Macrophyte-, macrozoobenthos- and fish-based indices were applied at eight newly-recreated seagrass sites in the northern lagoon of Venice according to the requirements of the Water Framework Directive (2000/60/EC). Here the results of the ecological status assessment during the first year of restoration under the project LIFE12 NAT/IT/000331 “SeResto” are presented.

The LIFE project No LIFE12 NAT/IT/000331 “SeResto” started in 2014 aiming at restoring seagrass meadows in the northern basin of Venice lagoon (Facca et al., Sfriso et al., this congress), and enhancing the overall ecological status (sensu WFD; Dir. 2000/60/EC) of the area. The aim of this study was to assess the ecological status during the first year of restoration by applying three WFD-compliant indices: the Macrophyte Quality Index (MaQI) (Sfriso et al., 2014), the Multivariate-Azti Marine Biotic Index (M-AMBI) (Muxika et al., 2007) and the Habitat Fish Bioindicator Index (HFBI) (Zucchetta et al., in preparation).

Biological samplings were carried out in spring, few weeks after the transplantations, and in autumn 2014. Eight stations, selected for their representativeness of the whole project area, were considered.

**Indices Applied**

- **MaQI** - Based on visual census and collection of macroalgae and aquatic angiosperm species. Species richness, percent cover and abundance are considered, yielding one annual MaQI score (Sfriso et al., 2014).

- **M-AMBI** - Based on bottom grab sampling of macrozoobenthos. Species richness and abundance are considered, yielding one annual M-AMBI score (ISPRA, 2008).

- **HFBI** - Based on seine net sampling of fish fauna (Franco et al., 2006). Richness, diversity and biomass of species functional groups are considered, yielding two seasonal HFBI scores (Zucchetta et al., in preparation).

**Ecological Status**

The ecological status as assessed by MaQI ranged between “High” and “Poor”, showing a higher spatial variability as compared to M-AMBI and HFBI scores, which ranged between “Good” and “Poor”. While the trophic status and water turbidity are likely a major cause of differences in MaQI scores between stations (Facca et al., Sfriso et al., this congress), the generally lower scores of M-AMBI and HFBI suggest a more mediated response of consumers. Faunal colonisation of restored seagrass meadows can indeed be slow (Bell et al., 2008).

The first assessment of ecological status at newly restored seagrass sites represents an important benchmark for the evaluation of the recovery success. The future application of these indices may allow to detect the faunal response to the ongoing habitat recovery process, as well as to assess the overall effectiveness of the LIFE restoration project.