CALL FOR APPLICATIONS

Innovation Initiative – *I²*

MEDRC Water Research Grants in Palestine

MEDRC Water Research is pleased to announce the 2022 Innovation Initiative (I²) research grant awards in Palestine, in collaboration with the Palestinian Water Authority ("PWA"), funded by the Government of the Netherlands. The I² grant provides research support funds to innovative and impactful projects relating to the water sector, or solutions to fresh water scarcity, with a particular interest in projects relating to water management and wastewater.

The Innovation Initiative will provide support funds ranging from roughly $3,000 to $5,000 USD per project, to a small selection of promising projects in relevant areas of water research. Both individual and group applications are accepted. Award amounts may vary depending on the scope of the proposed research and whether it concerns an individual or group application.

Application Deadline: 26 February 2022

I² grant award recipients will be selected by an international panel of experts representing MEDRC and its regional partners, with additional representatives reflecting national priority research interests and international standards of excellence. Selection criteria will be based on a scored system assessing the following:

- Quality & strength of the research proposal
- Innovative aspects and uniqueness of the research proposal
- Applicability to local or regional water issues
- Scalability of the proposed project/potential solution
- Durability, environmental impact and energy efficiency of the proposed solution

In addition, proposals are assessed on the extent to which they address priorities and research themes of national importance, as laid down in national policy documents and strategies for the water, environment and agricultural sectors. For reference, an overview of themes and priorities has been added to this Call for Applications (see **appendix)**. Applicants are also encouraged to inform themselves about national water strategies, climate adaptation plans and sustainable agriculture policies, prior to submitting their application.

Application Requirements

Innovation Initiative applicants may apply as either individuals or as a group/team. Applicants must be a resident national of Palestine, in either Gaza or the West Bank, and provide documentation of this to be eligible. Submitted applications must be fully completed, with all required supporting documentation in order to be considered. Applicants must be available for an interview to present their proposal, if requested.

1.1 ELIGIBILITY

Must be a resident national of Palestine

Applicants are expected to have:

- completed a Bachelor's degree in a related subject—Master's degree or higher preferred;
- must be fluent in English, capable of reading, writing, and presenting your research in English;
- A clear research proposal, addressing an immediate need or specific problem as identified by the water authorities in Palestine, including but not limited to, water resource management, desalination, hydrology of arid areas, climate change, wastewater reuse, or water and renewable energy topics;
- Resident national of Palestine, residing in the West Bank or Gaza.

1.2 APPLICATION PROCEDURE

- Submit a completed Application Form with all listed required documents at www.medrc.org/fellowships before 27 February 2022.
- Shortlisted candidates may be invited to take part in an interview for the selection process.
- Successful candidates will be notified of the award grant by MEDRC Water Research.

For those interested in applying for the MEDRC Innovation Initiative, please fill out the appropriate Application Form at the listed website, and submit your research proposal with the required accompanying documents. Applicants must submit a fully completed and signed application packet, including the requested supplemental documentation, in order to be considered for selection.

1. **Application Form** – Signed and fully completed application form submitted online.
2. **Statement of Purpose** – Your statement should be typed, single-spaced, and between one to two pages, and should be signed at the bottom. Describe succinctly your reasons for applying for an I² grant, your preparations for this area of research (relevant academic or work experience), and how the funding will help to achieve your project goal. You may also include your future career plans and other aspects of your background such as interests, which may aid the selection panel in evaluating your aptitude and motivation for research.
3. **Resume/CV** – Submit an up-to-date resume/CV listing your relevant work experience and academic achievements, not exceeding four (4) pages.
4. **Proof of Qualifying Degree** – Bachelor's degree, and/or Master's degree (MSc/MBA/MA), and/or Doctorate degree (PhD). Provide a copy of your diploma(s) confirming the conferment of your listed degree(s), or any relevant certificate(s). For those about to complete a degree, a letter from an advisor with an anticipated graduation date is acceptable.
5. **Academic Transcripts** – Official academic transcripts confirming your coursework and your grades for each course. If your institution provides a transcript in a language other than English, you must submit an official English translation of the transcript that is directly provided by the institution, or an official English version of the transcript. Third-party translations services must provide the certification.
6. **Letter of Recommendation (Optional)** – Recommendations should be written by people who have directly supervised you in an academic, employment, or community service setting. Letters should directly address your suitability for advanced research on the project topic.
7. **Project Research Proposal** – Full research proposal including budget and research costs, detailing the purpose and scope of your research project, emphasizing its innovative approach and any distinguishing qualities, such as potential impact on local and regional water issues.
8. **Copy of National ID** – documentation verifying you are a resident national of Palestine.

