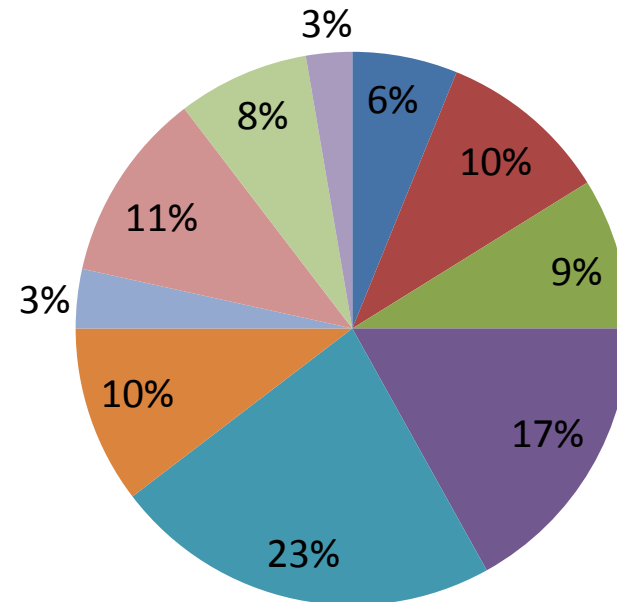
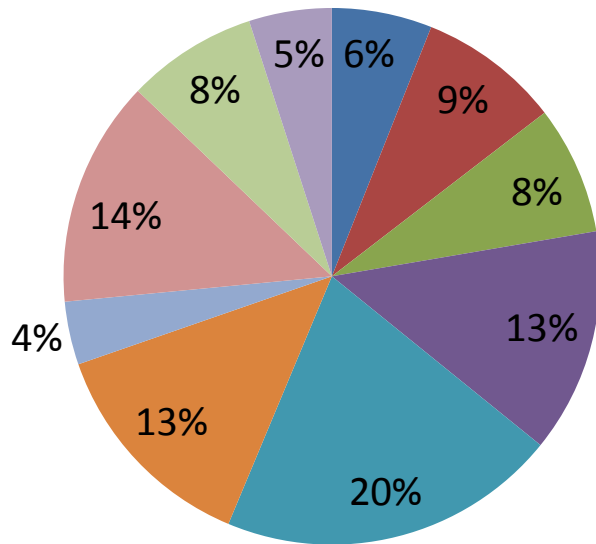
- Mathematics
- Physics
- Marine/Earth/Planet Sciences
- Chemistry
- Biology and Health
- Humanities
- Social Sciences
- Engineering Sciences
- Information Technology
- Agronomy/Ecology

