

A ROADMAP FOR ASSESSING SPATIAL-TEMPORAL UNCERTAINTY AND ECOSPACE MODEL FIT

Jeroen Steenbeek, Joe Buszowski, Dave Chagaris, Villy Christensen, Marta Coll, Kristy Lewis, Kim de Mutsert, Greig Oldford, Maria Grazia Pennino, Chiara Piroddi, Giovanni Romagnoni

BACKGROUND

- Ecospace is increasingly applied for management advice, policy exploration, and environmental impact analysis w. climate change
- Spatial-temporal uncertainty assessments are rare
- We conceptualized how to enable such assessments

FOUNDATION

- Leverage benefits of distributed computing to perform many, many Ecospace runs
- Flexible enough to use various computing and networking architectures, and programming languages
- Flexible enough to accommodate from simple to complex applications



Adding input parameter uncertainty assessments and spatial fitting to Ecospace



ROADMAP

- Foresight WS 06/2019 Inventory of needs, techniques, stats, approaches, and identify ways forward
- Build a client-server architecture to enable remote execution, independent of OS
- Connect to existing cloud-based computing platforms to allow for parallel EwE execution on different clusters
- Mass-execute Ecospace to assess input parameter uncertainty
- Measure the fit of Ecospace predictions when incorporating parameter uncertainty
- Improve the fit of Ecospace models by smart perturbation of most sensitive parameters



EwE 35 years – 2019 - St. Petersburg, FL

We gratefully acknowledge EuroMarine for funding the 3-6 June 2019 foresight workshop in Barcelona, Spain