APPORT project :

A common cross-border risks cartography for emergency planning in civil security

Aide à la Préparation des Plans Opérationnels des Risques Transfrontaliers

A. KHEFFI,
Project Engineer

AM-FM GIS Belux Seminar : « Geo and Emergency Management »

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Summary

I. APPORT Project

1. Main purpose

Helping for more operational plans for

cross-border civil security, between

North of France and Belgium

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Why ?

- No State border can stop disaster effects
- No legal and practical frames for common cooperation for cross-border risk management, except for major disasters (Helsinki's Convention and others cooperation agreements)

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Source : RTBF

07/09/2015 : Smokes from Clarebout Patatoes plant fire (Nieuwekerke, West-Vlaanderen), escaping towards France

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Source : Krant van West-Vlaanderen

07/09/2015 : Smokes from Clarebout Patatoes plant fire (Nieuwekerke, West-Vlaanderen) – Cooperation of Flemish, Walloon and French Firemen

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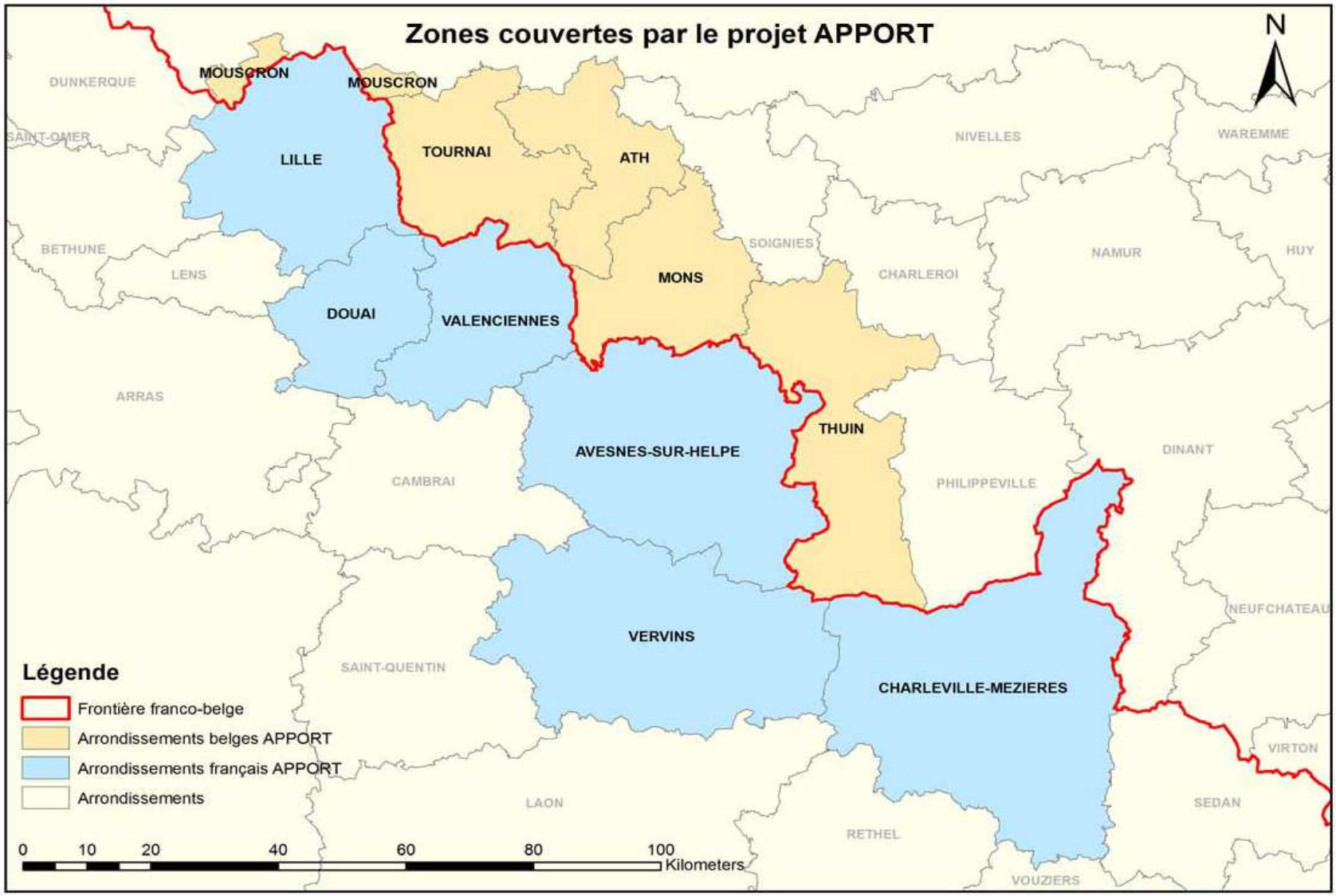
Source : RTBF

31/07/2004 : Major disaster of Ghislenghien, Hainaut

2. Project partners

Governor of Hainaut Province (B)	Executive Chief partner
RPA Hainaut Sécurité (B)	Administrative chief partner
EMIZ Nord - Staff of the North Defence Zone (F)	Partner
DREAL - Regional Ministry for Environment, Housing and Land occupation – Nord/Pas-de-Calais (F)	Partner
ISSeP – Walloon Scientific Institute (B)	Partner
Services of Hainaut Province (B)	Partner
SPW - Walloon Ministry (B)	Partner
SDIS 59 (F)	Associated partner

