## An integrated methodology for the monitoring of Italian recreational fishing within the Marine Strategy Framework Directive

P. Battaglia<sup>1,2</sup>, F. Andreoli<sup>3</sup>, C. Antonini<sup>4</sup>, E. Asciutto<sup>5,2,1</sup>, L. Bolognini<sup>3,2</sup>, F. De Carlo<sup>6</sup>, F. Grati<sup>3</sup>, F. Longo<sup>1</sup>, L. Pagano<sup>1</sup>, F. Rampazzo<sup>4</sup>, L. Santangelo<sup>3</sup>, P. Sartor<sup>7</sup>, M. Scanu<sup>3</sup>, C. Viva<sup>7</sup>, S. Raicevich<sup>4</sup>

<sup>1</sup>Stazione Zoologica Anton Dohrn, Sicily Marine Centre, Contrada Porticatello 29, 98167 Messina, Italy,

<sup>2</sup>NBFC – National Biodiversity Future Centre, Piazza Marina 61, 90133 Palermo, Italy

<sup>3</sup>CNR-IRBIM Istituto per le Risorse Biologiche e le Biotecnologie Marine del Consiglio Nazionale delle Ricerche, Largo Fiera della Pesca 1 - 60125 Ancona, Italy

<sup>4</sup>ISPRA - Istituto Superiore per la Protezione e la Ricerca Ambientale, via Padre Venturini snc, Loc. Brondolo (presso Mercato Orticolo), 30015 Chioggia (VE), Italy

<sup>5</sup>Università degli Studi di Palermo, Via Archirafi 22, 90123 Palermo, Italy

<sup>6</sup>Aplysia, Via Menichetti, 35 – 57121 Livorno, Italy,

<sup>7</sup>CIBM - Consorzio per il Centro Interuniversitario di Biologia Marina ed Ecologia Applicata "G. Bacci", Viale Nazario Sauro 4, 57127 Livorno, Italy

Presenting author: Pietro Battaglia

Presenting author email: pietro.battaglia@szn.it

Recreational fishing is a widespread activity that represents a form of leisure and entertainment during free time, with deep social roots and millions of enthusiast fishers. This practice has considerable economic and socio-cultural importance, even though it can generate impacts on fish stocks and competition with professional fisheries. Recently, a monitoring program aimed to investigate the catch and effort of Italian recreational fishing as well as its impacts on marine resources was implemented in the context of the Marine

Strategy Framework Directive. A telephone survey, based on a random approach, was performed to establish a panel of fishers to estimate the Italian recreational fishing population and determine the statistical universe over which to expand field observations and assessments.

In 2020, 11.095 telephone interviews were carried out in Italy (70% coastal, 30% non-coastal municipalities) for a total of 1.025 collected recreational fishers.

On-site surveys from 4 pilot areas (Tuscany, Sicily, Marche, Veneto) were also carried out interviewing a total of 1028 fishermen during their recreational activity in 2020. A total of 609 fishermen (from telephone or on-site surveys) were also available to be re-contacted, every month, for recall interviews. Collected data included fishers' age, fishing techniques, fishing tackle, fishing spots, avidity (fishing days/year), target species, baits, catch composition and biomass, fish size, catch and release ratio, effort and costs, categorizing information for fishing type (boat, land, spear).

This approach has been then extended to the entire Italian seas since 2021 and the study is still ongoing.