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Arctic Programme  
2014–2020



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# Growing tourism and local societies – Iceland example -

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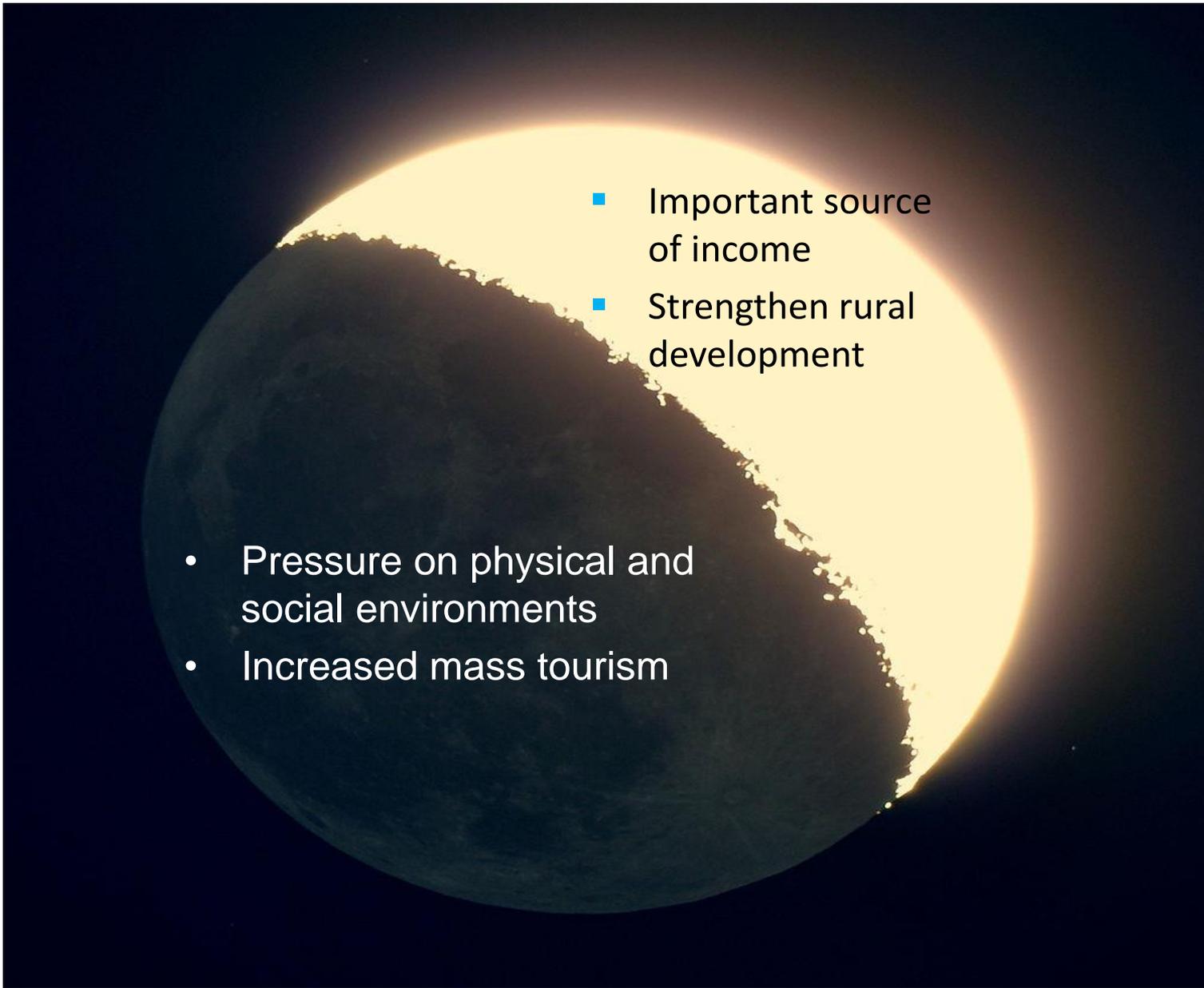


