Existing Marine Sites of Community Importance (SCIs) in Malta: Overview of Issues

Brian Christie
Biodiversity and Water Unit
September 2017

E: info@era.org.mt W: era.org.mt

The Natura 2000 Network, Management for Sustainable Use

- The approach to conservation and sustainable use of the Natura 2000 areas is largely centred on people working with nature rather than against it

- Member States must ensure that the sites are managed in a sustainable manner, both ecologically and economically[1]

1) http://ec.europa.eu/environment/nature/natura2000/index_en.htm

The Information Available

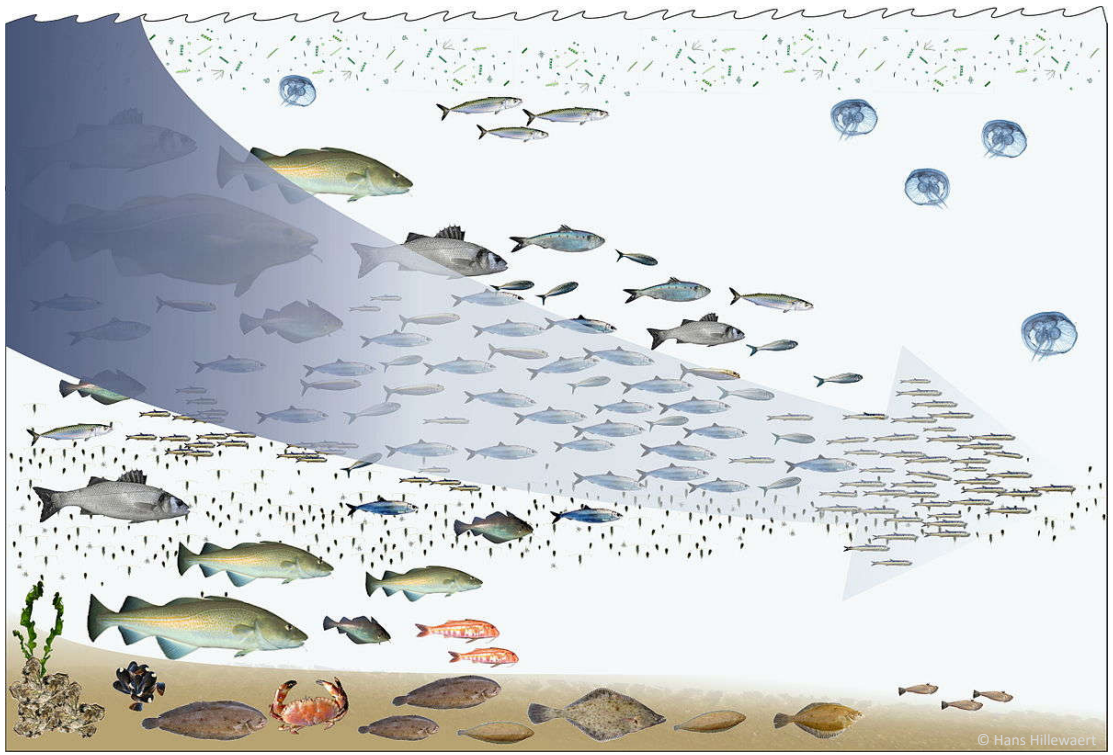
- Marine Strategy Framework Directive – Initial Assessment
- Project outputs (LIFE, Interreg Europe and others)
- Primary literature and research at national, regional and international levels
- Local/National stakeholder consultation

Overfishing

- Mediterranean Sea: Overfishing is prevalent and there is a lack of knowledge on the status of fish stocks[2]

- Overfishing is non-sustainable, both environmentally and socio-economically

- Fisheries target species are components of protected habitat structure and function assessments



2) https://www.eea.europa.eu/airs/2016/natural-capital/marine-fish-stocks

Bycatch


https://www.worldwildlife.org/species/hawksbill-turtle

- Bycatch is the accidental capture of non-target species
- In Malta's offshore SCI MPAs, turtles and cetaceans are the main concern
- Typically associated with potentially non-selective fishing strategies such as long-lining

Aquaculture

- There are aquaculture facilities within the Northeast 'Grigal' SCI MPA
- Malta's combined aquaculture sector generated €131.6 million GDP and generated 964 full-time equivalent jobs in 2015[3]
- Sustainable management will protect water quality, seabed habitats and prevent disease outbreaks in wild fish populations and stocks

