



# Links between research and development ?

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Euragri, Oslo, P. Caron, 25 sept. 18

 **cirad**

LA RECHERCHE AGRONOMIQUE  
POUR LE DÉVELOPPEMENT



1. **A framework to transform food systems as a lever for Agenda 2030**
2. **The role of science**
3. **An example at the international level: the HLPE**
4. **An example at the local and national level: Cirad's dP**





1. A framework  
to transform  
food  
systems as  
a lever for  
Agenda  
2030

Euragri, Oslo, P. Caron, 25 sept. 18






REVIEW ARTICLE



# Food systems for sustainable development: proposals for a profound four-part transformation

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# Milano group



# We need a profound transformation of the whole food systems!

Not only to provide food

Not only to adapt the food and agriculture sector

## As a lever...

- To address the nexus « *food and nutrition security / ecosystem integrity, climate and social justice* »
- To achieving the whole set of SDGs







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# Such a deep transformation...

- Radical and long term change
- Context specific: no universal applicable model or technology
- Considerable intellectual investment: knowledge intensive



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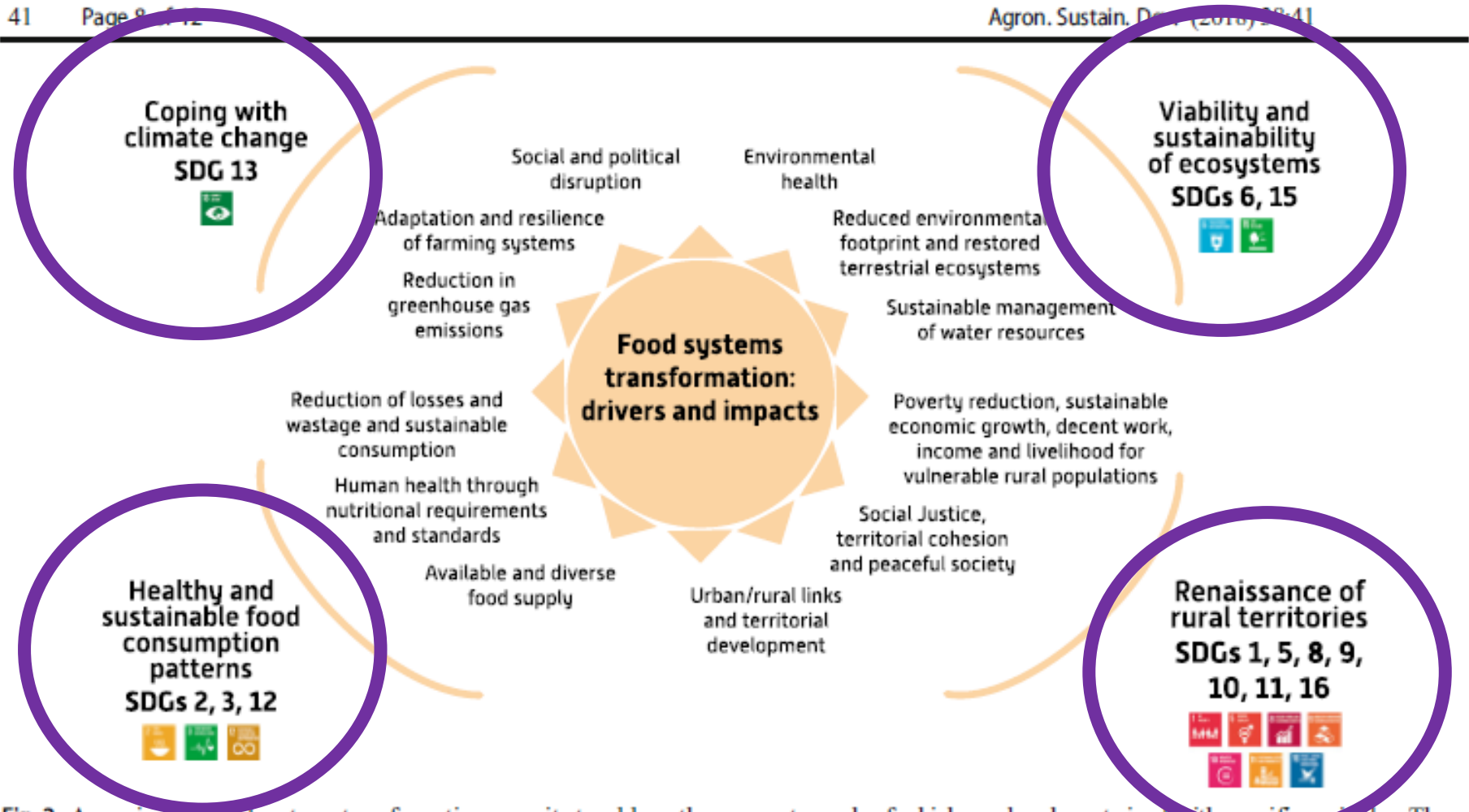
# Such a deep transformation cannot occur spontaneously!