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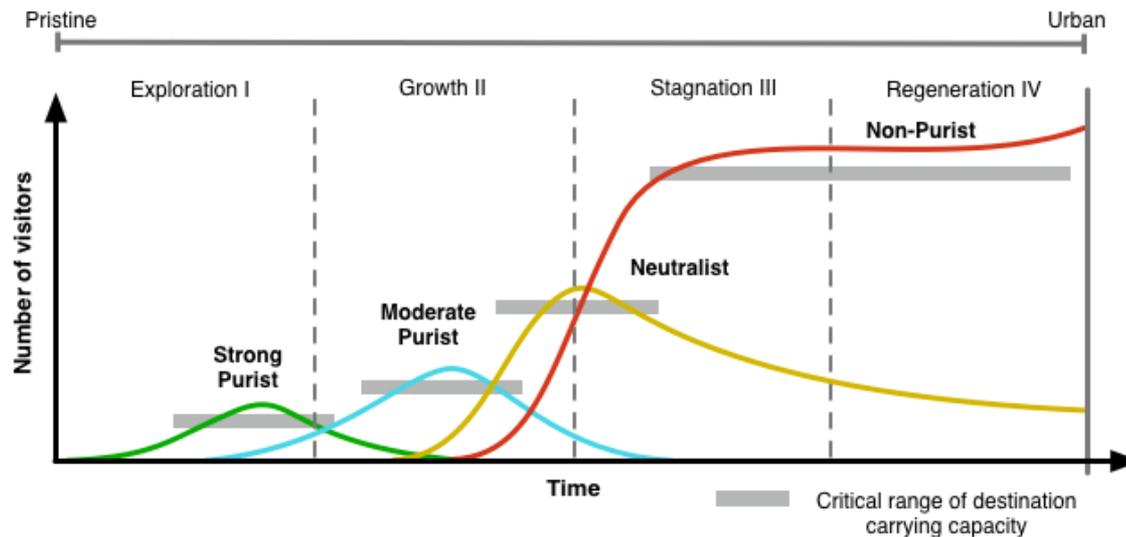
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- 
- Pressure on physical and social environments
  - Increased mass tourism
  - Important source of income
  - Strengthen rural development



- Dominating reaction based on “first aid”
- Increased demand on more infrastructure



## In Iceland - Still no land use plan for tourism

- How can we use tourism to support local societies, rather than being used by it?
- What kind of tourism is desirable?
- What kind of tourism do residents consider to be the most desirable in their communities?
- How can tourism increase residents' wellbeing?



# Icelandic BuSK cases

1. Managing future glacier recreational sites under social-economic and climatological changes
2. Public participation indicator framework for sustainable tourism development
3. Residents perception towards participation in land use planning (Harava - ongoing)



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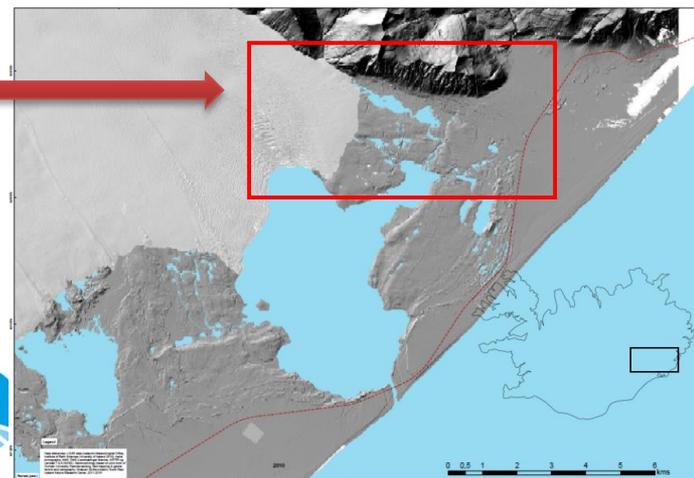
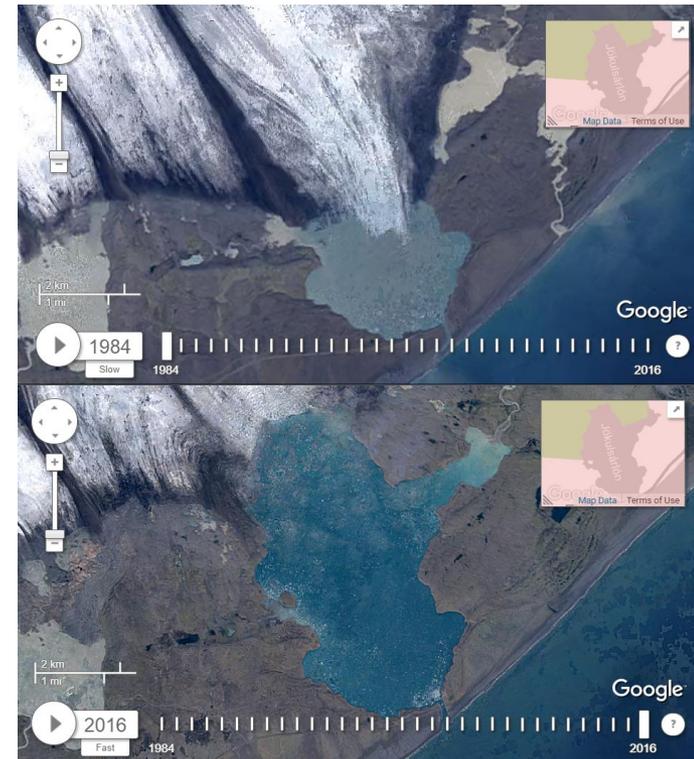
# Case study 1: Managing glacier recreational sites