SCIENTIFIC DOMAINS OF PROJECTS

FWB

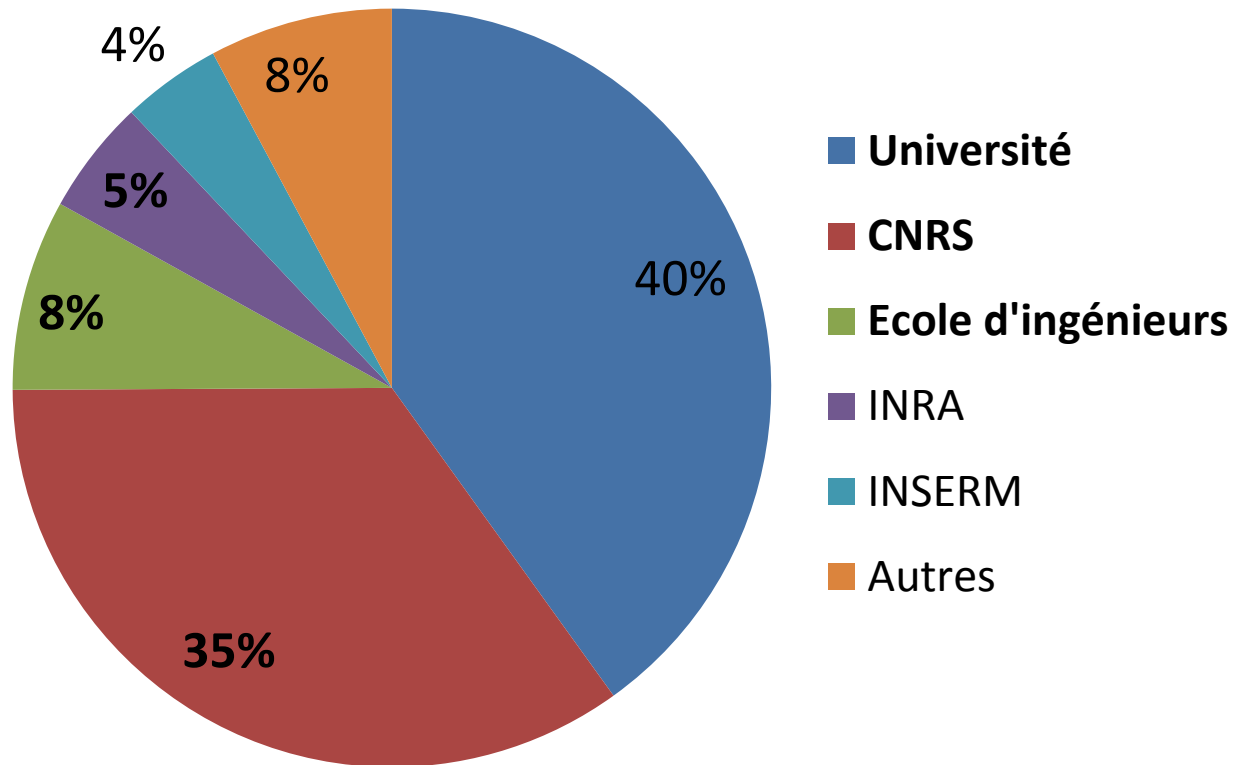
Number of applications : **762**

Number of funded projects : **260**

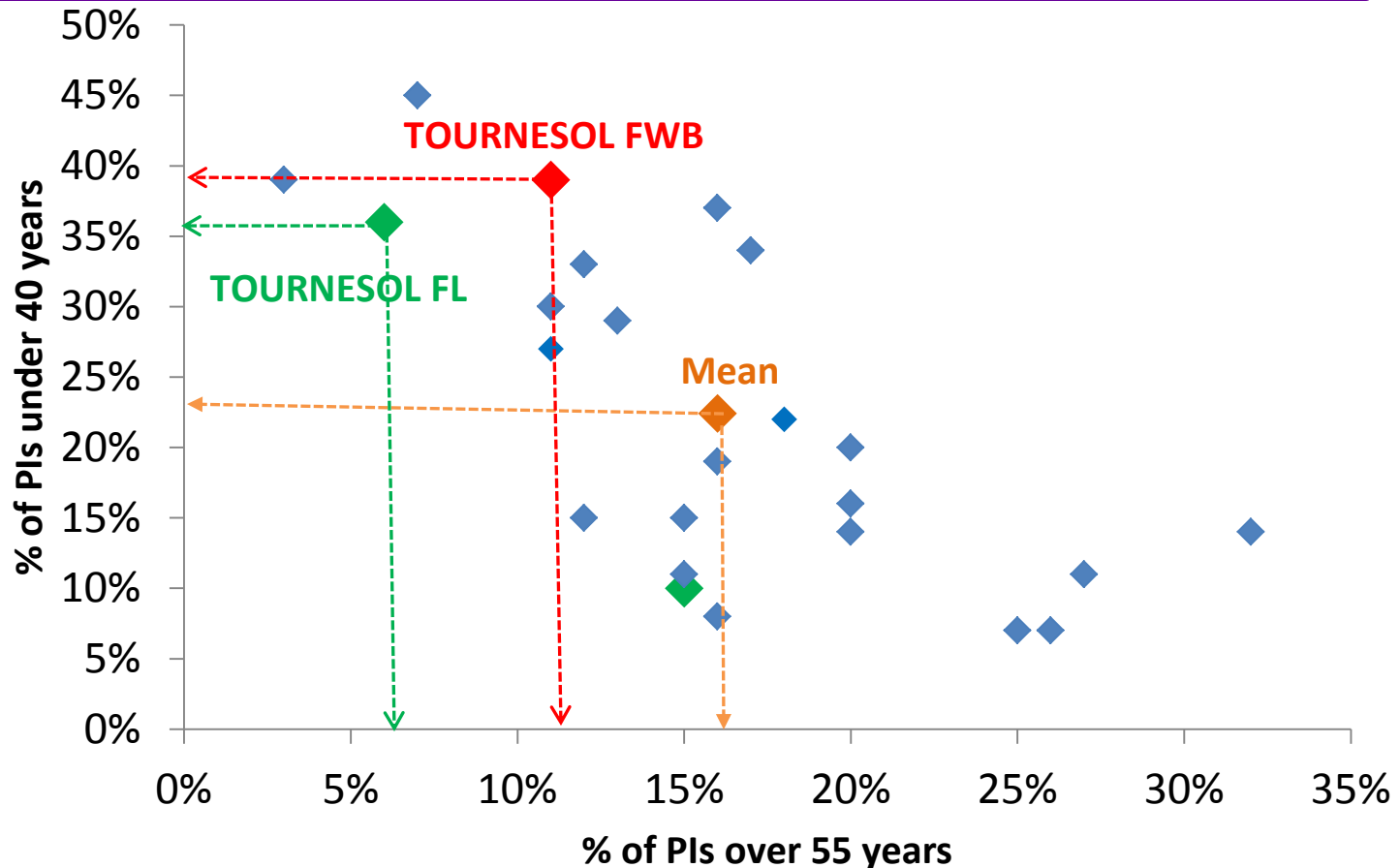


- | | |
|--------------------------------|------------------------|
| ■ Mathematics | ■ Physics |
| ■ Marine/Earth/Planet Sciences | ■ Chemistry |
| ■ Biology and Health | ■ Humanities |
| ■ Social Sciences | ■ Engineering Sciences |
| ■ Information Technology | ■ Agronomy/Ecology |

FRENCH PARTICIPATING INSTITUTIONS



AGE OF PRINCIPAL INVESTIGATORS (PI) (COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMS)



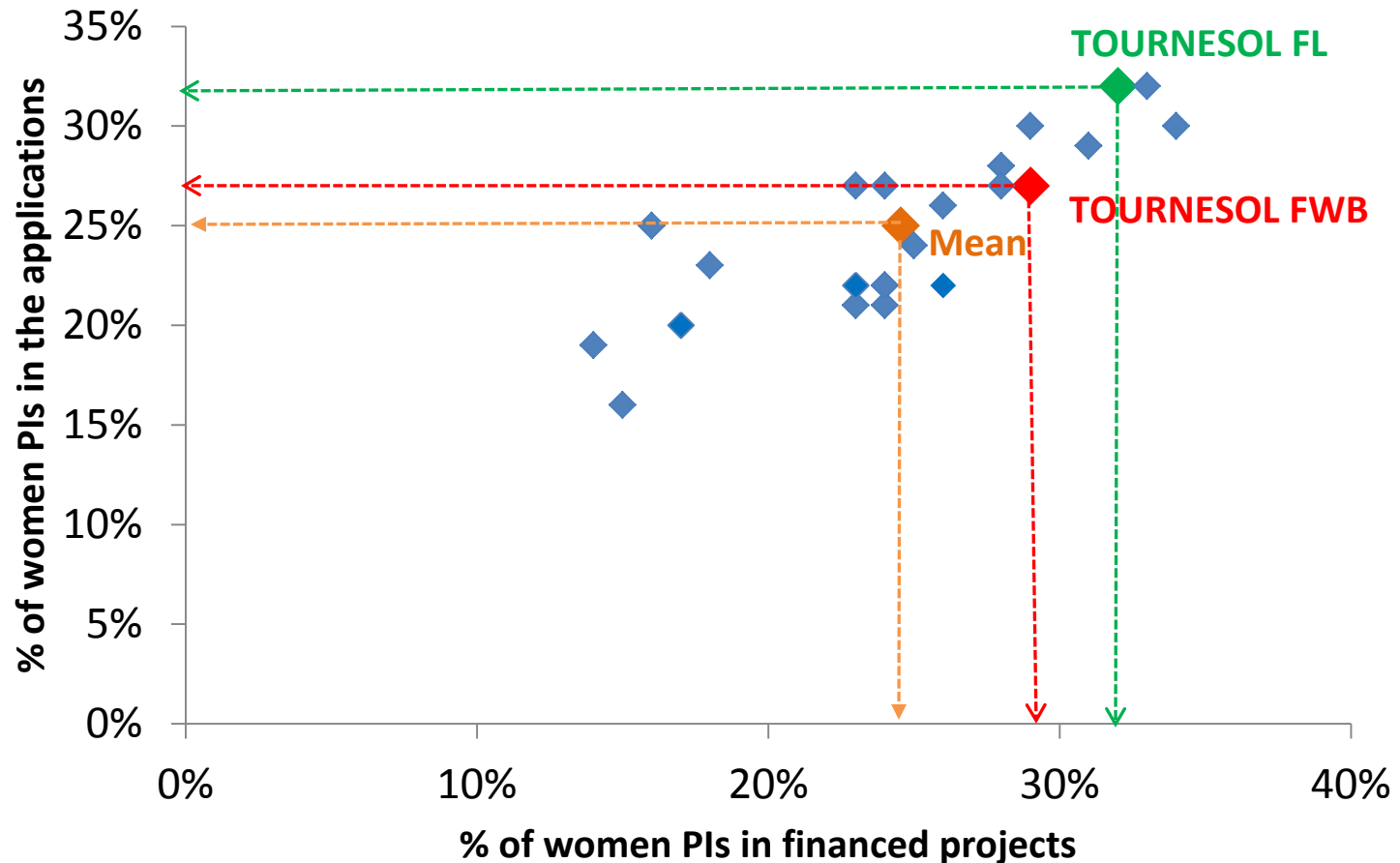
PIs under 40 years : 36% FL ; 39% FWB vs 22% mean

