



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
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Département fédéral de l'environnement,  
des transports, de l'énergie et de la communication DETEC

Office fédéral de l'environnement OFEV

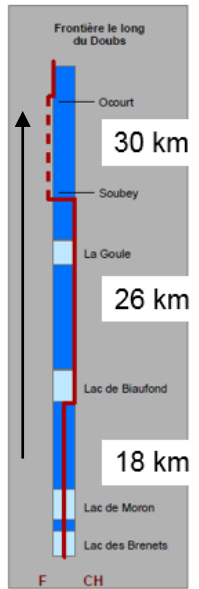
# Swiss National Action Plan for the Restoration of the River Doubs

**38th Standing Committee meeting of the Bern Convention  
Strasbourg, 27 – 30 november 2018**

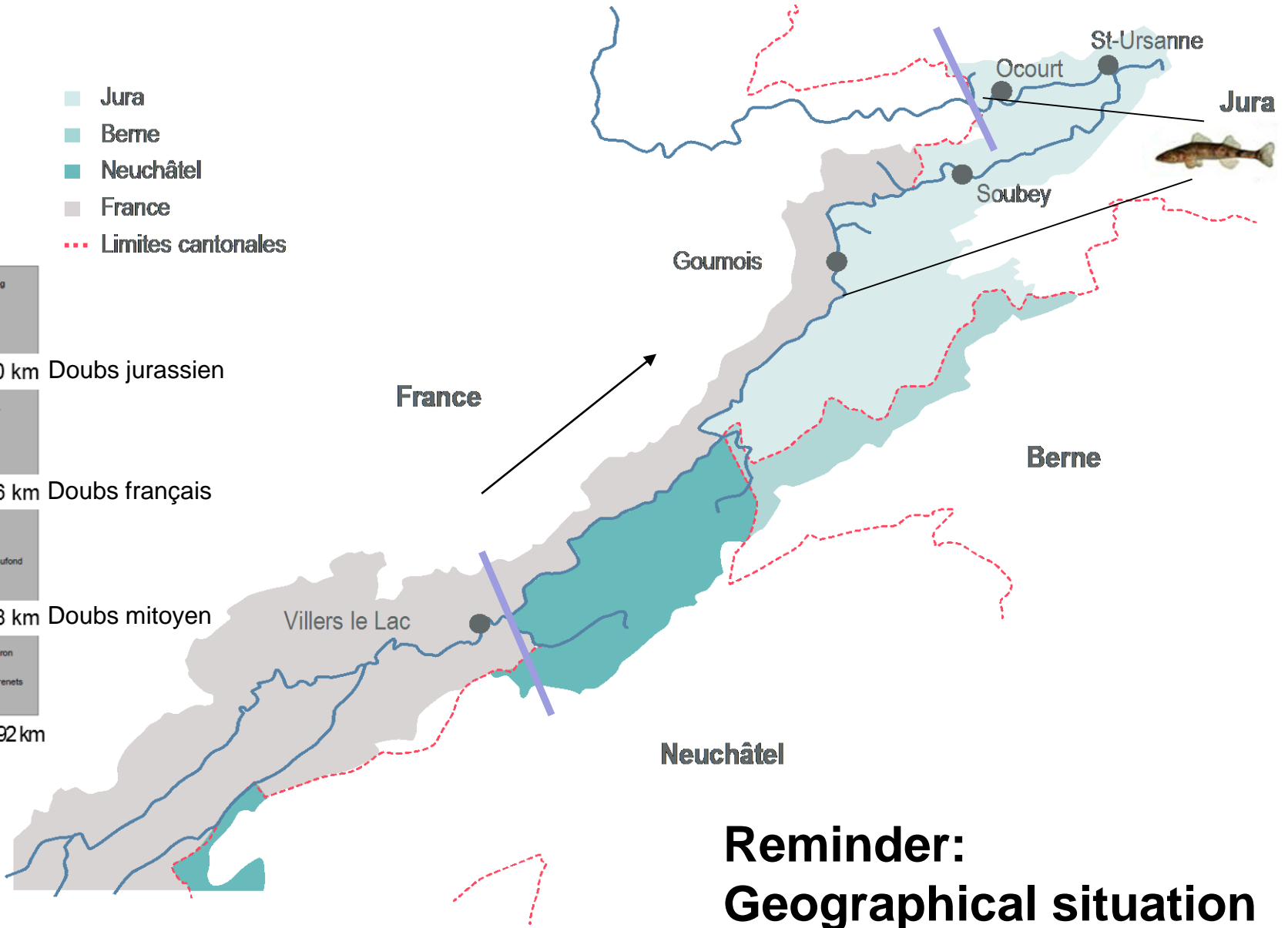
Photo: Aquarius



- Jura
- Berne
- Neuchâtel
- France
- Limites cantonales



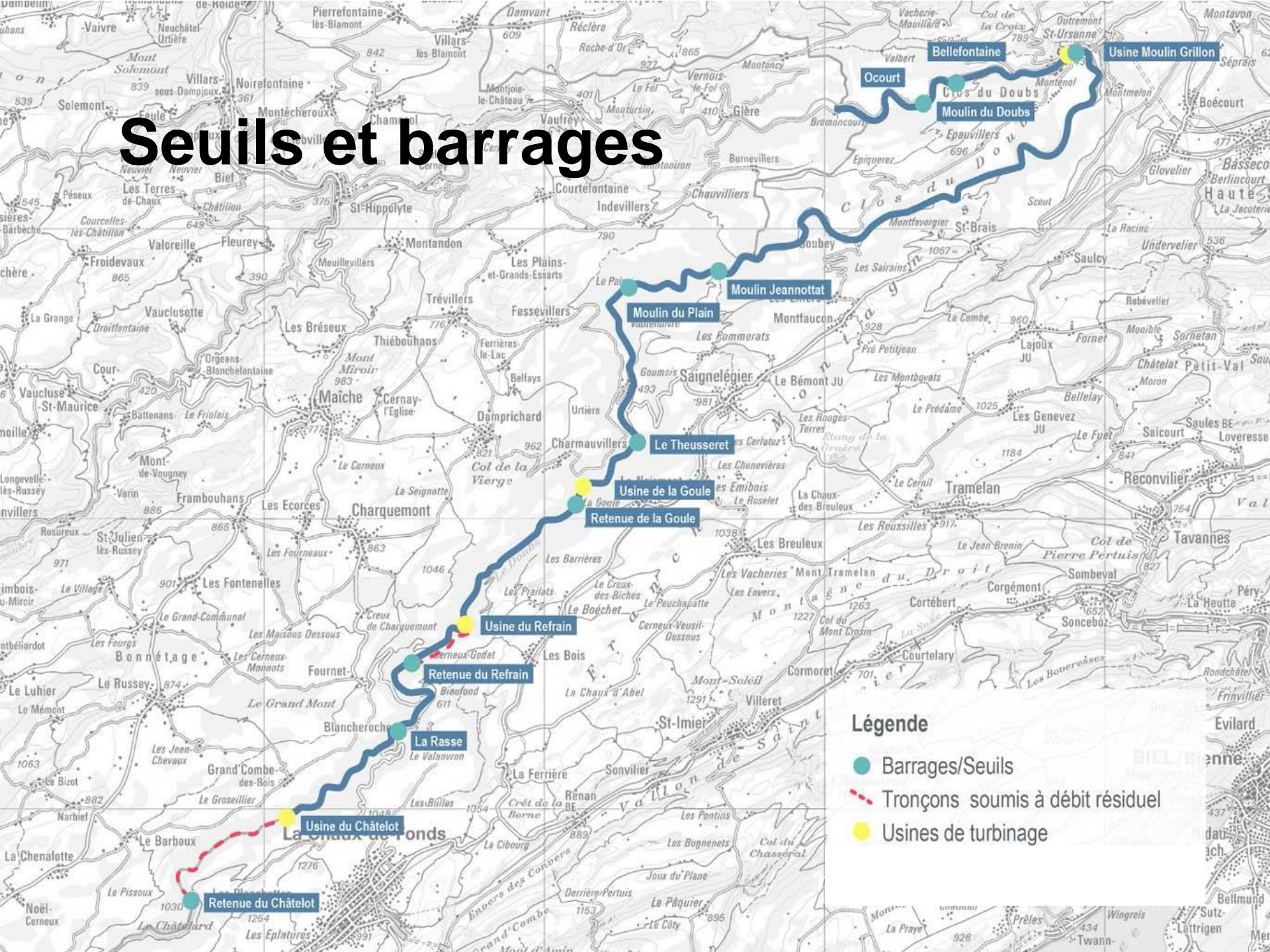
Haut-Doubs: 92 km



**Reminder:  
Geographical situation**



# Seuils et barrages





# Swiss National Action Plan

Response of the Swiss Confederation and cantons NE and JU to the 14 points of the recommandation No 169 (Bern Convention)

## Main Objectives

- To restore the functions of the Doubs ecosystems (frontiers and Jura) and to conserve the typical biocenosis of the Doubs and its tributaries
  - Long term conservation of the apron
- Global and pragmatic approaches
- Measures decided at international and national levels





# General Device

→ One Action Plan = Two Documents

<http://www.bafu.admin.ch/publikationen/publikation/01826/index.html?lang=fr>

