WORKSHOP:
How to set up an adaptor

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CISE-ALERT

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HOW TO SET UP AN ADAPTOR

L'océan en référence

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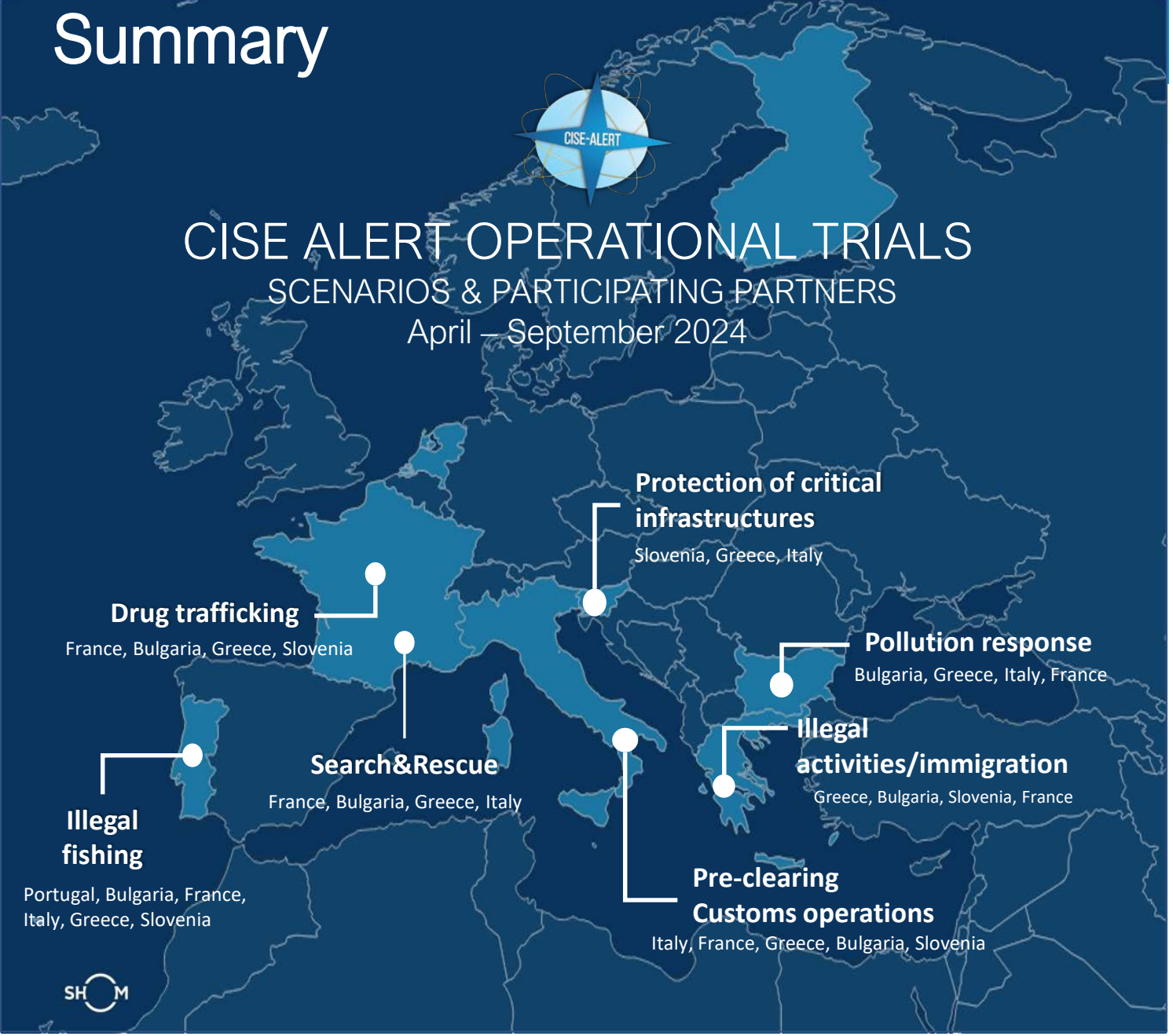
Summary

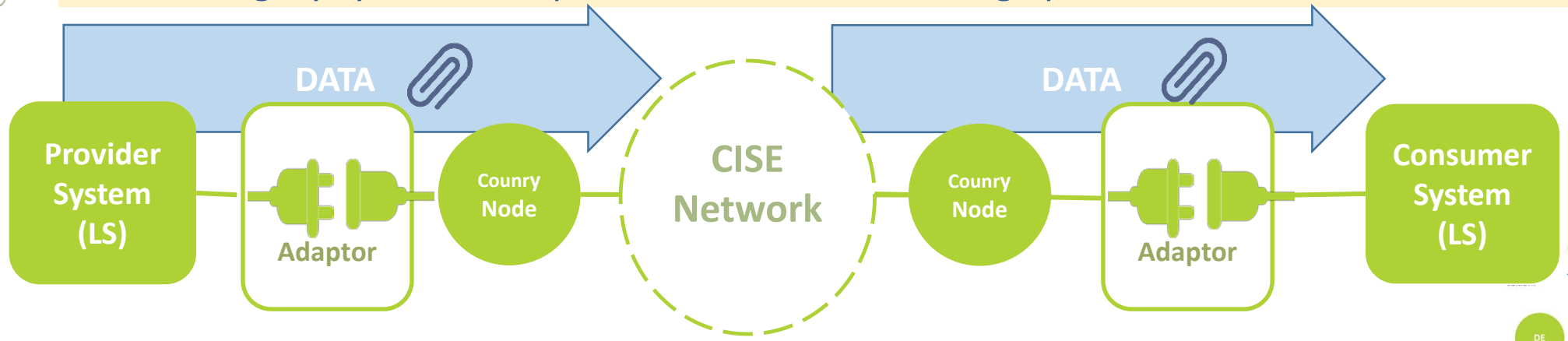


For trials to be conducted:

- Specific steps to join CISE
- **fully functional** national node
- Implementation of **Operational Services** in MS authorities systems
- Development and tests of **adaptors**

How to develop an adaptor

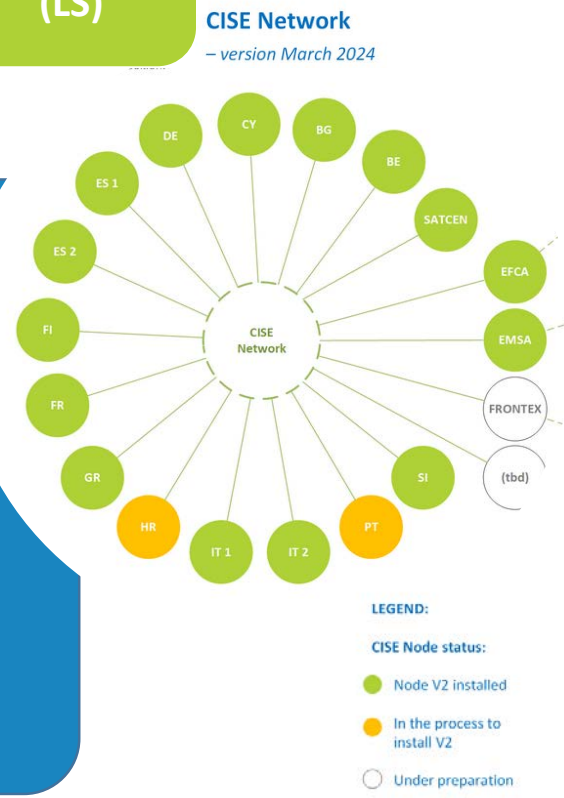
Nodes, Legacy systems, adaptors, services and exchange protocols



CONFIGURATION OF ADAPTORS WITH CISE SERVICES

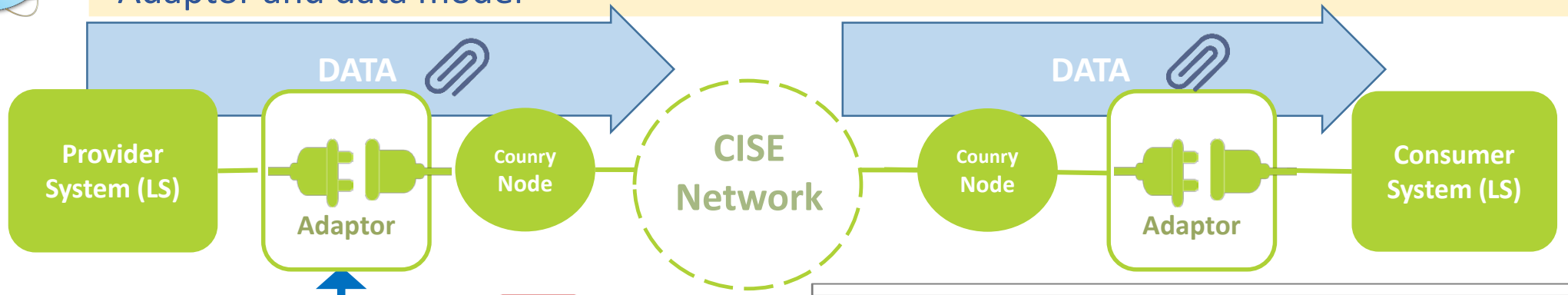
- Implementation /configuration of « services » in the adaptor:
  - categories + entities defined in **CISE data model and Catalogue**
  - **exchange protocol** (push/pull/subscribe)

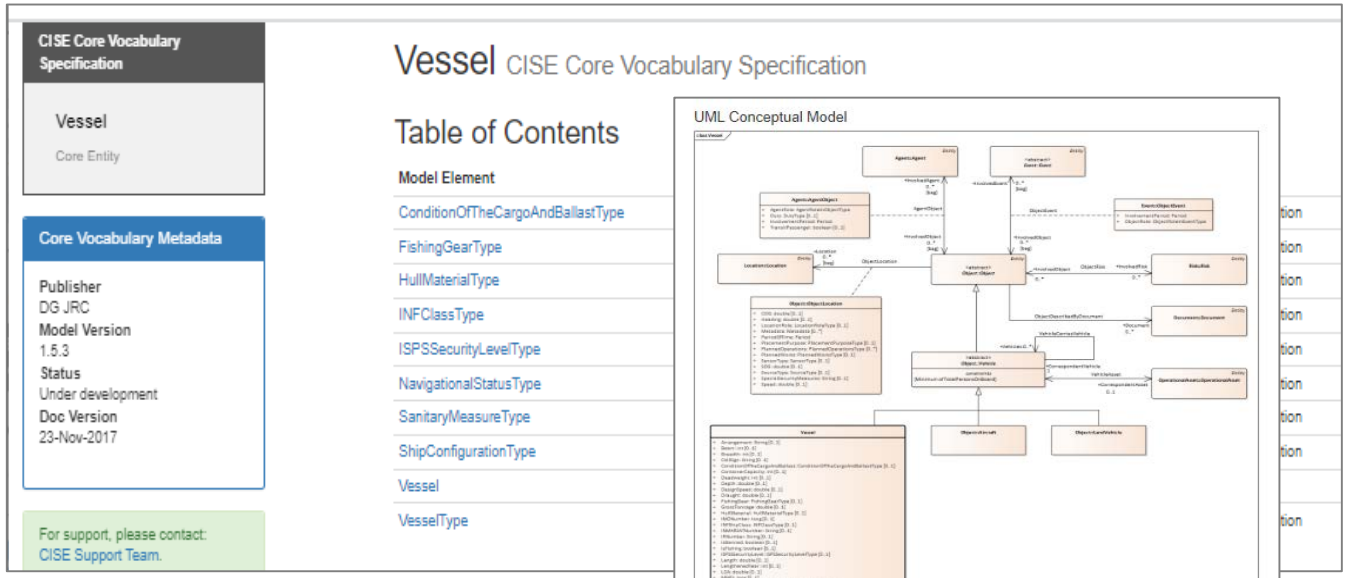
- **Compatible Data model entities + exchange protocols required** (push/pull/subscribe) for both provider and consumer adaptors



