

COST Action CA21158

SMILES

Enhancing Small-Medium Islands resilience by securing the sustainability of Ecosystem Services

Funded Short-Term Scientific Mission (STSM):

First Open Call

“Effects of land use and climate changes on ecosystem services”

Purpose of Short-Term Scientific Missions (STSMs) under SMILES & available topics

The main objective of SMILES is to provide a platform for coordinated interdisciplinary research on several aspects of mapping and assessment of ecosystem services (ES) in small and medium European Islands in order to synthesize and strengthen the knowledge base for conservation of island realms and contribute to their sustainable development. Achieving this goal includes fostering collaboration across disciplines and geographic regions, with a focus on PhD students, Early Career Scholars and researchers from Inclusiveness Target Countries (ITCs).

Topics:

Working Group 3 (WG3) is focusing on the Effects of land use and climate changes on ecosystem services. Based on the progress made and the work plan for the 1st year we are calling for four potential topics:

- A.** A literature review of the existing knowledge on the interactions between climate change and ecosystem services in European islands. This review would record and summarize a number of processes and variables across islands or groups of European islands, regarding climatic changes and their reciprocal interactions with ecosystem services. Indices of climate will be monitored such as temperature, precipitation, wind, in terms of mean change or extremes. These will be linked with indices of ecosystem services such as agriculture, recreation & tourism, soil erosion, cultural diversity among others. The host will facilitate publishing the results as a review paper in an international journal based on the significance of the work effort.
- B.** A literature review of the existing knowledge on the interactions between land use changes and ecosystem services in European islands. This review would record and summarize a number of processes and variables across islands or groups of European islands, regarding land use changes and their reciprocal interactions with ecosystem services. Indices of land use change will be monitored such as transitions of natural land to agricultural or artificial land, transitions from low to high intensity agriculture or fishing, renewable energy investments and other indices. These will be linked with indices of ecosystem services such as agriculture, recreation & tourism, soil erosion, cultural

diversity among others. The host will facilitate publishing the results as a review paper in an international journal based on the significance of the work effort.

- C. Compiling publicly available climate data on some European island(s). Data will be retrieved from publicly freely available repositories and will be stored as time series. Climatic indices such as mean, minimum, maximum values of temperature, precipitation, wind will be stored. These data will be homogenized and made comparable between islands. Sequentially climatic data will be plotted and visualized. Basic statistics such as correlations, temporal autocorrelations and summary statistics such as box plots will be performed. The host will facilitate publishing the results as a journal paper collaboratively with other researchers in WG3 in an international journal based on the significance of the work effort.
- D. Time series decomposition and statistical analysis of historical climatic data on European islands. A European island will be chosen as data case study and historical data regarding some climatic indices (eg temperature, precipitation) will be retrieved from publicly available open access repositories. These data will be treated as a learning case study data set for applying temporal statistics. This will include time series decomposition, change point detection, temporal autocorrelation and other techniques. The host will facilitate publishing the results as a journal paper collaboratively with other researchers in WG3 in an international journal based on the significance of the work effort

Specific information concerning STSMs

Short Term Scientific Missions (STSMs) consist of a visit at a host organization located in a different country than the country of affiliation by a Researcher or Innovator for the specific work to be carried out and for a determined period of time. The STSM grant provides a contribution for travelling, accommodation and subsistence expenses, implementation of the project, delivery of the report to the COST Action MC and overall effort. The financial support is a contribution to the overall expenses incurred during the STSM and may not necessarily cover all of the associated outgoings. It is the responsibility of each participant to ensure that all amounts that they receive from COST funding are compliant with their national tax rules and obligations.

The following funding conditions apply and must be respected:

1. Up to a maximum of EUR 2000 in total can be awarded to each successful STSM applicant.
2. Up to a maximum of EUR 160 per day can be afforded for accommodation and meal expenses.
3. Up to a maximum of EUR 500 can be afforded for travel costs.
4. The number of STSM approved and the amount granted for each individual STSM will be determined during the evaluation process by the Grant Awarding Coordinator, in cooperation with the Core Group.

The deadline for applications is 15th February 2023. For further info regarding selection criteria, eligibility, and how to apply please see:

https://drive.google.com/file/d/1LLU2yJU_W0VxhZCUGNbDm9bbqSMV_rbA/view

For any questions regarding the topics as well as the available hosts for the STSM please contact Dr Aristides Moustakas <arismoustakas@gmail.com>, or Dr Mirela Tase <mirelatase@hotmail.com>, or Dr Georgios Zittis <g.zittis@cyi.ac.cy>

For inquiries regarding the STSM process please contact Xana Álvarez <xaalvarez@uvigo.es>

To learn more about aims and the key questions of COST Action SMILES, please look at the Memorandum of Understanding (MoU) here: <https://www.cost.eu/actions/CA21158/>.



Details of the working groups can be found here: <https://sites.google.com/view/cost-smiles/working-group>

COST Inclusiveness Target Countries: Albania, Bosnia and Herzegovina, Bulgaria, Cyprus, Czech Republic, Estonia, Croatia, Georgia, Greece, Hungary, Lithuania, Latvia, Malta, Moldova, Montenegro, Poland, Portugal, Romania, Slovenia, Slovakia, Republic of North Macedonia, Republic of Serbia, Turkey and Ukraine. More information: <https://www.cost.eu/who-we-are/cost-strategy/excellence-and-inclusiveness/>