3. Project Area



4. Project actions

1) Inventory of cross-border technological risks

Publication of the cross-border technological risk Handbook (30/11/2011) :

- *Industrial plants*
- *Transportation of dangerous matters*
- *Pipelines*

2) Management of cross-border technological risks

2. Project actions

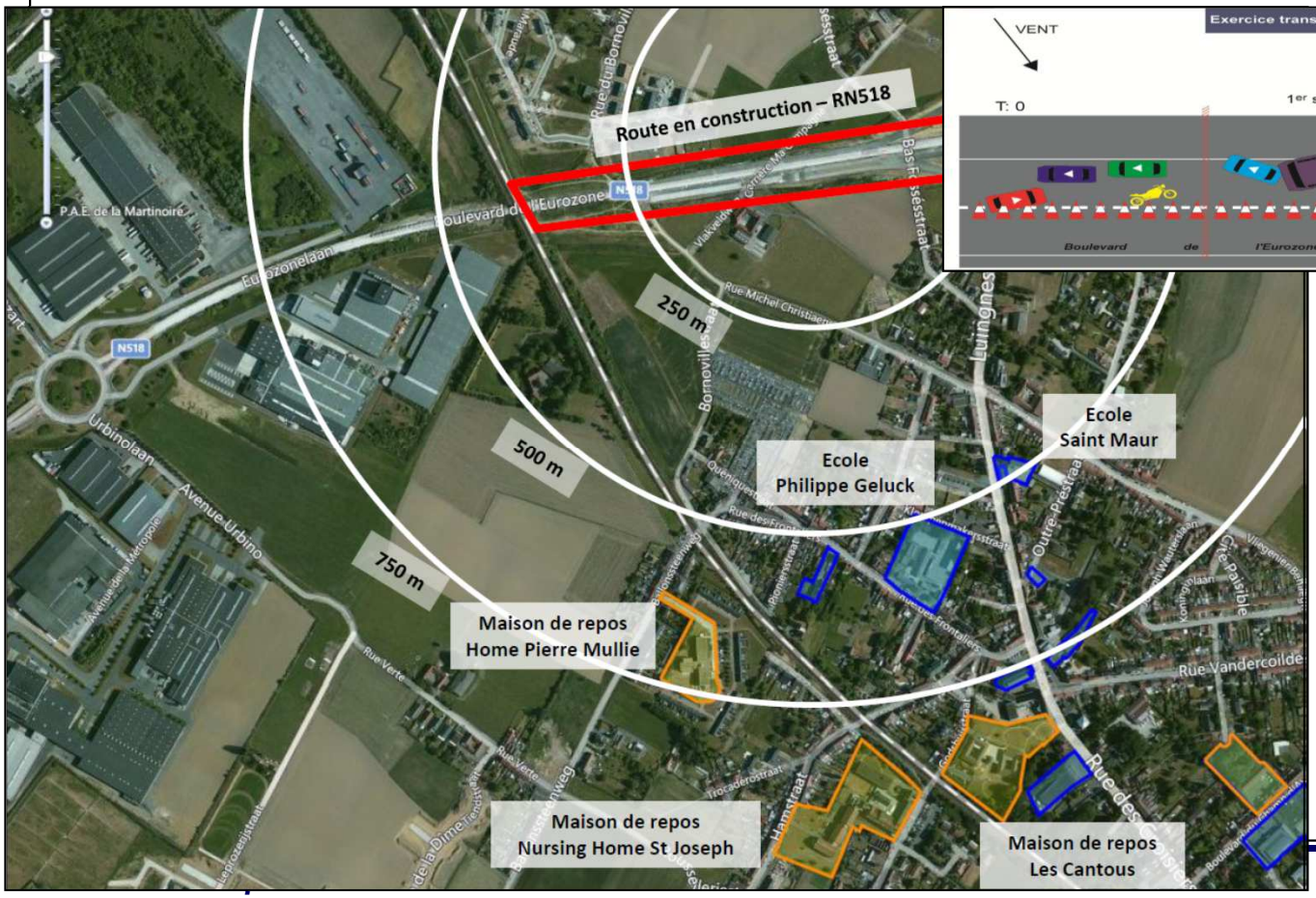
3) Cross-border parts included into emergency plans

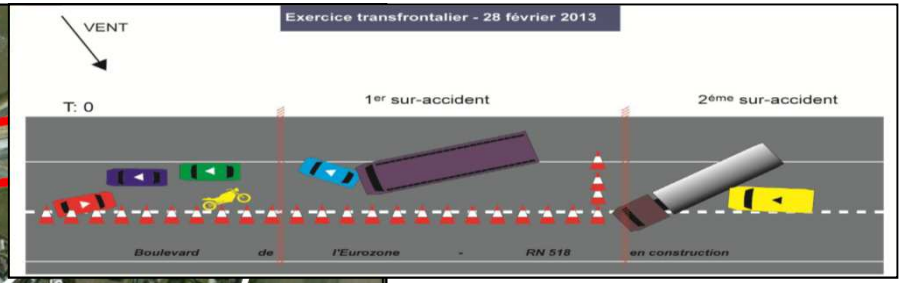
- Coordination of French and Belgian emergency decision-making schemes
- New French and Belgian coordination team
- ….

