

# Protecting drinking water supply over France: an analysis of action plans and actor networks

Soil, Agro and HydroSystems  
Rennes center

AGRO  
CAMPUS  
OUEST




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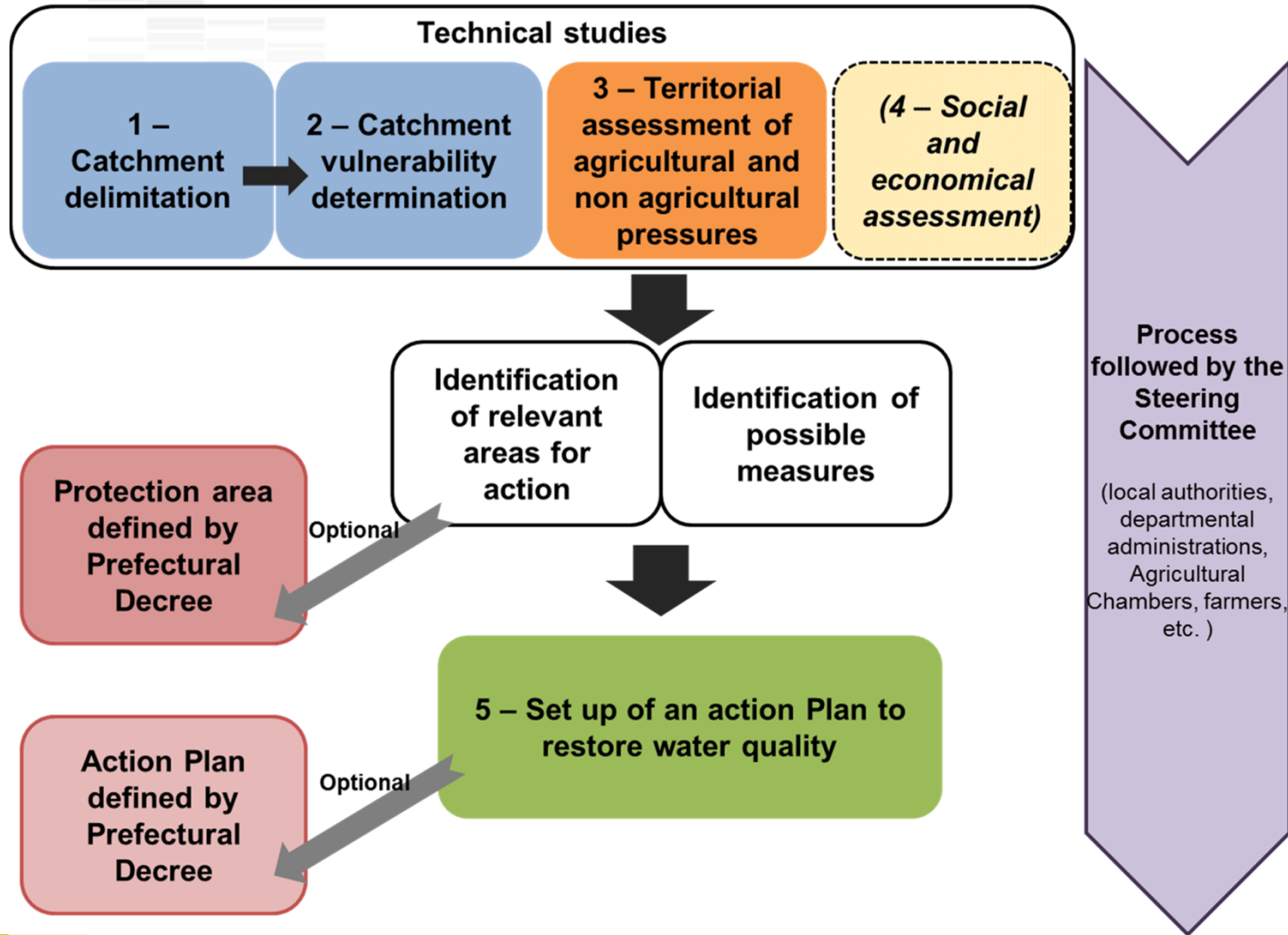
## **With contribution of**