## Problem

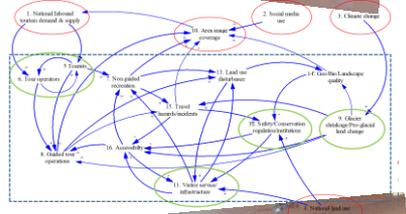
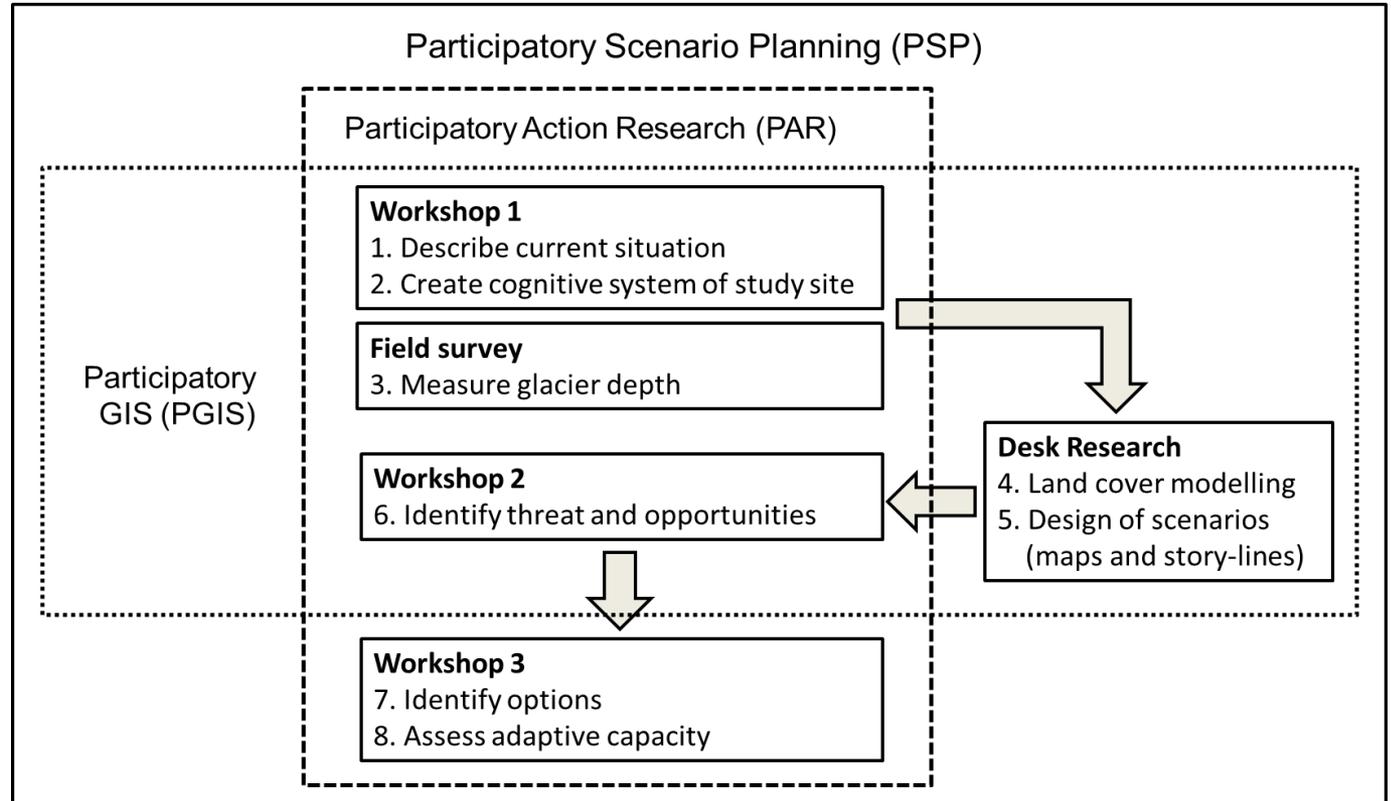
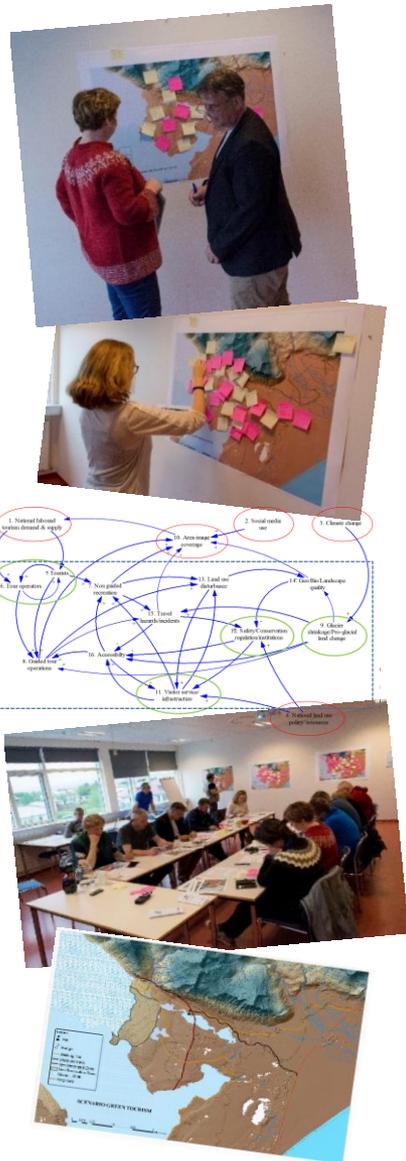
- Glacier destinations popular recreational sites; In 2017 1,8 m visitors
- Dynamic and fragile environment, uncertain and dangerous, increasing risk due to climate change
- Challenging to plan and manage
- Still no visitor planning

