

**Ana Cañas****Consultant in applied ecology and conservation****CONTACT DETAILS**

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**EDUCATION**

2000-2006: European Doctorate. Universidad Autónoma de Madrid. Thesis: Towards conservation of dolphins in the Alborán Sea.  
1998-2000: Diploma Thesis. Universidad Autónoma de Madrid.  
1983-1988: University degree in Biological Sciences, Universidad Autónoma de Madrid.

**PROFESSIONAL POSITION**

1990-2011: Scientific Director, Alnitak Marine Research Centre (ngo)  
2010-present: Administrator and Scientific Director, Alnilam Research and Conservation Ltd.  
2010-present: President and Scientific Director, Alnilam Conservation (ngo)  
2011-present: Adjunct Senior Lecturer, School of Biological Sciences and Biotechnology, Murdoch University, W Australia.  
2013-present: Scientific consultant and Vicepresident of Great Apes Project Spain ([www.proyectogransimio.org](http://www.proyectogransimio.org))

**PROFESSIONAL SKILLS****Fieldwork and data collection**

23 years experience of planning, organising and conducting shipboard fieldwork on cetaceans and sea turtles.

Skipper's licence for 17 years.

23 years experience of implementing line transect survey and photo-identification data collection methods.

**Data analysis**

15 years experience of analysing line transect survey data.

15 years experience of statistical modelling, especially general linear modelling (GLM) and generalised additive modelling (GAM).

**Computing**

21 years experience of using word and data processing software (MS Word, Excel, Access) and GIS (ArcView, ArcGIS) software.

15 years experience of using statistical analysis software (DISTANCE, R).

15 years experience as webmaster (e.g. [www.alnilam.info](http://www.alnilam.info))

**Reporting**

18 years experience of writing and presenting reports to government departments and agencies, IGOs and NGOs.

## Workshops

Organisation of several international workshops, including chairing.

## Business

25 years experience of running a NGO, including managing personnel, finance, logistics, projects and relationships with administrations and funding agencies.

6 years experience of running a Ltd. company, including managing personnel, finance, logistics, projects and relationships with administrations and funding agencies.

## Academic

Experienced supervisor of research students; teaching experience lecturing courses.

## Translation

4 years experience as translator (English – Spanish) of the meeting reports of the Scientific Committee of the International Whaling Commission.

## RESEARCH INTERESTS

Population dynamics and ecology, and the application of science to inform conservation and management. Research activities focus on four main areas: (a) investigation and modelling of the distribution, habitat selection and habitat use of marine top predators; (b) the estimation of abundance and trends; (c) development and application of novel analytical methodologies; (d) development and application of practical measures based on robust science to address specific conservation and management issues, including the development of science-based conservation plans, management actions and marine protected areas.

## CURRENT RESEARCH ACTIVITIES

2015-2016: Principal Investigator in project “Power analysis and cost-benefit analysis for the ICCAT GBYP aerial survey on bluefin tuna spawning aggregations”. Tender No. ICCAT-GBYP 08/2015. Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).

2015-2016: Principal Investigator in project “Elaboration of 2015 data from the aerial survey on spawning aggregations. Data recovery plan Of the Atlantic-wide Research Programme on Bluefin Tuna (ICCAT-GBYP Phase 5- 2015)”. Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).

2015-2017: Analyst in the project “Aerial Survey of Cetaceans and Seabirds In Irish Offshore Waters”. University College Cork, Ireland. Funded by the Department of Communications Energy and Natural Resources, Ireland.

## OTHER COMPLETED RESEARCH ACTIVITIES

2015: Analyst in the project “Proyecto Grampus”. Funded by Fundación Biodiversidad.

2015: Principal Investigator in the project “Elaboración de un Protocolo Nacional de Actuación para Varamientos de Cetáceos y Organización de Taller de Varamientos”. División para la Protección del Mar. Secretaría de Estado de Medio Ambiente. Ministerio de Agricultura, Alimentación y Medio Ambiente.

2015: Principal Investigator in the project “Aerial survey design of the Atlantic-wide Research Programme on bluefin tuna (ICCAT-GBYP Phase 4 - 2015)”. Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).

2015: Principal Investigator in the project “Further elaboration of the data from the aerial survey on spawning aggregations of the Atlantic-wide research programme on Bluefin tuna (ICCAT GBYP - PHASE 4)”. Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).

- 2011-2015: Analyst for the cetaceans and sea turtles aerial survey on Italian waters. Tethys Research Institute – ISPRA.
- 2014: Preparation of a Technical Document on the incidental capture of threatened cetacean species in fishing gear. Ministerio de Agricultura, Alimentación y Medio Ambiente.
- 2014: Creation of the IUCN Red List fact-sheets and meta data for the cetaceans species of the Alboran Sea. IUCN Málaga.
- 2011-2014: Principal Investigator in Project “Understanding the patterns and causes of variability in distribution, habitat use, abundance, survival and reproductive rates of three species of cetacean in the Alborán Sea, western Mediterranean”. Alnilam Research and Conservation Ltd. Funded by Office for Naval Research, USA.
- 2011-2014: Survey design and analysis for the cetaceans and sea turtles aerial surveys in the Comunidad Valenciana. University of Valencia.
- 2009-2013: Participation in the project "Cetáceos Madeira II – Identifying critical marine areas for bottlenose dolphin and surveillance of the cetaceans' conservation status in Madeira Archipelago". Museo da Baleia, Madeira, Portugal. External consultant and advisor in data analysis. Funded by LIFE+ (European Commission. LIFE07 NAT/P/000646).
- 2012-2013: Participation in the project “Development of photo-identification catalogues for cetaceans in the Spanish Mediterranean.” CIRCE. Funded by Fundación Biodiversidad.
- 2013: Principal Investigator in project “Elaboration of 2013 data from the aerial survey on spawning aggregations. Data recovery plan Of the Atlantic-wide Research Programme on Bluefin Tuna (ICCAT-GBYP Phase 4- 2013)”. Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).
- 2013: Principal Investigator in the project “Aerial survey design of the Atlantic-wide Research Programme on bluefin tuna (ICCAT-GBYP Phase 4 - 2013)”. Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).
- 2013: Participation in the project “Design and development of the manual for the training courses of marine mammal observers (MMO) and technicians in passive acoustics (PAM) for noise generating off-shore operations in Spanish jurisdictional waters”. SUBMON. Funded by Fundación Biodiversidad.
- 2012-2013: Principal Investigator in the project “Assessing the feasibility of a large-scale aerial survey on bluefin tuna spawning aggregations in all the Mediterranean sea for obtaining useful data for operating modeling purposes. Atlantic-wide research programme on bluefin tuna. (ICCAT-GBYP Phase 3)”. Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).
- 2006-2013: Coordinator of project “Ziphius initiative. Mapping of habitats of Cuvier's beaked whales in the Mediterranean Sea”. Funded by ACCOBAMS.
- 2012: Project, database and cartography design, and technical assistant for the project “Basis for the development of Conservation plans for the protected cetacean species in the “North-Atlantic Marine Region”. CEMMA-INT. Funded by Fundación Biodiversidad.
- 2011-2012: Participation in the project “Conservation Plans of non-migratory cetacean species in the Peninsular Mediterranean.” CIRCE. Funded by Ministerio de Medio Ambiente y Medio Rural y Marino.
- 2011-2012: Analyst in project “Complementary actions to the LIFE INDEMARES Project for the study and estimate of cetacean populations in marine areas proposed for the Natura 2000 network in the Northwestern Mediterranean”. SUBMON. Funded by Fundación Biodiversidad.
- 2003-2012: Coordinator of Working Group on “Surveying the ACCOBAMS area”. Funded by ACCOBAMS.
- 2011: Principal Investigator in project “Elaboration of 2011 data from the aerial survey on spawning aggregations. Data recovery plan Of the Atlantic-wide Research Programme

