

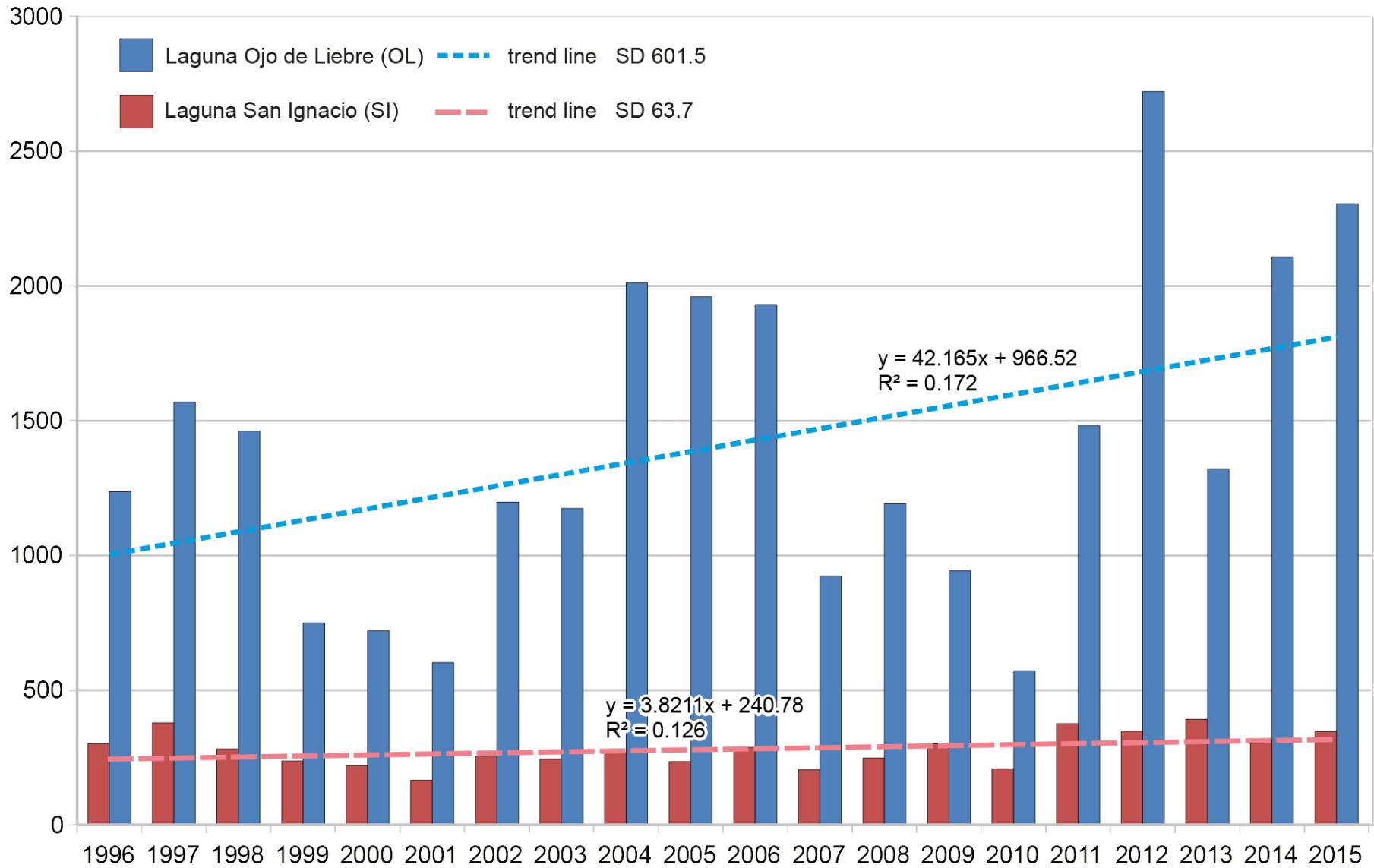
Economic Impacts of Whale-Watching Tourism in El Vizcaíno Biosphere Reserve, México



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Maximum Number of Gray Whales at the EVBR (1996-2015)



