



Economic impact of Iceland's protected areas and nature-based tourism sites

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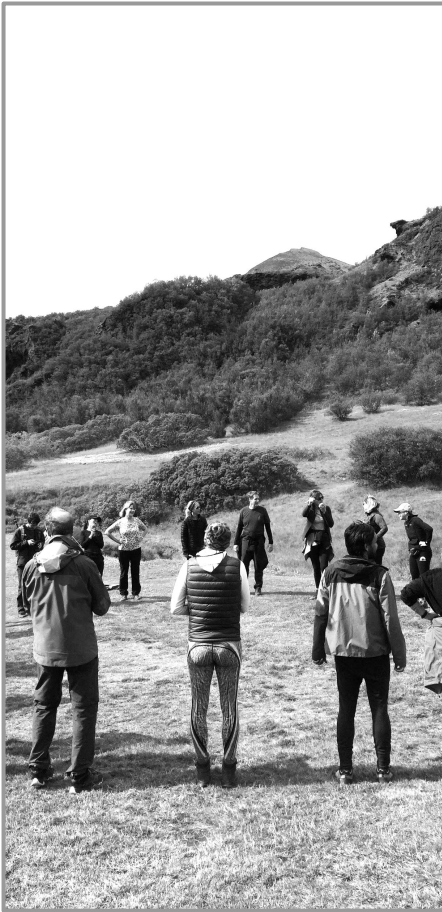
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Outline



- 1) Background for the research project
- 2) Study overview
- 3) Results
 - a) Visitor spending and activity
 - b) Economic impacts
 - c) Employment impacts
 - d) Employer survey
- 4) Conclusions





“Tourism, unlike many extractive industries, requires beautiful natural areas, healthy wildlife and nature, and authentic cultures. Therefore **tourism’s capacity to generate national income and generate jobs can act as a major driver to conserve and manage intact natural areas rather than to modify or destroy them to produce other commodities.**”





“Any phenomenon that is not measured and reported does not exist politically.

Governments, societies, communities and individuals place more value on that which is documented.”

- Prof. Paul F.J. Eagles, Chair of the Task Force on Tourism and Protected Areas at the World Commission on Protected Areas World Conservation Union (IUCN)

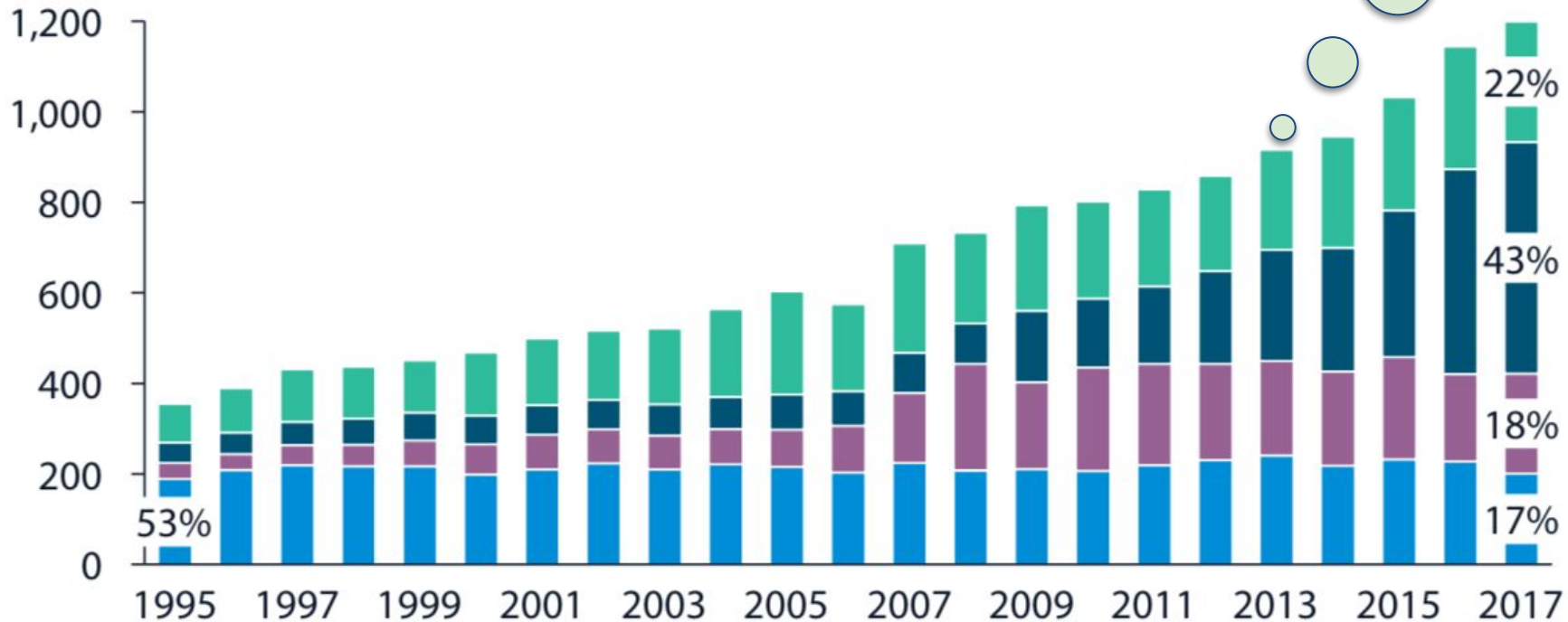


Foreign Revenue

92,4 % of foreign visitors come to Iceland mainly for the nature.

