DEMONSTRATION 5
EU maritime domain awareness

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Participants

EAMA	InBulMarS	
HMOD	NSS	
ITALLIAN SPACE AGENCY	COSMO	
MTE-DGAMPA Directorate-General for Maritime Affairs	SEAMIS/ PELAGUS	
SHOM HYDROGRAPHIC AND OCEANOGRAPHIC SERVICE	PING	
DNGCD Directorate of Customs Coast Guard	SIAM	

A general description of the scenario

Reference Use Case Initiator CISE-ALERT partner: EAMA

Maritime threat to be addressed by the scenario is (POLLUTION) and aims to improve:

- mutual cooperation between European maritime countries for detecting, monitoring and sanction against vessels violating MARPOL convention, polluting maritime environment.

- to prove use of CISE services as great advantage in increasing maritime domain awareness in handling the above issues.

The scenario represents example of probable actions and information exchange trough CISE, which goal is to elaborate a pattern for operational use between any CISE Node holders to react in similar cases.







Operational Services Involved



Vessel Of Interest List

CISE feature to be presented: obtaining complete data for vessel from different sources on base on which better analyses can be made, improving the decision making and educated guesses.



Event Reporting (Incident)

CISE feature to be presented: Raising an alert of incident and promulgate it to each partner instantly and simultaneous.



(POLLUTION)



Risk Profile

1. CISE feature to be presented: representation how the risk level can be raised or lowered depending of the development of situation.

2. CISE feature to be presented: association of the risk with object / vessel. Basically the risk is pinned to the object wherever it go.

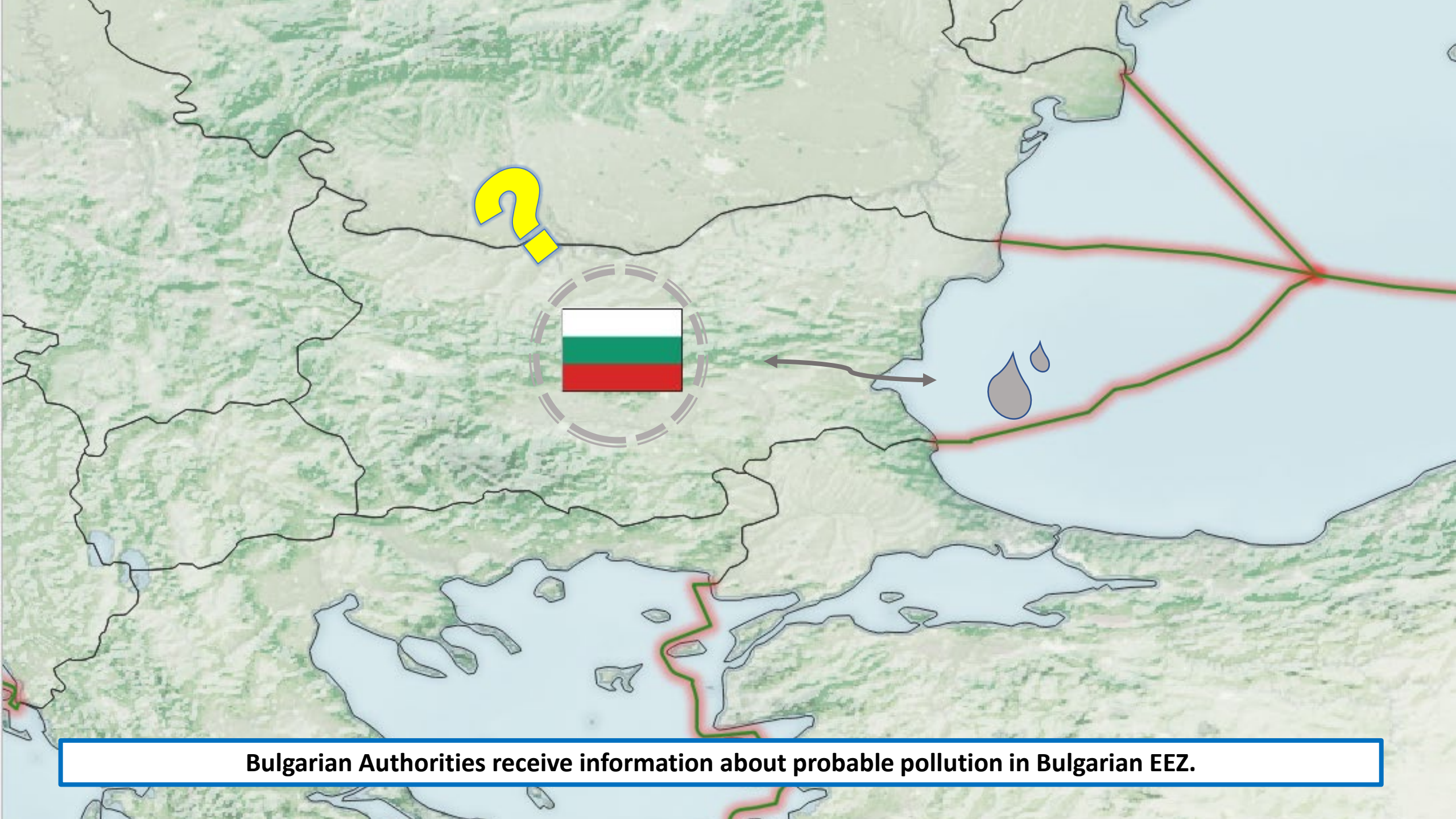
3. CISE feature to be presented: Association of the risk with incident, expanding the awareness about the incident in certain area.