2. Project actions

4) Operational coordination between French and Belgian firemen : real-scale cross-border disaster practice

28/02/2013 : simulation of road accidents, occurred in Mouscron





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- I. APPORT Project -

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Institut scientifique de service public
Métrologie environnementale
Recherche - Analyses
Essais - Expertises

Apport
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INTERREG IV
France • Wallonie • Vlaanderen
Interreg efface les frontières
Interreg doet grenzen vervagen

EUROPEAN UNION
European Regional Development Fund

Wallonie

2. Project actions

5) Awareness campaign and APPORT results continuity

Common training programmes for emergency situation management

II. Evaluation of cross-border technological risks

1. Methodology

- **Inventory of cross-border technological risks :**
  - Industrial plants, assumed as hazards
    - **Major assumption : only SEVESO plants, settled in Nord (F) and Hainaut (B)**
  - Sensible and busy buildings as potential targets
  - Inhabitants census in the cross-border area, as targets
  - Main dangerous matters transportations (trucks, wagon, pipelines)

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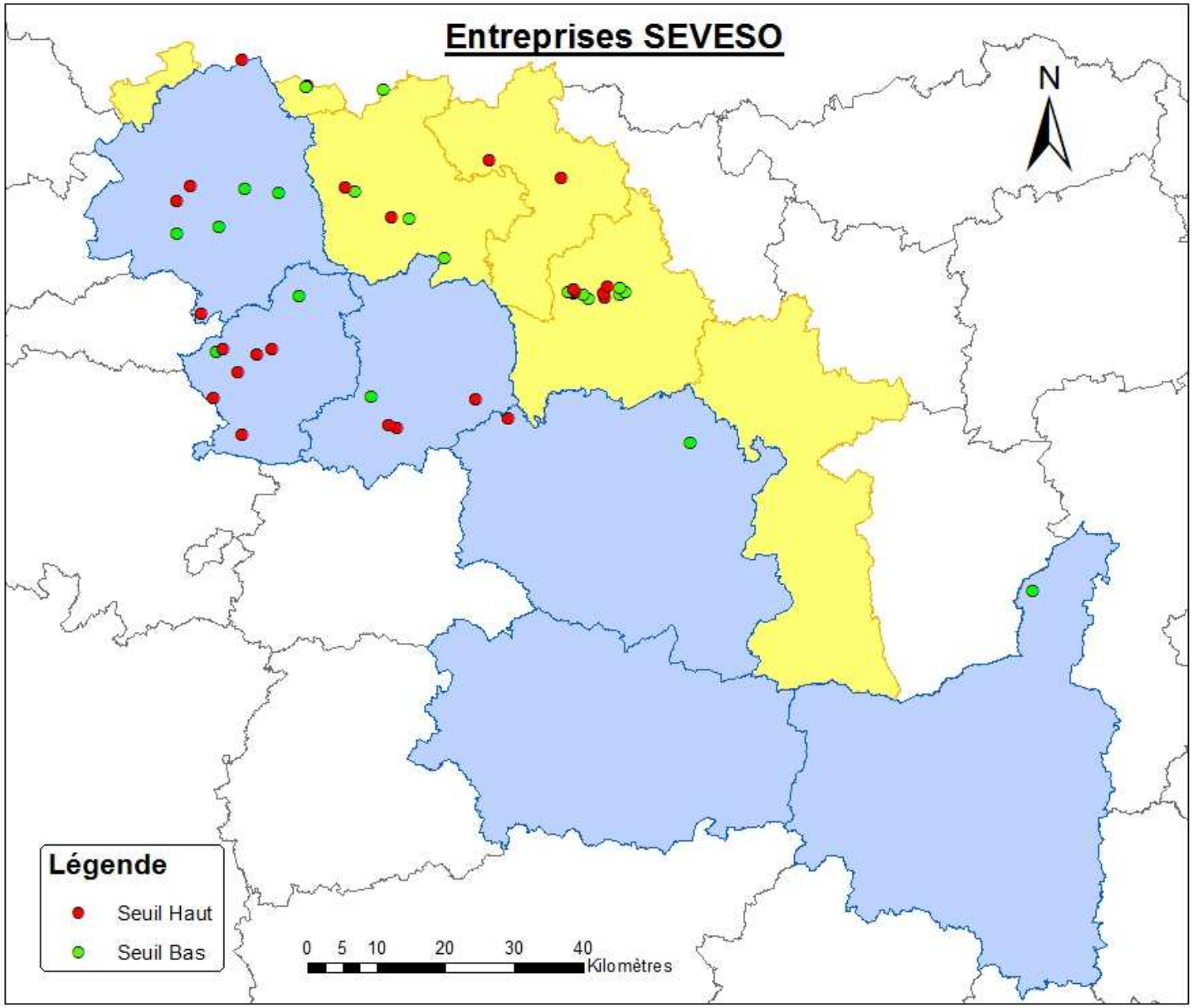
- II. Evaluation of cross-border technological risks -

