

Julius-Maximilians-

**UNIVERSITÄT
WÜRZBURG**

Evaluation of the Economic Impacts of Tourism in German National Parks

**Expert Meeting
“Ecosystem Valuation in the context of Natural Capital Accounting”**

24.-26.04.2018, Bonn

Hubert Job, Manuel Woltering

Large Scale Protected Areas in Germany

16 National Parks / 214.588 ha (terrestrial)

Two main types:

1. Strong integration in tourism marketing
2. Weak integration and cooperation

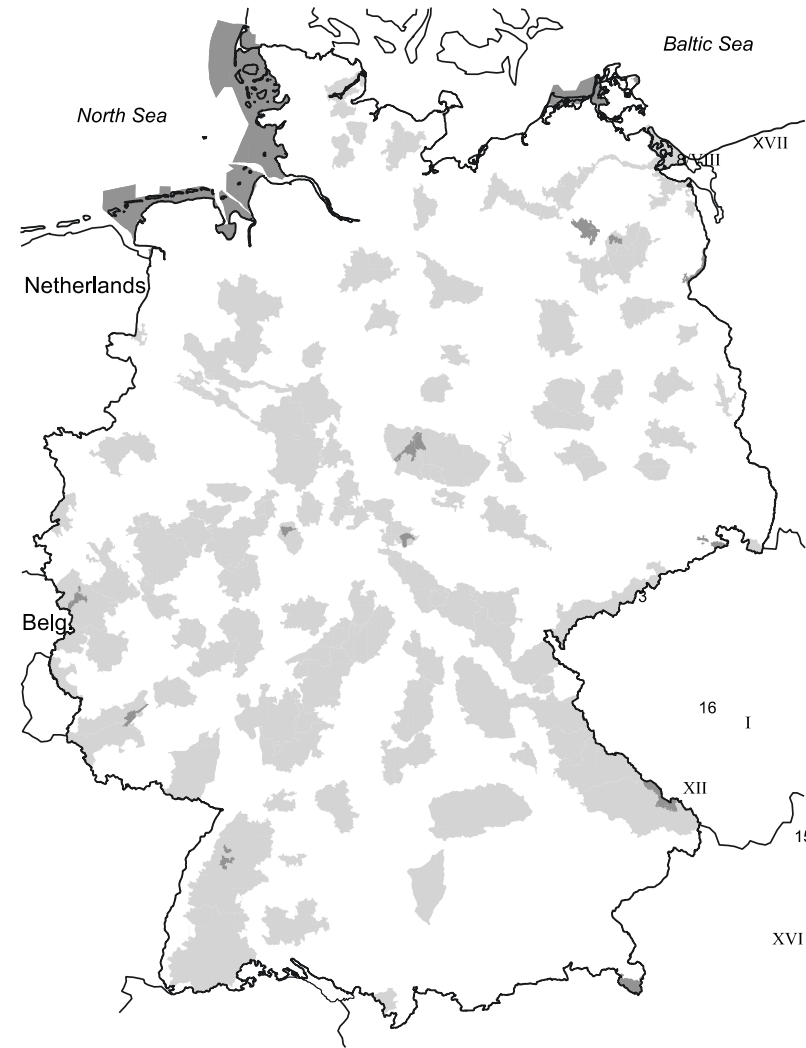
17 Biosphere Reserves (16 UNESCO) / 1.311.636 ha (terrestrial)

Different types from small up to big,
traditional tourism regions.

104 Nature Parks, 9,9 m ha (terrestrial)

Focus on recreation for nearby cities

- ➔ **Managed by the federal states**
- ➔ **Problem of common quality standards and uniform monitoring methods**



