



Conference on  
**Wind energy and  
Wildlife impacts**

# Programme



6-8 September 2017 | Estoril - Portugal

# 1 Welcome message

Welcome to the 4th Conference on Wind energy and Wildlife impacts (CWW 2017), Estoril, Portugal. Despite significant advances in recent years in our understanding of the impacts of wind energy on wildlife, challenges remain regarding planning and policy, assessment of direct and indirect effects on wildlife, methodological approaches, technology development, and mitigation strategies and their effectiveness. The CWW 2017 aims to maintain and promote the international cooperation among researchers, developers, regulators and stakeholders that over the years have contributed to building knowledge on this topic. As in previous conferences, we reached over 300 participants representing private and public companies, universities, professional groups and governmental agencies worldwide. The conference venue includes ample space for technical sessions as well as an exhibition area where developers, technology suppliers and other members of the industry can present their services and products. We are confident that CWW 2017, like its predecessors, will be a conference of high scientific quality in an enjoyable environment of good climate, beautiful landscapes and gastronomic Portuguese delights.

*Local Organizing Committee*

# **DAY 1**

Wednesday, September 6

<i>Time</i>	<i>Event</i>																																																						
09:30 - 11:00	<b>Opening Ceremony (Auditorium) — Chair:</b> Regina Bispo Henrique Cabral (Scientific Coordinator of MARE, Conference Host) Cascais City Mayor Environment Portuguese Minister (to be confirmed) President of the Republic of Portugal (to be confirmed) Edward Arnett (Scientific Committee)																																																						
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<i>Time</i>	<i>Event</i>			
14:00 - 15:30	<b>Plenary Session I (Auditorium) — Chair:</b> Roel May <b>Keynote Speaker 1:</b> Teresa Simas, <i>Offshore wind: current challenges for sustainable development</i> <b>Keynote Speaker 2:</b> Manuela Huso, <i>Wind Wildlife Fatality: How we know what we know and how we might mislead ourselves</i>			
15:30 - 16:30	<b>Poster Session I</b> Coffee Break			
	<b>Parallel Session 4 (Auditorium)</b> <b>Species behaviour — Offshore II</b> <b>Chair:</b> Andrew Gill			
	<b>Parallel Session 5 (Room 2)</b> <b>Species behaviour — Onshore II</b> <b>Chair:</b> Miguel Mascarenhas			
	<b>Parallel Session 6 (Room 3)</b> <b>Species fatality and vulnerability</b> <b>Chair:</b> Manuela Huso			
<i>Time</i>	<i>Presenter</i>	<i>Title</i>	<i>Presenter</i>	<i>Title</i>
16:30 - 16:45	Rachael Plunkett	Strategic post consent monitoring of breeding harbour seals at the Wash SAC	Gonçalo Brotas	The Iberian wolf and wind farm environmental impact assessment in Portugal – a review
16:45 - 17:00	Marijke Warnas	Filling up the gaps: addressing knowledge gaps on ecological impacts of offshore wind farms in the netherlands	Ricardo Tomé	Inter- and intra-specific variation in avoidance behaviour at different scales in migratory soaring birds
17:00 - 17:15	Roger Buisson	Displacement effects of offshore wind farms on red-throated divers ( <i>Gavia stellata</i> ) relative to the effects of other human activities	Sachiko Moriguchi	Wind farm effects on migration flight of swans and foraging distribution at their stopover site
17:15 - 17:30	Jesper Larsen	Evidence based tools to assess and mitigate population impacts of wind farm developments – the case of the DEPONS project	Torgeir Nygård	Where eagles dare: understanding collision risks, behavioural patterns and population impacts of white-tailed eagles at Smøla windfarm, Norway
17:30 - 17:45	Katharina Fließbach	Cumulative habitat loss for sensitive seabirds resulting from offshore wind energy and shipping traffic and implications for Marine Spatial Planning	Jonathan Colman	Effects of the Lista wind power plant on roadside revegetation and the space use of moose, red deer and roe deer
			Filipe Canário	Vulnerability index for Western Palearctic soaring birds regarding wind farms placed on migration flyways
			Aly McCluskie	A circus of uncertainty: collision risk and hen harriers, <i>Circus cyaneus</i>
			Oliver Behr	Accounting for regional bat phenology and turbine characteristics significantly improves models that predict bat collisions at wind turbines