Document Service

CISE feature to be presented: document exchange providing additional data outside CISE data model, which can be used in countless ways, currently as evidences for the specific use-case.

COMBINNING ALL SERVICES TOGETHER PROVE CISE ABILITY TO GREATLY ENCHANCE MARITIME AWEARNES ON DIFFERENT INFORMATION LAYERS AND SIMULTANIOUS UPDATE OF SITUATION TO ALL PARTNERS.



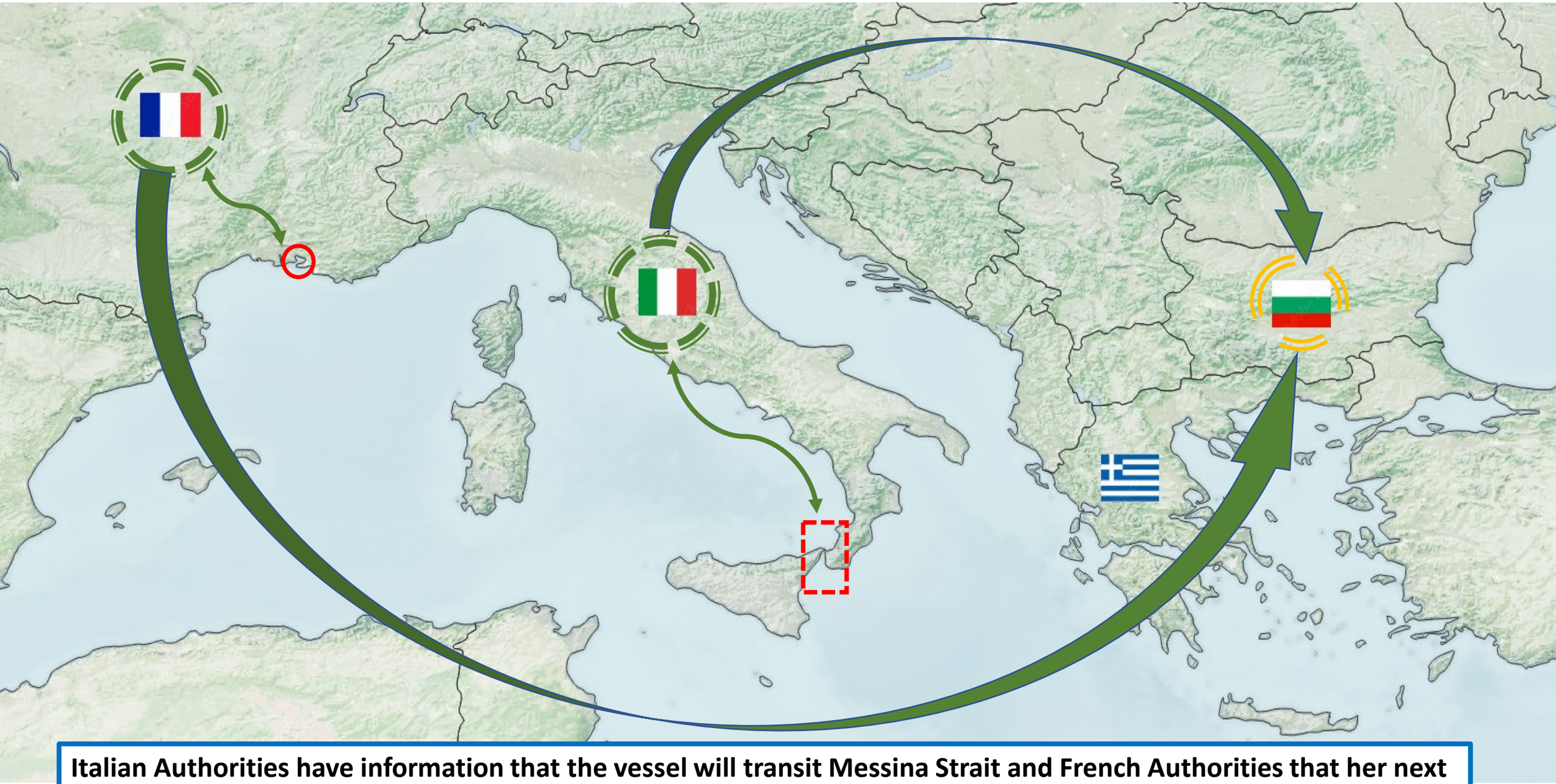
Bulgarian Authorities receive information about probable pollution in Bulgarian EEZ.