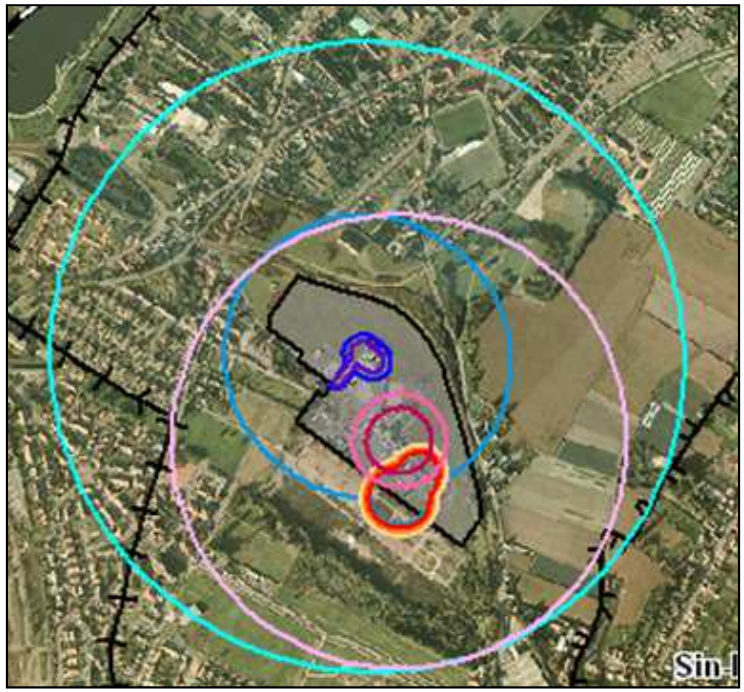


1. Methodology

- **Definition of effects areas from technological hazards :**
  - Studies
  - Security reports from the exploitation permit allowance
  - Numerical modeling

3 effect types :

- Thermic
- Toxic
- Pressure explosion and ejections



1. Methodology

- **Common definition of cross-border technological risks :**
  - Comparison between French and Belgian Laws, permit types,… ;
  - Comparison between the risk analysis methods.
  - …

Example :

Comparison between French and Belgian non-SEVESO industrial plants classification :

France	Belgique
Autorisation avec Servitudes	
Autorisation	Classe 1
	Classe 2
Déclaration (D ou DC)	Classe 3

1. Methodology

- **Planning of mutiple scenarios of potential disasters**
  - Assumptions for truck transporting dangerous matters
  - Domino ‘s effect
  - …

↳ **To a common tool mapping cross-border technological risks and used for emergency planification**

III. Data collecting and management

1. Data collecting

- **From Ministries (SPW, DREAL,…) :**
  - Industrial plants and associated effects
  - Main dangerous matters transportation
  - Reference land Cartography (PICC, BD ADRESSE,…)
  - Population census and spatial distribution
- **Governor's Services, EMIZ Nord, French and Belgian firemen:**
  - Risk analysis methodologies
  - Location of sensitive buildings and vulnerability assessment
  - Location and availability of emergency equipments

2. Data management

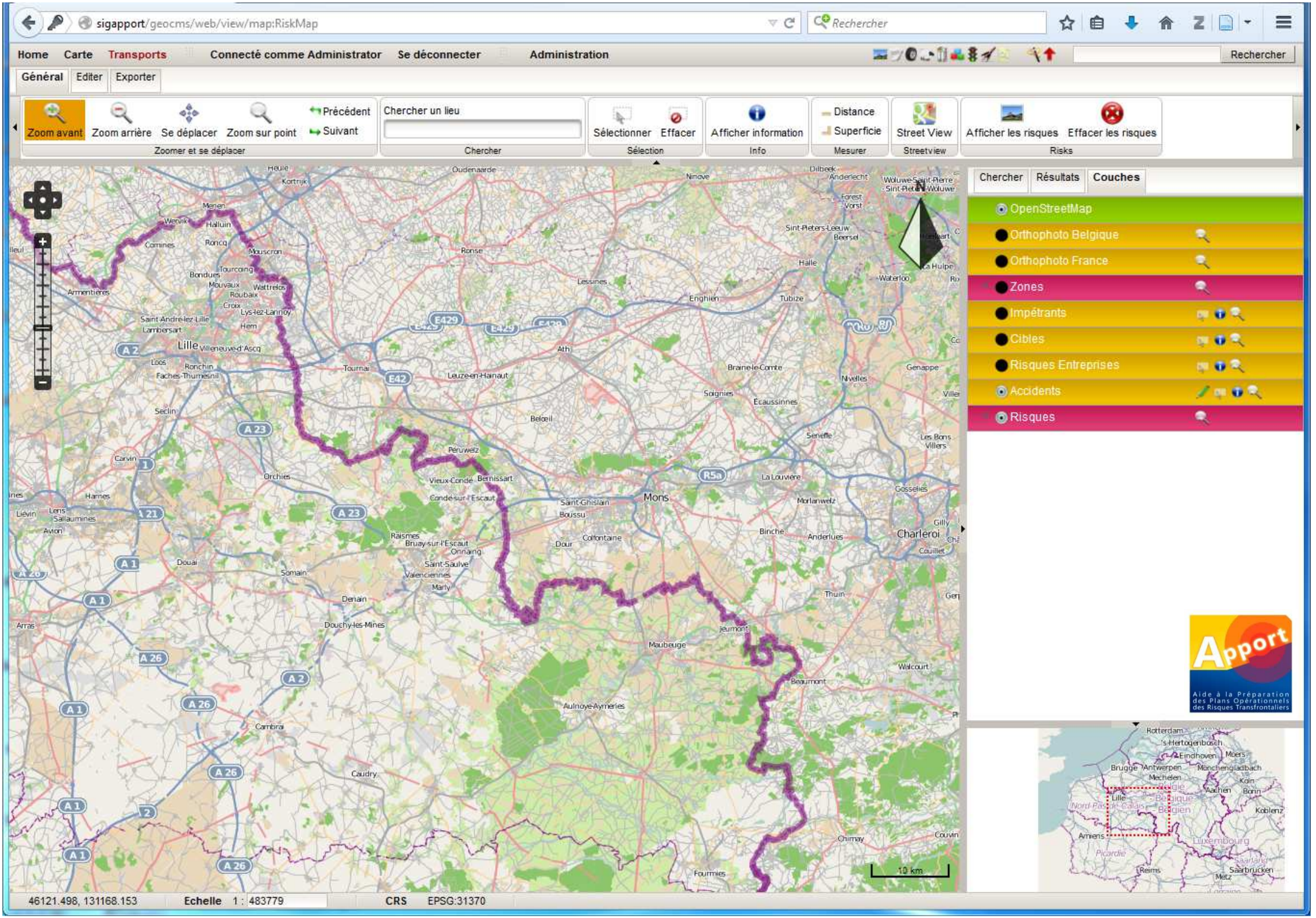
- **Spatial projection reference**
  - Lambert 72 for Belgian data
  - Lambert 93 for French data