Questions to be Answered



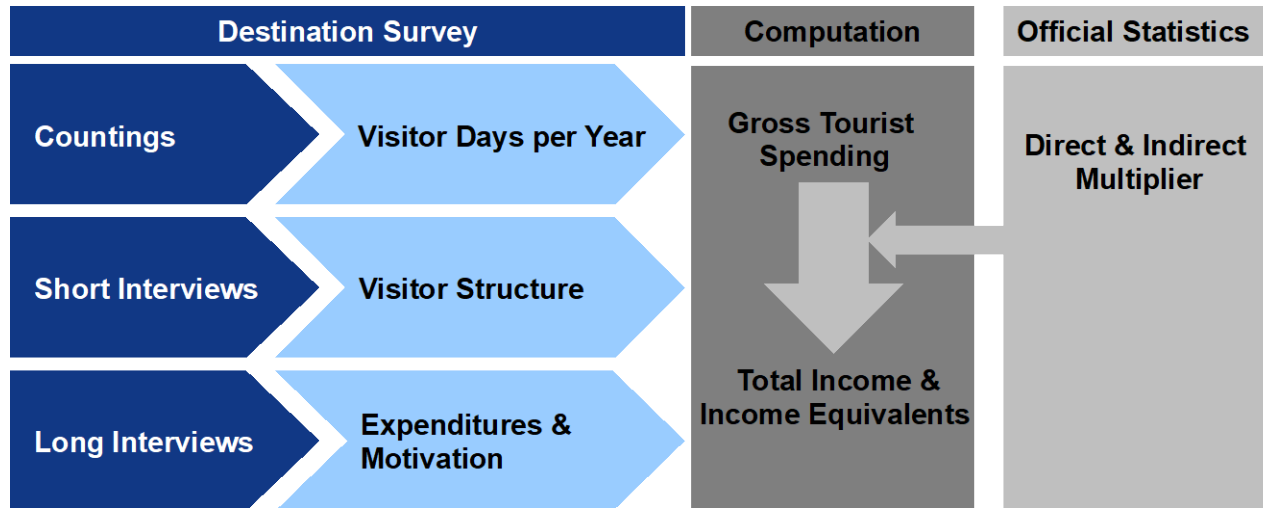
... on the way to the evaluation of regional economic impacts of tourism:

1. How many tourists visit the protected area?
2. How important is the protected area as tourist attraction?
3. Which economic impact does tourism in the protected area generate?

Evaluation of Regional Economic Impacts: A Brief History

- 2001/02: First attempt to evaluate tourism economic impacts within the Berchtesgaden National Park region
- 2003-05: Development of a standardized method for the evaluation of economic impacts of tourism in German large scale protected areas based on three case study regions
- 2006-2019: Application to national parks and biosphere reserves by a series of research projects
- Funding was always granted by the Federal Environment Ministry and Federal Nature Conservation Agency (BfN) as well as some of the local management bodies
- ➔ Lot of empirical results have been generated, but...
- ➔ To date, it still does not exist a compulsory monitoring standard for each of the protected area types!