## **DAY 2**

Thursday, September 7

<i>Time</i>	<i>Event</i>				
09:30 - 11:00	<b>Plenary Session II (Auditorium) — Chair:</b> Johann Köppel <b>Keynote Speaker 1:</b> Roel May, <i>Mitigating impacts of wind energy facilities on wildlife</i> <b>Keynote Speaker 2:</b> Fabien Quéfier, <i>Compensation: designing and implementing biodiversity offsets for wind energy projects</i>				
11:00 - 11:30	Coffee Break				
	<b>Parallel Session 7 (Auditorium)</b> <b>Mitigation</b> <b>Chair:</b> Roel May	<b>Parallel Session 8 (Room 2)</b> <b>Impact monitoring &amp; Risk assessment I</b> <b>Chair:</b> Teresa Simas	<b>Parallel Session 9 (Room 3)</b> <b>Planning &amp; Policy I</b> <b>Chair:</b> António Sá da Costa		
<i>Time</i>	<i>Presenter</i>	<i>Title</i>	<i>Presenter</i>	<i>Title</i>	
11:30 - 11:45	Michael Schirmacher	Multi-year operational minimization study in West Virginia: potential novel strategy to reducing bat fatalities at wind turbines	Janine Aschwanden	Combining radar measurements and carcass searches: Number of bird fatalities and relation to migration intensity at a wind farm in a mountainous area	Jens Lüdeke Environmentally Sound Development of Offshore Wind Energy by Implementing a Good Practice in Impact Assessment, Mitigation and Compensation
11:45 - 12:00	Joana Santos	Mitigation effectiveness – the Candeeiros wind farm monitoring and mitigation program case study	Jerry Roppe	Wildlife Monitoring and Reporting System using Operations and Maintenance Personnel: 5-year Assessment	Alex Sansom Tracks, maps and marine renewables: understanding seabird distributions at sea in relation to risk and spatial planning
12:00 - 12:15	Teresa Saraiva	Efficiency of radar-assisted wind turbines selective stop programs on migratory routes in SW Portugal	Bertrand Delprat	Red Kite collision risk for wind project acceptance	Gustaf Byström GIS-based methods for sustainable wind power planning
12:15 - 12:30	Amanda Hale	Could the smooth surfaces of tower monopoles be a contributing factor to bat fatalities at wind turbines?	Asaf Mayrose	Risk assessment of wind turbines for nocturnal migrating birds – a radar study within a world-renowned bottleneck in Israel	Christian Voigt Bat conservation at wind turbines: German experts discordant regarding performance of established approval and implementation planning processes
12:30 - 12:45	Bård Stokke	Visual mitigation measures to reduce bird collisions – experimental tests at the Smøla wind-power plant, Norway	Osama El-Gebaly	Gabel Al-zayt wind farm post-construction monitoring for non-operational wind farm for spring survey, 2014, Gulf of Suez, Egypt	Josip Kusak Framework for strategic wind farm site prioritisation based on modelled wolf reproduction habitat in Croatia
13:00 - 14:00	<b>Lunch</b>				

