



Economic valuation of birding events:

the example of crane tourism at *Vorpommersche Boddenlandschaft* National Park, Germany

Agenda

- I. Nature-based tourism: Birding
- II. Cranes at *Vorpommersche Boddenlandschaft* National Park
- III. Methodology
- IV. Findings
- V. Take away



Economic valuation of birding events: the example of crane tourism at *Vorpommersche Boddenlandschaft* National Park, Germany





Have binoculars, will travel

Bird-watchers flock to nature preserves around nation

By PAULINE ARRILLAGA
Associated Press Writer

LAGUNA ATASCOSA NATIONAL WILDLIFE REFUGE, Texas — Binoculars dangling from his neck and a spotting scope propped heavily on his shoulder, Tom Bormann takes a water break before embarking on another forest-lined trail.

Red-faced and sweaty, Bormann guzzles mineral water as he flips open a worn field guide and pulls out an index card, proudly displaying the eight new species of birds he's spotted while in the Rio Grande Valley.

"You can get more birds in the state of Texas than almost any other state. It's a top 10 spot on anybody's list," says Bormann, a St. Louis, Mo., insurance salesman on his second bird-watching trip to South Texas.

Bormann is proof: Birding is booming. "It's an addiction. It is considered the fastest growing hobby in North America," said Pincell, one of the creators of the Rio Grande Valley Birding Festival held recently.

A 1992 report by the Department of Interior found that 63 million Americans

expressed an interest in birds, and 30 million people travel expressly for wildlife viewing.

The American Birding Association in Colorado Springs, Colo., estimates bird-watchers spend \$18 billion annually on travel and equipment.

"It's a really good way for people to commune with the out-of-doors," said Greg Butcher, executive director of the organization, which has grown from 6,000 members to 16,000 in five years.

"A lot of people get stuck inside with office jobs and indoor tasks, and they're looking for a good excuse to get outside," Butcher said.

About 2,000 birders from 41 states and Canada have flocked to the Rio Grande Valley

species.

"A lot of these birds that are rare in other parts of the United States you can see just walking around neighborhoods here," said Nancy Millar, a Harlingen Chamber of Commerce official who started the festival last year.

Texas is the No. 1 North American destination for birders, according to the Texas Parks and Wildlife Department. More than 100,000 people travel annually to the Valley's three primary nature preserves.

The region's popularity is due to the 465 different species of birds found here, at least 34 of which are rare.



www.amazon.com



Photo: www.greeceturkeytours.com/wp-content

I. Nature-based tourism: Birding

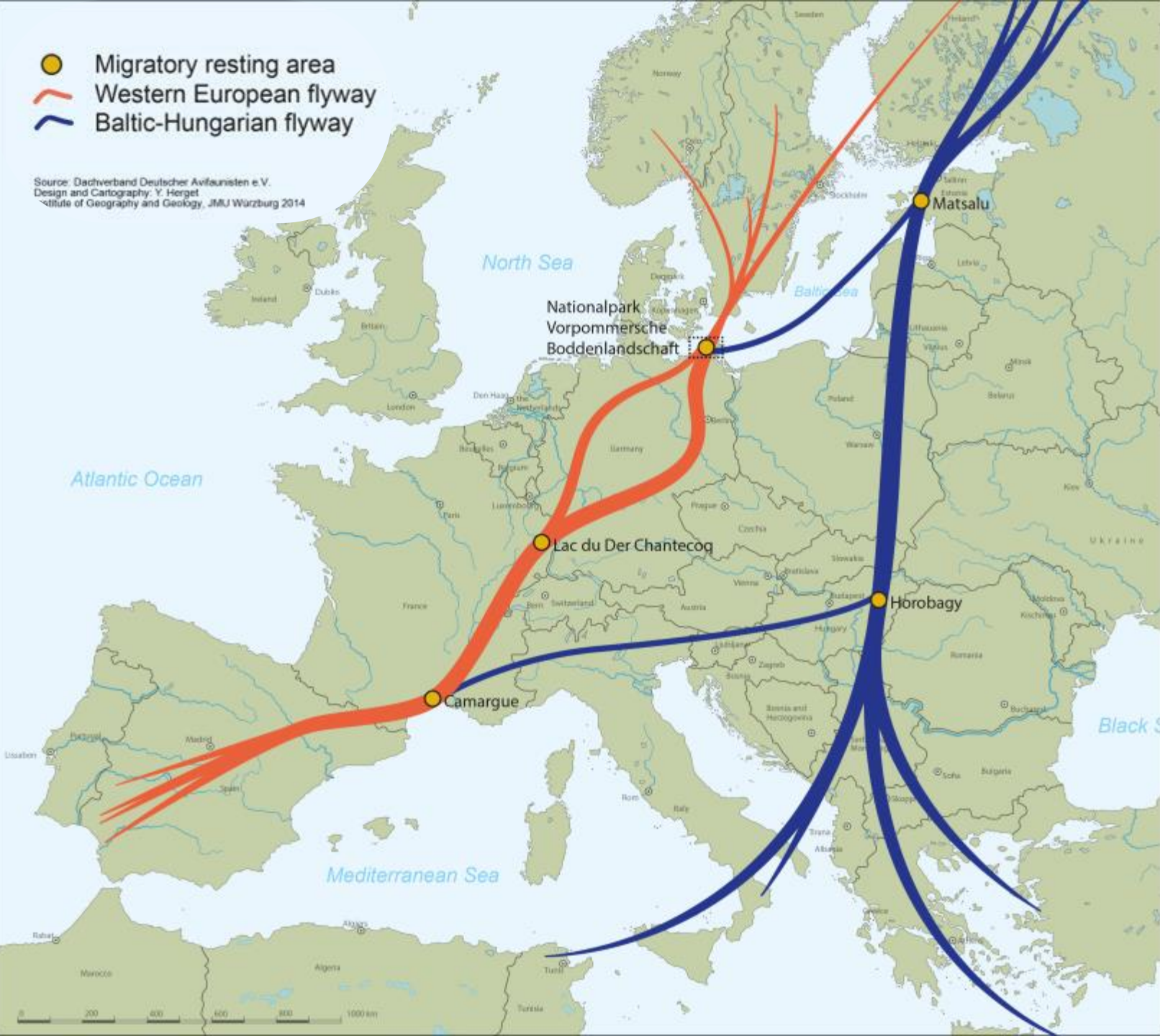
- 46.7 Mio. American birders – 17.8 Mio. took a trip
(US FISH AND WILDLIFE SERVICE 2011)
- ≈ 200 Birding Festivals in North America (LAWTON 2009)
- 32 Billion US-\$ turn-over a year through birding
(PULLIS LA ROUCHE 2006)
- Point Pelee National Park in Canada (HVENEGAARD / BUTLER 1989)
 - Total Economic Impact: **6.3 Mio. US-\$**
- Central Nebraska – Plate River (EDWARDS / THOMPSON 2009)
 - Spring crane migration attracts 40.000 visitors
 - Total Economic Impact: **2.08 Mio US-\$** in 2009

II. Cranes at *Vorpommersche Boddenlandschaft* National Park

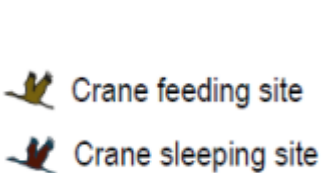
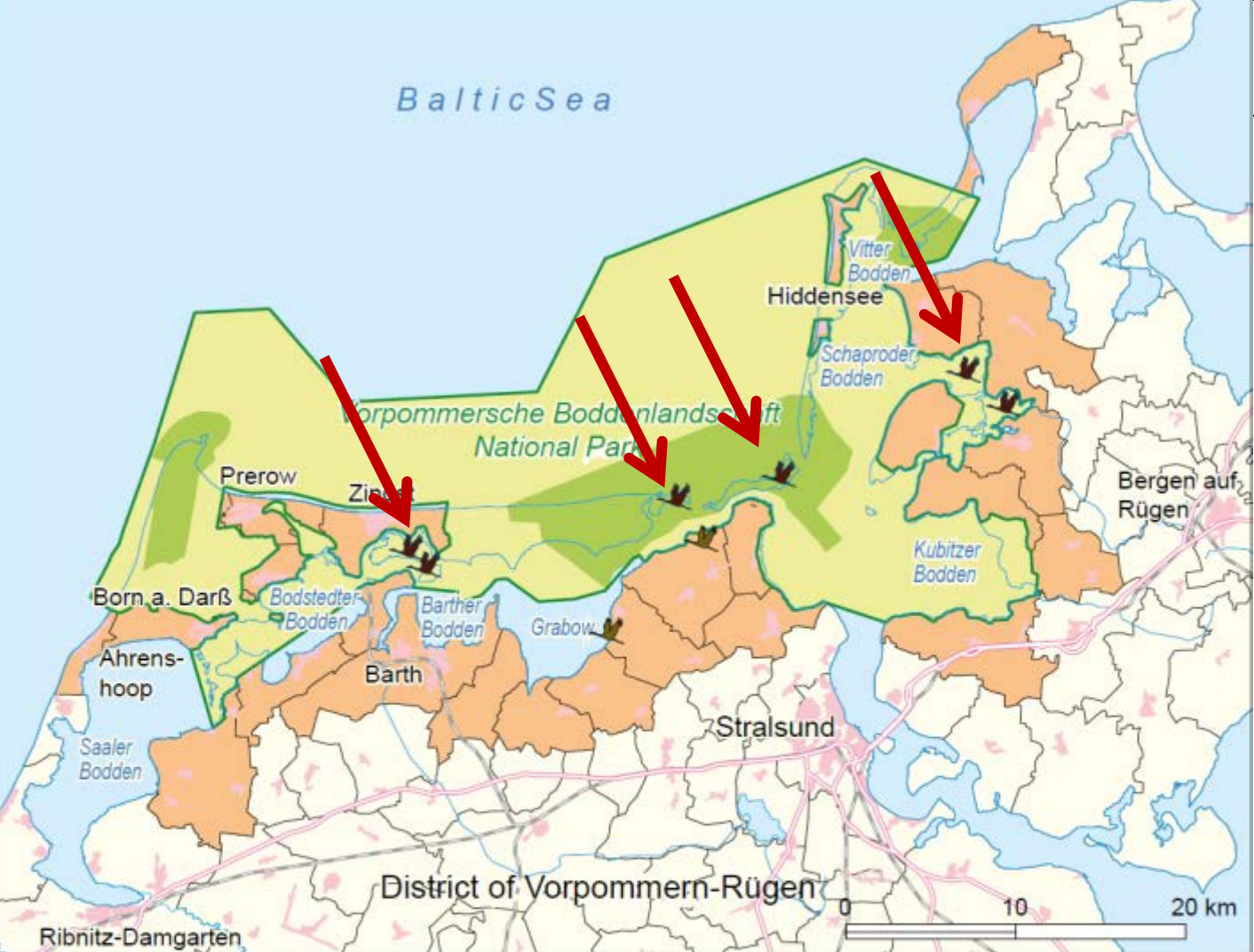