Iceland's Exports by sectors¹
B. ISK at 2017 prices

International sector¹ Energy
Tourism¹ Seafood



Icelandic Chamber of Commerce. (2018). [The Icelandic Economy: Current State, Recent Developments and Future Outlook - 2018 edition](#). Reykjavik. Accessed Sep 4th 2018.

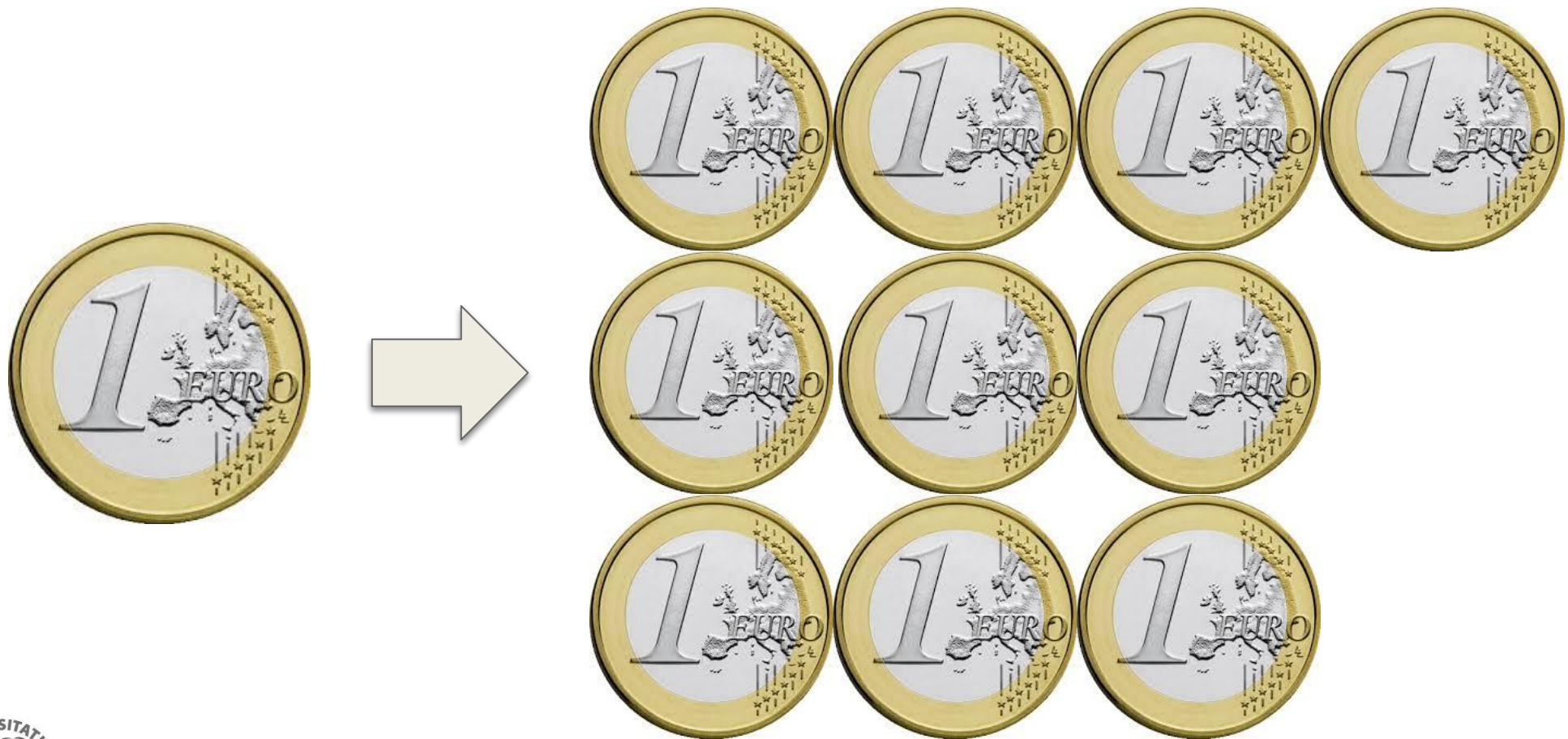
Icelandic Tourist Board. (2018). [Tourism in Iceland in Figures – June 2018](#). Reykjavik. [online]. Accessed October 5th 2018.



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Economic Impact of Finnish NPs and PAs (2009-2017)



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Kajala, L. (2012) [TEEB Nordic case: Estimating local economic benefits of visitors' spending in protected areas](#). In Kettunen et al. *Socio-economic importance of ecosystem services in the Nordic Countries – Scoping assessment in the context of The Economics of Ecosystems and Biodiversity (TEEB)*. Nordic Council of Ministers, Copenhagen.

Pilot study (2017): Snæfellsjökull National Park





REMEMBER:

*Recreation is only
1/17 of total value of
ecosystem services.*

Costanza, R., de Groot, R., Sutton, P., van der Ploeg, S.,
Anderson, S. J., Kubiszewski, I., ... & Turner, R. K. (2014).
[Changes in the global value of ecosystem services](#). *Global
Environmental Change*, **26**, 152-158.