on Bluefin Tuna (ICCAT-GBYP - 2011)". Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).

- 2011: Principal Investigator in Project "Identification of the critical areas for ziphius in the Alboran Sea, delimitation of the Priority Area for Conservation and basis for the establishment of a Management Plan." Funded by Ministerio de Medio Ambiente y Medio Rural y Marino.
- 2010-2011: Participation in the project "Conservation Plans for migratory species of cetaceans in the Peninsular Mediterranean." CIRCE. Funded by Ministerio de Medio Ambiente y Medio Rural y Marino.
- 2010-2011: Principal Investigator in project "Monitoring of cetaceans in the SAC (Special Area for Conservation) MEDIO MARINO – Murcia". Funded by the Consejería de Cultura y Agua de la Comunidad Autónoma de la Región de Murcia.
- 2009-2011: Principal Investigator in project "Beaked whales and pilot whales in the Alboran Sea (SW Mediterranean): research towards improved science-based mitigation strategies for risks from man-made sound". With Woods Hole Oceanographic Institute. Funded by Office for Naval Research, USA.
- 2007-2011: Consultant Researcher in Project "Spatially-explicit Conservation in the Alborán Sea: Predictive Habitat Modelling and Gap Analysis Guide Pelagic Protected Area Designs". Duke University Marine Laboratory. Funding: Pew Fellows Program in Marine Conservation.
- 2010: Principal Investigator in project "ATLANTIC-WIDE RESEARCH PROGRAMME ON BLUEFIN TUNA (ICCAT/GBYP – 2010). Data Recovery Plan – Elaboration of 2010 Data from sst and the Aerial Survey on Spawning Aggregations". Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).
- 2010: Principal Investigator in project "Atlantic-wide research programme on bluefin tuna (GBYP - 2010). Data Recovery Plan – Elaboration of 2010 Data from the Aerial Survey on Spawning Aggregations ". Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).
- 2010: Principal Investigator in project "Atlantic-wide research programme on bluefin tuna (GBYP - 2010). Design for aerial line transect survey in the Mediterranean Sea - Extension". Funded by Consorcio UNIMAR (Italy).
- 2010: Co-Principal Investigator in project " Atlantic-wide research programme on bluefin tuna (GBYP - 2010). Design for aerial line transect survey in the Mediterranean Sea". Funded by ICCAT (International Commission for the Conservation of Atlantic Tuna).
- 2010: Co-Principal Investigator in project "Spatial modeling of abundance in the northeast North Atlantic". With University of St Andrews, UK. Funded by GeoMarine, Inc, USA.
- 2009-2010: Spatial modelling analyst in project "INDEMARES – Designation and inventory of the Natura2000 Network of marine areas of Spain." Fundación Biodiversidad. Funded by EU LIFE+ Programme.
- 2009: Visual team leader and analyst in project "MED09". NURC (NATO Undersea Research Center) & Woods Hole Oceanographic Institute. Funded by Ofice for Naval Research (US)
- 2008-2010: Scientific Director of the IUCN initiative for the sustainable development of the Alboran Sea, spatial modelling analyst and GIS developer in project "The Alboran Sea: an opportunity for the implementation of the European Marine Strategy". Funded by Fundación Biodiversidad, Spain.
- 2008-2010: Field work assistant in project "SW Mediterranean Sea Turtle Conservation". Funding: NOAA NMFS (US National Oceanographic and Atmospheric Administration, National Marine Fisheries Service)
- 2008-2009: Field work assistant in project "Passive Acoustic Monitoring of whales in the Alborán Sea". Sea Mammal Research Unit. University of St Andrews, UK.