## Aims

- Develop a GIS grounded participatory approach to support planning of nature based recreational sites
- Test the approach in a case-study, a glacier site in southeast Iceland.



# The approach: Participatory Scenario Planning (PSP)



# Deliverables from CS1

## Major deliverables

- Increased knowledge on how to use PGIS to incorporate local knowledge in land use planning and management of dynamic glaciers destinations
- Framework for decision makers on how to collect and use local knowledge for evaluating potential drivers of change and local pressures critical for sustainable land use management of recreational nature destinations.

## Major advantage and disadvantage

- Encourages local stakeholders to:
  - 1) elaborate on long-term changes and associated uncertainties through scenario construction and visualization;
  - 2) long term thinking to cope with potential future implications for recreation sites located in glaciated areas
- Number of involved stakeholders has to be limited to certain number, in order to manage its process. So not all interests, perceptions are taken into consideration.



# Case study 2: Public participation indicator framework for sustainable tourism development

## Problem

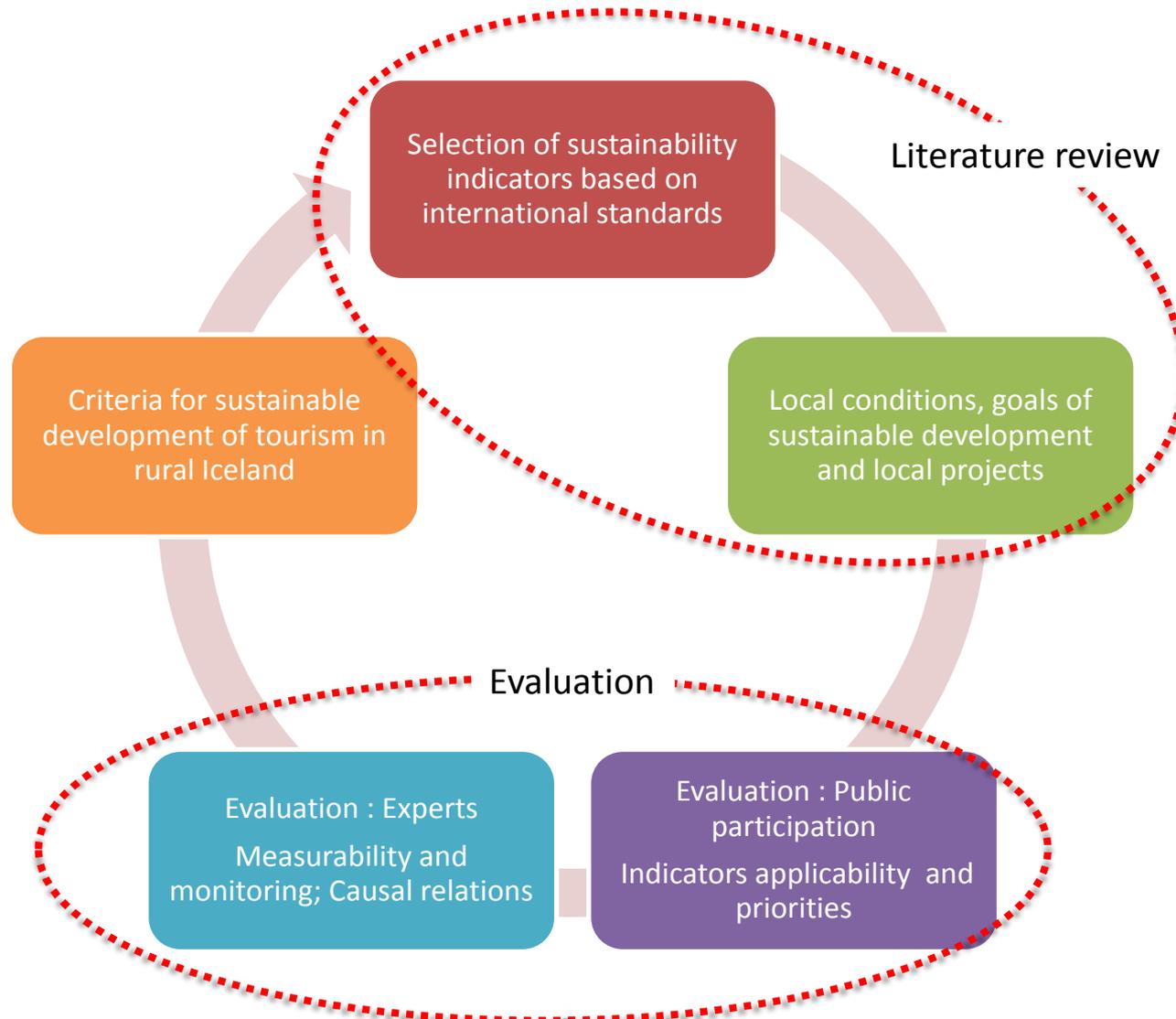