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## Plan d'action national en faveur du Doubs Démarche générale

Réponse à la recommandation N° 169 du Comité permanent de la Convention de Berne  
Avec la collaboration des cantons de Neuchâtel et du Jura et de l'Office fédéral de l'énergie (OFEN)



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## Plan d'action national en faveur du Doubs Catalogue de mesures

Réponse à la recommandation N° 169 du Comité permanent de la Convention de Berne  
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## Plan d'action national en faveur du Doubs

### Démarche générale

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Réponse à la recommandation N° 189 du Comité permanent de la Convention de Berne  
Avec la collaboration des cantons de Neuchâtel et du Jura et de l'Office fédéral de l'énergie (OFEN)



# General Approach

- Legal context
- Implementation strategy
- Current situation
- Pressure on natural environments
- Organization

## 6 strategical axis:

- Hydrological Regime (100)
- Physico-Chemical Water Quality (200)
- Ecomorphology, Connectivity of the aquatic Habitats (300)
- Natural Habitats, Connectivity and Species (400)
- Research and Monitoring (500)
- Communication (600)

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## Plan d'action national en faveur du Doubs

### Catalogue de mesures

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# Catalog with a list of concrete measures for each strategical axis

**Catalog 2016** → 22 measures

**Catalog 2017** → 18 measures  
(since 2016: 7 realized, 3 new ones)

**Catalog 2018** → 21 measures  
(since 2017: 3 new ones)

**Measures are discussed in  
an advising board**



# Advising board



- Federal authorities (OFEV, OFEN)
- Cantonal authorities NE + JU: Water Protection, Nature & Landscape, Fisheries, *Agriculture in 2019 (?)*
- NGO (WWF – ProNatura – FSP)
- PNRD

## Tasks

- To accompany the implementation process
- To advise the authorities by the implementation
- To propose new measures
- To promote the exchange of information
- To ensure the same level of information between the different partners
- To check the progression of the action plan





# Work in progress



## → Measures achieved

**101:** New «*Water Reglement*» regulating three hydroelectric plants **in force**

**201:** Improvements of different sewage treatment plants (STEP) in NE and JU

→ **Technical adaptations** of different wastewater treatment plants (Saignelégier, Epiquerez)

→ Equipment for a **micropollutant treatment** stage in Chaux-de-Fonds (budget accepted in 2018)