- **Attribute tables**
  - No common field
  - No common list

IV. Building a common tool mapping cross-border technological risks

1. Technical Features

- **Common tool as a Web-GIS with secured access**
- **Enhanced by GIM, from the GeoCMS system**
  - PostgreSQL/PostGIS geodatabase
  - GEOSERVER cartographic server
- **Data**
  - Mainly recorded into the PostGIS database
  - OpenStreet Map (OSM) as topographic reference map
  - Use of WMS services for some reference data (orthophoto)
- **Spatial processing tools:**
  - Calculation of potential targets and impacted inhabitants settled into effects hazard areas
  - Creating of new disasters and effects (dangerous matters trucks)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Zoomer et se déplacer
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Chercher
Sélectionner
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Afficher information
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Apport
Aide à la Préparation des Plans Opérationnels des Risques Transfrontaliers
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Tournai
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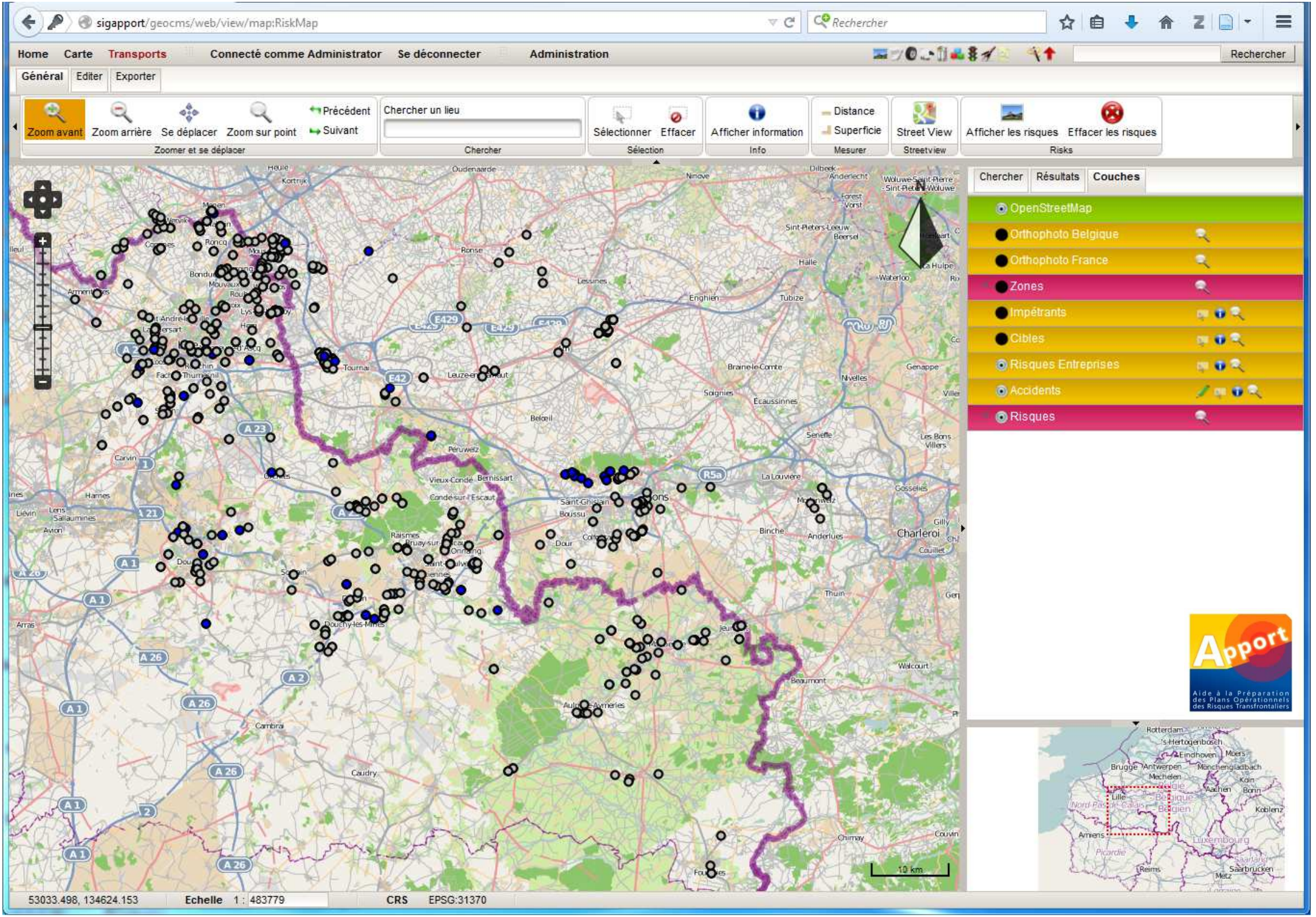
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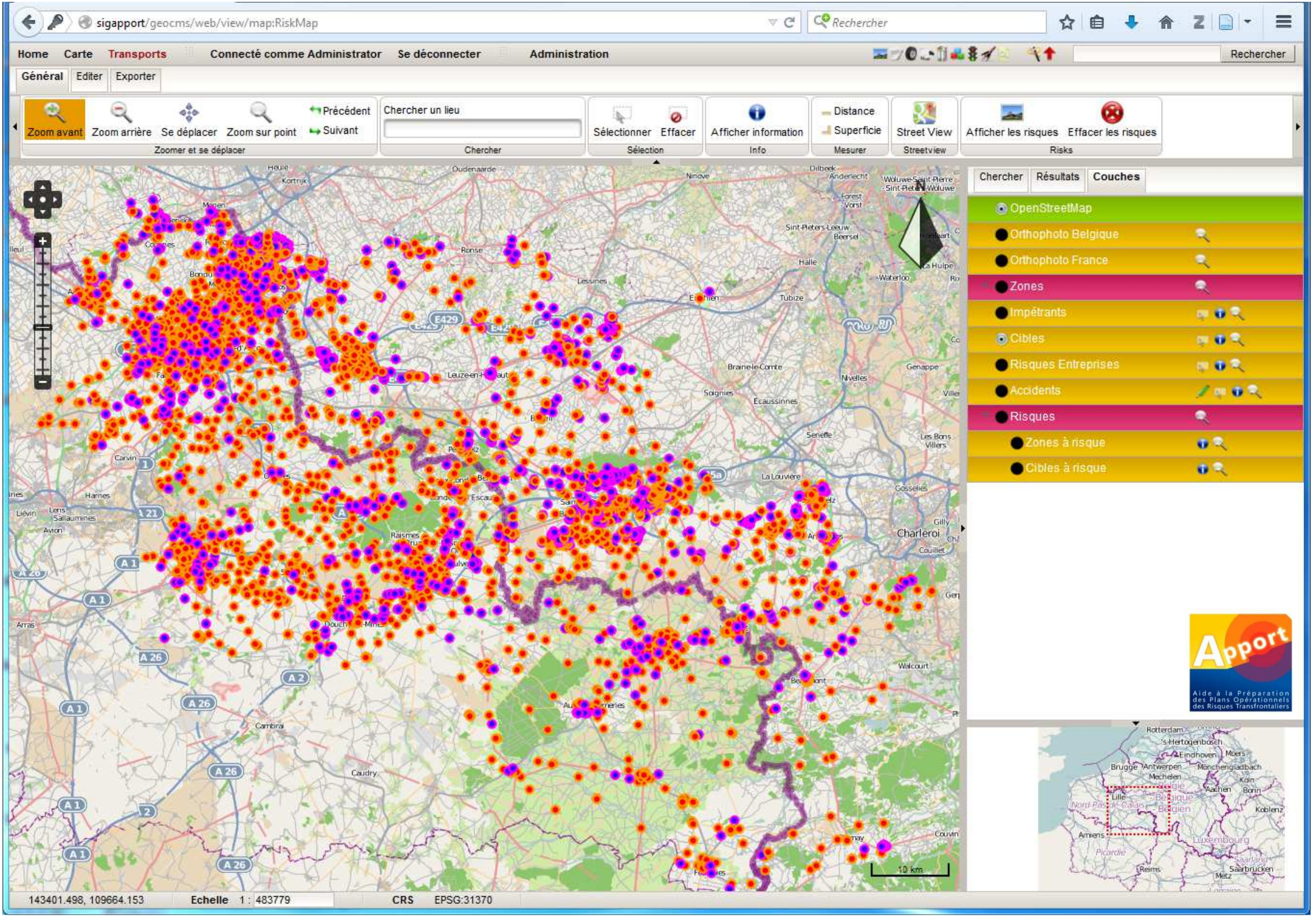
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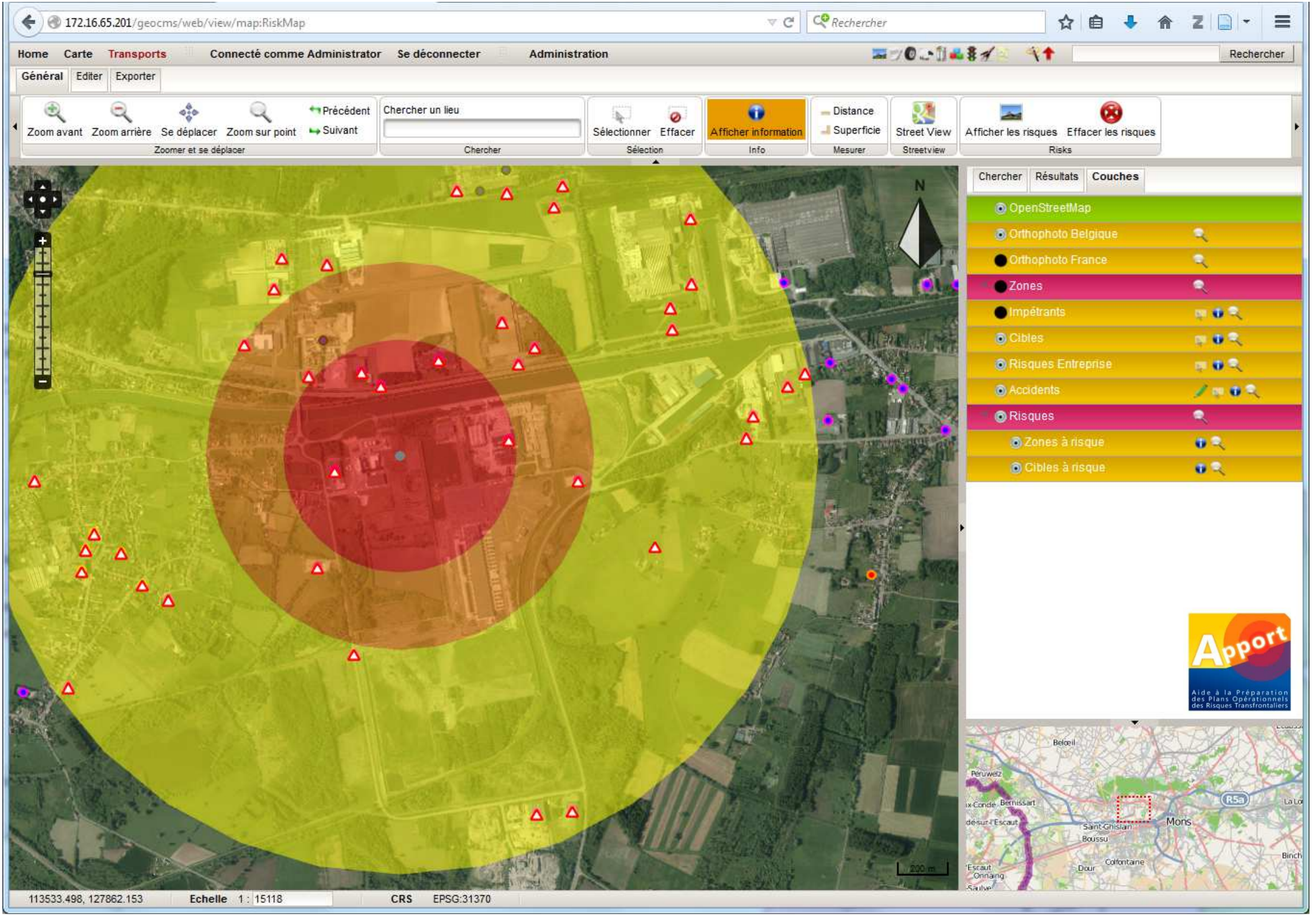
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Cibles à risque
Apport
Aide à la Préparation des Plans Opérationnels des Risques Transfrontaliers
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Péruwelz