-  Migratory resting area
-  Western European flyway
-  Baltic-Hungarian flyway

Source: Dachverband Deutscher Avifaunisten e.V.
Design and Cartography: Y. Herget
Institute of Geography and Geology, JMU Würzburg 2014





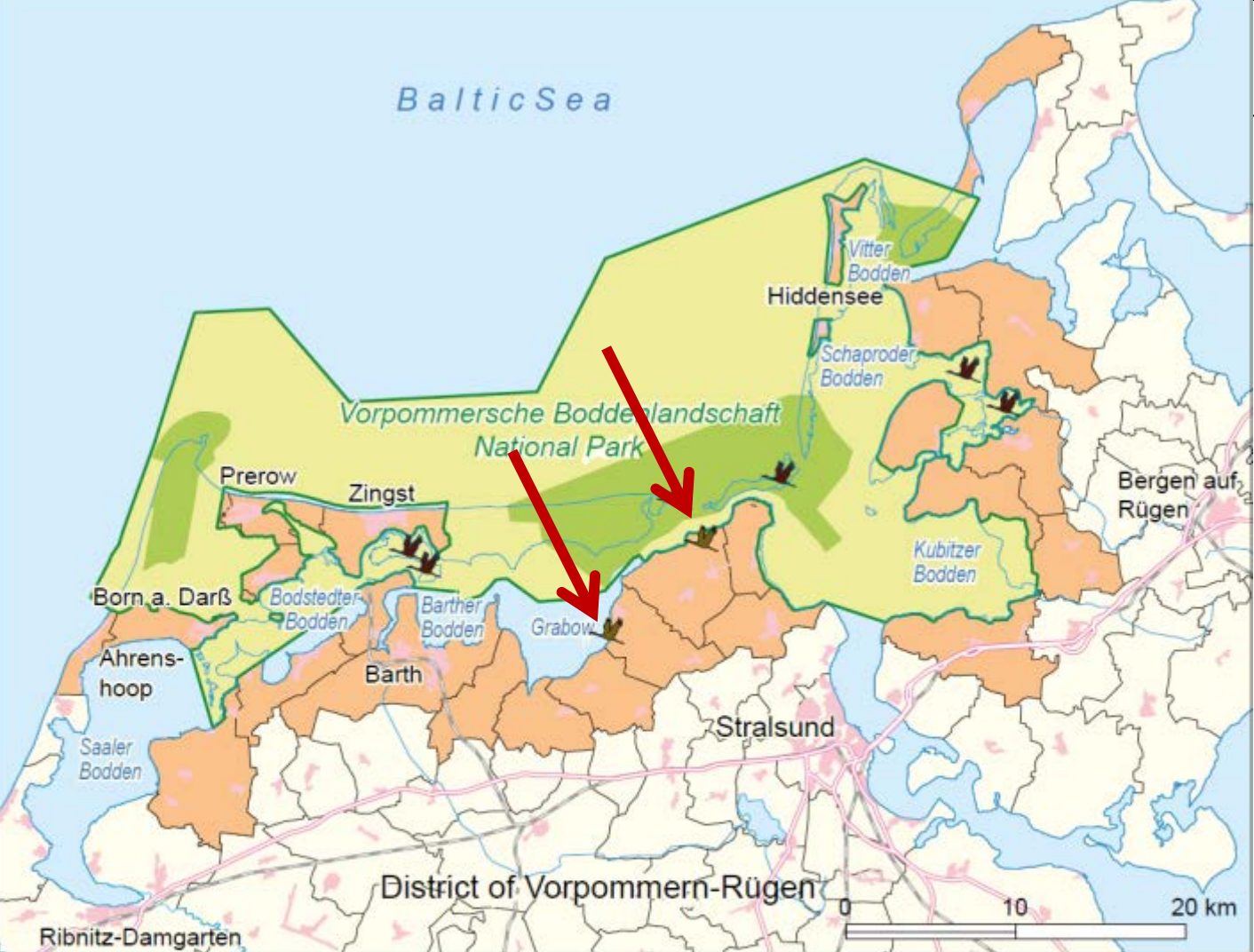


- National Park boundary
- Buffer zone
- Core zone
- Communities of study area
- Municipal boundary
- Railroad
- Federal highway
- Area of settlement
- Area of water/coast



Sources: Landesamt für Umwelt, Naturschutz und Geologie M-V 2012; GfK Macon
Design and Cartography: Y. Herget
Institute of Geography and Geology, JMU Würzburg 2014





- National Park boundary
- Buffer zone
- Core zone
- Communities of study area
- Municipal boundary
- Railroad
- Federal highway
- Area of settlement
- Area of water/coast
- Crane feeding site
- Crane sleeping site



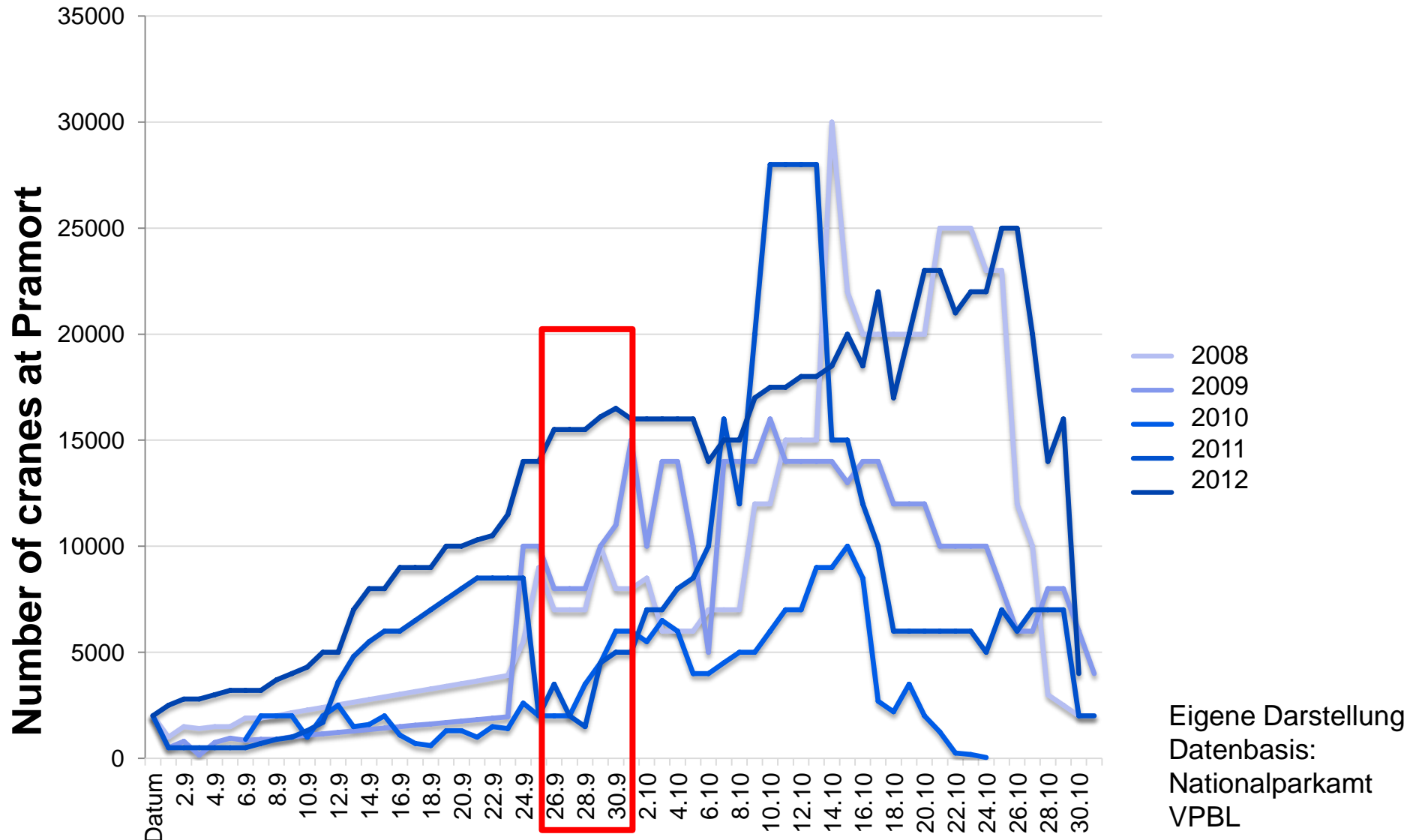
Sources: Landesamt für Umwelt, Naturschutz und Geologie M-V 2012; GfK Macon
Design and Cartography: Y. Herget
Institute of Geography and Geology, JMU Würzburg 2014

