**Qualitative Comparison Table – within case: Iceland**

| **Dimension** | **Corpus Analysis (mass media):** | **Interviews** | **Field Notes** | **Internet Ethnography (netnography)** | **Document Analysis** | **Synthesis, key points of comparison** |
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| **Direct contact:**  **Conflict over oil exploration & extraction** | - Not present. | - A lot of talk about oil is about prospectivity and a largely hypothetical industry in the northeast. Not a dominant theme, but a few participants critically point to a tension between the notion of oil prospectivity/Arctic oil frontiers and the notion of Iceland as a green nation that is part of its tourism image in relation to renewable energy.  -Several participants also engage in envisioning Iceland as a post-oil society as part of thinking about oil prospectivity, and in talking about oil & tourism as incompatible development paths. This is also connected to talk about Icelandic climate change policy, Iceland as a green nation, and also with talk about automobility.  - Not oil-tourism interface, but broader “energy tourism interface”: one of the issues that comes up recurrently (5 participants, from sectors other than NGO) are conflicts over the negative impacts of renewable energy, framed around claims that energy infrastructure, transportation lines, etc… negatively impacts wilderness values of Icelandic landscape that are valued by tourists as an attractor. The counterpoint (articulated more by interviewees) is to invoke renewable energy transition, the notion of Iceland as a green nation, and the possibility of renewable energy-tourism synergies. | - Not present. | - Not present. | -N/A | - Not a lot here. But there some interviewees note a potential point of tension in terms of rethinking Icelandic oil prospectivity in relation to Iceland’s tourism image and image as a green nation.  - Otherwise, some friction does come up around renewable energy development, with conflict over the notion that renewable energy infrastructure impacts wilderness values that are among the key tourism attractors. On the other side, other interviewees see Iceland’s renewable energy orientation as part of the green self-image that is also part of its tourism image.  (KB: Quite reasonable. The conflicting interpretations of (further) RE development (hydro and geothermal, wind only beginning) are a persistent feature of discourses about energy.) |
| **Direct contact:**  **Threat of oil extraction as “envirotisement” for tourism – increasing tourism as strategy for opposition to oil** | - Not present. | - Not present. | - Not present. | - Not present. | -N/A | - Not present. |
| **Direct contact:**  **Oil as a tourism attractor** | - Not present. | - Not present. | - Not present. | - Not present. | -N/A | - Not present. |
| **Direct contact:**  **Oil money supports tourism development** | -Not present. | - Not present. | - Not present. | - Not present. | -N/A | - Not present. |
| **Indirect contact:**  **tourism is carbon intensive** | - The most central node, defined mostly by tourism, ocean and place, does connect these with car and boat travel, though this is weakly linked to the node on technology, climate & energy. | - The main climate change nodes focus on tourism’s role in responding to climate change (8 references) and tourism contributes to climate change (6 references), both of which are linked to talk about aeromobility (acknowledged as one of the main ecological ironies of Iceland’s image as a green nation and nature-based tourism destination), automobility and boat tours. In terms of tourism’s role in responding, the recurrent theme is moving towards vehicle electrification as a response (tour buses, tour boats). There are also a few points of discussion of national climate change performance and policy, where the Icelandic image as a green nation, emphasis on renewable energy and its commitment to the Paris Agreement are contrasted with automobile-dependence and the carbon intensity of shipping.  - One of the main culture & identity nodes is “Iceland is a green nation,” wherein automobility comes up recurrently as an exception to this in tourism and beyond.  - The main animal coding is for whales, linked to boat tours, and often connected to sustainability discourse, talk about tourism-environmentalism collaboration, and tourism’s role in addressing climate change. This is recurrently framed in terms of working to lower the carbon footprint of boat tours by seeking alternatives.  - Similarly the main mode of interaction with coastal environments is boat tours, which often connects with talk about tourism responding to climate change in terms of examples of trying to lower carbon footprints.  - The ecological drawbacks of tourism comes up recurrently, with a focus on the impacts of aeromobility and automobility, and is often connected to tourism sustainability discourse, both as challenge, and place where tourism can address its carbon footprint and make improvements – including mentions of specific “best practices.”  - There is quite a bit of discussion of aeromobility, which is often connected to talk about the environmental drawbacks of tourism and tourism’s contributions to climate change, as well as to the key role of Icelandair and aeromobility networks in building tourism flows (and contributing to the tourism boom). Likewise, there is a lot of talk about automobility, much of which links thematically to the environmental drawbacks of tourism, as well as the potential for tourism to respond to climate change by addressing automobility issues. This gets at an interesting “Icelandic paradox”: a tourism economy built on being close to nature, with a green self-image, and renewable energy synergies, coupled with environmental reflexivity about the environmental costs of heavy reliance on carbon intensive aeromobility and automobility networks.  - Global region also comes up recurrently, particularly in talk about tourism markets, with America and China being particularly visible (U.S. as a currently important market, with China talked about more as a emerging/prospective market). Coding for this is also often linked to coding for aeromobility. | - Little explicit evidence of a discourse noting or problematizing carbon intensity of tourism. However, note centrality of boat tours and automobility across thematic coding for modes of interaction with nature, and in coding for key tourism attractors (northern lights, seascape, whales, puffins, hiking, waterfalls, volcanic landscape, Lake Myvatn …). So, the fossil fuel intensive modes of transportation as mediators of travel/experience are very present, though a bit below the surface?  - Automobility comes up repeatedly as a dominant mobility network that structures tourism, however, this is not really problematized in terms of climate change or carbon footprint.  -Aeromobility also comes up quite a lot, but here there are a few more explicit instances where this is connected to tourism`s contributions to climate change.  -Relatedly, the notion that oil will continue to be integral to the energy system comes up primarily in relation to air travel.  - Coding for global region comes up quite a lot, mostly in relation to tourism, with America and China particularly recurrent themes, suggesting an orientation (or reliance) on long distance (& more carbon intensive) tourism flows. This is also often linked to coding for automobility. | - There is lots of coding for aeromobility, across a broad range of tourism sector websites. This is often linked to Icelandair as a key actor, and to coding for wilderness and automobility. There are also points where this connects to material on tourism’s role in responding to climate change and corporate environmental responsibility.  - There is also lots of coding for automobility across a range of tourism sector websites (though especially prevalent in Reykjavik Excursions and Grey Line). This is often linked to tourism activities and attractors including hiking, waterfalls, hot springs (and specifically the Blue Lagoon), and particular travel routes. Whereas there are signs of environmental reflexivity about the carbon intensity of tourism in coding for aeromobilities, this is less visible or problematized here.  - There are quite a few references to corporate environmental responsibility and tourism sustainability discourse within tourism sector websites. Much of this connects to boat tours and whales, but also to aeromobility (specifically, Icelandair web content). This links to the role of tourism in responding to climate change through adopting sustainability/CER measures to work towards lower carbon impacts of these local (boat tours) and global (aeromobility) activities. | -N/A | - There are repeated references, across data sources, on the carbon-intensive mobilities that are woven into Icelandic tourism – aeromobility, automobility, boat tours. Related to aeromobility, there are also frequent mentions of the US and China as distant and key tourism markets that are tied to aeromobility.  - There is often environmental reflexivity (particularly in interviews) about the role of tourism in contributing to and responding to climate change via its carbon-intensive mobilities (aeromobility, automobility, boat tours). There are examples across the interviews and netnography of attempting to address this and lower the tourism carbon footprint, i.e. around cars, boat tours, etc…  - In terms of environmental reflexivity, there are also invocations of “ecological irony” (in Szerszynski`s sense) between the self-image of Iceland as a green nation, Paris agreement commitments, and the carbon-intensive dimensions of the current tourism boom.  - As we see across data sources, perhaps aeromobility is the most intractable problem in terms of carbon footprint and Icelandic tourism flows.  (KB: Again I agree with your interpretation. Changes in tourism during the last few years have really brought this dilemma of carbon-based mobilities into light – mainly in three ways I think: a) the (until very recently) exponential growth of flights with now two Icelandic airlines bringing in about 80% of all tourists coming by air; b) great increase in cruise ships, many very large, all using oil to produce electricity also while in harbour; and c) the great increase in the rental car fleets, with corresponding increase in traffic esp. along the south coast. Occasionally this is discussed in terms of emissions, both in global terms (the inability of Iceland to achieve reduction targets) and local terms (e.g.. air pollution from cruise ships in harbour) |