PIs over 55 years : 6% FL ; 11% FWB vs 16% mean

58% FL ; 50% FR of the PIs are between 40 and 55 years

IMPLICATION OF WOMEN

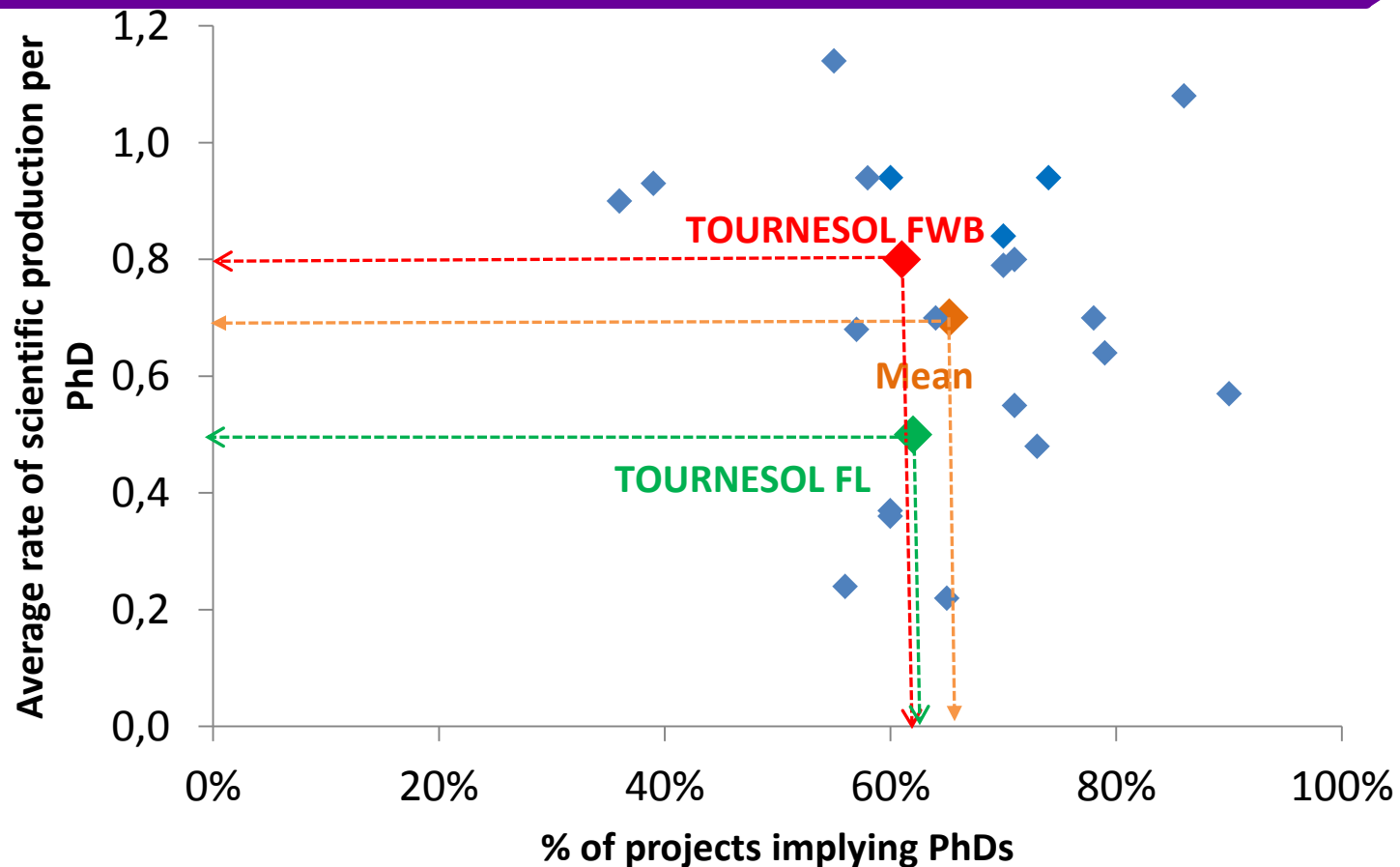
(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMS)



% of women PIs in the applications : 32% FL ; 27% FWB vs 25% mean
% of women PIs in the selected projects : 32% FL ; 29% FWB vs 25% mean

IMPLICATION OF PhDs

(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMS)

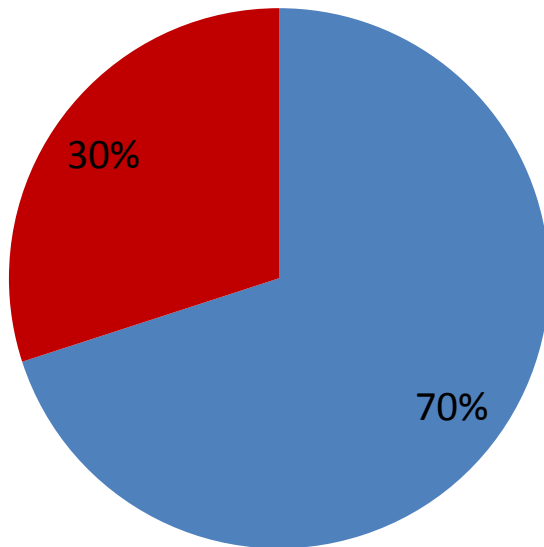


% of projects implying PhDs : 62% FL ; 61% FWB vs 65% mean
Average rate of scientific production per PhD : 0,5 FL ; 0,8 FWB vs 0,7 mean