## Requires

- Well conceived and carefully planned process
- Paradigm shift
- Governance shift of food systems with priorities to SDGs and adapted policies at all levels
- Barriers and obstacles to be overcome, including power imbalances and conflicts of interest
- Opportunistic « washing » behaviours to be prevented

**Research is needed!**

# A global framework for a four parts transformation



**Fig. 2** Assessing the food systems transformation capacity to address the Agenda 2030 through the agriculture–food and nutrition security–environment health–climate–social justice nexus. Suggests a general framework for food systems transformation by highlighting the four

parts, each of which can be characterized with specific variables. These can be used to design relevant indicators for assessing the impact of system transformation





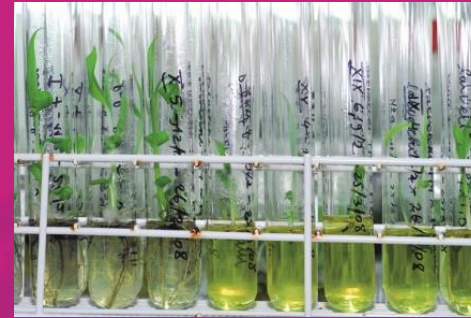
## 2. The role of science

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# Research...

## Technology, of course



## But also knowledge, to:

- Innovate: contribution to innovation systems and involvement in arrangements
- Understand, plan and program (« evidences » ): performance? Nexus? Transition ?
- Imagine possible futures
- Understand disagreements



Catherine EMMANUEL / Les outils d'une communication et négociation efficaces

D'après Catherine Emmanuel,  
médiatrice d'Etat



# Science and SDGs?

- Crafting the agenda
- Metrics
- Knowledge as a public good
- Development through research (Global South?)







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# Renewing the interaction science - policy

- Acknowledge and accept complexity
- Evidence: navigate between certainty sellers and doubt sellers to enlighten uncertainty
- Integration to negotiation and policy making process: knowledge as a starting point (IPCC, HLPE, IpBES)
- Controversy to build and design



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## 3 prerequisites

### 1. Metrics to plan and assess contributions to SDGs

- Modify how performance is conceived and measured
- Framework and indicators which account for nexus
- Global framework, context specific declinations and comparisons



# 3 prerequisites

## 2. Achieving impact at scale through local level action

### Inclusiveness

- Local specific
- Anchoring transformation and regulatory capacity in local institutions and innovation systems

### Limits of one size fits all solutions and illusion of scaling-up

- Local change not necessarily first
- Global impact not only the summation of local changes
- Most of local success stories not reproducible





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# 3 prerequisites

## 3. Achieving impact at scale through multi-scales changes and territorial approaches

- Local-global interactions, in particular between local agriculture and globalized markets
- Organising consistency: multi level policies, including effective governance and arbitration of trade offs





3. An example  
at the  
international  
level:

the HLPE



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# HLPE Functions (as per the CFS)

(I) Assess and analyze the current state of food security and nutrition and its underlying causes.

(ii) Provide scientific and knowledge-based **analysis and advice on specific policy-relevant issues**, utilizing existing high quality research, data and technical studies.

(iii) **Identify emerging issues**, and help members prioritize future actions and attentions on key focal areas.



