



## 2023 Master internship at UBO



### LAB & PEOPLE

- Name of the hosting lab: Géoarchitecture  
General activities of the lab: Multidisciplinary research mainly in urban planning and biodiversity  
Website: <http://www.geoarchi.net/rech/axe3>  
Number of staff / PhD: 25 researchers/ 11 PhD
- Supervisor name and contact: Edna HERNANDEZ GONZALEZ (UBO) and Manuel ARCILA (UCA)

### TOPIC OF THE INTERSHIP

- Scientific context of the internship (max 20 lines)

The coastal areas of the Atlantic region of the European Union suffer significant pressure from tourist activity (European Commission, 2016). One of the impacts is light pollution, especially in natural areas near these urban touristic environments. It is necessary to take into account the human activities associated with tourism and the environmental consequences of artificial lighting (Widmer *et al.*, 2022). It is considered a necessity to achieve sustainable tourism to quantify this light impact and propose concrete solutions that combine the protection of nocturnal biodiversity with tourism development. We will work on some areas of interest in the "blue tourism" territories of Brittany, Algarve and Andalusia. Selection criteria will identify areas with light pollution problems near areas of special interest for biodiversity by using cartographic tools and satellite images in addition to georeferenced databases of the lighting network, which includes port areas and industrial facilities, as well as tourist facilities and infrastructures. After, the databases related to the biodiversity corridors in each study area will be used with the aim of identifying where artificial light causes breaks in the ecological continuities. Once identified, local biodiversity shall be evaluated along with possible effects on the supply of ecosystem services.

Based on this information, cartographic simulations will be created to visualize different scenarios for the restoration of nocturnal ecological continuities. The application of a sociological survey is also planned with key actors from the different territories, including inhabitants, users, and civil associations with the aim of integrating "*l'expertise d'usage*".

Keywords : light pollution, blue tourism, ecological continuities

Bibliography:



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Widmer, K., Beloconi, A., Marnane, I., Vounatsou, P., (2022). Review and Assessment of Available Information on Light Pollution in Europe (Eionet Report – ETC HE 2022/8), Kjeller, Norway.

Report of tourist activity in Europe, European Commission, 2016

- **Tasks and duties entrusted to the student:**  
Contribute to determination of causal relationships between the main emitters of light pollution, especially those associated with the tourism sector, their effects on biodiversity and the consequences on the well-being of other local social agents.
- **Skills to be acquired or developed:**  
Contribute to design of a management model based on ecosystem services, taking into account services as generators of human well-being in these territories

### PROFILE OF THE DESIRED STUDENT

- Minimum level of study required: Master 2
- Field(s) of study: Social sciences, management & environmental, urban planning
- Scientific skills: QGIS software, writing and analysis skills, scientific curiosity for the subject matter
- Language skills required: English level B2 or B1

### THE INTERNSHIP ASSIGNMENT:

Desired duration of the internship (in months): 5 months

Desired Starting date of the mission: currently march 2023

Indicative weekly schedule: 35h / week

Remuneration: 600€/month, paid on national SEA-EU funds for a maximum of 5 months; additional Erasmus grant could be asked to your own university.

Internship agreement: *an internship agreement will be signed.*

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*To SEA-EU students:*

*If you're interested please send your CV and letter of motivation to the scientist in charge, [edna.hernandez@univ-brest.fr](mailto:edna.hernandez@univ-brest.fr)/[manuel.arcila@uca.es](mailto:manuel.arcila@uca.es); before the date 15/02 /2023.*