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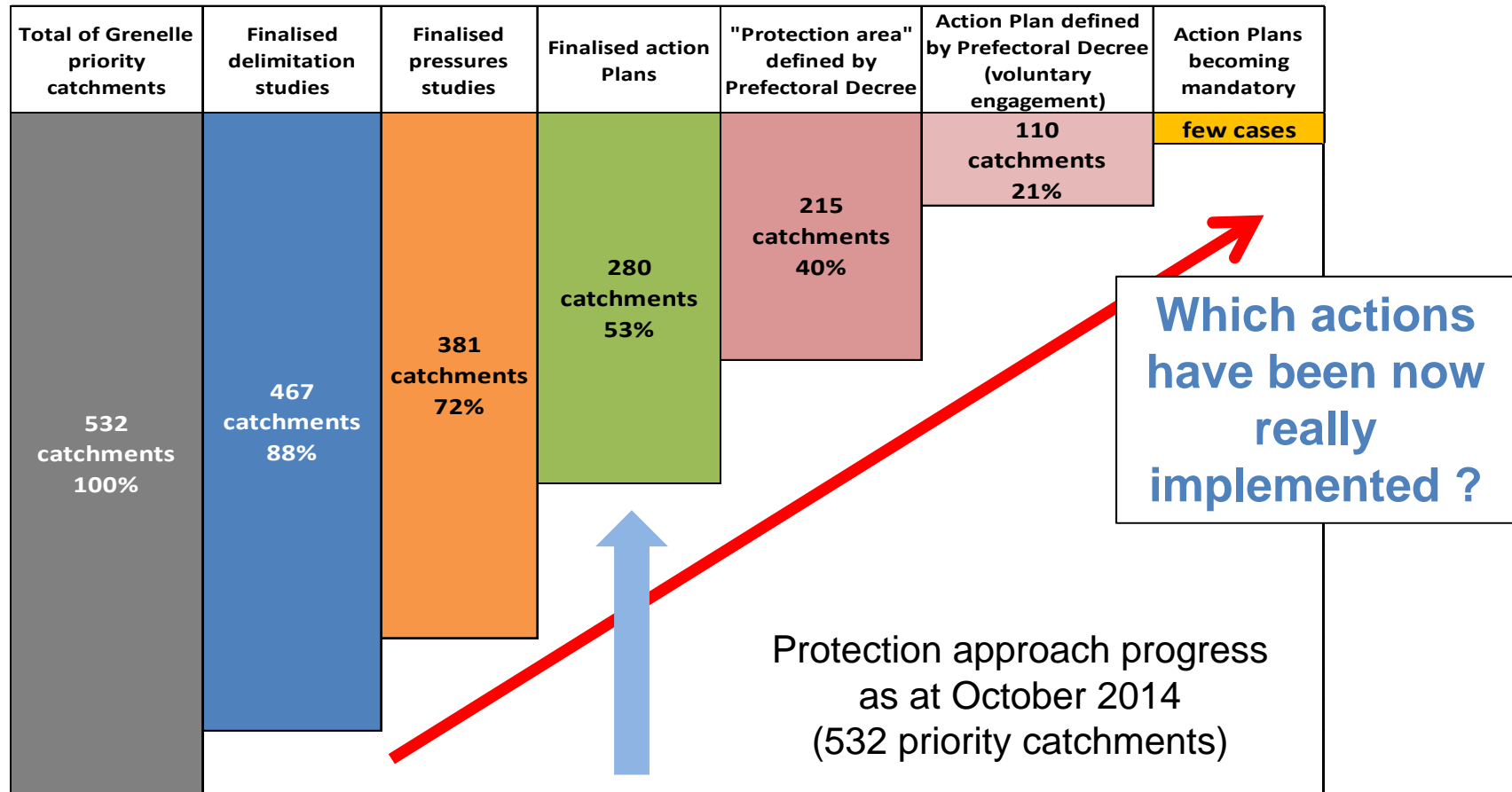


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- ❖ Since the WFD and the 2006 law on water and aquatic ecosystems, the policy for **protecting drinking water has been enhanced**.
  - ❖ The 2006 national policy establishes, **for France**, the main components and the different steps for protecting drinking water and asks for **defining and implementing an action plan adapted to each catchment**.
  - ❖ Despite ambitious objectives of the “Grenelle de l’Environnement (2009) for the 500 national priority catchments, the local implementation is difficult.

# The current French framework




# The current French situation



Among the 532 priority catchments:

- ✓ **88% of catchment delimitation** and **72% of pressures assessment studies** have been finished. **But only 53% of them have an action plan**
- ✓ **No data on the effectiveness of implementation.**

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- ❖ For these reasons (we discovered by the study...), an **assessment of on-going projects** on priority catchments has been undertaken,...
  - ❖ ....in order to define the framework and the **main functions of what could be a Resource Centre** to help stakeholders in elaborating an efficient drinking water protection.



## National level

### 1st Step

**FOCUS ON**  
**Protection approaches progress**  
**Action plans and technical studies**

*Assessment of :*

**Existing national databases**  $\approx$  500 catchments  
**Action plans**  $\approx$  70 catchments  
**Technical studies**  $\approx$  20 catchments

**FOCUS ON**  
**Knowledge**  
**Stakeholders networks**

**Interviews of project leaders**  
 Ministries of agriculture & ecology, ONEMA, INRA

**National Institutional survey on the internet**  
 Regional and departmental State services and water agencies

## Focus at local level and on key actors

### 2nd Step

**Case studies:**  
**10 catchments in 3 regions**

Lorraine/ Midi-Pyrénées/ Champagne-Ardenne

**Interviews at**  
**« regional scale »**

**Target:** regional & departmental State services and water agencies

**Interviews at**  
**« catchment scale »**

**Target :** local authorities (project coordinators & elected representatives)

**Internet survey at « regional scale »**

**Target:** local authorities (elected representatives)

**Other stakeholders**

**Interviews of existing local resources centers and training institutes (7)**

**Internet survey of project coordinators**

**Interviews of consultants (5) & agricultural chambers (2)**

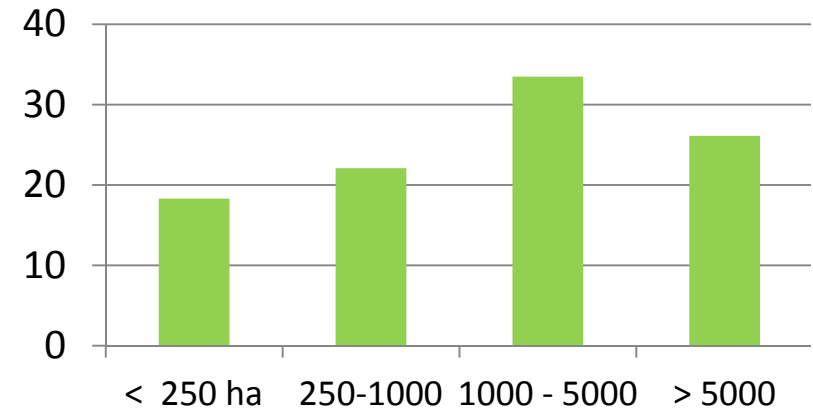
**Recommendations for a resources center**