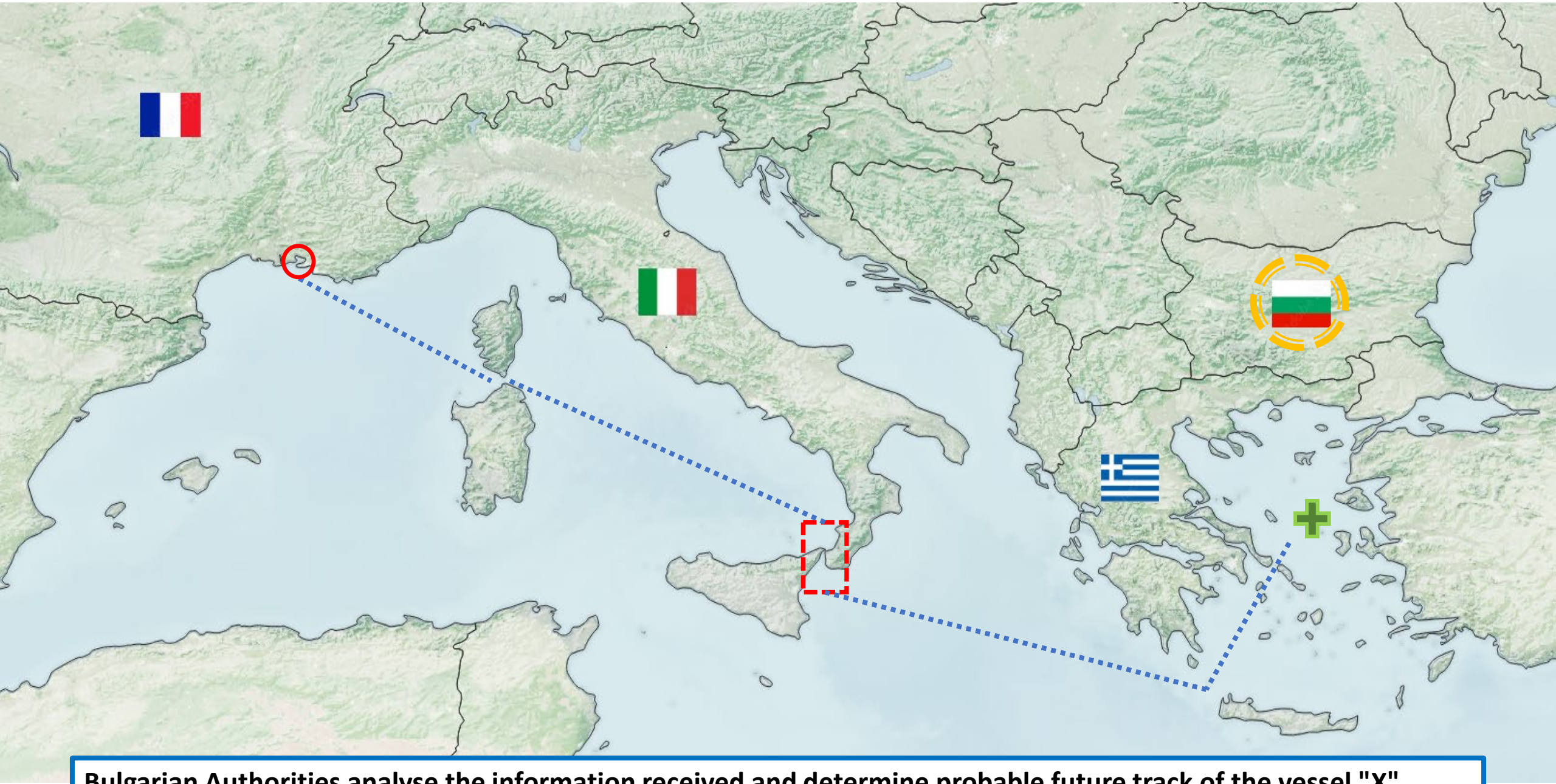
Suspected vessel is "X" Due to lack of information, sent VOI List to ALL partners for additional information.