How to develop an adaptor

Adaptor and data model



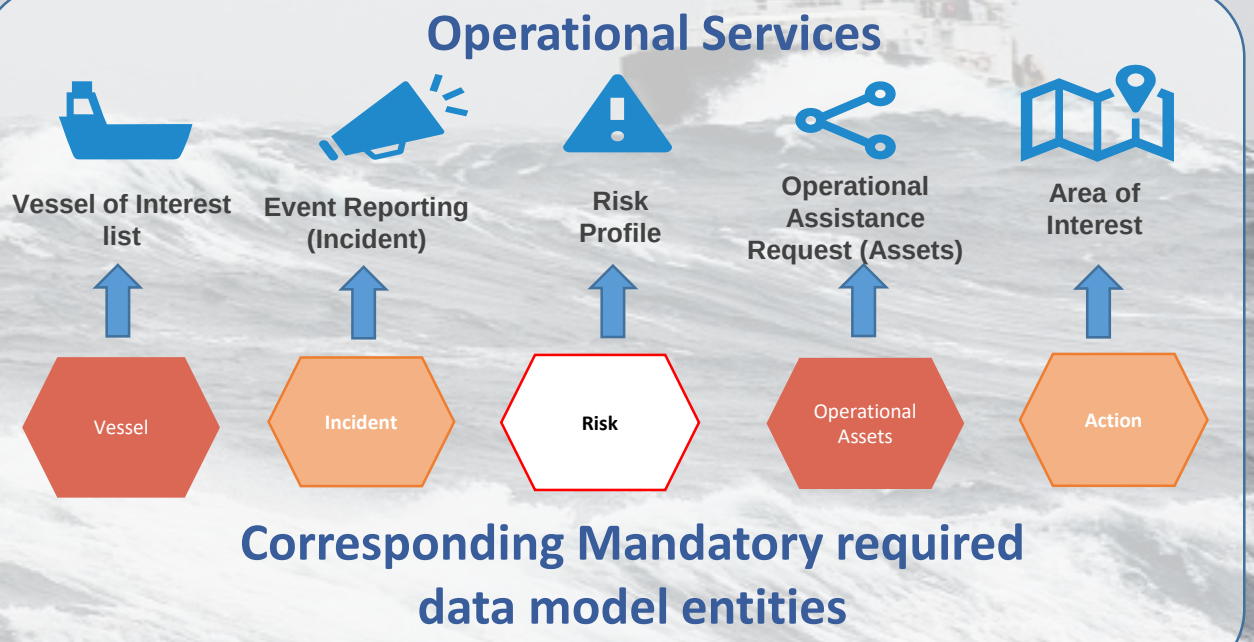


Operational Services

CISE “Operational Services” define how to use CISE services in a specific operational scenario.

They are defined by workflows that comprise one or more CISE services/data model entities. Ex: 2 or more organisations exchanging information about vessels of interest.

- Dedicated to Maritime surveillance OPERATIONAL authorities and situations
- Implemented in MS systems
- Combine different services
- 1 corresponding mandatory entity from data model