**202:** Improvements of the connecting systems of wastewater in NE and JU

→ Planification plan and connecting systems (Epauvillers, Saint-Ursanne, Montmelon, Seleute)

**203:** Assessment of the flux of pollutants in the River Doubs

→ **Priorities identified** based on a modelisation

**204, 206, 207:** Permanent survey of the water quality

→ Fixed station in Ocourt and mobile station, both **in operation**

→ **New station NAWA** on the Doubs (entrance of the system)

**302:** **Restoration** of 5 tributaries of the Doubs



## → Measures achieved

**502, 503:** Genetical analysis of the apron

- Genetic structure of the Doubs population is known
- e-DNA as a new identification method

**601:** Advising board **in operation**

**602:** Documentation about the apron

- DVD and CD, different material for school, exhibition.... **available**

**603:** Communication and sensibilisation by the local population

- Flyer on the «Réserve cantonale du Doubs» **available**

**604:** Preventive measures to assure good health of the aquatic fauna

- Flyer of good practice **available**





## → Measures implemented and in progress



**102, 103:** Monitoring new «*Water reglement*» (temperature, discharge, stranding, spawning of trout and grayling, electric fishing) and measures hydropeaking T2

**201:** Improvements of different sewage treatment plants in NE and JU  
→ Further improvements (for exemple Le Locle)

**202:** Improvements of the connecting systems of wastewater in NE and JU  
→ Further improvements

**205:** Project Chlorokarst → Detection program of HCC will start in 2019

**301:** Enough space for the river

**303-304-305:** Restoration of the fish migration at three obstacles

**402:** Management plan for three alluvial zones of national importance

**403:** Base for the implementation of an ecological infrastructure

**501, 504:** Monitoring apron → continuation of the program

**605:** Action plan tourism and nature → program 2016-2020





## → Measures in «stand by»

**306:** Restoration of the tributary Ruisseau du Moulin

**401:** Emerald management plan «*Clos du Doubs*»





→ Implementation of measures on a good way

→ Collaboration with NGO established

..... **BUT**.....

→ Situation of apron remains in a critical stage !

## Monitoring de l'apron (*Zingel asper*, L.)



## 501 Monitoring apron

Situation followed since 2000.