# Key attributes of the HLPE



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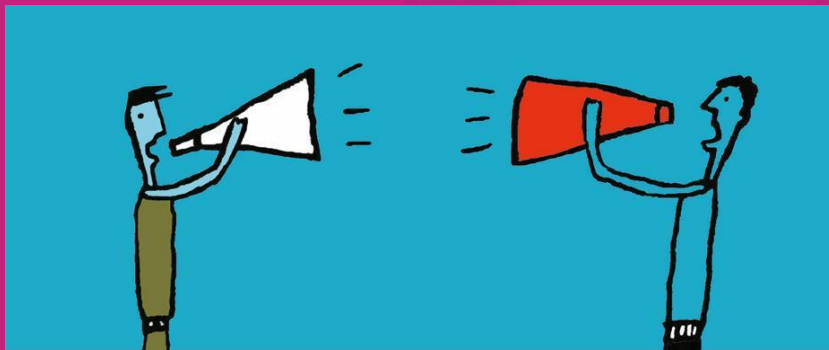
- Created and mandated by the CFS but working independently: a scientific process feeding a political agenda under the spotlights
- Demand-driven: HLPE's success reinforces political pressures
- Openness to various forms of knowledge





# Addressing controversial issues: why and how?

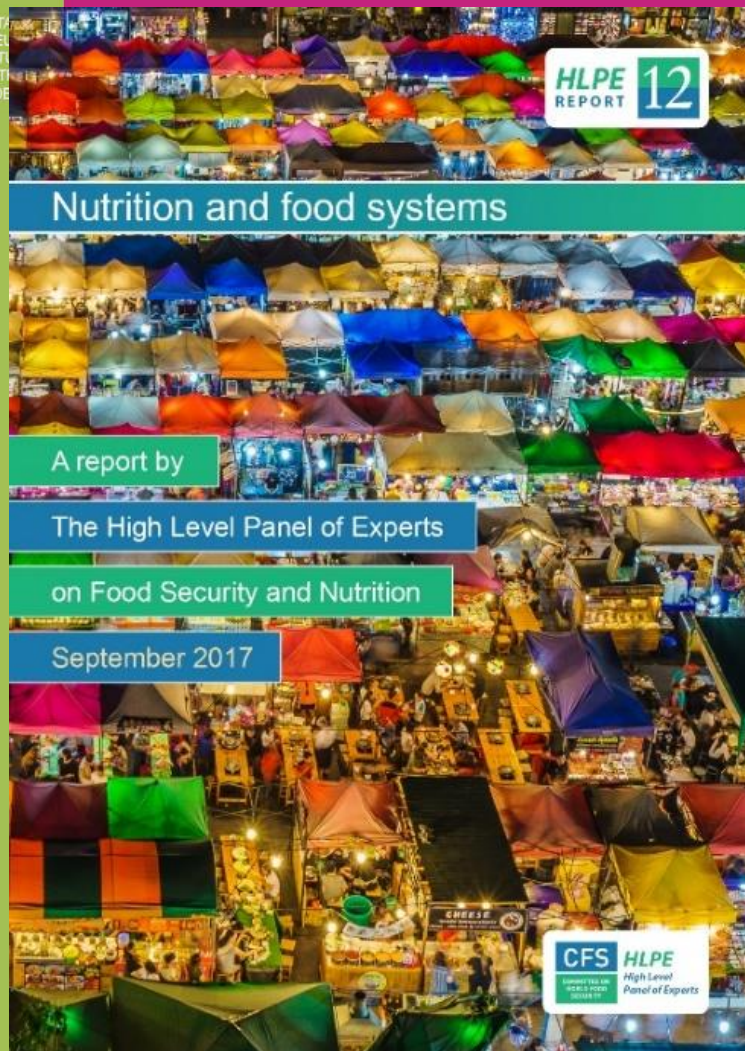
- Disentangle its rationales and explain uncertainties or pivotal points (Data? Reasoning ? Values?)
- Carefully balanced reports and references positioned in relation to debates
- Importance of evidence behind polemical topics, to force discussion: fight stakeholders' intentional blindness





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# If not the decision, draw the map, to help projection