- The « Grenelle » priority catchments (around 532 catchments)

- 29% pesticides, 27% nitrate, 42% mixed issue
- **Nb:** 88% GW & 12 % surface water
- **Surface area :** 55 % GW, 45% surface water
- Around **7% agricultural surface area** of France

- **Highly variable is surface area: from 23 to 780 000 ha**
- **High variable in the concerned population: 18% less than 1000 hab.; 50% more than 5000 hab. (400 000 hab. max)**

% of catchments

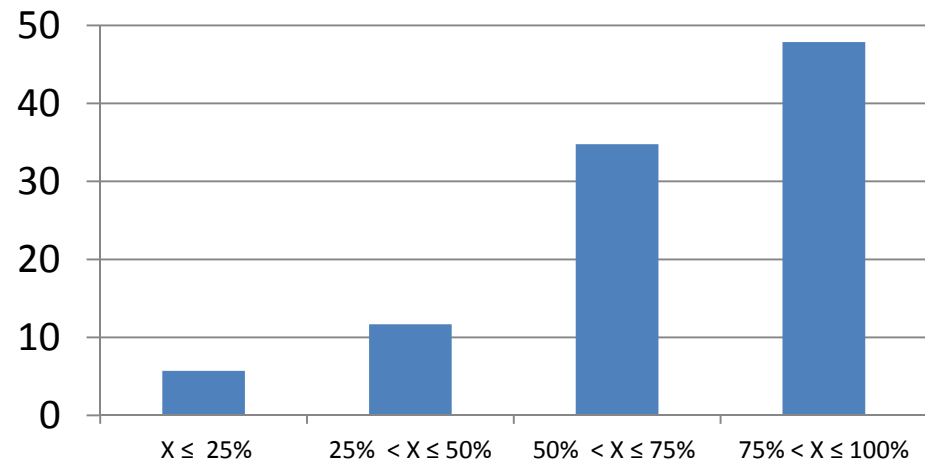


## ⇒ Different issues

- **Agriculture is always the dominant land use**

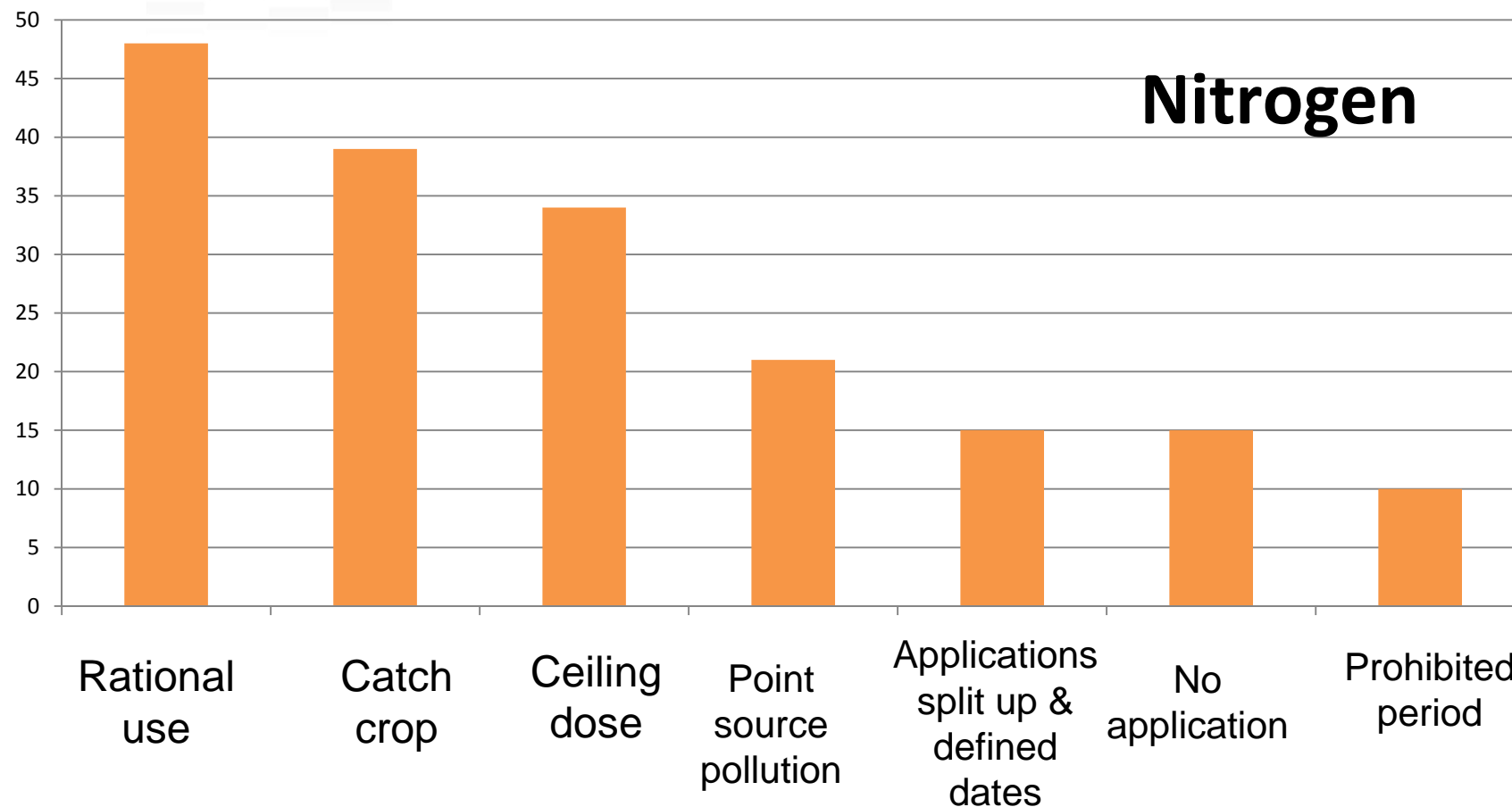
- Around 50% of the catchments have more than 75% of their surface area in agricultural lands