Shom: French Hydrographic Service
Reference data provider

Understand
Description
Forecast
Dissemination

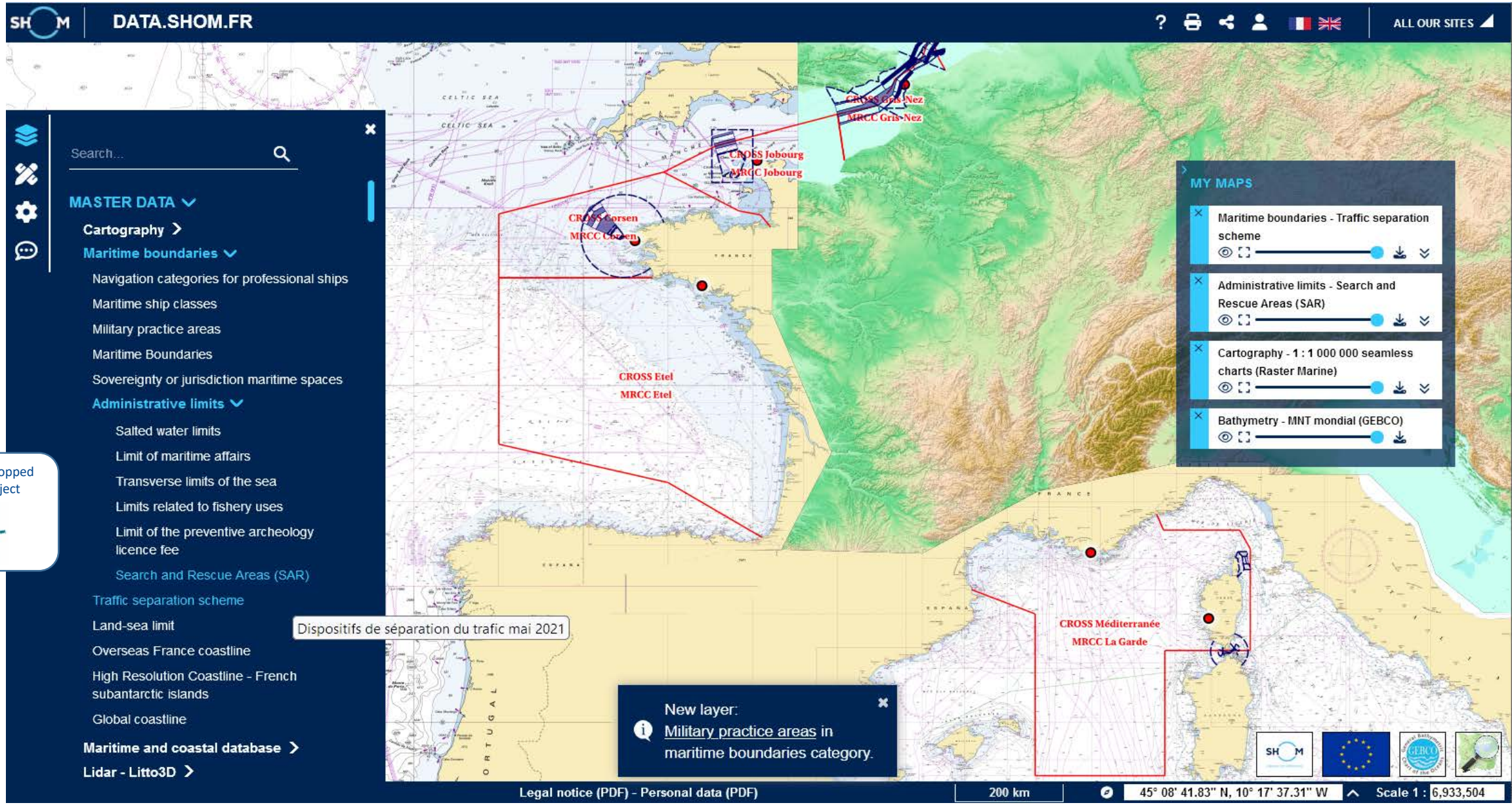
Marine
Physical
Environment

Missions

- Meet surface navigation needs
- Support armed forces
- Support public policies

Role in CISE: data provider only

Adaptor 1 – WMS Adaptor developed by JRC (2022)



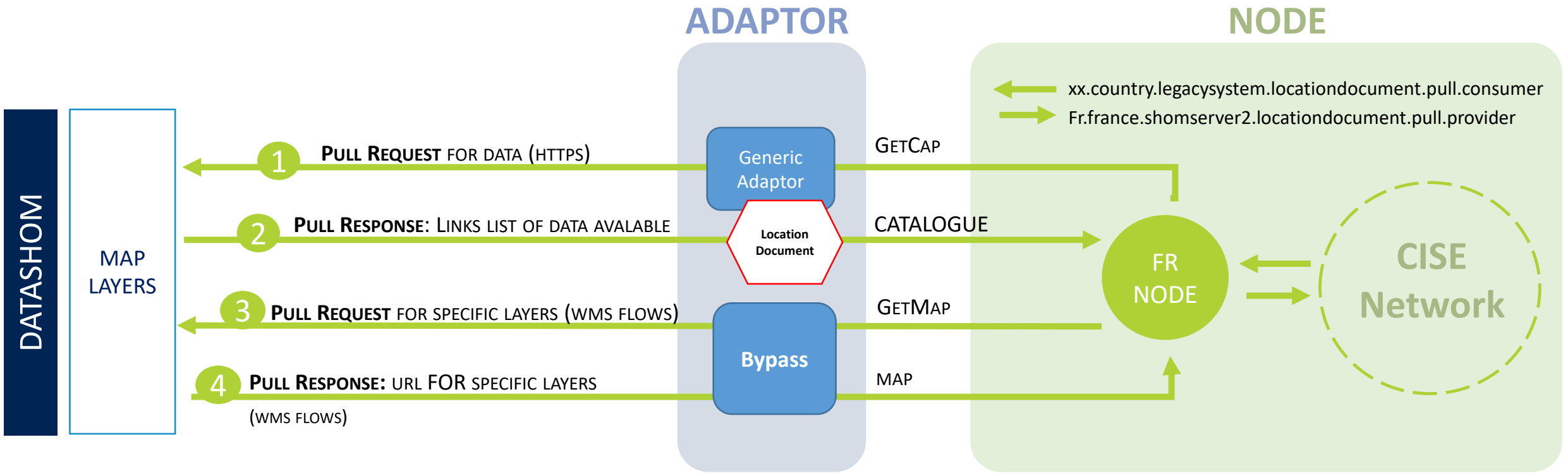
WMS CISE Adaptor developped with JRC during EU Project