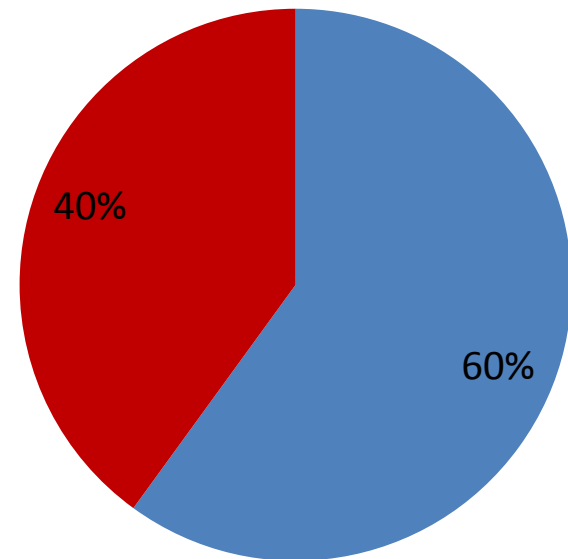
Mobility

MOBILITY : GENDER DISTRIBUTION

France → FWB



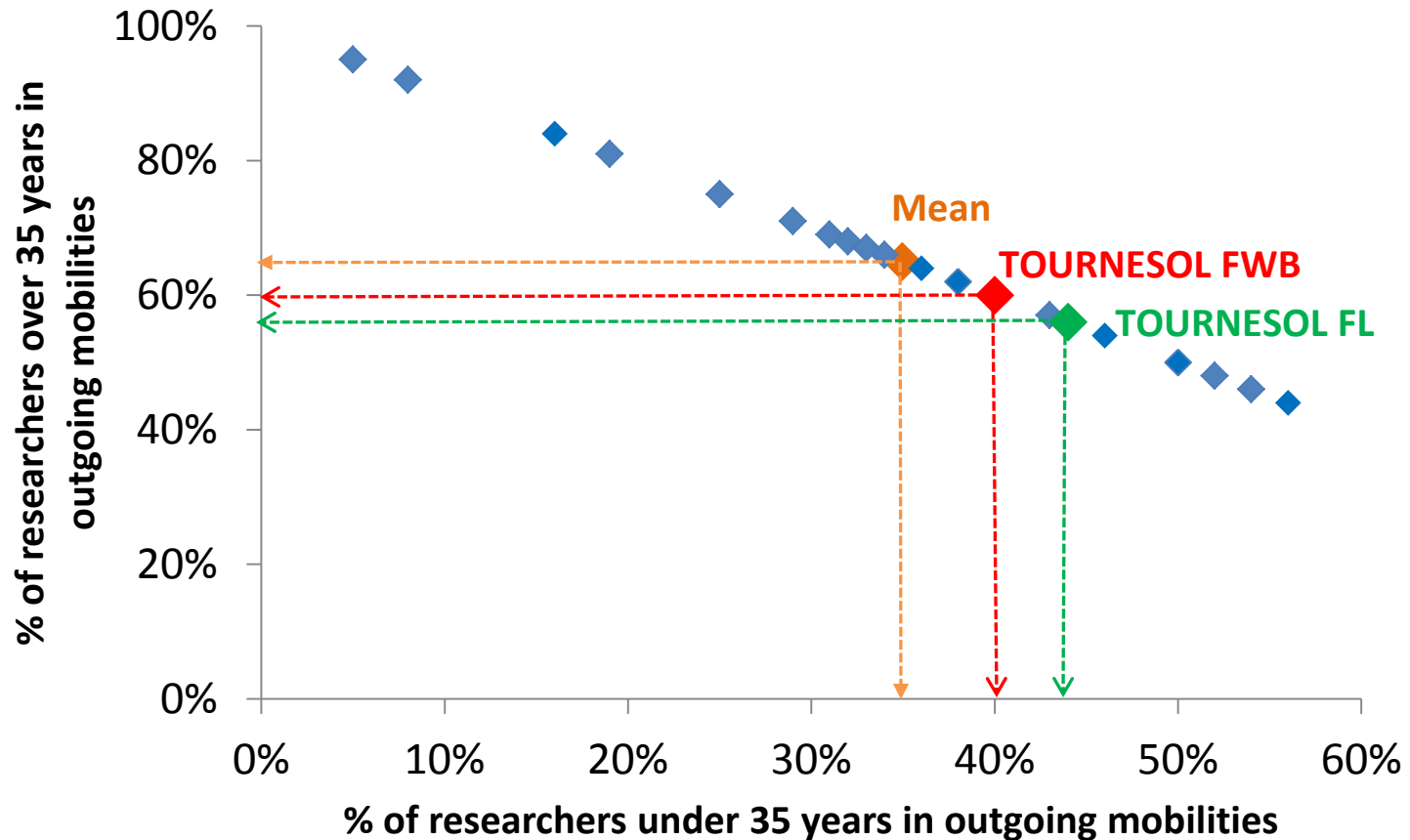
France → Flemish institutions



■ Men ■ Women

MOBILITY FRANCE BELGIQUE

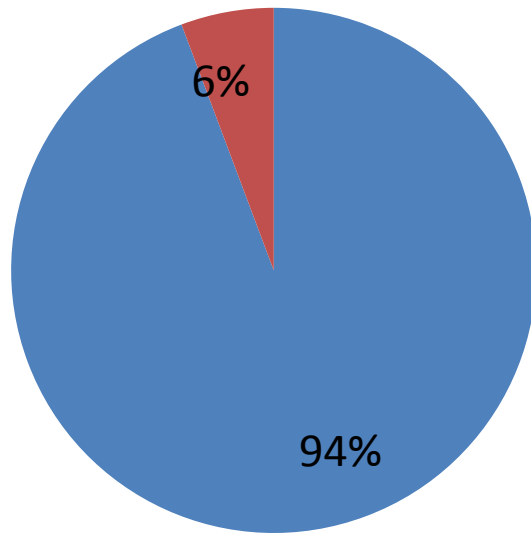
(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMS)



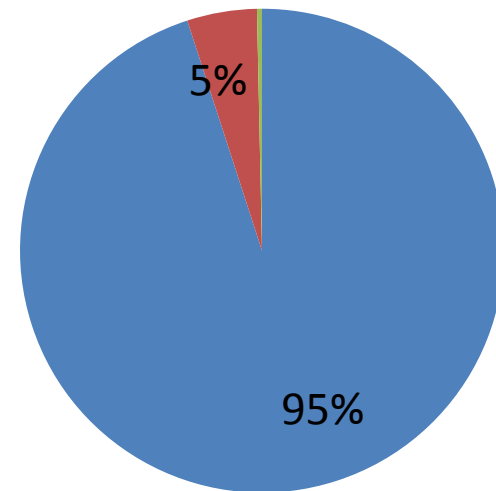
% of french young researchers in outgoing mobilities : 44% FL ; 40% FR vs 35% mean