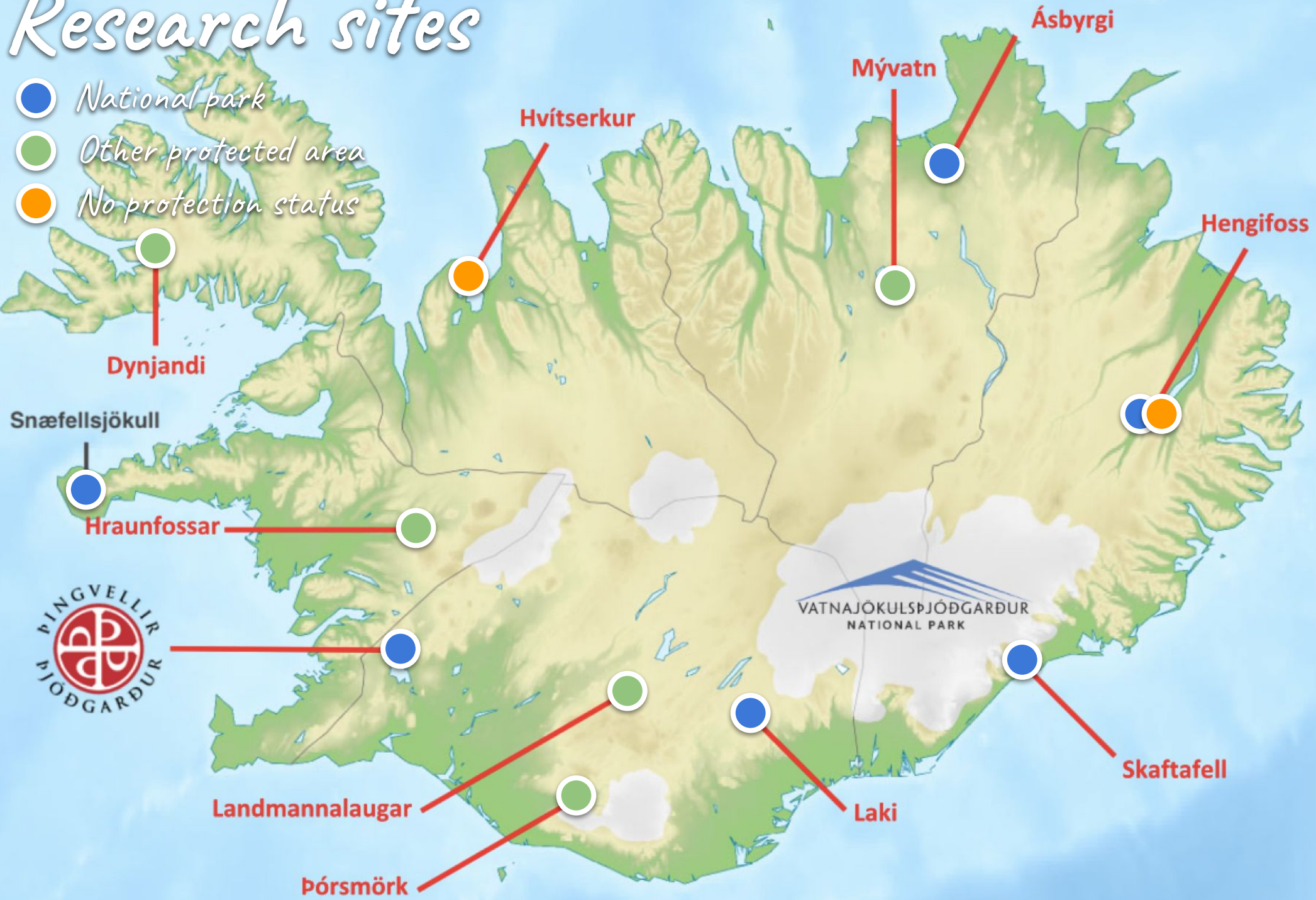
Main objectives

- Assess the impact of national parks and protected areas
 - to local economy and employment
 - summarize results on national level
- Verify results
 - tax data and employer survey



Research sites

-  National park
-  Other protected area
-  No protection status



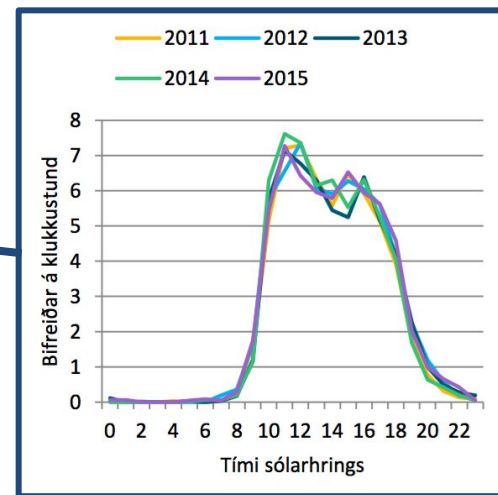


Methodology - overview

Money Generation Model (MGM)

Economic impact =

- 1 Number of visitors *
- 2 Average spending per visitor *
- 3 Economic multipliers based on IO-tables



Visitor Spending Survey 2018: Dyrjandi

This survey is conducted by the Institute of Economic Studies, at University of Iceland as part of a research project commissioned by the Ministry of Environment and Natural Resources of Iceland. Aim of the survey is to study the economic impact of protected area and nature-based tourism sites in Iceland, and to provide information for decision-making and policies regarding the development of protected area. Answering this short questionnaire will only take a couple of minutes and all answers will be treated anonymously. We are grateful for your time and participation in this study.

