



European Union Network for the Implementation
and Enforcement of Environmental Law

Impel Project Water Crimes

Water Security in Europe

Report number: 2018/11

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Introduction to IMPEL

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international non-profit association of the environmental authorities of the EU Member States, acceding and candidate countries of the European Union and EEA countries. The association is registered in Belgium and its legal seat is in Brussels, Belgium.

IMPEL was set up in 1992 as an informal Network of European regulators and authorities concerned with the implementation and enforcement of environmental law. The Network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation. The core of the IMPEL activities concerns awareness raising, capacity building and exchange of information and experiences on implementation, enforcement and international enforcement collaboration as well as promoting and supporting the practicability and enforceability of European environmental legislation.

During the previous years IMPEL has developed into a considerable, widely known organisation, being mentioned in a number of EU legislative and policy documents, e.g. the 7th Environment Action Programme and the Recommendation on Minimum Criteria for Environmental Inspections.

The expertise and experience of the participants within IMPEL make the network uniquely qualified to work on both technical and regulatory aspects of EU environmental legislation.

Information on the IMPEL Network is also available through its website at: www.impel.eu

Title of the report: Water Crimes	Number report: 2018/11
Project Manager: Claudia Carpino Authors: Lorenzo Segato; Giuseppe Sgorbati	Report adopted at IMPEL General Assembly Meeting: <i>December 2018, Austria</i> Total number of pages: 56 Report: 13 Annexes: 43
Executive Summary <p>Activities and events threatening the quantity and quality of freshwater will have major consequences for health, business success and security; the harms and risks to water supply are associated with multiple causes that include industrial pollution and water theft through to global warming. So, the reduced availability of freshwater, the tensions in trans-boundary basins, the human pressure on limited water resources, state-corporate level overconsumption and unequal distribution are among the causes that have made water a hot product exposed to criminals (CLARKE, 1999), highly exposed to illicit interests of individuals, companies, terrorists and organized crime.</p> <p>Nevertheless, only recently there has been a criminological interest in water crime issues (WHITE, 2003, BRICKNELL, 2010; JOHNSON et al., 2015; BRISMAN et al., 2016). But, crimes against water remain difficult to assess, detect and prosecute, especially because water often crosses nation-state boundaries, cooperation is difficult, and data at national level are recorded under different categories of offences, and legislations and policies on freshwater vary from Country to Country. Furthermore, both physical and logical water management infrastructures are exposed to cyber and traditional terrorist threat (EUROPOL, 2014; ENISA, 2014), but intelligence and research are still scarce in this field.</p> <p>The Council Conclusions on countering environmental crime - Council conclusions (8 December 2016) has recognised the role of IMPEL in countering environmental Crimes, but a common definition of "water crimes" is a challenging task. Furthermore, water-related crimes are often recoded under other offences – like fraud, corruption, trafficking, falsification of documents, terrorism – for the absence of a systematic analytical approach. The nature and extent of these kinds of activities is still relatively unknown. The project aims to increase knowledge on water crimes, by sharing information on the subject, in terms of persecution and management with the competent authorities.</p>	
Disclaimer This report is the result of a project within the IMPEL network. The content does not necessarily represent the view of the national administrations or the Commission.	

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1. THE PROJECT (background)

Environmental crime covers acts that breach environmental legislation and cause significant harm or risk to the environment and human health. The most known areas of environmental crime are the illegal emission or discharge of substances into air, water or soil, the illegal trade in wildlife, illegal trade in ozone-depleting substances and the illegal shipment or dumping of waste. Environmental crimes cause significant damage to the environment in Europe and the world. At the same time they provide for very high profits for perpetrators and relatively low risks of detection. Very often, environmental crimes have a cross border aspect. Environmental crime is a serious and growing problem that needs to be tackled at European level.

In addition to these clear and present crimes, new types of environmental crime are emerging, such as carbon trade and water management crime. In this regard, a recent study (Water Crimes Project, 2017) has explored the different emerging threats to freshwater in Europe, analysing 82 cases across Europe. Researchers have identified a number of challenges, mainly the absence of an harmonised legal framework to protect water as natural resource and the consequent scarcity of data on crimes against water.

Different Cases on water crimes were noted in the European Union , but open issues remain: the lack of definition of water crime in the criminal codes leads to fewer targeted investigations, to police not recording statistics or data on water-related offences, and therefore to limited prosecution. Furthermore, although water pollution is widely recognised, such is not the case for other types of crimes as identified in the project, namely water corruption, water-related organised crime, water theft, water fraud, water terrorism and water cyber-attacks.

It is recommended to adopt a definition of water crimes, but also to ensure that information is collected at national level by the enforcement authorities.

1.1. Aims of project

The project aims to develop an assessment of EU Water Crimes Threat and to design a Water Security Strategy in Europe. The goal of the project can be achieved by identifying common challenges, harmonizing the legal framework, improving data on water crimes and protecting water as a natural resource.

The WATER CRIMES project aims to advance knowledge in this field through four main activities:

1. DATA COLLECTION: Collecting Case study from different countries and good practices in the investigation and prosecution of environmental crimes in EU and non-EU countries to create an inventory of the various forms of crime that threaten water resources.
2. RISK ASSESSMENT: Developing a Risk assessment based on threat sources, risk likelihood, risk impacts, risk rating and risk management measures.
3. OUTLOOK OF CRIME TRENDS: Compiling mid-term scenarios; developing targeted and innovative recommendations for leaders and policy makers on the adoption of countermeasures and mitigation strategies; and promoting the sustainable use of water;

4. DISSEMINATION: Developing policy recommendations and mitigation strategies; Communicating project results; publishing the first European report on water security (expected in 2017); and raising awareness of this emerging threat.

1.1.1. Participants

During 2018 the following persons have been participating in the project.