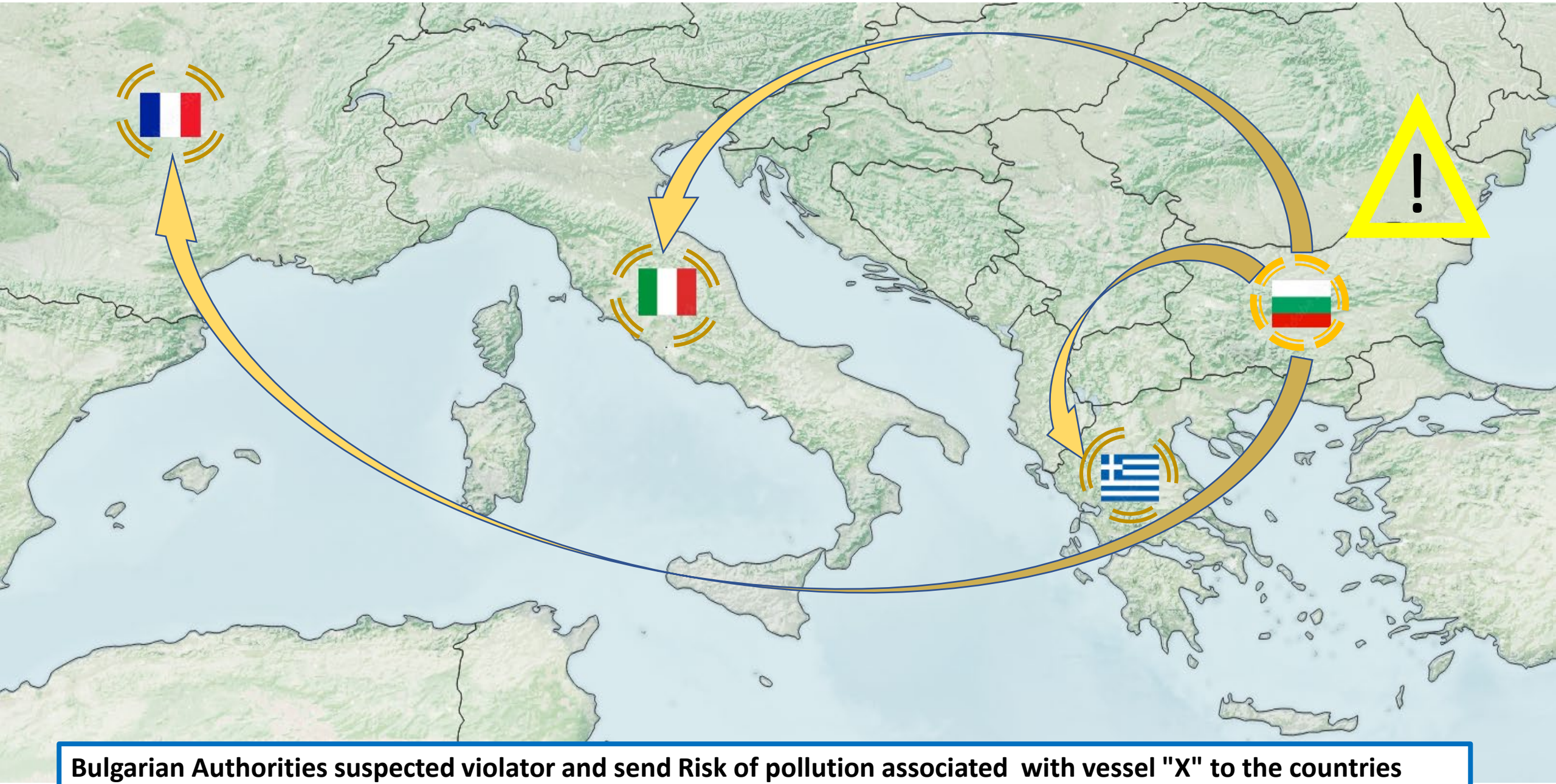
Greek Authorities report the detection of the vessel and respond with location of the vessel.