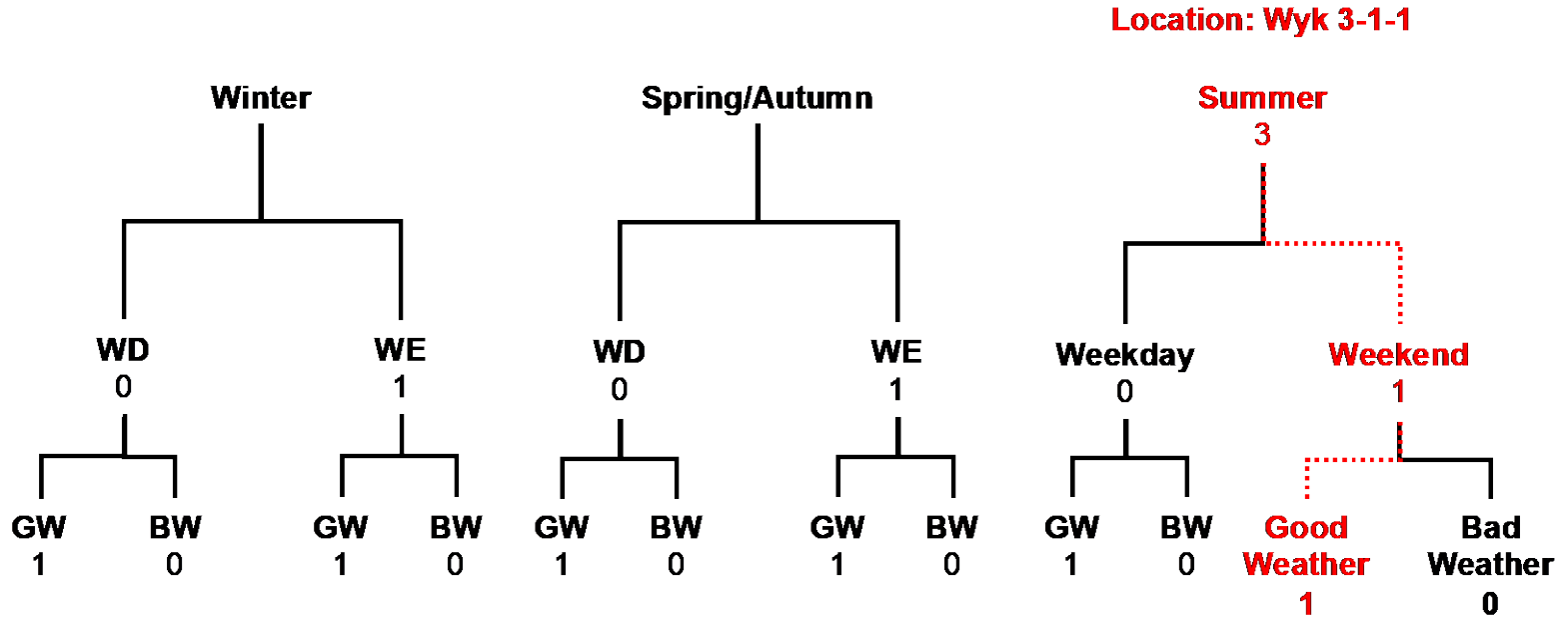
Survey Design for Evaluation



- There are no visitor numbers in German protected areas → countings
- Visitor structure is not known → short interviews
- What are the expenditures and the motivation of visitors → long interviews

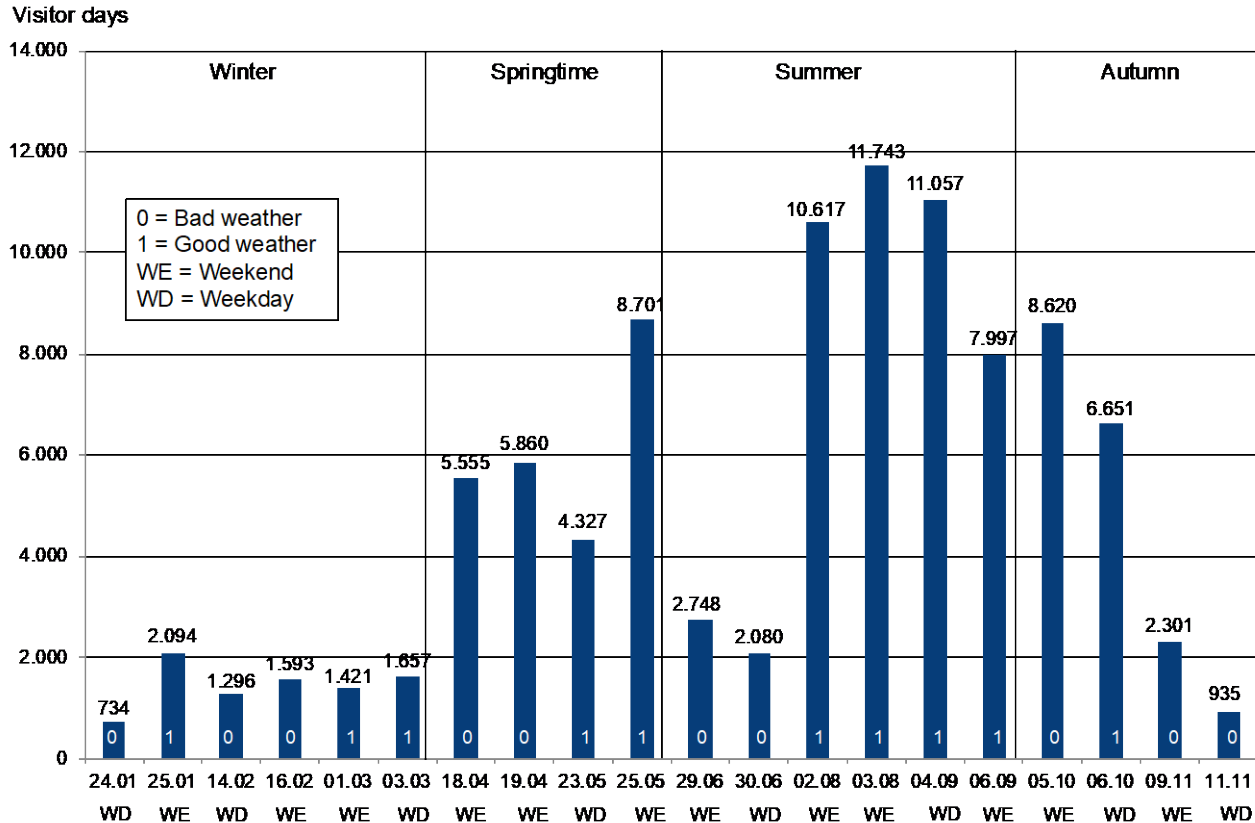
Analysis of Visitor Structure with Countings and Short Interviews