Country	Name	Organization
Albania	Enis Tela	Enis.Tela@ishmp.gov.al
Belgium	Tania Van Laer	tania.vanlaer@vlaanderen.be
Finland	Maria-Pia Karppela	maria-pia.karppela@ely-keskus.fi
Germany	Karsten Bugiel Michaela.Hinz	Karsten.Bugiel@lm.mv-regierung.de Michaela.Hinz@lm.mv-regierung.de
Italy	Alessandro Peru Vincenzo Lo Iacono Manuela Bernardi Lorenzo Segato Giuseppe Sgorbati	Peru.alessandro@minambiente.it v.loiacono@arpalombardia.it m.bernardi@arpa.piemonte.it lorenzo.segato@gmail.com g.sgorbati@arpalombardia.it
Ireland	Michelle Minihan	m.minihan@epa.ie
LATVIA	Janis Lukins	janis.lukins@vvd.gov.lv
PORTUGAL	Fernando Bruno Santos Simões	fsimoes@igamaot.gov.pt
ROMANIA	Hirean Florin Mircea	cjbrasov@gnm.ro
Slovakia	Mario Kern	mario.kern@minv.sk
Slovenia	Benjamin Franca	benjamin.franca@policija.si
United Kingdom	Maugeri-Todaro Franca Paul Hickey Craig Hatcher	Franca.MaugeriTodaro@sepa.org.uk paul.hickey@environment-agency.gov.uk craig.hatcher@environment-agency.gov.uk

2. RESULTS

2.1.1 The Survey

The project idea was transferred in a specific survey¹ to collect information on the specific legislation, documents and data on offences against water bodies. Experts belonging to national or regional environmental agencies have filled in the questionnaire. The low number of surveys does not affect the validity of results, but limits the capacity to generalize data at a wider level. The survey has 4 sections:

- ✓ The KNOWLEDGE of different offences in the water sector
- ✓ The FREQUENCY of these crimes
- ✓ The IMPACT, either on the environment, on the society and in terms of costs
- ✓ The expected OUTLOOK of the offences in the next 5 years.

The current status is as follows:

29 COUNTRIES INVITED

12 COUNTRIES PARTICIPATING

12 SURVEYS COLLECTED

6 CASE STUDIES FROM 4 COUNTRIES

2.1.2 Output

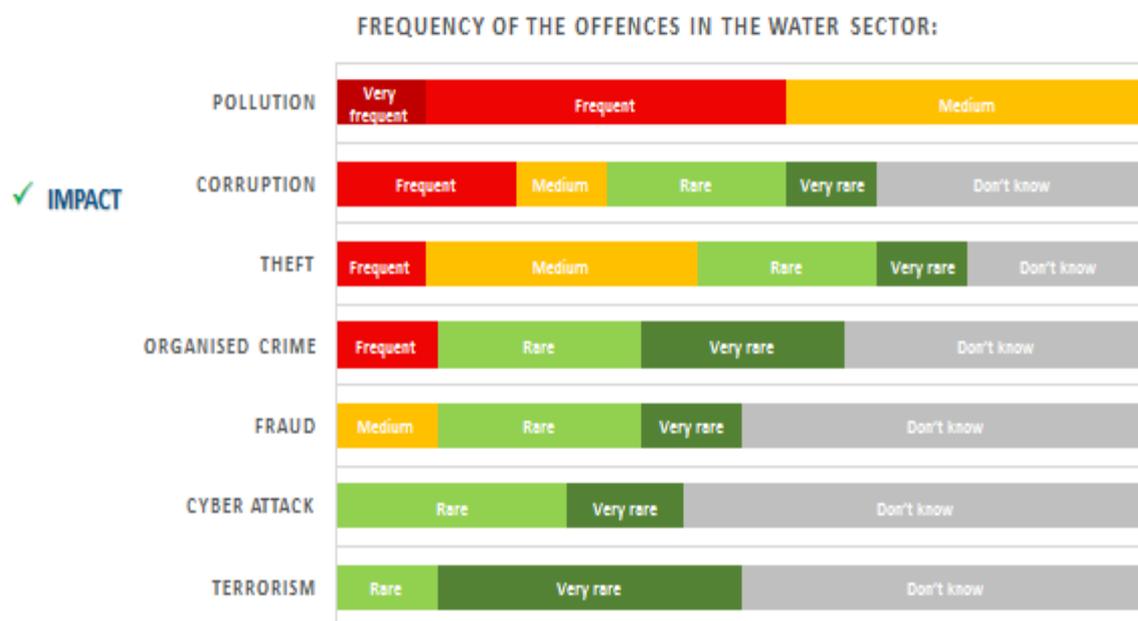
Results highlighted: Competence in matters of water crime other than pollution and, in part, from theft, was minimal. There are many explanations; the main is that the tasks of the Law Enforcement Agencies, or the functions of the respondent, don't require knowledge of all different offences. But the picture confirms that we need a protection strategy for water from criminal offences.

¹ ANNEX I, Survey on water crimes

a. In the picture below, we can see that the Pollution is considered the most frequent offence. If we consider this as an indicator of likelihood, it seems that water crimes are very rare.

We must consider, however, the significant share of «don't know», around 50% on cyberattacks or terrorism.

THE SURVEY



b. The survey also collected data on environmental impact: how much can the following crimes damage the soil, the water and the animal species?