MOBILITY : DURATION

France → FWB



France → Flemish institutions



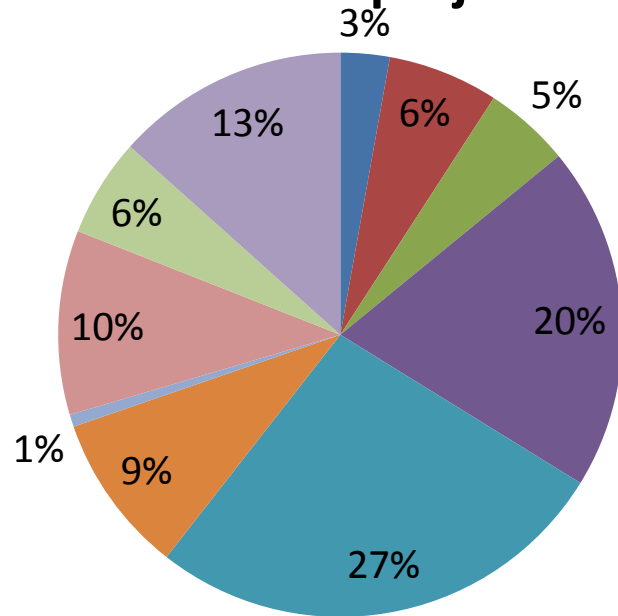
- < 15 days
- between 15 days and 3 months
- > 3 months

Scientific production

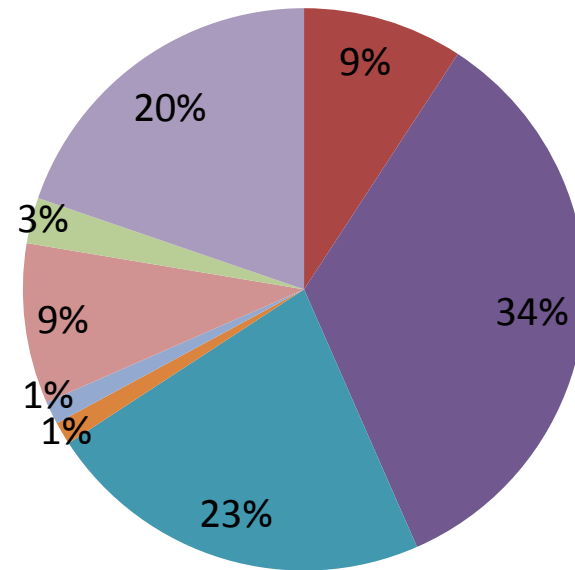
SCIENTIFIC OUTPUT

FR – FLEMISH (1/2)

Number of funded projects : **142**



Percentage of copublications



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

SCIENTIFIC OUTPUT

FR – FLEMISH (2/2)

Data from 47 funded projects

	Number of financed projects in the survey	Average number of co-publications per project
Mathematics	0	0
Physics	2	3,5
Marine / Earth / Planet Sciences	1	0
Chemistry	13	2
Biology and Health	12	1,4
Humanities	2	0,5
Social Sciences	1	1,0
Engineering Sciences	6	1,2
Information Technology	2	1
Agronomy / Ecology	8	1,9
TOTAL	47	1,6

Overall average annual number of copublications per project : **0,8 vs 0,9 mean**

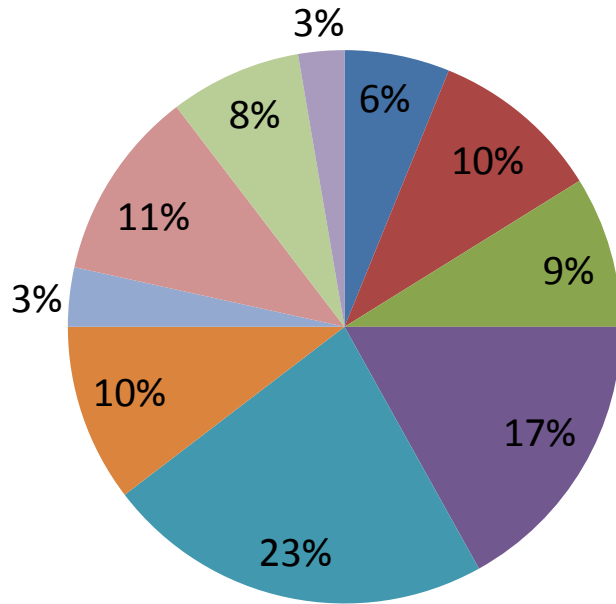
77% of funded projects led to one scientific production at least

28% of scientific productions include at least 1 PhD or PostDoc

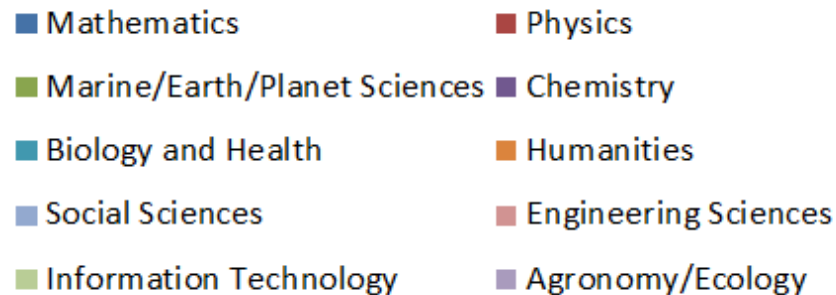
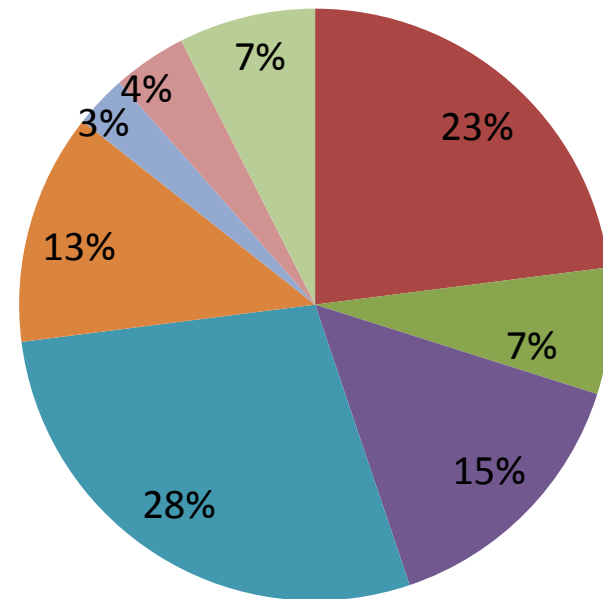
SCIENTIFIC OUTPUT

FR – FWB (1/2)