Example



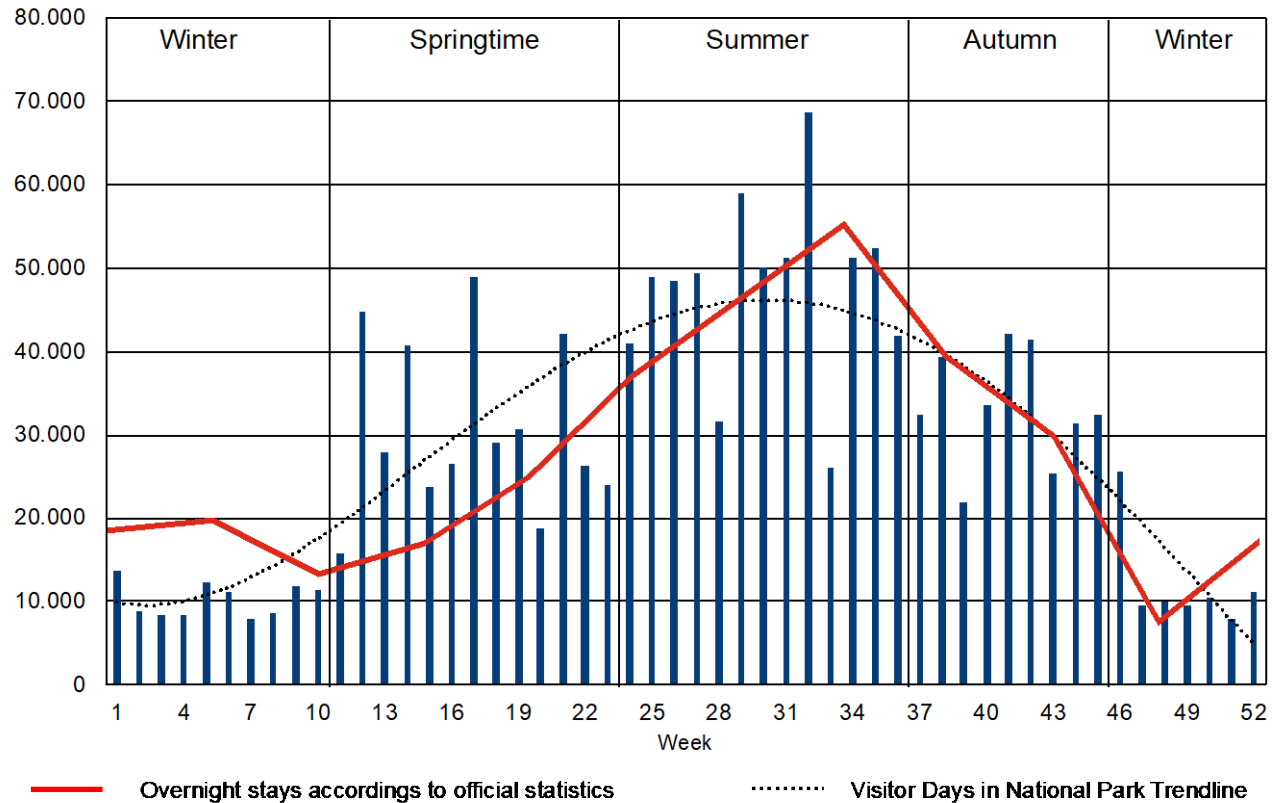
Wyk 3-1-1 means summer, weekend and good weather

