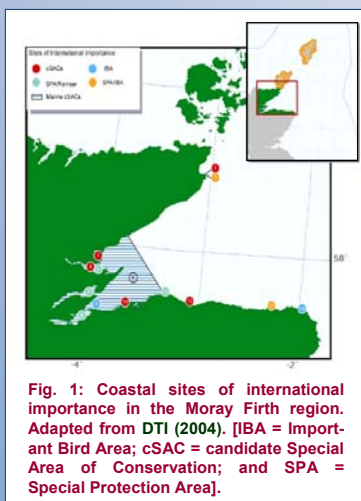




# Social attitudes to marine conservation in NE Scotland: public perceptions and cetaceans in the Moray Firth

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## Introduction

The Moray Firth in northeast Scotland (figure 1) is an area of outstanding biological importance that hosts several sites of recognised conservation significance. This region is economically important for several activities, e.g. oil extraction, industrial waste discharge, military training, commercial fishing, international trade and for local recreational craft. As such, an effective conservation program for the area needs to take into account and balance these diverse uses, as well as the interests of the various stakeholders. Perceptions are known to have a considerable impact upon conservation strategies (Pomeroy *et al.*, 2004) and, even if measurements tend to be imprecise, their investigation is thought to be invaluable for the management of marine protected areas (MPAs). To date, no directed studies have been conducted in the Moray Firth addressing the awareness and concerns about marine wildlife by the major stakeholders. The aim of the present study, therefore, was to investigate the complex integration of human activities and environmental processes in this area using a social science perspective.

## Methods

In order to include decision-makers and protagonists, an illustrative sample of people related to conservation, scientific research, fishing, and whale and dolphin watching in the area were interviewed. To investigate local awareness of the whale and dolphin species present in the Moray Firth, the threats facing them, and the public's conceptual support for MPAs, a non-random sample of respondents of miscellaneous age, profession and residence was incorporated. The questions were developed taking into account the previous public opinion survey carried out in the west coast of Scotland by Scott & Parsons (2001).

## Results

- Between July and August 2006, 64 structured and 12 semi-structured interviews were conducted with local inhabitants / visitors and important stakeholders respectively.
- More than the 70% of the inhabitants and visitors knew of the three main cetacean species occurring in the area, namely: the bottlenose dolphin, minke whale and harbour porpoise. However, the majority were not aware of their current protection status.
- Answers related to conservation were generally very positive, with 82% asserting that conservation was very important, and 63% judging a hypothetical protected area to be a good idea – since it could both preserve animals and enhance tourism in the region.
- Several activities occurring in the Moray Firth were perceived as a threat to marine wildlife. From the public survey, the highest degree of concern was for those factors causing direct harm to animals, e.g. entrapment in fishing gear. From the stakeholder survey, however, more subtle issues such as acoustic barotrauma and skin lesions were underlined.
- The presence of different conservation / research organisations in the area was considered by interviewees to be a positive component.
- Several interviewees also expressed concerns as to the limitations of the designated Special Area of Conservation in the inner firth. The need for specific and enforced legislation was claimed by several stakeholders.
- The expansion of green tourism and whalewatching were noted by many respondents. Although the educational / economic benefits of this industry were stated by those involved, the potentially negative impacts on wildlife were raised, and the need for a licensing scheme was further expressed.

## Discussion

The public knowledge of cetaceans in the Moray Firth, and the concerns expressed for the threats they face, makes the mission of seeking support for conservation measures and their subsequent implementation, critical but promising. In the present context, wildlife conservation is apparently supported by the public and is rarely perceived as a limitation. Taking into account the concerns expressed towards negative anthropogenic impacts and the generally perceived limitations of the present Special Area of Conservation, however, effective legislation is regarded to be an essential step for the conservation of the marine environment in the Moray Firth. The establishment of a protected area for the whole of the Moray Firth is supported by many, but a number of stakeholders perceive this to be in conflict with their present interests. Consequently, the importance of a precautionary approach, as proposed by one of the stakeholders, is advised. In conclusion, the results of this study are thought to be significant to such an approach, supporting the integration of sustainable human uses alongside management directives for the protection of this vitally important coastal ecosystem.

## References

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