1. On this trip, Dyrjandi is...
 your only or the most important destination?
 one among other intended destinations?
 a non-planned destination along your route?

2. What other sites in the surrounding area have you visited in the last 24 hours or one day?

3. How many days are you going to stay altogether around Dyrjandi or its surroundings? _____

4. How many people are travelling in your party? _____
Please do not include other participants of an organized tour.

5. In the following section we will ask you to estimate your spending in connection to visiting the Dyrjandi and its surroundings. Please indicate whether you will estimate:
 your personal expenses only (1 person)
 total expenses of your party (for the number of people indicated above).

6. Please select the currency you're most comfortable estimating the expenses in:
 ISK EUR USD GBP Other _____

7. In the following questions, indicate your total expenses for the **last 24 hours or one day** on this trip in column **a)** for **Lak and its surroundings (map area)**, and column **b)** for **elsewhere in Iceland** during the same 24h time period.

	a)	b)
Fuel and other purchases from service stations?		
Costs for transportation?*		
Guided tours and other recreational activities?*		
Cultural activities?		
Accommodation?*		
Cafe and restaurant purchases?		
Groceries?		
Souvenirs?		
Other area purchases? (e.g. clothing, goods, ...)		
Other spending? (one-time)		

*Please include any pre-paid expenses on a per-day basis.

7c. Type of accommodation if overnight stay:
 Hotel / guesthouse
 Hotel / mountain hut
 Farm accommodation
 Private rental (eg. Airbnb)
 Camping / camper van
 Summer house / cottage
 At family / friends / home
 Sleeping in the car
 Other: _____

8. Are you a local resident living in the municipality surrounding Dyrjandi? Yes No

9. Gender? Female Male Non binary

10. Age <18 18-24 25-34 35-44 45-54 55-64 65+

11. Country of residence _____

Thank you for your time! UNIVERSITY OF ICELAND



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Stynes, D., (2005). [Economic significance of recreational uses of national parks and other public lands](#). *Social Science Research Review*, 5(1), Winter 2005.



Data collection - visitor spending

- Actual categorised spending in last 24 h per person
- Locally within 50 km radius / elsewhere
- Length of stay
- In connection to protected area or not





Challenges in Icelandic context



- Seasonality
- Local vs. capital region spending & economic impact
- Multi-destination travel plans
- Regional input-output tables and multipliers missing



Visitor interviews / segments

Segment	Number of visitors	%-share
Foreign day-trip visitors (DAY)	728	24,6 %
Foreign overnight visitors (HOTEL)	1.378	44,9 %
Foreign overnight camping visitors (CAMP)	775	26,2 %
Icelandic residents (LOCAL)	124	4,4 %
Total	3.005 (+ SNJP 501)	100 %