Part of agricultural landuse (%)

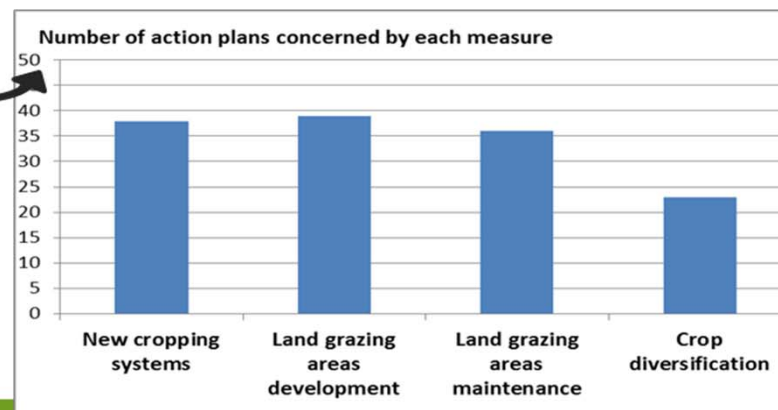
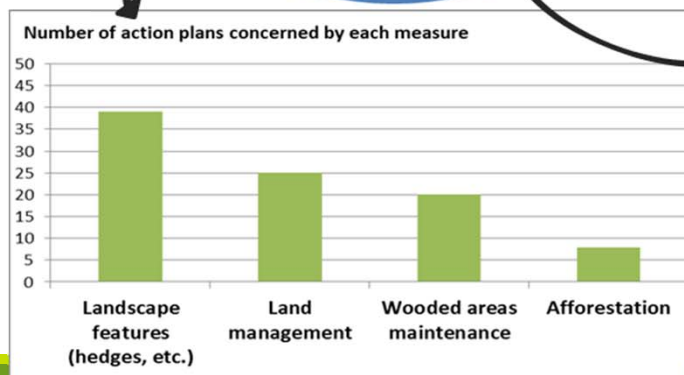
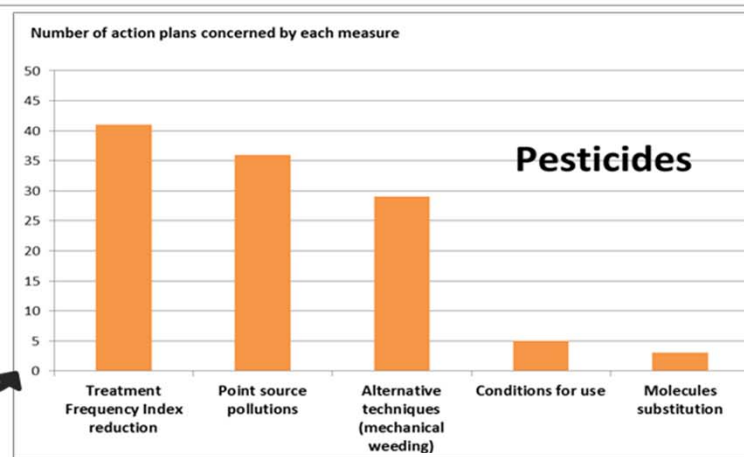
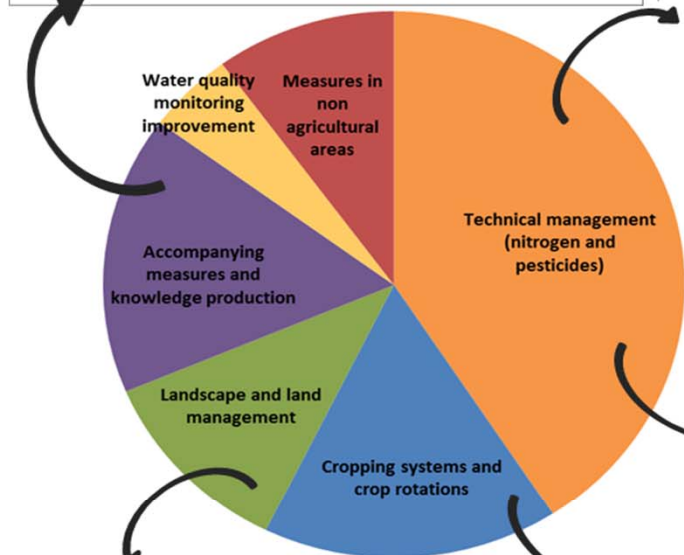
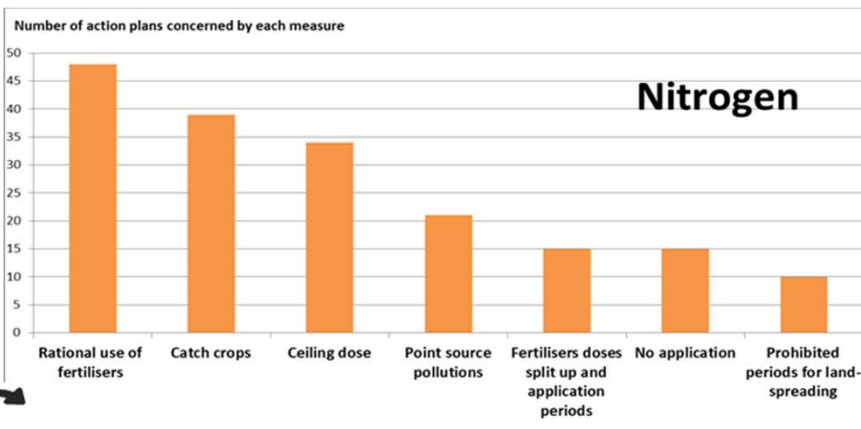
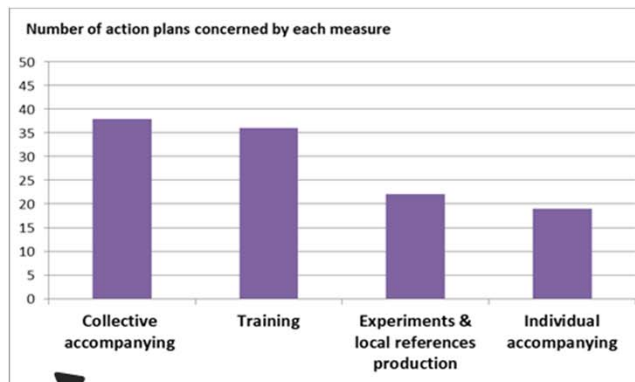