III. Methodology

- Study is imbedded in holistic study about the economic impact of *Vorpommersche Boddenlandschaft* National Park (KRAUS 2015)
- Methodology arranged in parallel to studies about protected areas by JOB et al. (2009)

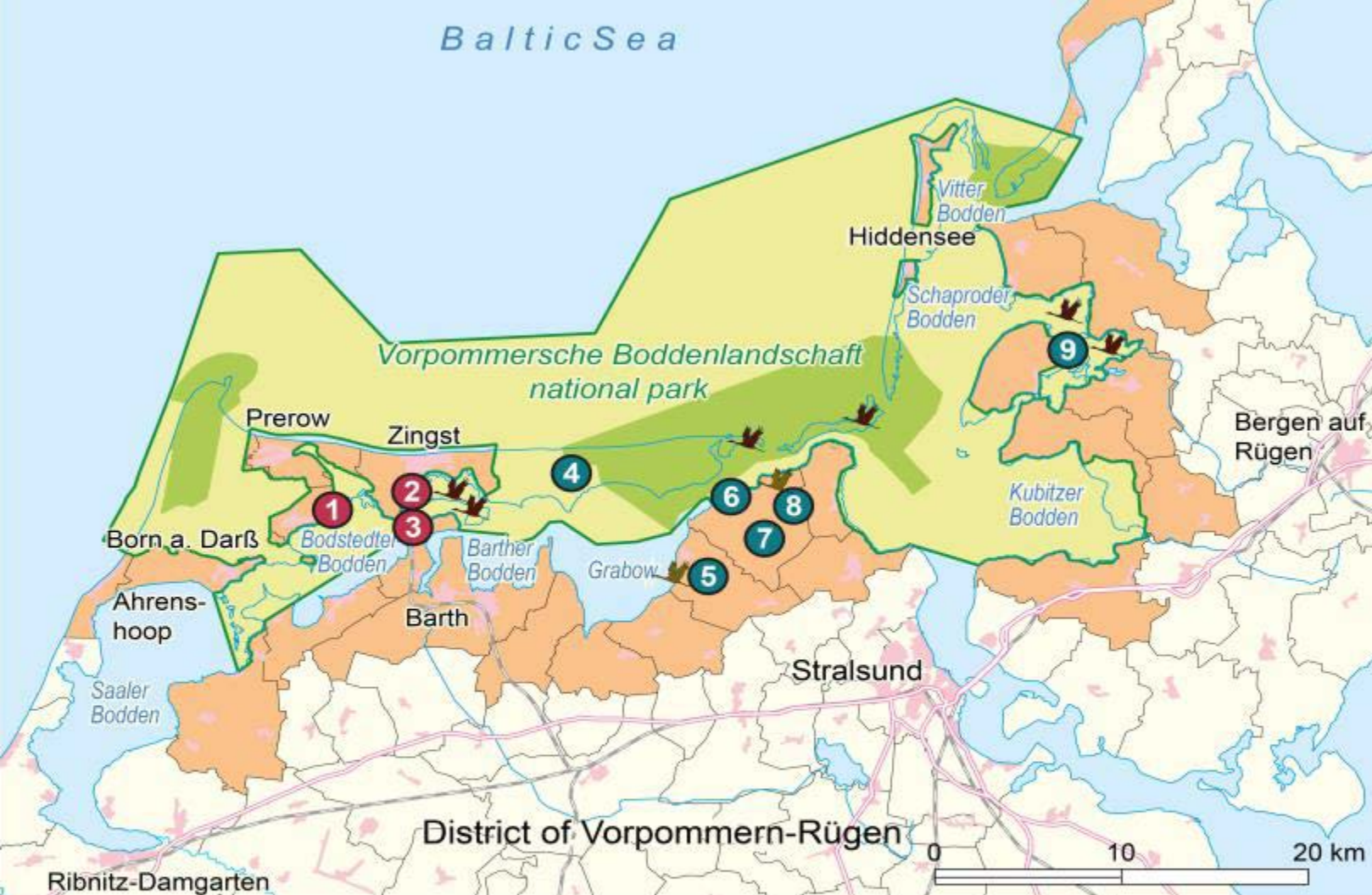
- **Crane season (September and October 2013)**
 - 3 survey days
 - 9 survey sites
- 292 interviews

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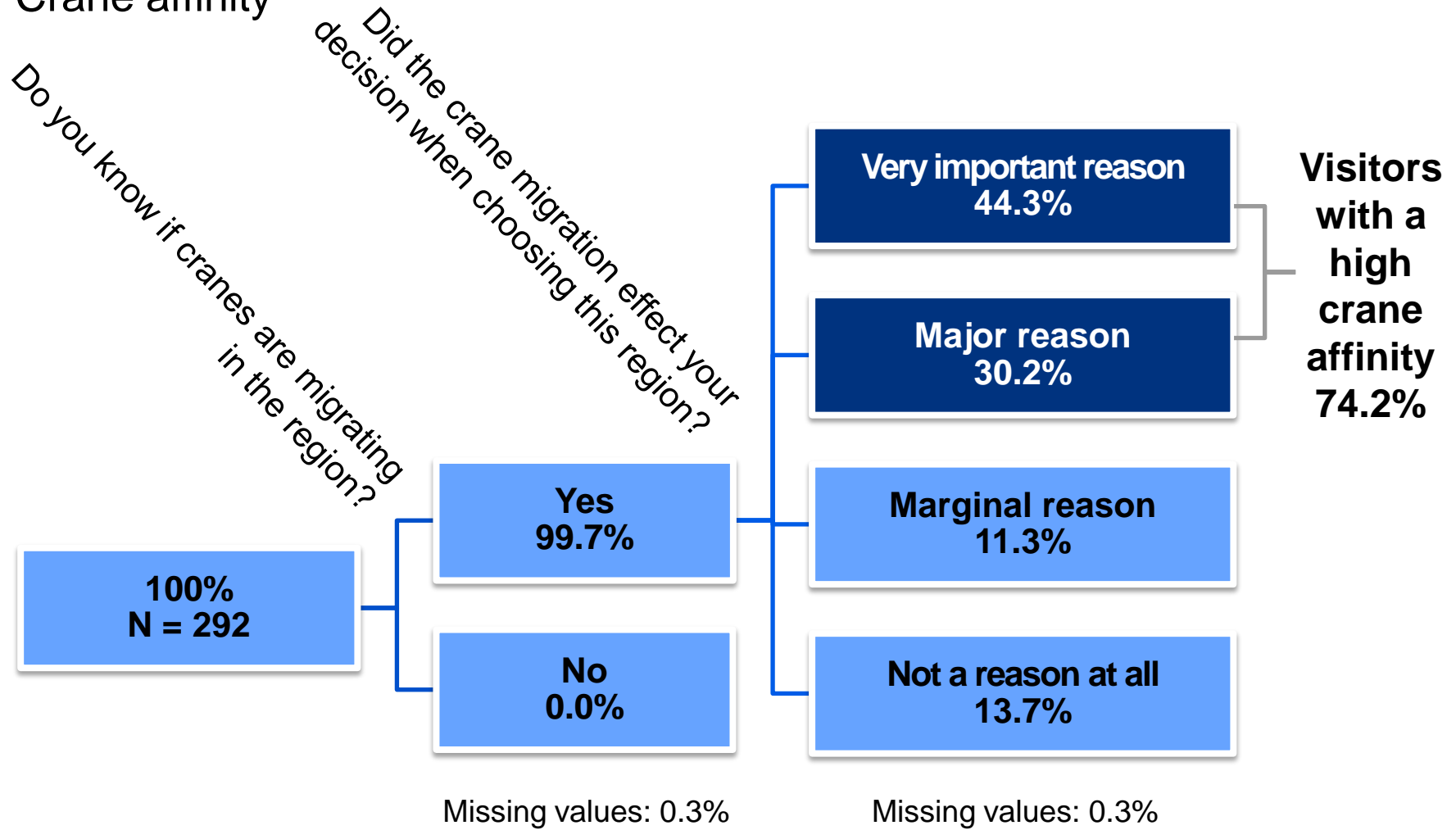


- | | | | | | |
|--|-------------------------------|--|---------------------------|--|---------------------|
| | Daytime survey site | | National Park boundary | | Municipal boundary |
| | Morning / evening survey site | | Buffer zone | | Railroad |
| | Crane feeding site | | Core zone | | Federal highway |
| | Crane sleeping site | | Communities of study area | | Area of settlement |
| | | | | | Area of water/coast |