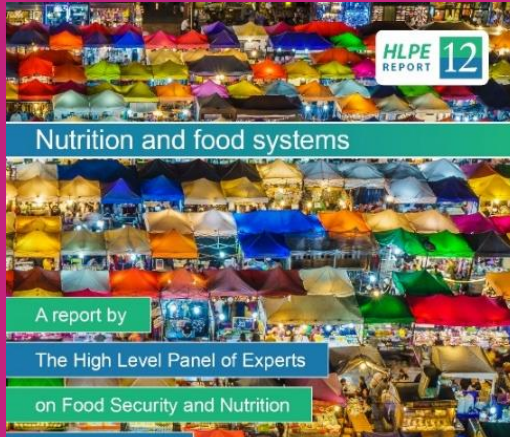
- New map of FSN ... beyond North - South
- Link SDG 2 – SDG 3
- Food systems at the heart of Agenda 2030
- Food environment as central lever
- Conflicts of interest



# Make controversy fertile



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Voluntary guidelines on  
food environment ?





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# The deliberative process, rather than an expert based decision





Critical and Emerging Issues

2<sup>nd</sup> Edition

Final Note to the CFS



# Crafting the agenda: C&EI for FSN (HLPE 2017)

...ing the inter-connected future of  
...tion and rural transformation

2. Conflicts, migrations and FSN
3. Inequalities, vulnerability, marginalized groups and FSN (reviewing C&EI in 2014)
4. Impacts of trade on FSN
5. Agroecology for FSN in a context of uncertainty and change
6. Agrobiodiversity, genetic resources and modern breeding for FSN
7. Food safety and emerging diseases
8. From technology promises towards knowledge for FSN
9. Strengthening governance of food systems for an improved FSN