Results 2018 → only one individual observed

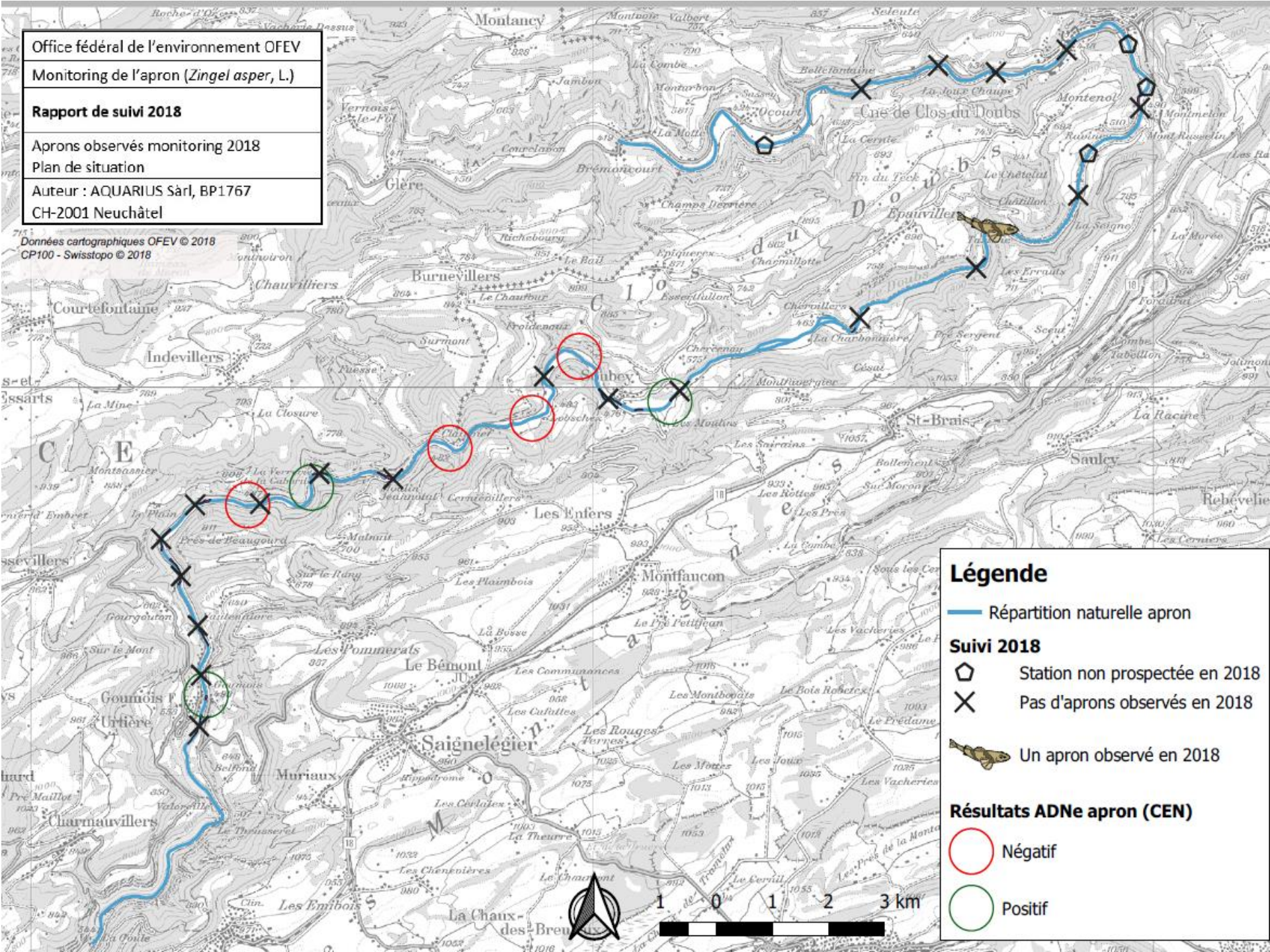
Evolution since 2000 → trend toward extinction has not been stopped !

Rapport de suivi 2018









Office fédéral de l'environnement OFEV  
 Monitoring de l'apron (*Zingel asper*, L.)  
 Rapport de suivi 2018  
 Aprons observés monitoring 2018  
 Plan de situation  
 Auteur : AQUARIUS Sàrl, BP1767  
 CH-2001 Neuchâtel

Données cartographiques OFEV © 2018  
 CP100 - Swisstopo © 2018



### Légende

-  Répartition naturelle apron
- Suivi 2018**
-  Station non prospectée en 2018
-  Pas d'aprons observés en 2018
-  Un apron observé en 2018
- Résultats ADNe apron (CEN)**
-  Négatif
-  Positif



