Protection of drinking water catchments

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Fight against diffuse pollutions

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EUROPE-INBO 2017
21 september 2017
• 2017 : Setting up of a Ressource Centre by the French Agency for Biodiversity

• As part of this Resource Centre, the International Office for Water puts on line a web portal – May 2017

→ For the stakeholders involved in all water catchment areas issues.
  • Encourages the stakeholders networking
  • Centralizes and disseminates some resources (data, documentation, training, success stories...)

https://aires-captages.fr/
• Creation of specific sheet describing each **drinking water safeguard zones (DWSZ)** in France
  • From external databases
  • Directly entered by some of the portal’s users

• This web portal is linked:
  • To other websites in order to make the selection of useful documentation easier or training sessions

• This web portal will disseminate work carried out by the Ressource center and by numerous partners of this project (Research institution, French Ministry (agriculture, environment), local networks...).
News

AIUEUX SUR LE WEB

Captages protégés, eau potable préservée !
www.eau-min-minuse.fr - 23/08/2017

Protection de ressources en eau potable, vers une coopération renforcée entre les acteurs
www.ressources.eau-floue.fr - 28/08/2017

Les captages d’eau protégés à Corcieux
www.vosgesmat.fr - 24/09/2017

FORMATIONS - PROCHAINES SESSIONS

Pilotage de projet : l’organisation, la planification, l’animation
Organisée par CNRTP à Bordeaux (33)
11 SEP.

Faciliter les projets communs multi-acteurs
Organisée par Résoa à Paris
13 SEP.

DWSZ map

OFFRES D’EMPLOI

<table>
<thead>
<tr>
<th>Type d’emploi</th>
<th>Organisme</th>
<th>Annexe</th>
<th>Lien</th>
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<tbody>
<tr>
<td>Offre d’emploi</td>
<td>Symposium Rive verte Garlages campagne</td>
<td>Poste d’animateur : démarche de protection des captages prioritaires Garlages basses - Béziers</td>
<td>Disponible le 09/09/2017 - CIC 7 \n</td>
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<tr>
<td>Offre d’emploi</td>
<td>Symposia Arbois</td>
<td>Offre d’emploi</td>
<td>Disponible le 09/09/2017 - CIC 7 \n</td>
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Events

AGENDA

- 20 SEP. - Préservation des captages des pollutions diffuses : relais, acteur et outils - Gray (26)

- 03 OCT. - Association Rivière Rhône Alpes Auvergne : réunion du réseau animateurs agricoles - Fiset (38)

- 18 OCT. - PROTECTION DES CAPTAGES : Comment faire émerger et animer des initiatives agroécologiques ? - Buzane (21)

- 19 OCT. - Journée de l’UEA : protection des aires d’alimentation de captages - lutte contre les pollutions diffuses - Paris

- 21 NOV. - Atelier national APFCA/V2E : quelles démarches innovantes et transversales pour la protection des captages ? - Paris

Consultez les autres événements

Training courses

Jobs opportunities
DWSZ : French Web Portal

- In France, Web Portal, allow an individual monitoring of each DWSZ
Why a survey on drinking water protected areas? Why a presentation in Euro-INBO?

• Euro-INBO: A place for sharing and have discussion on water catchment problems
  • protection of water resources $\rightarrow$ protection of drinking water intakes
• With global warming, water is more and more precious
  $\rightarrow$ Important to protect and to improve quality of drinking water resources
• On the french web Portal: a lot of french success stories (>40) and it is important to have European success stories:
  • Are problems similar outside of France?
  • What are the solutions? Innovative solutions? Difficulties?

• Share success stories $\rightarrow$ will help to preserve valuable water resources
Why a survey on drinking water protected areas?
Why a presentation in Euro-RIOB?

• The International Office for Water put on line a survey before summer

1) We will present you first results
2) We will be asking you for:
   • Discussions on this subject (how is drinking water protected in your country?)
   • Helping us to disseminate this survey (for having new success stories)

More precisely : *drinking water protected areas*

| Description of the operation | • Title  
|                            | • Summary of drinking water catchment protection  
|                            | • Funding  
| Description of the territory + problematic | • Area (forest, urban area, main crops...)  
|                            | • Number of farmers  
|                            | • Main water pollutants  
|                            | • Population served  
| Enseignements | • Main results  
|                            | • Lessons and perspectives  
|                            | • Obstacles and difficulties  
| Stakeholders | • Technical partners  
|                            | • Financial Partners  
|                            | • ...  

Survey on protection of water catchment areas in Europe (1)
Survey on protection of water catchment areas in Europe (2)

• Some additional questions:
  • Water monitoring
  • Contacts
  • Pictures/documentation
  • History of the operation
  • …

The purpose of the subject:
  • Not Statistics
  • Success stories of concrete actions on drinking water protection

Share success stories between European actors
First results of the project

- Local projects
- General policy of the country
- French local project (Web Portal)
First results of the project

- WATERPROTECT Bollaertbeek
- Till Fell Sandstone Groundwater Body
- Drinkwater protection file Valtherbos/Noordbargeres
- The Drastrup project
- Global situation in Finland
- Reducing the pollution of the Black Sea
- Bordes’ DWSZ: a priority water intakes

Focus on 3 countries and comparison with French success stories
The Bollaertbeek feeds the drinking water supply for the city of Ieper (Ypres) but has **high loads of pesticides** during spring and summer to be used for drinking water production.

In the WATERPROTECT project, farmers, drinking water company, environmental administration and farmers' advisory centre are brought together in a **multi-actor approach**

- To discuss the problem
- To develop a targeted monitoring approach
- To select suitable best management practices and mitigation measures
- To get these implemented in the catchment developing new water governance approaches.