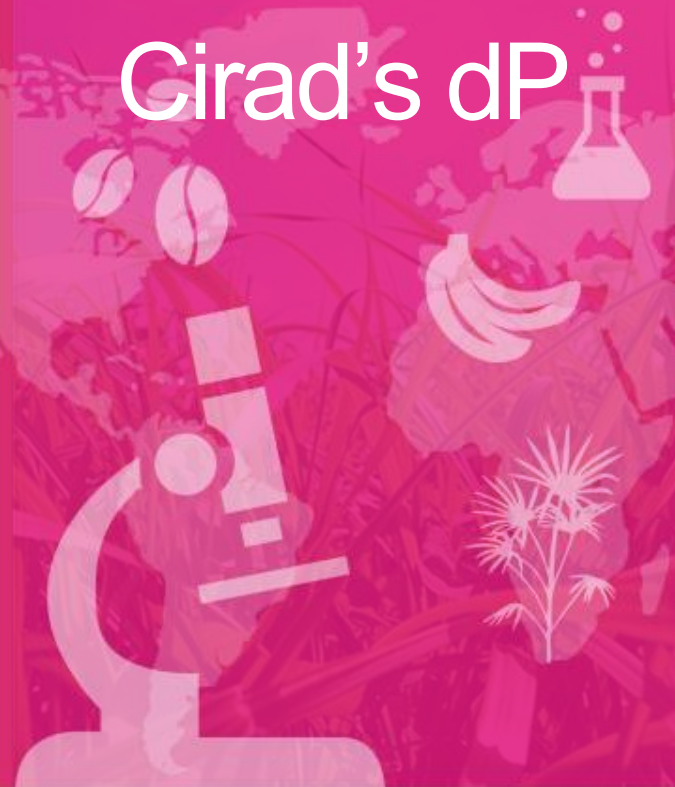
© HLPE, 2017





4. An example  
at the local  
and national  
level:  
Cirad's dP

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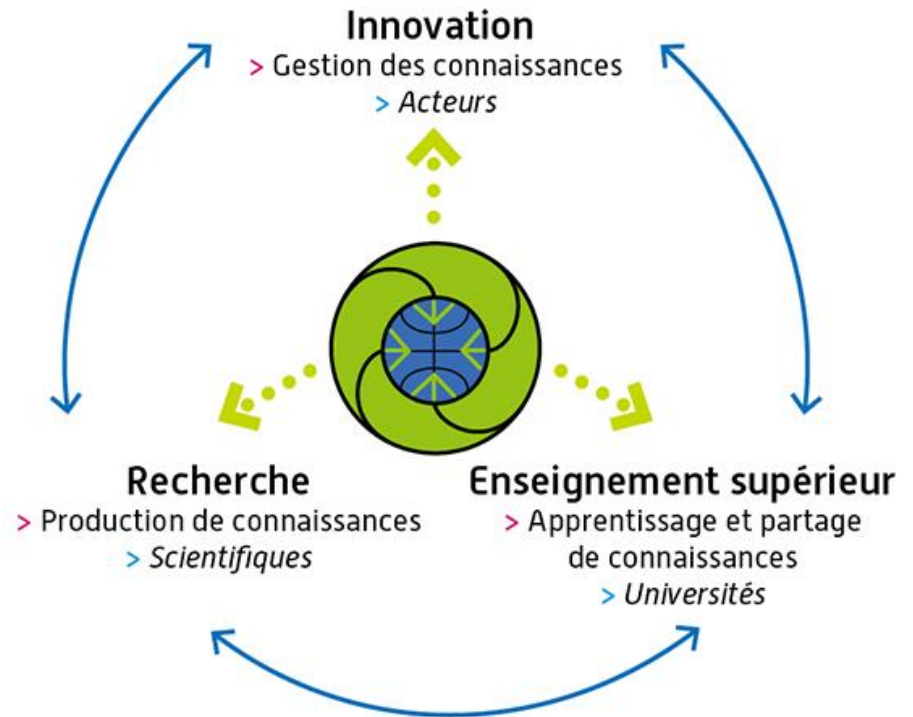


# Platforms in Partnership for research and training



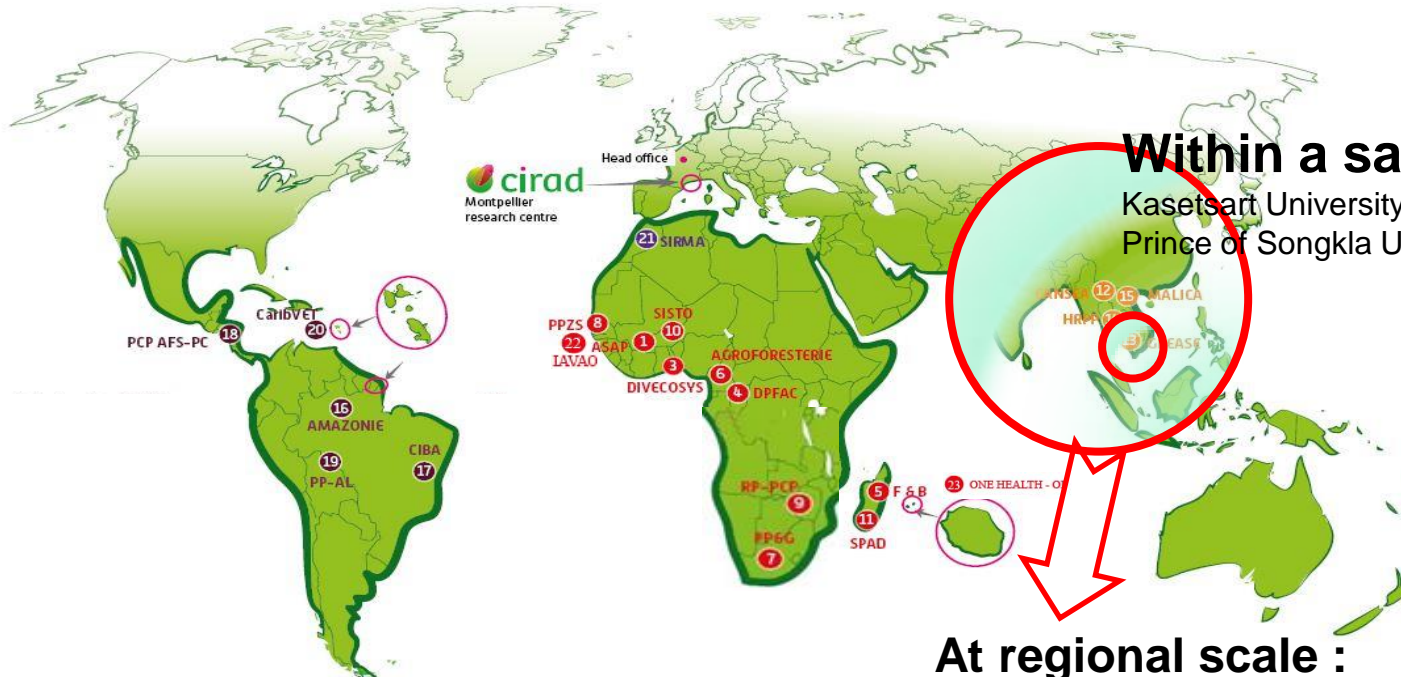
***An innovative tool for international  
agricultural research***