Number of funded projects : **260**



Percentage of copublications



SCIENTIFIC OUTPUT

FR – FWB (2/2)

Data from 96 funded projects

	Number of financed projects in the survey	Average number of co-publications per project
Mathematics	6	0
Physics	15	2,7
Marine / Earth / Planet Sciences	12	1
Chemistry	16	1,8
Biology and Health	28	1,8
Humanities	9	2,4
Social Sciences	3	2,5
Engineering Sciences	10	0,8
Information Technology	6	2,2
Agronomy / Ecology	0	0
TOTAL	105	1,7

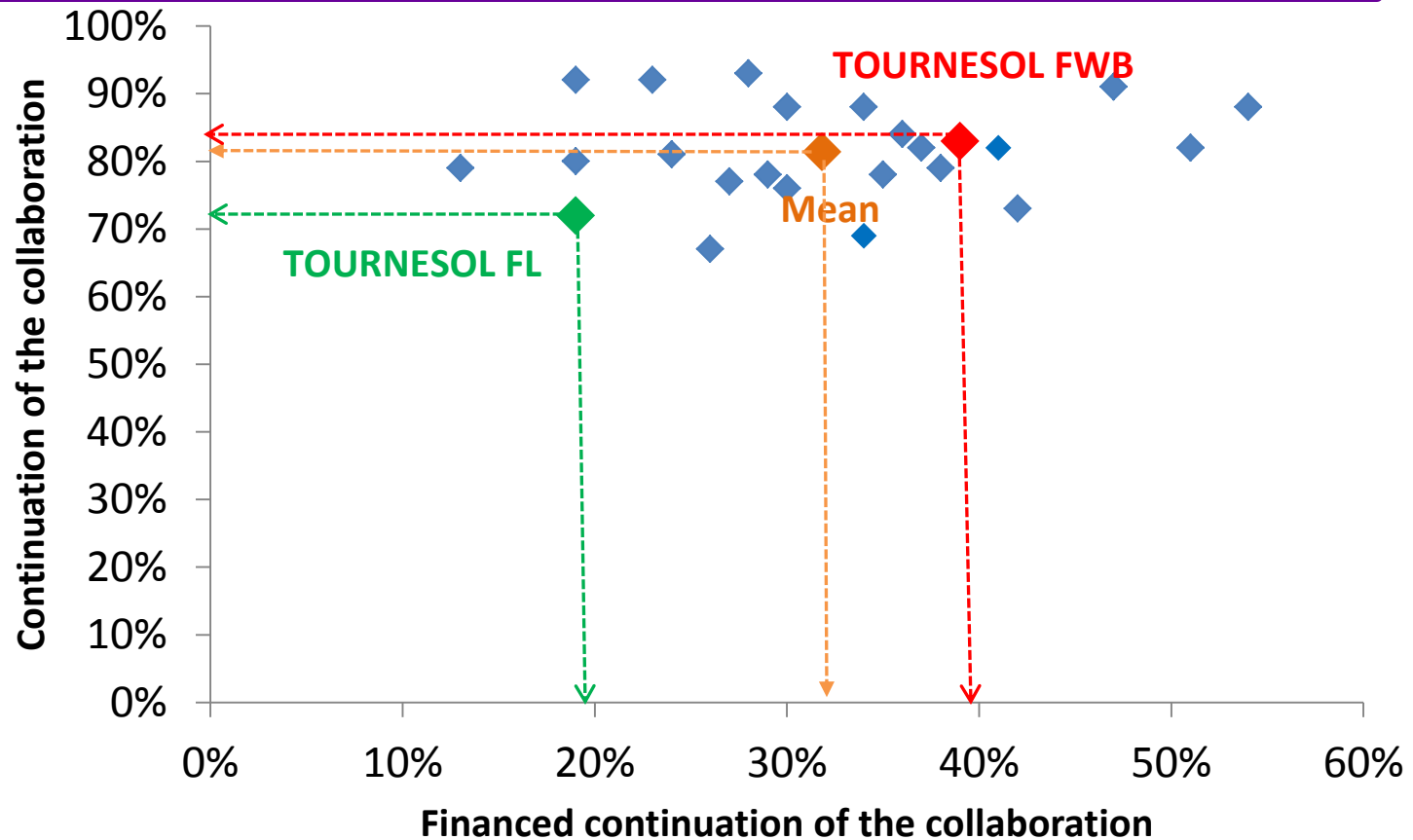
Overall average annual number of copublications per projets : 0,9 vs 0,9 mean

63% of funded projects led to one scientific production at least

42% of scientific productions include at least 1 PhD or PostDoc

After the project

CONTINUATION OF THE COLLABORATION (1/3) (COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMS)



Continuation of the collaboration : **72% FL ; 83% FWB vs 81% mean**

Continuation of the collaboration with other sources of subvention : **19% FL ; 39% FWB vs 32% mean**

CONTINUATION OF THE COLLABORATION (2/3)

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

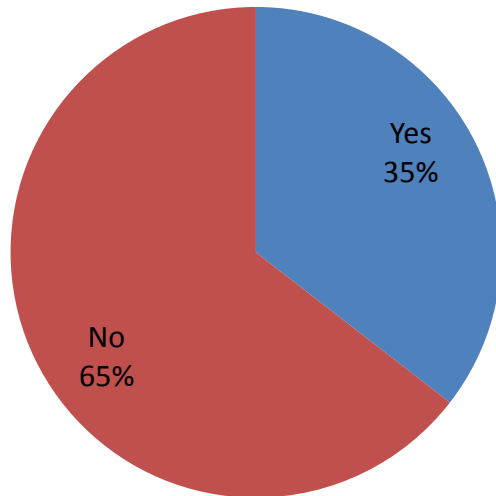
2 “autre” pour la FWB

- **réseau ImmunoComplexiT (label RNSC)**
- **GDR au CNRS de Topologie Algébrique**

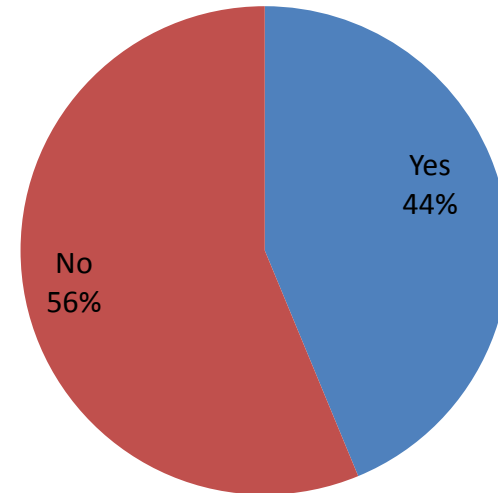
0 pour FL

CONTINUATION OF THE COLLABORATION (3/3)

Has the FR – FL collaboration involved new partners?



