

Developing a Toolbox for Managing International Collaborative PhD Programmes

Session 7: The use of the Toolbox (towards achieving the goals of collaborative PhD programmes – graduating excellent PhD researchers through informed and excellent supervision)

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Developing the internationalization
of PhD studies in South Africa



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An experience on PhD supervision

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CIRAD's experience on PhD Supervision

- What is CIRAD?
- Under what setting are we working with PhD students?
- How do we work with PhD Students?
 - How international?
 - What are the challenges?
 - Could we do better?
 - Rewards

WHAT IS CIRAD?



cirad

AGRICULTURAL RESEARCH
FOR DEVELOPMENT

CIRAD is the French agricultural research
and international cooperation organization
working for the sustainable development
of tropical and Mediterranean regions

A French public research organization with an international vocation



- CIRAD is placed under the authority of the **Ministry of Education and Research** and the **Ministry for Europe and Foreign Affairs**
- CIRAD is a targeted research organization with a **mandate for scientific cooperation with organizations in southern countries**
- Its operations fit in with the **17 sustainable development goals (SDGs)** adopted by the UN and the **Paris agreement on climate change (COP21)** and **are classed as public development aid**

A staff of **1650** including **800** researchers

€ **198M** in **2017**

Research as a tool for development

- > CIRAD produces and disseminates **knowledge and innovations** and contributes to capacity building **in support of agricultural development in southern countries**
- > CIRAD does this through **long-term partnerships** with public and private organizations in the South, **taking account of the specificities of the societies and environments** in which it works
- > CIRAD is working – with its partners in the South – to **address the main global issues** surrounding agriculture, the environment and food

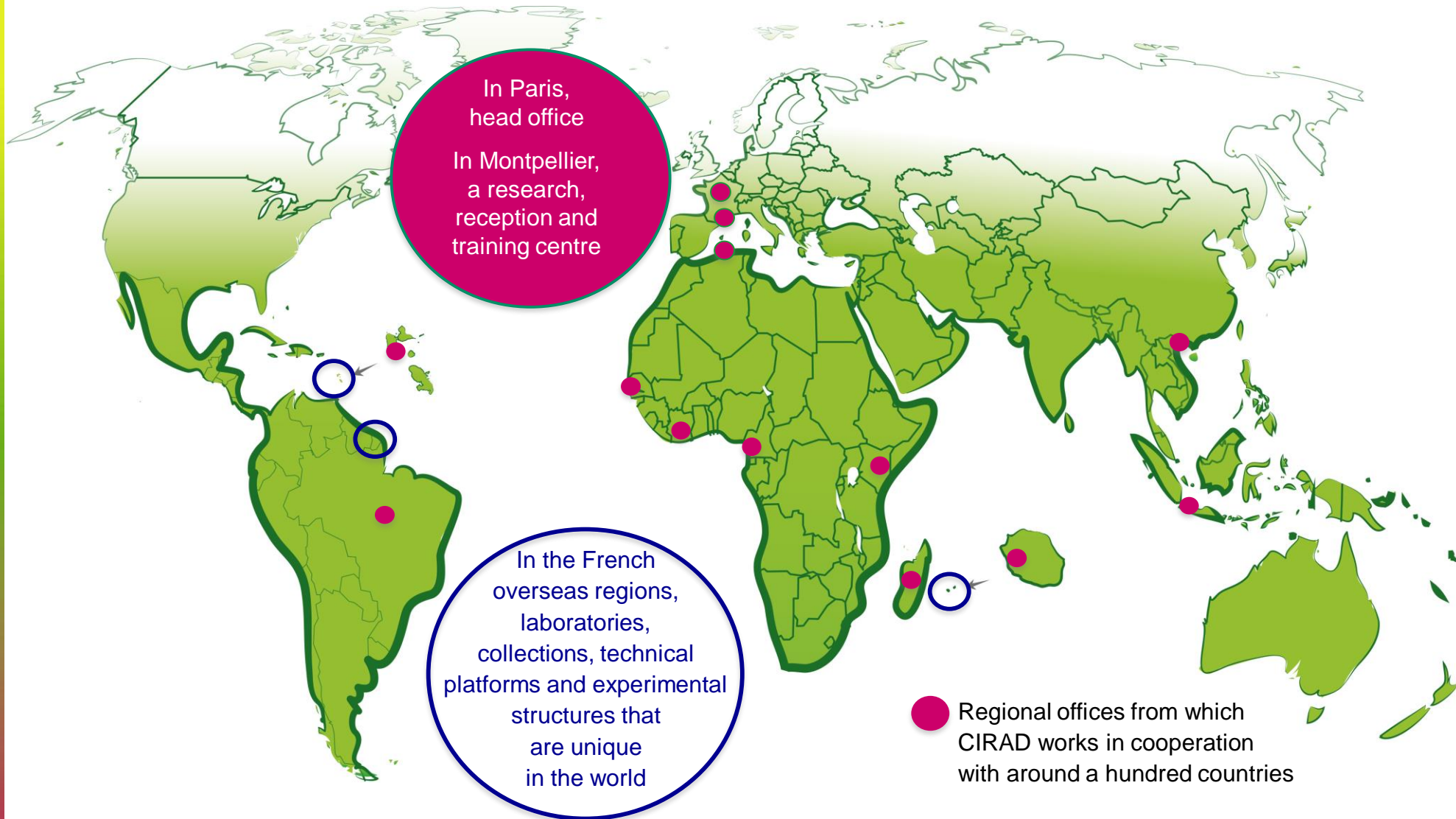
CIRAD is...