3) http://www.fao.org/fishery/countrysector/naso_malta/en

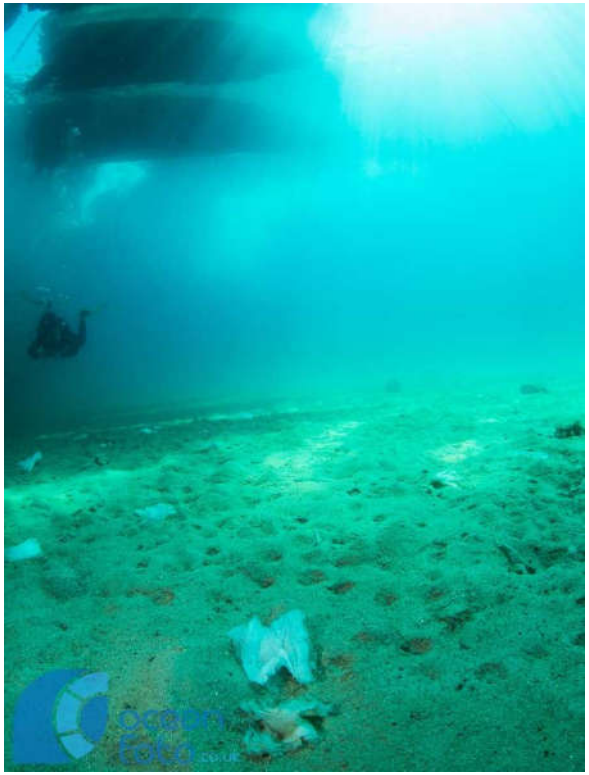
Bunkering

- Bunkering activities are an important aspect of Malta's maritime sector
- There is an unavoidable risk of oil being spilt
- Many large ships weigh anchor in and near the bunkering areas – this can cause damage to benthic habitats and species
- Light pollution may be an issue for protected seabird species

Anchoring

- Can cause physical damage through its operation if placed on or near sensitive habitats and/or species
- Occurs at a variety of scales from large bunkering ships to small leisure craft
- Is an ideal target for maintaining economic and ecological objectives simultaneously through management measures

Pollution



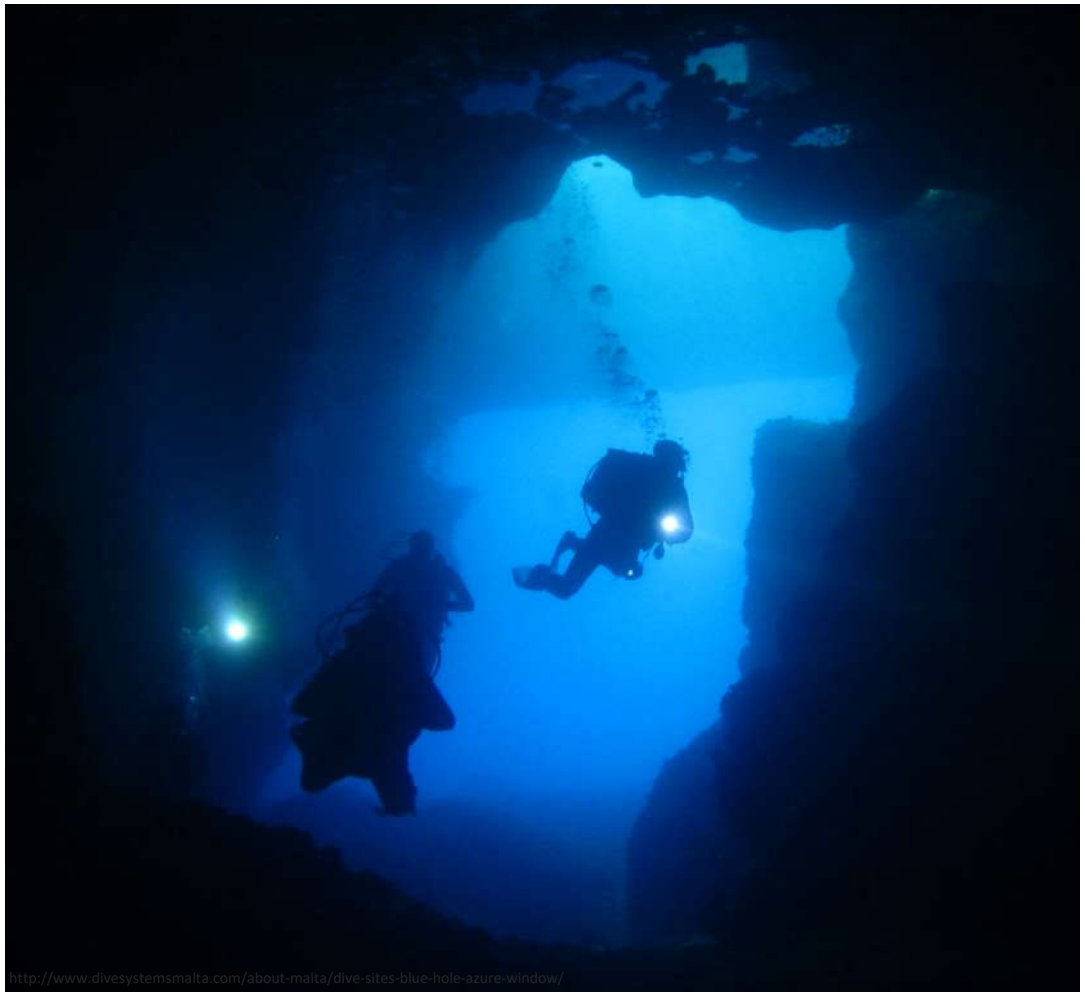
- Terrestrial sourced litter
- Boating sourced litter
- Chemical and oil spills
- Dumped waste
- Micro-plastics
- Discarded/lost fishing gear

