



WREN Webinar Series Goals

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WREN's webinar series, launched in September 2014, supports WREN's goals to:

- Facilitate international collaboration that advances global understanding of environmental effects of offshore and land-based wind energy development.
- Create a shared global knowledge base and community of practice around research, monitoring and management of the environmental effects of wind energy development.





WREN Webinars Held to Date

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Webinar #1, September 2014 covered best practices for assessing the impact of wind energy development on bats with a focus on the combination of operational minimization and deterrents as a possible strategy to minimize bat fatalities at wind turbines. Speakers: Cris Hein of Bat Conservation International and Oliver Behr of University of Erlangen in Germany

Webinar #2, December 2014 covered research efforts to measure seabird and marine mammal attraction and avoidance at offshore wind farms. Speakers: Debbie Russell, Research Fellow from the Sea Mammal Research Unit, University of St. Andrews and Ross McGregor, Senior Ornithologist from UK's Natural Power

Webinar #3, April 2014 was on understanding avian collision rate modeling and what this means in a population context. Speakers: Mark Collier from Bureau Waardenburg in the Netherlands; and Aonghais Cook from the British Trust for Ornithology in the UK.





Today's Webinar #4 – Thursday August 27, 2015 from 3 to 4:30 pm UTC (8 am PT/11 am ET)

Avian Sensitivity Mapping and Wind Energy Projects as presented by:

- Julia Robinson Willmott of Normandean Associates
- Sinead Cummins of BirdWatch Ireland
- Roel May of the Norwegian Institute for Nature Research (NINA)

Speakers will present on tools they have developed to assess the potential vulnerability of birds to wind energy development. Presentations will trend from broad based to fine scale sensitivity mapping.

For additional information visit the WRENHub at:

<http://tethys.pnnl.gov/events/avian-sensitivity-mapping-and-wind-energy>





Webinar #4 Speaker Biographies

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- **Julia Robinson Willmott** is a core member of Normandeau's avian team, working directly with the technology team to design, test, and deploy innovative technology systems for remote monitoring of wildlife. She has over 20 years of experience designing, managing, and conducting ornithological and ecological projects in 23 countries. Julia's utility and wildlife experience includes avian risk assessment and impact studies, literature review, field studies, data analysis and interpretation, transmission line impacts, and guideline documents. She is also skilled in field observation and visual/acoustic identification of birds, avian blood sampling and microscope surveys, avian surveys and data analysis, population monitoring, and ecological risk analysis.
- **Sinead Cummins** has worked for over 12 years initially as a Senior Conservation Officer and since 2012, as Species Policy Officer. Sinéad led on the initial scoping study for the *Bird Sensitivity Mapping Tool for Wind Energy Developments* in the Republic of Ireland in 2010, and retained an active role in the Bird Sensitivity Mapping Tool project development engaging with many stakeholders in the Renewable Energy sector in Ireland over the past 5 years.
- **Roel May** is a Senior Research Scientist at the Norwegian Institute for Nature Research (NINA). His current research interest lies in the interface between science and conservation, and centers on impacts of renewable energy on wildlife and on spatial ecology. He has coauthored 24 peer-reviewed journal articles and over 60 technical reports. He received his Master of Science degree in Forestry/Ecology at the Wageningen University, the Netherlands, in 1996. He received his PhD degree on "Spatial Ecology in Wolverines in Scandinavia" at the Norwegian University of Science and Technology (NTNU) and NINA in 2007. He has worked in the Netherlands, Scotland and Norway.



Some ideas being considered:

- Offshore mitigation techniques (Nov/Dec 2015). e.g., bubble curtains and other approaches.
- Sensors (March/April 2016). e.g. recognition software and other systems.

What would you be interested in learning more about and participating in deeper discussion?



Thank You!

- For more information on WREN including the webinar series, visit the WRENHub at:
 - <http://tethys.pnnl.gov/about-wren>
- For questions, contact:
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