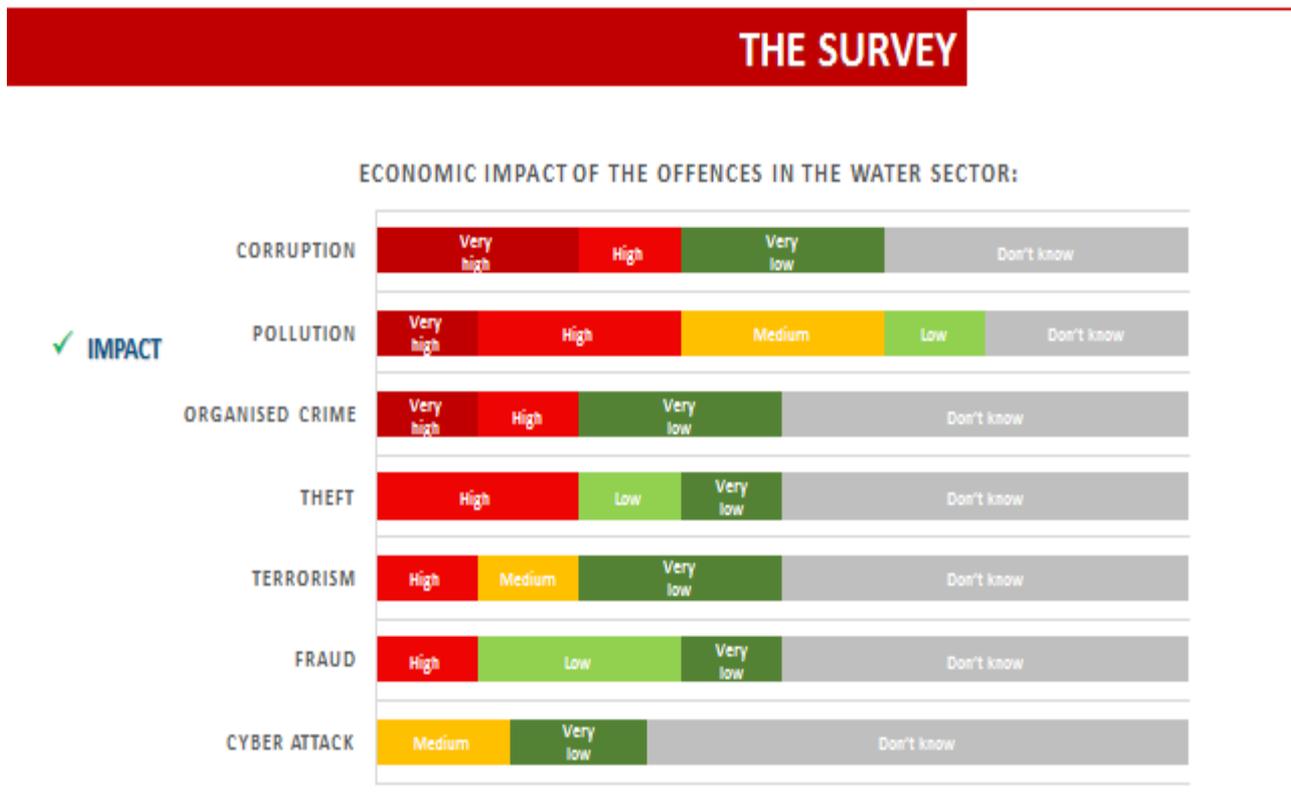
THE SURVEY

ENVIRONMENTAL IMPACT OF THE OFFENCES IN THE WATER SECTOR:

✓ IMPACT



c. In the picture below we asked to the respondents their perception on the impact of the following crimes on the overall economic loss in the water sector.



The images shown in the report want to give an idea of the questionnaire. Full work is available as an attachment².

The main remarks of the survey, which we would like to investigate, are:

- More resources are needed for enforcement;
- Better procedure can minimize consequences of criminal incidents against water;
- More data could help in designing preventing strategies;
- Legislation should be more harmonized at European Level

² ANNEX II, Results of the Survey

2.1.3 The final meeting

The meeting³ was held at the Historical Museum of Crete, Heraklion – Crete (Gr), as side event of the ENPE Conference: “Protecting habitats and endangered species in Europe through tackling environmental crime”.

The meeting was the context to discuss the results of the survey, to share case studies from 3 different countries and to tackle the next step for a project update.

The discussions with the participants⁴ can be summarised as follows:

- A legal framework for better water management, that provides implementable and enforceable measures for monitoring, control, prevention and protection of water is needed. Enforcement and deterrence are key elements on which to concentrate efforts. The EU legislation does not cover the full spectrum of issues. This includes enhanced communication between all actors, from the regulators to the judiciary, and better trained authorities.
- The border between water crimes and other offences is thin, and should be clarified.
- Corruption is a prominent issue, even in the European Union, and lessons learned and best practices should be exchanged within the region, and with other regions.
- Attention should also be put on water issues in the context of global challenges, such as climate change and conflicts. The number of conflicts based on water are increasing, and scarcity is a growing concern, even in Europe.
- Raising awareness is a good start.

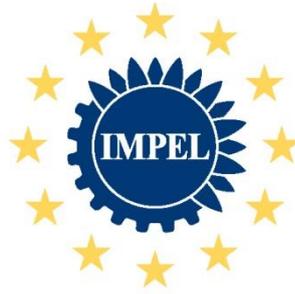
³ ANNEX III, Agenda IMPEL Water Crimes Project - Heraklion

⁴ ANNEX IV, List of participants

3. RECOMMENDATIONS

TO WHOM	WHAT	WHY
<ul style="list-style-type: none"> • International, National and Local Police Forces • Environmental Agencies • Environmental Networks 	<ul style="list-style-type: none"> • Set a systematic data collection • Extend the investigation also to water data • Diffuse/exchange data among EU countries • Develop Intelligence Analysis on emerging threats in water sector 	<ul style="list-style-type: none"> • Data are lacking • need to classify water crimes • Some Water Crimes have cross-border and cybercrime relevance • Threat Assessment needs to be improved
<ul style="list-style-type: none"> • Water Utilities • Water related companies • Municipalities 	<ul style="list-style-type: none"> • Set up and perform a risk assessment analysis • Take proper measures to mitigate the risks of water crimes 	<ul style="list-style-type: none"> • Scarce knowledge • Data are lacking • Data needed to classify water crimes • Threat Assessment needs to be improved
<ul style="list-style-type: none"> • Research Organizations, Universities • Scientific Institutions 	<p>Continue to increase knowledge on Water Crimes, developing and refining tools for:</p> <ul style="list-style-type: none"> • Data Collection & Analysis • Threat and Risk Assessment • Best practices exchange and diffusion 	<ul style="list-style-type: none"> • Knowledge is the key starting point to fight the arising phenomena of WATER CRIMES

Annexes



European Union Network for
the Implementation and Enforcement
of Environmental Law

Annex I. Survey on water crimes

Questionnaire

WATER CRIMES IN EUROPE

Protecting the water sector
from criminal offences

April 2018

Draft 1.2

V. 1.1	22/02/2018
V. 1.2	10/04/2018

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Dear Colleague, the Italian Ministry for Environment, together with other members of the IMPEL Network, invites you to participate in this survey about crimes in the water sector in Europe.

Your answers are fundamental to understand the legal framework protecting water from traditional and new forms of crime, and to collect data at European level.

The survey will take around 25 minutes. Please note that some questions require references to documents and other sources, and where possible to provide link to on line sources. This might take some extra time.

Please include your email address if you want to receive information about the survey results. The survey is also available on line: <https://goo.gl/forms/hsJgX8PojqOqUaN23>

For any information you can contact Ms Claudia Carpino (Carpino.Claudia@minambiente.it)

INTRODUCTION

A recent study (Water Crimes Project, 2017) has explored the different emerging threats to freshwater in Europe, analysing 82 cases across Europe. Researchers have identified a number of challenges, mainly the absence of an harmonised legal framework to protect water as natural resource (similar to wildlife or forest), and the consequent scarcity of data on crimes against water.

The following survey aims to collect information on legislation and offences against freshwater: the national legal framework, the availability of data or official reports, and the evolution in the next future. This information has never been collected systematically in Europe. The survey provides working definitions of water crimes, derived from the UNODC International Crime Classification System ICCS (<http://www.unodc.org/unodc/en/data-and-analysis/statistics/iccs.html>)

The survey requires firstly basic information on the respondent, with a self-assessment on the degree of knowledge of offences in the water sector.

The next group of questions searches for specific legislation, documents, or data on specific offences against water bodies, different from generic provisions (e.g. an offence on fraud in the water service as opposed to the generic criminal provision of fraud). Please do your best in particular in indicating sources or references (e.g. legislation, links), in particular if in available in English.

The next section will serve to identify priorities in terms of impact, and to collect information to design possible scenarios. This section is built upon an EUROPOL methodology, but it is based on subjective answers, so please be as objective as possible.



The survey will improve quality of data on crime against water at national level, to support national efforts to monitor SDG targets in the areas of public security and safety. The survey will contribute to the development of an EU Water Crimes Threat Assessment, and to members' capacity to design a Water Security Strategy in Europe.