Ghost-fishing

- Deadliest form of marine debris
- Estimated 600,000-800,000 tonnes of fishing gear lost or abandoned globally in oceans annually (10% of all marine litter)
- Directly responsible for a 10% decline in fish stock levels globally [4]
- Can be any form of fishing gear which has been lost or discarded
- Extremely wasteful both environmentally and economically

4) The Ocean Conference – Global Ghost Gear Initiative - https://oceanconference.un.org/commitments/?id=14840

SCUBA Diving



- Open-circuit SCUBA systems release air bubbles which can become trapped on the ceilings of marine caves
- These air-pockets can lead to mortality of sessile cave flora and fauna
- Divers can have poor buoyancy control and might not know all the codes of best-practice, particularly students and newly qualified divers

Development

- Developments adjacent to/near the coast can have spillover impacts
- Infrastructure with a footprint in the marine environment can have a significant local impact
- Secondary impacts such as increased tourism activities can also be generated

Invasive Alien Species

Caulerpa taxifolia

- Efficient coloniser that outcompetes native seagrass species such as *Posidonia oceanica* reducing their area coverage

Pterois miles

- Rapacious predator that causes widespread biodiversity loss, particularly in reef associated fish

Climate Change

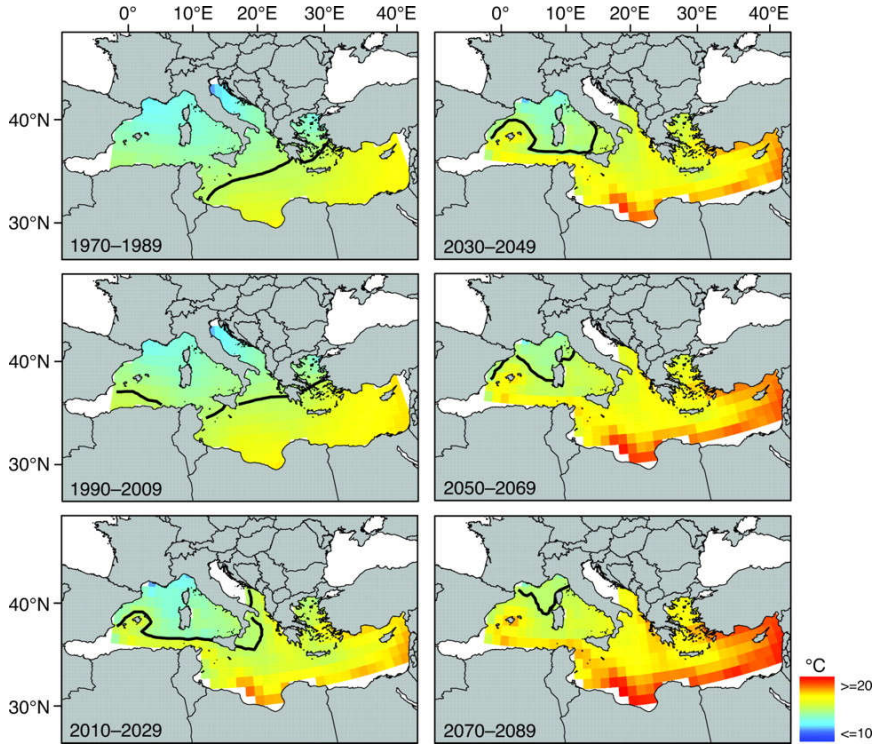


Figure 1) Historic and forecast 20-year mean March sea surface temperature for the Mediterranean Sea with 20-year mean 15°C isotherm. Forecast sea surface temperature data (HadGEM1) were variance and trend adjusted and merged with historic (HadISST) data. Six 20-year duration sea surface temperature datasets were constructed. For each 20-year dataset the mean March position of the 15°C isotherm was identified (solid line) using cubic interpolation

- Warmer and more acidic waters
- More frequent extreme weather events
- Sea-level rise and associated ‘coastal-squeeze’
- Change in species composition of ecosystems
- Increasing numbers of Lessepsian Invasive Alien Species migrating through the Suez Canal

Figure 1) M. J. Witt, L. A. Hawkes, M. H. Godfrey, B. J. Godley, A. C. Broderick
Journal of Experimental Biology 2010 213: 901-911; doi: 10.1242/jeb.038133

Monitoring & Enforcement

- Need for enforcement was strongly supported through stakeholder consultation process
- Monitoring both protected features' statuses and for human activities
- Malta's SCI MPAs are large areas with significant logistical hurdles

https://austal.com/image-library/all?title=&page=23

Education & Awareness

Photo: Doi- Omar Camilleri

DOI - Photo - Reuben Piscopo

Maarten de Boer / Getty Images

"You might not care, even if you know, but you can't care if you don't know"

Dr Sylvia Earle

Thank you