

# Monitoring the attractiveness of an UNESCO World Heritage region: identifying 14 million fans of the international Wadden area

**Nora Mehnen**, Department of Economic Geography, Faculty of Spatial Sciences, University of Groningen, The Netherlands, German, [n.mehnen@rug.nl](mailto:n.mehnen@rug.nl)

**Frans J. Sijtsma**, Department of Economic Geography, Faculty of Spatial Sciences, University of Groningen, The Netherlands, Dutch

## Introduction

Each year many visitors are coming to the Wadden area, an international natural and cultural coastal region, shared by Denmark, Germany and the Netherlands. It forms a shallow body of water with tidal flats and wetlands and stretches from Den Helder in the Netherlands in the southwest, past the North Sea coast of Germany to Esbjerg in Denmark along a total length of roughly 500 km and a total area of about 10.000 km<sup>2</sup>. It is an area that has been intensively shaped by humans but is also one of the most valuable nature areas worldwide. In June 2009 the Dutch and German Wadden Sea was added to the UNESCO World Natural Heritage List, and in 2013 a nomination of the Danish part of the Wadden Sea was submitted. Against this background and by building on conceptual insights from the place attachment and governance literature (Mehnen et al., 2013), this research takes a quantitative and monitoring stance and examines the attractiveness of this area through the use of an online Public Participation Geographic Information System (PPGIS) tool known as the Hotspotmonitor (HSM).

Vanclay (2012) argues that unique landscapes attract day-trippers and holidaymakers and that these people are also likely to develop a strong attachment to such places. Vanclay (2012, p. 149) highlights that “when landscapes and/or regions are significant biodiversity reserves, World Heritage sites or have significant cultural heritage values, or are highly socially valued for some other characteristic, many individuals may develop strong custodianship or stewardship notions over them, albeit vicarious, and feel they are a legitimate stakeholder in decision making about a specific location or landscape, even if they don’t live there and sometimes even if they have never actually been there.”

With Vanclay as our point of departure, we aim to answer two main questions in our research:

- 1.) How many people are attached to the Wadden area and where are they coming from?
- 2.) What is the character of their attachment?

## Methodology

The Hotspotmonitor (<http://www.hotspotmonitor.eu>) is a web-based GIS program, which builds on the Google maps tool. It is connected to the SoftGIS approach, the ‘value mapping’ technique and to the trend to integrate the potential of GIS into Cost-Benefit-Analysis (Sijtsma et al., 2012, 2013; De Vries et al., 2013). Its function is to gather ‘hotspots of landscape experience’, places with high attractiveness in general, and attractiveness for specific experiences (peace and quiet, cycling, bird watching, etc.); the Hotspotmonitor was designed to measure preferences for nature or water and by

doing so limits the possible answers of respondents. The central question is: *Which places do you find very attractive, valuable or important? And why?* Therefore, we operationalized place attachment. We understand and define in this case place attachment simply as a measure or indicator related to that central question. The respondent has marked a place, which is attractive, valuable or important for him. Hence, he is in some way attached to the place.

The current HSM version 2.0 is a first international version, and includes local, regional, national and recently identified worldwide hotspots. 7656 respondents participated in the trilateral survey initiated by the Dutch WaLTER project and the Dutch Waddenacademie, of which 1316 were from the Netherlands, 5275 from Germany, and 1065 from Denmark. The survey was set up to be representative for the three national populations, therefore respondents were asked from across all three countries. A balance was sought between a minimum number of respondents per country, a reflection of the size of the overall population in all three countries, and the available budget. The respondents were equally spread across the country: about 1/12 from every one of the 12 Dutch provinces, 1/16 from every one of the 16 German Bundesländer, and 1/5 from every one of the 5 Danish regions. Of the participants 49.3 % were women and 50.7 % were men from all age groups (>15 years old).