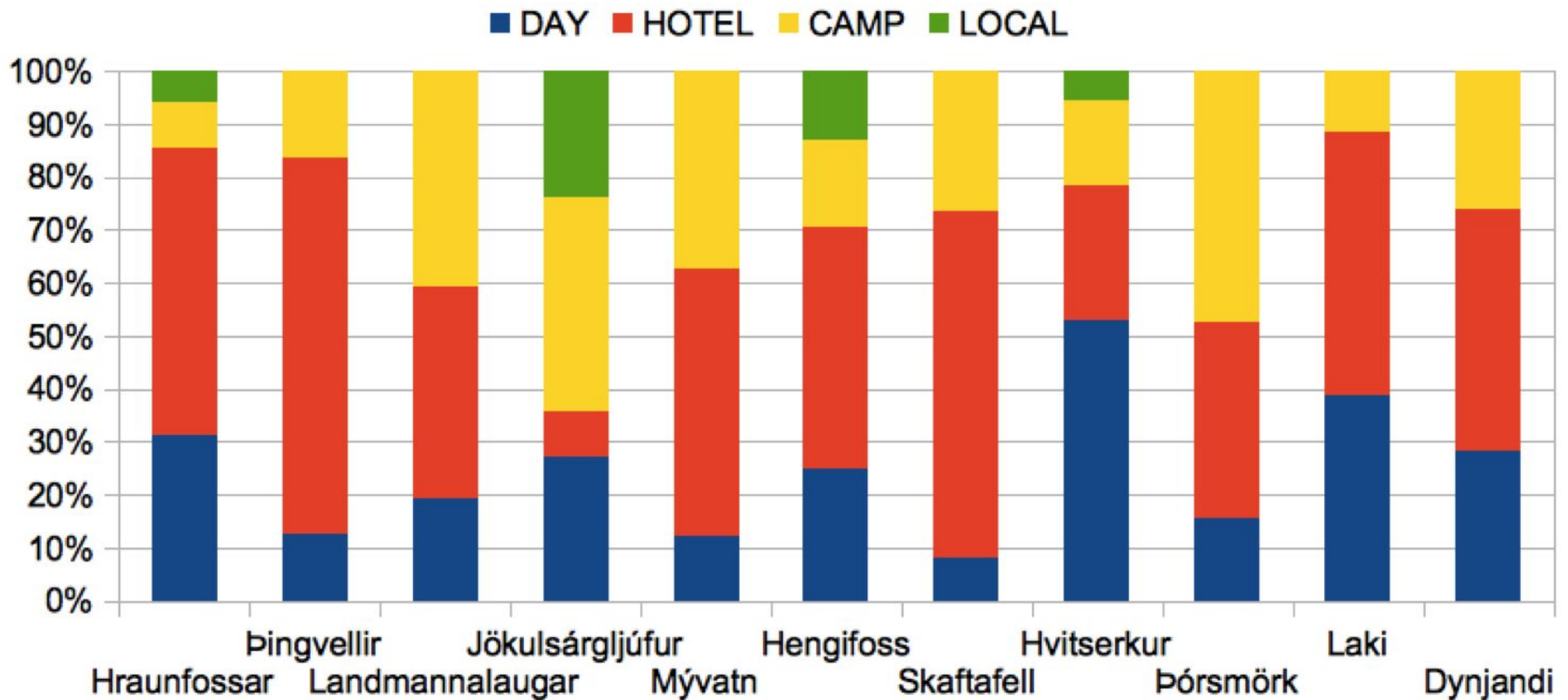
Segmented spending on PAs

Visitor segment	Avg. total ISK per 24 h
Foreign day-trip visitors (DAY)	14.734
Foreign overnight visitors (HOTEL)	15.535
Foreign overnight camping visitors (CAMP)	6.872
Icelandic residents (LOCAL)	5.271





