



WMO HydroHub 2nd Innovation Call Terms of Reference (TORs)

	Section	Content guidelines
1	Background	<p>1.1 National Meteorological and Hydrological Services (NMHS) install, operate and maintain networks of observation stations to collect in situ measurements that describe the status of river basins as a basis for management, forecast and warning services.</p> <p>1.2 The drive to improve these services is leading to a need to expand observation networks, especially in data scarce areas, and to find new ways of monitoring in challenging environments. At the same time the demand for more cost-effective solutions is high, especially considering the global trend to reduce national funding for observation activities.</p> <p>1.3 A variety of possible innovative monitoring technologies and approaches have been developed by industry and academia.</p> <p>1.4 While proof-of-concept studies have often been successful, operational uptake by NMHSs is rather low. This is partially due to the fact that widespread operational deployment depends on more than just technological aspects.</p> <p>1.5 Additional properties that make an otherwise sound solution fit-for-operations, besides include, among others:</p> <ul style="list-style-type: none"> • cost of long-term operations and maintenance; • compliance (or non-compliance) to international regulations and standards; • comparability of observation data throughout a river basin or globally and over time as well as with other technologies; • availability of local supply chains for manufacturing; • necessary expertise and trainings for technical staff; and embedded working practices and cultures.
2	Scope	<p>2.1 The WMO HydroHub is seeking to fund projects that will build the capacity of NMHSs to use innovative hydrometric observation technologies or monitoring approaches.</p> <p>2.2 It is expected that the observation technology or monitoring approach utilized in the project has already been through proof-of-concept laboratory- or field-tests, but are not yet widely used in the operational community. While minor modifications might be required as part of the project (for example, to allow implementation in a new environment) it is expected that projects clearly focus on supporting capacity building for the sustainable operational uptake of the technology or approach by NMHSs.</p> <p>2.3 Solutions should be suitable for operational use and their deployment should provide clear benefits to NMHSs. For example, a total cost of ownership which is less than that of conventional methods, an advancement in the utility</p>

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		<p>of the data collected and/or an ability to undertake monitoring which was previously more difficult or impossible.</p> <p>2.4 The focus is on freshwater quantity observation, namely surface or groundwater water levels, river discharge, snow/ice storage, soil moisture and precipitation.</p> <p>2.5 While activities may be focused on particular environments (for example, high mountain catchments or ephemeral waterbodies), proposals should have wide geographical applicability, with the potential to help improve operational hydrometry in many different countries around the world. Proposals may therefore be based anywhere in the world and international collaborations are encouraged where necessary to provide the knowledge and skills needed to address the challenge. All proposals must however demonstrate a clear pathway by which their outputs will deliver benefits to low or middle income countries. Proposals focusing on Least-Developed Countries (LDCs) and Small Island Developing States (SIDSs) are particularly encouraged.</p>
3	Development objective	<p>Projects should address one or more of the following challenges:</p> <ol style="list-style-type: none"> 1. Improved measurement of floods using non-contact technologies; 2. Expansion of localised hydrometric equipment supply and maintenance opportunities through open-design, distributed manufacturing and new calibration tools; 3. Increased accuracy and reliability of river discharge measurement in vegetated channels; 4. Integration of new data sources into operational hydrometric monitoring (e.g. earth observation data, citizen science monitoring, research or private sector data); 5. Advancing quality control practices and tools for hydrometric data management, including through the use of Artificial Intelligence.
4	Outputs	<p>4.1 Projects should deliver outputs that help build the capacity of NMHSs to use innovative hydrometric observation technologies or monitoring approaches. Outputs should support the ongoing operational uptake of the solution beyond the life of the project.</p> <p>4.2 The exact nature of outputs is left to the supplier's discretion but they should facilitate the sustainable operational update of the solution by NMHSs. Outputs might include: training courses, secondments, workshops, producing training material or guidance material.</p> <p>4.3 Wherever possible outputs should be designed such that, following the completion of the project, other NMHSs not directly involved in the project can assess the potential uptake of the observation technology or monitoring approach in their own countries.</p>
5	Project Consortium	<p>5.1 Project consortia submitting proposals are expected to include at least one NMHS as either the lead or a main partner and proposals should explain</p>

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		<p>how the project will provide sustainable enhancements to the NMHS hydrological monitoring capacities.</p> <p>5.2 The envisioned roles and responsibilities of all partners involved in the project should be described in proposals and the budget and activity plans in the project proposals should clearly demonstrate that the project is a partnership between NMHSs and the other consortium members.</p> <p>5.3 Consortia should be in place before the bid and therefore details of the roles of all partners expected to be included in the proposal. Where suppliers are unable to identify suitable NMHS partners themselves, the WMO Secretariat may be able help find suitable collaborators that are interested to engage and support the project on an exceptional basis and before proposals are submitted. Such requests should be done through the United Nation Global Marketplace (UNGM).</p>
6	Language	<p>Project proposals and outputs should be provided in English, with additional version in local languages where this is necessary to support capacity development within the NMHS. For communication between WMO and the supplier, English language is preferred, French can be arranged.</p>
7	Application Guidelines	<p>7.1 An Application Template is annexed to these ToRs providing guidance to suppliers. All proposals are required to use this template.</p> <p>7.2 Project proposals must include an innovation description comprising of:</p> <ul style="list-style-type: none"> A - High-level description of the observation technology or monitoring approach that the project will focus on, including an explanation the overall innovativeness of the solution; B - Details of the technology or approach's development history, including past proof-of-concept testing/field trials where appropriate and details of previous/existing grant funding which has supported this; C - Proposals should include reference to material relevant to demonstrate accuracy and dependability of the solution (for example, proof of concept trial results) and include these as Annexes to the proposal where they are not in the public domain; D - Detailed description of intellectual property ownership of all components relevant for operational use. <p>7.3 Project proposals must include a project implementation plan comprising of:</p> <ul style="list-style-type: none"> E - Detailed description of the activities that will be undertaken in the project and the outputs that will be produced. The description should explain how these will build the capacity of NMHSs to use the innovative hydrometric observation technology or monitoring approach; F - Explanation of the geographical focus of the project. Where projects do not focus specifically on a Low or Middle Income Countries, proposals should provide a clear explanation of how LMICs would benefit from the projects outputs in future; G - Project timeline including milestones and deliverables; H - Risk management plan, including an assessment of the risks and mitigations measures related to the COVID-19 pandemic (see section 13).

