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UNIVERSIDADE
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INTERNATIONAL CONFERENCE ON BIOLOGICAL INVASIONS 13TH EDITION



WORKSHOP #3

MAPPING AND ASSESSING THE CUMULATIVE IMPACT OF INVASIVE ALIEN SPECIES: THE CIMPAL INDEX ONLINE WORKFLOW

The CIMPAL index (Katsanevakis, Tempera & Teixeira, 2016) was implemented as an e-tool under a collaboration with LifeWatch-ERIC, the European e-Science Infrastructure for Biodiversity and Ecosystem Research that provides research facilities, resources and ICT technology support to scientists investigating biodiversity and ecosystem functions and services to address key ecological questions. Under a Virtual Research Environment, the CIMPAL workflow offers a flexible tool to map and assess the cumulative negative impact caused by invasive alien species (IAS). CIMPAL integrates information on IAS occurrences, habitat spatial distribution and the magnitude of the impact of those IAS in the ecosystems e.g. on biodiversity, on ecosystem services or any other type of impact (e.g., health, economic) that could be anchored to the defined spatial unit. One of the advantages of this cloud computing webservice is that it allows to integrate different types of information and process large datasets to perform wide-scale assessments (global, EU scale, national scale) at high spatial resolutions (meters). This workflow offers flexibility to accommodate any impact assessment protocol, use any habitat classification, being applicable to both marine and terrestrial ecosystems, and perform multi-species assessments, as well as capability to aggregate the cumulative impact scores according to user-tailored criteria (spatial grids, administrative regions, habitats, countries, protected areas, etc...). In this workshop participants will learn how to gather relevant data to run the CIMPAL index calculator and generate vulnerability maps of habitats most at risk from the cumulative negative impacts of IAS, identifying impact hot spots and impact footprints associated to pathways of introduction. Participants will also learn how to explore the outputs to prioritise species for management by ranking IAS according to complementary impact indicators. The hands-on session will be preceded by an introductory session presenting CIMPAL components and the new algorithm implementations, alerting for sources of uncertainty and reproducibility of the assessments.

TARGET AUDIENCE This workshop targets PhD students, researchers at any career level, environmental managers and decision makers. No programming or coding skills are needed to run the CIMPAL workflow as the platform provides a friendly GUI.

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DURATION 3-3,5 hours

PERIOD Morning

ORGANIZER LINK <https://www.cienciavitae.pt/portal/DD12-5E29-4B22>

OTHER RESEARCHER INVOLVED Julien Radoux (Lifewatch-BE, UC Louvain, BE), julien.radoux@uclouvain.be

NUMBER OF PARTICIPANTS Maximum of 15 participants

ADDITIONAL COMMENTS Participants need to bring their own laptops. Prior to the workshop the participants need to register (free) to create an account at the LifeWatch platform. Go to <https://www.lifewatch.eu> in the side bar "Menu" select: "Resources & Services > Invasive Alien Species Workflows" and then register with your Google account. Have a GIS software installed in your laptop (e.g. QGIS). No prior data preparation is needed as we will be using a dummy dataset for the workshop.