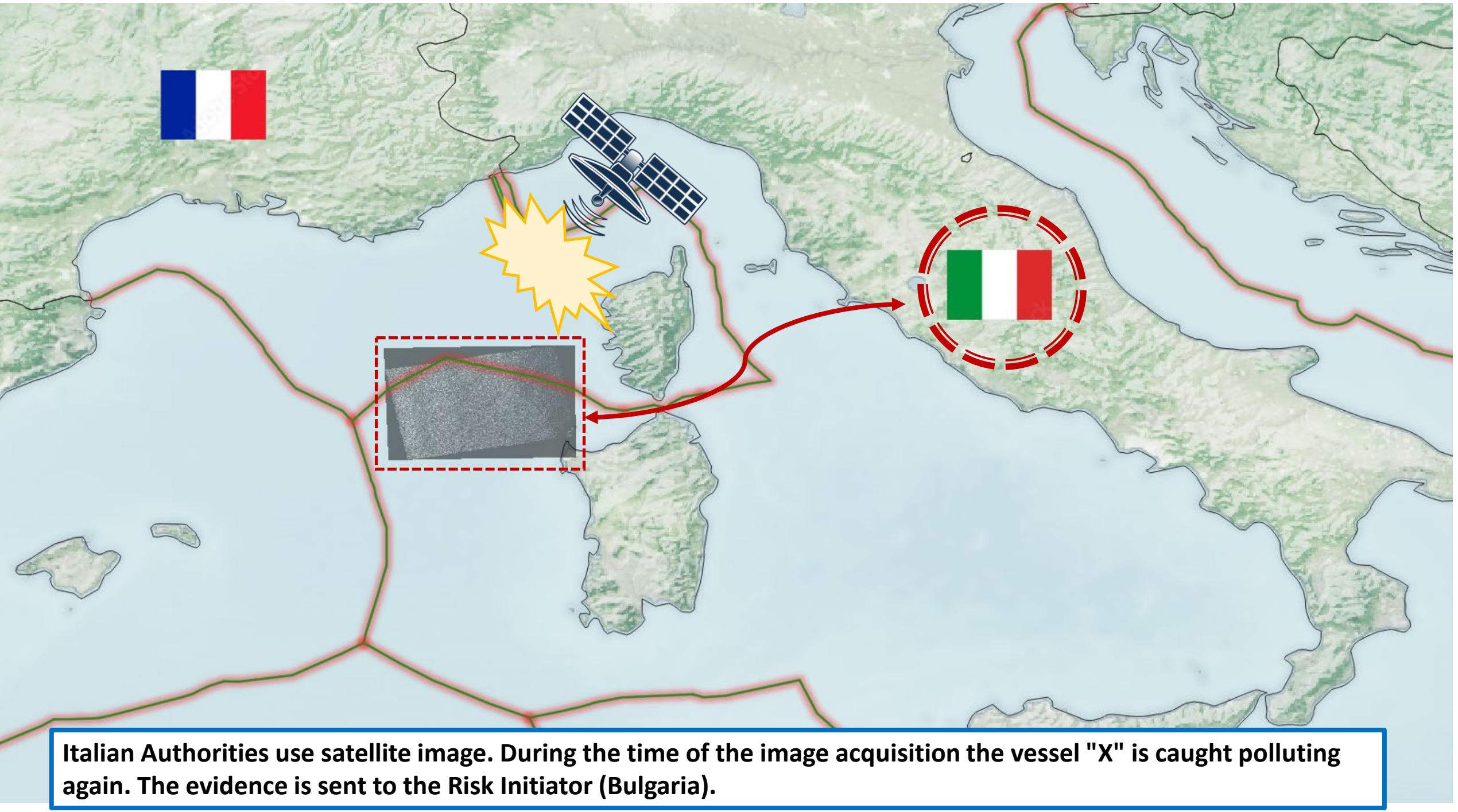
Italian Authorities have information that the vessel will transit Messina Strait and French Authorities that her next visit is in French port at certain date.



