

Interreg



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Italia - Malta

Modulo per la ricerca di partner / Partner search form

per la presentazione di progetti di cooperazione a valere sull'Avviso pubblico 2/2025 – Targeted Call del Programma INTERREG VI-A Italia-Malta / for the submission of cooperation projects under the Public Notice 2/2025 – Targeted Call of the INTERREG VI-A Italia-Malta Programme

SEZIONE A: CARATTERISTICHE DELL'ENTE CHE RICERCA ALTRI PARTNER / SECTION A: CHARACTERISTICS OF THE ENTITY SEEKING OTHER PARTNER/S.

1. Anagrafica Ente / Entity data

1.1 - Nome e Cognome / Name and Surname	Pellegrino Conte
1.2 - Nome dell'ente / Name of the organization	Università degli Studi di Palermo
1.3 - Tipo di beneficiario / Type of beneficiary	<input type="checkbox"/> Autorità pubblica (locale, regionale o nazionale) / Public Authority (local, regional or national) <input type="checkbox"/> Agenzia Pubblica / Public agency <input checked="" type="checkbox"/> Università o Centro di ricerca / University or Research centre <input type="checkbox"/> Impresa / Enterprise <input type="checkbox"/> Organizzazione di sostegno alle imprese / Business support organisation <input type="checkbox"/> Camera di commercio / Chamber of commerce <input type="checkbox"/> Cluster / Cluster <input type="checkbox"/> Incubatore / Incubator <input type="checkbox"/> Living lab / Living lab <input type="checkbox"/> Istituto Tecnico Superiore / Higher Technical Institute <input type="checkbox"/> Istituto scolastico (di ogni ordine e grado) / Educational institution (of all levels) <input type="checkbox"/> Corpo di protezione civile e servizi di emergenza / Civil protection corp and emergency services <input type="checkbox"/> Organizzazione della società civile / Civil society organisation <input type="checkbox"/> Ente gestore di siti, riserve, parchi, aree protette / Managing body of sites, reserves, parks, protected areas <input type="checkbox"/> Associazione attiva nei settori ambientali / Association active in the environmental sectors <input type="checkbox"/> Associazione attiva nei settori della valorizzazione del patrimonio naturale e culturale / Association active in the enhancement of natural and cultural heritage <input type="checkbox"/> Ente e/o associazione di promozione della partecipazione attiva di soggetti svantaggiati / Body and/or association promoting the active participation of disadvantaged subjects <input type="checkbox"/> Associazione di consumatori / Consumer association
1.4 - Status giuridico / Legal status	<input checked="" type="checkbox"/> Ente pubblico / Public entity <input type="checkbox"/> Organismo di diritto pubblico / Body governed by public law

	<input type="checkbox"/> Ente privato dotato di personalità giuridica / Private body having a legal personality <input type="checkbox"/> Ente del terzo settore iscritto nel Registro unico nazionale del terzo settore (Runts) / Third sector entity included in the Italian National Register for Third Sector (Runts) <i>oppure / or</i> <input type="checkbox"/> Ente del terzo settore iscritto nel registro del Commissioner for Voluntary Organisations / Third sector entity registered with the Maltese Commissioner for Voluntary Organisations
1.5 - E-mail	pellegrino.conte@unipa.it
1.6 - Website	

2. Esperienza / Experience

2.1 - Settore di esperienza / Field of experience	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Ricerca e Innovazione / Research and Innovation <input type="checkbox"/> Capitale umano / Human capital <input type="checkbox"/> Cambiamento climatico / Climate change <input type="checkbox"/> Rischi naturali e antropici / Natural risks and deriving from human activities <input checked="" type="checkbox"/> Economia circolare / Circular economy <input type="checkbox"/> Patrimonio naturale e biodiversità / Natural heritage and biodiversity <input checked="" type="checkbox"/> Beni culturali / Cultural heritage <input type="checkbox"/> Inclusione sociale / Social inclusion <input type="checkbox"/> Turismo / Tourism <input type="checkbox"/> Innovazione sociale / Social innovation <input type="checkbox"/> Cooperazione istituzionale e reti di cooperazione / Institutional cooperation and cooperation network
2.2 Competenze dell'ente / Competences of this organisation	<p>The University of Palermo is a public research institution covering almost all major fields of study, promoting an interdisciplinary approach. Its academic structures include: 16 departments, 1 medical school, and various interdepartmental Centers.</p> <p>The University of Palermo uses a large research infrastructure called "ATeN - Center," which is recognized at the regional level and included in the PNIR - National Research Infrastructure Plan 2021-2027.</p> <p>The research team involved in the project, composed of researchers from the STEBICEF and SAAF departments integrates diverse yet complementary expertise essential for developing innovative solutions for micro- and nano-plastics removal, spanning from environmental</p>