- Increasing tourism (436% from 1998 in Sudurland region)
- Increasing tourism impact – large economic leakage

## Aims

- To gain insight into the development and utilization of sustainable indicators for tourism outside of Iceland
- To develop public participation framework for designing sustainable indicators for tourism in rural Iceland



# Indicator framework - major work processes



Sjálfbærnisvísir	
Umhverfi	1. Umhverfisstærðir og tækifæri til umhverfsvæns reksturs
	2. Líffræðilegur fjölbreytileiki
	3. Jarðfræðilegur fjölbreytileiki
	4. Svávarrof
	5. Utanvegaakstur
	6. Sorphirða og úrgangsmál
	7. Loftmengun og loftlagsbreytingar
	8. Orkunýting
	9. Náttúruvernd
	10. Álag ferðamennsku á gróður og jarðveg
	11. Árstíðabundin þolmörk jarðvegs og gróðurs
	12. Stjórnun ferskvatnsauðlinda
Sjálfbærnisvísir	
Efnahagur og innviðir	1. Atvinnutækifæri og vinnuþarfaður samfélagsins umhverfis þjóðgarðinn
	2. Tækifæri til nýsköpunar
	3. Efnahagsleg lífskjör og verðlag
	4. Fóst búseta og árstíðabundin búseta
	5. Árstíðabundin atvinna
	6. Tekjur af ferðaþjónustu
	7. Samgöngumátar og umferð
	8. Ástand vega og bílastæða
	9. Hreinlætisaðstaða fyrir ferðamenn
	10. Innflutningur vinnuafis
	11. Innflutningur vörur