Visitation in Berchtesgaden National Park 2014 on 20 Survey Days

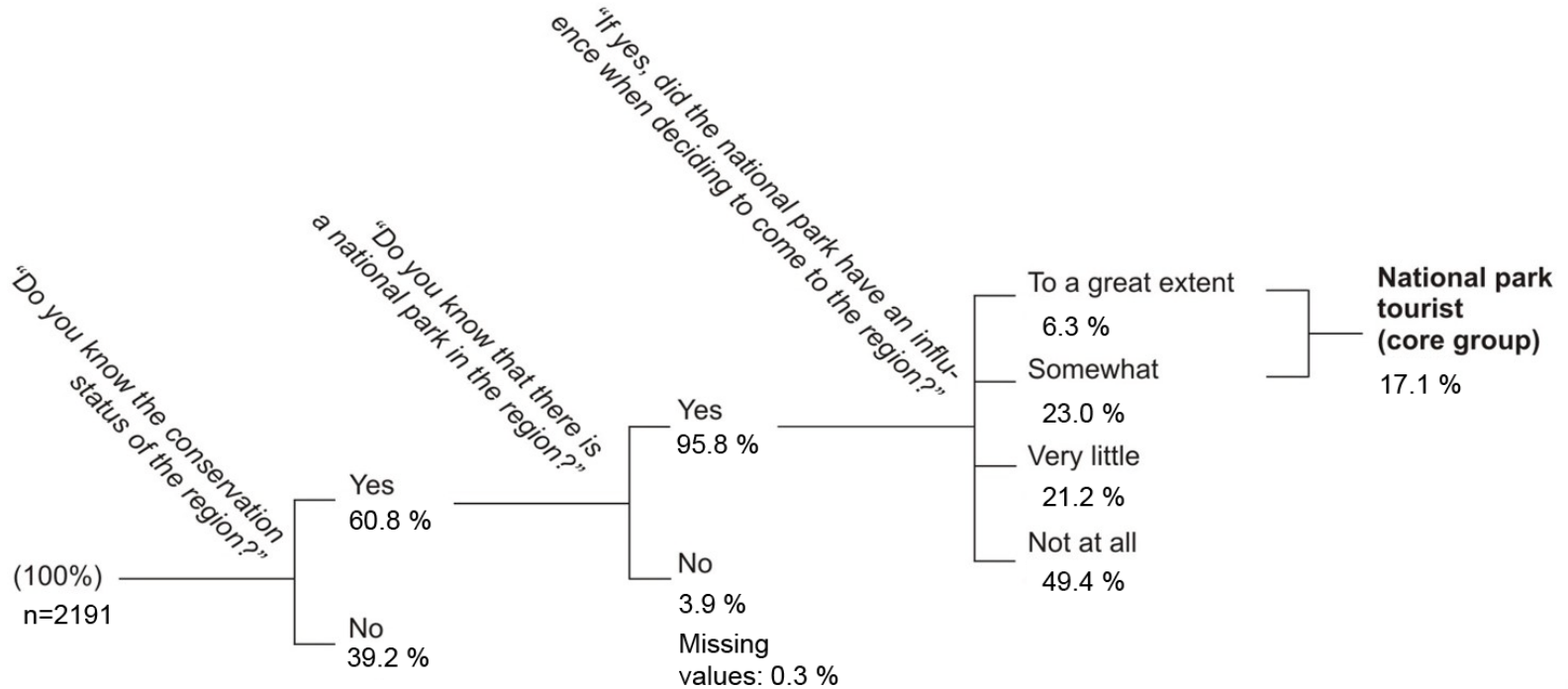


Visitation in Berchtesgaden National Park 2014 – Extrapolation

Visitor days per week



Visitors with a High National Park Affinity – Example: National Park Schleswig-Holstein Wadden Sea