Bulgarian Authorities analyse the information received and determine probable future track of the vessel "X"



Bulgarian Authorities suspected violator and send Risk of pollution associated with vessel "X" to the countries which EEZ she is expected to transit.



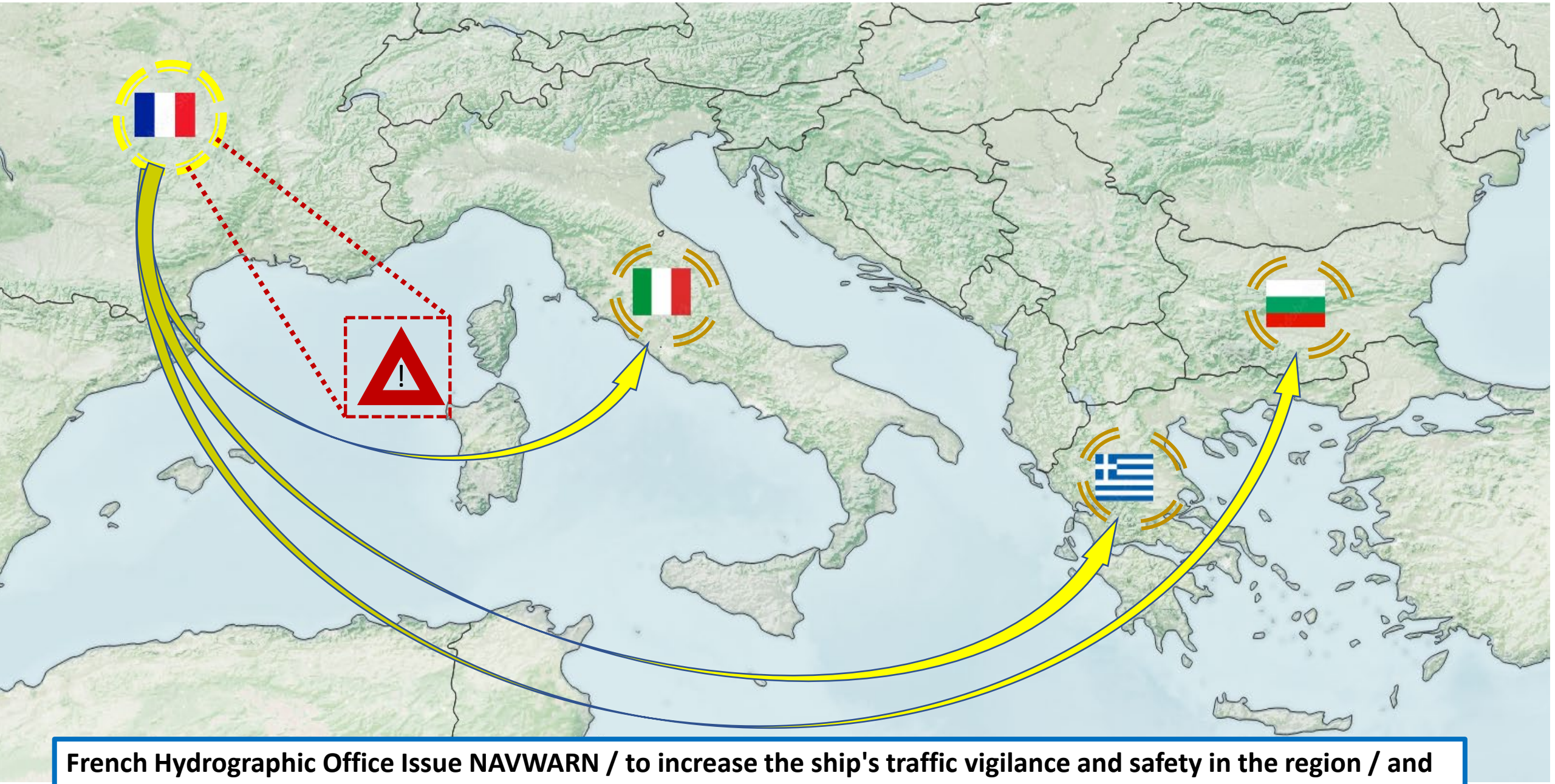
Italian Authorities use satellite image. During the time of the image acquisition the vessel "X" is caught polluting again. The evidence is sent to the Risk Initiator (Bulgaria).



