

**Proposed dissertation theme for the Doctoral degree Studies (2018-2022) in
Ecology and Environmental Science at Klaipėda University**

Title	Assessment and modelling of ecosystem services in coastal lagoons
Brief description of the topic	The biodiversity and ecosystem services (ES) supplied by lagoon ecosystems are vulnerable to environmental change pressures because of their spatial location and attributes. However, only part of the ES could be directly related to functional and taxonomic biodiversity, and even less could be related directly to impact drivers or linked from the so called “essential ecosystem variables” to the real values of ES. The main scientific challenge of this project is to identify and predict the changes of essential ecological variables (EEV, including ecosystem function- and structural-related ones as defined in GEOBON) and of related ES under scenarios of climate change and other human impacts. Work is expected to be organized as a comparative study between the Curonian and one of the lagoons from the Mediterranean or Atlantic coasts applying both qualitative and quantitative techniques, including the impact of climate change by applying existing climate change scenarios. We expect to use both process based models, RS data and statistical methods (BBN)
Requirements for a candidate	Background in natural or physical sciences (numerical analysis), good communication skills, ability to work in the multicultural environment. Proficiency in one of the additional languages (Spanish, French, Arabic, Italian, Turkish) would be an asset.
Research experience in the institution	Klaipėda University and partner organizations have international level experience in the ES assessment and modelling. A number of publications derived from the output of international projects could provide a good guidance for the PhD project. The PhD study will be supported by the HORIZON2020 ECOPOTENTIAL, GGF project EcoServe and SBP LiveLagoons projects.
Existing research infrastructure and support	Annual stipend: €5,740-6.400 (duration 4 years); Support for travel and consumables: ~€7,400 for 4 years; All necessary computational facilities and access to the databases are available as well as commercial licenses of GIS (ArcGIS, TerrSet) and BBN software (NETICA) licenses.
Potential supervisor [contact person for the topic]	Prof. Dr. Artūras Razinkovas-Baziukas (arturas.razinkovas-baziukas@ku.lt);