Interreg Mediterranean MEDOSMOSIS

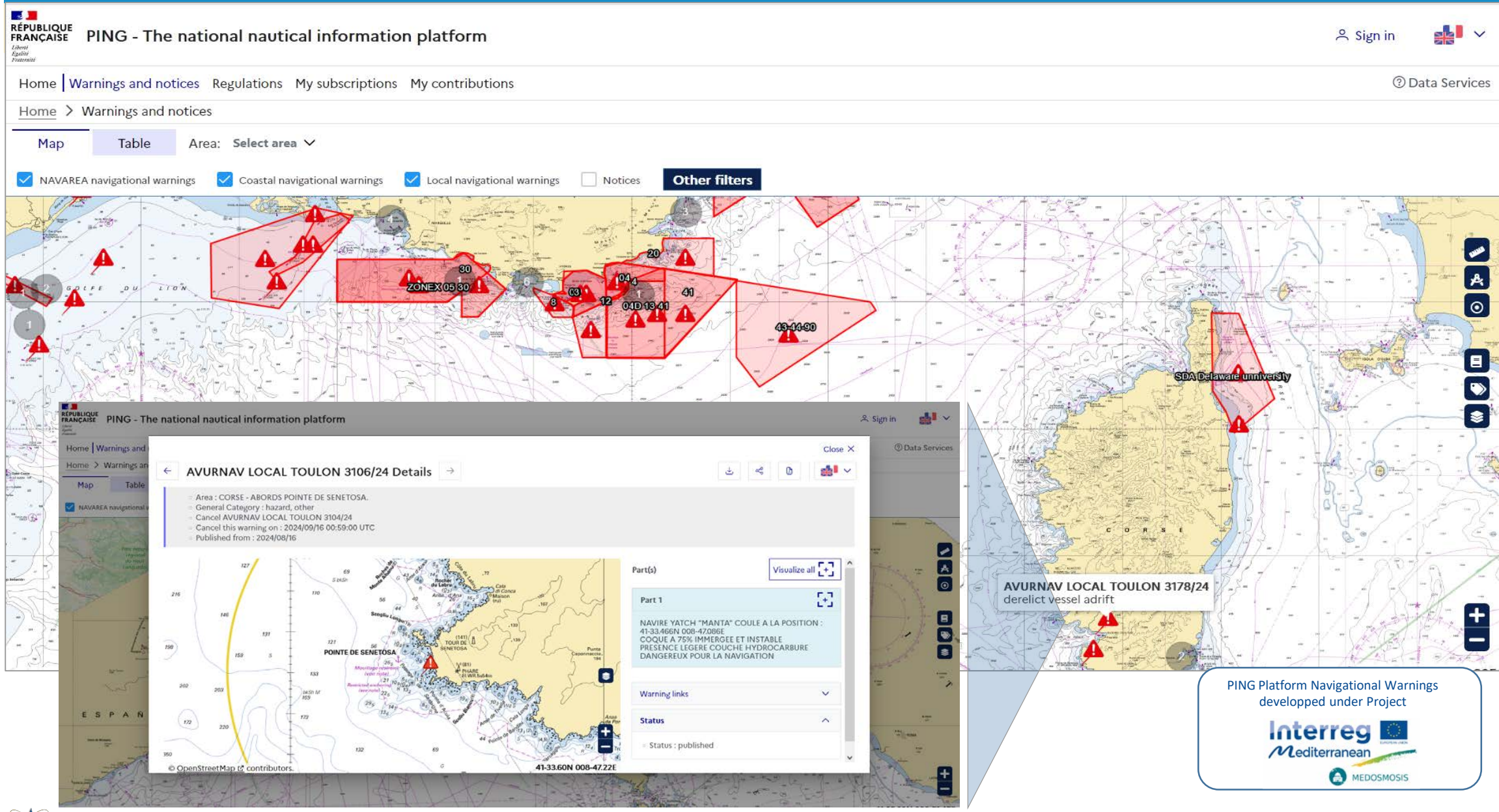
Adaptor 1: WMS adaptor

Protocol and Data model entity. Shom: data provider only => Pull protocol

WHAT ?		HOW?	SERVICE ID in NODE Interface
LS	Info/ Data?	Process	Code/country/LS Name.Protocol.Role