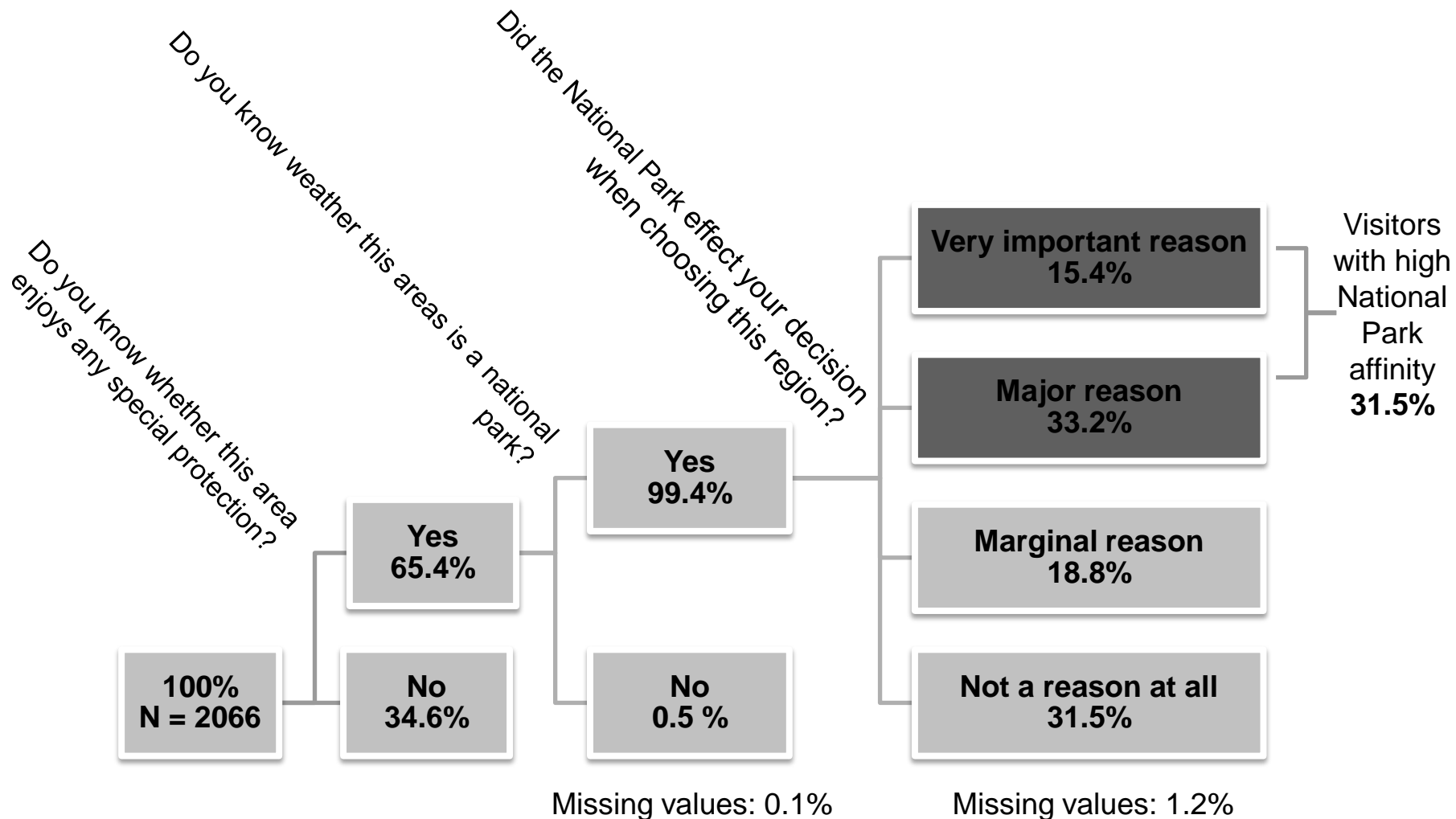
IV. Findings

Crane affinity



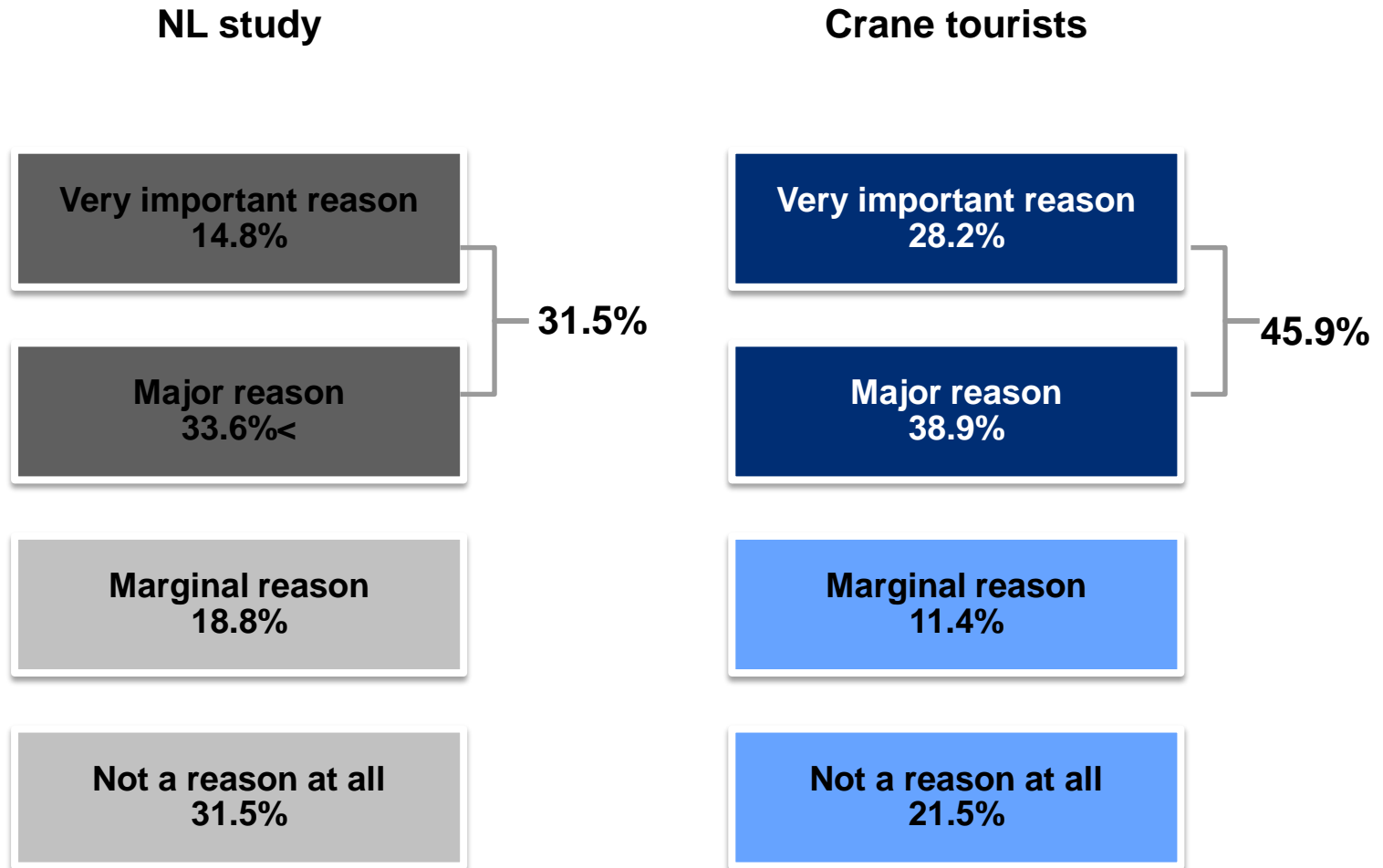
IV. Findings

National park affinity



IV. Findings

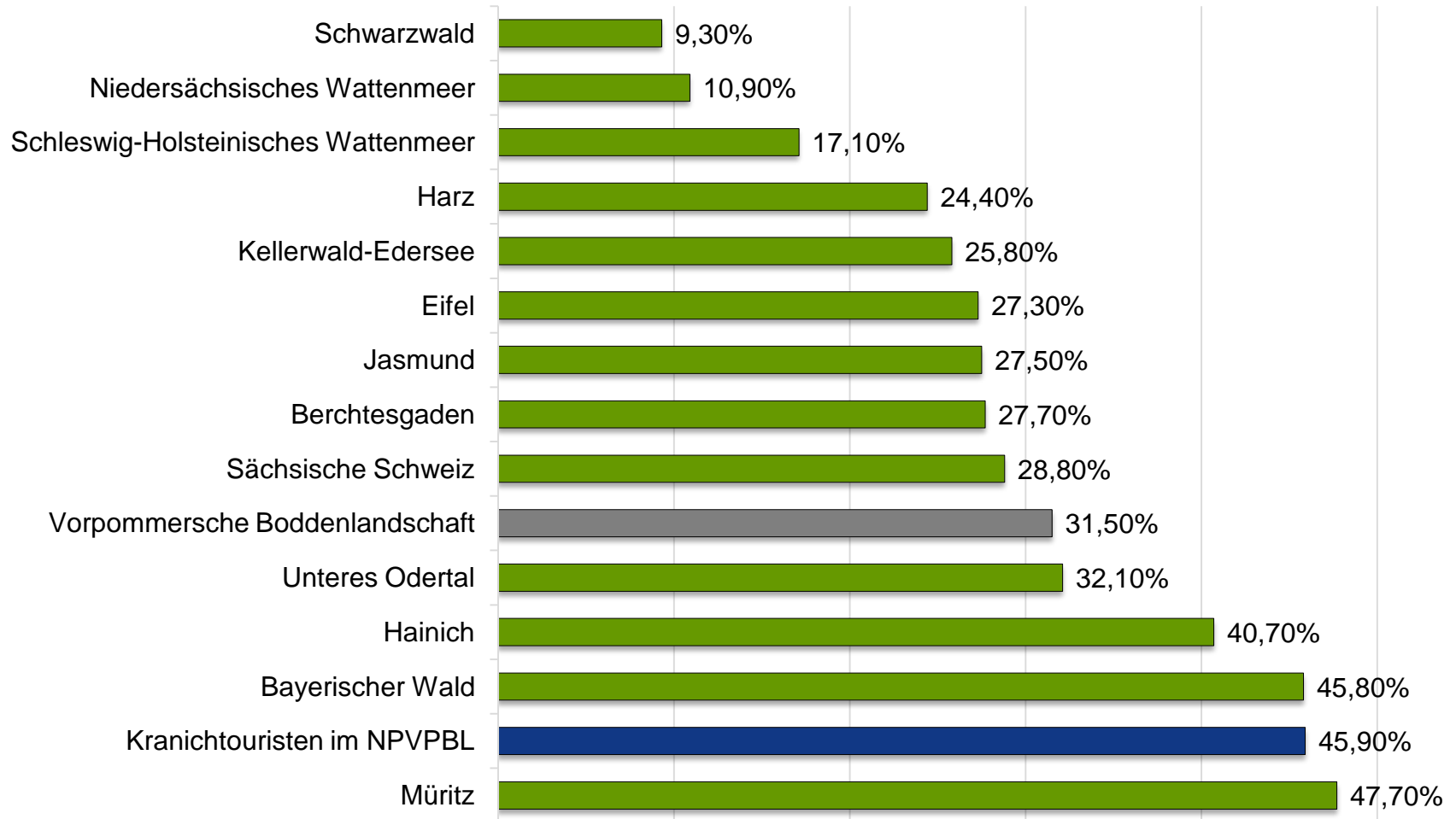
National park affinity



($p < 0.001$, Chi-Quadrat-Test)

