

## 37 Critical indicators for measuring the support for bird protection among visitors in the Dutch Wadden Sea area

Akke Folmer<sup>1</sup>, Sjors Schuurmans<sup>1,2</sup>, Ben Wielenga<sup>1</sup>, <sup>1</sup>NHL Stenden, Netherlands. <sup>2</sup>University Wageningen, Netherlands

### Introduction

*“Onbekend maakt onbemind”* [Unfamiliar makes unloved], is a typical Dutch saying that refers to unfamiliarity with a place, with food or something else, leading to a lack of emotional connection, support and/or care. With this in mind, nine nature organisations in the Netherlands want to increase awareness on the special nature values of World Heritage Site the Wadden Sea area among a broad public, with the overall aim to enlarge support for nature and bird protection. Their campaign is part of a larger multi-faceted project called *“Wij & Wadvogels”* [“We and Wadden birds”], which is running from 2019 to 2026. The project is unique as it does not only focus on physical measurements to improve the natural habitat of birds (restoration and expansion of resting, foraging and breeding places for birds); it also includes the social valuation of nature, with the focus on birds. The project aims to offer new sustainable forms of bird recreation which should result in increasing support for nature and birds (Vogelbescherming, 2018). This aim underlines the importance of gaining more insight into which aspects contribute to a higher support for nature and bird protection most.

In this paper, we investigate indicators which predict support for bird protection among visitors to the Wadden Sea area. These indicators will be part of a monitoring system which monitors the effectiveness of activities of the project from 2021 to 2026. Due to the corona crisis, the actual monitoring could not start yet, as the type of visitors was expected to differ significantly from a ‘normal’ year. Especially the relatively high number of first time visitors was notable. On the other hand, this gave us

more opportunities to investigate differences between visitors.

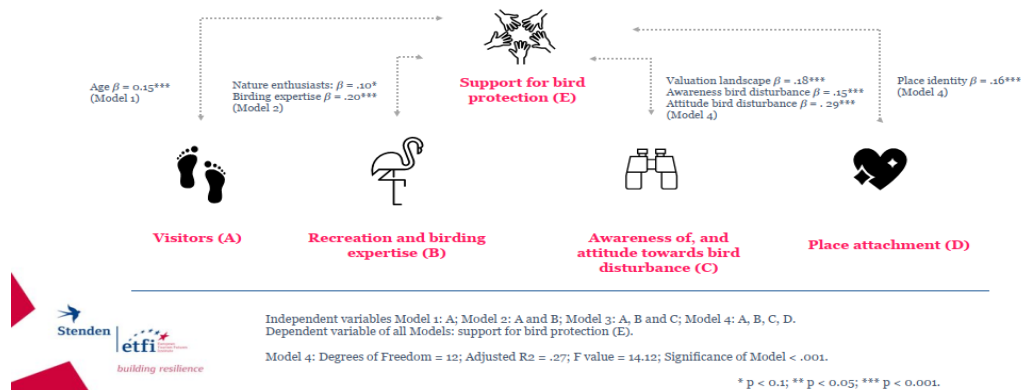
### Study area and data collection

The location of our study is the UNESCO World Heritage Dutch Wadden Sea area, in particular two popular tourist destinations: the harbour of Lauwersoog on the mainland, and the island of Texel. Due to the corona crisis, there were less visitors from abroad, whereas there were more visitors from the West and South of the Netherlands who visited for the first time (e.g. see Folmer, Revier and Cupido, 2016; De Vries et al., 2013). Data was collected by using face to face questionnaires. A total of 421 respondents were gathered, 213 in Lauwersoog, and 208 on Texel.

### Measurement instrument

Based on an extensive literature review, we identified the main concepts that are expected to contribute to support for nature and bird protection. The operationalization of the concepts was based on previous studies on place attachment by Folmer (2013ab), Hammitt and McDonald (1983, 2006), Moore and Graefe (1994), and Budruk et al. (2011), support for nature protection (De Boer & Langers, 2017), and effects of recreational activities on bird disturbance (Van Haaren, Querl, & Vertegaal, 2002). Several specific questions about the project *Wij & Wadvogels* were added as well. The data analysis consisted of factor analysis, scale formation, reliability analyses, transforming nominal variables into bivariate variables, and carrying out two multiple linear regressions, one to predict support for nature protection and one to predict support for bird protection.

## Indicators affecting support for bird protection



### Results

In general, age mattered significantly. Older visitors had visited the Wadden Sea area significantly more often than younger visitors, they had more bird watching expertise, were more involved in nature protection, took birds more into account during their recreational activities, and had a stronger place attachment.

In our Models, we predicted 21% of variance in support for nature protection, and 27% of variance in support for bird protection (See Figure 1). Some differences in strength of the indicators were found. Involvement in nature protection, and the number of previous visits mattered more in predicting support for nature protection, whereas age predicted support for bird protection better. Especially the perceived attitude towards birds by taking birds into account during recreational activities was a much stronger predictor of support for bird protection than nature protection.

### Conclusions

We found that, to increase support for bird protection, it is important to increase expertise (knowledge and experience) on birds, for instance by giving opportunities to watch birds in birdwatching huts; increase awareness on the effects of outdoor recreation on bird disturbance, and give tips on how to take birds into account during recreational activities. These aspects relate significantly to a stronger attachment to the Wadden Sea area, which in turn increase support for bird protection.

#### Management implications

Nature organisations can use the insights for promotion campaigns aimed at increasing support for bird protection. Together with the leisure and tourism industry, nature organisations can develop meaningful and transformative experiences which improve awareness on the special nature values and bird protection in the Wadden Sea area, and which increase support for bird protection.

### References

- Boer, de, T.A., Langers, F.L. (2017). WOT-technical report 102. Wageningen: Wageningen University & Research; Wettelijke Onderzoekstaken Natuur & Milieu. Budruk, M., Wilhelm Stanis S.A., Schneider I.E., and Anderson, D.H. (2011). doi.org/10.1080/08941920.2010.495975. De Vries, S., Buijs, A., Langers, F., Farjon, H., Van Hinsberg, A., and Sijtsma, F.J. (2013) DOI: 10.1016/j.apgeog.2013.09.017. Folmer, A., Revier, H. and Cupido (2016). DOI: 10.2989/RHM.2016.6.1.6.1294. Folmer, A., Haartsen, T., Huigen P.P.P. (2013a). DOI: 10.1080/14724049.2013.864297. Folmer, A., Haartsen, T., & Huigen, P. P. P. (2013b). DOI: 10.1080/10871209.2013.811618. Haaren, van, J., Querl, B., Vertegaal, K. (2002). Rapport RIKZ/2002.02. Den Haag: Rijksinstituut voor Kust en Zee/RIKZ. Hammitt, W.E., Backlund E.A., Bixler, R.D. (2006). doi.org/10.1080/02614360500098100. Hammitt, W.E., McDonald, C.D. (1983). DOI: 10.1093/forests/29.2.262. Moore, R.L., Graefe, A.R. (1994). DOI: 10.1080/01490409409513214. Schreyer, R., Lime, D.W., Williams, D.R. (1984). DOI: 10.1080/00222216.1984.11969571. Vogelbescherming. (2018). Zeist, the Netherlands: Vogelbescherming.