	<p>chemistry, materials science, wastewater treatment, analytical characterization, and process optimization.</p> <p>Specifically, Prof Pellegrino Conte (full professor of Agricultural Chemistry), internationally recognized for his research on the production, use, and characterization of biochar, food matrices, porous materials, and their advanced study through NMR relaxometry, provides the required leadership as the Principal Investigator of this project. Prof Delia F. Chillura Martino (full professor of Physical Chemistry), expert in soft matter chemistry, materials chemistry and their characterization, ensures the development and optimization of bio-derived carriers with tailored physical-chemical properties. Prof. Paolo Lo Meo (associate professor of Organic Chemistry) contributes advanced competencies in physical and mechanistic organic chemistry, supramolecular chemistry, catalysis, and the structural understanding of organic materials, supporting the generation of stable composite biocarriers. Dr. Elena Piacenza (assistant professor of Physical Chemistry), adds critical expertise in interfacial processes, colloidal behaviour, nanomaterial chemistry, and advanced spectroscopic and microscopic analyses, enabling robust assessment of adsorption mechanisms and micro- or nano-plastic interactions.</p> <p>Together, the team offers a fully integrated skill set covering material design, physical-chemical characterization, and environmental application, ensuring the scientific robustness and feasibility of the proposed project.</p>
<p>2.3. - Partecipazione a precedenti progetti del Programma IT-MT / Participation in previous IT-MT Programme projects</p>	<p>None of the team members has previously participated in projects funded under the Interreg V/VI-A Italy–Malta Programme</p>
<p>2.4 - Partecipazione a programmi e progetti finanziati da altri fondi europei / Participation in programs and projects financed by other European funds</p>	<p>– EJP SOIL (Horizon 2020 ERA-NET, 2020–2024) – <i>Towards climate-smart sustainable management of agricultural soils (Grant agreement ID: 862695)</i>. Role: member of the Italian working group, contributing FFC-NMR methods to characterise soil hydrological functions and support climate-smart soil management.</p> <p>– COST Action CA15209 – EURELAX (2015–2021) – <i>European Network on NMR Relaxometry</i>. Role: Substitute Management Committee Member and leader of the University of Palermo node; coordination of activities on FFC-NMR methods applied to porous and environmental systems, including soils and biochar.</p> <p>INTERREG NEXT Italia-Tunisia, Avis 1/24, “Filières de L'énergie Optimisée avec Transducteurs et Technologies Avancées pour la Nouvelle génération de récupérateur hybride et le Traitement des sources marines” – FLOTTANT. Contract n. A1-2.2-128. Role: D.F. Chillura</p>

	<p>Martino is the P.I. of the partner UniPA responsible for the development of a bio-battery to be integrated in a system of energy harvesting.</p> <p>H2020-IND-CE-2016-17 "Resource recovery from industrial waste water by cutting edge membrane technologies – ReWaCEM" project, contract n. 723729. Role: D.F. Chillura Martino was member of UniPA Team responsible for the quantification of metals in solution through spectroscopic methods.</p>
<p>2.5 – Specificare se l'organizzazione intende svolgere il ruolo di capofila o partner / This organisation is willing to be a Lead Partner or partner in this IT-MT call</p>	<p><input checked="" type="checkbox"/> Capofila / Lead Partner <i>oppure/or</i></p> <p><input type="checkbox"/> Partner</p>