- **Shared thematic agenda**
- **Geographic focus**
- **Confidence and partnership**
- **Common goals**
- **Commitment to share resources**





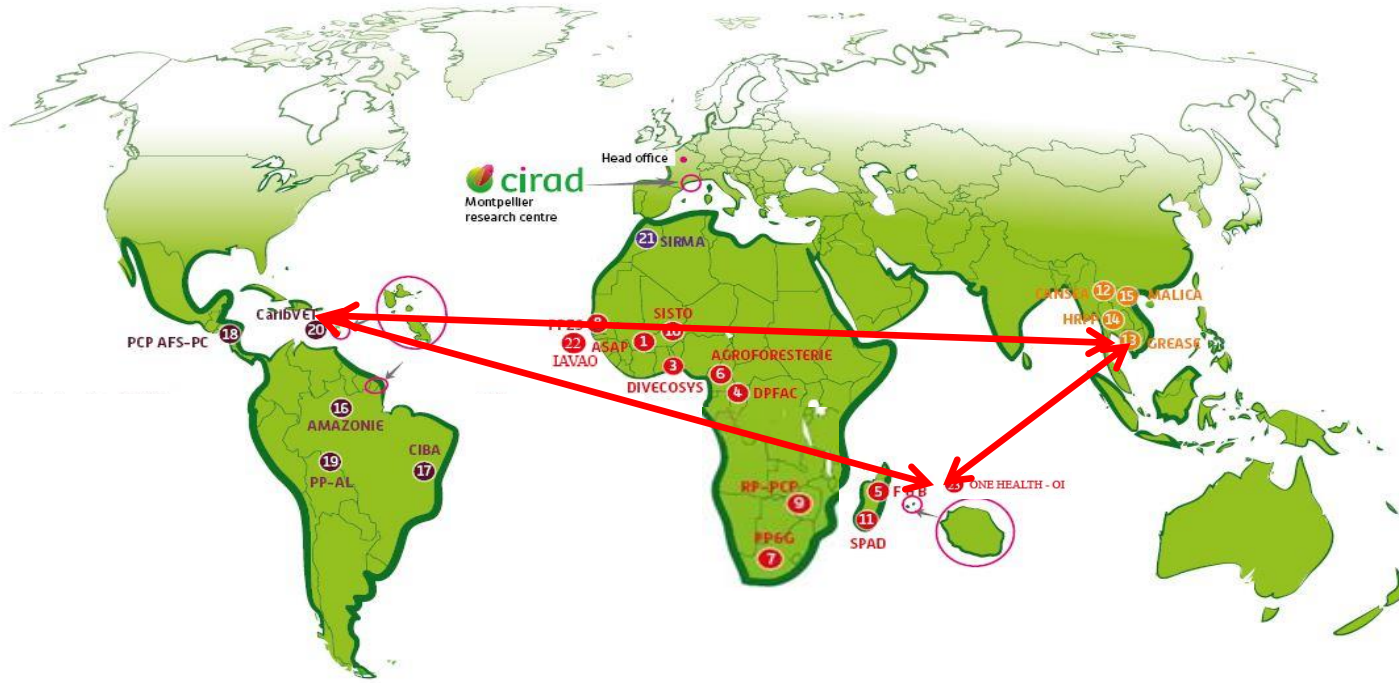
# Local, national, regional and international cooperation