# The key measures of Action plans

Nb of action plans including the measure





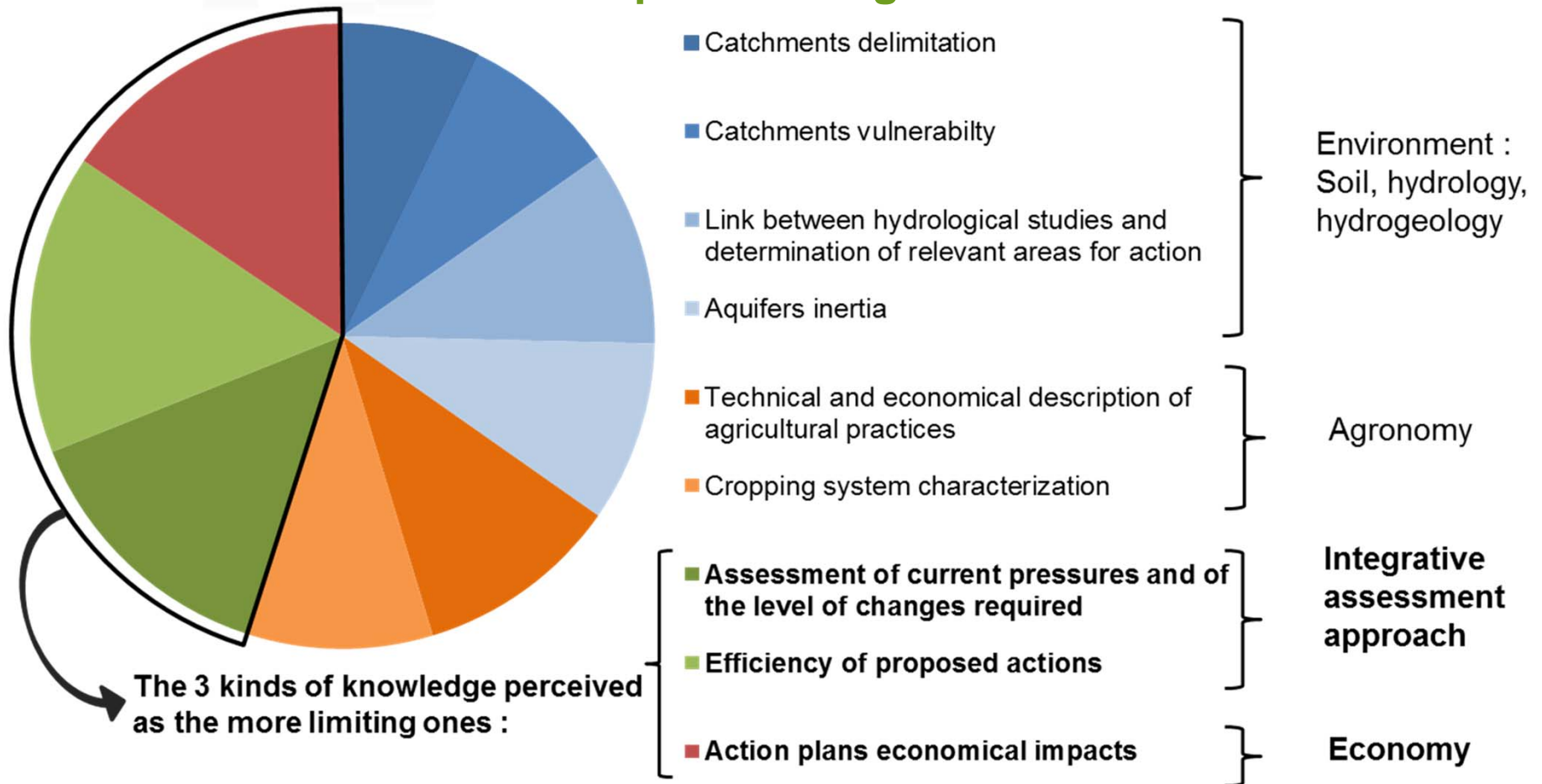


# Action plans

- ✓ A **majority of measures** are on nitrogen and pesticides management, are **based on regulations and/or agri-environmental measures**
- ✓ More ambitious and complementary measures can be **included, but without any support measure nor accurate objectives** for their implementation
