

Addendum to “Expert evidence of Donald Allan Robertson on commercial fisheries matters as requested by the EPA for the DMC. 21 February 2017”.

Adaptive Management

In my Report of 21 February I have mentioned the terms “adaptive management” and “adaptive management approach.” This was done in three contexts:

- the general context of my science management background, where many good management decisions can be considered “adaptive”. i.e. changes made to management decisions to adapt to changing circumstances;
- the more specific context of my professional background in fisheries science and fisheries stock management where an adaptive management approach is not uncommon and has a specific meaning;
- the context intended by Section 64 (2) (b) of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012. (Reprint as at 18 October 2016).

In the context of fisheries science and management I use the term as it is used for example, in Hilborn and Waters 1992¹. In short, in this sense it uses a “mixture of quantitative modelling and empirical management experimentation”. The latter can be based on “an initial choice that “looks reasonable” on intuitive grounds, then plan to systematically vary the choice while monitoring biological and economic responses so as to find the best choice by an empirical process of trial and error.” This can allow the reduction over time of uncertainty associated with new fisheries in particular or with large new projects in general with potential environmental impacts.

An adaptive management approach appears eminently suitable to meet challenges of managing uncertainty associated with any interaction between the proposed TTR project and South Taranaki Bight commercial fisheries. I understand now however that it has been agreed that the DMC is not entitled to impose conditions that relate to discharges that together amount or contribute to an "adaptive management approach", at least insofar as that term is defined in section 64 of the EEZ Act.

In this scenario, I am happy to leave the meaning of the term "adaptive management approach", in the specific context of section 64 of the EEZ Act, to be dealt with in line with the DMC's Minute 28.

Don Robertson

28 February 2017

1. Hilborn, R. & Walters, C.J. 1992: Quantitative Fish Stock Assessment: Choice, Dynamics and Uncertainty. Chapman and Hall, 570 pp.