830 scientific articles published each year, **425** co-written with researchers from southern countries

800 researchers and technicians from all over the world hosted each year

More than 300 researchers assigned abroad and in the French overseas regions

CIRAD worldwide



A basic working principle: partnerships

- > Long-term partnerships with organizations in southern countries, to **overcome the status imbalance** resulting from differing degrees of development
- > **Scientific programmes co-constructed and steered** with players in the South
- > **Establishment of a global network** of platforms in partnership for research and training (**dPs**)

CIRAD is...

More than
150 partner
organizations
in around
a hundred
countries

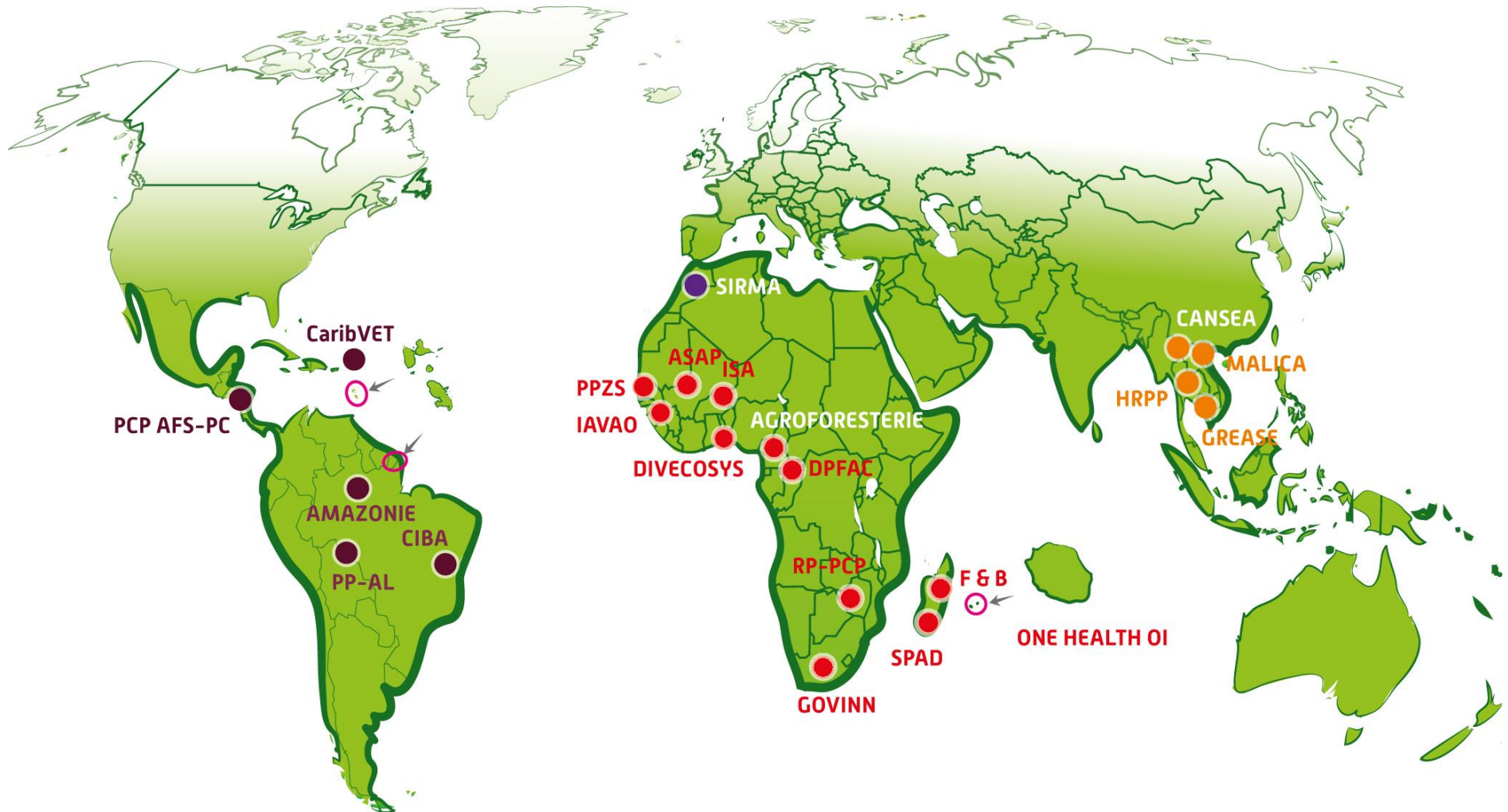
22 dPs in close
proximity to
development players
200 scientists
on assignment