Agenda

- 1. Why evaluate the economic benefits of nature-based tourism in Protected Areas (PA)?**
- 2. Whale-watching at El Vizcaíno Biosphere Reserve (EVBR), Mexico**
- 3. Methodology**
- 4. Results**
- 5. Conclusions**

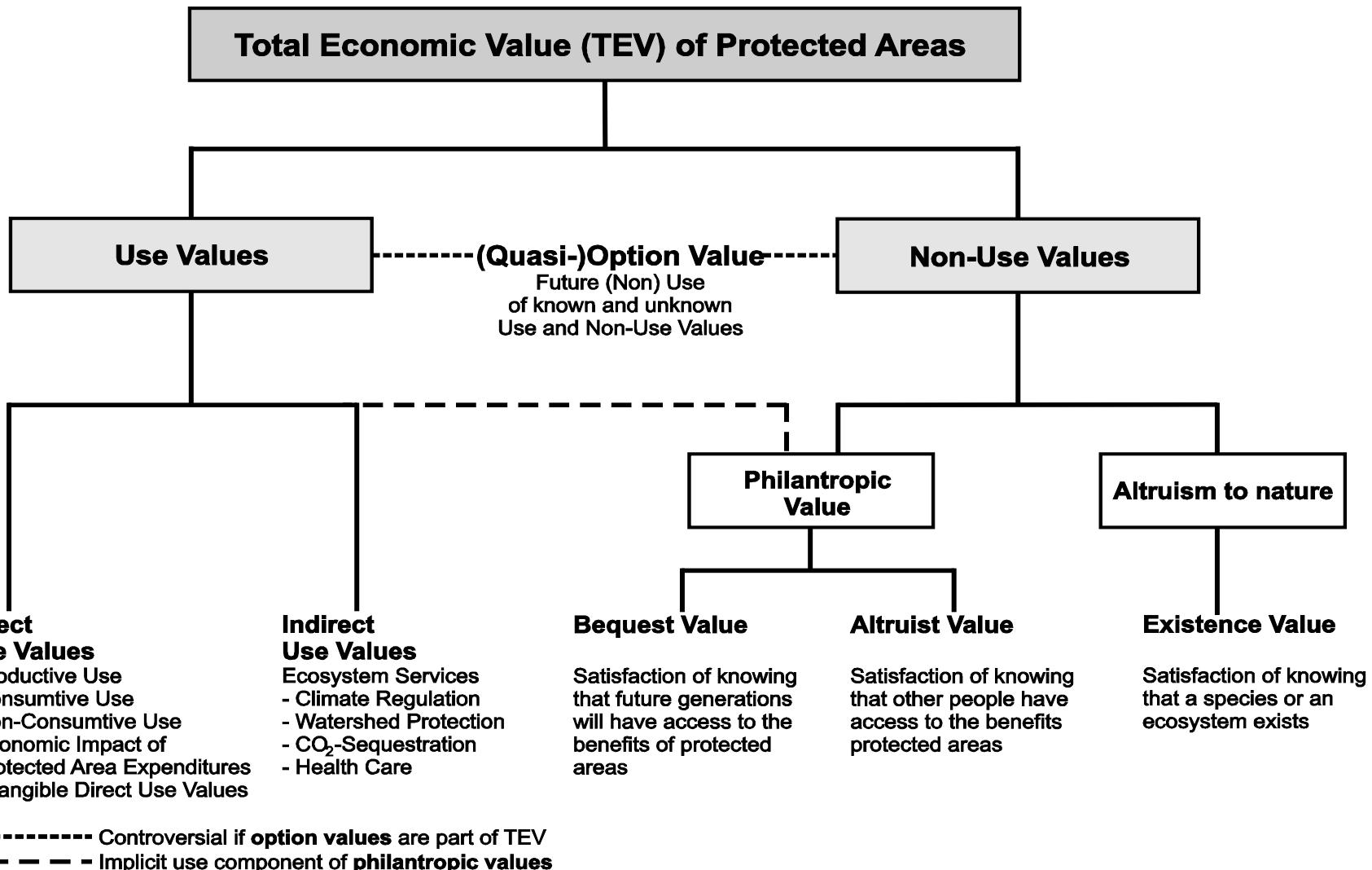
1. Economic Evaluation of Protected Areas I