## Synthèse du monitoring de l'apron du Doubs Efficacité de prospection et nombre d'individus observés

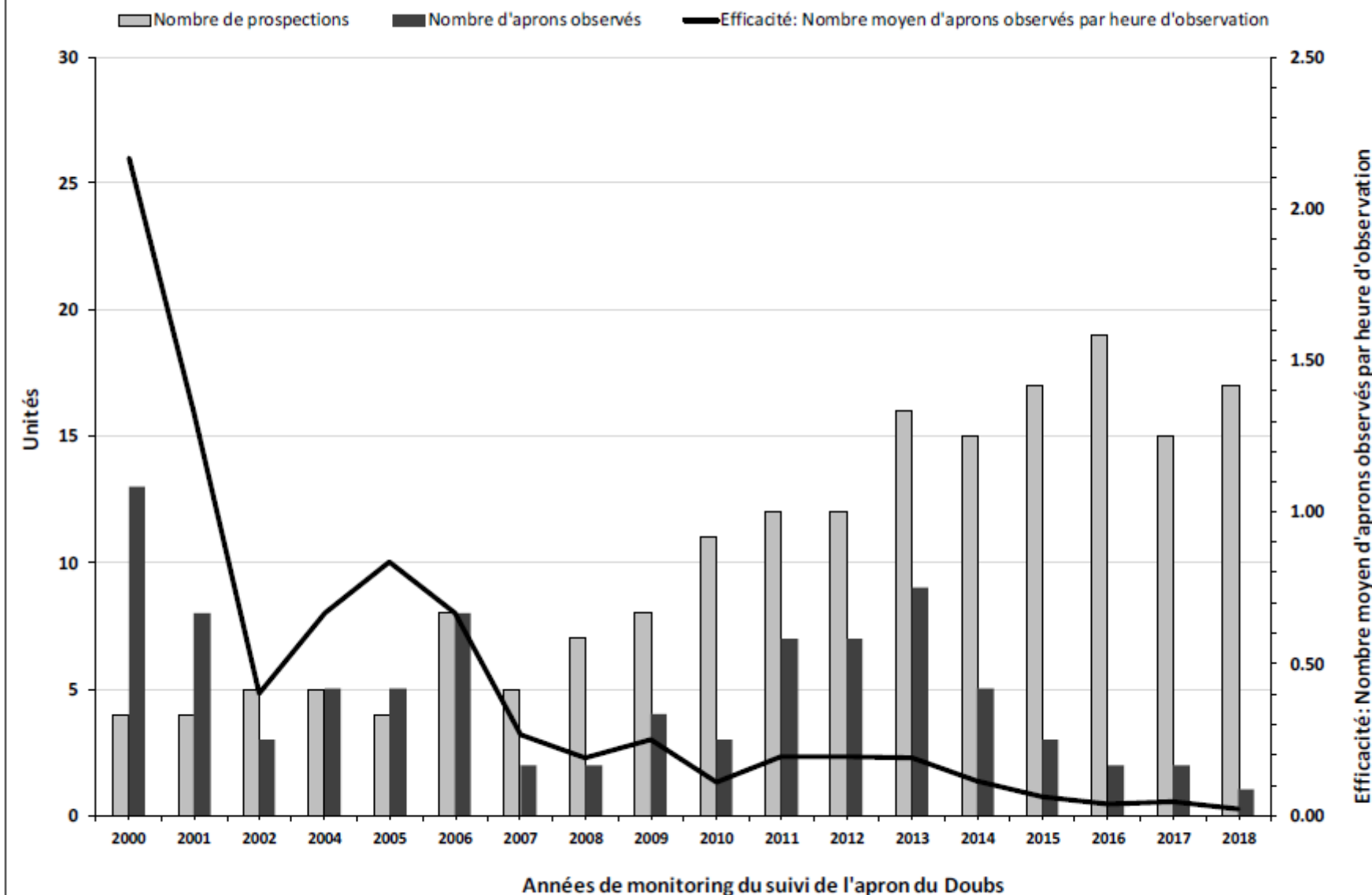


Figure 1 : Effort de prospection/résultats des observations d'apron pour la période de monitoring 2000-2018 pour le Doubs jurassien.



# Perspectives

Are new measures needed ?

- 2019: Workshop on the topic «agriculture» to be organised with the advising board
- 2019: Integration of cantonal services for agriculture in the advising board
- 2019: Specific «agricultural measures» to be discussed with the advising board



An underwater photograph showing a fish resting on a rocky riverbed. The water is clear, and the rocks are covered in green algae. The fish is positioned horizontally, facing left. The text "Thanks for your attention" is overlaid in white at the bottom of the image.

**Thanks for your attention**