350 researchers
assigned
abroad and in
the French
overseas
regions

An active
portfolio of
1000 funded
research projects
(EU, AFD, AUF, USAID
FFEM, WB, Foundations,
etc)

More than **250**
framework
agreements,
including **180**
with overseas
partners

Platforms in partnership for research and training (dPs)



Three scientific departments

UNDERSTANDING
biological systems,
from molecule
to ecosystem



**Biological Systems
Department (BIOS)**
11 research units

ANALYSING
the practices and
performance of
farming systems,
from plot to farm



**Tropical Production
and Processing Systems
Department (PERSYST)**
12 research units

SUPPORTING
players in rural
areas,
from a local to
a global level



**Environment
and Societies
Department (ES)**
10 research units

Research topics

rural **tropical** societies
development **agricultural**
local know-how **supply chains**
family farming forests animal health
biomass **climate** ecosystems
territories **change** plant health
landscapes **food** public policy
genome **security** **biodiversity** health
emerging diseases **agro-ecology**



MUSE



MONTPELLIER
UNIVERSITY
of EXCELLENCE



NOURRIR
FEED



PROTÉGER
PROTECT



SOIGNER
CARE

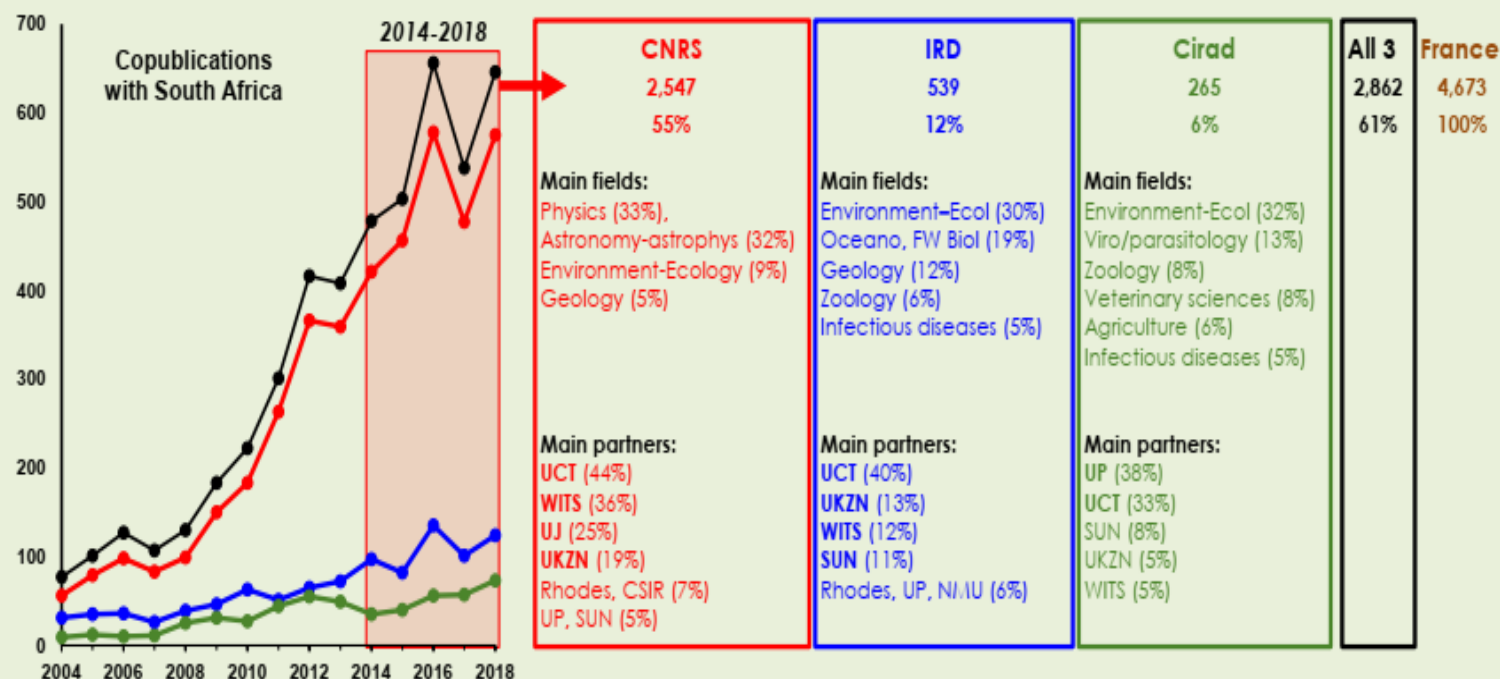


IRD-CNRS-Cirad in South Africa - Key figures 2019

11 staff on posting (**IRD 2**, **Cirad 6**, **CNRS 3**) in 6 universities (Pretoria, Stellenbosch, Cape Town, W Cape, Nelson Mandela)
 c.a. **19 FTE** short scientific stays in RSA in 2018 (> 450 stays)