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Saint-Ghislain
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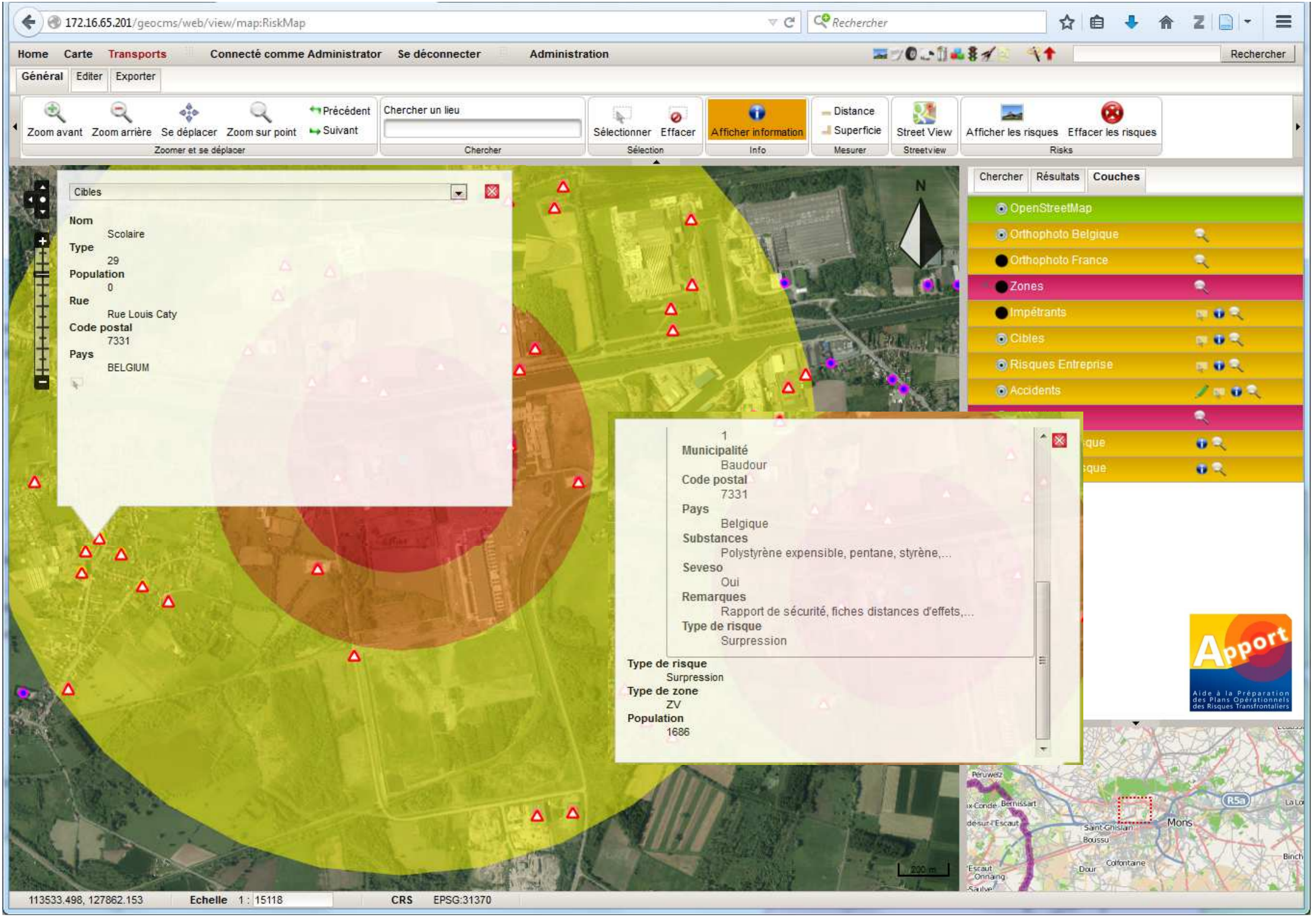
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Afficher les risques
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Pays
BELGIUM
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Municipalité
Baudour
Code postal
7331
Pays
Belgique
Substances
Polystyrène expensible, pentane, styrène,...
Seveso
Oui
Remarques
Rapport de sécurité, fiches distances d'effets,...
Type de risque
Surpression
Type de risque
Surpression
Type de zone
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Boussu
Dour
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200 m
113533.498, 127862.153
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V. Further examples aside APPORT