- 2008: GIS developer in project "Basis for the conservation of marine turtles in Spain." Alnitak Marine Research Centre. Funded by Spanish Ministry for the Environment and Marine and Rural Affairs.
- 2008: Data analyst in project "Sirena08". NURC (NATO Undersea Research Center) & Woods Hole Oceanographic Institute. Funded by NURC.
- 2007-2009: Field work leader for the Alboran Sea section in project "Conservation of the populations of long-finned pilot whale (*Globicephala melas*) in the Spanish Mediterranean". CIRCE (Conservación Información y Estudio sobre Cetáceos). Funded by Fundación Biodiversidad, Spain.
- 2007- 2008: Principal Investigator in project "Analysis of the effects of the displacement of the Cabo de Gata Traffic Separation Scheme". Funded by Whale and Dolphin Conservation Society.
- 2006-2008: Cruise leader and data analyst in project "CODA – Cetacean Offshore Distribution and Abundance in the European Atlantic". University of St. Andrews. Funded by governments and agencies in Spain, France, UK and Ireland.
- 2006- 2008: Co- Principal Investigator in project "Development of technologies and new methods to reduce the accidental capture of protected species of the marine fauna: loggerhead turtle and bottlenose dolphin". Alnitak Marine Research Centre. Funded by Secretaría General de Pesca Marítima (Spanish Ministry of Agriculture, Fisheries and Food).
- 2005: Cruise leader on project "SCANS II - Small cetaceans in European Atlantic waters and the North Sea" (LIFE04NAT/GB/000245). University of St Andrews. Funded by EU LIFE-Nature Programme.
- 2005: Invited scientist on cruise "CEDAR: CEtacean raDAR". SACLANTCEN (NATO SACLANT Undersea Research Centre). Funded by Office for Naval Research, USA.
- 2004- 2006: Co-coordinator of project "Seguimiento de pequeños cetáceos en aguas europeas del Atlántico Norte". Spanish participation in LIFE Nature project "SCANS II – Small Cetaceans in the European Atlantic and North Sea" (LIFE04NAT/GB/000245). SEC (Spanish Cetacean Society). Funded by Spanish Ministry of Fisheries.
- 2003-2006: Co-coordinator of project "Balearic Sperm Whale Project". Sea Mammal Research Unit (University of St Andrews) and Alnitak Marine Environment Research and Education Centre. Funded by One World Wildlife.
- 2002-2006: Coordinator of the Monitoring Actions under LIFE-Nature project LIFE02NAT/E/8610 "Conservation of Cetaceans and Sea Turtles in Murcia and Andalucía". SEC (Spanish Cetacean Society). Funded by EU LIFE-Nature Programme.

## **MEMBERSHIP OF INTERNATIONAL COMMITTEES**

- 2004 - present: Member of IUCN Species Survival Commission's Cetacean Specialist Group.
- 2004 - present: Member of International Whaling Commission Scientific Committee.
- 2004 - 2010: Member of ACCOBAMS (Agreement for the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Atlantic Contiguous Waters) Scientific Committee.

## **INVITED PARTICIPATION IN RESEARCH MEETINGS AND WORKSHOPS**

- 2015: Workshop "Bottlenose dolphin conservation and monitoring in the North-Western Mediterranean Sea". GIS3M (Groupement d'Intérêt Scientifique pour les Mammifères de Méditerranée et leur Environnement). Marseille, France. December.
- 2015: Meeting on Interactions between dolphins and Fisheries in Andalusia, Spain. Secretaria General de Pesca Marítima. Madrid. April.
- 2014: Meeting of the Expert Group on Cetaceans. Ministerio de Agricultura, Alimentación y Medio Ambiente. Madrid. December.

- Workshop on Management Units. Ministerio de Agricultura, Alimentación y Medio Ambiente. Madrid. May.
- 2013: Workshop of the Working Group on Biodiversity (Cetaceans and sea turtles). Project POCTEFEX. Doñana (Huelva). October.
- 2012: Workshop for the project "Identifying critical marine areas for bottlenose dolphin and surveillance of the cetaceans' conservation status in Madeira archipelago". LIFE+. Madeira (Portugal). November.
- Workshop "Joint analysis of the effort-related sightings data in the Demarcación Marina Noratlántica". CEMMA, Funded by Fundación Diversidad. Hondarribia. February.
- 2011: Scientific Committee Meeting of the International Whaling Commission. Invited expert. Trømsø, Norway. May-June.
- "ICCAT/GBYP Training Workshop on 2011 Aerial Surveys". Invited expert and Trainer. Madrid, Spain. May.
- Invited as International expert to the Scientific Committee of ACCOBAMS. Monaco. March.
- Line transect data analysis workshop. CSIRO Marine Laboratories. Hobart, Tasmania. February
- "Year of the Whale" project (part of SORP – "Southern Ocean Research Program") meeting. Government of Australia. Hobart, Tasmania. February.
- 2010: Scientific Committee Meeting of the International Whaling Commission. Invited expert. Agadir, Morocco. June.
- 2009: Workshop "TNASS-SNESSA-CODA Surveys Review". Quebec City, Canada. October.
- Meeting "NAMMCO Working group on abundance estimates". NAMMCO (North Atlantic Marine Mammal Commission). Quebec City, Canada. October.
- Scientific Committee Meeting of the International Whaling Commission. Invited expert. Madeira, Portugal. May-June.
- Workshop "Training of Spanish, Algerian and Moroccan researches on cetacean survey analytical techniques". Valsaín, Segovia, Spain. May.
- "I International Conference on Marine Mammals Protected Areas". Maui, Hawaii, US. April.
- "Climate Change Workshop". International Whaling Commission. Siena, Italy. February.
- Meeting "MED09". Organizer: NOAA Ocean Acoustics Programme and Woods Hole Oceanographic Institute. Museo Civico de Historia Natural, Milan, Italy. February.
- 2008: Scientific Committee Meeting of the International Whaling Commission. Member of the Spanish Delegation. Santiago de Chile, Chile. May-June.
- "Model-based abundance estimates and their implications for conservation and management. Another example of "Good practice" for wildlife monitoring within the LIFE-Nature framework." Workshop "Methods to assess cetacean abundance in Italian waters". APA-ICRAM-CoNISMa. Rome, Italy. April.
- 2007: "Spatio-Temporal Management of Noise on a regional scale". Dokumentes des Meeres. Lanzarote, Spain. June
- Scientific Committee Meeting of the International Whaling Commission. Member of the Spanish Delegation. Anchorage, Alaska. May-June.
- "SCANS-II". European Cetacean Society. San Sebastián, Spain. April.
- "Selection criteria for marine protected areas for cetaceans". ACCOBAMS-ASCOBANS. San Sebastián, Spain. April.
- "Beaked Whales". ECS-WDCS. San Sebastián, Spain. April.
- 2006: Scientific Committee Meeting of the International Whaling Commission. Member of the Spanish Delegation. St. Kitts and Nevis. May-June.