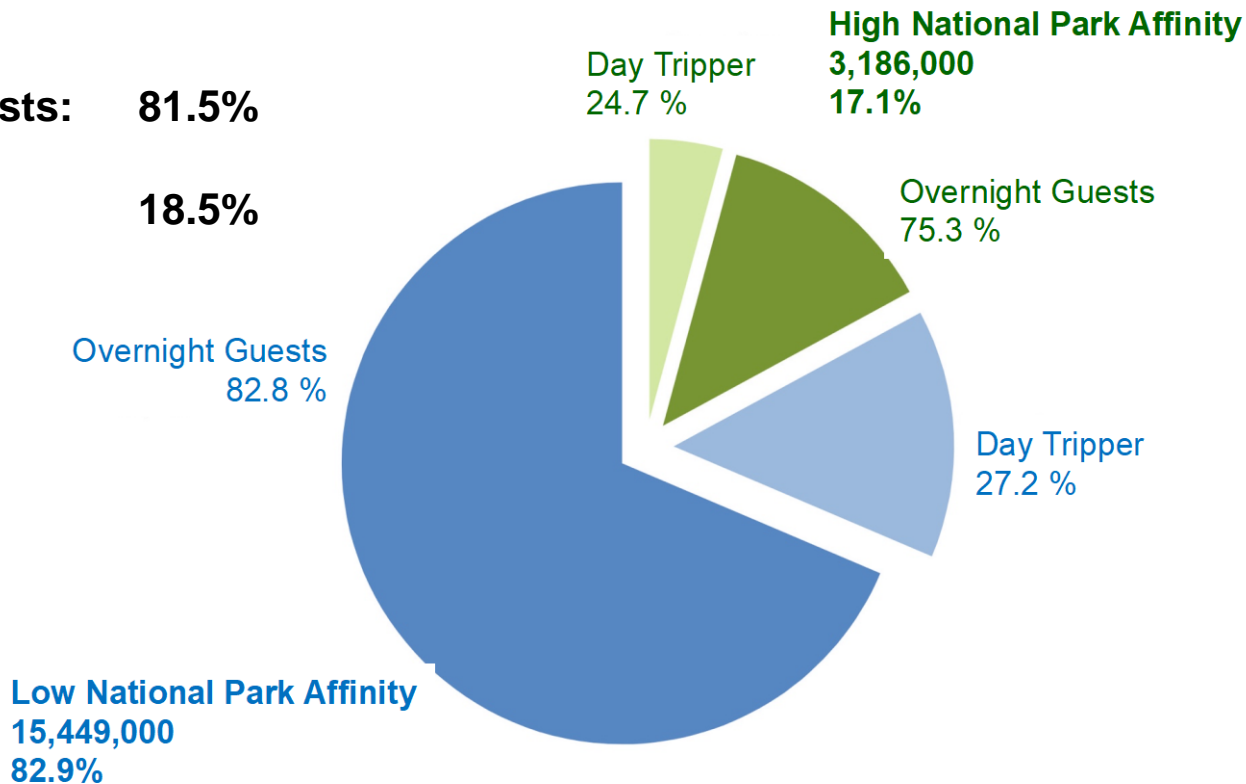


[in comparison: National Park Lower Saxony Wadden Sea: 10,9% National park tourists]

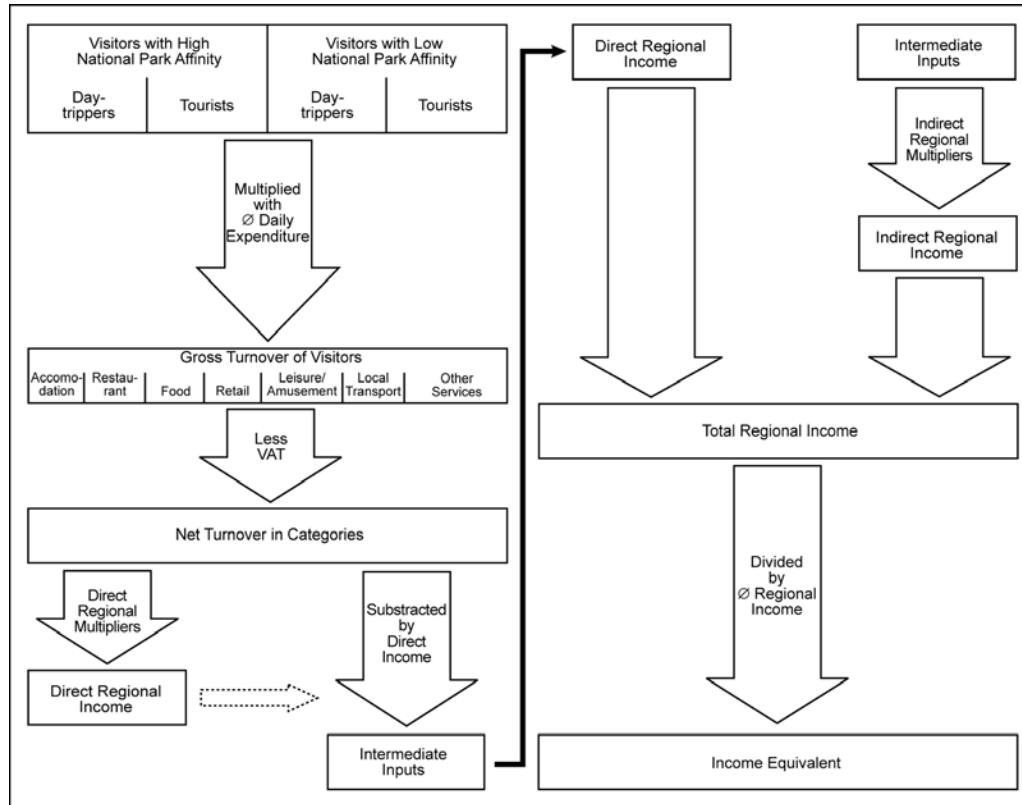
Visitor Days, Visitor Structure and Motivation: Example: National Park Schleswig-Holstein Wadden Sea