## Results

### 14 Million Wadden fans

To answer the first research question we used respondents' home locations in order to analyse which areas within the three involved countries show the strongest appreciation for the Wadden (see Figure 1). Based on survey responses, we estimated the total number of Dutch, German and Danish people who find the Wadden an attractive, valuable or important place on a national scale. The overall total adds up to 14 million 'fans' for the three countries altogether. From a governance point of view, and the theme of the congress it is interesting to compare this number to the number of local inhabitants of the regions. Since the number of inhabitants is around 1 million, there are 14 times more Wadden fans than Wadden inhabitants. To achieve balanced governance involving all stakeholders (Mehnen et al., 2013), it therefore seems a worthwhile aim to further connect these 'fans' to the area (Bijker et al., (in prep.)).

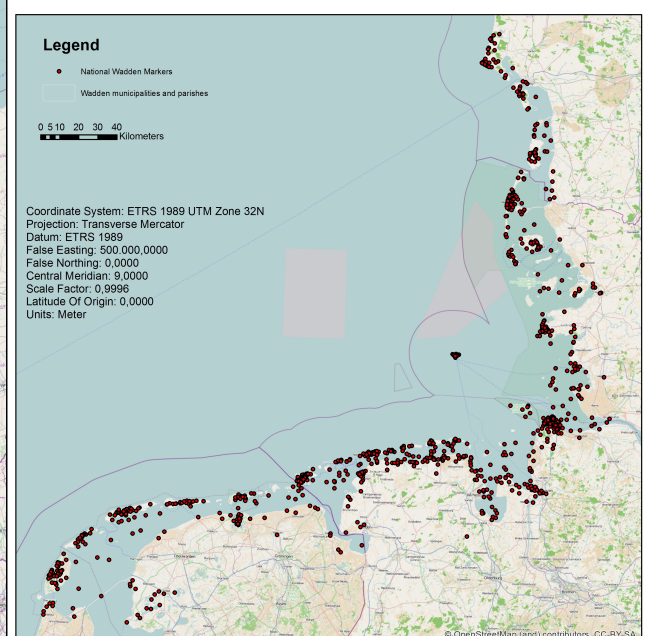
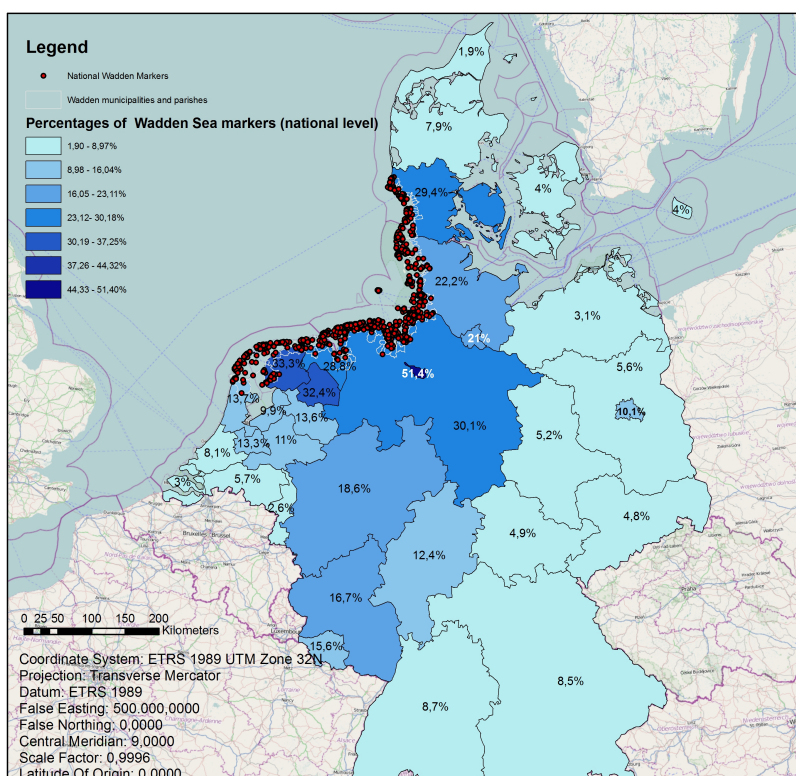