## Emerging diseases in Southeast Asia - GREASE

**Knowledge produced and shared among stakeholders : farmers, vets, students, policy makers, ...(ex. Master InterRisk)**

# Local, national, regional and international cooperation



# CaribVET Partnership

**2006: CaribVET**

**2012: DP**

**47 partners**

34 «countries» - Veterinary Services  
6 Universities & Research institutes  
5 International organizations  
2 polical (1) and intergovernmental (1) org.





# Risks of Animal Infections introduction & spread

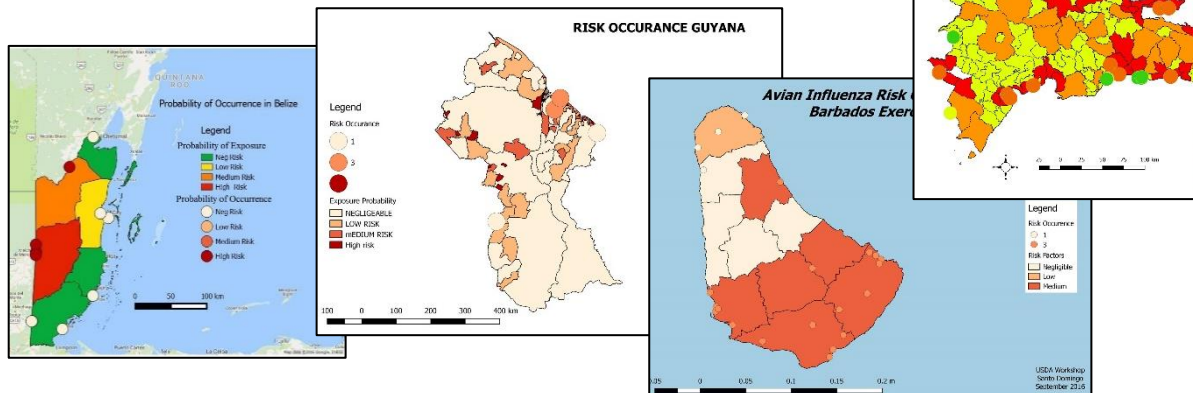
Basic GIS

Risk mapping principles

Advanced Risk mapping

Risk-Based Surveillance

Train national experts in GIS, risk mapping  
 Gather and collect Data  
 Panel expert discussion to identify risk factor  
 Put the data together, analyse and discuss!



6th October 2016  
 Press release

**Avian Influenza: CIRAD and USDA train 8 Caribbean experts to map risk analysis**

The Veterinary Services in the Caribbean now have 8 additional experts (Barbados, Belize, Guyana, Jamaica, Dominican Republic, St. Lucia, St. Vincent and the Grenadines, Suriname) in the mapping and risk analysis of the introduction and spread of diseases. Their expertise will be used to enhance monitoring of Avian Influenza in the region, but can also be adapted to other diseases. The participants were trained by experts from Cirad FVI\* (Dr. Cécile Squarozzi Diaw), Cirad CMAEE\*\* (Dr. Caroline Coste) and one expert from USDA CEAH\*\*\* (Dr. Andrew Fox), as part of a workshop organized by the Caribbean Animal Health Network (CaribVET) from 19 to 23 September in the Dominican Republic.

The Caribbean is subject to several risk factors regarding the introduction and spread of Avian Influenza. It is a region of high poultry production, with a high quantity of animal trade and a large diversity of ecosystems. It is also a nesting area for migratory birds which could transmit the disease to domestic poultry.

**Harmonizing surveillance in the region**

To effectively and quickly detect the disease, surveillance methods must be harmonized between countries and territories, while keeping costs low and focussing surveillance on high-risk zones. Monitoring techniques differ from one country and territory to another. A training course on mapping and risk analysis of disease introduction and spread was developed based on the achievements of the European Epigenesis Project (2013-2016). The training was organized by the Caribbean Animal Health Network (CaribVET) and by CIRAD CMAEE- with support from the USDA\*\*\*, CARICOM and IICA. The course took place in three phases: initial training (Belize, November 2015), online training (January-August 2016) and advanced training (Dominican Republic, September 2016).