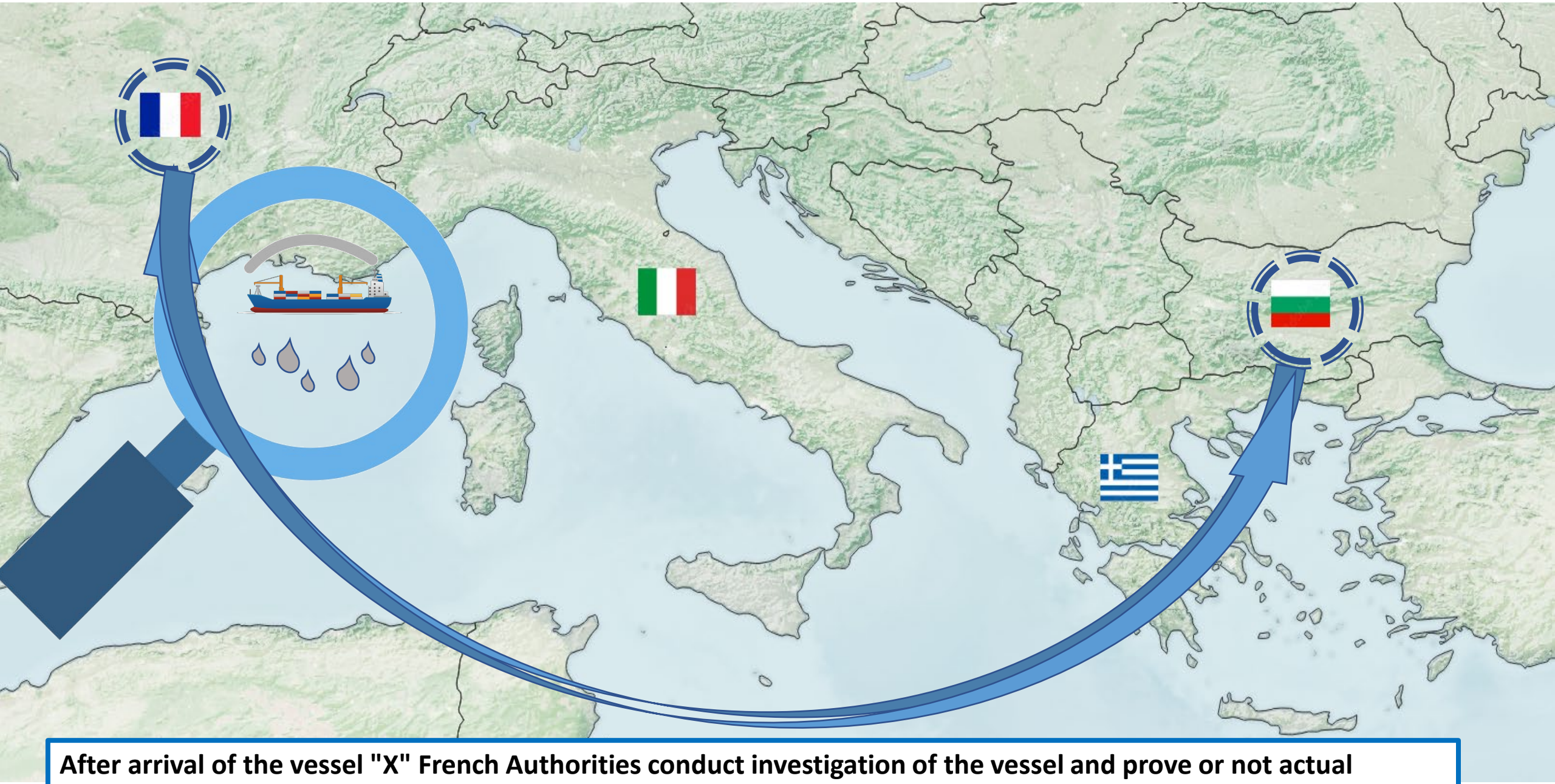
Italian Authorities issue an incident and send it simultaneously to all concerned parties.



