Hauraki Gulf Forum constituent party report – Department of Conservation

8 November 2018

Identifying significant ecological areas in the marine environment

Context

The request from the Chair is that AC, WRC and DOC report on "agency work to identify significant ecological areas in the marine environment in the context of fisheries health."

The expectation is for a short report of no more than two pages, that will sit under a cover report prepared by the Forum, alongside the reports from AC & WRC.

Work undertaken by the Department of Conservation to identify significant ecological areas within the Hauraki Gulf Marine Park

Fisheries New Zealand is the crown agency with primary responsibility for ensuring the health of New Zealand's marine fisheries. Fisheries New Zealand is charged under the Fisheries Act 1996 with providing for the utilisation of fisheries resources while ensuring sustainability, including:

- maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and
- avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment.

Regional Councils and unitary authorities have responsibility for managing anthropogenic effects on the marine environment, including in some cases the adverse effects of fishing, within the Territorial Sea. This function is the responsibility of the EPA within the Exclusive Economic Zone (EEZ). The Department of Conservation works closely with Fisheries New Zealand, local authorities, mana whenua, the fishing industry and communities of interest to achieve the conservation of natural and historic resources. In the marine environment that includes the reduction and mitigation of threats to protected marine species (i.e. coastal birds, sea birds, marine mammals, marine reptiles, fishes and corals) and the establishment of marine protected areas (marine mammal sanctuaries, marine reserves, areas protected under special legislation).

The department does not undertake any work directly related to fisheries health, that is the role of Fisheries New Zealand. However, research and surveys undertaken, funded or otherwise supported by the department may identify important fisheries habitat and/or linkages between the conservation status of protected species and fisheries health.

Reports describing the results of research and surveys undertaken or commissioned by the Department of Conservation since 2000 that are relevant to the identification of significant

ecological areas within the Hauraki Gulf are listed in Attachment 1. Current research on marine ecosystems within the Hauraki Gulf funded by the department is limited to a baited underwater video survey of benthic habitats and fish assemblages north of Little Barrier Island and within Craddock Channel (between Little and Great Barrier Islands). This research is scheduled to begin in early 2019 and is being undertaken by Dr Adam Smith and Odette Howarth, Massey University, Albany. As well as documenting species and habitat distributions, this research will also describe the relative abundance and size structure of fish populations, and associations between fishes and different physical and biogenic habitats. Both areas are identified as potential marine protected areas in the SeaChange - Tai Timu Tai Pari Hauraki Gulf Marine Spatial Plan.

At a national level the key ecological areas project is in the process of collating data sets that will be used to trial criteria for identifying ecologically important areas for future marine protected area and marine spatial planning processes. These data sets include existing GIS layers and presence-absence data for Vulnerable Marine Ecosystems; sensitive environments (e.g. seagrass, mangroves, kelp forests, turfing algal meadows, rhodoliths, bryozoan thickets, sponge gardens, large habitat-forming shellfish, calcareous and non-calcareous tubeworms, corals, seapens and whips, xenophyophores); fragile or slow to recover species; fish distributions; fish spawning areas; other benthic invertebrate records; marine mammal sightings; seabird breeding and feeding areas; and inshore and offshore productivity.

Technical support provided by the department to Sea Change - Tai Timu Tai Pari included the publication of a large amount of information on the spatial distribution of estuarine and marine species, habitats, ecosystem services and human uses on SeaSketch under the Sea Change - Tai Timu Tai Pari Project (http://seachange.seasketch.org). SeaSketch is a web-based GIS platform that allows users to examine spatial information on marine ecosystems, select areas by drawing polygons around them and generate reports summarising the information available for a specific site or network of sites selected by the user. The department is continuing to maintain the Sea Change - Tai Timu Tai Pari Project on SeaSketch, and users can see the information used in the development of the plan and those plan proposals that have a clearly defined spatial component. How the project may be used in implementation of the SeaChange recommendations has yet to be determined.

Progressing a central government response to Sea Change has been a priority for the department since the release of the plan. As the plan covers a wide range of topics and has impacts for several Ministerial portfolios the department has been working with other agencies to provide Ministers with advice on the best way to implement the plan's recommendations. We expect progress on this in the near future.

Attachment 1.