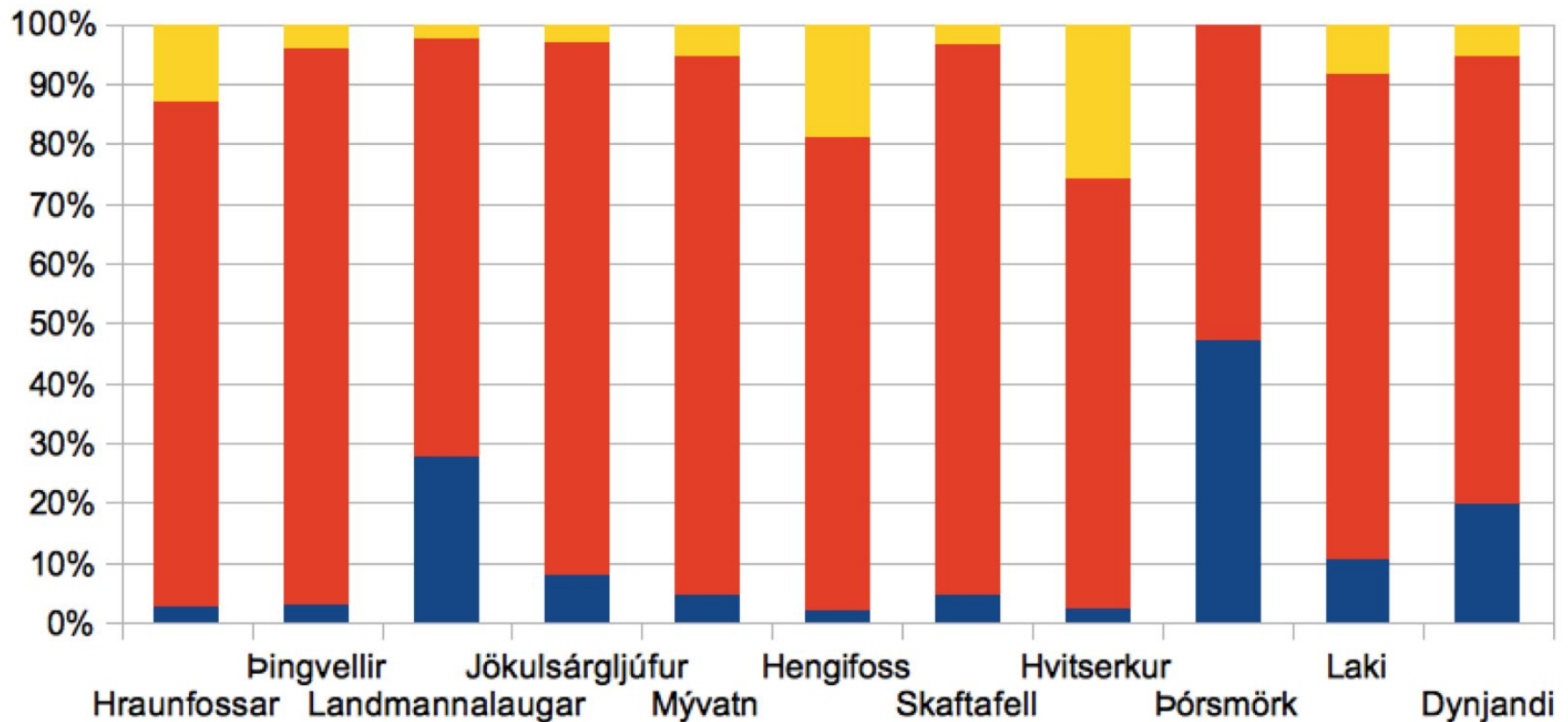
Visitor surveys - overview





Visitor surveys - reason for visiting

■ Only site / most important ■ One among multiple ■ Non planned



Average spending per person per 24 h

Overall
21.865 ISK

Locally
10.187 ISK

'PA-only'
12.683 ISK

Locally
5.625 ISK





Average spending per person per 24 h

45 % of spending in the vicinity of the PAs

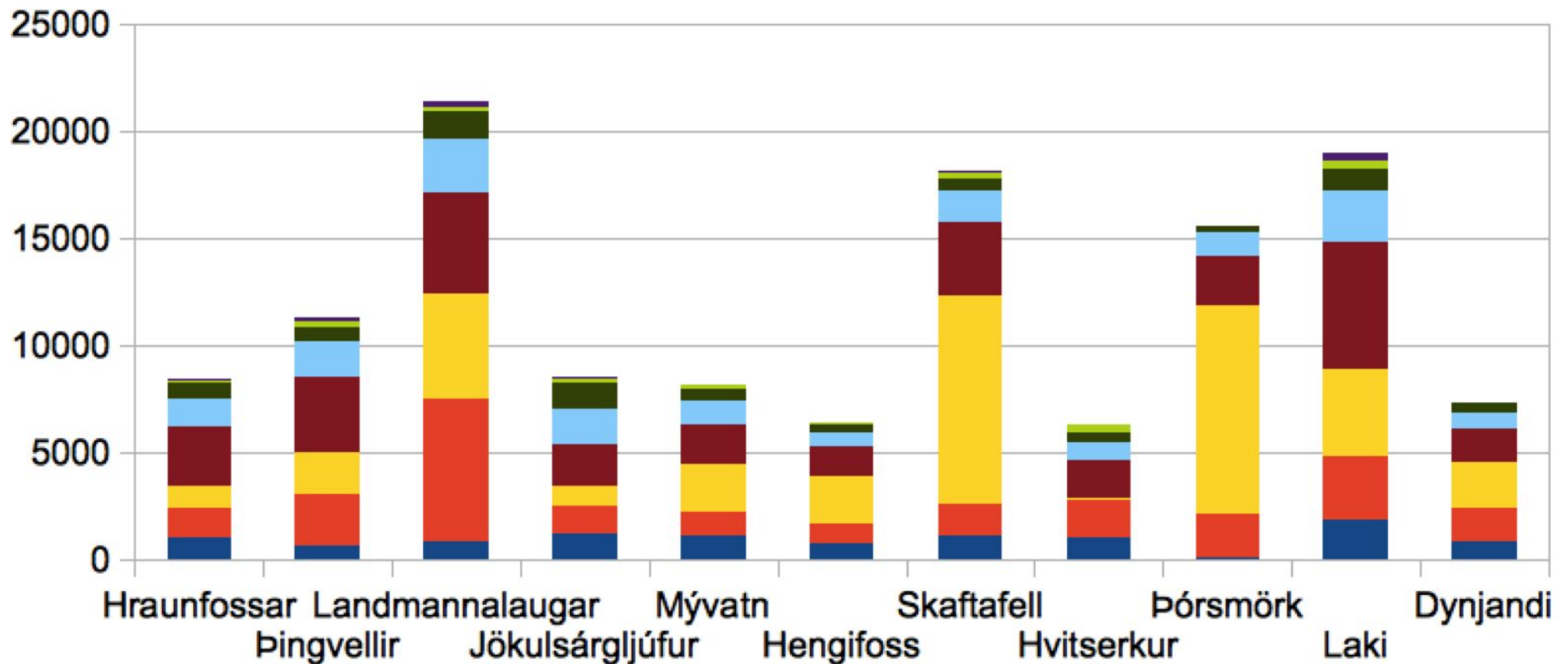
98 % of all spending by foreign tourists





