Agenda Item 8: **Any other business**

Identifying Research Needs to Improve the Management and Conservation of Bottlenose Dolphins throughout the Northeast Atlantic and Mediterranean Areas

Submitted by: **United Kingdom**

NOTE:
IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO BRING THEIR OWN COPIES OF THESE DOCUMENTS TO THE MEETING

Identifying Research Needs to Improve the Management and Conservation of Bottlenose Dolphins throughout the Northeast Atlantic and Mediterranean Areas

The bottlenose dolphin, *Tursiops truncatus*, has a global distribution, ranging from cold temperate regions to tropical waters. From a European perspective, the species ranges from Scotland at its most northerly point to the most southerly extent of Portuguese waters within the North Atlantic, as well as throughout the Mediterranean Sea and into the Black Sea. However, the overall range of this species has changed and likely has decreased.

At a European level, Natoli et al (2005) demonstrated the existence of five genetically differentiated populations of *Tursiops truncatus*: Black Sea, eastern Mediterranean Sea, western Mediterranean Sea, eastern North Atlantic (including individuals from Spain to southern England) and Scotland. This population structure was found to correspond to physical boundaries in the environment, although these boundaries would not restrict the physical movement of bottlenose dolphins. Boundary examples include the Italian peninsula separating the western and eastern Mediterranean basins and the oceanographic conditions separating the Mediterranean from the North Atlantic and the Black Sea.

Long term studies have suggested that bottlenose dolphins are philopatric, with males occupying larger home ranges than females (Scott et al., 1990; Connor et al., 2000). Natoli et al (2005) suggested that local populations of bottlenose dolphins were habitat dependant in a way that defines patterns of movement for both males and females, and that this may be related to the social facilitation of foraging strategies, keeping individuals near their natal sites. Research on group coordination (Janik, 2000) and subadult learning (Mann & Smuts, 1999) appears to support this hypothesis.

Conservation and management of *Tursiops truncatus*

The Convention on the Conservation of European Wildlife and Natural Habitats (also known as the Bern Convention) accords strict protection to *T.truncatus* under Appendix II. In Europe, this has been expressed largely through the EU Directive of Natural Habitats and Wild Fauna and Flora (92/43/EEC), known commonly as the Habitats Directive. Bottlenose dolphins in EU waters are accorded strict protection under Annex IV of this directive. They are also listed under Annex II which requires the designation, where suitable areas exist, of Special Areas of Conservation (SACs). In order for SAC designation under the Habitats Directive to be an appropriate mechanism for the protection of Annex II species, it is necessary that clearly identifiable areas can be defined that have physical and biological factors essential to the life and reproduction of a population of the species.

Within the North East Atlantic region, currently there are 18 SACs either designated or proposed specifically for *Tursiops* and an additional 24 in which *T. truncatus* is present but not considered to be a qualifying feature. Within the Mediterranean there are no designated SACs for bottlenose dolphins, although 20 mention their presence. There are, however, an additional 33 Marine Protected Areas (MPAs) which specifically cover *T. truncatus*. Within the Black Sea region, there are 3 MPAs designated for bottlenose dolphins.

Identification of Research Needs for management and Conservation of *T. truncatus*

It is proposed that two ASCOBANS workshops should be held to assist in the development of a European-wide bottlenose dolphin project. These would support ASCOBANS (and ACCOBAMS) in meeting its management and conservation objectives,

and the resulting project would help meet European objectives in relation to bottlenose dolphins. The first workshop is likely to be held in Autumn 2006.

The workshops would focus on identifying research needs to improve the management and conservation of bottlenose dolphins throughout the Northeast Atlantic and Mediterranean areas. Key aims and objectives include:

1. Identification of fine-scale population structure and the pattern of distribution and abundance throughout their European range, including the possible presence of parapatric coastal and offshore populations. Such information is essential for the appropriate management and conservation of the species.
2. Determination of key bottlenose dolphin habitat, including the relationship between distribution, key environmental variables, and regional variation in prey choice. Such work will enable managers to predict utilisation of particular areas in particular seasons aiding the Natura 2000 process.
3. Quantify and **e**xplore reasons for decreases in range with a view to examining whether recovery of range is possible.

References

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