Overnight Guests: 81.5%

Day Trippers: 18.5%



Economic Impact Assessment: Value Added Analysis



Economic Multipliers

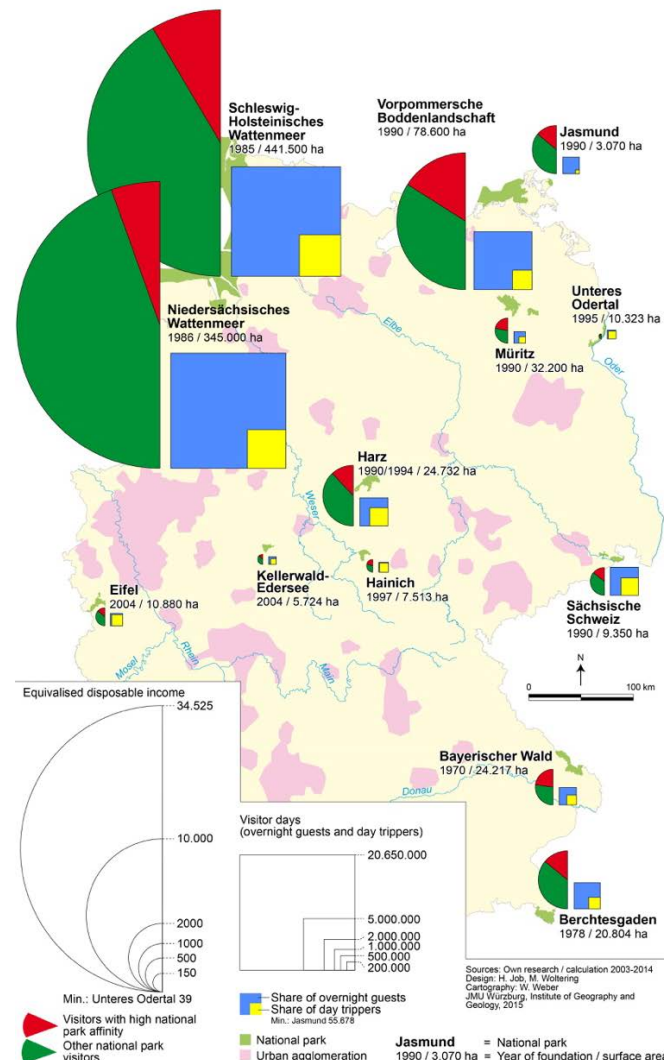
Different options:

- Empirical survey on economic structure of the study area (high effort)
- National multipliers derived from official statistics (bad quality for regional evaluation if used “raw”)
- Regional multipliers from official statistics or other studies (mostly not available in Germany)
- Regionalization of Input-Output-Table (high effort)

➔ Regionalization of national multipliers

Visitor Days and Income Equivalents of German National Parks

Italic: Tourists with a high national park affinity



| | Bayerischer Wald | Eifel | Hainich | Kellerwald-Ederssee | Nds. Wattenmeer |
|---------------------------------|-----------------------------------|---------------------------------|----------------------------------|----------------------------------|------------------------------------|
| Visitor Days | 760,000 <i>350,000</i> | 450,000 <i>123,000</i> | 290,000 <i>119,000</i> | 200,000 <i>52,000</i> | 20,650,000 <i>2,256,000</i> |
| Share of Day-Tripper | 33 % <i>29 %</i> | 76 % <i>70 %</i> | 76 % <i>74 %</i> | 59 % <i>58 %</i> | 15 % <i>15 %</i> |
| Ø Daily Expenditures per Person | 36.57 € <i>38.70 €</i> | 19.31 € <i>22.77 €</i> | 17.25 € <i>18.85 €</i> | 19.48 € <i>20.14 €</i> | 50.37 € <i>51.32 €</i> |
| Gross Turnover | 27.8 Mio. € <i>13.5 Mio. €</i> | 8.7 Mio. € <i>2.8 Mio. €</i> | 5.0 Mio. € <i>2.2 Mio. €</i> | 3.9 Mio. € <i>1.0 Mio. €</i> | 1.04 Mrd. € <i>115.8 Mio. €</i> |
| Income | 13.5 Mio. € <i>6.5 Mio. €</i> | 4.3 Mio. € <i>1.4 Mio. €</i> | 2.5 Mio. € <i>1.12 Mio. €</i> | 1.9 Mio. € <i>0.52 Mio. €</i> | 525.1 Mio. € <i>58.2 Mio. €</i> |
| Ø National Income | 14,387 € | 16,217 € | 12,132 € | 18,335 € | 17,335 € |
| Income Equivalent | 939 p <i>456 p</i> | 265 p <i>85 p</i> | 206 p <i>92 p</i> | 105 p <i>28 p</i> | 30.289 p <i>3.360 p</i> |

Looking at the general questions...