Adaptor 2: Nav Warnings



PING Platform Navigational Warnings developped under Project

Interreg Mediterranean

MEDOSMOSIS

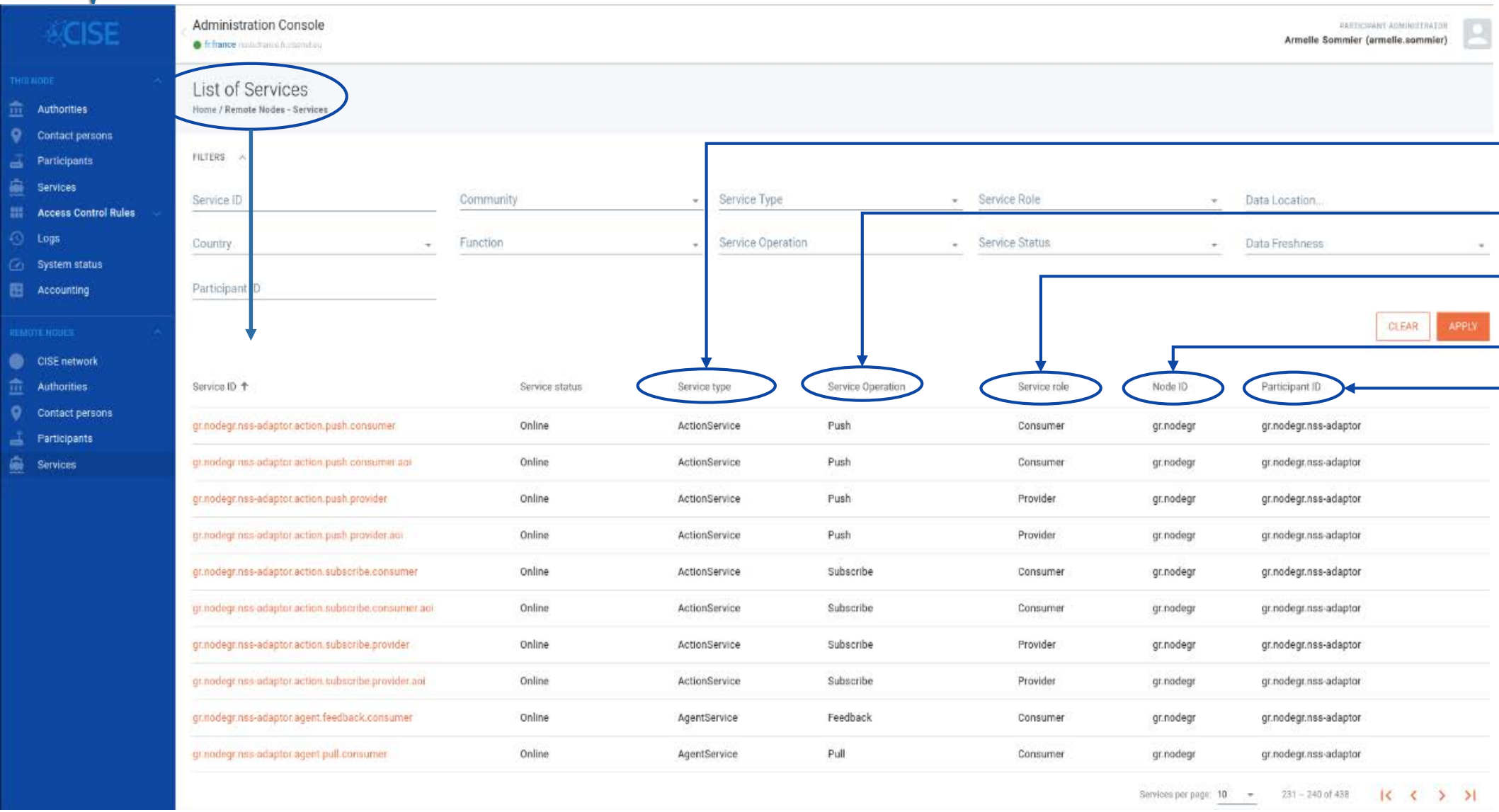
Adaptor 2: Nav Warnings

Development Steps

1	What ? For who? Why?	Navigational Warnings for authorities to contribute enhance Maritime Situational awareness authorities
2	Understand CISE	Access to CISE Interface + Study of CISE DATA MODEL
3	Service identification:	Data model Risk entity
4	Validation of protocol	Pull / Provider to respond to a request from an authority
5	Development phase	Outsource. Example provided by EMSA in java.
6	Test at national level	EMSA simulator
7	Test with other EU country	BG and GR : operational Risk Service in Pull Protocol (FR partners implementation ongoing)
8	Improvements	Addition of type of information as per data model (not all fields required)

Understanding CISE

Access and understand exchanges with Node interface



Data Model Entity (Service)

Exchange Protocols: Push, Pull, Subscribe

Role in exchange: Consumer or Provider

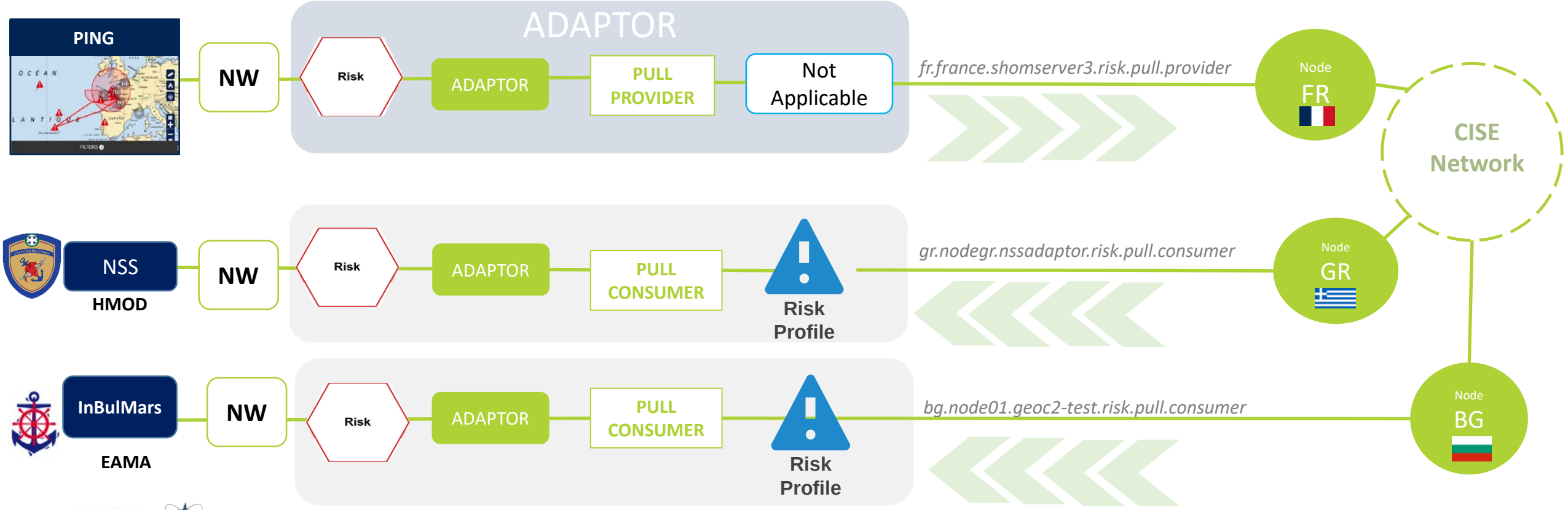
Country Node

Stakeholder System (LS)

Adaptor 2: Nav Warnings

Data model entity & Protocol

WHAT ?		HOW ?			SERVICE ID IN CISE NODE INTERFACE ?
System ?	Info/ Data ?	Service(s) ?	Protocol & Role ?	Operational Service ?	⇨Service name in CISE Interface: Code/country/LS Name.Protocol.Role



Cofinancé par l'Union européenne

Configuration of adaptator with a Risk object

xml example:

Extract from **Training Booklet** produced by HMOD:

```
▼<Risk xmlns:ns2="http://www.cise.eu/servicemodel/v1/authority/" xmlns:ns3="http://www.cise.eu/servicemodel/v1/service/"
 xmlns:ns4="http://www.cise.eu/servicemodel/v1/message/" xmlns:ns5="http://www.cise.eu/datamodel/v1/entity/location/"
 xmlns:ns6="http://www.cise.eu/datamodel/v1/entity/document/" xmlns:ns7="http://www.cise.eu/datamodel/v1/entity/organization/"
 xmlns:ns8="http://www.cise.eu/datamodel/v1/entity/incident/">
  ▼<Identifier>
    ▼<GeneratedBy>
       <AlternativeName>SATWAYS</AlternativeName>
       <IdentificationNumber>SATWAYS</IdentificationNumber>
       <LegalName>SATWAYS</LegalName>
       <OrganizationClassification>Governmental</OrganizationClassification>
       <OrganizationPurpose>MarineEnvironment</OrganizationPurpose>
       <OrganizationPurpose>MaritimeSafetyAndSecurity</OrganizationPurpose>
       <OrganizationRole>NonSpecified</OrganizationRole>
     </GeneratedBy>
     <GeneratedIn>2024-03-06T07:52:29.358Z</GeneratedIn>
     <UUID>d57aa869-6df1-445e-997d-a0a2ef8abaf1</UUID>
   </Identifier>
  ▼<Metadata>
     <Description/>
   </Metadata>
   <RiskLevel>High</RiskLevel>
   <RiskProbability>Frequent</RiskProbability>
   <RiskSeverity>Catastrophic</RiskSeverity>
   <RiskType>Accident</RiskType>
  ▼<LocationRel>
    ▼<Location>
      ▼<Geometry>
         <Altitude>0.0</Altitude>
         <Latitude>37.818191984242375</Latitude>
         <Longitude>25.77529907226563</Longitude>
         <WKT>POINT (25.77529907226563 37.818191984242375)</WKT>
       </Geometry>
     </Location>
   </LocationRel>
```

CISE Risk Important Fields

- Identifier
  - GeneratedBy providing the IdentificationNumber
  - UUID
- RiskLevel
- RiskProbability
- RiskSeverity
- RiskType
- OccurencePeriod , UTC Start / End Date
- Location WKT Point Geometry

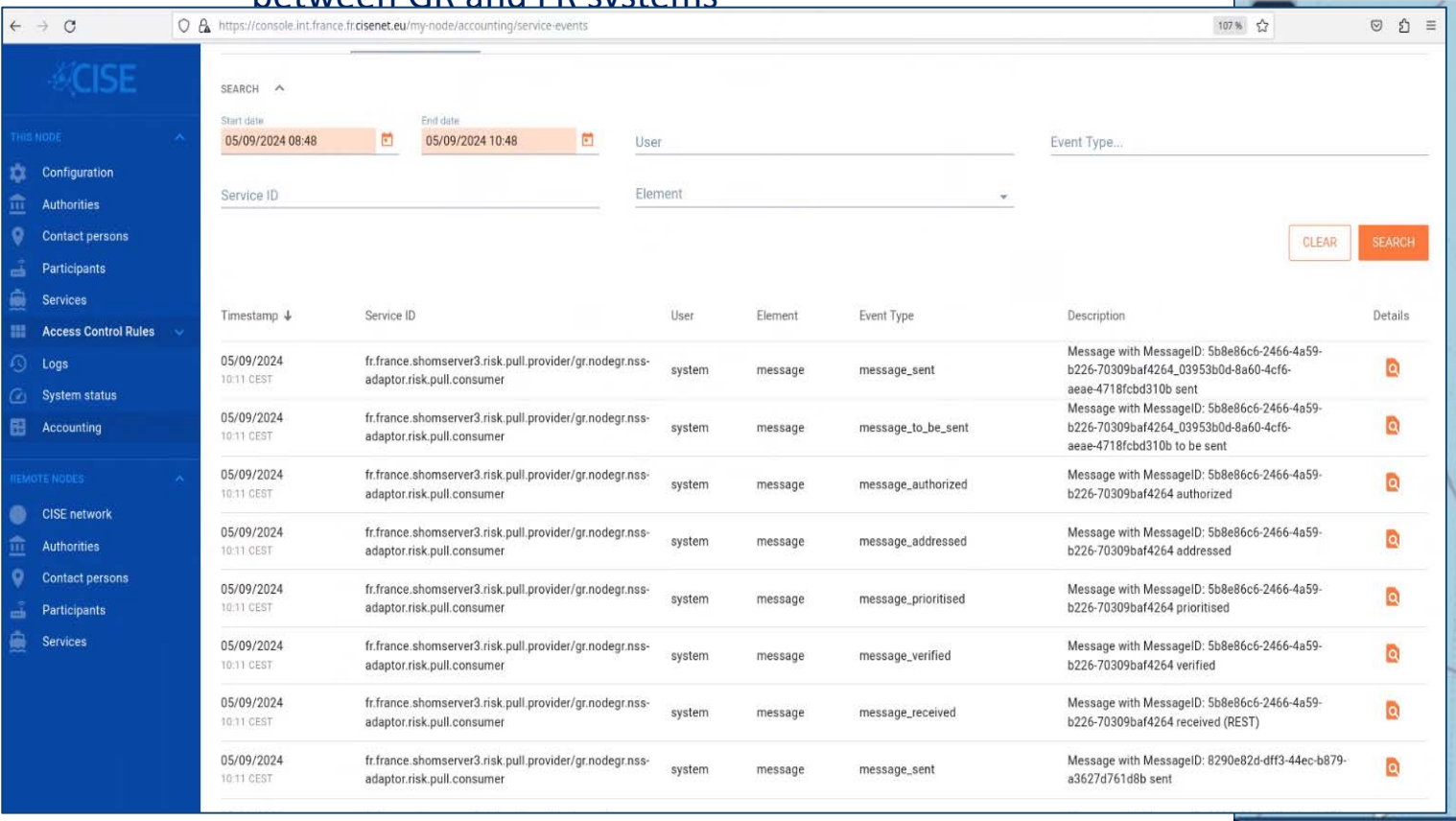
Configuration of adaptator with a Risk object