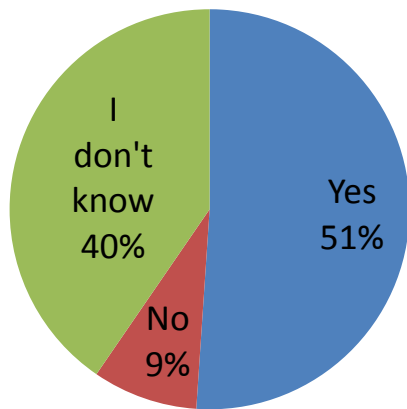
Has the FR – FWB collaboration involved new partners?



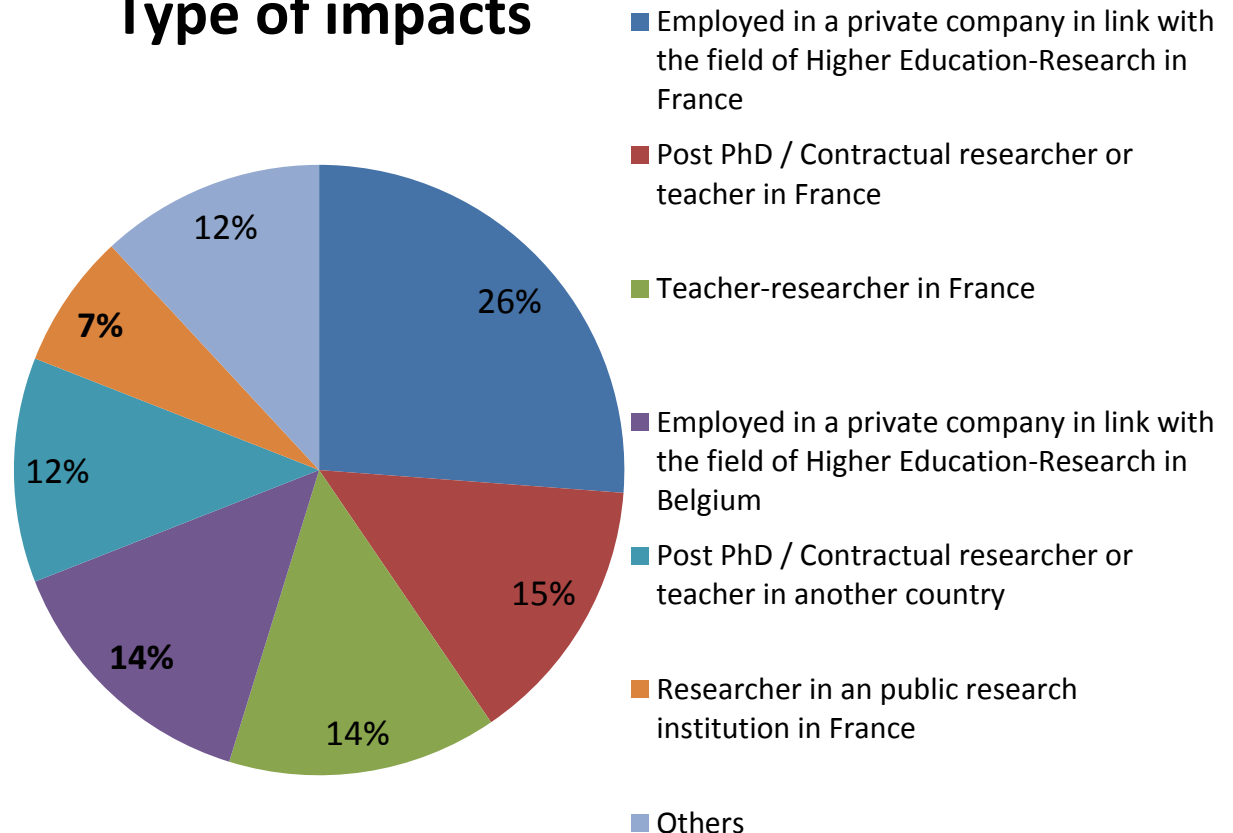
IMPACT ON YOUNG RESEARCHERS' CAREER

FR - FLEMISH

% of young researchers whose career was impacted by the PHC program



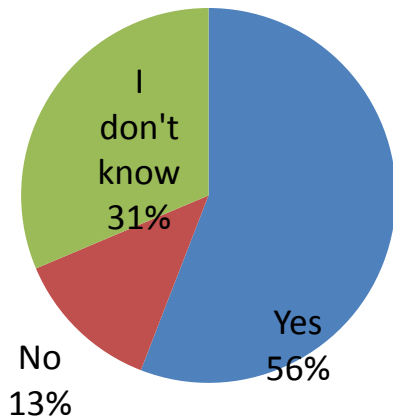
Type of impacts



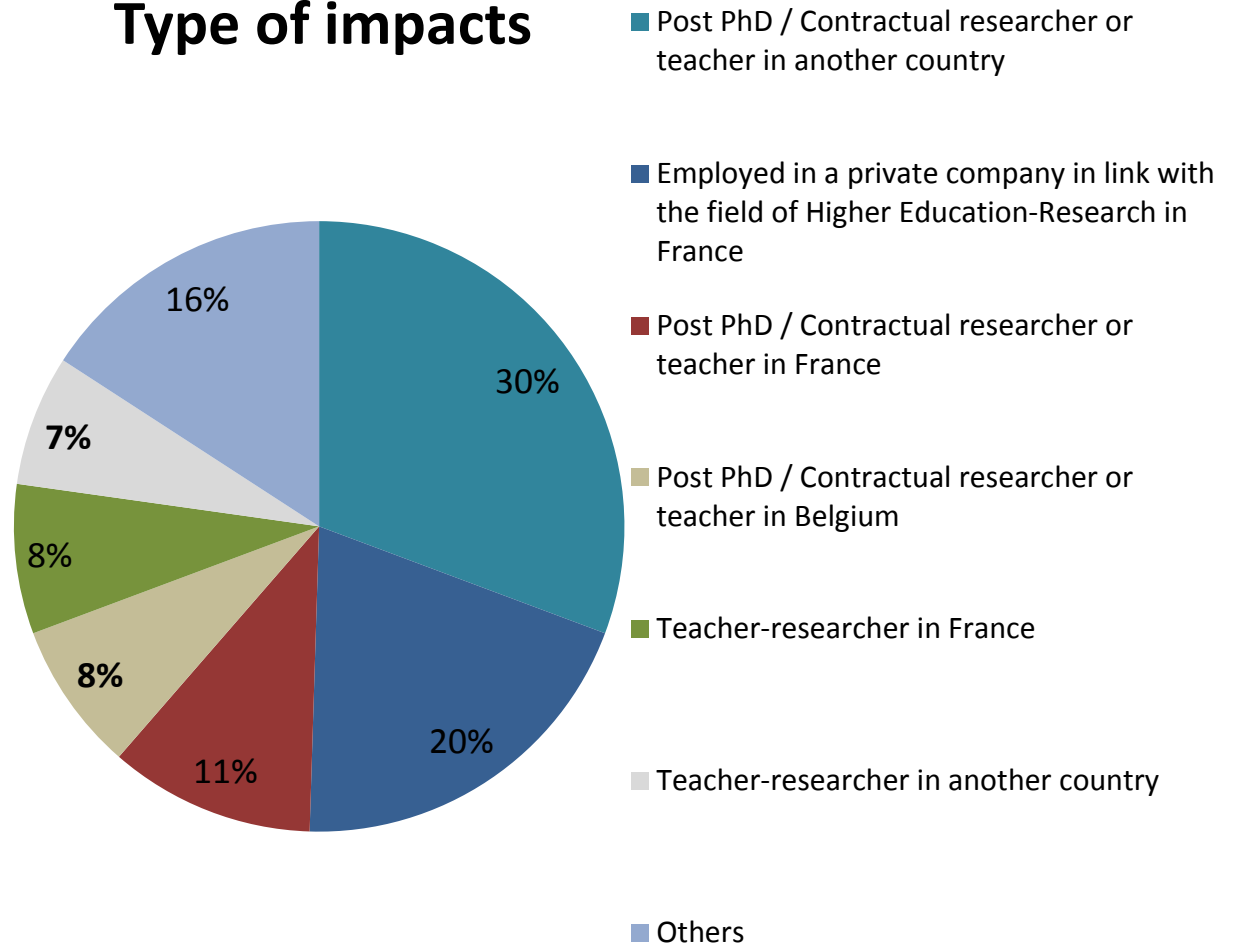
IMPACT ON YOUNG RESEARCHERS' CAREER

FR - FLEMISH

% of young researchers whose career was impacted by the PHC program

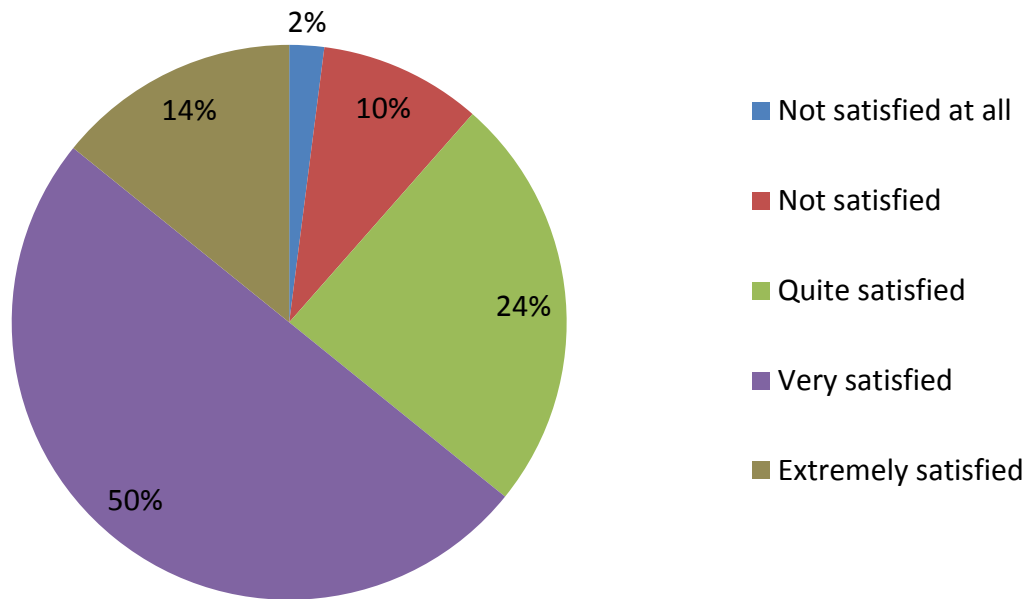


Type of impacts



GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME (1/3)

88% of French principal investigators are satisfied



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

SURVEY OF 152 RESPONSES

Strengths of this program	Number of occurrences (out of 152)	% (out of 152)
Allows an international scientific collaboration	110	72%
Allows the mobility of the researchers	108	71%
Simplicity of the application process	100	66%
Allows the training of the young researchers	93	61%
Allows exchanges which allow a scientific production	85	56%
Easy implementation (administrative flexibility)	56	37%
Financial means sufficient for the expenditure of mobility	32	21%
Is used as starting for raising other funds	30	20%
Good scientific appreciation compared to the financial investment	27	18%
Allows a knowledge of the country partner	24	16%
Duration of mobilities adapted to the needs	17	11%
Sufficiently long duration of the projects	17	11%
Transparency of the methods for selecting the projects	10	7%
Other	1	0%
<i>Total number of occurrences</i>	710	

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

SURVEY OF 152 RESPONSES