A software tool is developed to visualise the concentrations and risk zones in the area and help in making decisions on new measures.

**Territory:** Mix of urbanised area (villages) and agriculture (81% of the area); agriculture is mainly arable land (maize, potatoes, cereals) and grassland,
The Environment Agency and Northumbrian Water are working in partnership to **identify the sources of nitrate contamination** to the Till Fell Sandstone **groundwater body**, 

Currently nitrate concentrations in the recharge area of the aquifer exceed the drinking water supply. This puts public water supply abstractions at risk - concentrations of nitrate at the public water supply boreholes are **currently below the drinking water standard**.

We are working together to **reduce the infiltration of N** from **agricultural practices** on this highly vulnerable aquifer.
The Drinking Water Protection File (DWPF) identifies necessary measures needed per water abstraction site.

The Protection File is part of the Dutch national EU-WFD implementation strategy, intended to improve the protection level of groundwater resources.

One of the DWPF is the file for the abstraction in the city of Emmen, named Valtherbos/Noordbargeres.

Population served: 175,000

Water Pollutants: Pesticides, nitrates, heavy metals

20-30 farmers

 Territory: a sandy area with short travel times from the surface towards the drinking water wells. Recharge area 10% urban, 25% forest, 65% Agricultural use (mainly arable: potatoes, sugarbeets, cereals)
Bordes’ DWSZ: a priority water intakes

- Bordes’ DWSZ belongs to different drinking water intakes close « gave de Pau ». These different drinking water intakes have a problem of water. This territory has an important **agricultural activity** and a **lot of people live in these areas** (city of Pau, city of Lacq . . . ). The action plan launched actions for all these people before DWSZ designation.

- Project is not finished, more and more **agricultural stakeholders** (agricultural cooperatives) are engaged
Other responses received:

• **Conversion of land use**, from intensive farming and active quarries to forest, fallow and extensive grazing.

• Reducing the pollution of the Black Sea by introducing **sustainable wastewater** and **nutrient management** in Rural Georgian Communities.

• Drinking water catchments are protected against diffuse pollution (and other risks) with **precise legislation**. Description of the legislation and description of **Groundwater protection plan** and **Water Safety Plans**.
## Stakeholders involved

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<thead>
<tr>
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<th>Private company</th>
<th>Farmers</th>
<th>Agencies</th>
<th>Research Center</th>
<th>Association</th>
<th>Public structure</th>
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<tr>
<td><strong>Belgium</strong></td>
<td>De Watergroep</td>
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<td>VMM</td>
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<td><strong>United Kingdom</strong></td>
<td>Northumbrian Water*</td>
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<td>Environment Agency*</td>
<td>National Environmental Research (NERC)</td>
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<td><strong>Netherlands</strong></td>
<td>Drinkingwater company, Royal Haskoning, Watercompany</td>
<td>Farmers, Agricultural organisation</td>
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<td>Nature conservation organisations</td>
<td>Province Drenthe*, municipality Emmen</td>
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<tr>
<td><strong>France</strong></td>
<td>Chamber of Agriculture, farmers</td>
<td>Water Agence</td>
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<td>Water Organisation*, municipality Pau</td>
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* : project leader
Description of concrete actions

- Farmer interviews
- Spatially distributed 2-weekly monitoring
- Targeted high-resolution monitoring
- Establishment of catchment working groups
- Engagement with local farming community
- Soil sampling
- Septic tank maintenance awareness campaign
- Designated a safeguard zone
- PhD project to quantify N leaching and identify and trial practical mitigation measures
- Drinking Water Protection File:
- Program of measures
- Start Agricultural project
- Collection of old and used pesticides
French actions: some examples of actions in protection area

• Property (land):
  • Parcels of land exchange between farmers (Organic farmers and intensive farmer)

• Agronomy:
  • Demonstration of mechanical weeding (decrease the use of pesticides)

• Agricultural sector:
  • Assist in the implementation of new markets for farmers (avoid monoculture)
**Difficulties/Lessons**

**Difficulties**
- Explain why we have a problem with N
- Lot of time: Get stakeholders engaged. Bring partner in. Secure funding
- Most measures are voluntary. Financement
- Difficulties to determine exact geographic origin of pollutants
- Diverse socio-economic contexts
- Too soon

**Lessons**
- Important to speak with farmers and explain that they lost money
- Cyclical evaluation is a major improvement
- Individual support for farmers
- Too soon
Main questions:

Where?
- Public water supplies
- Boreholes within the catchment
- Soil water monitoring stations
- Catchment outlet
- Drinking water production

When?
- 2 weekly monitoring at 7 locations in the catchment
- High-resolution monitoring at 1 location

How to improve the monitoring?
- Monitoring wells to investigate and follow the ground water plumes of pollution
- Study started to a shallow early warning monitoring network, to be placed before 2020.
Conclusion

- Survey is still on line
- Success stories will be available on French Web Portal (aires-captages.fr)
- In France, Resource Center and web Portal web encourage: information exchange, data exchange, success stories exchange → to protect water resources
- At the European level, is it relevant to share success stories on drinking water catchment protection (fight against diffuse pollution)?
- We would like to take advantage of your presence here today to have your opinion on protection of drinking water intakes in your country?

• Do you know some similar success stories in your country?

What are the concrete actions in this success stories? Are they efficient? Priorities for some DWSZ?

→ Drinking water protected areas (fight against diffuse pollution)
In your country, what are difficulties to the implementation of actions?

What solutions do you have?
Is there a political action?
• What is the perception of agricultural stakeholders?

Are farmers involved from the beginning of the project?
Many thanks for your help and your attention

- Have you some contacts who could be interested in this survey? (In the room you have a sheet) (Your name, your contact ont this subject, e-mail, country, name of the success story)