Bulgarian Authorities, after receiveng evidence. Update the associated with Vessel "X" Risk



French Hydrographic Office Issue NAVWARN / to increase the ship's traffic vigilance and safety in the region / and share it to all neighbouring countries as MSI and trough CISE Subscription.



After arrival of the vessel "X" French Authorities conduct investigation of the vessel and prove or not actual violation of the MRAPOL Convention, then evidences and documentation about the case is exchanged.

Open structure of the scenario

The use-case is elaborated in a manner to be flexible and to cover wide variety of situations between different countries and authorities.

1. Can address different safety and security threats by following the pattern of mutual decentralized reaction trough CISE usage increased awareness.
2. Give possibility to be used by any count and regardless the location of CISE stakeholders;
3. Remain open for including various new participants on one hand and on other can expand to usage of additional operational services as- AOI and Asset Sharing service.
4. The pollution scenario is just one example of how CISE can be used, there are countless variants to be explored and brought to light.

Maritime Domain Awareness

Common Information Sharing Environment (CISE) as a powerful single tool for rapid sharing safety and security information among the stakeholders provide the important feature of **Maritime domain awareness.** Benefits associated with the above are:

- Cross-community data exchange.
- Provide last updated information, about certain case, simultaneously to all participants, amplifying and completing the data continuously.
- Collecting of information from different independent sources for better decision making.
- Possibility to increase or decrease the alert stage in developing situations based on real-time data information.

Maritime Domain Awareness

- Allow associations between different operational services creating multi-layer information content.

- Increasing the attention over a marine object or area between each stakeholder regardless the location, track, activities and type of the object and allowing them to take appropriate measures according their involvement in administrative or operational duties;

- Usage of documents for further gathering and exchange of additional information, keeping the document value as evidence.

- Decentralized reaction of the EU countries, without leading authority

- Ability to fuse civil and military data sources

- CISE can be the backbone of the information exchange related to the Coast Guard functions

Trial results

Results are formed on the base of feed back of Endurance trial report Questionary

1. Trial objectives – general opinion of the participants in the trial is that the objectives ware met:

   - Mutual international reaction, between different countries, MOCs and Authorities;

   - Open structure of the scenario pattern, allowing use in different cases;

   - MARITIME DOMAIN AWARENESS improvement by the use of CISE .

2. Operational Services

   - VOI List – population of data about certain vessel starting from very little information;

   - Risk Profile – flexible risk level, association with other objects, events or areas;

   - Event reporting – simultaneous alerting.

   - Document service – exchange of various data and preserving the values of the documents.

Conclusions / Partners expectations

Conclusions and partners expectations are formed on the base of feed back of Endurance trial report Questionary

1. Single data model of CISE is great approach to ensure interoperability between various systems, but there are not single rules to be followed within the different systems.
2. Partners ware generally satisfied about the speed of message exchange and the low latency.
3. Idea of exploring of electronic signatures trough document services appeared.

Development expectations were very variable and dependable of the organisations goals and interests, but summarized are following the same trend

4. Development of all CISE services in the LS, where applicable, providing additional capabilities;
5. Engagement of more authorities and organizations with various activities in CISE;
6. Extra operational and integration tests, not excluding unconventional approaches;
7. More types of information, from the origin, to be shared through CISE;
8. Operational needs are essential to be understood from developers prior to developments and integration in the surveillance maritime systems.

PRESENTATION VIDEO

Questions