IV. Findings

Anteil der Nationalparktouristen im engeren Sinn



(JOB et al. 2016)

IV. Findings

Demographic characteristics

The “typical” crane tourist
at VPBL NP:

- ≈ 58 years old
- 43,6% are retired
- 56.4% have a university degree

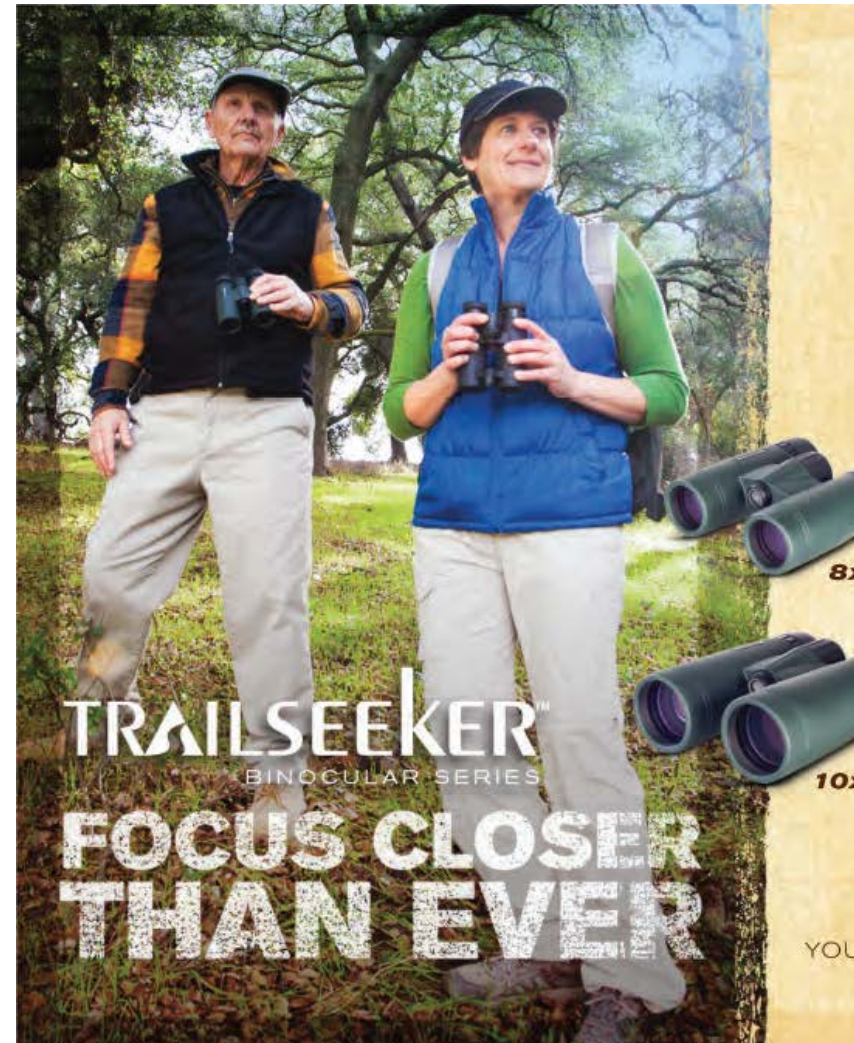


Photo: Celestron in ABA-Birding 2013

		NLP-Touristen (n=2 066)	davon Kranichtou- risten i.e.S. (n=218)	p
Alter		46,4 Jahre	58,1 Jahre	<0,000 ^{a)}
Geschlecht	männlich	49,1 %	48,9 %	0,93 ^{b)}
Ausbildung	kein Schulabschluss	0,6 %	0,0 %	0,42 ^{b)}
	Haupt-/Volksschulabschluss	7,5 %	10,6 %	
	Mittlere Reife	28,6 %	28,4 %	
	Abitur/ Fachhochschulreife	63,3 %	61,0 %	
Beruf	selbständig	14,5 %	8,7 %	<0,000 ^{b)}
	Beamter/Angestellter	46,2 %	39,9 %	
	Arbeiter/Facharbeiter	7,2 %	5,0 %	
	Rentner/Pensionär	26,3 %	43,6 %	
	Sonstiges	5,7 %	2,8 %	
Einkommen	< 2 000 €	13,3 %	14,7 %	0,23 ^{c)}
	2 000 € bis < 3 000 €	22,0 %	25,3 %	
	3 000 € bis < 4 000 €	20,2 %	18,9 %	
	4 000 € bis < 5 000 €	12,4 %	10,4 %	
	> 5 000 €	12,4 %	8,2 %	
	keine Angabe	19,7 %	22,5 %	
Gruppengröße		2,7	2,5	0,18 ^{a)}
Anreisezeit [Min]		257	263	0,45 ^{a)}
Aufenthaltsdauer (nur ÜG)		8,3	7,6	0,17 ^{a)}

a) t-test; b) Chi-Quadrat-Test; c) Mann-Whitney U-test

IV. Findings

Travel pattern

Overnight crane tourists

- 88,5%
- Stay 7,6 nights
- Visit since 3,45 years
- 18,7% visited for 10th time (or more)