Sjálfbærnisvísir	
Stjórnýsla	1. Stefnumótun fyrir sjálfbæra þróun
	2. Landnýtingaráætlun fyrir þróun ferðamennsku
	3. Vöktun á sjálfbærni
	4. Mannauður þjóðgarðsins og þekking starfsfólks til sjálfbærrar þróunar
	5. Þátttaka almennings í stefnumótun
	6. Langtímaáætlun fjárveitingar til þjóðgarðsins
	7. Upplifun heimamanna af þjóðgarðinum
Sjálfbærnisvísir	
Samfélag og velferð	1. Fólksfjöldapróun samfélagsins umhverfis þjóðgarðinn
	2. Gæði þjónustu og veitinga
	3. Ferðahegðun og þarfir ferðamanna
	4. Upplifun heimamanna af ferðamennsku
	5. Upplifun starfsmanna þjóðgarðsins af ferðamönnum
	6. Ánægja og kjör starfsfólks í ferðaþjónustu
	7. Ánægja ferðamanna
	8. Staða jafnréttis í samfélaginu
	9. Menntun og hjálfun
	10. Ímynd og menning svæðisins í huga íbúa
	11. Umhverfis- og sjálfbærnivitund heimamanna
	12. Umhverfis- og sjálfbærnivitund ferðamanna
	13. Lýðheilsa og öryggi íbúa

⇒ 44 key indicators

Environment

Economy

Governance

Community and welfare

### Assessment procedure for each selected indicator

Relevance Suitability Who will use it and how will it influence decisions on the issue?	Feasibility Is it practical and affordable to collect and analyze the data?	Clarity Is it easy to understand and clear to users?	Credibility Is it supported by valid and reliable information from credible sources?	Comparison Is it useful for comparisons with other areas, standards, or in time series?
Is it clear what this indicator stands for?	Is the indicator describing the situation today?	Is it easy to monitor this indicator?	Are there sources that support the use of this indicator? Are examples/ experience of its use?	Is monitoring this indicator feasible in this area with respect existing measurements? Are the indicators comparable?
Evaluation: Public participation			Evaluation: Experts	

# Example of an individual assessment sheet

Mat rýnihóps á notagildi og mikilvægi sjálfbærnivísa fyrir ferðamennsku í Þjóðgarðinum Snæfellsjökli og nágrannabyggðum

Nafn:

Lykill fyrir matsspurningar

Alls ekki sammála	1
Ekki sammála	2
Hvorki né	3
Sammála	4
Mjög sammála	5

## Efnahagur

Sjálfbærnivísir	Matsspurningar			Röðun vísa eftir mikilvægi
	Er skýrt hvað þessi vísir stendur fyrir?	Er unnt að nota vísinn til að lýsa ástandinu í dag?	Er einfalt að vakta þennan vísi?	
1. Atvinnutækifæri og vinnumarkaður				
2. Tækifæri íbúa til nýsköpunar				
3. Efnahagsleg lífskjör og verðlag				
4. Föst og árstíðabundin búseta				
5. Árstíðabundin atvinna				
6. Beinar tekjur af ferðaþjónustu				
7. Óbeinar tekjur af ferðaþjónustu				
8. Samgöngur og umferð				
9. Ástand vega og bílastæða				
10. Salerni og önnur aðstaða fyrir ferðamenn				
11. Framleiðsla og nýting vöru og þjónustu í héraði				
12. Tillaga að vísi:				

# Example of a group assessment sheet

## Mat rýnihóps á mikilvægi sjálfbærnivísa fyrir ferðamennsku í Þjóðgarðinum Snæfellsjökli og nágrannabyggðum

### Efnahagur

Sjálfbærnivísir	Röðun vísa eftir mikilvægi
1. Atvinnutækifæri og vinnumarkaður	
2. Tækifæri íbúa til nýsköpunar	
3. Efnahagsleg lífskjör og verðlag	
4. Föst og árstíðabundin búseta	
5. Árstíðabundin atvinna	
6. Beinar tekjur af ferðapjónustu	
7. Óbeinar tekjur af ferðapjónustu	
8. Samgöngur og umferð	
9. Ástand vega og bílastæða	
10. Salerni og önnur aðstaða fyrir ferðamenn	
11. Framleiðsla og nýting vöru og þjónustu í héraði	
Tillaga að vísi:	

