

LAND METHODOLOGY

The aim of MONICET is to create a union between the commercial operation of Whale and Dolphin Watching and scientific research so in order to reach this goal we prefer to collect less information, but of better quality rather than a lot of information of not so good quality.

In the land based data sheet the main focus is given to collect information in order to analyse temporal patterns. However there is also space for the implementation of data regarding the spatial location of the sightings.

We can divide the information in different fields:

Company info (Lookout, place, boat)
Atmospheric info (Visibility)
Effort Data (Time)
Sighting Data (Specie, General Behaviour, N^o of Individuals...)

To fill the forms there are 4 different codes:

I: Beginning of the operation

F: End of the operation

RA: Register of a sighting

R: Register in order to write down time and visibility for effort calculations.

Company Info:

Important to establish the records on the database, and know who makes every sighting.

These fields are gathered mostly at the beginning of the operation, with exception of the boat, which is unique of each sighting, and are:

- Spotter
- Place
- Boat of the company present in the sighting

Atmospheric Info:

In order to know the atmospheric conditions and establish the liability of the data we establish some fields. This data is gathered at the beginning and during the operation, at every new register in order to know how the atmospheric conditions evolved.

The fields are:

- Visibility: 5 different conditions
 - 1= Very Bad (less than 1km)
 - 2= Bad (1 to 5 km)
 - 3= Good (5 to 10 km)
 - 4= Very Good (more than 10 km)

Effort Data:

The effort is a really important field in the data in order to establish later the temporal and also the spatial effort to have a more useful database to work with. So to quantify the effort at the beginning of each operation is noted the start time and the visibility restrictions.

To quantify the effort every hour is asked to the spotters to collect the time and visibility. At the end of the operation is also asked to note the ending time.

Sighting Data:

With the sighting data we pretend to obtain the information of the species sighted during each operation. There are 5 fields:

- Specie: There are all the usual species sighted usually in the Azores in a 2 letters code (ex. *Delphinus delphis*: Dd). For the Beaked whales there is also a general code (Zp), to avoid confusions due to the difficulty of identification.
- Behaviour: in order to simplify just 4 elemental behaviours at first contact are established:
 - Feeding
 - Resting
 - Socializing
 - Travelling
- Number of Individuals: Described as Best Estimative number. It has to be taken after some minutes of observation to take a look at the whole group. In some cases the Lookout can help with a more general view.
- Direction: A general idea of the heading of the group when the sighting was made
- Group: To identify each group of animals sighted. For ex.: If a Sperm Whales is sighted at the beginning of the effort, then we will note this as Pm with group A, so Pm (A). If we see the same animal later on (for example one hour later) we will put the letter A in the group field, to note that this is the same individual we sighted previously. If a new Sperm Whale is sighted this will be noted as Pm (B).
- Spatial Coordinates: In the case of the availability of spatial coordinates, there are two fields in the sheet. One for the horizontal axis and another for the vertical axis.