- **Why quantify the economic value generated by PAs:**
 - Allows direct comparison of different ways of direct resource use in terms of monetary value
 - Provides criteria for decision making based on traceable data
 - Identifies monetary benefits which can supply powerful reasons to justify public support to nature conservation
 - Quantifies economic losses due to environmental damage
 - Promoting of local support for PA (raising the acceptance level of indigenous people)

1. Economic Evaluation of Protected Areas II

- Economic evaluation of PA faces several methodological challenges
- **How to determinate the value for nature-based tourism: concept of ‘Total Economic Valuation’:**
- Refers to the economic value of all “services” provided by nature currently and in future
- Distinguish between (direct and indirect) use values and non-use values
- It should not be considered the only criterion for decision making

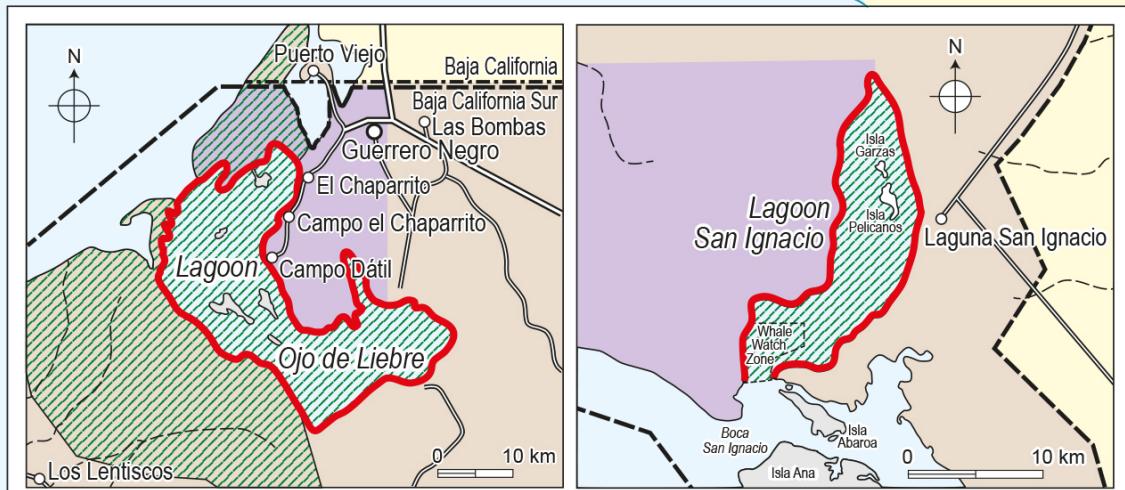
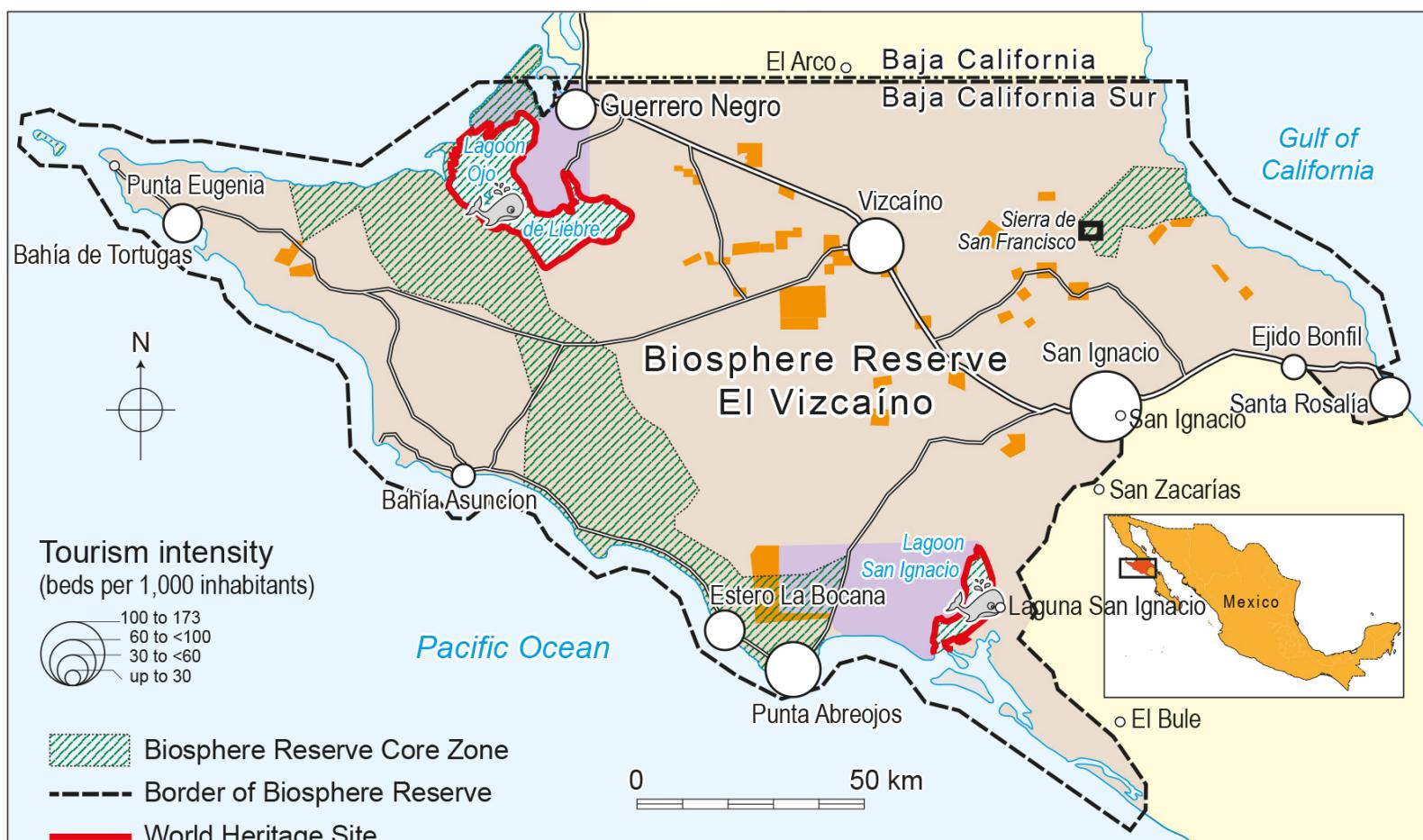
1. Economic Evaluation of Protected Areas III



