



LIFE IBAs Marinhas  
*Áreas Importantes para as Aves  
Marinhas em Portugal*

1st Scientific Committee Meeting  
16 - 17 February 2005

**Location**

*Instituto Nacional de Investigação das Pescas, INIAP-IPIMAR, Avenida de Brasília 1449-006, Algés*

**Attendants**

<b>DOP</b>	<i>Maria Carvalho (MC)</i>	<b>SRARN-M</b>	<i>Paulo Oliveira (PO)</i>
<b>ICN</b>	<i>Manuela Nunes (MN)</i>	<b>UA</b>	<i>António Silva Luís (ASL)</i>
<b>INIAP</b>	<i>Yorgos Stratoudakis (YS)</i> <i>Maria Manuel Angélico (MA)</i>	<b>Royal Nioz</b>	<i>C.J. Camphuysen (KC)</i>
<b>SPEA</b>	<i>Iván Ramírez (IR)</i> <i>Pedro Geraldés (PG)</i> <i>Ana Meirinho (AM)</i> <i>Miguel Lecoq (ML)</i>	<b>Bureau Waardenburg</b>	<i>Martin Poot (MP)</i>
		<b>University of Kiel</b>	<i>Stephan Garthe (SG)</i>
		<b>University of Coimbra</b>	<i>Jaime Ramos (JR)</i>
		<b>SEO</b>	<i>Pep Arcos (PA)</i>

Wednesday 16th of March 2004

**Action: A.1**

**Name: Marine characterisation**

1. IR to distribute information given by each Project partner on marine data available, years available and support/format for these data.
2. Martin Poot and Kees Camphuysen to give brief presentation on how to use additional abiotic data to characterise seabird distributions
3. Oceanographic data to be considered, as defined at the Executive committee meeting: *Temperature, up-welling, chlorophyll, salinity, sea currents, predominant winds, benthic fauna, main fisheries and fishing effort, presence of marine mammals and turtles, by-catch, topographical layout, river mouths and other high-production areas.*
4. Scientific commission to comment on these parameters and confirm
5. Pep Arcos to give a brief presentation on type of parameters used at SEO's project

Raised points:

- KC stressed the importance of defining main objectives and concrete data to be obtained and evaluate them in a cost/ benefice balanced approach. KC suggested that a broad class approach was followed, regarding abiotic data (classify areas in 4 or 5 different classes). KC also said that satellite data necessary should be obtained during the project and before the data analysis.
- MC said that DOP had satellite data for the North Atlantic that could be of use
- PG remembered that uniformity between data from all regions should be verified in advance
- PA made a characterization of SEO's project. Main data to be obtained/analysed include: fishing variables; fauna distribution; oceanographic variables; topography; seabirds previous data. Search for the best areas with the available data before going to the sea. He mentioned SEO's project will use radar shots combined with visual observations to count fishing vessels. PA referred that it is useful to characterize the **kind of fish discharged**. PA also referred that SEO will use satellite data information. Important to have contact with the vessel bridge to know how many fishing boats are in the region (radar information supporting visual observations).
- KC suggested creation of a guide datasheet to classify trawlers. Distribution of trawlers should be made in a 3 miles range recurring to the ship's radar and also with binoculars, if possible.
- KC noted it seems there is no clear correlation between fish schools and seabird distribution
- Several areas were pointed out as of interest to focus census in: areas with wider platform area, sea canyons, water-fronts and offshore stratification
- The SC decided that DOP will be the contact for satellite data at the Azores, IPIMAR for the mainland. Madeira doesn't have an institute working with satellite data. See if the satellite data in the Azores covers Madeira. Important to identified the main objective before start working with satellite data.
- MP presented a Block-Kriging based model that allows distribution assumptions to be made in non-censused areas, based in abiotic data. In the Dutch study the correlations were established with depth and salinity values. Spatial statistic analysis origins status and confidence intervals and allows to differentiate between high and low density areas.
- MP alerted to be cautious about map analysis to avoid artefacts and to verify inter correlations between analysed factors. MP noticed that data could be analysed with irregular block-kriging techniques in wider areas where there is not enough data to support a 5x5 km grid block-kriging analysis

**Comentário [JMA1]:** Can't remember this. I guess I commented on the usefulness of identifying fishing vessels-type, assess fish landings in a given area and the relationship landings-discards, and pelagic fish biomass through acoustic surveys.