Research and surveys commissioned or undertaken by the Department of Conservation relevant to identifying significant ecological areas within the Hauraki Gulf Maritime Park

Department of Conservation and Ministry of Fisheries. 2011 Coastal marine habitats and marine protected areas in the New Zealand Territorial Sea: a broad scale gap analysis. Department of Conservation and Ministry of Fisheries. Wellington, New Zealand.

Drury, J. 2008. Video ground-truthing of deep rocky reef areas in the Hauraki Gulf Marine Park. NIWA Client Report: AKL2008-054. National Institute of Water & Atmospheric Research Ltd., Wellington. 7 pp.

Hadfield, M.; O'Callaghan, J.; Pritchard, M.; Stevens, C. 2014. Sediment transport and deposition in the Hauraki Gulf: a pilot modelling study. NIWA Client Report No: WLG2012-29. National Institute of Water & Atmospheric Research Ltd., Wellington. 28 pp.

Hewitt, J; Edhouse, S.; Simpson, J. 2009. Biodiversity of intertidal soft-sediment habitats in the Auckland Region. NIWA Client Report: HAM2009-097. Report for the Department of Conservation. 47 pp.

Leathwick, J.; Julian, K.; Smith, A. 2008. Use of reserve planning software to identify priority sites for the conservation of New Zealand's inshore fishes. NIWA Client Report HAM2008-151. Unpublished report for the Department of Conservation. 26 pp.

Lundquist, C.; Chiaroni, L.; Halliday, J.; Williston, T. 2004. Identifying Areas of Conservation Value in the Waikato Coastal Marine Environment. Report for Department of Conservation. NIWA Client Report HAM2004-039. National Institute of Water & Atmospheric Research Ltd., Hamilton. 98 pp.

Middleton, I. 2018. Colville Channel, Cuvier and Mercury Island group invertebrate diversity: Methods and discussion. Contract report for Department of Conservation. Massey University, Albany. 8 pp + data file.

Morrison, M.; Drury, J.; Shankar, U. 2001. An acoustic survey of the seafloor habitats of Tiritiri Matangi Island and of the northeastern side of Great Barrier Island. Report prepared for the Department of Conservation. NIWA Client Report No. AK01114. 40 pp.

Morrison, M.; Drury, J.; Shankar, U.; Hill, A. 2002. A broad scale seafloor habitat assessment of the Firth of Thames using acoustic mapping, with associated video and grab sample ground-truthing Report prepared for the Department of Conservation. NIWA Report AKL2002–014.

Morrison, M.; Drury, J.; Shankar, U.; Middleton, C.; Smith, M. 2003. A broad scale, soft sediment habitat assessment of the Hauraki Gulf. Report prepared for the Department of Conservation. NIWA Client Report No. AKL2003-64 HAR02101.

Needham, H. R. 2012. Review of mapped intertidal habitat information for the Hauraki Gulf. Prepared for Department of Conservation. NIWA Client Report No. HAM12-125. National Institute of Water & Atmospheric Research Ltd., Hamilton. 70 pp.

O'Callaghan T. M.; Baker, C. S. 2002. Summer cetacean community, with particular reference to Bryde's whales, in the Hauraki Gulf, New Zealand. DOC Science Internal Series 55. Department of Conservation, Wellington. 18 pp.

Schwarz, A.-M.; Morrison, M.; Hawes, I.; Halliday, J. 2006. Physical and biological characteristics of a rare marine habitat: sub-tidal seagrass beds of offshore islands. Science for Conservation 29. Department of Conservation. 39 pp.

Shears, N. T.; Babcock, R. C. 2000. Classification and preliminary productivity estimates of rocky coastal community types: northeastern New Zealand. Report to the Department of Conservation, Wellington. 75 pp.

Shears, N. T.; Babcock, R. C. 2007. Quantitative description of mainland New Zealand's shallow subtidal reef communities. Science for Conservation 280. Department of Conservation, Wellington. 126 pp.

Shears, N.; Usmar, N. 2006 The role of the Hauraki Gulf: Cable Protection Zone in protecting exploited fish species: de facto marine reserve? DOC Research & Development Series 253. Department of Conservation, Wellington. 27 p.

Smith, A.N.H.; Duffy, C.A.J.; Leathwick, J.R. 2013. Predicting the distribution and relative abundance of fishes on shallow subtidal reefs around New Zealand. Science for Conservation 323. Department of Conservation, Wellington. 25 p. + 2 supplements. http://www.doc.govt.nz/Documents/science-and-technical/sfc323entire.pdf