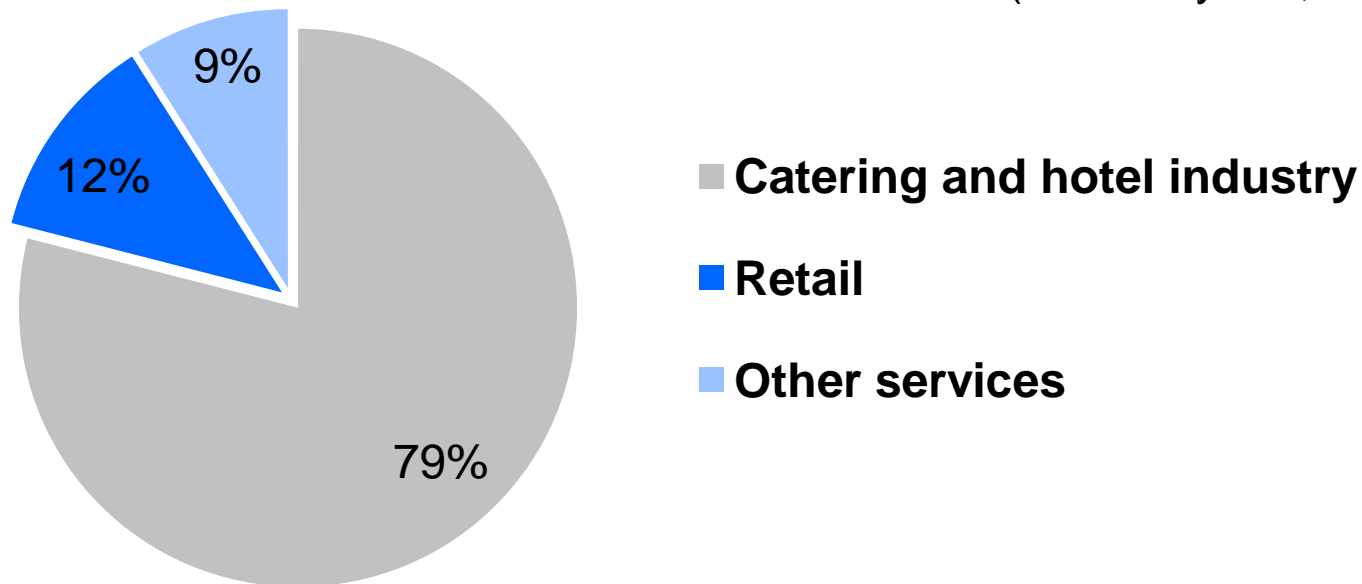
Crane tourists on a **daytrip**

- 11,5%
- Visit 2.9 times a year

IV. Findings

Trip expenditures

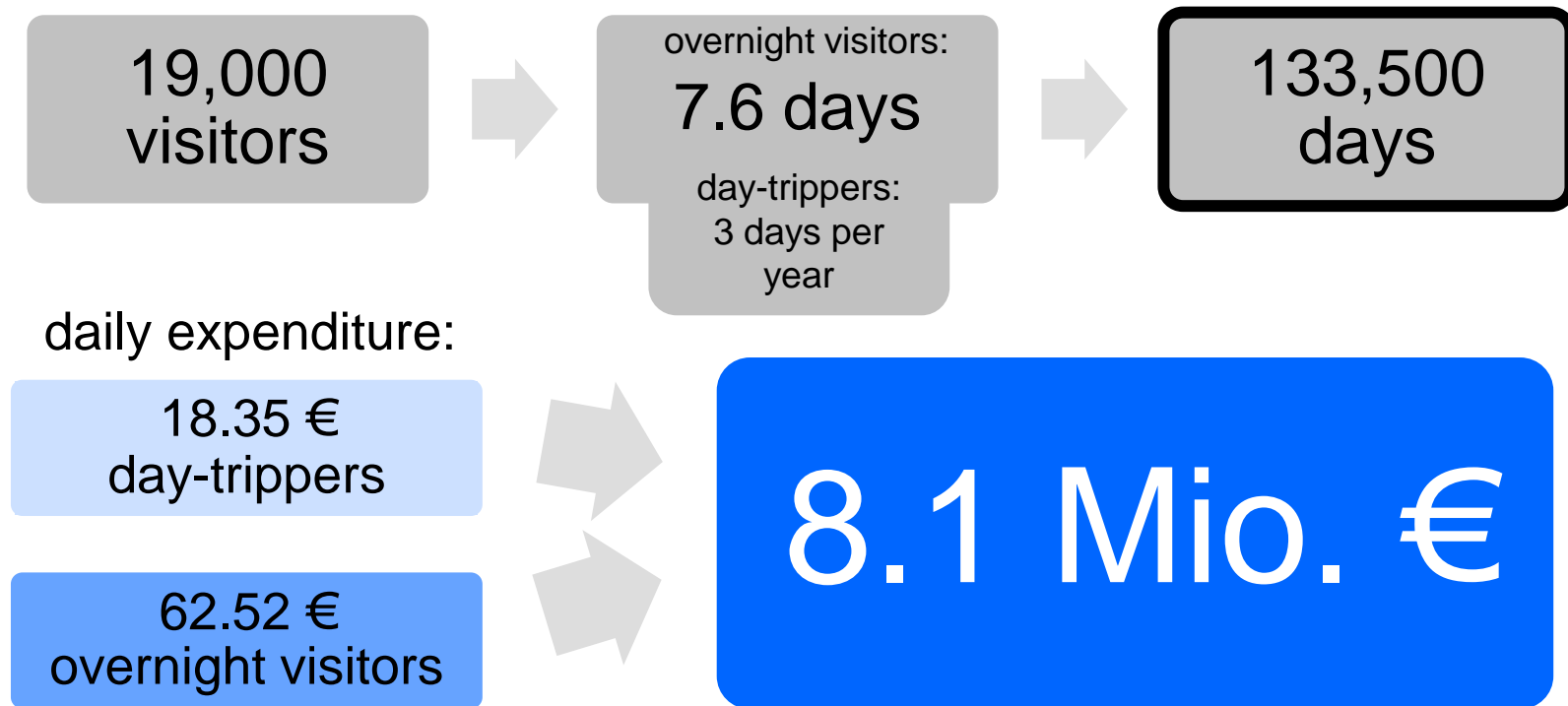
- Crane tourists on a day trip spend 18.35 € (NP-study: 18,30€)
- Overnight crane tourists spend **62.50 €** per person per night
(NP-study: 68,70€)



IV. Findings

Economic value of crane tourism

Gross tourist spending:



(Visitors with high crane affinity multiplied with daily expenditure and duration of stay)

Tab. 3: Gesamtschau der regionalökonomischen Effekte durch Kranichtouristen.

Overview of effects on the regional economy caused by crane tourists.

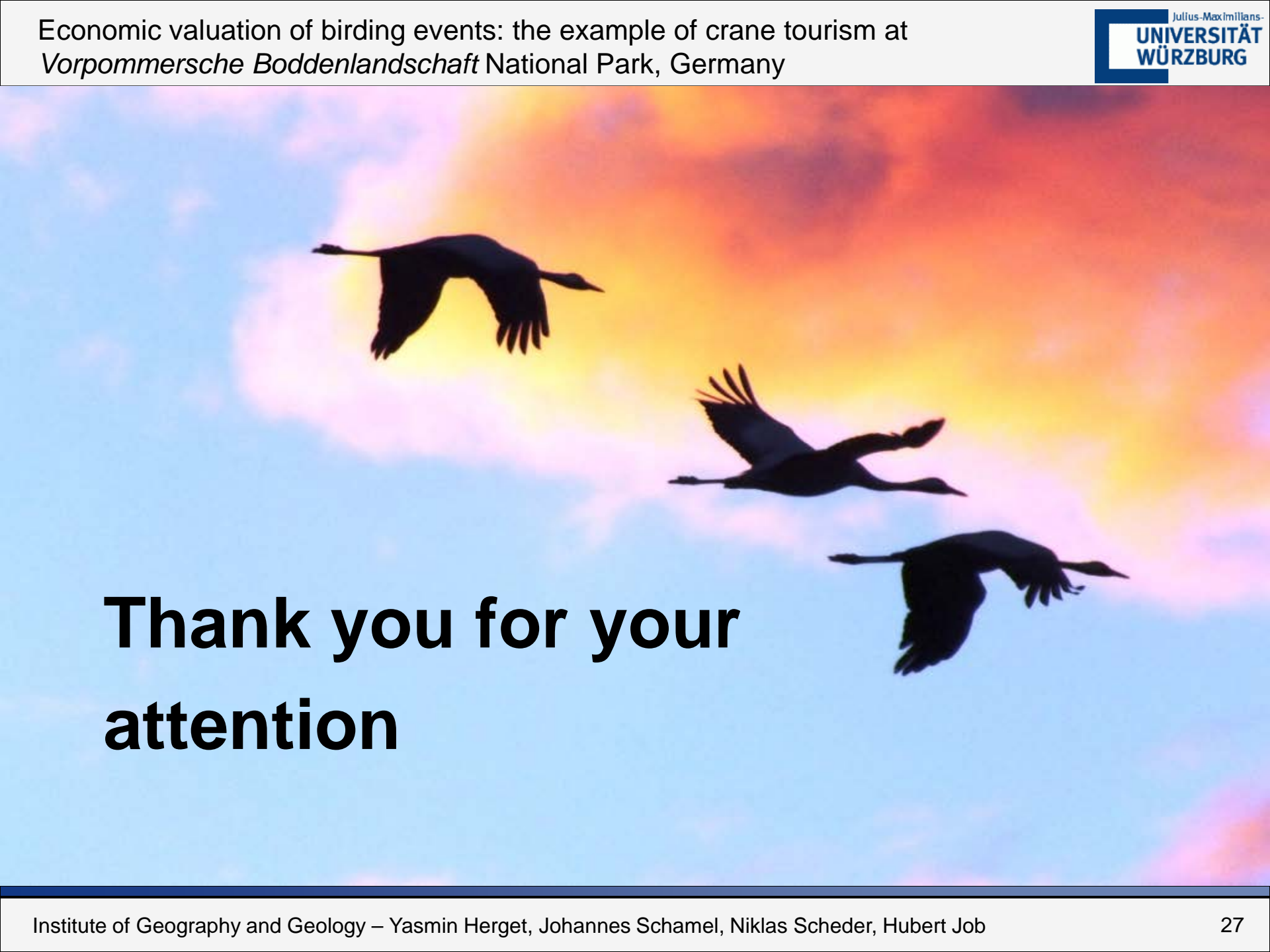
	NLP-Besucher insgesamt	davon Kranichtouristen
Besuchstage [Tsd.]	4 800	133
Ø Tagesausgaben pro Kopf [€]	61,60	60,45
Bruttoumsatz [Mio. €] (Besuchstage * Tagesausgaben)	290,0	8,1
Nettoumsatz [Mio. €] (Bruttoumsatz - Mwst.)	263,9	7,4
Vorleistungen [Mio. €] (Nettoumsatz * [1-Wertschöpfungsquote])	162,2	4,3
Direktes regionales Einkommen (1. Umsatzstufe) [Mio. €] (Nettoumsatz * Wertschöpfungsquote 1)	101,7	3,1
Indirektes regionales Einkommen (2. Umsatzstufe) [Mio. €] (Vorleistungen * Wertschöpfungsquote 2)	48,7	1,3
regionales Einkommen Gesamt [Mio. €] (EK1 + EK2)	150,4 ≙ 100 %	4,4 ≙ ca. 3 %
Einkommensäquivalent (EK Gesamt/ PEK pro Kopf)	9 582 Personen	280 Personen

VI. Take away

Birders at *Vorpommersche Boddenlandschaft* National Park...