The survey can be replied annually, including new set of information every year. It was drafted in February 2018, tested in March, and released in April for its first wave. Data collected will not be shared or published unless in aggregated or anonymous form.

DISCLAIMER: Answers represent your personal opinion/knowledge. Please respond carefully to all the questions. Thank you in advance for your time and collaboration.

Please send this survey to Carpino.Claudia@minambiente.it by 21/05/2018



WORKING DEFINITIONS

The definition of crime for the purposes of the ICCS

While certain common elements, such as “harm” and “wrongfulness”, can be associated with crime, they cannot wholly and operationally define it. Moreover, the vast disparity in approaches and sources used in the establishment of criminal laws by different countries makes it impossible to create a consistent and comprehensive definition of crime. The common denominator of what constitutes a “crime” is that it consists of behaviours which are defined as criminal offences and are punishable as such by law. The offences defined as criminal are established by each country’s legal system and the codification of crimes (criminal code, penal code, etc.).

As a result, “crime” is considered by the ICCS to be the punishable contravention or violation of the limits on human behaviour as imposed by national criminal legislation. Each criminal offence has a perpetrator — person, corporation or institution — which is liable for the criminal behaviour in question.

WATER: surface and ground freshwater, as defined in the EC Water Framework Directive 2000/60/EC, and the Drinking Water Directive 98/83/EC. The definition includes also water services.

European Union has defined freshwater as “naturally occurring water having a low concentration of salts, which is often acceptable as suitable for abstraction and treatment to produce drinking water” (art. 2b Dir 91/676/EEC). Surface water, ground water, and water services are defined in the EC Water Framework Directive 2000/60/EC and the Drinking Water Directive 98/83/EC. The EU Directive 2000/60/EC (art. 1) establishes a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater, while within Art. 2 “surface water” means inland waters, except groundwater; transitional waters and coastal waters, except in respect of chemical status for which it shall also include territorial waters; “ground water” means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil; “water intended for human consumption” has the same meaning as under Directive 80/778/EEC, which excludes natural mineral waters and medicinal waters, as amended by Directive 98/83/EC, where art. 1 concerns the quality of water intended for human consumption. “Water services” means all services which provide, for households, public institutions or any economic activity: (a) abstraction, impoundment, storage, treatment and distribution of surface water or groundwater, (b) waste-water collection and treatment facilities which subsequently discharge into surface water.



WATER SECTOR: consists of all means and activities devoted to creating net ‘added value’ from the water resources available on a given territory. The water sector operates in a complex interplay between water resources and the socio-economic and environmental system in a given country (UN-Water Task Force on Indicators, Monitoring and Reporting, Final Report)

CRIME: the criminal acts in national and international laws related to punishable contravention or violation of the limits on human behaviour or demands, as defined by national criminal legislation, or “the offences that are included within this range of events, however, are established by each country’s legal system and the codification of crimes (criminal code, penal code, etc.)”, as defined in the UNODC ICCS. The working definition of CRIME for this project can include also other acts, not included in the national/international legislations, that can potentially harm or damage the water. In this case, the acts not specified in any legislation require a specific description.

WATER CRIME is defined here as any punishable contravention or violation of the limits on human behaviour as imposed by national criminal legislation, against surface, and ground water, or against water services. WATER CRIME definition include also as any intentional act that can potentially harm or damage the water.

WATER RELATED CRIME includes any punishable contravention or violation of the limits on human behaviour as imposed by national criminal legislation, which uses surface, and ground water, or water services, as a mean for committing other crimes

SECTION 1 - INFORMATION ON RESPONDENT

Name of the respondent	
Organisation	
Level of your organisation	<input type="checkbox"/> National or State level <input type="checkbox"/> Regional or Provincial level <input type="checkbox"/> Local level <input type="checkbox"/> Other



Position in the organisation	
Main functions/competences	
Contact	



SECTION 2 – KNOWLEDGE

The seven offences identified as relevant for the water sector:

WATER CORRUPTION, either grand corruption, that involves political decision-makers, and petty corruption, that people can experience daily referred to modest sums of money. According to the ICCS Classification the corruption is defined as “Unlawful acts as defined in the United Nations Convention against Corruption and other national and international legal instruments against corruption” (ICCS cod. 0703).

WATER POLLUTION, as offences against the natural environmental and, specially, directly against water quality. According to the ICCS Classification the environmental crimes are defined as “Acts that result in the pollution of the natural environment”. In particular, cod. 10012 includes “Acts that result in water pollution or degradation” (ICCS cod. 1001 and cod. 10012).

WATER THEFT, carried out by the consumers of the water supply system to provide an economic advantage through a physical alteration of the water supply system. According to the ICCS Classification the theft is defined as “Unlawfully taking or obtaining of property with the intent to permanently withhold it from a person or organization without consent and without the use of force, threat of force or violence, coercion or deception” (ICCS cod. 0502).

WATER FRAUD, composed by fiscal artifices aimed to adulterate the water consumption registration and to reach an illicit gain. According to the ICCS Classification the fraud is defined as “Obtaining money or other benefit, or evading a liability through deceit or dishonest” (ICCS cod. 0701).

WATER ORGANIZED CRIME, as the activity of criminal organisations that have taken the control over management of the water within a territory. According to the ICCS Classification the crime of organized crime is defined as “Participating in the activities of an organized criminal group” (ICCS cod. 0905).



WATER TERRORISM, intended like the existence of terrorist plans aimed to attack the water sectors. According to the ICCS Classification the crime of terrorism is defined as “Participating in the activities of a terrorist group or other individual or group acts related to terrorist offences” (ICCS cod. 0906).

WATER CYBER ATTACKS that occur with the intrusion in the cyber system, manipulation of information or networks, data destruction, etc. According to the ICCS Classification the cyber-attacks is defined as “Unauthorized access to, interception of, interference with, or misuse of computer data or computer systems” (ICCS cod. 0903).

What is your experience (self assessment) on Water Crimes, as previously defined?	Very low	low	medium	high	Very high
Corruption					
Pollution					
Theft					
Fraud					
Organised crime					
Terrorism					
Cyber-attack					



Corruption in the water sector

CORRUPTION, either grand corruption, involves political decision-makers, and petty corruption, that people can experience daily referred to modest sums of money. According to the ICCS Classification the corruption is defined as “Unlawful acts as defined in the United Nations Convention against Corruption and other national and international legal instruments against corruption” (ICCS cod. 0703).

In your country, are there legal provisions for water corruption?

