

CALL FOR APPLICATIONS

PhD Position - Sediment Dynamics and Beneficial Reuse in the Danube Delta

Host: Faculty of Geography, University of Bucharest **Doctoral School:** Faculty of Geography, University of Bucharest **Duration:** 3.5 years | **Start:** 1 October 2026 **Gross salary:** ~3,100 EUR/month (~2,000 EUR net)

ABOUT THE PROJECT

DELTA-Hub strengthens research capacity at the University of Bucharest in delta science, with the Danube Delta as its flagship study site. A central ambition of the project is to underpin a new hydro-sedimentary management strategy for the delta, one that integrates Beneficial Use of Dredged Material (BUDM) and Nature-based Solutions (NbS) with quantitative, process-based understanding of sediment dynamics. This PhD position will provide the scientific foundation for that strategy.

<https://delta-hub.unibuc.ro>

SCIENTIFIC OBJECTIVES

The thesis will advance the quantitative understanding of sediment dynamics in the Danube Delta and evaluate the morphodynamic effectiveness of BUDM and NbS interventions through process-based modelling constrained by in-situ and satellite observations. Specifically, the candidate will:

- 1. Extend and calibrate** the sediment transport component of the Danube Delta Twin model, using new in-situ data from optical and acoustic sensors (turbidity, backscatter, ADCP) and from filtered water samples (SSC/SPM).
- 2. Support the calibration and validation** of satellite-derived suspended sediment products (Sentinel-2, SWOT) against in-situ observations.
- 3. Quantify sediment pathways, budgets, and depositional regimes** across key sub-systems of the delta under present and plausible future hydro-climatic forcings.



5. Synthesise the results into a transferable framework informing sediment management in low-energy, micro-tidal deltas, contributing directly to the hydro-sedimentary management strategy being developed within DELTA-Hub.

TIMELINE

Application deadline: 1st of JUNE 2026

Interview 1: 15 June 2026 (selected candidates)

Interview 2: July 2026 (as part of the Doctoral School admission procedure)

Enrolment: 1 October 2026

HOW TO APPLY

Please send:

- (i) a CV,
- (ii) a one-page motivation letter,
- (iii) MSc transcript (or current grades if not yet defended),
- (iv) contact details of two academic references with the subject line:
“DELTA-Hub PhD application - [your name]”

at

delta.hub@geo.unibuc.ro

DELTA-Hub is funded by the European Union's Horizon Europe programme. The project aims to establish a leading research centre for delta science at the University of Bucharest, addressing the sustainability challenges facing deltaic environments worldwide.