2 Cases :

- **EMRIC Project – Interreg III Euregio Meuse-Rhine:**
  - Euregio Maas-Rijn Interventie in geval van Crisis
  - Cooperation for cross-border risks in Euregio
  - Emergency planning and crisis management
  - Partners :

StädteRegion Aachen · GGD Zuid Limburg · Province de Liège · Veiligheidsregio Zuid-Limburg · Heinsberg · provincie Limburg · stadt aachen

INTERREG IV France • Wallonie • Vlaanderen
Interreg efface les frontières
Interreg doet grenzen vervagen

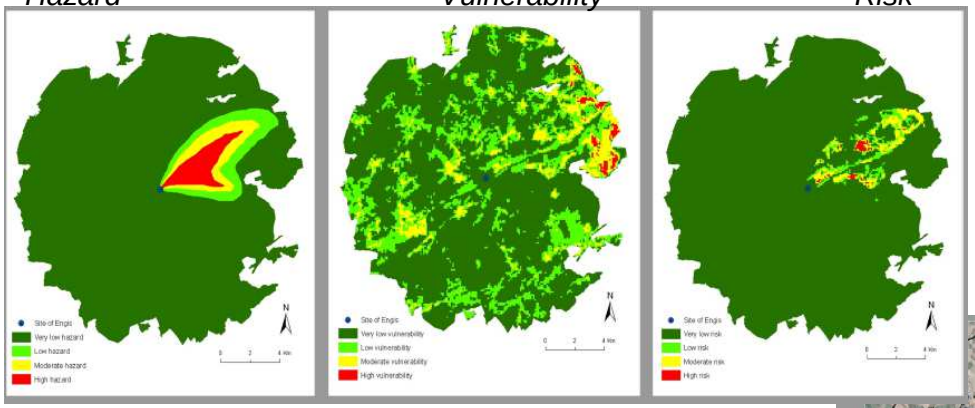
EUROPEAN UNION
European Regional Development Fund

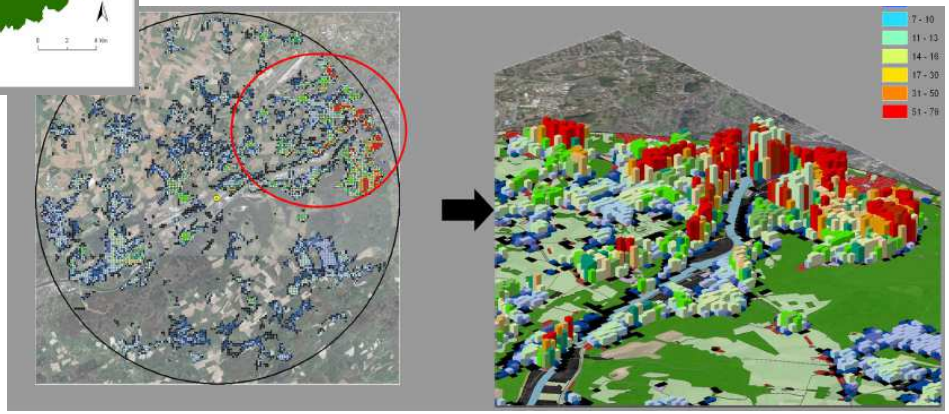
Wallonie

2 Cases :

- **W3SA - Wallonia World Wide Space Applications**
  - Project led by Spacebel
  - Focused on industrial crises preparedness
  - GIS-tools and geoservices for emergency and crisis planning

Hazard *Vulnerability* *Risk*





VI. Outlooks

- **Many extensions to APPORT project :**
  - Kinds of risks and hazards : natural, environmental and society dysfonctionnings
  - Cross-border area spred out the whole French and Belgian state border
  - A common (GIS-)tool designed for both emergency planning, operational and crisis management

↳ **Purposes for a further project**

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Contact : KHEFFI Ali (a.kheffi@issep.be)

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