Action : A.2

**Name: Workshop on delimitation of marine IBAs for Annex I species**

---

1. Scientific commission to help defining participants and contents that should be present at the workshop.

Raised points:

- SC agreed that the workshop should take place between 6 and 8 of September. SC agreed that representatives from SEO and OSPAR and ICN should be invited to this event. ICN should be represented the most, since they are the main stakeholder that can possibly enforce a strategy of Marine IBAs.
- Main issues to discuss are:
  1. General methodology to define Marine IBAs;
  2. Management measures and legal mechanisms to support Marine IBAs;
  3. List of species addressed with this LIFE project and it's specific problems
  4. Species by species approach.
- KC suggests that John Croxhall be invited or another south sea seabird specialist instead (see if John Croxhall will be invited for the SEO workshop)
- IR insisted on the necessity of establishing clear criteria for delimiting Marine IBAs, whether a site management approach is valid or not.
- PA suggests invitation to David Edinberg (that works in Northern Carolina)
- MN and YS suggested inviting stakeholders from the fisheries sector (including government) maybe for a later session during last day of the meeting, so they can hear about management and legal protection of marine areas. Specialists on marine law to be included too.
- IR also commented on the necessity for inviting specialists from terrestrial IBAs delimitation and legal protection.
- SG and IR commented on the possibility of having some German government representatives for this meeting.
- IR and the SC stressed the importance of using SPEA's and SEO's workshops as windows for other BirdLife International Partners to see, since there is clear interest at many of them to implement similar Marine IBAs Projects

**Action: C.1**

**Name: Rádio-tracking of *P. Feae*, *B.bulwerii*, *P.assimilis*, *O.castro*, *S.dougalli*,**

---

1. Each partner/ IR to distribute info on previous work on this methodology
2. Pep Arcos, from SEO, to give a small presentation on SEO's utilisation of radio-tracking.
3. Maria Carvalho, from DOP, to give a small presentation on radio-tracking applied to small seabirds
4. Feasibility of this method towards the identification of marine IBAs.
5. 2005 plan on radio-tracking: selection of best areas for pilot-study

Raised points:

- PA presented SEO's project on PTTs (*C. diomedea* and *L. audouinii*) and Radio-tracking (*B. bulweria*, *O. castro*, *P. aristotelis desmarestii*).
- Main issues focused were:
  1. No harnesses used to fixate devices (PTTs). Devices only used on birds heavier than 600 grams. Two main periods to be covered: egg laying and chick rearing.
  2. Interchange devices between birds to diminish risk of loosing device and to increase variability in the sample. (1 track-trip/bird).
  3. Radio tags are to be used with < 300gram birds or low-range species (2km max detectability). Tailmounts have 0,35g (few days duration) to 0,8g (15 to 30 days duration). A compromise between detectability/ battery life will be made. Capture methods will be based in Mist-netting and nest location. A 3-level prospecting approach will be followed: a receiving station in the colony that will monitor 20 to 30 frequencies; Vessel surveys; airplane surveys.
  4. ASL commented on the need for implementing a Pilot project to assess the viability of this method. It was decided to have further thoughts about this at a later stage. Berlengas appear as the main area for this tests, probably during Autumn/Winter 2005. Radio-tracking will be used at colonies by setting up a receiving station and combining with vessel surveys up to 10 miles off coast. Also they will use aeroplane up to 25-50 miles off. Data will also be useful to know for how long do the birds stay at the colony before they leave to feed.
- SC agreed on pilot study to take place in Berlengas during the summer of 2005 , during *C. diomedea* breeding season.