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		<p>7.4 Project proposals must include project impact plan comprising of:</p> <ul style="list-style-type: none"> I - Overview of the advantages expected from operational use of the solution within NMHSs, including an estimate of the total-cost-of-ownership, details of any improvements to resulting data quality/reliability or coverage; J - Outline of how long-term suitability of hydrometric observations would be improved, including how the NMHS would maintain operational use of the innovative hydrometric observation technology or monitoring approach following the end of the project; K - Discussion of the potential opportunities and challenges to widespread national, regional and global level uptake of the solution, including details of the environments, terrains and geographies in which the solution could be used and the degree to which the solution conforms to current international hydrometry standards; L - Theory of change for the project. <p>7.5 Project proposals must include information on vendors and consortium members' skills and experience including:</p> <ul style="list-style-type: none"> M - Overview of vendor's (lead consortium partner) relevant past experience implementing similar activities; N - Details of the project consortium, including the role of each of the partner organization and details of key individuals in the project team; O - Overview of capacity, resources and relevant operational hydrometry expertise of consortium organisations to deliver project; P - Skills and experience of key individuals in the core Project Team (from vendor). CVs for key individuals should be included as Annexes.
8	Financial Proposal	<p>8.1 Financial proposals must include a budget i.e. when and how funds will be used, which will be used in conjunction with the WMO Bid Submission Form template (including all financial details). All related costs should be included (i.e. travel, etc).</p> <p>8.2 The requested budget should be clearly justified in the proposals and a disbursement plan should be included that allows to derive a payment plan. Generally payments should be planned after delivery of milestones, advance payments require justification, acceptance depends on the supplier profile.</p>
9	Budget	<p>The financial support which is provided under this Call ranges between CHF 50,000 and CHF 75,000 per project. Between 2 and 4 projects are expected to be funded.</p>
10	Timing	<p>Submitted proposals should include a clear implementation plan commencing within a month of the award expected to take place in October 2020 and for a maximum duration of 6 months. The supplier should state the date at which implementation can commence.</p>

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11	Reporting	<p>11.1 Projects will be monitored and evaluated on a regular basis to assess progress against their implementation plans and these ToRs. Obstacles to implementation that had not been foreseen in the planning would need to be reported immediately to the WMO Secretariat.</p> <p>11.2 A short inception report with an updated project implementation plan and a final project report will be expected, further reporting might be demanded depending on the project plan.</p> <p>11.3 Expenditure shall be reported according to UN rules and regulations.</p>
12	Intellectual Property	<p>12.1 Ownership of intellectual property before and after implementation of the project shall be described in proposals. WMO requests full hand-over of all intellectual property created in this project with the intention to release it to the public domain for economic exploitation.</p> <p>12.2 Deviations from this scheme (partial or delayed hand-over etc.) shall be described explicitly in the proposal and the funding agreement.</p> <p>12.3 WMO intends to aggregate information from all submitted proposals in order to publish anonymous information as part of a market analysis or lessons learned document. No details on specific suppliers, proposals or proposed solutions from unsuccessful bidders will be revealed without permission.</p>
13	Assessment Process and Timeline	<p>13.1 Applications will go through the following assessment process:</p> <ul style="list-style-type: none"> • Applications submitted through the United Nations Global Marketplace (UNGM) will be evaluated by a Technical Evaluation Board (TEB). • Any registered company – irrespective from its size – is allowed to submit an application in the UNGM. Individuals are not eligible to submit applications. • The selection process includes a technical and a financial evaluation/scoring of the proposals. Technical and financial proposals shall be submitted in separate envelopes with the technical proposal having a greater weight compared to the financial proposal (80/20). • Once the technical and financial evaluations have been carried out, post-qualification interviews/oral presentations will be carried out to validate the information provided by the bidders in their proposal and to test the bidder's understanding of the requirement. The post-qualification interviews/oral presentation may influence the final decision vis-à-vis their overall final scores. <p>13.2 The timeline of the process is the following:</p> <ul style="list-style-type: none"> • July 2020: launch of the Call • July-September 2020: submission of proposals. Here, bidders can ask clarification questions through the UNGM • 4 September 2020: Deadline to submit proposals • September: Technical and Financial Evaluation of the proposals • Early October 2020: Post-qualification interviews

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		<ul style="list-style-type: none">• End of October 2020: Award
14	Other	Project proposals must outline and the possible impacts of the COVID-19 pandemic on their activities and outputs and explain how they will mitigate these – including suggesting possible alternate deliverables if appropriate. Projects which demonstrate a lower risk of delay, and deliverables which are unlikely to be impacted by COVID-19 may be favored.