- "Scientific Seminar on Cetaceans in the South Mediterranean Countries". ACCOBAMS-ISPA. Bizerta, Tunisia. March.
- "IUCN and ACCOBAMS Red List Assessment of cetaceans in the ACCOBAMS area". IUCN – ACCOBAMS. Monaco. March.
- 2005: "Application of GIS and Spatial-Temporal Modeling for Marine Mammal Science and Management". Society for Marine Mammalogy. San Diego, USA. December.
- "How can Science best inform Managers: the role of field studies in the conservation management of European bottlenose dolphin populations". European Cetacean Society. Sponsored by ASCOBANS. La Rochelle, France. April.
- "Establecimiento de las bases ecológicas para la gestión de los tipos de hábitat de interés comunitario en España". Spanish Ministry of Environment. Madrid, Spain. January.

#### **PARTICIPATION IN OTHER RELEVANT RESEARCH WORKSHOPS, CONFERENCES AND COURSES**

- 2014: Course "Introduction to Linear Mixed effect models and GLMM in Ecology with R. I Edition. Granada, Spain, 17-20 February.
- 2013: Cachalote Consortium. Society for Marine Mammalogy. Dunedin, New Zealand. December.  
20<sup>th</sup> Biennial Conference on the Biology of Marine Mammals. Society for Marine Mammalogy. Dunedin, New Zealand. December.  
VI Conference of the Spanish Cetacean Society. Tarifa, Spain. October.
- 2012: II Iberian Conference on Wolves. Lugo. Spain. November.  
22<sup>nd</sup> Conference of the European Cetacean Society. Galway, Ireland. March.
- 2011: 19<sup>th</sup> Biennial Conference on the Biology of Marine Mammals of the Society for Marine Mammalogy. Tampa, Florida, US. December.  
21<sup>st</sup> European cetacean Society Conference. Cádiz. Spain. March.
- 2010: II International Conference on Computational Sustainability. Massachussets Institute of Technology (M.I.T.). Cambridge, Boston, U.S. June.
- 2009: 18<sup>th</sup> Biennial Conference on the Biology of Marine Mammals of the Society for Marine Mammalogy. Quebec, Canada. October.
- 2007: 17<sup>th</sup> Biennial Conference on the Biology of Marine Mammals of the Society for Marine Mammalogy. Cape Town, South Africa. December.  
17<sup>th</sup> European cetacean Society Conference. San Sebastian. Spain. March.
- 2006: Course "Primer on Density Surface Modelling". CREEM (Center for Research into Ecological and Environmental Modelling), University of St Andrews, Scotland. September.  
Course "Advance Techniques and Recent Developments in Distance Sampling". CREEM (Center for Research into Ecological and Environmental Modelling), University of St Andrews, Scotland. August.  
16<sup>th</sup> European cetacean Society Conference. Gdynia, Poland. March.
- 2005: 16<sup>th</sup> Biennial Conference of the Society for Marine Mammalogy. San Diego, US. December.  
15<sup>th</sup> European cetacean Society Conference. La Rochelle, France. March.
- 2004: 14<sup>th</sup> European cetacean Society Conference. Kolmarden, Sweden. March.
- 2003: 15<sup>th</sup> Biennial Conference of the Society for Marine Mammalogy. Greensboro, US. December.  
13<sup>th</sup> European cetacean Society Conference. Las Palmas, Gran Canaria, Spain. March.
- 2002: Course "Advance Distance Sampling". CREEM (Center for Research into Ecological and Environmental Modelling), University of St Andrews, Scotland. August.

12<sup>th</sup> European Cetacean Society Conference. Liege, Belgium. March.

1996-1998-2000-2002: Course "Marine Mammals: Biology and Conservation" I to IV, Universidad Internacional Menéndez Pelayo, Valencia, September.

1995 to 2001: European Cetacean Society Conferences.

## **INVITED RESEARCH SEMINARS, CONFERENCES AND LECTURES**

- 2015: "Towards conservation of bottlenose dolphins in the Mediterranean". Invited talk at the Workshop "Bottlenose dolphin conservation and monitoring in the North-Western Mediterranean Sea". GIS3M (Groupement d'Intérêt Scientifique pour les Mammifères de Méditerranée et leur Environnement). Marseille, France. December.
- 2011: "Long-term cetacean research in the Alboran Sea to improve ecological understanding and inform conservation". Invited talk at the European Cetacean Society Conference. Cadiz, Spain. March.
- 2009: "I International Conference on Marine Mammals Protected Areas". Maui, Hawaii, US. April.
- 2007: "Towards an ACCOBAMS collaborative effort to map critical areas for beaked whales in the Mediterranean". Workshop "Spatio-Temporal Management of Noise on a regional scale". Dokumentes des Meeres. Lanzarote, Spain. June
  - "Survey visual methods". Workshop "SCANS-II". European Cetacean Society. San Sebastián, Spain. April
  - "Selection criteria: Habitat modelling". Workshop "Selection criteria for marine protected areas for cetaceans". ACCOBAMS-ASCOBANS. San Sebastián, Spain. April
  - "Towards an ACCOBAMS collaborative effort to map critical areas for beaked whales in the Mediterranean". Workshop "Beaked Whales". WDCS. San Sebastián, Spain. April
- 2006: "Surveying the ACCOBAMS area". Scientific Seminar on Cetaceans in the South Mediterranean Countries. ACCOBAMS – ISPA. Bizerta, Tunisia. March.
- 2005: "Ecology of the short-beaked common dolphin off Southern Spain". Workshop "Application of GIS and Spatial-Temporal Modeling for Marine Mammal Science and Management". Society for Marine Mammalogy. San Diego, USA. December.
  - "Spatial analysis as a tool for conservation and management of bottlenose dolphin populations". Workshop "How can Science best inform Managers: the role of field studies in the conservation management of European bottlenose dolphin populations". European Cetacean Society. Sponsored by ASCOBANS. La Rochelle, France. April.