What is the anti-corruption legislation in your Country? include links to the legal text (in English where possible)	(please provide here the references of the provisions)
Is it:	<input type="checkbox"/> Penal/criminal law <input type="checkbox"/> Administrative law <input type="checkbox"/> Civil law
Are there specific laws applicable when water is involved in the offence?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
If yes, please provide here the references of the provisions:	

In your country, are there reports/official documents related to the water corruption?

<input type="checkbox"/> Yes	(please provide here the references of the provisions)
<input type="checkbox"/> Yes, on corruption in general, with some information on water corruption	(please provide here the references of the provisions)
<input type="checkbox"/> No, only on corruption in general	(please provide here the references of the provisions)
<input type="checkbox"/> No	
<input type="checkbox"/> Don't know	

Are they available in English?



<input type="checkbox"/> Yes
<input type="checkbox"/> No

Are they available on line? Please add the link

<input type="checkbox"/> Yes
<input type="checkbox"/> No

Please list the key actors for enforcement, investigation, prosecution against this offence

Please provide name, competence, task of the key actors.
--



Pollution

In your country, are there legal provisions for water pollution?

What is the legislation on pollution in your Country? include links to the legal text (in English where possible)	(please provide here the references of the provisions)
Is it:	<input type="checkbox"/> Penal/criminal law <input type="checkbox"/> Administrative law <input type="checkbox"/> Civil law
Are there specific laws applicable when water is involved in the offence?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
If yes, please provide here the references of the provisions:	

In your country, are there reports/official documents related to the water pollution?

<input type="checkbox"/> Yes	(please provide here the references of the provisions)
<input type="checkbox"/> Yes, on pollution in general, with some information on water pollution	(please provide here the references of the provisions)
<input type="checkbox"/> No, only on pollution in general	(please provide here the references of the provisions)
<input type="checkbox"/> No	
<input type="checkbox"/> Don't know	

Are they available in English?

<input type="checkbox"/> Yes
<input type="checkbox"/> No



Are they available on line? Please add the link

Yes

No

Please list the key actors for enforcement, investigation, prosecution against this offence

Please provide name, competence, task of the key actors.



Theft

In your country, are there legal provisions for water theft?

What is the legislation on theft in your Country? include links to the legal text (in English where possible)	(please provide here the references of the provisions)
Is it:	<input type="checkbox"/> Penal/criminal law <input type="checkbox"/> Administrative law <input type="checkbox"/> Civil law
Are there specific laws applicable when water is involved in the offence?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
If yes, please provide here the references of the provisions:	

In your country, are there reports/official documents related to the water theft?

<input type="checkbox"/> Yes	(please provide here the references of the provisions)
<input type="checkbox"/> Yes, on theft in general, with some information on water theft	(please provide here the references of the provisions)
<input type="checkbox"/> No, only on theft in general	(please provide here the references of the provisions)
<input type="checkbox"/> No	
<input type="checkbox"/> Don't know	

Are they available in English?

<input type="checkbox"/> Yes
<input type="checkbox"/> No



Are they available on line? Please add the link

Yes

No

Please list the key actors for enforcement, investigation, prosecution against this offence

Please provide name, competence, task of the key actors.



Water Fraud

In your country, are there legal provisions for water fraud?

What is the legislation on fraud in your Country? include links to the legal text (in English where possible)	(please provide here the references of the provisions)
Is it:	<input type="checkbox"/> Penal/criminal law <input type="checkbox"/> Administrative law <input type="checkbox"/> Civil law
Are there specific laws applicable when water is involved in the offence?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
If yes, please provide here the references of the provisions:	

In your country, are there reports/official documents related to the water fraud?

<input type="checkbox"/> Yes	(please provide here the references of the provisions)
<input type="checkbox"/> Yes, on fraud in general, with some information on water fraud	(please provide here the references of the provisions)
<input type="checkbox"/> No, only on fraud in general	(please provide here the references of the provisions)
<input type="checkbox"/> No	
<input type="checkbox"/> Don't know	

Are they available in English?

<input type="checkbox"/> Yes
<input type="checkbox"/> No

Are they available on line? Please add the link



<input type="checkbox"/> Yes
<input type="checkbox"/> No

Please list the key actors for enforcement, investigation, prosecution against this offence

Please provide name, competence, task of the key actors.
--



Water Organized crime

In your country, are there legal provisions for water organised crime?

What is the legislation on organised crime in your Country? include links to the legal text (in English where possible)	(please provide here the references of the provisions)
Is it:	<input type="checkbox"/> Penal/criminal law <input type="checkbox"/> Administrative law <input type="checkbox"/> Civil law
Are there specific laws applicable when water is involved in the offence?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
If yes, please provide here the references of the provisions:	

In your country, are there reports/official documents related to the water organised crime?

<input type="checkbox"/> Yes	(please provide here the references of the provisions)
<input type="checkbox"/> Yes, on organised crime in general, with some information on water organised crime	(please provide here the references of the provisions)
<input type="checkbox"/> No, only on organised crime in general	(please provide here the references of the provisions)
<input type="checkbox"/> No	
<input type="checkbox"/> Don't know	

Are they available in English?

<input type="checkbox"/> Yes
<input type="checkbox"/> No

Are they available on line? Please add the link



<input type="checkbox"/> Yes
<input type="checkbox"/> No

Please list the key actors for enforcement, investigation, prosecution against this offence

Please provide name, competence, task of the key actors.
--



Water Terrorism

In your country, are there legal provisions for water terrorism?

What is the legislation on terrorism in your Country? include links to the legal text (in English where possible)	(please provide here the references of the provisions)
Is it:	<input type="checkbox"/> Penal/criminal law <input type="checkbox"/> Administrative law <input type="checkbox"/> Civil law
Are there specific laws applicable when water is involved in the offence?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
If yes, please provide here the references of the provisions:	

In your country, are there reports/official documents related to the water terrorism?

<input type="checkbox"/> Yes	(please provide here the references of the provisions)
<input type="checkbox"/> Yes, on terrorism in general, with some information on water terrorism	(please provide here the references of the provisions)
<input type="checkbox"/> No, only on terrorism in general	(please provide here the references of the provisions)
<input type="checkbox"/> No	
<input type="checkbox"/> Don't know	

Are they available in English?

<input type="checkbox"/> Yes
<input type="checkbox"/> No



Are they available on line? Please add the link

<input type="checkbox"/> Yes
<input type="checkbox"/> No

Please list the key actors for enforcement, investigation, prosecution against this offence

Please provide name, competence, task of the key actors.
--



Water Cyber-attacks

In your country, are there legal provisions for water cyber-attack?

What is the legislation on cyber-attack in your Country? include links to the legal text (in English where possible)	(please provide here the references of the provisions)
Is it:	<input type="checkbox"/> Penal/criminal law <input type="checkbox"/> Administrative law <input type="checkbox"/> Civil law
Are there specific laws applicable when water is involved in the offence?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
If yes, please provide here the references of the provisions:	

In your country, are there reports/official documents related to the water cyber-attack?