# The indicator framework

Literature review

Public participation

Evaluation of measurability  
(OESD: short term; medium term; long term)

DPSIR analysis - causal relation

## Umhverfi- Lykilvísir (röðun eftir forgangsröðun þátttakenda)

### Titill lykilvísis

*Sjálfbærnisvísar úr heimildaúttekt:*

Kóði/númer og titill vísis úr heimildaúttekt, eftir stafrófsröð.

Skammstafanir heimilda:

ASI-II (Arctic Social Indicators, önnur útgáfa 2014)

GSTCC (The Global Sustainable Tourism Council Criteria, 2013)

SUSTAIN (Staðlar sjálfbærnisvísna fyrir ferðamennsku á strandsvæðum sem þróaðir voru á vegum Þróunarstofnunar Evrópusambandsins (e. EU Regional Development fund), 2012)

US (Umhverfisstærðir Snæfellsness, Skýrsla frá vottunarsamtökunum vegna sjálfbærnisvísna fyrir árið 2015 og skýrslan *Skref í rétta átt. Hverju hefur vinna að umhverfisstærðum sveitarfélaga á Snæfellsnesi skilað?*, desember 2015)



Niðurstöður heimildaúttektar	Niðurstöður þátttöku í úttekt			
	Er skýrt hvað þessi vísir stendur fyrir?	Er unnt að nota þennan vísir til að lýsa ástandinu í dag?	Er einfalt að vaktu þennan vísir?	Röðun vísna eftir mikilvægi
Fjöldi vísna	meðalgildi svara	meðalgildi svara	meðalgildi svara	meðalgildi svara
↓	↓	↓	↓	↓
fjöldi vísna	Meðaltal gilda á líkhert skala, frá 1-5 (Alls ekki sammála – mjög sammála)	Meðaltal gilda á líkhert skala, frá 1-5 (Alls ekki sammála – mjög sammála)	Meðaltal gilda á líkhert skala, frá 1-5 (Alls ekki sammála – mjög sammála)	Meðaltal gilda röðunar Sæti x af x

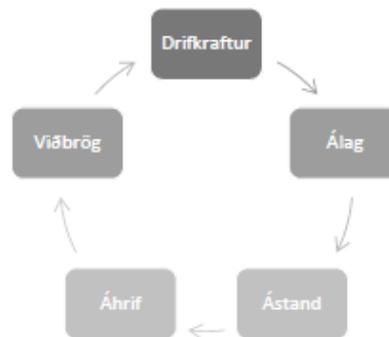
**Möguleg tiltæk gögn til virkrar vöktunar:**

Titill vöktunar (Heimild).



**Niðurstöður raunhæfnimats:**  
 - Vöktun raunhæf:  
 - Vöktun framkvæmanleg að hluta: - -  
 - Vöktun ekki framkvæmanleg:

**DPSIR greining**



**Heildarmat á notagildi sjálfbærnisvísisins:**

Samantekt heildaráhrifa vöktunar á þessum vísir fyrir ferðamennsku í Þjóðgarðinum Snæfellsjökli og nærliggjandi byggðum.

# Deliverables from CS2

## Major deliverables

- Increased knowledge on the potentials of public participation in indicator development
- Qualified work procedure and assessment sheets (individual and group) for the public to select indicators for sustainable tourism development
- Framework for sustainable tourism planning based on selection and assessment of sustainability indicators that are most important for a local tourism system, how they are interconnected, how they impact each other and where potential conflicts arise.
- Set of indicators for sustainable tourism development in rural Iceland