## **TEACHING**

- 2015: ICCAT/GBYP Training Workshop on 2015 Aerial Surveys. ICCAT (International Commission for the Conservation of Atlantic Tunas), Madrid, Spain. May.
- 2013: ICCAT/GBYP Training Workshop on 2013 Aerial Surveys. ICCAT (International Commission for the Conservation of Atlantic Tunas), Madrid, Spain. May.
- 2012: Workshop "Joint analysis of effort-related sightings data in the North-Atlantic Marine Demarcation. Organised by CEMMA-INT. Hondarribia, Spain. February.
- 2011: Workshop "Course on spatial modeling analysis" within the framework of the project CETOCAN PREVIO, funded by the Ministerio de Medio Ambiente, Medio Rural y Marino. Organized by SECAC. Lanzarote, Canary Islands, Spain.
- 2011: ICCAT/GBYP Training Workshop on 2011 Aerial Surveys. ICCAT (International Commission for the Conservation of Atlantic Tunas), Madrid, Spain. May.
  - Workshop "Spatial modelling of cetacean abundance and habitat use". Murdoch University. Fremantle, Perth, Western Australia. January.

- Workshop "Spatial modelling of cetacean abundance and habitat use". Flinders University. Port Lincoln, Adelaide. Southern Australia. February.
- 2010: Workshop "Marine Mammal Population Parameters Estimation". The Swire Institute of Marine Science, The University of Hong Kong. Hong Kong. December.
- II Workshop "Training of Spanish, Algerian and Moroccan researches in cetacean survey analytical techniques". Valsain, Segovia, Spain. May
- 2009: I Workshop "Training of Spanish, Algerian and Moroccan researches in cetacean survey analytical techniques". Valsain, Segovia, Spain. May
- 2008: "Habitat modeling of cetaceans". VII Seminar on Marine Mammals: Biology and Conservation. International University Meléndez Pelayo, Valencia, Spain. September.  
"Introduction to the modeling of the habitat of cetaceans". Seminar "Impacto ambiental en cetáceos producido por fuentes acústicas de alta intensidad y estrategias para su mitigación". Summer courses of the University of Cádiz, Spain. July
- 2007: "Conservation Research Methods: Estimating Population Size (BL4266)". School of Biology, University of St Andrews. 4th course. Scotland, UK. October

### **ORGANIZATION OF CONFERENCES, MEETINGS AND WORKSHOPS**

- 2015: Workshop on Strandings for the development of a National Protocol for Cetacean Strandings. Valsain, Segovia, Spain. July.
- 2010: II Workshop "Training of Spanish, Algerian and Moroccan researches in cetacean survey analytical techniques". Valsain, Segovia, Spain. May
- 2009: Workshop "Criteria for Marine Mammal Critical Habitat to make MPA Networks more Effective". I International Conference on Marine Mammals Protected Areas. Maui, Hawaii, USA. April.
- 2009: I Workshop "Training of Spanish, Algerian and Moroccan researches in cetacean survey analytical techniques". Valsain, Segovia, Spain. May.
- 2008: Workshop "Second Workshop on surveying the Mediterranean and the Black Sea". Monaco, May.
- 2007: Workshop "Selection criteria for marine protected areas for cetaceans". ECS-ASCOBANS-ACCOBAMS. San Sebastián, Spain. April.
- 2007: Workshop "European Project SCANS-II". San Sebastián, Spain. April.
- 2006: Workshop "Europhlukes". Gdynia, Poland. April.
- 2005: Workshop "Methodology for surveying the Black Sea". St Andrews, UK. September.

### **RESEARCH SUPERVISION**

- 2010-2014. PhD Thesis. Ana Dinis. "'Ecology and habitat use of bottlenose dolphin (*Tursiops truncatus*) in Madeira archipelago: implications for its conservation'. University of Madeira, Portugal.
- 2007-2013. PhD Thesis. Antonella Servidio. "Social structure, distribution and habitat use of short-finned pilot whales in the Canary Islands". University of St Andrews, Scotland.
- 2009-2010. Master of Research Thesis in Marine Mammal Science. Monica Arso. "Estimating abundance and survival rates of bottlenose dolphins (*Tursiops truncatus*) in the Alboran Sea ". University of St Andrews, Scotland.
- 2009-2010. Master Thesis. Miriam Roman. "Estructura social y ecología del comportamiento de *Delphinus delphis* y *Stenella coeruleoalba* en el mar de Alborán". University of Barcelona, Spain.

- 2009-2010. Master Thesis on Environmental Research and Technology. Marta Acosta. "Developing the photo identification catalogue of common dolphin (*Delphinus delphis*) and testing of mark-recapture method on the resident population of the Alborán Sea". University Rey Juan Carlos, Madrid, Spain.
2009. Master of Research Thesis in Marine Mammal Science. Erin Soucy. "Spatial Modelling of the distribution and absolute abundance of Risso's dolphins (*Grampus griseus*) in the Alborán Sea". University of St Andrews, Scotland.
2008. Master of Research Thesis in Marine Mammal Science. Cornelia Oedekoven. "Spatial Modelling of the distribution and absolute abundance of Cuvier's beaked whales (*Ziphius cavirostris*) in the Alborán Sea". University of St Andrews, Scotland.
- 2007-2008: Diploma Thesis. Caroline Hoschle. "Abundance and habitat preferences of striped dolphins (*Stenella coeruleoalba*) in the northern Alborán Sea, Spain". University of Hamburg, Germany.
- 2007: Master of Research Thesis in Environmental Biology. Rebecca Jewell. "Modelling the distribution and absolute abundance of long-finned pilot whales (*Globicephala melas*) in the Alborán Sea". University of St. Andrews, Scotland.
- 2007: Master of Research Thesis in Environmental Biology. Danielle Harris. "Analysis of fluctuations in abundance of bottlenose dolphins (*Tursiops truncatus*) in the Alborán Sea". University of St. Andrews, Scotland.
- 2006: Master of Research Thesis in Environmental Biology. Anna Sweeney. "Assessment of cetacean distribution in the Alborán Sea through the application of habitat preference modelling". University of St. Andrews, Scotland.