It enabled the participants to:

- > List the risk factors in their country and map the population at risk
- > Identify potential entry points
- > Assess risks
- > Learn about risk-based monitoring methods

The training course allowed the participants to create risk maps using GIS\*\*\*\* and qualitative analytical methods, thus increasing the cost / benefit ratio of monitoring systems.

*Participants presenting their work at the end of the training course.*

*In the process of creating the risk maps.*

\* FVI: French Veterinary International  
 \*\* Cirad Cmaee: French Agriculture research, Control of emerging and exotic diseases research unit.  
 \*\*\* USDA-CEAH: United States Department of Agriculture, Center for Epidemiology in Animal Health.  
 \*\*\*\* GIS: Geographic Information Systems

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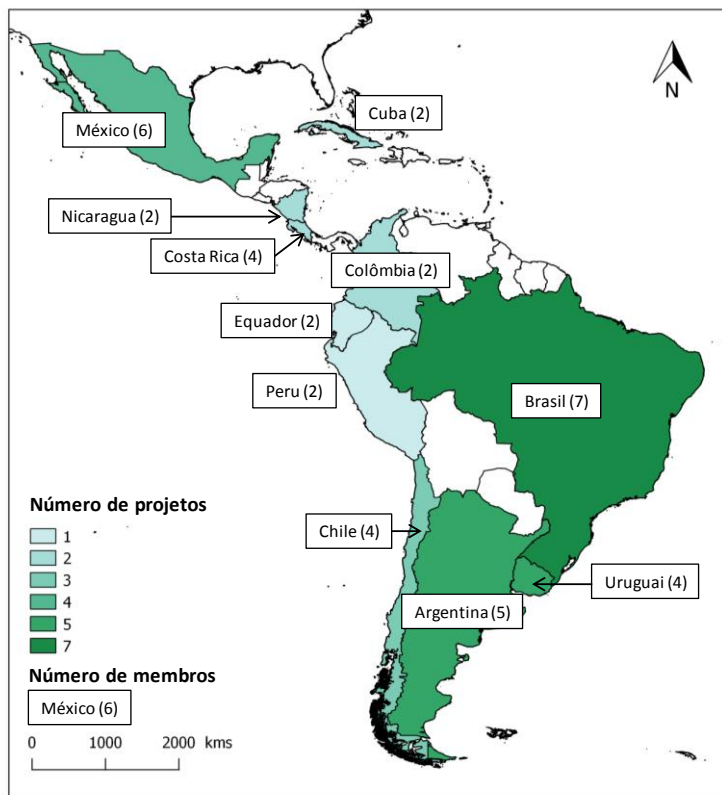
## PP-AL Network

# Public policies & Rural Development in America Latina



**RED POLÍTICAS PÚBLICAS  
Y DESARROLLO RURAL EN  
AMERICA LATINA**

### PP-AL Members & projects by countries



### ➤ Incidence in national public policies

- Research on instruments of PES in México, Costa Rica & Nicaragua
- Regional & Territory Development evaluation in Brazil, used in Central-America

### ➤ Incidence among international organizations

- Family agriculture policies analysis has contributed to renew FAO, IICA & CEPAL strategy
- Food chain analysis (CEPAL, CIRAD, IICA, Procisur project) provided training and capacity building to local organisations



## ➤ **Incidence in national public policies**

- Research on instruments of PES in México, Costa Rica & Nica Ragua has influenced National Biodiversity Financement governance in México with UE support
- Regional & Territory Development evaluation in Brazil, used for ECADERT (Centro-American Strategy for Rural Development Platform in Centro-America)

## ➤ **Incidence among international organizations**

- Family agriculture policies study, conference and publications in 2014 AIAF has contribute to renew FAO, IICA & CEPAL regional cooperation strategy on this subject
- Short food chain tools with CEPAL, CIRAD, IICA, Procisur project provide training and capacity building to COPROFAM and REAF local organisations



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