



## HYDRALAB+: Second Call for Proposals

HYDRALAB is a network of research institutes with world-leading hydraulic and hydrodynamic experimental facilities. The HYDRALAB+ project is funded by the European Commission through the Horizon2020 programme to strengthen the coherence of experimental hydraulic and hydrodynamic research by improving the infrastructures with a focus on adaptation to climate change issues. The project has three key objectives: (i) widen the use of and access to unique hydraulic and hydrodynamic research infrastructures in the EU; (ii) improve experimental methods to enhance hydraulic and hydrodynamic research and address the future challenges of climate change adaptation; and (iii) network with the experimental hydraulic and hydrodynamic research community throughout Europe and share knowledge and data with the wider scientific community and other stakeholders, including industry and government agencies.

This Second Call for Proposals is an invitation to all eligible research groups (see the summary of rules and conditions for transnational access) to submit a proposal for an experiment to be hosted in one of the HYDRALAB+ major and unique facilities, free of charge.

The facilities available in this second call are based at the institutes: Deltares, Aalto University, DHI, HR Wallingford Ltd., HSVA, Leibniz Universität Hannover, University of Hull and Universitat Politècnica de Catalunya. The experimental facilities we are making available are designed for research across a range of disciplines, including hydraulics, geophysical hydrodynamics, morphodynamics, ecohydraulics, ice engineering and hydraulic structures. More information on the facilities is available in the list of providers and facilities at the end of this document and on <http://hydralab.eu/facilities--instruments/facilities-in-hydralab/>.

The theme of HYDRALAB+ is 'Adaptation to Climate Change' and this focus will integrate Transnational Access projects with our Joint Research Activities (see <http://hydralab.eu/research--results/> for further details). We ask prospective Users of the facilities to make clear in their proposal how their research will contribute to our knowledge and understanding of adaptations to climate change.

The programme provides user groups access *free of charge* to the facilities for their research project and covers also travel and subsistence costs (within prescribed limits). Access is made available for short duration projects, not exceeding 3 months. State-of-the-art measuring instruments, data-acquisition and processing systems will be available, as well as modern support facilities, such as library, computers and internet access. Furthermore, visiting researchers are offered a scientific and intellectual environment, with assistance and guidance from experts at the host institute. Previous experience in physical modelling and laboratory experiments are not a prerequisite since technical support and training will be provided.

User groups are only eligible when the team leader and the majority of researchers are conducting their research in the EU or Associated States, but outside the host country of the facility. Details on the conditions for eligibility are in the summary of rules and conditions ([http://hydralab.eu/assets/dms/summary\\_of\\_rules\\_and\\_conditions6a.pdf](http://hydralab.eu/assets/dms/summary_of_rules_and_conditions6a.pdf)).

You should submit your project proposal, by email, to the facility provider at the institution where you would like to conduct your proposed experiment. A valid proposal consists of the following items in one file:

1. Application form
2. A proposal, not exceeding 4 pages (incl. text, references and figures), with the following sections:
  - a. Scientific context of the study
  - b. Explanation of how the research contributes to climate change adaptation
  - c. Scientific need to use this specific installation
  - d. Methodology
  - e. Proposed analysis of the results
  - f. Publication Plan

- g. Data Storage Plan (focus: dissemination of knowledge and availability for the European Research Community);
3. A 1-page description of the model set-up (if relevant), additional technical details and specifications to aid the facility providers in assessing the project's feasibility;
4. CVs for each researcher (not exceeding 1 page per researcher).

Please note that proposals exceeding the above page limits cannot be considered by the User Selection Panel. The deadline for proposals is **December 2, 2016**. Proposals received after this date cannot be considered.

Proposals are reviewed by a User Selection Panel of which the outcome is expected to be known on March 31 2017. The primary criterion for selection is the scientific merit. Secondary criteria are used to encourage the participation of first-time users, active female participation, trans-national research teams, interaction with the host institute and contribution to our research focus of adaptation to climate change.

It is highly recommended to send a draft proposal to the infrastructure manager, as early as possible but at least 2 weeks before the deadline. By doing so, the facility manager can advise users with respect to technical constraints, feasibility or eligibility conditions and provide additional information aimed at improving your final proposal.

For more information please contact:

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## List of providers and facilities participating in the second call