- ✓ By the end, **action plans reflect a formal implementation of protection than a real search for efficiency** which could be based by
  - defining a relevant area for action
  - engaging in a reflection including social and economical issues
  - setting-up a consistent support scheme and accompanying stakeholders' organization

# Stakeholders and knowledge...

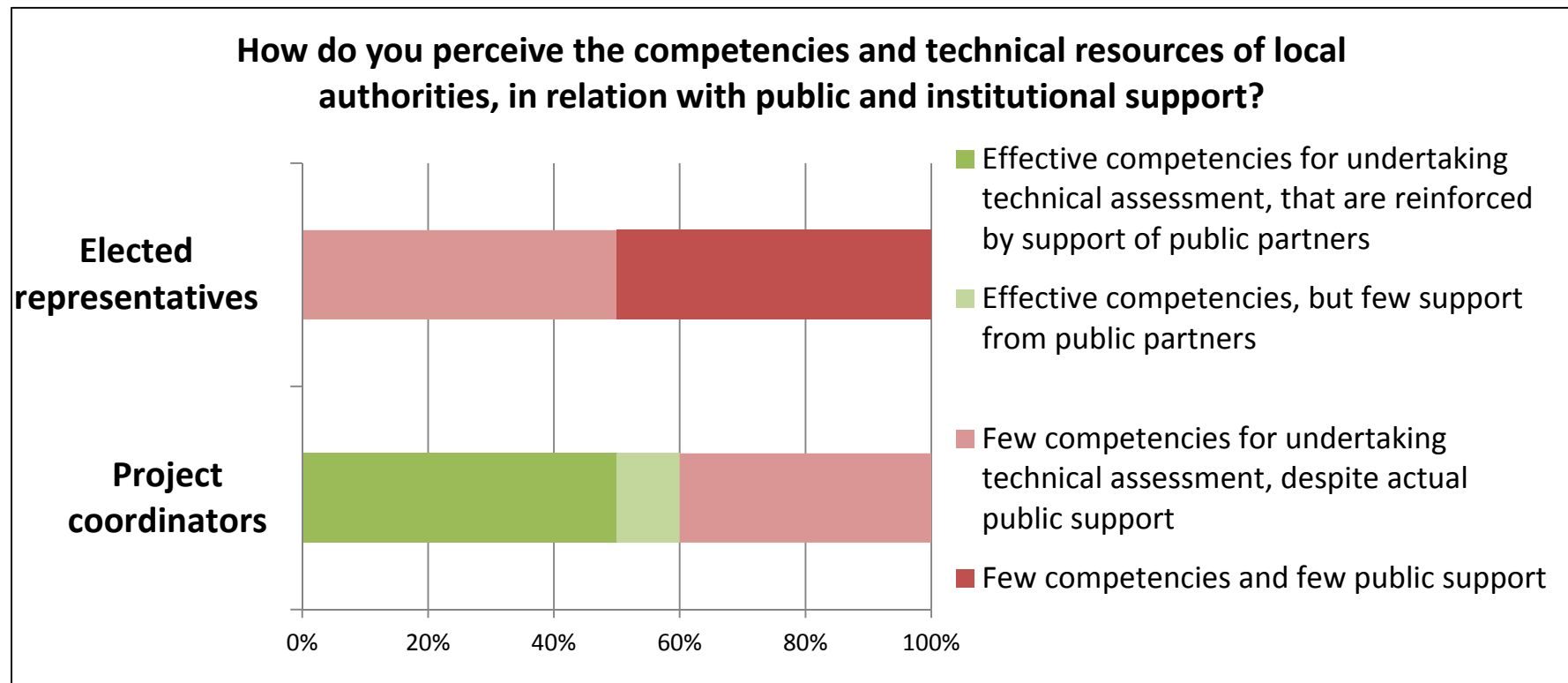
What is the more limiting knowledge for implementing protection approaches, they told us economical assessment, identification of required changes