Several research projects funded by:

- French National Research Agency (5 + 5 JPI Water),
- EU (1 ERC, 3 H2020, 2 recent FP7 ended in 2017),
- South African National Research Foundation (NRF)



UNDER WHAT SETTINGS ARE WE WORKING WITH PHD STUDENTS?

Can we supervise PhD students?

- CIRAD is **NOT** an academic institution
→ we do **NOT** deliver diplomas

But... yes, we can

- Many researchers: « Habilitation » → affiliated to a « Doctoral School » → can direct a PhD thesis
- MUSE ...
- Most research units are « Joined » (UMR)
 - Different institutes / single research thematic / one roof
 - The « mix » : Universities; Research Centers
 - Ex: G-EAU: CIRAD, IRSTEA, Montpellier Sup-Agro, ENGREF

When outside France

- We are approved by the Senate of the Universities where we work (part of the MOU). Approved as « Co-supervisors »
- Different statuses
 - But we usually teach, co-supervise, and conduct research projects
 - If not 100% present → « Extra-ordinary » Professors

DIVERSITY OF PHD SUPERVISION

How: « 100% made in France »

- (M.Sc +) Ph.D in France
- Ph.D without courses (or only a few targeted courses to improve skills adapted for the research question)
- Bursaries: French Embassy or Projects
- Usually Lab oriented research (Genetics, Plant physiology, etc.)
- Often, PhD identified during in-country collaboration

How : « French Sandwich »

- (X%) in other country, (100-X)% in France
 - Field work in other country
 - The « type » of Sandwich can vary a lot
 - Who is supervising the analysis-writing
 - Analysis / Writing in France (French Prof)
 - Co-analysis / co-writing
 - Who is the Student?
 - from France (X large in France)
 - from Other country (X large outside France)
 - « Un-balanced », but often appreciated by students → especially in countries that value « foreign diploma »

How: « Local » PhD

- (100%) in other country
 - « Local » student
 - Co-supervision within universities where we are affiliated (based and/or « extra-ordinary »)
 - Local work
 - Local co-supervision
 - Local PhD

How: Double or Joint Degrees ?

- Very seldom...
- Why ?
 - Not part of our DNA... and not how we are evaluated
 - ... we are not pushing for it: what matters is the research collaboration (...research papers) and the completion of the PhD
 - ... we go for it only if the local institution sees it as an important « signal » for the collaboration
- Exceptions:
 - Joint « Master » programmes

HOW DO WE WORK WITH PHD STUDENTS

How international?

- CEEPA Office:
 - Prof/Supervisor Nationalities: Sudan / Kenya / Namibia / South-Africa / Denmark / France
 - Student Nationalities: Kenya / Zambia / Zimbabwe / Mozambique / Lesotho / eSwatini
- Actually, an important reason why we collaborate with CEEPA → Seeking regional collaboration

Challenges ?

- Extremely heterogeneous batches
 - Academic
 - “Set of mind” for the “PhD Journey”
 - Probably not a sufficient pool to select from
- Expectations about supervision
 - Student « pro-activity » : a PhD is a young researcher
 - The “struggle” to define his/her own research questions and adequate tools to use is part of the training
 - “Supervision” probably misleading name (“mentoring”)



Challenges ?

- Work as an « independent-minds »
 - Ownership of the research question (they are not answering the supervisor's question !!)
 - Be able to assess alone the strong and weak points about their work/findings
- Distance from the field
 - Prof and Student in different countries
 - Flexibility / Reactivity when new information ... likely to have an influence on the methodology?
- Co-supervision (+ thesis committeee) can be confusing for the student

Challenges

- Declining number of scholarship
- Funding of PhD sometimes difficult (donors restrictions)
 - Fund only research activities but not tuition fees

Could we do differently?

- MSc + PhD is usually more productive
- A mix of different « sandwiches »
 - French students working with SA students on complementary research questions
 - Wonderful ... when it works
 - Awful, if mis-understood

Rewards

- Co-publications
- Long-term impact
 - Beginning of a long term partnership
 - Future collaborative projects
- Regional perspectives
 - E.g., work on water issues under different institutional settings



THANK YOU



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Agricultural Research
for Development