## **AWARDS AND NOMINATIONS**

- 2008: Nomination as candidate to the 2009 Pew Marine Conservation Fellowship.
- 2007: "Doctorate in Biology Extraordinary Award". Universidad Autónoma de Madrid.
- 2007: Nomination as candidate to the 2008 Pew Marine Conservation Fellowship.
- 2004: Best postgraduate oral presentation at the XVIII Annual Conference of the European Cetacean Society, Kolmården, Sweden.
- 2003: Best poster at the XVII Annual Conference of the European Cetacean Society, Canary Islands, Spain.
- 2001: Best poster at the XV Annual Conference of the European Cetacean Society, Rome, Italy
- 2000: Best poster at the XIV Annual Conference of the European Cetacean Society, Cork, Ireland.
- 2000: Nomination as candidate to the 2001 Pew Marine Conservation Fellowship.

## **CONSULTANCY FOR DOCUMENTARIES**

- 1999/2000: Scientific consultant for the chapter "Oceans" of the documentary "Blue Planet" produced by BBC Wildvision.
- 1999: Scientific consultant for the documentary "In Search of Neptune" of "The Guardian of the Planet" produced by Transglobe Films for National Geographic.

## **OTHER RESEARCH-RELATED ACTIVITIES**

### ***Research projects reviewed for:***

European Science Foundation, The Center for Field Research (Earthwatch Institute), ACCOBAMS, UK JNCC, Australian Marine Mammal Centre.

### ***Journal articles reviewed for:***

Aquatic Conservation. Marine and freshwater ecosystems (UK), Aquatic Mammals (Netherlands), Deep Sea Research I and II (USA), ICES Journal of Marine Science (Denmark), Journal of Cetacean Research and Management (IWC), Journal of Sea Research (Netherlands), Journal of the Marine Biological Association of the United Kingdom (UK), Marine Mammal Science (USA), Marine Ecology Progress Series (Germany), Biological Conservation (USA), Endangered Species Research (UK), Marine Mammalogy (USA), PlosONE (UK and USA), Deep-Sea Research Part II (USA).

**Member of Editorial Boards:**

Endangered Species Research (UK).

## LANGUAGES

Spanish: mother tongue

English: high level in speaking, listening, writing and reading

French: low-medium level in reading and listening

## REFERENCES WHO MAY BE CONTACTED

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- Randall Reeves**, Chairman, Cetacean Specialist Group, IUCN, 27 Chandler Lane, Hudson, Quebec, JOP 1HO, Canada. <rreeves@okapis.ca>

## SCIENTIFIC PUBLICATIONS

**Peer-reviewed:**

- Panigada, S., Lauriano, G., Donovan, G., Pierantonio, N., **Cañadas**, A., Vázquez, J.A., Burt, L. In review. Estimating cetacean density and abundance in the central Mediterranean sea through aerial surveys: implications for conservation. Deep Sea Research II.
- Cañadas**, A., Vázquez, J.A. In review. Common dolphins in the Alborán Sea: facing a reduction in their suitable habitat due to an increase in sea surface temperature. Deep Sea Research II.
- Rogan, E., **Cañadas**, A., Macleod, K., Santos, M.B., Mikkelsen, B., Uriarte, A., Van Canneyt, O., Vázquez, J.A. Hammond, P.S. In review. Distribution, abundance and habitat use of deep diving cetaceans in the North East Atlantic. Deep Sea Research II.
- Dinis, A., Alves, F., Nicolau, C., Ribeiro, C., Kaufmann, M. **Cañadas**, A. and Freitas, L. In press. Bottlenose dolphin (*Tursiops truncatus*) group dynamics, site fidelity, residency and movement patterns in Madeira archipelago (NE Atlantic). African Journal of Marine Science.
- Lauriano, G., Pierantonio, N., Kell, L. **Cañadas**, A. Donovan, G. Panigada, S. In review. Fishery-independent abundance and density estimates of swordfish (*Xiphias gladius*) from aerial surveys in the Central Mediterranean Sea. Deep Sea Research II.
- Notarbartolo-di-Sciara, G., Lauriano, G., Pierantonio, N., **Cañadas**, A., Donovan, G. Panigada, S. 2015. The Devil We Don't Know: Investigating Habitat and Abundance of Endangered Giant Devil rays in the North-Western Mediterranean Sea. PlosONE.
- Cañadas**, A. and Vázquez, J.A. 2014. Conserving Cuvier's beaked whales in the Alboran Sea (SW Mediterranean): Identification of high density areas to be avoided by intense man-made sound. Biological Conservation 178: 155-162.

Carpinelli, E., Pauline Gauffier, Philippe Verborgh, Sabina Airol迪, Lèa David, Nathalie Di-Méglie, Ana **Cañadas**, Alexandros Frantzis, Luke Rendell, Tim Lewis, Barbara Mussi, Daniela Silvia Pace , Renaud de Stephanis. 2014. Assessing sperm whale (*Physeter macrocephalus*) movements within the Mediterranean Sea through photo-identification, Aquatic Conservation: Marine and Freshwater Ecosystems (special issue) 24, Suppl (1): 23-30.

Wierucka, K., Verborgh, P., Meade, R., Colmant, L., Gauffier, P., Esteban, R., de Stephanis, R. and **Cañadas**, A. 2014. Differences in survival rates and the effect of the Morbillivirus epizootic between clusters of long-finned pilot whales (*Globicephala melas*) in the Mediterranean Spanish waters. *Marine Ecology Progress Series*, 502:1-10.

Hammond, PS, Gillespie, D, Lovell, P, Samarra, F, Swift, R, Macleod, K, Tasker, ML, Berggren, P, Borchers, DL, Burt, ML, Paxton, CGM, **Cañadas**, A, Desportes, G, Donovan, GP, Gilles, A, Lehnert, K, Siebert, U, Gordon, J, Leaper, R, Leopold, M, Scheidat, M, Øien, N, Ridoux, V, Rogan, E, Skov, H, Teilmann, J, Van Canneyt, O & Vázquez, JA. 2014. Large scale surveys for cetaceans: Line transect assumptions, reliability of abundance estimates and improving survey efficiency – A response to MacLeod. *Biological Conservation* 170: 338-339

Esteban, R., Verborgh, P., Gauffier, P., Giménez, J., Afán, I., **Cañadas**, A., García, P., Murcia, J.L., Magalhães, S., Andreu, E. and de Stephanis, R. 2013. Identifying key habitat and seasonal patterns of a critically endangered population of killer whales. *Journal of the Marine Biological Association of the United Kingdom*. doi:10.1017/S002531541300091X

Hammond, PS, Macleod, K, Berggren, P, Borchers, DL, Burt, ML, **Cañadas**, A, Desportes, G, Donovan, GP, Gilles, A, Gillespie, D, Gordon, J, Hedley, S, Hiby, L, Kuklik, I, Leaper, R, Lehnert, K, Leopold, M, Lovell, P, Øien, N, Paxton, C, Ridoux, V, Rogan, E, Samarra, F, Scheidat, M, Sequeira, M, Siebert, U, Skov, H, Swift, R, Tasker, ML, Teilmann, J, Van Canneyt, O Vázquez, JA. 2013. Abundance of harbour porpoise and other cetaceans in European Atlantic shelf waters. *Biological Conservation* 164: 107-122.