Figure 1: Percentage of Wadden Fans by Bundesland (DE), Region (DK) and Provincie (NL) and national Wadden markers

### *The attractiveness of the Wadden – nature, water and more*

To answer the second research question, respondents had to answer several questions on the character of the attractiveness. One female respondent from Bavaria marked a place on Sylt and stated “I love the rough landscape, the sea, the irrepressible nature and that it is so different from home” (ID 1086). She found the place very attractive (10). Her activities range from sunbathing and swimming to cycling, walking and nature watching. The paper shows systematic results on these aspects. In general, the Wadden Sea region is highly valued and appreciated in all three countries and the Wadden islands especially are attractive places. 2/3 of the markers are placed in the Wadden municipalities and parishes, hence either on the Wadden islands or the mainland municipalities; 1/3 are sea markers. Sijtsma et al. (2012, p. 147) have detected a spatial mismatch between the Dutch demarcation of the World Heritage site and areas that have proved to be attractive to tourists, because the UNESCO World Heritage site includes mainly the sea area and only a few parts of the Wadden islands; the paper also addresses this demarcation issue and will elaborate what type of areas are of specific interest.

### **Conclusion**

The present paper has quantified the attachment of individuals to the World Heritage site known as the Wadden area. Our results have shown that the Wadden Sea region is highly valued and appreciated in all three countries – and to date, there are 14 million Wadden ‘fans’. The paper has also presented the character of their appreciation; this method can be applied elsewhere to allow for comparative research across sites and indeed, the software is available for that purpose. From a governance perspective we have demonstrated that a potentially very large number of actors need to be considered when decisions are being made in relation to landscapes which are appreciated and protected (Vanclay, 2012; Mehnen, et. al., 2013).

### *References*

Bijker, R.A., Mehnen, N., Sijtsma, F.J. & Daams, M.N. (in prep). Managing Urban Wellbeing in Rural Areas: The Potential Role of Online Communities to Improve the Financing and Governance of Highly Valued Nature Areas. Land.

De Vries, S., Buijs, A., Langers, F., Farjon, H., van Hinsberg, A. & Sijtsma F.J. (2013). Measuring the attractiveness of Dutch landscapes: identifying national hotspots using Google Maps. *Applied Geography*. Volume 45, December 2013, 220-229. DOI: <http://dx.doi.org/10.1016/j.apgeog.2013.09.017>

Mehnen, N., Mose, I. & Strijker, D. (2013). Governance and Sense of Place: Half a Century of a German Nature Park. *Env. Pol. Gov.*, 23: 46–62. DOI: <http://dx.doi.org/10.1002/eet.1592>

Sijtsma, F.J., Farjon, H., van Tol, S., van Hinsberg, A., van Kampen, P. & Buijs, A.E.(2013). Evaluation of landscape changes - Enriching the economist's toolbox with the Hotspotindex. In: W. Heijman, & C. M. J. v. d. Heide (Eds.), *The Economic Value of Landscapes*. Chapter 8, pp 136-164. London: Routledge.

Sijtsma, F.J., Daams, M.N., Farjon, H. & Buijs, A.E. (2012). Deep feelings around a shallow coast. A spatial analysis of tourism jobs and the attractivity of nature in the Dutch Waddenarea. *Ocean & Coastal Management*, Volume 68, pp. 138-148. DOI: <http://dx.doi.org/10.1016/j.ocecoaman.2012.05.018>

Vanclay, F. (2012). The potential application of social impact assessment in integrated coastal zone management, *Ocean & Coastal Management*, Volume 68, November 2012, Pages 149-156, DOI: <http://dx.doi.org/10.1016/j.ocecoaman.2012.05.016>.