SC summarize possibilities for Radio-tracking

1. Farilhão (Berlengas) / Winter / – Madeiran Storm Petrel, *O. castro* (winter pop.) – receivers on land
2. Graciosa (Azores) / Summer /– Madeiran Store Petrel + Terns + *C. diomedea*
3. Ilhéu da Vila (Azores) / April, May / - *Puffinus assimilis*; / Sep, Oct, Nov / - *O. Castro*; /April / - Tern

4. Selvagens / All year / - *O. castro* (both pop.) + *P. assimilis* + *B. bulwerii* + *P. marina*  
YS suggested Cabo Avelar (Ferry-boat) from Berlengas for radio-tracking detection work

**Action: C. 3**

**Name: Aerial Seabird census**

---

**Planned surveys:**

- Two aerial census along continental coast, ideally October 2005 and January 2006
- Martin Poot to give a brief presentation on plane based methodology
- André Elias to give a brief presentation on the type of survey planned and the plane available
- Scientific committee to comment on these surveys, on the possibility of simultaneous radio-tracking actions and on the advantages/disadvantages of plane vs helicopter.

**Raised points:**

- MP made some remarks about aerial surveys: counting bands defined by angles from plane and detection is influenced by several factors: sea state/ sunshine/ flock size
- André Elias informed SC on the plane characteristics: 180 Km/h flight speed, 500m minimum flying height. The 40 flight hours in the budget include 5 hours extra-time and 10 hours reserve time, so it is possible to use some of this time to additional census. Airport taxes are considered extras from original budget. AE informed the SC that it is allowed by law to flight to 50 miles offshore at 75 m high but that he will not do it for security reasons
- ASL raised some concerns about the convenience of aerial surveys for smaller seabird species
- PG suggested that some extra-time flight hours should be especially directed towards radio-tracking efforts around Berlenga in closer radial line-transects
- IR asked about the training days required, MP and AE agreed on a maximum of 2 days for this. MP appears as our best contact to collaborate with SPEA during this 2005 campaign.

**Action: C. 3**

**Name: Visual boat-based census**

---

- Kees Camphuysen and Martin Poot to give a small presentation on ESAS methodology
- Pep Arcos to give a brief presentation on SEO's visual census methodology
- Pedro Geraudes to distribute information available on ships and observers, and preliminary plan for 2005. IR and PG to comment on the GIAM (Iberian Seabirds Group meeting) and the launching of a voluntary network of seabird observers in Portugal.
- Ana Meirinho to present preliminary results of first boat-based trip with IPIMAR
- How to identify best areas at sea in the surroundings of a breeding colony. How do we define the limits of a potential IBA close to a breeding colony?
- Scientific committee to comment on possible methodology adaptations.

**Raised points:**

- PA presented methodology used by SEO and differences to ESAS: sometimes two bands recorded, maximizing area censused; fishing vessels recorded (visual observations in 3 miles range, supported by radar information). PA referred the use of radial transects from seabird colonies, 2 census during nesting season.
- PA suggested possible use of Spanish oceanographic research vessel during its trips from Vigo to Southern Spain
- YS mentioned campaigns of census of shellfish in Aveiro and Algarve and possibility of boarding SPEA's observers during those, dates around Sept/October. KC stressed the importance of such campaigns and the relations between some seabirds distribution with shellfish. It could be a very useful tool for identifying scouters in Portuguese waters (especially Aveiro).
- Next acoustic survey was addressed, regarding the use of the extra-longer transects as referred in SPEA's project. KC, SG and MP agreed that should be made some longer radials in selected places (sea mountains, canyons, water fronts, etc) and distribute the rest evenly amongst the other radials.
- ASL and PG commented on the launch of the Programa de Observação de Aves Marinhas in Portugal, that aims to create a database of available volunteers that will contribute in coastal-based census and maybe at some boat-based activities. ASL stressed the need for a training event for these volunteers, all SC members agreed.
- ASL made some contacts with stakeholders and observers and had very good replies in Aveiro and Algarve. AL stressed the importance of a training campaign for observers.
- There are some research vessels (mainly German) around Madeira. SG and KC to send some details on these. MC to send the MARECO report too.



