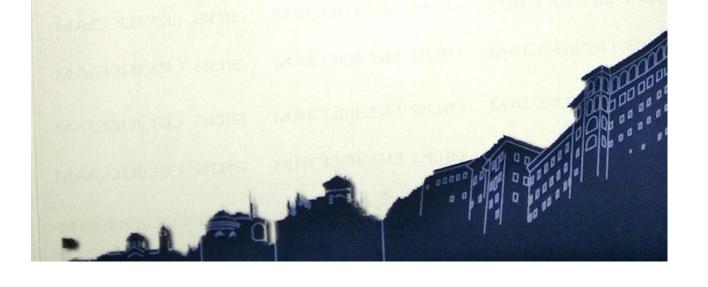# MACODESU 2015

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ABSTRACT BOOK

PRELIMINARY DATA ON USING GADGET MODEL FOR TURBOT IN THE BLACK SEA

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The utilisation of GADGET (Globally applicable Area Disaggregated General Ecosystem Toolbox) allows to include a number of features of the ecosystem into the model. To date, GADGET has successfully been used to investigate the population dynamics of stock complexes in Icelandic waters, the Barents Sea, the North Sea, the Irish and Celtic Seas and the Sofala Bank fishery of Mozambique.

For the first time in the Black Sea, in the frame of FP7 project MareFrame, the restoration of turbot fisheries to more productive levels, considering both the effect of fisheries and the ecosystem change occurred in the last 30 years will be analyzed. GADGET will be implemented in the western sector of the Black Sea (Romanian coasts).

The following three scenarios will be considered:
- stock unique (for all six riparian countries - Bulgaria, Georgia, Romania, Russian Federation, Turkey and Ukraine);
- one of the stocks in western part of the Black Sea (Ukraine, Romania, Bulgaria), and
- national stock (Romania).

In the Black Sea, GADGET application, turbot is considered the key species, while prey species are: whiting, gobies, sprat, anchovy, mussels; the predator species are cetaceans. Aditionally, environmental and socio-economic factors will be considered in the modeling

In all scenarios, as a first management measure, Ilegal, Unreported and Unregulated (IUU) fisheries will be eliminated.

Depending on the results obtained after first run of the model using the elimination of the IUU catches, other management measures will also be considered in the model, such as: spatial restrictions; temporal restrictions; effort restrictions; minimum size; participatory restrictions.

Key words: GADGET, Modeling, Turbot, Ecosystem-Approach to Fisheries Management