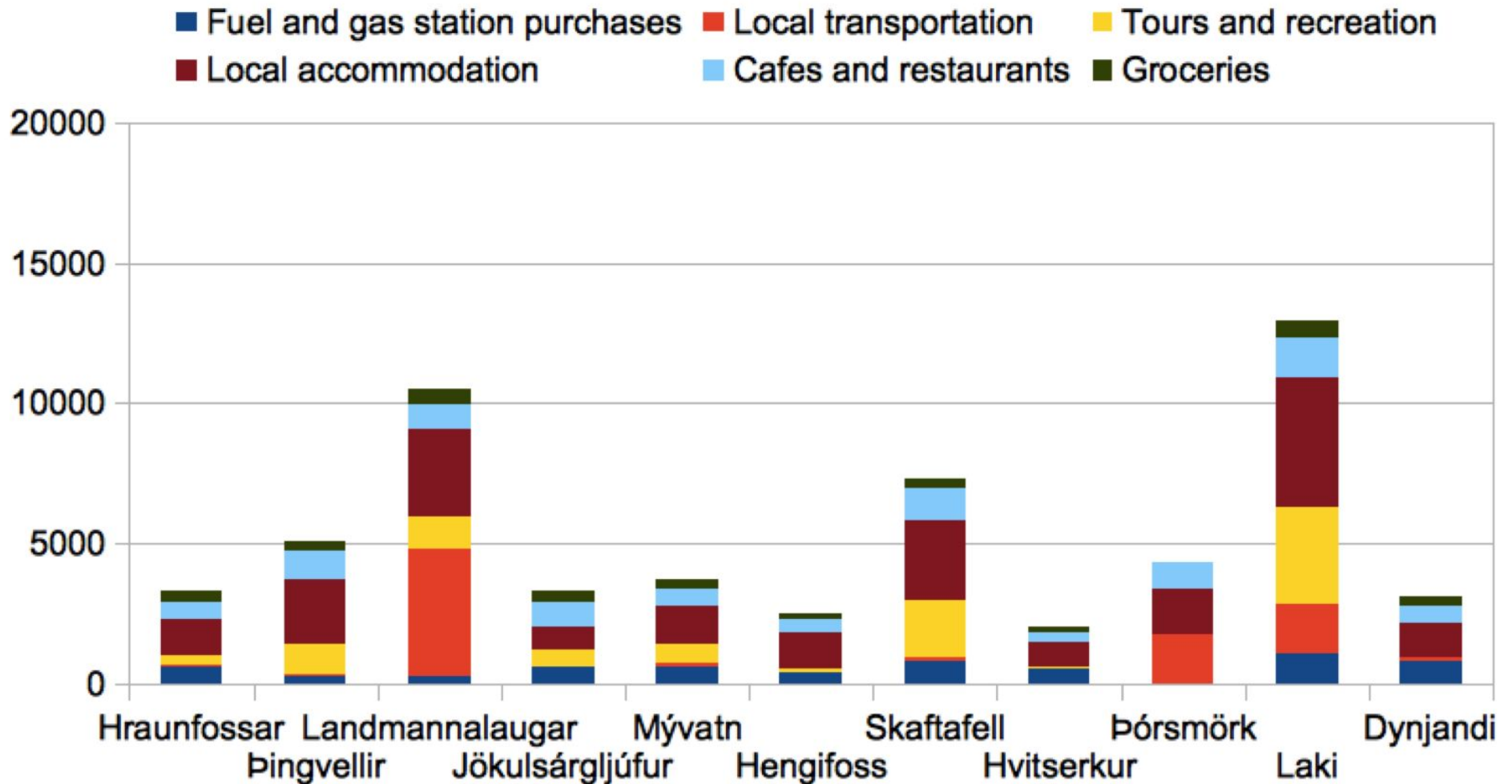
Total 'PA-only' spending per site

- Fuel and gas station purchases
- Accommodation
- Souvenirs
- Transportation
- Cafes and restaurants
- Other retail
- Tours and recreation
- Groceries





Local 'PA-only' spending per site





Direct economic impacts (2017)

<p>3,8 million visits</p>	<p>10 billion ISK locally 33,5 billion ISK overall <small>(personal income & business value-added)</small></p>
<p>1.800 jobs locally 5.500 jobs overall <small>(1.500 / 4.800 in full-time equivalent)</small></p>	<p>12 billion ISK in tax revenue <small>(sales, personal income and business taxes)</small></p>





Employment effects of the PAs

200 people in total
(120 in full-time equivalent)



90 %



80 visitors per day
for each ft-employee
(260 for UST sites!)

+ significant
volunteer efforts





Employment effects of the PAs

National park or protected area	Full-time staff	Part-time / seasonal staff	Staff in total	Staff in total (FTE)
Snæfellsjökull NP	2	6	8	4
Vatnajökull NP	21	101	122	71
Þingvellir NP	31	14	45	38
Dynjandi	1	2	3	1,5
Hraunfossar	0	1	1	0,5
Landmannalaugar	1	3	4	2
Mývatn	2	6	8	4
Þórsmörk	1	(70 volunt.) ~3	4	1,2
<i>Total</i>	<i>59</i>	<i>136</i>	<i>195</i>	<i>122,2</i>



Overall impact to cost -ratio



23:1



Taxes 8:1



Economic impact vs budget / taxes

Location	Operational budget 2017 (mISK)	Budget with investments 2017 (mISK)	Direct economic impact by MGM2 (mISK)	Economic impact to cost -ratio	Tax revenue generated by MGM2 (mISK)	Generated taxes to state contribution -ratio
Pingvellir NP	751	1.229	13.394	25:1	4.919	9:1
Vatnajökull NP ^[4]	351	725	10.763	15:1	3.874	5:1
Snæfellsjökull	39,7	75,0	3.606	48:1	1.426	19:1
Landmannalaugar	20,0	35,5	1.062	30:1	429	12:1
Dynjandi	4,3	28,2	295	10:1	123	4:1
Mývatn	42,7	47,1	2.444	52:1	1.038	22:1
Hraunfossar	7,0	8,2	1.292	158:1	514	63:1
Þórsmörk	15,0	15,0	312	21:1	97,3	6:1
Total	1.230	2.163	33.168	23:1	12.420	8:1



International comparisons (2017)



- 331 million visits
- 306.237 jobs
- \$35,8 billion in economic output



- 3,1 million visits
- 2055 local FTE jobs
- 206,5 million € in economic output



- 3,8 million visits
- 1500 local, 5500 total FTE jobs
- 33,5 billion ISK (ca. 243 m€) in economic output



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Thomas, C. C., Koontz, L., & Cornachione, E.. (2018). [2017 national park visitor spending effects: Economic contributions to local communities, states, and the nation](#). *Natural Resource Report NPS/NRSS/EQD/NRR—2018/1616*. National Park Service, Fort Collins, Colorado.

Metsáhallitus Parks & Wildlife Finland. (2018). [Local Economic Impacts of Finnish National Parks and Other Protected Areas Year 2017](#). [online]. Accessed Sep 5th 2018.