LIFE IBAs Marinhas  
*Áreas Importantes para as Aves  
Marinhas em Portugal*



Thursday 17th of March 2004

14.00– 16.00 h

Action: C. 4 and C.5

Name: POPA data gathering and Satellite and marine information available from DOP

---

- Maria Carvalho, from DOP, to give a small presentation on POPA's methodology
- New staff to be recruited by DOP, start date and coordination with SPEA.
- Consultants to comment on the possibilities of adapting ESAS and POPA's methodologies to produce qualitative data
- Type of data available from satellite, format and creation of data-base

Raised points:

- In spite of MC presentation, some doubts remained about POPA's Methodology and possibility of data coordination with the present Marine IBAs project.
- KC and MP suggested that POPA data shouldn't be used to calculate densities. If a methodology adaptation is not possible, the data should be used as presence/ absence for some species. However, it will be useful to record bird activity and cetaceans too.

Thursday 17th of March 2004

Action: C. 2

Name: Data loggers to be used with *Calonectris diomedea borealis*, and eventually with *Pterodroma feae*.

1. 20 *Calonectris diomedea borealis* – Madeira
2. 20 *Calonectris diomedea borealis* – Açores
3. 10 *Calonectris diomedea borealis* – Berlengas

- IR to distribute information on best colonies available to use data-loggers
- PG to comment on preliminary plan for 2005. Miguel Lecoq to help towards identifying best dates
- Define target species for data-loggers (possibility of including *Pterodroma*?)
- Stephan Garthe to give a small presentation on the use of data-logger technology.
- Stephan Garthe and Jaime Ramos to present the study-plan for PhD-student to work on the analysis of data-logger data. Coordination with Ana Meirinho.

Raised points:

Data-loggers work should be tested in Berlengas in 2005. ML noticed that the first dates suggested would overlap with the incubation period of some birds and in this way could have some adverse effect on this particularly sensitive period of the breeding season. The dates to do this test were not decided and will be decided during ESAS meeting.

PG presented ship-based surveys planned dates in Mainland and Madeira and stressed difficulties to find boats in Azores. MC became responsible to inquire about the possibility of the use of the DOP's boat "Arquipélago". KC and SG suggested the consultation of some sites that have the planned trips of research vessels and offered to send the links to PG.

YS presented the possibility of the use of two tuna boats that work in Algarve (one from IPIMAR and other for some fisheries industry). These boats operate on a daily base and could also be used for the training of observers.

During SG's presentation some differences were stressed between GPS data-loggers, Compass data-loggers and Geolocators

	Duration	Weight	Precision	Price	Notes
GPS data-loggers	1 – 6 days	60 g	<100 m	1600 € to 2500 €	Hope to have 40 g in 2006 and 2007
Compass data-loggers	3 – 9 days	14,5 g	1 – 20 Kms	1200 €	Position given upon software correction
Geolocators	to 12 month	9 g	30 to 150 Kms	900 €	

SG stressed the advantages of working with known companies, mainly regarding the data retrieving and software support. SG also informed the SC of the equipment necessary for the data retrieval operations and suggested the names of two companies: Earth and Ocean and Lowtech.

Upon advice from the SC it was decided to acquire 10 compass loggers to use in the Berlengas field test. SG demonstrated the will to compare results from both incubating birds and bird with hatched chicks, but upon advice from ML it was decided to try to avoid incubating period.

NOTE: after the ESAS meeting in Texel, the Netherlands, IR and SG agreed to start field work on the 25th of August, for a maximum length of two weeks. This represents a problem for the proposed workshop planned for September. IR will re-evaluate the dates and will contact the SC and EC in due course.