<input type="checkbox"/> Yes	(please provide here the references of the provisions)
<input type="checkbox"/> Yes, on cyber-attack in general, with some information on water cyber-attack	(please provide here the references of the provisions)
<input type="checkbox"/> No, only on cyber-attack in general	(please provide here the references of the provisions)
<input type="checkbox"/> No	
<input type="checkbox"/> Don't know	

Are they available in English?

<input type="checkbox"/> Yes
<input type="checkbox"/> No



Are they available on line? Please add the link

Yes

No

Please list the key actors for enforcement, investigation, prosecution against this offence

Please provide name, competence, task of the key actors.



SECTION 3 – DATA AND CASE STUDIES

Please provide official data or statistics about corruption in your country (link). If data on water corruption are available, please add a separate line

<input type="checkbox"/> Yes	If yes, please provide the references of the data or statistics (and eventual link)
<input type="checkbox"/> No data	

Please provide official data or statistics about pollution in your country (link). If data on water pollution are available, please add a separate line

<input type="checkbox"/> Yes	If yes, please provide the references of the data or statistics (and eventual link)
<input type="checkbox"/> No data	

Please provide official data or statistics about theft in your country (link). If data on water theft are available, please add a separate line

<input type="checkbox"/> Yes	If yes, please provide the references of the data or statistics (and eventual link)
<input type="checkbox"/> No data	

Please provide official data or statistics about fraud in your country (link). If data on water fraud are available, please add a separate line

<input type="checkbox"/> Yes	If yes, please provide the references of the data or statistics (and eventual link)
<input type="checkbox"/> No data	

Please provide official data or statistics about organised crime in your country (link). If data on organised crime in the water sector are available, please add a separate line

<input type="checkbox"/> Yes	If yes, please provide the references of the data or statistics (and eventual link)
<input type="checkbox"/> No data	

Please provide official data or statistics about terrorism in your country (link). If data on water terrorism are available, please add a separate line

<input type="checkbox"/> Yes	If yes, please provide the references of the data or statistics (and eventual link)
<input type="checkbox"/> No data	

Please provide official data or statistics about cybercrime in your country (link). If data on cyber-attacks in the water sector are available, please add a separate line



<input type="checkbox"/> Yes	If yes, please provide the references of the data or statistics (and eventual link)
<input type="checkbox"/> No data	



SECTION 4 - OUTLOOK

The four following questions will allow to identify the possible criminal scenarios in the water sector.

Do you think that, over the next 5 years, the price of water will

- Increase
- Decrease
- Stay the same
- Don't know

Do you think that, over the next 5 years, the certainty of water supply will

- Increase
- Decrease
- Stay the same
- Don't know
-

Do you think that, over the next 5 years, the water demand will

- Increase
- Decrease
- Stay the same
- Don't know
-

Do you think that, over the next 5 years, the value of the investments in the water sector will

- Increase
- Decrease
- Stay the same
- Don't know

Do you think that, over the next five years, the risk of the mentioned criminal phenomena will

	Increase	Increase a little	Stay the same	Decrease a little	Decrease	Don't' know
Corruption						
Pollution						
Fraud						
Theft						
Organised crime						
Terrorism						
Cyber attack						



SECTION 5 – CRIME IMPACT

Please enter a value for each question, in order to obtain a general estimation on how the different typologies of crimes could impact on several receptors (environmental, economic and social).

FREQUENCY - In your opinion, what is the FREQUENCY of the following offences in the water sector?

	Very frequent	Frequent	Medium	Rare	Very rare	Don't know
Corruption						
Pollution						
Fraud						
Theft						
Organised crime						
Terrorism						
Corruption						

ENVIRONMENT IMPACT - In your opinion, what is the impact of the following crimes taking into account at least the following aspects : a) Resources (soil,water, etc.); b) People; c) Flora/Fauna.

	Very high	High	Medium	Low	Very low	Don't know
Corruption						
Pollution						
Fraud						
Theft						
Organised crime						
Terrorism						
Corruption						

ECONOMIC IMPACT - In your opinion, what is the impact of the following crimes taking into account at least the following aspects: a) cost of water supply service alteration/disruption; b) cost of drainage.



	Very high	High	Medium	Low	Very low	Don't know
Corruption						
Pollution						
Fraud						
Theft						
Organised crime						
Terrorism						
Corruption						

SOCIAL IMPACT - In your opinion, what is the impact of the following crimes taking into account at least the following aspects: a) Mistrust of people; b) Crimes imitation; c) Insecurity perception; d) Loss of freedom/privacy?

	Very high	High	Medium	Low	Very low	Don't know
Corruption						
Pollution						
Fraud						
Theft						
Organised crime						
Terrorism						
Corruption						



What are (in %) water losses in your system, and how much of these losses is for illicit behaviours?

Water losses:

Please put one or more "x" on the percentage or range	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Of which, how much for illicit behaviours?

Please put one or more "x" on the percentage or range (50% means that half of the losses are for illicit behaviours)	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Legislation and instruments

How much do you agree with the following statements?

One choice per row	I disagree	I partly disagree	I don't know	I partly agree	I agree
The current legislation is adequate to prevent or prosecute criminal phenomena against water					
Legislation should be more harmonised at European Level					
Sanctions have a sufficient deterrent effect					
Prosecution of crimes against water is effective					
More data could help in designing preventing strategies					
The current procedures are adequate to respond to criminal incidents against water					
Better procedure can minimize consequences of criminal incidents against water					
More resources are needed for					



enforcement					
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CASE STUDY

Please fill the annex for the description of case studies as many times as necessary.

The research is trying to collect case studies. Please use the form available here below.

Note on the Annex for case studies:

Disaggregating variables in the annex allow the recording of additional information about an offence that is necessary to understand the complexities of each individual offence, such as victim and perpetrator characteristics. They derive from the [ICCS](#), pag. 20, which provides an overview of disaggregating variables that can be used to describe each individual crime act/event more fully or to describe perpetrator and victim attributes in more depth.