Verification

**MGM2 results
vs. tax data
vs. employer survey**



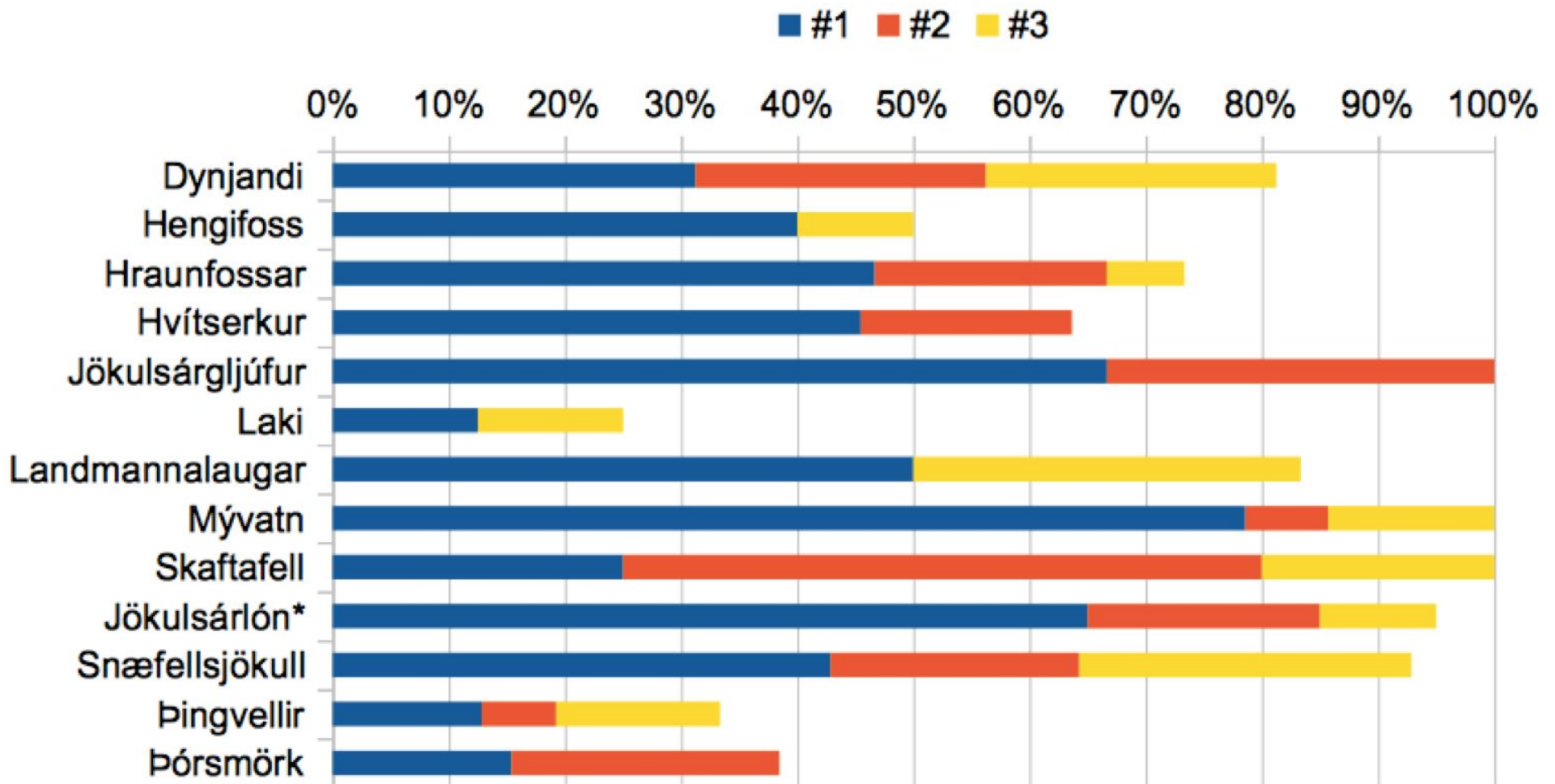
Employer survey

- 415 companies, representing ca. 4360 employees in tourism
- Mainly small businesses in accommodation, tours and restaurant sectors
- Employees mostly local and employed all-year round
- Majority of staff female (ca. 65 %), no gender difference in permanent /seasonal staff





Employer survey - importance of PAs to local operators





Employer feedback



- Road network main concern
- Spreading tourists more evenly across country important
- Restroom shortage
- Clear goals and policies needed
- Better cooperation between government, landowners, institutions, municipalities and workers wanted.



Conclusions

- High employment and economic impacts
- Results supported by tax records
- 45 % of the visitor spending locally
- Very high impact to budget -ratios
- PAs have potential to generate local employment; currently realised by VNP and PNP





Further research

- What is the added-value of PAs in Iceland?
How can PAs further support sustainable recreational use, better visitor experience and rural livelihoods?
- How the areas in the current protection plans could contribute to regional development?





Related readings

IUCN

Tourism and Visitor Management in Protected Areas

Guidelines for sustainability

Yu-Fai Leung, Anna Spenceley, Glen Hvenegaard, and Ralf Buckley, Volume Editors
Craig Groves, Series Editor

Developing capacity for a protected planet

Best Practice Protected Area Guidelines Series No. 27

VISITOR MONITORING IN NATURE AREAS

– a manual based on experiences from the Nordic and Baltic countries

World Commission on Protected Areas (WCPA)

Economic Values of Protected Areas

Guidelines for Protected Area Managers

Task Force on Economic Benefits of Protected Areas of the World Commission on Protected Areas (WCPA) of IUCN
In collaboration with the Economics Service Unit of IUCN

Adrian Phillips, Series Editor

Best Practice Protected Area Guidelines Series No. 2

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