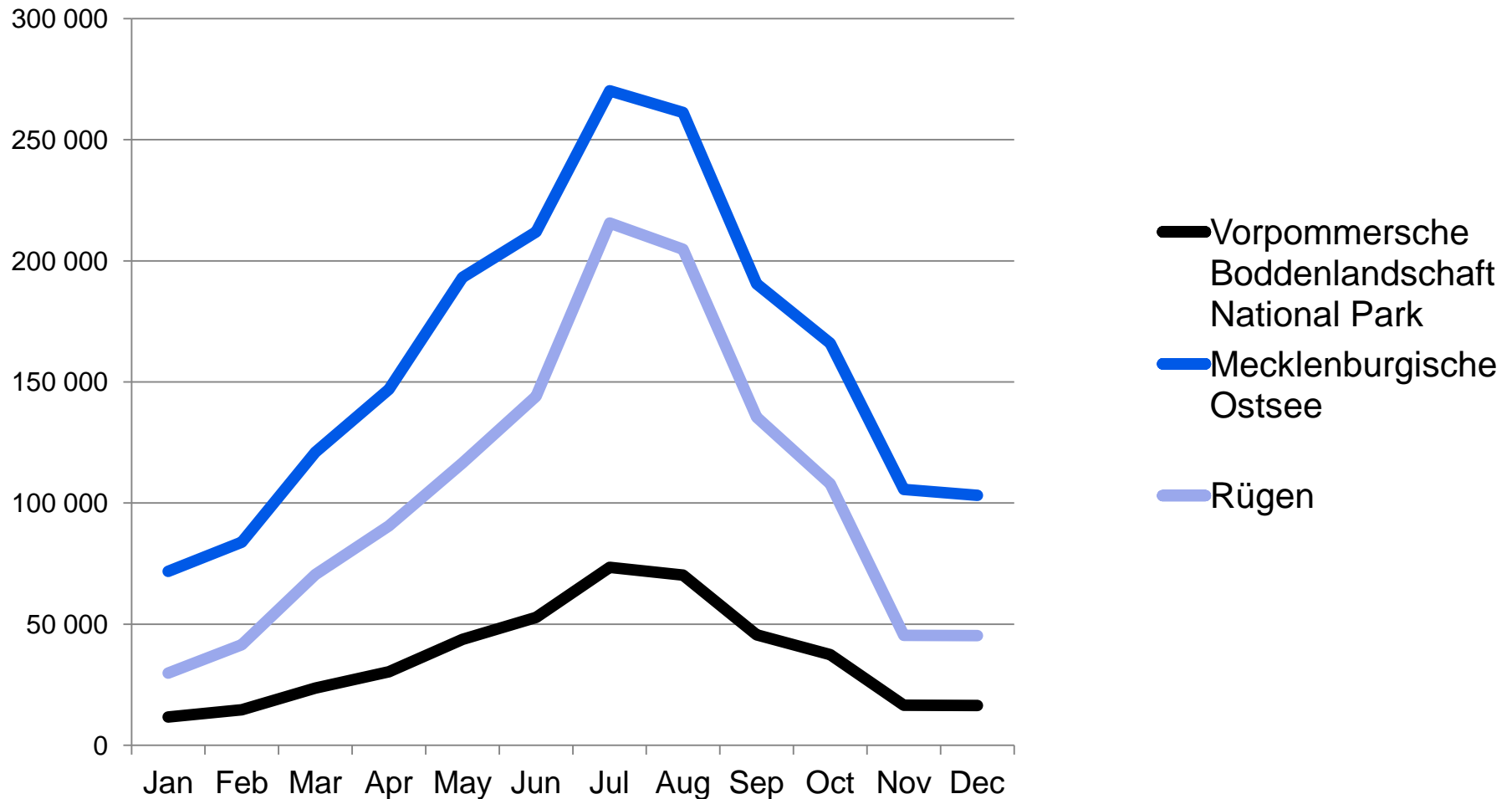
- are visitors with high national park affinity
- older than average and highly educated
- spend 8.1 million € (gross)
 - Employment effect: 280 persons



The background of the slide is a photograph of three cranes in flight against a vibrant sunset sky. The sky transitions from a deep blue on the left to a bright yellow and orange in the center, with soft, wispy clouds. The cranes are silhouetted against the bright light, showing their long necks and large, spread wings. They are flying from left to right across the frame.

**Thank you for your
attention**

Visitors in National Park region



IV. Findings

Number of visitors

External information:

- 11.175 visitors at Crane Information Center “Groß Mohrdorf” (CIC) during crane season

Information from survey:

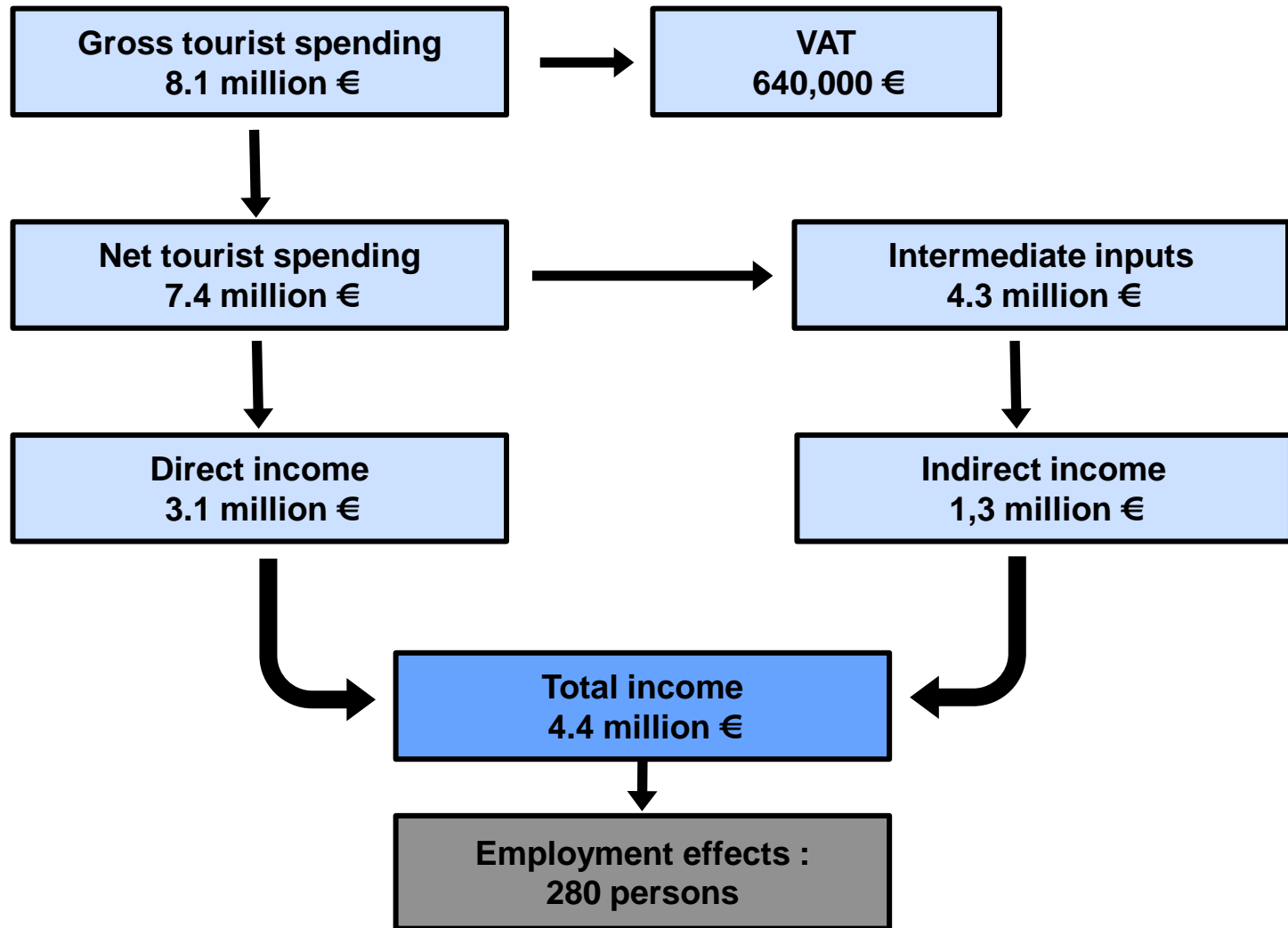
- 89.1 % of CIC-visitors are with high crane affinity
- 52.8 % of survey partners with high crane affinity visited CIC

Estimation of number of visitors:

- **19.000 visitors in Vorpommersche Boddenlandschaft with high crane affinity**

IV. Findings

Economic value of crane tourism



Visitors in National Park region

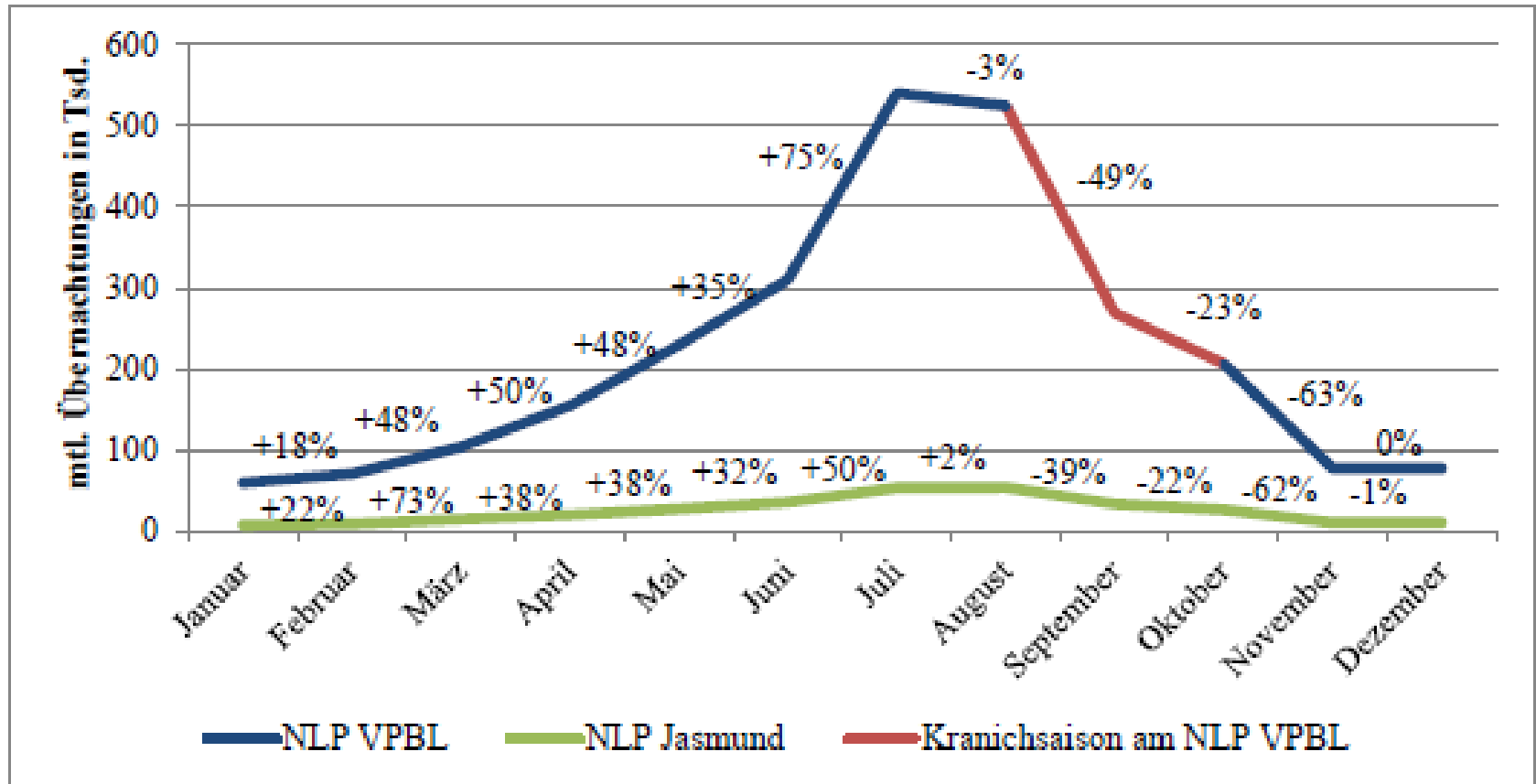


Abbildung 15: Übernachtungszahlen der Nationalparkregionen Vorpommersche Boddenlandschaft und Jasmund in den Jahren 2011 bis 2013

Quelle: eigene Berechnung/Darstellung auf der Datengrundlage von STATA MV (2011-2013)

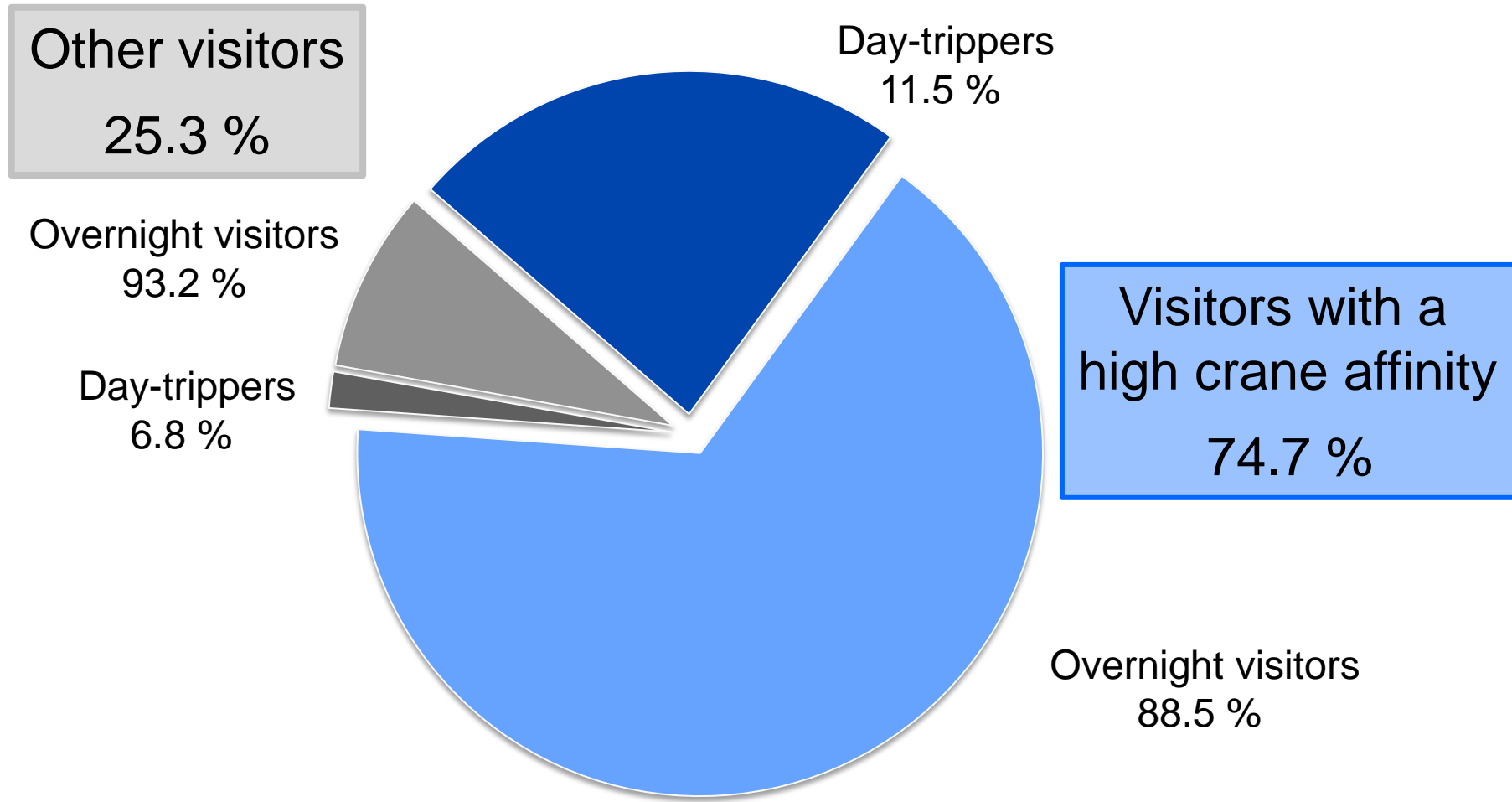
IV. Findings

National park affinity

	Birders	Non-birders
Other national park tourist	54.1%	68.5%
National park tourist with high affinity	45.9%	31.5%

IV. Findings

Visitor structure



Tab. 1: Auswahl touristischer Angebote für Birder in deutschen Großschutzgebieten.

Selection of touristic offers for birders in German Large Protection Areas.

Gebiet	Vogelart	Zeitraum des Vogelzuges	Thema	ausgewählte Angebote	Teilnehmer/ Besucher (pro Jahr)	Kosten/ Eintrittsgelder (pro Pers.)
Biosphärenreservat Flusslandschaft Elbe-Brandenburg (Rühstädt)	Weißstorch (<i>Ciconia ciconia</i>)	Ende April bis An- fang September		NABU-Informationszentrum	12 000	kostenlos
				Ausstellung „Weltenbummler Adebar“	7 000	1,50 €
				Führungen (u.a. GPS-geführt, mit (Park-)Rangern, „Storchenfeierabend“ mit Abendessen)	1 600	2,50 bis 19,00 €
Nationalpark Müritz	Kranich (<i>Grus grus</i>)	Frühjahr (März bis April) und Herbst (September bis Oktober)		Kranich-Ticket (Tour zum abendlichen Kranicheinflug)	3 500	8,50 €
Nationalpark Niedersächsisches Wattenmeer	Diverse Zug- vögel, z.B. die Eiderente	Herbst	Zugvogeltage (September/ Oktober)	250 Veranstaltungen (u.a. Führungen, Kinder-Mal-Wett- bewerbe, Zugvogelfest)	12 500	unter- schiedlich
Nationalpark Schleswig- Holsteinisches Wattenmeer	Braunbäuchige Ringelgans (<i>Branta bernicla</i>)	Frühjahr (April bis Mai); Herbst (September bis November)	Ringelganstage (April/Mai)	Veranstaltungen der Ringelganstage	400	0 bis 20€
				Schiffstouren Reederei Adler.	250	21 bis 26 €
				4-tätige Pauschalreise „Vogelkiek“	30	229 bis 309 €
Nationalpark Vorpommersche Boddenlandschaft	Kranich (<i>Grus grus</i>)	Frühjahr (März bis April) und Herbst (September bis Oktober)	Woche des Kranichs (September / Ok- tober)	Kranich-Informations-zentrum in Groß Mohrdorf	11 000	kostenlos
				Aussichtspunkt Pramort mit Besucher- Reglementierung „Beobachten, ohne zu stören“	2 000	5 €
				Führungen	3 000	3 bis 34 €
				Kranichbootstouren	k.A.	14 bis 46 €
Nationalpark Unteres Odertal	Kranich (<i>Grus grus</i>), Sing- schwan (<i>Cygnus cygnus</i>)	Februar und Herbst (September bis Ok- tober)	Kranichwoche, Singschwantage	Vorträge und Lesungen		0 bis 3 €
				Exkursionen zu Fuß, mit Bus oder Kremser		0 bis 15 €
				Paddel- oder Bustouren		20 bis 30 €
				Kranichfeste		kostenlos
				Fotoworkshop	4 bis 10	79 €

Quellen: KNOLL (2014: 60), LITZBACH (2014: 40), PAGENKOPF & KÄMPFER (2015: 20), WEIGEL (2012: 57), eigene Erhebungen und freundliche schriftliche sowie mündliche Mitteilungen des NABU-Informationszentrums in Rühstädt, des Kranich-Informationszentrums Groß Mohrdorf, der Nationalparkverwaltung Niedersächsisches Wattenmeer, der Nationalparkverwaltung Schleswig-Holsteinisches Wattenmeer, der Nationalparkverwaltung Müritz, der Nationalparkverwaltung Vorpommersche Boddenlandschaft, Nationalparkverwaltung Unteres Odertal und des Biosphärenreservats Flusslandschaft Elbe-Brandenburg