Appendix

PWA-MEDRC Research priorities & themes - 2021 - 2025

3.1.1 Water Management and Capacity Building

- Industrial wastewater treatment and reuse, reduce municipal waste generation, increased use of biological treatment especially from stone cutting, tanneries, olive mills using different treatment technologies and environmental impacts.
- Enhance institutional capacities: implement monitor and control effective waste residues to be disposed on land as bio-remediation source.
- Sustainable development of water resource: by improved water demand management. Non-conventional water resources, water harvesting, new opportunities for the future.
- Desalination of sea and brackish water with concern to Jordan Valley and Gaza; development of non-conventional water resources using different technologies, decrease the cost of desalination, develop sustainable desalination technologies.
- Water Quality Management: water pollution and health; protected areas, sensitivity to pollution and drought, remote sensing of water resources, vulnerable areas water/sanitation solutions, ecosystems and quality of water.
- Advancing Sustainable Development Goals: “SDGs” and ensure availability and sustainable management of water and Sanitation (Goal 6), in addition to the integrated water resource management for best practices and technology transfer for other SDGs Goals

3.1.2 Water Governance and Public Health

- Water governance and regulation of water services, water integrity, water utilities benchmarking, management of Public Private Partnerships (PPP), Non-Revenue Water Reduction, Utilities asset management tools (Standards of Operation and Maintenance (O&M) And Asset Management Strategies (AM) for water).
- Water economics and management; developing water supply systems, improving water services, irrigation systems and water, agricultural patterns and suitability, economic feasibility and productivity, institutional aspects of water utilities and service providers, equity of water allocation amongst the different sectors, prepaid water meters.
- Efficiency of water usage, SMART IoT, SMART monitoring program in domestic water, Water Use Smart Control Systems, reinforce administration capacities to manage sustainably and efficiently water.
- Billing and Collection and water loss management.
- Monitoring and modeling microbiological contamination.
- Monitoring and modeling chemical pollution of water (e.g. NO3).
- Sanitary safety planning: safety of wastewater for reuse purposes.
- Innovative solution for water de-contamination and disinfection.

3.1.3 Climate Change

- Climate Change challenges and solutions, disaster risk management as it relates to floods and droughts, extreme hazardous weather events such as floods drought, etc.
- Modeling of climate change impact on water resources.
- Technologies for adaptation to climate change in the water sector, lessons learnt in adaptation and awareness on climate change.

- Artificial recharge to groundwater and its management; hydrologic studies, dams, water flows in wadis, rainwater harvesting.
- Adapting to climate change: risk management and disaster preparedness.

3.1.4 Water-Energy-Food Nexus

- Renewable energy efficiency.
- Reinforce exchange of experiences on technical and tangible implementation of renewable energy projects.
- Reinforce cooperation and technological consideration.
- Support cost-effective approaches to renovation.

3.1.5 Non-traditional Supplies

- Environmental monitoring of wastewater treatment plant.
- Modeling of wastewater treatment plants process using optimization technique.
- Reuse and recycling of treated effluents.
- Reuse and recycling of sludge.
- Assessing the environmental impact of breach wells of seawater desalination plant.
- Potential impact of intermittent operation of seawater desalination plants in the Gaza.
- Potential impacts of irrigation schemes on groundwater in the Gaza strip.
- Reuse of brine water.
- Stormwater and Flood Management: Advancing a Holistic Approach to Wet Weather Flow and Water Quality Management.

3.1.6 Cooperation and Diplomacy

- Water challenges and entrepreneurship, support MSMEs in accessing research and innovation, support initiatives aimed at finding innovative and technological solutions, facilitate technological transfer and commercialization.
- Education, research, technological development and innovation, creative education and awareness raising tools, establish an inter-institutional dialogue and knowledge-exchange platforms on water management and best practices.
- Public Private Partnerships (PPP), encourage the involvement of interest groups/users' association, find suitable ways to involve the private sector.
- Utilities-customers communication systems including complaints and responses, strengthen the participation of stakeholders in the decision-making process.
- Develop productive partnerships cooperation and improve communications in the desalination community, develop human resources for application of desalination and foster international cooperation in research activities, particularly among regional experts, utilize limited regional and international research resources and maximize technology transfer.

Research outputs and data across the themes that could be generated by the proposed research

- Costs (life cycle, operating, capital)
- Energy performance (conventional and renewable)
- Water treatment performance,
- Resilience (adaptability, reliability, availability, compatibility)
- Public health and environment
- Case studies (on impact/innovation)