Source: Mayer 2013: 108

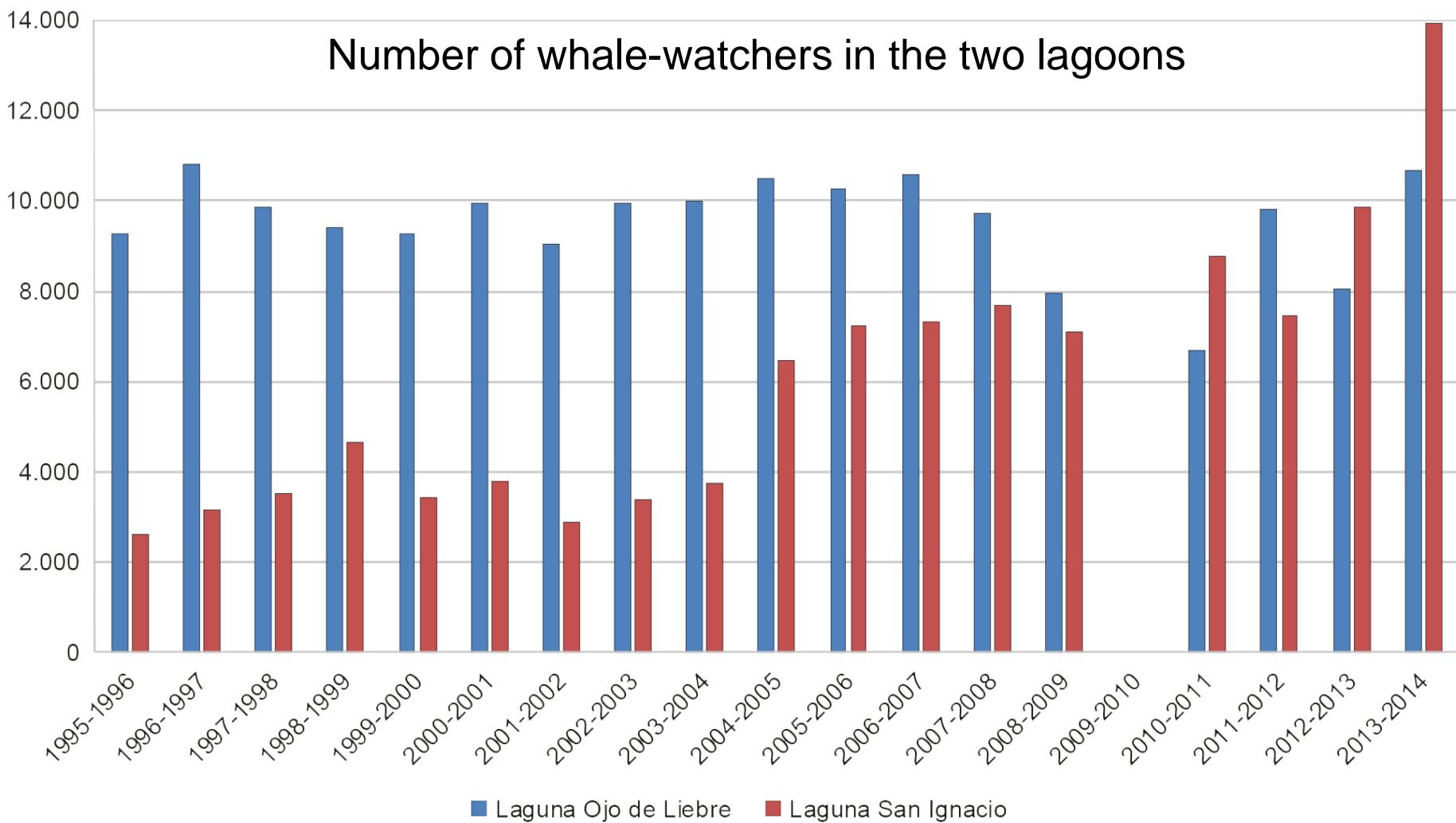
2. Whale-Watching at the EVBR I

- EVBR is Mexico's largest PA (25,468 km²) and includes three UNESCO World Natural Heritage Sites
- Protection of different arid and maritime ecosystems
- Main mating habitat of Pacific Gray Whales (*Eschrichtius robustus*)
- Whale watching as tourist attraction – major constraints: whale-watching is limited to three to four months a year with low visitor number at the EVBR during off-season from May to November; location off the beaten tourist paths in Mexico



Source: CONANP 2007, GOBPCS 2006,
INEGI 2005, SECTUR 2007, own research
Design: H. Job, M. Mayer, B. Schauss
Drawing: W. Weber
Institute of Geography and Geology,
JMU Würzburg 2014

2. Whale-Watching at the EVBR II



Source: Own design based on CONANP 2015

3. Methodology

1. Demand side of tourism in BREV:

- Face-to-face interviews; random sample of 382 whale watchers during 42 days in season 2006/07
- Standardized intercept interviews: expenditure, trip motivation → turnover generated by visitors of EVBR

2. Supply side of tourism in BREV:

- Qualitative interviews with 40 whale watching tour operators, hotels and campsites
- Nearly all businesses in Guerrero Negro and San Ignacio surveyed: turnover, seasonality, supply network, conflicts and cooperation
- Estimation of gross turnover of whale watching tourism from two perspectives
- Use of regionalized input-output tables to estimate leakages and income accruing to local households

4. Results I: Gross Turnover in Tourism Businesses of Guerrero Negro and San Ignacio

	Gross Turnover (in US-\$)	Gross Turnover Winter (Dec.-Apr.) (in US-\$)	Gross Turnover Summer (May-Nov.) (in US-\$)
Tour Operators Guerrero Negro	782.613	782.613	-
Hotels Guerrero Negro	1.720.545	1.118.354	602.191
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Tour Operators San Ignacio	613.336	613.336	-
Hotels San Ignacio	659.090	527.272	131.818
Total	3.775.584	3.041.575	734.009

Source: SCHAUSS 2008: 64ff.

