LIFE BaĦAR for N2K (LIFE12 NAT/MT/000845)

ACTION A2: Data Analysis and Interpretation

Report on the final analysis of existing data (following the data collection exercise carried out through Action A1)

Prepared by

JOSEPH A. BORG

BSc, MSc, PhD (Plymouth), CBiol, MSB, MMBA, FIBMS

JULIAN EVANS

BSc (Hons), MSc, PhD (Plymouth), MMBA

LEYLA KNITTWEIS

BSc (Hons), MSc, PhD (Bremen)

PATRICK J. SCHEMBRI

BSc, MSc, PhD (Glasgow), CBiol, FSB

UNIVERSITY OF MALTA
Faculty of Science
Department of Biology

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The Life+ Benthic Habitat Research for Marine Natura 2000 Site Designation (LIFE BaĦAR for N2K) project is an EU Life+ research programme that aims to conduct research on benthic habitats in Maltese waters to support designation of marine Natura 2000 sites. The project aims to collate existing information on marine benthic habitats in Maltese waters, carry out scientific surveys in areas where knowledge gaps are identified, and analyse the data collected during these surveys in order to map the distribution of three habitat types listed in Annex I of the Habitats Directive: sandbanks, reefs and marine caves. Action A2 is led by the Department of Biology of the University of Malta (UoM-DoB), and is aimed at analysing and interpreting data generated during the LIFE BaĦAR for N2K project.

Through Action A1 of the LIFE BaĦAR for N2K project, information on marine habitats and on threats and pressures was collected by the Department for Fisheries and Aquaculture within the Ministry for Sustainable Development, the Environment and Climate Change (MSDEC-DFA). Initial analyses of the datasets submitted by February 2015 were undertaken by UoM-DoB in March 2015 in order to identify gaps and make recommendations for sites to be surveyed as part of Action A3 of the LIFE BaĦAR for N2K project. Additional data were subsequently incorporated into the Action A1 dataset after the A2 initial analysis report was concluded, with the final consolidated dataset submitted to UoM-DoB in June 2016. The present report, titled *"Report containing final analysis of existing data (following the data collection exercise carried out through Action A1)"* is a follow-up to the initial Action A2 analysis report disseminated in March 2015, and constitutes an additional deliverable of Action A2 in the LIFE BaĦAR for N2K project presenting UoM-DoB's analysis of the data collected and added to the GIS Action A1 dataset by MSDEC-DFA between March 2015 and June 2016.

Some of the issues with the datasets available by February 2015 that were highlighted in UoM-DoB's initial analysis report have been addressed in the final dataset submitted by MSDEC-DFA in June 2016. In particular, high resolution bathymetric data for shallow waters down to a depth of 50 m obtained through the 'ERDF 156' project (Development of Environmental Monitoring Strategy and Environmental Monitoring Baseline Surveys) are now included in the dataset; no high resolution bathymetric data for deeper waters is available. In addition, the information contained in some of the shapefiles with data on the distribution of marine habitats has been encoded using the EUNIS typology, thus allowing comparison of information collected from different sources and originally classified according to different habitat classification schemes. No new location data for these habitats have been added to the final dataset, so gaps related to data deficiency, notably the poor data coverage for offshore or deep-water reefs, remain. These gaps should be addressed through the Action A3 surveys. Information on sandbanks is also scarce, mostly due to the ambiguity regarding the interpretation of this habitat in the Mediterranean. The European Commission has now indicated sufficiency for Malta in relation to sandbanks (Environment and Resources Authority, communication to LIFE BaĦAR for N2K Scientific Committee, 21/04/2016).

In the case of caves, UoM-DoB's initial analysis had indicated that the datasets available by February 2015 did not contain all the existent data on caves. MSDEC-DFA have addressed this by including additional data for this habitat in the final Action A1 dataset, including new information collected specifically for this project from diving school operators. However, the data coverage is still poor since very little is known about the potential distribution of marine caves deeper than 40 m or in

areas of the coast that are not easily accessible, while some of the caves that have been mapped have not been categorised according to whether they are emergent or submerged, which precludes classifying them according to the EUNIS typology. Some of these gaps should be addressed through the Action A3 surveys, which are focusing on areas that are likely to have a high density of marine caves in inshore areas.

Only a limited amount of data on the location of threats and pressures were included in the Action A1 datasets submitted by February 2015. This information was considered to be of limited use for assessing the conservation status of the habitats being considered. The final dataset compiled through Action A1 by June 2016 and analysed in the present report contains additional data on several threats and pressures, including ones related to aviation, shipping, aquaculture, commercial fishing, and particular recreational activities. While these data will be of use when assessing habitat conservation status, as is required when proposing SCIs to the EU, data on other important pressures such as extent of coastal development, recreational boating and anchoring, swimming outside of swimmers zones, or recreational fishing, are still missing since such data were not available to MSDEC-DFA when compiling the Action A1 dataset

Overall, some issues with the Action A1 datasets submitted to UoM-DoB by February 2015, including the lack of high resolution bathymetry (for inshore waters), the lack of consistency in habitat classification schemes used, and the lack of data on several threats and pressures, have been addressed and no longer apply in the case of the final dataset submitted in June 2016. However, the general pattern identified during the initial analysis undertaken in March 2015 – that data coverage is patchy for inshore areas and generally poor for offshore sites – is still true. In March 2015, UoM-DoB used the data available at the time to identify potential areas hosting reef, sandbank and cave habitats to be surveyed during the first phase of Action A3, while the information generated in the A3 surveys held between June and July 2015 was analysed by UoM-DoB in 2016 in order to make recommendations for sites to be surveyed in the second phase of Action A3. The data generated through these surveys will help to address the gaps identified in the analysis of the existing data compiled through Action A1, and help identify sites that may be potential candidates for designation as SCIs.