DSS Statistics Seminar
December 11, 2020, 12:00
https://meet.google.com/upw-finw-niw

Integrating researchers and citizen science data: A case with two dolphin species in the central Italian mediterranean

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Collecting information about wild species distribution across space and time is a fundamental source of ecological knowledge. However, data collection at the relevant spatio-temporal scale, through the traditional expert surveys, is often cost prohibitive.

Citizen science has been signaled as an increasingly important source to fill in data gaps where information is needed to make comprehensive and robust inferences on species distributions. However, while expert surveys are designed in order to control the sampling effort, citizen science data have unknown and varying sampling effort. This is a major issue when trying to integrate different data source.

In this talk we propose a model based approach for merging expert survey and citizen science data while accounting for variation in citizen science data sampling effort. The case study is an analysis of sightings from two dolphins species along the Lazio coast. Sightings come from 3 different data, two from expert surveys and one from citizen science. We assume that the main source of variation for the sampling effort of the citizen science data is the accessibility of the sightings location.

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