# Role of actors

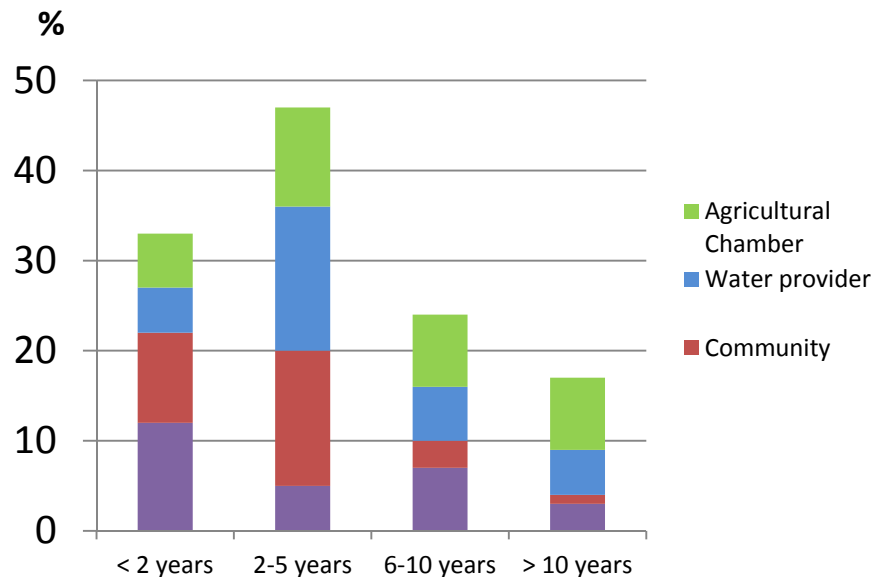
- Administrations **start the process of water protection**
  - Department and water agencies are key actors
  - Ambition is highly variable over France
- Consultants **are involved but do not decide**
  - Numerous have high skills in hydrology, hydrogeology... but not in agricultural sciences
  - Most of them are focus on « how to progress » than « how to be efficient ». Lack in pressure / impact approaches
  - ... and not always consulted in agricultural sciences
- Agricultural chambers **have a key role in technical choices** as they are often the only one actor on such skill

- Local authorities are generally responsible for the process without having all the required competencies
- Project coordinators support local authorities, mainly for leading the process, but they are generally too young to orientate the action plans



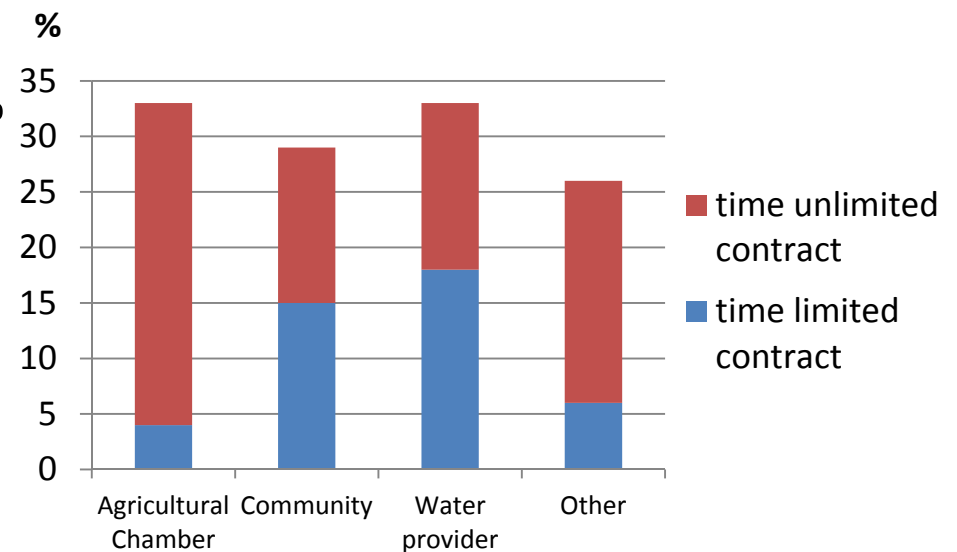


## Project coordinators



- 35% have a short fix term contract: 12% in agricultural chambers ; 50% in community and water providers
- A high proportion of them are included in a network (75%)

- 32 % have less than 2 years of experience
- More than 75% have a master level. But 25% have no knowledge in agricultural sciences