4. Results II: Visitor Profile

	Day-trippers		Overnight visitors	
Gross sales (all visitors)	4 %		96 %	
Gross sales by nationality	Mexicans: 1.4 %	Foreigners: 2.6 %	Mexicans: 20.1 %	Foreigners: 75.8 %
Average length of stay by nationality (days)	Mexicans: 1.0	Foreigners: 1.0	Mexicans: 2.6	Foreigners: 3.1

4. Results III: Spending by Visitor Segments/Day (US-\$)

	Mexican day-trippers	Foreign day-trippers	Mexican overnight visitors	Foreign overnight visitors	Total (excluding foreign visitors hiring packages at their home country)
Whale-watching tour (local enterprises)	30.1	39.4	22.1	22.9	24.3
Food & beverages (local restaurants)	8.9	8.0	18.0	17.8	16.7
Accommodation (local enterprises)	0.0	0.0	12.7	14.6	12.3
Other spending	8.1	25.6	15.4	16.5	16.4
Total	47.1	73.0	68.2	71.8	69.7

4. Results IV:

Sum of Spending by Visitor Segments (US-\$)

	Mexican day-trippers	Foreign day-trippers	Mexican overnight visitor	Foreign overnight visitor	Total (excluding foreign visitors hiring packages at their home country)
Total number of visitors	826	984	3,079	9,363	14,252
Length of stay (days)	1.0	1.0	2.6	3.1	-
Total number of visitor days	826	984	8,100	28,976	38.886
Total spending (US-\$)	38,905	71,832	552,178	2,079,928	2,742,843
% of total spending	1.4%	2.6%	20.1%	75.8%	100.0%

4. Results V: Gross Turnover (US-\$)

	Mexican day-trippers	Foreign day-trippers	Mexican overnight visitor	Foreign overnight visitor	Total (excluding foreign visitors having purchased packages at their home country)
Total spending (US-\$)	38,905	71,832	552,178	2,079,928	2,742,843
Income Multiplier	0.24	0.26	0.24	0.24	0.24
Total Income per household (just EVBR, US-\$)	9,290	18,525	203,251	469,884	700,494
Income equivalent (jobs)	1.5	3.0	33.2	76.7	114.4

4. Results VI: Travel Motivation

	“Whale-watching only”	“Whale-watching first of all”	“Whale watching as add-on”
Relevance of whale-watching as travel motive	16.4 %	36.3 %	47.3 %
Average length of stay by segment (days, only overnight visitors)	3.9	2.9	2.9
Average expenditures per visit (only overnight visitors, US-\$)	177,70 \$	212,98 \$	212,31 \$
Share of gross turnover	8,5 %	34,3 %	57,2 %

5. Conclusions I

- Economic benefits generated by nature-based tourism at EVBR are considerable: approx. 2.75 million US-\$ and 700,000 US-\$ of household income
- Local community-owned and private tour-operators benefit the most, apart from small businesses providing accommodation and food
- High leakage rates of tourism enterprises operating in BREV
- Whale watchers per se contribute less than casual tourists (with a wider range of interests) to the regional economy because of higher numbers

5. Conclusions II

- Income generated by whale-watching compensates the opportunity costs caused by restrictions of fishery: at the Ojo de Liebre lagoon income from nature-based tourism (600,000 US-\$) outweigh losses due to the banning on crayfish harvesting (400,000 US-\$) during the mating period of gray whales
- Income from whale-watching fosters acceptance of restrictions on part of fishing communities and acceptance of BREV
- Apparently whale-watching has no negative impacts on the population of gray whales in BREV

A photograph showing a close-up interaction between a man and a whale. The man, wearing a blue zip-up jacket and a dark baseball cap with a logo, is leaning over the side of a boat to touch the whale's head. The whale's large, grey, textured head is partially above the water. In the background, another person in a red vest is visible on the boat. A white thought bubble originates from the whale's head, containing the text "Thank you for your attention!"

**Thank you
for your
attention!**

Package-Tourists

- Share of 20,4 % of all whale watchers: 11.772 visitor days
- Average length of stay: 3,55 days
- Whale watching as a motive far more relevant as for the individual tourists (Cramérs V 0,338, p<0,001)
- Average expenditures per day: 112,74 US-\$
- Gross turnover of 1.324 million US-\$