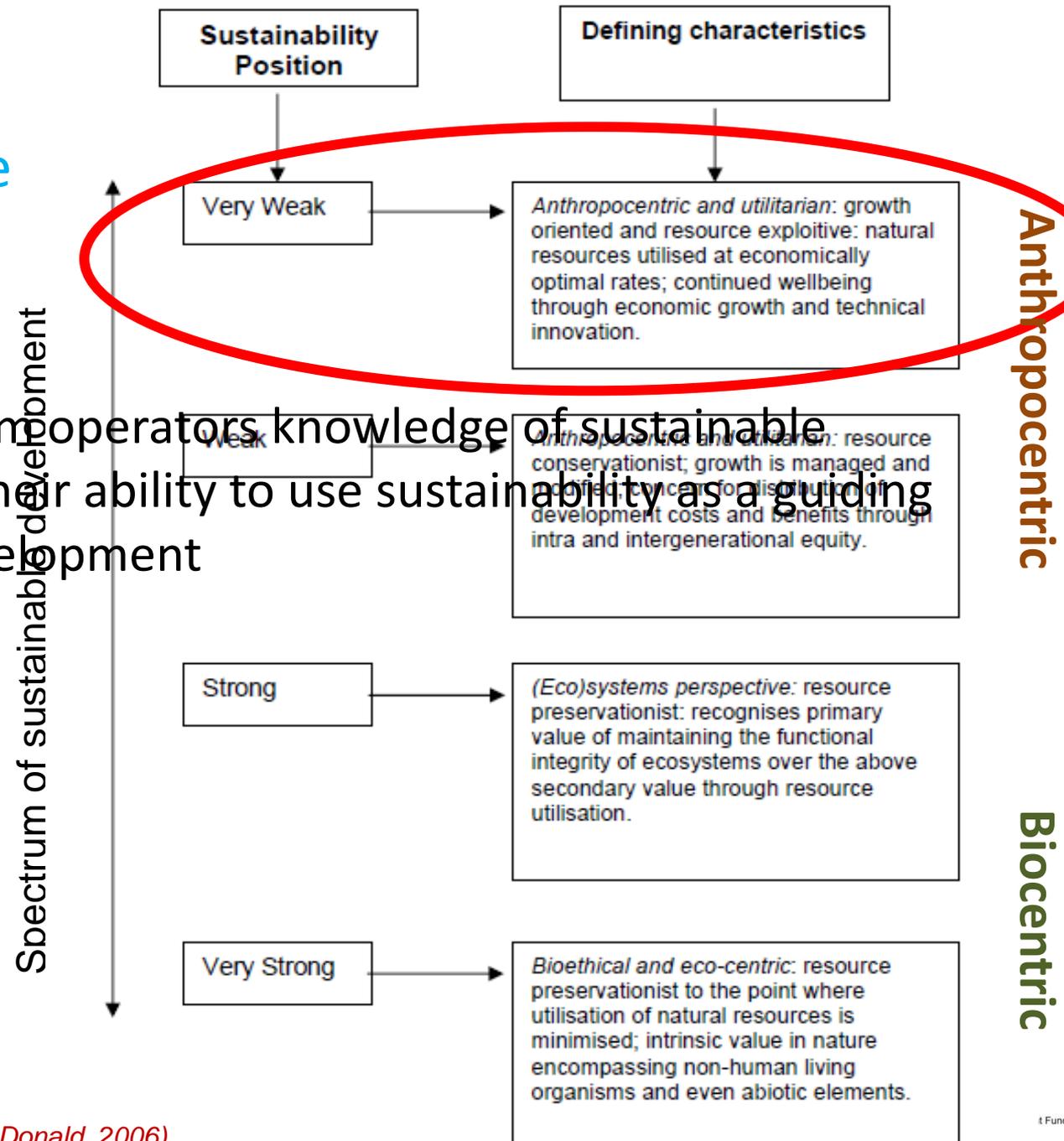
## Major advantage/Disadvantage

- Encourage stakeholders to discuss the advantages and disadvantages of each indicators in order to prioritize them; using PGIS the potential impacts of tourism development are made clear spatially.
- Time consuming, expensive



# The position of Icelandic tourist operators, on the sustainability development spectrum

To assess the tourism operators knowledge of sustainable development and their ability to use sustainability as a guiding light in tourism development



## Case study 3: PPGIS/Harava survey

- Aim: Assessing residents perception towards participation in land use planning
- ONGOING 😊

# Key takeaways from the Icelandic cases

- The importance of integrating local knowledge into regional tourism planning is critical for sustainable tourism development.
- Local knowledge reflects the diverse range of opinions of particular places in a community as well as different values and perceptions of a place that are of vital importance for sustainability of a place, both for the local society and tourism development.
- Using PGIS unites participants in a place and spatially visualizes the problems in question increasing its understanding.

# Thank you!



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