<i>Time</i>	<i>Event</i>					
14:00 - 15:30	<b>Plenary Session III (Auditorium) — Chair:</b> Henrique Cabral <b>Keynote Speaker 1:</b> Daniel Skambracks, <i>Wind Energy, Wildlife Impacts and Banks</i> – <i>How banks can promote sustainable Wind Energy development</i> <b>Keynote Speaker 2:</b> Johann Köppel, <i>A pioneer in transition: A horizon scan of emerging issues in sustainable wind energy development</i>					
15:30 - 16:30	<b>Poster Session II</b> Coffee Break					
	<b>Parallel Session 10 (Auditorium)</b> <b>Impact monitoring &amp; Risk assessment II</b> <b>Chair:</b> Edward Arnett					
	<b>Parallel Session 11 (Room 2)</b> <b>Trends, tools and technologies I</b> <b>Chair:</b> Timóteo Monteiro					
	<b>Parallel Session 12 (Room 3)</b> <b>Planning &amp; Policy II</b> <b>Chair:</b> Johann Köppel					
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16:30 - 16:45	Joana Marques	Is bird fatality driven by environmental features? A spatial model for Portugal	Jay Prueett	The use of low ecological risk wind energy development areas analysis to facilitate sustainable wind energy deployment	Helena Coelho	Experiences gained from delivery of offshore wind energy in the UK that could inform the environmental assessment of Portuguese projects
16:45 - 17:00	Rafael Villegas	Biological monitoring of birds and bats in wind farm La Venta III in México	Alexandre Leitão	Appraisal of the soaring bird sensitivity map tool for the Rift valley/Red sea flyway based on local data from the Gabel El Zayt wind farm monitoring	Finlay Bennet	Considerations for upscaling individual effects of wind energy development towards population-level impacts on wildlife
17:00 - 17:15	David Meninger	Bird surveys in wind turbine projects as a tool for studying migration routes	Gonzalo Arroyo	Can marine surveillance radars be used to adequately detect diurnal seabird movements at sea?	Tris Allinson	Introducing BirdLife International's Soaring Bird Sensitivity Mapping Tool for the Mediterranean
17:15 - 17:30	Bertrand Delprat	Bat activity, and distance, new results for considerations?	Jared Wilson	Spatially explicit tools for the assessment of potential impacts of marine renewables on breeding seabirds	Andrea Copping	Managing wind farms – What is the role of adaptive management?
17:30 - 17:45	David Young	A cost and scientifically effective monitoring protocol for large bird fatalities at wind energy facilities	Stephanie McGovern	Keeping an eye on offshore wind and wildlife: The world's largest digital aerial survey off the Long Island coast	Josip Kusak	Guidelines for assessment of wind farms impact on large carnivores in Croatia

## **DAY 3**

Friday, September 8



# POSTER PRESENTATIONS

Poster Number	Poster Session	Presenter	Title
1	I	Alex Sansom	The impacts of a wind farm on breeding golden plover ( <i>Pluvialis apricaria</i> )
2	II	Amanda Hale	Wind turbines provide foraging opportunities for bats in the southern great plains, U.S.
3	I	Andreas Traxler	Comparison of results of bird and bat collision experiments in different habitat types in Austria in context with european fatality results
4	II	Bertrand Delprat	If I have to stop my turbines for bat conservation, how much does it cost? How can I scale the collision risk gained?
5	I	Bettina Mendel	Offshore wind farms: heaven or hell for guillemots? First result of the project HELBIRD
6	II	Christian Voigt	Monitoring of bats in wind turbine projects: A stakeholder-based assessment of methods
7	I	Dale Kikuchi	Additional energy costs and avoidance patterns of swans and geese associated with an onshore wind farm in Japan
8	II	Elizabeth Masden	Wide-scale movements of lesser black-backed gulls throughout the year and implications for cumulative impact assessments of wind farms
9	I	Erick Jacobsen	Avoidance behaviour of migrating raptors approaching a Danish offshore windfarm
10	II	Fiona Caryl	Searching frequently or searching far? Precision and bias of bird fatality estimates from two contrasting carcass detection strategies
11	I	Fiona Caryl	A modelling approach to identify peat depth and its use within habitat management plans
12	II	Frank Hanssen	ConSite Wind: Consensus based siting of wind power
13	I	Frank Hanssen	High-resolution spatial modelling of landscape geomorphometry and updraft landscapes to forecast risk-enhancing topography for bird-friendly micrositing
14	II	Gaelle Vives	Bat flight height monitored from wind masts predicts mortality risk at wind farms
15	I	Geoffroy Marx	French onshore wind farms and their direct impact on birds - review of bird mortality surveys conducted between 1997 and 2015 in France
16	II	Gonzalo Arroyo	Bats and wind energy in southern Spain: temporal patterns and potential consequences for wind power facilities management
17	I	Hendrik Reers	Bat activity at nacelle height over forests and open landscape
18	II	Hermann Hötker*	Mortality and displacement of birds at small wind turbines