SEZIONE B: IDEA PROGETTUALE / SECTION B: PROJECT IDEA

3. Campo di interesse della candidatura e ricerca Partner / Field of Interest of the Application and partner search

<p>3.1 - Priorità e Obiettivo Specifico/ Priority and Specific Objectives</p>	<p>PRIORITÀ 1 - Un'area di cooperazione più intelligente per promuovere la ricerca e l'innovazione e lo sviluppo delle competenze per la specializzazione intelligente / PRIORITY 1 – A smarter area of cooperation to promote research and innovation and the development of skills for smart specialisation</p> <p><input type="checkbox"/> OS 1.1 - Sviluppare e rafforzare le capacità di ricerca e di innovazione e l'introduzione di tecnologie avanzate nell'area transfrontaliera / SO 1.1 – Developing and enhancing research and innovation capacities and the uptake of advanced technologies in the cross-border area</p> <p><input type="checkbox"/> OS 1.2 - Sviluppare le competenze per la specializzazione intelligente, la transizione industriale e l'imprenditorialità dell'area transfrontaliera / SO 1.2 - Develop skills for smart specialisation, industrial transition and entrepreneurship in the cross-border area</p> <p>PRIORITÀ: 2 - Un'area di cooperazione resiliente, che rafforza la protezione e la preservazione della natura anche attraverso l'uso efficiente delle risorse / PRIORITY 2 - A resilient cooperation area, which strengthens the protection and preservation of nature also through the efficient use of resources</p> <p><input type="checkbox"/> OS 2.1 - Promuovere l'adattamento ai cambiamenti climatici, la prevenzione dei rischi di catastrofe e la resilienza dell'area transfrontaliera / SO 2.1 – Promoting climate change adaptation, disaster risk prevention and resilience in the cross-border area</p> <p><input checked="" type="checkbox"/> OS 2.2 - Promuovere la transizione verso un'economia circolare dell'area transfrontaliera – SO 2.2 - Promoting</p>
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	<p>the transition to a circular economy in the cross-border area</p> <p>PRIORITÀ 3 – Un'area di cooperazione efficiente in capitale sociale attraverso il ruolo della cultura e del turismo sostenibile nello sviluppo economico / PRIORITY 3 - An area of efficient cooperation in social capital through the role of culture and sustainable tourism in economic development</p> <p><input type="checkbox"/> OS 3.1 - Rafforzare il ruolo della cultura e del turismo sostenibile dell'area transfrontaliera nello sviluppo economico, l'inclusione sociale e l'innovazione sociale / SO 3.1 - Enhancing the role of culture and sustainable tourism in the cross-border area in economic development, social inclusion and social innovation</p> <p>PRIORITÀ 4 – Un'area di cooperazione con una migliore governance tra l'Italia e Malta / PRIORITY 4 - An area of cooperation with better governance between Italy and Malta</p> <p><input type="checkbox"/> OS 4.1 - Aumentare l'efficienza e l'efficacia della cooperazione nell'area transfrontaliera / SO 4.1 - Enhance the efficiency and effectiveness of cooperation in the cross-border area</p>
<p>3.2 - Breve descrizione dell'idea progettuale / Brief description of the project idea</p>	<p>The project aims at developing a sustainable system for the removal of micro- and nano-plastics from wastewater by integrating biochar derived from agricultural residues with composite biocarriers in moving bed biofilm reactors within wastewater treatment implants. Implementing this system in pilot plants in Italy and Malta, this innovative solution will contribute to reduce concerning pollutants (i.e., micro- and nano-plastics), valorise local biomass, and promote circular approaches in cross-border wastewater treatment processes.</p>

SEZIONE C: CARATTERISTICHE DEL PARTNER RICERCATO / SECTION C: CHARACTERISTICS BEING SOUGHT IN OTHER PARTNER/S.

4. Caratteristiche del partner ricercato / Characteristics of the entity being sought

<p>4.1 Tipologia di partner ricercato tra quelli elencati al punto 1.3 / Type of partner being sought among the ones listed in point 1.3</p>	<ul style="list-style-type: none"> • Autorità pubblica (locale, regionale o nazionale) / Public Authority (local, regional or national); • Agenzia Pubblica / Public agency; • Università o Centro di ricerca / University or Research centre; • Impresa / Enterprise
<p>4.2 - Competenze richieste del partner ricercato / Requested competence of the sought partner</p>	<p>The Maltese partner should have expertise in municipal or industrial wastewater treatment, including moving bed biofilm reactors (MBBRs) or biological treatment processes. Preferably, the partner should have</p>

	experience in pilot-scale implementation, facility operation, or environmental monitoring, alongside knowledge of local regulations.
4.3 - Attività che dovrebbero essere realizzate dal partner ricercato / Activities that should be carried out by the sought partner	The partner will enable the translation of laboratory-scale developments into real-world wastewater treatment, ensuring pilot validation, local applicability, and transnational knowledge transfer. Specifically, the partner should provide access to wastewater treatment implant facilities, support pilot-scale installation and operation of biochar-functionalized and bio-based composite biocarriers and contribute to data sharing and dissemination.

Inviare la scheda compilata all'indirizzo stc.italia-malta@regione.sicilia.it. Il Segretariato Congiunto provvederà a pubblicare la scheda di ricerca partner sul sito del programma www.italiamalta.eu.

Please, send the fulfilled template to stc.italia-malta@regione.sicilia.it. The Joint Secretariat will publish the partner search form on the programme website www.italiamalta.eu.