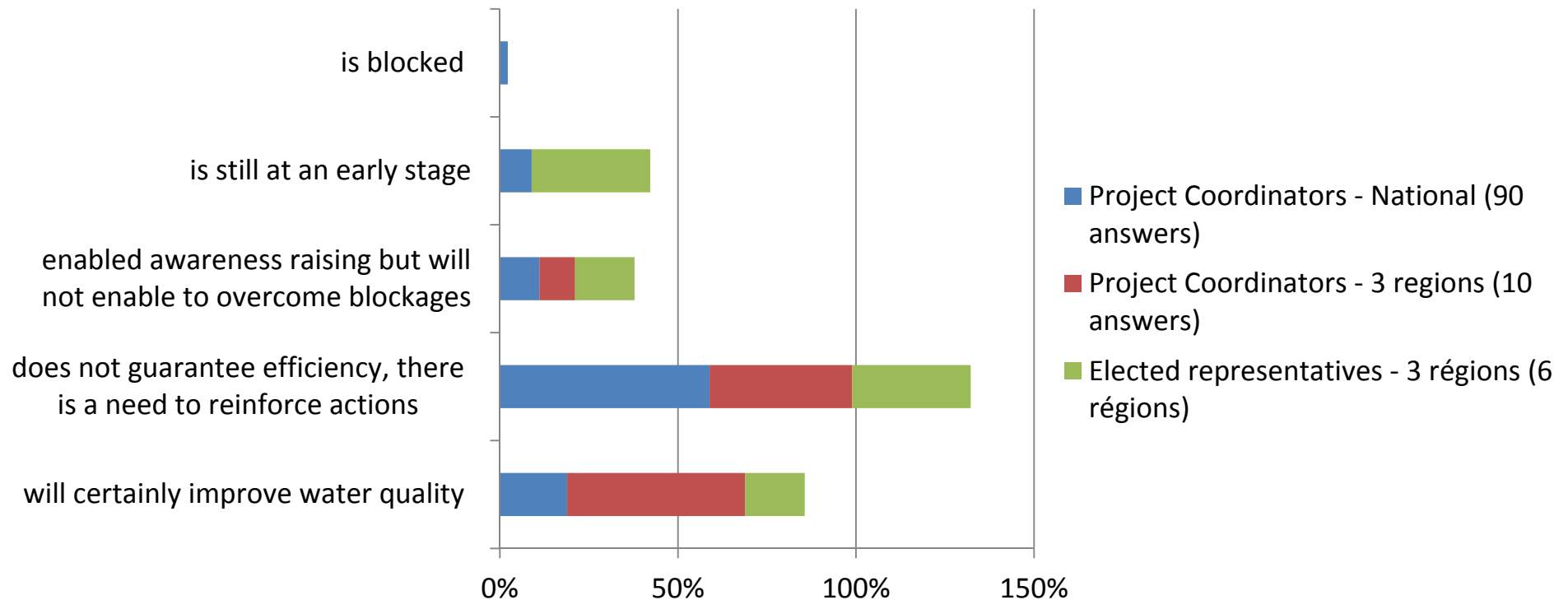


# Stakeholders and knowledge

According to the surveys undertaken at national scale, local authorities do not feel competent, nor legitimate for leading such formal and technical projects

Three profiles	Local factors	Consequences
« Passive » local authorities	<ul style="list-style-type: none"> <li>- Few concerns about water protection</li> <li>- Large catchments, many stakeholders</li> <li>- Small local authorities with limited means of action</li> <li>- Elected representative that do not feel responsible for water protection (historical context)</li> </ul>	<ul style="list-style-type: none"> <li>- Difficulties to set up an action plan</li> <li>- No knowledge mobilization</li> <li>- Departmental administrations and water agencies undertaking project management: weakening of local authorities' involvement and accountability</li> </ul>
Support of local protection approach but no search for an effective action plan	<ul style="list-style-type: none"> <li>- Few concerns about water protection</li> <li>- Elected representatives willing to set up an action plan but no concerns about its efficiency</li> </ul>	<ul style="list-style-type: none"> <li>- Very few knowledge mobilization</li> <li>- Project management by departmental administrations and water agencies</li> </ul>
Local authorities that aim at efficient actions	<ul style="list-style-type: none"> <li>- Urgent need of action for preserving threatened resources</li> <li>- Small catchments and few stakeholders involved</li> <li>- Elected representatives carrying a real political ambition for restoring water quality</li> <li>- Local authorities with available human resources</li> </ul>	<ul style="list-style-type: none"> <li>- Knowledge mobilization</li> <li>- Existence of a territorial and political project linked to water quality restoration</li> </ul>

## From your perspective, the approach ...



### is in the way to have a protection of water quality ...

- As the majority of project coordinators working for local authority are convinced of the approach soundness
- The majority of stakeholders think that current approach will not be sufficient and that it will be necessary to reinforce actions

## ✓ Needs of knowledge

### For local authorities

- Shed light on and support « the **urgency to act** » on catchments
- Show the **diversity of adapted solutions** for water quality protection

### For the global approach scheme

- Include an **assessment and follow-up disposal** at the very beginning of the project
- Integrate **changes of agricultural practices in a larger economic and territorial context**

## ✓ Needs of knowledge's mobilization

- **Translate knowledge** so that local stakeholders can appropriate it and decline it locally
- **Organize local debates** during which technical issues are discussed
- **Accompany project management and the set-up of a strategic debate**

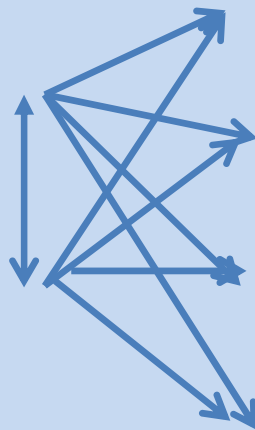
## ✓ Needs of networks' mobilization

- **Expand training offer** to strategic management, project efficiency, etc.
- **Produce feedbacks on ongoing projects** to show the diversity of approaches and to analyse the causes of success and failure

# Resource Center for protecting drinking water

**National level**

**Water Agencies  
& Region**



**Actors Networking (pilot sites, pilote tools,...)**

**Transfer Knowledge (reference, tools,...)**

**Information system (useful for actors)**

**Administrative and juridic assistance**

*Is there such experience in other countries ?*



## With the contribution of

### A committee of scientists and stakeholders :

Irstea, BRGM and Inra scientists

Drinking water providers

Water Agencies, Onema

Ministries of Agriculture and Environment

**Detailed results:** <https://colloque.inra.fr/captages/Rapport-et-presentations>

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## Thanks for your attention