\*Presenter replaced by co-author

Poster Number	Poster Session	Presenter	Title
19	I	Ipek Kaymaz	Measuring the impacts of offshore wind developments in the north sea region on cetacean species: developing SDG14 indicators for transparent monitoring
20	II	Jakob Fric	Demonstration of good practices to minimize impacts of wind farms on biodiversity in Greece
21	I	Janine Aschwanden	Integrated analytical solution for long-term quantitative monitoring of bird movements by radar
22	II	Jerry Roppe	Wildlife Monitoring and Reporting System using Operations and Maintenance Personnel: 5-year Assessment
23	I	Jerry Roppe	Avian Power Line Interaction Committee: A Partnership Working for Avian Resources
24	II	Jessica Weber	Lost in bias? multi-faceted discourses framing the communication of wind and wildlife research results – the progress case
25	I	Joana Marques	Bird behavioural response to the surrounding environment: a specific approach to wind farm location and placement
26	II	Joana Marques	Fatality estimation using the bayesian approach: prediction of fatalities and adjustment of monitoring programmes
27	I	Joana Santos	Local stakeholders' involvement on offset/compensation projects: what is their role and how they matter for sustainability?
28	II	Juha Niemi	Automatic Bird Identification and Strike Assessment System for Offshore Wind Farms
29	I	Karin Sinclair	Expansion of WREN – An International Collaborative Under International Energy Agency Wind
30	II	Karl Otto Merz	The SKARV System - Preventing bird strikes through active control of wind turbines
31	I	Laura Turner	Evidence of nightjar disturbance distances during construction works at an upland wind farm site
32	II	Liesbeth Verlinden	Monitoring nocturnal bird migration on a regional scale using operational weather radars
33	I	Marija Sabolić	Wind farms in Croatia - an overview of impacts, procedures and issues
34	II	Mei-Ling Bai	Mapping and modelling seabird distribution in the Taiwan strait to support spatial planning of offshore wind farms
35	I	Miguel Mascarenhas	Invasive plant control - challenges and opportunities
36	II	Miguel Mascarenhas	Wind farms aren't the same concept to all of us? So what are they?
37	I	Moisés Pescador	Effectiveness of mitigation measures to avoid fatalities in the populations of lesser kestrel ( <i>Falco naumanni</i> ) at wind farms in Central-East Spain

<i>Poster Number</i>	<i>Poster Session</i>	<i>Presenter</i>	<i>Title</i>
38	II	Nancy McLean	How to reduce uncertainty using a questions based approach for universal wind energy assessment
39	I	Nicola Largey	'Birds in space' a review of methods to assess the use of the airspace by birds: implications for evaluating the impacts of wind energy generation
40	II	Nicolás Antón García	Study of the effect of the design and implementation of the Dos Pueblos Wind Farm on the habitat and populations of Dupont's lark
41	I	Nicolas Vanermen	Why are large gulls attracted to offshore wind farms?
42	II	Robin Cox	Key considerations for using modern radar systems for bird studies of wind energy projects
43	I	Robin Cox	Potential effects of North Sea wind regimes on <i>Nathusius pipistrelle</i> migration strategies to the UK and implications for offshore wind energy
44	II	Roel May	Do birds in flight respond to (ultra)violet lighting? A pilot study
45	I	Roel May	Minimizing the trade-off between energy production and avian collision risk: a spatio-temporal model for optimal operational shutdown of wind turbines
46	II	Sabine Mueller	When you see nothing at all – displacement of seabirds caused by offshore wind farms?
47	I	Sandra Rodrigues	Bat nightly and seasonal activity patterns at height: a cross country comparison and insights into conservation
48	II	Sarah Rankin	Practical techniques for restoring blanket bog on previously afforested land to mitigate habitat impacts from windfarm development in upland Scotland
49	I	Sergej Drechsel	Noise mitigation systems: successes and lessons learnt during construction of Wikinger offshore wind farm 2016
50	II	Silvia Mesquita	Adding value to wind farm projects by integrating ecosystem services in the environmental impact assessment process
51	I	Silvia Mesquita	Call for action: adaptive management in practice
52	II	Stefan Pettersson	Bat activity at nacelle level and its implications for mitigation
53	I	Stuart Clough	Assessing avian avoidance rates and collision risk at offshore wind farms from aerial digital images
54	II	Tatsuya Ura	Case examples of barrier effects of wind farms on birds in Japan
55	I	Tatsuya Ura	Species and wind farm sensitivity index for seabirds and landbirds in Hokkaido

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56	II	Vera Brust	Individual passerine flight decisions at the German North Sea coast
57	I	Wataru Kitamura	Habitat displacement of small land birds at wind farms in Japan
58	II	Yuki Yabuhara	Predicting regional distribution of white tailed eagle in winter to inform wind farm placement in Hokkaido, Northern Japan

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