PROVIDER	SHORT NAME	LOCATION
<b>1. Deltares</b> <a href="http://www.deltares.nl/en/facilities/">www.deltares.nl/en/facilities/</a>	<b>Delta Flume</b>	<b>Delft, the Netherlands</b>
	<ul style="list-style-type: none"> <li>- 300m x 5m x 9.5m</li> <li>- Regular/irregular waves up to 4m height</li> <li>- Unique in size in combination with second-order wave steering system and active re-reflection compensation</li> <li>- only small projects of less than 14 access days (including construction of test setup, tests and removal of test setup) can be accommodated in this second call in the Delta Flume.</li> </ul>	
	<b>Delta Basin</b>	<b>Delft, the Netherlands</b>
	<ul style="list-style-type: none"> <li>- 50m x 50m</li> <li>- Regular/irregular swell or short-crested waves within -50 degrees and + 50 degrees.</li> </ul>	
	<b>Scheldt Flume</b>	<b>Delft, the Netherlands</b>
	<ul style="list-style-type: none"> <li>- 110m x 1.2m</li> <li>- Wave board steering system for second order waves and a controlled wave damping system</li> <li>- Wave current interaction</li> </ul>	
<b>2. Aalto</b> <a href="http://cearctic.aalto.fi/en/infra/">http://cearctic.aalto.fi/en/infra/</a>	<b>Water&amp;Soil Flume</b>	<b>Delft, the Netherlands</b>
	<ul style="list-style-type: none"> <li>- 50m x 5.5m x 2.5m</li> <li>- Large flow conditions</li> <li>- All water/soil research projects</li> </ul>	
	<b>Ice Tank</b>	<b>Espoo (Otaniemi), Finland</b>
	<ul style="list-style-type: none"> <li>- 40m x 40m x 2.8m</li> <li>- Xy carriage</li> <li>- Ship performance in ice, ice structure interaction, ice formation processes</li> <li>- 40m long wave-maker for wave-ice interaction or structure-wave-ice- interaction</li> </ul>	
	<b>Offshore Wave Basin</b>	<b>Hørsholm, Denmark</b>
	<ul style="list-style-type: none"> <li>- 3D 60 flap wave maker</li> <li>- Irregular waves, steady current and wind loading possible</li> <li>- Water and structure interaction</li> </ul>	
<b>3. DHI</b> <a href="https://www.dhigroup.com/">https://www.dhigroup.com/</a>	<b>Shallow water Multi-Directional Wave Basin</b>	<b>Hørsholm, Denmark</b>
	<ul style="list-style-type: none"> <li>- 2D and 3D wavemaker, steady current and wind loading</li> <li>- Flexible use for support research on water and structure interaction, water and environment and water and sediment.</li> </ul>	

4. <b>HR Wallingford</b> <a href="http://www.hrwallingford.com/facilities/fast-flow-facility">http://www.hrwallingford.com/facilities/fast-flow-facility</a>	<b>Froude Modelling Hall Fast Flow Facility</b>	<b>Wallingford, UK</b>
	<ul style="list-style-type: none"> <li>- 70m x 4m x 2.5 m, Dual channel</li> <li>- Wave-Current-Sediment modelling</li> <li>- Water depth 0.5m to 2.0m</li> <li>- Maximum pump discharge 5m<sup>3</sup>s<sup>-1</sup></li> <li>- Flow speeds (0.625m/s at 2m depth, 1.25m/s at 1m depth)</li> <li>- Absorbing wavemaker</li> <li>- 1 m deep sediment pit</li> <li>- Underwater laser scanner, Aquadopp and Vectrino2</li> </ul>	
5. <b>HSVA</b> <a href="http://www.hsva.de">www.hsva.de</a>	<b>Arcteclab</b>	<b>Hamburg, Germany</b>
	<b>Large Ice Model Basin with mobile Wave Generator (LIMB)</b>	
	<ul style="list-style-type: none"> <li>- 78m x 10m x 2.5m</li> <li>- 12m x 10 m deep water section (5 m)</li> <li>- Air temperatures of about -20 degrees Celsius</li> <li>- Wave height up to 0.25 m</li> <li>- Wave period up to 3 sec</li> <li>- A motor-driven and a transverse carriage available for offshore structures</li> </ul>	
	<b>Arctic Environmental Wave Basin (AETB)</b>	
6. <b>LUH</b> <a href="http://www.fzk.uni-hannover.de/">www.fzk.uni-hannover.de/</a>	<b>Forschungszentrum Küste</b>	<b>Hannover, Germany</b>
	<b>Large Wave Flume</b>	
	<ul style="list-style-type: none"> <li>- 300m x 5m x 7m</li> <li>- Regular waves (H up to 2.1 m) , wave spectra (H<sub>s</sub> up to 1.3 m) , freak waves (H up to 3 m)</li> <li>- Active wave absorption control</li> <li>- Comprehensive measurement equipment</li> </ul>	
	<b>Multi-directional Wave and Current Basin</b>	
7. <b>UHULL</b> <a href="http://www.hull.ac.uk/tes">http://www.hull.ac.uk/tes</a>	<b>Total Environment Simulator</b>	<b>Hull, United Kingdom</b>
	<ul style="list-style-type: none"> <li>- Designed for ecohydraulics and sediment dynamics research in rivers estuaries and coasts</li> <li>- Particularly suited to climate adaptation with environmental control and flexibility to change boundary conditions</li> <li>- 16 m x 6 m x 1.8 m. Can be configured with channels 1-6 m wide or multiple channels or meandering channels and complex topographies.</li> <li>- Recirculating flow, regular and irregular waves</li> </ul>	

	<p>and rainfall with sediment transport in fresh or saline water</p> <ul style="list-style-type: none"> <li>- Instrumentation includes PIV, ADVs &amp; Vectrino Profilers, Laser surface scanning, acoustic bed profilers.</li> <li>- Supports plants and animal experimentation.</li> </ul>	
<p><b>8. UPC</b>  <a href="http://ciemlab.upc.edu/en">http://ciemlab.upc.edu/en</a></p>	<p><b>CIEM</b></p>	<p><b>Barcelona, Spain</b></p>
	<ul style="list-style-type: none"> <li>- 100 m x 3m x 4.5m</li> <li>- Scale 1:2 – 1:20</li> <li>- Waves (up to 0.90m) with a SWL of 2.65 m</li> <li>- Regular, bichromatic and irregular waves</li> <li>- Influence of Sea and swell over beach profiles and coastal defence structures</li> <li>- Recirculating flow allowing the study of wave-current interaction</li> </ul>	