Borchers, D.L., Zucchini, W., Heide-Jørgensson, M.P., **Cañadas**, A. and Langrock, R. 2013. Using hidden Markov models to deal with availability bias on line transect surveys. *Biometrics*. DOI: 10.1111/biom.12049

Renaud de Stephanis, Joan Giménez, Eva Carpinelli, Carlos Gutierrez-Exposito, Ana **Cañadas**. 2013. As main meal for Sperm whales: Greenhouse plastics. *Marine Pollution Bulletin* 69, Issues 1-2: 206-214.

**Cañadas**, A. 2012. *Ziphius cavirostris* (Mediterranean subpopulation). In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <[www.iucnredlist.org](http://www.iucnredlist.org)>.

Druon, J.N., Panigada, S., David, L., Gannier, A., Mayol, P., Arcangeli, A., **Cañadas**, A., Di Méglie, N. and Gauffier, P. 2012. Potential feeding habitat of fin whale in the Western Mediterranean Sea. *Marine Ecology Progress Series*. MEPS 464:289-306 (2012) - doi:10.3354/meps09810

Rueda Ramírez, L., **Cañadas**, A., Sagarminaga, R. and Cadriñ, S.X. In review. Environmental factors related to loggerhead turtle distribution in the Alboran Sea. *Endangered Species Research*.

Hooker, S.K., **Cañadas**, A., Hyrenbach, K.D., Corrigan, C., Polovina, J.J., Reeves, R.R. 2011. AS WE SEE IT: Making protected area networks effective for marine top predators. *Endangered Species Research* 13: 203-218. doi: 10.3354/esr00322

Engelhardt, D., A. R. Hoelzel, C. Nicholson, A. Frantzis, S. Mesnick, S. Gero, H. Whitehead, L. Rendell, P. Miller, R. De Stephanis, A. A. Mignucci-Giannoni, A. **Cañadas** and S. Airol迪. 2009. Female philopatry in coastal basins and male dispersion across the North Atlantic in a highly mobile marine species, the sperm whale (*Physeter macrocephalus*). *Molecular Ecology* 18: 4193-4205.

**Cañadas**, A. Donovan, G., Desportes, G. and Borchers, D. 2009. A short review of the distribution of short beaked common dolphins (*Delphinus delphis*) in the central and eastern North Atlantic with an abundance estimate for part of this area. NAMMCO Scientific Publications, Volume 7, "North Atlantic Sighting Surveys (1987-2001)": 201-220.

- Cañadas**, A. and Hammond, P.S. 2008. Abundance and habitat preferences of the short-beaked common dolphin (*Delphinus delphis*) in the South-western Mediterranean: implications for conservation. *Endangered Species Research* 4: 309-331.
- Natoli, A., **Cañadas**, A., Vaquero, C., Politi, P., Fernández-Piqueras, J. and Hoelzel, A.R. 2008. Conservation genetics of the short-beaked common dolphin (*Delphinus delphis*) in the Mediterranean Sea and eastern North Atlantic Ocean. *Conservation genetics* (online).
- Gómez de Segura, A., Hammond, P.S., **Cañadas**, A. and Raga, J.A. 2007. Comparing cetacean abundance estimates derived from spatial modelling and line transect sampling. *Marine Ecology Progress Series* 329: 289-299.
- Cañadas**, A. and Hammond, P. 2006. Model-based abundance estimate of bottlenose dolphins off Southern Spain: implications for conservation and management. *Journal of Cetacean Research and Management*, 8(1): 13-27.
- Natoli, A., **Cañadas**, A., Peddemors, V.M., Aguilar, A., Vaquero, C., Fernández-Piqueras, P. and Hoelzel, A.R. 2006. Phylogeography and alpha taxonomy of the common dolphin (*Delphinus sp.*). *Journal of Evolutionary Biology* 19(3): 943.
- Cañadas**, A., R. Saggarminaga, R. de Stephanis, E. Urquiola and P.S. Hammond. 2005. Habitat selection models as a conservation tool: proposal of marine protected areas for cetaceans in Southern Spain. *Aquatic Conservation: Marine and Freshwater Ecosystems* 15:495-521.
- Cañadas**, A., Desportes, G. and Borchers, D.L. 2004. Estimation of  $g(0)$  and abundance of common dolphins (*Delphinus delphis*) from the NASS-95 Faroese survey. *Journal of Cetacean Research and Management* 6(2): 191-198.
- Bearzi, G., R.R. Reeves, G. Notarbartolo di Sciara, E. Politi, A. **Cañadas**, A. Frantzis and B. Mussi. 2003. Ecology, status and conservation of short-beaked common dolphins *Delphinus delphis* in the Mediterranean Sea. *Mammal Review*, 33: 224-252.
- Cañadas**, A., Saggarminaga, R. and García-Tiscar, S. 2002. Cetacean distribution related with depth and slope in the Mediterranean waters off southern Spain. *Deep Sea Research I* 49: 2053-2073.
- Guerra, A., González, A. F., Rocha, F.J., Saggarminaga, R. and **Cañadas**, A. 2002. Planktonic egg masses of the diamond-shaped squid *Thysanoteuthis rhombus* in the eastern Atlantic and the Mediterranean Sea. *Journal of Plankton Research*, 24(4): 333-338.
- Cañadas**, A. and Saggarminaga, R. 2000. The Alboran Sea, an important breeding and feeding ground for the long-finned pilot whale (*Globicephala melas*) in the Mediterranean Sea. *Marine Mammal Science* 16 (3): 513-529.