- What is it exactly that you are valuing? (e.g. in what units is the service expressed; what value concept is captured?)
>>> *income in monetary units*
- What methods are most commonly used when valuing this service?
>>> *input-output models*
- Is it possible to isolate this service from other services, or should they be looked at in a basket of services? Is there any risk of double counting with other services (e.g. carbon sequestration and/or storage)?
>>> *results are fully covered by SNA but – as common for tourism with many linkages to variety of economic sectors – it is not present there as a single service*

Looking at the general questions...

- What are the strengths and weaknesses of the presented methods. In more detail: How high are the statistical uncertainties? Repeatability: in which intervals and to what extend is it possible? Are annual changes relevant/statistically significant?
>>> a lot of empirical work is necessary to get the data you need to do such an analysis: therefore repeatability is a quite a difficult task
- Level/scale: at what scale (local/regional/national) is this service usually valued? Can it be scaled up to the national level easily?
>>> regional level
- Is there sufficient experience to agree / recommend on a ranking of methods? (e.g. A,B and C methods) for valuing this specific service in an accounting context?



Thank You!

Zählbogen Berchtesgaden

Beobachter/Interviewer: _____

Datum: _____

Standort: _____

Uhrzeit Zähl-/Blitzinterview-Beginn: _____

Uhrzeit Zähl-/Blitzinterview-Ende: _____

(je Zählintervall einen neuen Bogen verwenden!)

| Frequenz | Anzahl | Anzahl Übernachtungen/Kategorie (Tagestouristen bitte mit „0“ Übernachtungen eintragen!) | | | | | | | | | | | |
|---------------|--------------|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Spaziengänger | 1 5 10 15 20 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | 25 30 35 40 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (Wi-)Wanderer | 1 5 10 15 20 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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| Radfahrer/MTB | 1 5 10 15 20 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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| Ski | 1 5 10 15 20 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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Paper-and-Pencil-Countings and -Interviews

LEHRSTUHL FÜR GEOGRAPHIE UND REGIONALFORSCHUNG
JULIUS-MAXIMILIANS-UNIVERSITÄT WÜRZBURG

Tel.: 093 1/31-89271



Liebe Gäste,
wir sind Studenten von der Universität Würzburg und führen eine Befragung zur wirtschaftlichen Bedeutung des Tourismus im **Berchtesgadener Land** durch. Bitte nehmen Sie sich kurz Zeit, um die folgenden Fragen zu beantworten. Natürlich werden Ihre Angaben absolut vertraulich behandelt.

Nr.: _____ Datum: _____ Uhrzeit: _____

Interviewer: _____ Standort: _____ Ablehnung: _____

Witterung: wolkenlos heiter bewölkt bedeckt Niederschlag

Aktivität: Spaziengänger (Wi-)Wanderer Radfahrer/MTB Ski

Bemerkungen: _____

1) Was ist der Ausgangsort Ihres heuligen Besuchs?
 Hauptwohnsitz oder Ferienort/Übernachtungsort: _____

1a) In welchem Ort übernachteten Sie heute? (Tagestouristen weiter bei Frage 2)
 Hauptwohnsitz oder Ferienort/Übernachtungsort: _____

1b) Wie viele Nächte bleiben Sie in diesem Ort?
 _____ Nächte

1c) Gesamte Übernachtungszahl während dieser Reise:
 _____ Nächte

1d) In welcher Art von Unterkunft übernachteten Sie?
IP Hotel (garni) *IP* bis 30€ *IP* bis 50€ *IP* bis 75€ *IP* über 75€ pro Person/Übernachtung
 Gasthof Kurklinik Bekannte/Verwandte
 Pension Jugendherberge Sonstiges: _____
 Ferienwohnung Camping keine Angabe

1e) Welches Verpflegungsarrangement haben Sie gebucht?
 keine Mahlzeit Frühstück Halbpension Vollpension keine Angabe

1f) Ist die Reise
 pauschal gebucht oder selbst organisiert (Weiter bei Frage 2) Kur (Weiter bei Frage 2)