

Name of Project: Tackling illegal groundwater drilling and abstractions (TIGDA) Phase 2	
ToR Reference No.: 2022-VI/02	
Version: <input type="checkbox"/> Draft <input type="checkbox"/> Final <input checked="" type="checkbox"/> Adopted	Date: 13.10.2021
<b>TERMS OF REFERENCE FOR WORK UNDER THE AUSPICES OF IMPEL</b>	

## 1. Work type and title

<b>1.1 Identify which Expert Team this needs to go to for initial consideration</b>	
Industry and air	<input type="checkbox"/>
Waste and TFS	<input type="checkbox"/>
Water and land	<input checked="" type="checkbox"/>
Nature protection	<input type="checkbox"/>
Cross-cutting tools and approaches	<input type="checkbox"/>
<b>1.2 Type of work you need funding for</b>	
Exchange visits	<input checked="" type="checkbox"/>
Peer reviews (e.g. IRI)	<input type="checkbox"/>
Conference	<input type="checkbox"/>
Development of tools/guidance	<input checked="" type="checkbox"/>
Comparison studies	<input type="checkbox"/>
Assessing legislation (checklist)	<input checked="" type="checkbox"/>
Other, (please describe):	<input type="checkbox"/>
<b>1.3 Full name of work</b>	
Tackling illegal groundwater drilling and abstractions (TIGDA ) Phase 2	
<b>1.4 Abbreviated name of work or project</b>	
TIGDA 2	

## 2. Outline business case (why this piece of work?)

<b>2.1 Name the legislative driver(s) where they exist</b>
<ul style="list-style-type: none"> <li>• Water Framework Directive (2000/60/EC)</li> <li>• Groundwater Directive (2006/118/EC)</li> <li>• Action Plan on Improving Environmental Compliance and Governance (COM (2018) 10)</li> <li>• The European Green Deal</li> </ul>



## 2.2 Link to IMPEL MASP priority work areas

- |   |                                     |
|---|-------------------------------------|
| 1. Assist members to implement new legislation.   | <input type="checkbox"/>            |
| 2. Build capacity in member organisations through the IMPEL Review Initiatives.               | <input type="checkbox"/>            |
| 3. Work on 'problem areas' of implementation identified by IMPEL and the European Commission. | <input checked="" type="checkbox"/> |
| 4. Other, (please specify):   | <input type="checkbox"/>            |

## 2.3 Why is this work needed?

Groundwater is and remains a valuable resource for the environment and different human activities. Environmental and anthropogenic pressures on this resource include amongst others: climate change (drought, flooding, etc.), (over)abstraction and pollution (point source and diffuse). Water reuse, water buffering and infiltration are some of the possible measures to diminish our requirement for fresh groundwater as well as replenish its storage. Nonetheless groundwater drilling and abstraction will remain necessary for different purposes. Groundwater shortage is no longer an exclusive problem for arid or Mediterranean countries. Recent prolonged drought periods have repeatedly made clear that groundwater supplies have to be carefully managed (abstraction as well as recharge) in all member states.

As a tool for reaching a good quantitative and qualitative state of groundwater bodies, a prior authorisation for abstraction and impoundment should be in place in the member states (WFD). The directive does not include any specific requirements on how to successfully enforce these authorisations or other possible impacts they might have on groundwater quantity or quality. This project therefore aims specifically on groundwater drilling and abstractions, including open and closed loop geothermal systems.

As the different aquifers and aquitards in the member states are drilled (through) for these purposes it is useful for the states to share knowledge or have guidance on:

1. Which specific legislation and requirements are in place for groundwater protection (drilling, instalment and exploitation).
2. Which specific methods are in use for enforcement of this legislation (site visits, checklists, use of experts, best practices).

Proper regulation and enforcement of groundwater drilling and abstractions are important for reaching a good quantitative and qualitative status of groundwater bodies as they can have a direct impact on groundwater quantity and an indirect impact on groundwater quality. Optimal tackling of illegal groundwater drilling & abstraction is therefore an essential instrument. Important to note that by 'illegal' in this sense non-permitted installations as well as permitted but non-compliant installations are meant (e.g. over-abstraction, faulty installation (depth, grouting)).

## 2.4 Desired outcome of the work



The aim of this project in the first phase was to collect data from the member states regarding the two topics mentioned above; done via a questionnaire (automated & on-line) & several online project group meetings.

The aim of this project in the second phase (2022) is to do technical site visits at specific groundwater abstraction and/or drilling sites , to share best practices and expertise on groundwater abstraction

The main focus of this project in this phase is to create a guidance document on enforcement methods which can be used at groundwater drilling and abstraction sites. These would include targeting methods, checklists on specific items to look for whilst inspecting different installations as well as description of specific methods to check compliance (e.g. inspection of flow meters, analysis of groundwater level and quality data, drilling methods).

After the guidance document has been created, it will be disseminated to the stakeholders.

In further phases (2023 -2024) these may continue and integration of the outcomes of this project in the Water Framework Directive will be explored. This to aid member states to ensure/to reach a good quantitative and qualitative state of groundwater bodies by having better control/overview of the groundwater pressures (quantity and quality) if illegal, unknown or unregulated boreholes are identified. An analysis of River Basin Management Plans will highlight the groundwater bodies where greater scrutiny of illegal and unregulated boreholes is required to manage a significant pressure to the assessment of good quantitative and/or good quantitative status.

### **2.5 Does this project link to any previous or current IMPEL projects?**

The project aims to build on the experience of other water-related IMPEL projects (e.g. SWETE, Good practice for tackling nitrate pollution, WODA- Water Over-abstraction and illegal abstraction Detection and Assessment) for sharing best practices to implement the Water Framework Directive.



### 3. Structure of the proposed activity

#### 3.1 Describe the activities of the proposal

The project leader(s) and team will organise a virtual meeting in the spring of 2022 to gather information on groundwater legislation, with special focus on possible loopholes and enforcement methods, either in place or not existing. The meeting will be driven following the questionnaire submitted in 2021 and will aim to establish the possibility to perform on-site visits (if possible due to Covid 19 Pandemics).

The second meeting, scheduled for the summer of 2022 will be a face-to-face meeting and will consist in on-site data collection activities.

The third meeting planned for the autumn of 2022 will also be an on-site face-to-face meeting and its objective is to start the work on the guidance document referring to enforcement methods for groundwater drilling and abstraction sites.

The fourth meeting, virtual one is scheduled for the winter of 2022 will set the final version of the guidance document on enforcement methods which is planned to be used for groundwater drilling and abstraction sites.

For the years 2023-2024 after the second phase 2 meetings combined with sites visits, for each year are scheduled, to disseminate and implement the outcomes of the guidance . The guidance document will be translated for better dissemination. A consultant will review the pressures data, River Basin Management Plans, compliance and enforcement by MS on regulated and unregulated boreholes. The consultant will make reasonable and plausible assumptions on the impact of illegal or unregulated abstraction and the risk in achieving good WFD objectives for each groundwater body.

#### 3.2 Describe the products of the proposal

Output:

Guidance Document on enforcement methods to be used at groundwater drilling and abstraction sites.

Outcomes:

- 1) Support for WFD Implementation, tackling groundwater drilling and abstraction sites
- 2) Increase of experience on enforcement methods used for groundwater drilling and abstraction sites by IMPEL Network.
- 3) Improve professional expertise on tackling groundwater drilling and abstractions.
- 4) Improve groundwater management