#### Book sections:

- Cañadas**, A. Saggarminaga, R., Marcos, P. y Urquiola, E. 2004. Sector Sur (Andalucía y Ceuta). In: Proyecto Mediterráneo. Zonas de especial interés para la conservación de los cetáceos en el Mediterráneo español (Ed. J.A. Raga and J. Pantoja), pp. 133-190. Ministerio de Medio Ambiente. Organismo Autónomo Parques Nacionales. Madrid.
- Raga, J. A., **Cañadas**, A., Gazo, M. y Urquiola, E. 2004. Conclusiones y recomendaciones. In: Proyecto Mediterráneo. Zonas de especial interés para la conservación de los cetáceos en el Mediterráneo español (Ed. J.A. Raga and J. Pantoja), pp. 191-217. Ministerio de Medio Ambiente. Organismo Autónomo Parques Nacionales. Madrid.

#### Selected Technical reports:

- Cañadas**, A., B-Nagy, A., Bearzi, G., Cotte, C., Fortuna, C., Frantzis, A., Gannier, A., Laran, S., Lauriano, G., Lewis, T., Moulins, A., Mussi, B., Pastor, X., Politi, E., Pulcini, M., Raga, J.A., Rendell, L. 2013. ACCOBAMS collaborative effort to map high-use areas by beaked whales in the Mediterranean. 24 p.
- Cañadas**, A., Gauffier, P., Verborgh, P., Esteban, R., de Stephanis, R. 2011. Propuesta de un Plan de Conservación para zifio de Cuvier (*Ziphius cavirostris*) en el Mediterráneo español. 73 p

- Cañadas**, A., Gauffier, P., Verborgh, P., Esteban, R., de Stephanis, R. 2011. Propuesta de un Plan de Conservación para calderón gris (*Grampus griseus*) en el Mediterráneo español. 62 p
- García-Tiscar, S., Gauffier, P., Verborgh, P., **Cañadas**, A., Esteban, R., de Stephanis, R. 2011. Propuesta de un Plan de Conservación para delfín mular (*Tursiops truncatus*) en el Mediterráneo español. 99 p.
- Giménez, J., Gauffier, P., Verborgh, P., Jiménez Torres, C., Esteban, R., **Cañadas**, A., de Stephanis, R. 2011. Propuesta de un Plan de Conservación para delfín comun (*Delphinus delphis*) en el Mediterráneo español. 79 p.
- Jiménez Torres, C., Gauffier, P., Verborgh, P., Esteban, R., Giménez, J., **Cañadas**, A., de Stephanis, R. 2011. Propuesta de un Plan de Conservación para delfín listado (*Stenella coeruleoalba*) en el Mediterráneo español. 84 p.
- Cañadas**, A., Podestà, M., Pusser, T., Quero, M. E., Revelli, E., Tyack, P. L. 2009. Med09 focal follow operations visual team handbook.
- Agardy, T., Aguilar, N., **Cañadas**, A., Engel, M., Frantzis, A., Hatch, L., Hoyt, E., Kaschner, K., LaBrecque, E., Martin, V., Notarbartolo di Sciara, G., Pavan, G., Servidio, A., Smith, B., Wang, J., Weilgart, L., Wintle, B. and Wright, A. 2007. Un Taller Científico Global sobre la Gestión Espacio-Temporal del Ruido. Report of the Workshop.
- Cañadas**, A. and de Stephanis, R. 2006. "Evaluation of the status of the killer whales in the Mediterranean Sea", in "The status and distribution of cetaceans in the Black Sea and Mediterranean Sea". Ed: Reeves R., Notarbartolo di Sciara G, IUCN Centre for Mediterranean Cooperation, Malaga, Spain. 137 pp.
- Cañadas**, A. 2006. "Evaluation of the status of the long-finned pilot whales in the Mediterranean Sea", in "The status and distribution of cetaceans in the Black Sea and Mediterranean Sea". Ed: Reeves R., Notarbartolo di Sciara G, IUCN Centre for Mediterranean Cooperation, Malaga, Spain. 137 pp.
- Cañadas**, A. 2006. "Evaluation of the status of the Cuvier's beaked whales in the Mediterranean Sea", in "The status and distribution of cetaceans in the Black Sea and Mediterranean Sea". Ed: Reeves R., Notarbartolo di Sciara G, IUCN Centre for Mediterranean Cooperation, Malaga, Spain. 137 pp.
- Cañadas**, A. and Sagarmiaga, R. 2006. Conservation Plan proposal for the bottlenose dolphin (*Tursiops truncatus*) in the Spanish Mediterranean. Spanish Cetacean Society. LIFE02NAT/E/8610. 136pp.
- Sagarmiaga, R. and **Cañadas**, A. 2006. Conservation Plan proposal for the loggerhead turtle (*Caretta caretta*) in the Spanish Mediterranean. Spanish Cetacean Society. LIFE02NAT/E/8610. 53pp.
- Bearzi G., Notarbartolo di Sciara G., Reeves R.R., **Cañadas** A., Frantzis A. 2004. Conservation Plan for short beaked common dolphins in the Mediterranean Sea. ACCOBAMS, Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area. 90 pp.
- Cañadas**, A. 2003. Propuesta de conservación de zifios (orden Cetacea, familia Ziphiidae) en el Mar de Alborán. Report for the Spanish Navy Hydrographic Institute. Spanish Cetacean Society.
- Cañadas**, A. and Sagarmiaga, R. 2002. Identificación de las áreas de especial interés para la conservación de los cetáceos en el Mediterráneo español. Volumen IV. Sector Sur. Universidad Autónoma de Madrid – Alnitak. December 2002. 604 pp.
- Other selected contributions:**
- Scientific Committee of the International Whaling Commission: 18 documents since 2003
- Scientific Conferences (ECS, SMM, etc): 50 presentations since 1993
- Oral presentations at the ECS, Society for Marine Mammalogy (SMM) and other Conferences: 29 presentations since 1999