Current xml illustration

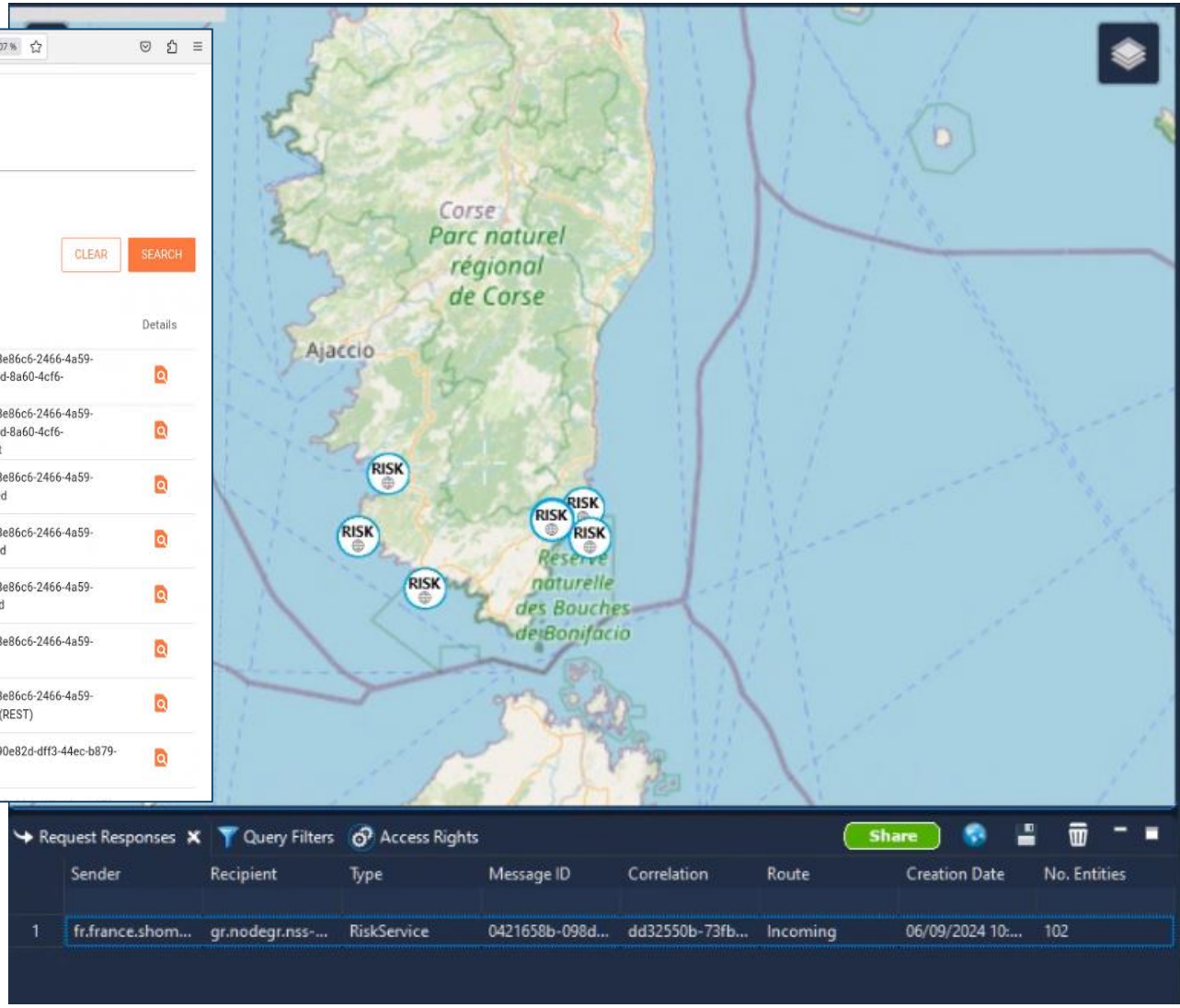
<Risk>
<Identifier>
<UUID>
nw_published_avurnav_toulon_v2_en.fid--6678a655_191be711143_-159e
</UUID>
</Identifier>
<Metadata>
<Abstract>generalarea</Abstract>
<Comments>PROVENCE</Comments>
<Language>eng</Language>
<PublicationDate>2024-09-04T00:00:00.000Z</PublicationDate>
</Metadata>
<OccurrencePeriod>
<Duration>P0Y1M0DT0H0M0S</Duration>
</OccurrencePeriod>
<RiskLevel>NonSpecified</RiskLevel>
<RiskProbability>NonSpecified</RiskProbability>
<RiskSeverity>NonSpecified</RiskSeverity>
<RiskType>Accident</RiskType>
<LocationRel>
<Location>
<Geometry>
<WKT>
POLYGON ((5.500016666775801 42.96668333351419, 5.633350000356742 43.03835000008024, 5.633350000356742 42.666683333136895, 5.500016666775801 42.666683333136895, 5.500016666775801 42.96668333351419))
</WKT>
</Geometry>
</Location>
</LocationRel>
</Risk>

Tests with project partners

Logs in CISE French node interface showing activity between GR and FR systems



Navigational Warnings from PING displayed in HMOD system (Sept 2024)



Feedback

Challenges:

- Node fully operational and connected is key
- Time and resources need to be allocated for full understanding of environment, data model and notion of Services
- Combined understanding of both field operational needs and technical requirements is mandatory.
- Implementation of same attributes necessary for full interoperability

Recommendations:

- **EMSA Tools:** CISE CATALOGUE, Wiki…
- CISE Alert Training booklet (by HMOD) available with illustrated examples for each step
- Refer to existing available xml examples
- Anticipation of evolution of data model to comply with standards in place or up-coming.

Ex: Navigational Warnings: S124 based on guidelines set in the joint IHO/IMO/WMO Manual on Maritime Safety Information (MSI) which will be at term used on ECDIS onboard vessels

CISE-ALERT

CISE's operationalization launch through A Long Endurance and Real live Test

Thank you !

L'océan en référence

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