<i>Case study: Title</i>	
Water crime	<input type="checkbox"/> Water pollution <input type="checkbox"/> Water pollution <input type="checkbox"/> Water fraud <input type="checkbox"/> Water fraud <input type="checkbox"/> Water organised crime <input type="checkbox"/> Water terrorism <input type="checkbox"/> Water cyber-attack
Brief description of the case	
Type of water involved in the offence	Surface water ("means inland waters, except groundwater; transitional waters and coastal waters, except in respect of chemical status for which it shall also include territorial waters")
	Groundwater ("all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil")
	Water intended for human consumption (meaning as under Directive 80/778/EEC, as amended by Directive 98/83/EC.) formerly Drinking water
	Water services (all services which provide, for households, public institutions or any economic activity: (a) abstraction, impoundment, storage, treatment and distribution of surface water or groundwater; (b) waste-water collection and treatment facilities which subsequently discharge into surface water.
	Other
Intended use of water	Direct human Consumption



involved	Industrial	
	Agricultural	
	Recreational	
	None	
	Other. <i>Please describe...</i>	
Water service stage involved	Abstraction	
	Impoundment	
	Storage	
	Treatment	
	Distribution	
	Waste-water collection	
	Waste-water treatment	
	Discharge into surface water	
	None (No water service involved)	
	Other. <i>Please describe...</i>	
Legal basis for the offence	Penal/criminal law	
	Administrative law	
	Civil law	
Type of offence (UNODC ICCS)	Offences against the natural environment (cat. 10)	
	Offences through water (or against water users e.g. for poisoning)	
	Offences involving fraud, deception or pollution (cat.7)	
	Offences against property only (cat 5.)	



	Other. <i>Please describe...</i>	
Perpetrator information	Individual	
	Criminal group	
	Organised crime group (national or transnational)	
	Enterprise	
	Other legal person	
	State/institution	
	Unknown	
	Other. <i>Please describe...</i>	
Motive of crime	Illicit gain	
	Hate crime	
	Gender-based	
	Interpersonal conflict	
	Political agenda	
	Need	
	Terrorism ideology included	
	Not applicable	
	Unknown	
	Other. <i>Please describe...</i>	
Form of event	Planned	
	Attempted	
	Completed	
	Not applicable	



	Unknown	
	Other. <i>Please describe...</i>	
Consequences of crime	Harm/damage to water (water pollution)	
	Harm/damage to the natural environment or animals (water abuse)	
	Harm/damage to human beings (water accessibility)	
	Harm/damage to infrastructures(water availability)	
	Harm/damage to the public economy (water fraud)	
	Unknown	
	Other. <i>Please describe...</i>	



Annex II. Results of the Survey

THE IMPEL PROJECT

THE RESULTS OF THE SURVEY

✓ PROFILE OF RESPONDENTS

Experts belonging to national or regional environmental agencies have filled in the questionnaire.

The survey had 4 sections:

- The KNOWLEDGE of different offences in the water sector
- The FREQUENCY of these crimes
- The IMPACT, either on the environment, on the society and in terms of costs
- The expected OUTLOOK of the offences in the next 5 years.

THE SURVEY

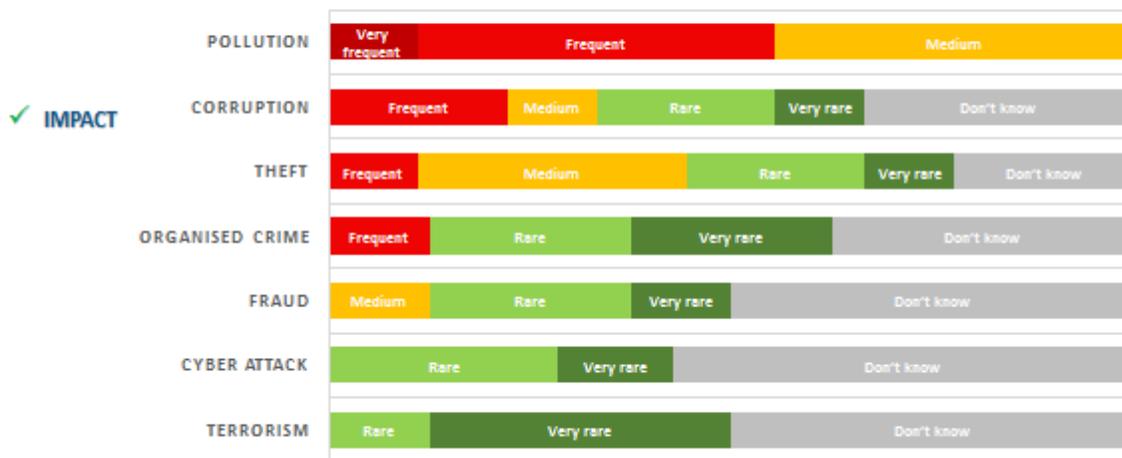
WHAT IS YOUR EXPERTISE ON WATER CRIMES?





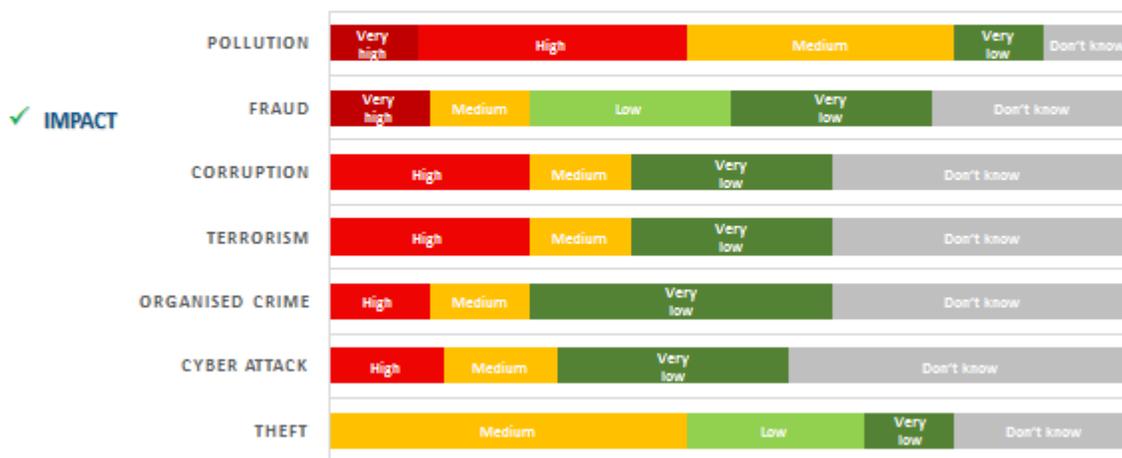
THE SURVEY

FREQUENCY OF THE OFFENCES IN THE WATER SECTOR:



THE SURVEY

ENVIRONMENTAL IMPACT OF THE OFFENCES IN THE WATER SECTOR:





THE SURVEY

ECONOMIC IMPACT OF THE OFFENCES IN THE WATER SECTOR:



THE SURVEY

SOCIAL IMPACT OF THE OFFENCES IN THE WATER SECTOR:

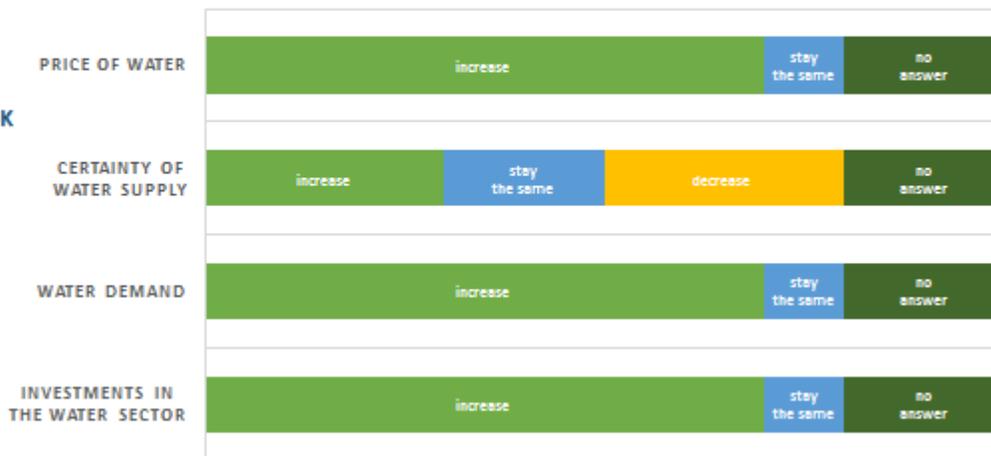




THE SURVEY

EVOLUTION OF THE WATER SECTOR IN THE NEXT 5 YEARS

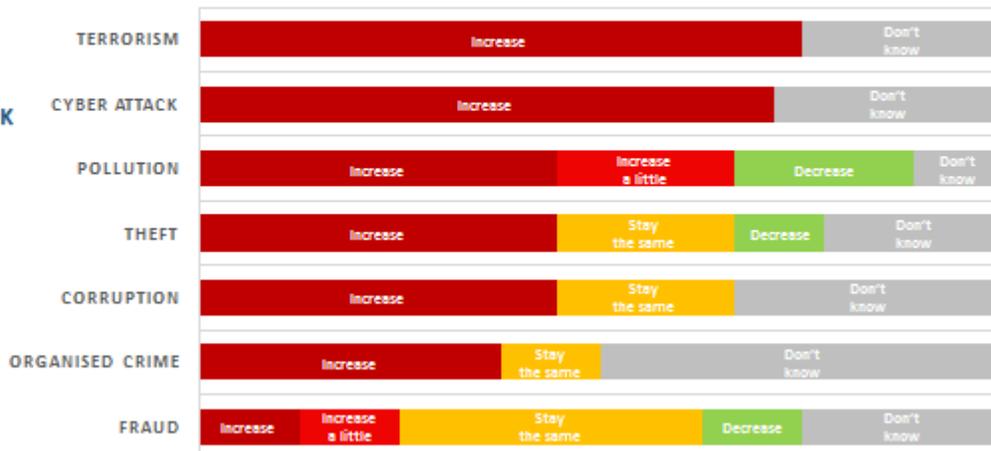
✓ **OUTLOOK**



THE SURVEY

EVOLUTION OF THE OFFENCES IN THE NEXT 5 YEARS

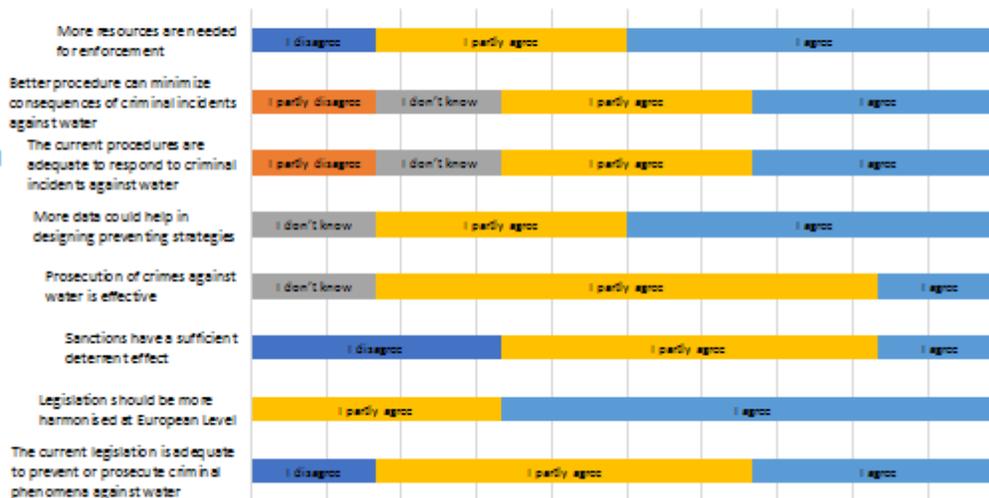
✓ **OUTLOOK**





THE SURVEY

✓ **OPINION**





Annex III. Agenda IMPEL Water Crimes Project – Heraklion



ENPE Conference

Heraclion – Crete (Gr)
23th – 24th October, 2018



IMPEL Water Crimes workshop

24th October, 2018

parallel session with International and national initiatives in environmental prosecution

1st part - NHMC classroom 1.

1	09.00 – 09.15	Presentation of the IMPEL Water Crimes project - Claudia Carpino – Project Manager and Chair of the Workshop
2	09.15 – 09.45	Results from the IMPEL Water Crimes Survey – Lorenzo Segato
3	09.45 – 10.30	3 Case studies: <ul style="list-style-type: none">- Greece - Thalia Statha- Slovenia - Darija Stanic-Racman- Romania - Hirean Mircea
4	10.30– 11:00	Methodology for Threat and Risk assessment – Giuseppe Sgorbati

11.00 – 11.30: Coffee break & networking

2nd part - NHMC classroom 1.

5	11:30 – 11:50	ENPE experience on prosecution on water crimes - Tom Ledden
6	11:50 – 12: 10	Water crimes and Environmental Compliance Assurance Initiative – Chris Dijkens, IMPEL Chair
7	12:10 – 12:30	Roundtable/discussion on EU Water Security Strategy – What next?



Annex IV. List of Participants



IMPEL project "Water Crimes". Expert workshop, 24 October 2018
Historical Museum of Crete
Heraklion, Greece

Name	Country
Fabio Carella	Italy
Claudia Carpino	Italy
Brigitte Mrvelj Cecatka	Croatia
Ruth Ciarlo'	Malta
Chris Dijkens	Netherlands
Marco Falconi	Italy
Paul Hickey	England
Tom Ledden	England
Hirean Mircea	Romania
Alessandro Peru	Italy
Darija Stanic-Racman	Slovenia
Lorenzo Segato	Italy
Giuseppe Sgorbati	Italy
Fernando Simões	Portugal
Thalia Statha	Greece
Dasa Sulekova	Slovakia

Rome, 29/10/2018

Claudia Carpino