Weaknesses of this program	Number of occurrences (out of 152)	% (out of 152)
No funding of the operation and capital expenditures	81	53%
Financial means insufficient for the expenditure of mobility (per diem)	49	32%
Financial means insufficient for the expenditure of mobility (transport)	44	29%
Too short duration of the projects	39	26%
Too short duration of mobilities	36	24%
Too low number of mobilities	25	16%
Lack of transparency on the methods of projects selection	22	14%
Difficult perpetuation of collaboration	21	14%
Insufficient communication on the evaluation's results	18	12%
Heaviness of the process of applications	16	11%
Administrative heaviness of the missions management	12	8%
Other	10	7%
Too long duration of mobilities	0	0%
<i>Number of occurrences</i>	373	

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”.

However

- Although the average number of co-publications per year with regards to the budget per project is satisfying (0,85 taken together vs a mean value of 0,9), the number of publications per project could be increased (1,65 taken together vs a mean value of 2,3)
- Involvement of young researchers could be improved for scientific output (average rate of scientific production per PhD : 0,65 taken together vs a mean value of 0,7)

PRELIMINARY RECOMMENDATIONS

RECOMMENDATIONS

- Develop the communication to attract more applicants
 - Aim an average 30% success rate
 - Promote scientific co-publications
 - **Promote co-publications by young researchers**
-
- Ouverture sur des PHC multilatéraux ?

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

christophe.delacourt@recherche.gouv.fr

guillaume.ravier@recherche.gouv.fr

robert.gardette@recherche.gouv.fr

Thank you for your attention