| **Indirect contact:**  **tourism environments impacted by climate change** | - There is a node oriented around technology, climate and energy, but this is less central than the others, and is weakly connected to the three nodes that have a tourism & travel focus (rather, this is a bit better connected to the node on technology, finance, economy). | - Not present. | - There are a set of related climate change key themes: climate change & the global Arctic, risks & impacts of climate change, and climate governance. Most of this material is from the discussion space of Artic Circle, and most is not explicitly linked to tourism, but is more general discussion about climate change impacts, the notion of a global Arctic, and the need to evolve environmental governance & policy to meet the challenge. The only specific link to tourism is marginal, and outside Arctic Circle, and focuses on tourism site environmental education that speaks to the decline of Icelandic glaciers due to CC, wherein we see the negative impacts of CC on tourism environments.  - Relatedly, one of the most recurrent critical events is the Paris COP agreement, largely in Artic Circle fieldnotes, which is often tied to talk about the rapidly changing Arctic and need for government policy responses.  - Relatedly, coding for tourism landscapes often focuses on “Arctic Nature”, especially in the Arctic Circle fieldnotes, and this is often connected to a bundle of themes: wilderness, polar bears, boat tours, and the impacts of CC, which are changing the dynamics/opportunities/challenges of expanding Arctic tourism. Outside Arctic Circle, the focus on Icelandic Arcticness for the tourist gaze is more present in Akureryi (vs. RVK), though probably less so than in northern Norway.  - Not a dominant discourse, but the main recurring theme related to ecological dimensions of oil focuses on Arctic oil frontiers, which is linked to oil prospectivity, climate change impacts, and notions of a global Arctic. This is also linked to discussion of cruise ship tourism and Arctic nature in talk about potential benefits/opportunities of climate change – in terms of increasing accessibility of Arctic for oil prospectivity, shipping and tourism traffic. | - There is quite a bit on government performance and policy on climate change, mostly from ENGOs, but also the government (National Energy Authority), which is cross-coded with the need to ensure protection of natural areas, nature as fragile, and with notions of wilderness. This also connects to mentions of the Paris COP agreement. While often not framed explicitly in relation to tourism, here we see climate change policy responses as also being about protecting Icelandic nature and wilderness (which are in turn often positioned as the basis of the tourism economy). Risks and impacts of climate change also come up quite a bit, mostly raised on ENGO websites. | - Melting Arctic ice around Iceland are linked to potential increased economic opportunities (i.e. shipping, resource extraction), but may also have significant impacts in driving shifts in ocean currents in the North Atlantic, which may also have significant impacts on Iceland (i.e. cooling temperatures, increasingly severe extreme weather). | - The material on climate change impacts is generally broader than tourism, and focuses on protecting nature (i.e. Arctic nature, wilderness values) in the face of climate change impacts. For Iceland, projected impacts also include cooling temperatures and increasingly severe extreme weather, which may have spillover effects on tourism. There are episodic moments where tourism sites also narrate climate change impacts (i.e. melting glaciers). There are also allusions to increased cruise ship travel with melting Arctic ice and interest in Arctic tourism. |
| **Indirect contact:**  **oil infrastructure supports tourism** | - Not present. | - Not present. | - Not present. | - Not present. | -N/A | - Not present. |
| **Culture:**  **Discourses of coastal communities & environments as spaces for nature-based tourism and oil extraction** | - The focus on place and environment is mostly related to tourism, not to oil development. The main node on place focuses on fishing and fish, mountains, sea, landscape, light (northern lights?) and links to keywords including community and nation. Another node on tourism, nature and energy also includes keywords like river, rock, earth, water, forest, ocean, in relation to tourism. Two tourism-oriented nodes (out of 3) are oriented around nature and place.  - Another node focuses more on travel in relation to history, art, culture.  - The coastal environment is less linked to oil exploration and extraction. | - Whales come up most often, across a broad range of participants, as an iconic animal and key tourism attractor. This is linked to boat tours, sustainability discourse, talk about the positive impacts of tourism. Puffins are the other main wildlife attractor that comes up a few times, linked to whales, northern lights, and boat tours.  - Relatedly, boat tours are the most frequently invoked mode of interaction with coastal environments, linked to whales, tourism sustainability, positive sentiment, and the rapid growth of tourism flows.  - The other modes of interaction talked about a bit more is hiking, which is linked to talk about glaciers, automobility, sustainability, tourism as environmental education, and negative sentiment (related to witnessing climate change impacts through hiking & glaciers).  - In terms of tourism landscapes, the main recurring theme is that Iceland draws people to experience ‘being close to nature,’ (invoked by 10 participants) which is often linked to hiking, notions of Iceland as a green country, and tourism-renewable energy synergies. Interestingly, this is also often connected to aeromobility in terms of the connectivity and affordability of a nature experience for visitors, only once is this critically interrogated in this context (i..e pointing to the ecological irony of carbon intensity of flying for a nature experience). Relatedly, a few (4) participants use language associated with wilderness (unspoiled, etc…) to describe the overarching qualities that draw visitors.  - The notion of `being close to nature` is also something of a master frame that often connects to more specific tourism attractors. These include: 1) geysers, geothermal pools, which are often connected to talk about the Blue Lagoon as a key attractor, as well as tourism-renewable energy synergies, and boat tours; 2) glaciers, which are linked to talk about automobility, aeromobility, hiking, waterfalls, as well as to the role of tourism in responding to climate change, primarily through talk about the experiential element of seeing glaciers as they`re being impacted by climate change, but also pointing to localized climate change impacts that *should* spur tourism operators to take more action; 3) Northern Lights, linked to whales, boat tours, and notion that this is a tourism attractor that extends the annual cycle; 4) Iceland`s volcanic landscape often linked to talk about the 2008 crisis, then the 2010 eruption as a pivotal mass mediated event that disrupted aeromobility, but shaped the region`s Tourism Destination Image.  - Tourism is often framed through sustainability discourse, as a site of environmental education/reflexivity. The environmental costs are acknowledged (in terms of carbon footprints and local ecological impacts), but are seen as potentially manageable, and that the value of tourism in terms of environmental reflexivity is a net positive vs. the ecological costs.  - Under coding for media communication networks, we also see a couple interesting recurrent themes: 1) that social media structures tourism mobilities, and 2) that the 2010 volcanic explosion was a critical media event; both of these events/dynamics are seen as contributing to the tourism boom.  - Talk about oil and coastal environments largely focuses on largely inter-related themes of coasts as sites of oil prospectivity and Arctic oil frontiers. There is seismic activity going on and exploration agreements in place but an Icelandic oil industry is still largely hypothetical and dampened by the global oil price declines of recent years. The notion of Icelandic oil has largely fallen out of the political/public imaginary. | - In terms of enacting coastal environments, Arctic Nature is a dominant theme, though this is more specific to the field of Arctic Circle. Otherwise, the constellation of themes that is more visible and prevalent throughout sites includes: coastline/seascape as focal point (connected with boat tours, whales, puffins); hot springs/geysers; mountain landscapes; northern lights; volcanic landscape; waterfalls. This latter set of elements is also often connected with hiking, automobility, photography as tourist practice.  - Puffins and whales both come up very often as iconic animals that define coastal environments and as key tourism attractors. Both are often cross-coded with coastlines and seacapes as focal points, boat tours, and northern lights in creating an “Icelandic nature’ and promoting modes of interacting with coastal environments. As a key difference, though, puffins are also often linked to Vikings (primarily via the enactments of tourism shops and tourism objects). Another key difference is that material on whales is often linked to tourism as a site for environmental reflexivity (learning), with more environmental education going on around whale-focused tourism.  - The two dominant modes of interaction with the environment are hiking (linked to volcanic landscape, waterfalls, photography as tourist practice, and automobility); and boat tours (linked to puffins, whales, northern lights and the seascape as focal point).  - In terms of mobilities, automobility comes up quite recurrently, which is repeatedly linked with hiking, hot springs/geysers, waterfalls, photography as tourism process. Automobility is also a core part of accessing and experiencing Icelandic tourism landscapes, a key mediator of tourism experience.  - Photography as tourism practice comes up repeatedly, most often linked to waterfalls, hot springs/geysers, hiking, and automobility. This gives a sense of how Iceland is experienced via the tourist gaze and through active encounters with nature – both through embodiment and visuality (and connects with the idea raised elsewhere that digital media and selfie culture has a been a major driver of the tourism boom).  - Not a dominant discourse overall, but Lake Myvatn comes up lots in the Akureyri fieldnotes as a key attractor for the region, which is connected with hiking, automobility, the volcanic landscape, geysers/hot springs, and photography as tourism practice.  - In terms of culture & identity, the three key themes, which are often cross-coded and related are: arts, crafts & culture (mostly focused on traditional craft, but also contemporary culture); history as a tourism attractor; and Vikings (the largest subset of coding for history as a tourism attractor. These coding categories are also consistently connected with coding for Northern Lights, hot springs/geothermal, puffins, and also often with food and drink as performance of identity.  - Not a dominant discourse, but the main recurring theme related to ecological dimensions of oil focuses on Arctic oil frontiers, which is linked to oil prospectivity, climate change impacts, and notions of a global Arctic. This is also linked to discussion of cruise ship tourism and Arctic nature in talk about potential benefits/opportunities of climate change – in terms of increasing accessibility of Arctic for oil prospectivity, shipping and tourism. | - In terms of enacting coastal environments, there a set of core themes, which include being close to nature, hot springs/geysers, focus on coastlines & seascapes, mountain landscapes, northern lights, waterfalls, and wilderness. These themes are often cross-coded with each other, as well as with coding for boat tours, whales, photography as tourist practice. These are most often enacted by tourism sector websites, though also often invoked in ENGO websites, and occasionally in oil sector websites (i.e. Eykon energy). Coding for wilderness is often linked to notions of Iceland as a green society.  - Animals feature prominently in website representations of Icelandic coastal environments & nature. Most prevalent are whales, often linked with boat tours, puffins, photography as tourist practice. Puffins are the next most frequent, often linked with whales, boat tours, horses, photography as tourist practice. Other seabirds are also prevalent, and again also connect with puffins, whales, boat tours, horses. Horses also feature on several websites, linked with hiking, puffins, sport fishing, rural communities as sites of authenticity and history.  - Much of the website content features photography as a tourist practice, linked to enactments of the tourism landscape defined through boat tours and hiking, whales, puffins, and the mountain landscape as a focal point.  - Parks and protected areas also come up fairly often, with the most frequent being Vatnajokull national park and Thingveller national park, both of which are more oriented to wilderness, volcanic landscapes, hiking than seascapes or coastal activities per se.  - Coding for culture & identity mostly focuses on a suite of tourism attractors: the historicity & authenticity of rural coastal communities (linked with things like hiking, puffins, etc…); food and drink as tourism attractors and performance of identity, which is interesting as it connects with whales and contestation over whale hunting; history as a tourism attractor, most often linked to the Viking history of the region; and arts, culture and craft as a tourism attractor (which is also linked to rural communities).  - Quite a bit of coding here invokes a collective identity of Iceland as a green society. This appears in a couple ways, one in connection with nature-based tourism attractors (hot springs & geysers, wilderness, waterfalls), but also in relation to the potential of coastal environments as sites of oil extraction, renewable energy transitions, and the co-existence of renewables and fossil fuels.  - For modes of interaction, we see Iceland as a site of active tourism. Hiking and boat tours come up frequently, primarily in tourism operator sites, but also ENGO sites, with links to whales, puffins (for boat tours), sport fishing (for hiking), and photography as tourism practice. Other modes of interaction that come up frequently are horseback riding, sport fishing, and swimming.  - In terms of oil, coastal environments are not often framed as sites of oil prospectivity and extraction. This is limited to web content from the energy sector (Eykon Energy) and government (Icelandic Energy Authority). For the energy sector, framing the coastal environment as a site of prospectivity and extraction is linked to notions of positive impacts of oil for host communities. By contrast, the government site discusses oil prospectivity in terms of the coexistence of fossil fuels and renewables.  - By contrast coding for the environmental risks of oil development, which are also somewhat peripheral, comes from ENGO sources, as well as government (again, the Energy Authority). Key risks include risks to whales and wilderness values. In contrast to the renewables-oil co-existence discourse, here we also see the notion that Iceland does not need to pursue oil development because of its renewable energy wealth.  - WRT social markers of web content and cultural representations, most sites across sectors are places of normalized whiteness, and sites of middle-upper class experience, often marked by business attire as a marker of class. | - The most significant tourism activities, in terms of economic revenues, include whale watching, museums, and geothermal pools, which include key nature-based tourism attractors. Tourist-based data also points to the significance of nature-based attractors, identifying northern lights, glaciers, lagoons (i.e. geothermal pools?), waterfalls, and whale watching among the most memorable experiences.  - Oil extraction is largely a matter of future-oriented prospectivity, with promising fields in the northeast of the country. Icelandic oil prospectivity is linked to the plans for a new shipping port at Finnafjord, which itself premised on the notion of a changing (i.e. melting) Arctic and the increased openness and importance of Arctic shipping routes. As such, oil prospectivity is part of visions for extractive & shipping-oriented development in the northeast region of the country (which is currently largely outside the tourism boom). | - In general, coastal communities and environments are depicted much more as tourism spaces than spaces of oil exploration and extraction, which is more peripheral. (KB: This last part is an understatement… I think that (apart from one or two communities in the NE) the oil scenario is totally absent from depictions of coastal communities!  - In terms of tourism attractors, there is a large focus on a range of nature-based attractors, including wildlife (especially whales, puffins), geysers/hot springs, northern lights, volcanic landscapes, waterfalls, glaciers. Main valued modes of interaction with coastal environments include boat tours and hiking.  - Photography as tourism practice, and the ways that social media structure tourism mobility are also interesting themes, pointing to how the tourism mobilities of the boom are shaped through practices of social media use and photography.  - Beyond nature-based tourism attractors, there is also an emphasis on history (particularly Vikings), arts and culture.  - In general, tourism is oriented around notions of being close to nature, wilderness, and sustainability discourse, positioning tourism as a sustainable development pathway (though with some critical reflexivity on the carbon intensity of tourism mobilities). (KB: Not sure really that tourism itself is positioned as a ‘sustainable development pathway’ – but there is a lot of talk about how to make tourism (more) sustainable.  - Enactments of coastal environments as sites of oil prospectivity are generally more peripheral, with oil as more hypothetical or future oriented. (KB: Exactly. All three exploration licences that were issued in 2013-2014 have now been taken back or returned.)  - There are some tensions around coastal environments as spaces of oil prospectivity. There is some critical reflection on this, in terms of potential negative impacts of oil development (i.e. netnographies), such as impacts on whales and wilderness values, and the notion that Icelandic renewable energy resources mean that there is not an imperative for oil development.  - Conversely, there is also discussion about linking oil prospectivity to the Finnafjord development in the northeast of the country, which is generally outside the current tourism boom, as well as talk about the positive potential impacts of future oil development for host societies more generally. |
| **Culture:**  **Discourses of positive & negative social-environmental impacts of tourism development** | - Not present. Tourism and travel is dominant (3/6communities), which is consistent with other data, but data doesn’t speak to affect or positive/negative impacts. | - Almost all participants (10) note that tourism numbers are growing rapidly. This is a starting point (or master frame) for many in discussing both the positive and negative impacts of tourism, and is often cross-coded with both. It is also often linked with boat tours as a specific mode of interaction with coastal environments.  - Most (10) interview participants talk about the positive impacts of tourism ( mostly in general economic/employment terms), which is linked to the notion that tourism numbers are growing and sustainability discourse, but also often to the challenges of tourism for host communities.  - Most (9) interview participants talk about challenges of tourism for host communities, most notably Air BnB issues, rental housing issues (related to AirBnB crowding out rental housing), overcrowding of tourism spaces. This is also often tied to the notion of the rapid growth of tourism numbers, and an uneven terrain of benefits and negative impacts. However, for many participants, it is also linked with talk about the positive impacts of tourism, so rather than being simply “critics” or “boosters”, participant interpretations are a bit more ambiguous. This is also often related to the notion that tourism governance is underdeveloped. So, for several participants, it is less that tourism is inherently good/bad, more the need to evolve ways of managing it to mitigate the challenges.  - This also connects to the theme of the unequal terrain of benefits and negative impacts (raised by 6 participants) which largely sees benefits more concentrated in the capital region and surrounding area (i.e. golden circle) while more rural/remote areas are seeing fewer benefits. This is linked to talk about aeromobility and automobility and illustrates how these socio-technological mobility systems structure tourism flows that lead to an unequal terrain of benefits.  - Another theme that comes up for several (6) participants is the tourism cycle. Here, we see that the notion that the cyclical nature of tourism is a challenge, but that Icelandic tourism is becoming less cyclical – especially in Reykjavik – partly due to extending seasons around northern lights and winter tourism.  - A few participants talk about the Icelandic (and Nordic more broadly) notion of the “right to nature,” and how this is in tension with the negative local environmental impacts of the tourism boom. This is connected with talk about the underdevelopment of tourism governance and need for rules of conduct for nature tourism.  - Icelandic parks and protected areas also invoked by several participants, with links to tourism sustainability discourse, the notion of tourism as a site of environmental education, and the ability for protected areas to work as anchors to help cultivate the positive impacts of tourism for host communities, while there are also a few more critical comments about the need to develop better rules of conduct for park visitors. (The specific parks most referenced are Lake Myvatn and Reykjanes Geopark.)  - Tourism is often valued as a forum for environmental education/reflexivity, often cross-coded with Iceland’s image as a green society, renewable energy-tourism synergies, and positive impacts for host communities.  - Environmental drawbacks of tourism are acknowledged and discussed, especially carbon footprints and local ecological impacts associated with automobility, boat tours. However, these are generally viewed as manageable through developing tourism governance, and rules of conduct for tourists.  - Several participants (6) note tourism-renewable energy synergies, which is linked to the notion of Iceland as a green society, being close to nature, and tourism as a site of environmental education. This also often comes up in specific reference to the Blue Lagoon as a tourism attractor. However, at a couple points this also connects to talk about negative impacts of renewable energy.  - One of the “auto-stereotypes” articulated by several participants is that Iceland is a green nation, which connects to talk about renewable energy-tourism synergy, being close to nature as a draw of Icelandic tourism, and tourism as a of environmental education. This is brought up by participants from across sectors. | - The field notes include a lot of coding for both positive and negative impacts of tourism. In terms of positive impacts, the main themes that come up (in order of prevalence of coding) are social impacts, community impacts, economic impacts, including with specific reference to rural communities. Coding for positive impacts is often cross-coded with material on challenges of tourism for host communities, as well as boat tours, whales, and Arctic nature.  - Relatedly, there is also a lot of coding for challenges, which mostly focuses on overcrowding of tourism spaces, and Air BnB issues (i.e. linked to rental housing and student housing availability). Coding for challenges often intersects with coding for positive impacts, as well as for coding about building tourism governance.  - Claims that tourism numbers are (rapidly) growing come up repeatedly, and are linked to both the positive impacts, as well as the notion of “being close to nature” as an attractor, and challenges of tourism development (particularly overcrowding of tourism space).  - Relatedly, the tourism cycle comes up several times, both in terms of annual cycles of tourism flows (with repeated observations that RVK is no longer characterized by an annual cycle with a notable seasonal downturn, though the annual cycle remains visible in other parts of the country), but also in terms of longer-term cycles of tourism destination trends (i.e. the current boom being facilitated by mediated visibility of the volcano explosion and decline of the ISK after the 2008 crisis). This also comes up in relation to challenges for host communities.  - Whales are one of the most prominent animals (along with puffins), and are often linked with boat tours and notions of tourism as a site of environmental reflexivity, and developing ecological learning.  - The emphasis on history as a tourism attractor (especially around Vikings, and coastal environments as sites of fisheries) implicitly speaks to the importance of tourism sites/narratives for preserving & enacting history.  - Pro-sustainability discourse comes up repeatedly in relation to tourism, which is often linked to the idea of tourism as a site of environmental reflexivity/learning (which is itself thematically linked to tourism-ENGO coloration at a few points; and which is further connected with coding for whales, puffins, seabirds, and coastal environments as focal point), and also to the idea that tourism legitimates nature protection, a discourse that appears primarily at Arctic Circle and in connection with Arctic nature.  - Conversely, the environmental drawbacks of tourism also come up repeatedly in the field notes, primarily in relation to automobility, hiking, and rules of conduct for nature tourists, primarily around issues of trail erosion, vegetation damage – so localized negative environmental impacts.  -Relatedly, when UN Sustainable Development Goals are invoked (in Arctic Circle fieldnotes), tourism is positioned as more sustainable economy that societies can use to integrate SDGs.  - Another critical event that comes up recurrently is the 2008 Iceland crisis which had a massive negative economic impact. Tourism has been a key driver in the economic recovery, and returning the country to economic well-being. | - The positive impacts of tourism come up across repeatedly, across a range of both tourism sector and ENGO websites. This is often in relation to economic impacts of tourism development, but we also in relation to the idea that tourism development legitimates nature preservation.  - Sustainability discourse is often invoked in relation to tourism, as is corporate environmental responsibility. This is mostly articulated on tourism sector websites, and often connects to whales and boat tours.  - The notion of tourism as a site of environmental education also comes up repeatedly, primarily among tourism sector sites, but also for environmental organizations (i.e. Landvernd, South Iceland Nature Centre), also often in reference to boat tours and whales.  - Relatedly, the notion of rules of environmental conduct for tourists comes up several times. Often this is in relation to boat tours, whales and tourism sustainability discourse, imploring visitors to adopt an environmentally respectful or responsible stance. Though a bit of an outlier, another version of this comes from Landvernd, which notes increasing problems of local ecological damage in natural areas due to tourism (i.e. overcrowding of hiking and wilderness areas) that needs to be addressed through ensuring better rules for responsible tourist conduct. | - Iceland is in the midst of a tourism boom, with rapidly growing tourism numbers and revenues over the past several years (i.e. dating from 2010 or 2012). Tourism employment is also rapidly growing in parallel with this. The benefits are framed primarily as economic (i.e. revenues from outside the country) and employment.  - However, data on host community perceptions shows increasing discomfort with tourism, with more residents seeing tourism numbers as too high (especially in peak season), perceiving issues of housing availability and affordability, issues with availability of services, and issues of “heavy” tourism impacts on the natural environment. | - The `master frame` is that Iceland is in the midst of a tourism boom, with tourism flows growing rapidly. Relatedly, there is talk about tourism cycles and the notion that the boom is making Icelandic tourism less attached to seasonal cycles, especially in the capital region. (KB: The explosive growth of touism has decreased (but not stopped – there is still some growth in tourism arrivals) – now the sector is bracing itself for somewhat leaner times.  - Much of the interpretation of tourism is positive, framed in terms of economic & employment impacts (i.e. interviews, netnography) but also in terms of broader community and social impacts, particularly for rural communities (i.e. fieldnotes).  - In general, tourism is linked with sustainability discourse, notions that tourism works as a valuable site of ecological education (especially linked with boat tours and whales), and that tourism can help legitimize nature preservation, that there are tourism-renewable energy synergies, and that tourism is a good fit with the auto-stereotype of Iceland as a green nation.  - At the same time, there is also quite a bit of reflection on the challenges and drawbacks of tourism (particularly in interviews and fieldnotes, more so than netnographies). In terms of social-economic impacts, this includes the negative impacts on rental housing (i.e. Air BnB as villain) and overcrowding of tourism spaces. This is reflected in the document analysis by data showing increasing frustration and annoyance of local residents with tourism. This also connects to the notion of an uneven terrain of tourism benefits, with much of the tourism boom focused in Reykjavik and the broader capital region, and a need to ensure tourism flows and benefits are better distributed.  - In terms of environmental drawbacks, there is reflexivity about both local and extra-local environmental impacts of tourism. At the local level, this includes impacts on natural areas or national parks in terms of increased demands on infrastructure (hiking trails, etc…) . At the extra-local level, impacts are linked to the carbon intensity of various forms of tourism mobility (automobility, aeromobility, boat tours).  - Drawing on Wong`s use of Goffman in environmental governance, the positive view of tourism, in economic, social, and environmental terms, is the "front stage" narrative of websites, etc…, while the more complex picture of positive and negative social-ecological impacts is more visible in the "back stage" spaces of interviews and field note sites. |
| **Culture: Discourses of positive & negative social-environmental impacts of oil extraction** | - Not present. In general, oil and energy development are less central (though one node focuses more on climate, energy and technology). Data doesn’t speak to positive or negative impacts or affective dimension. | - Interview talk focuses more on prospectivity and the hypothetical scenario of Icelandic oil, which is premised on a significant rebound of global oil prices that makes Arctic frontiers (i.e. northeast Iceland) more appealing. That said, positive impacts are discussed – general economic impacts for Iceland as a whole, and specific impacts for communities in the northeast which are more remote and have been largely bypassed by the tourism boom.  - A few participants (3; 2 energy sector, 1 government) have a more positive view of the potential for future oil exploration/extraction, indicating optimism about a rebounding price cycle that will re-energize interest in Arctic oil prospectivity.  - Relatedly, a few participants (4) focus on the potential positive social-economic impacts of oil, defined primarily in terms of revenues and employment (including in the more remote northeast of the country), and locate the prospect of oil in relation to the 2008 crisis and recovery. This is linked to talk about Arctic oil frontiers and the coast as a site of oil prospectivity.  - A few participants (from across sectors) note that oil development risks harming Iceland’s tourism image, which is linked to claims about oil and environmental risk, and coding for oil and tourism as incompatible development paths.  - Relatedly, several participants engage in envisioning Iceland as a post-oil society in thinking about Icelandic climate change commitments, and in viewing tourism and oil as largely incompatible development paths.  - Similarly, one of the key social futures themes is around renewable energy transitions, which is linked to talk about Iceland as a green society and envisioning a post-oil society, as well as to issues of automobility and the coasts as sites of oil prospectivity. | - There are a few points that speak to the positive impacts of oil development, generally framed in economistic terms, and in relation to driving economic development in the northeastern part of the country that has largely been peripheral to the tourism boom and hasn’t shared in the positive impacts of tourism.  - At a few points where the Paris COP agreement is invoked, it is in the context of revisiting the Icelandic oil issue in relation to climate change, the Paris COP agreements, and Icelandic commitments to address climate change. Does pursuing oil make sense in this context?  - In terms of social futures, there are several references to envisioning post-oil societies and renewable energy transitions, much of this articulated in the context of Arctic Circle and referring to Iceland and the Arctic region more broadly. Talk about renewable energy transitions focuses on the large renewables capacity already in Iceland, and that the country is moving in this direction, however, there is also stuff on conflict and controversy over renewables expansion re: negative impacts of infrastructure development. It is interesting that while the oil debate is now fairly peripheral, the renewables transition is a more contested terrain in terms of social futures, sustainability & wilderness values. | - The positive impacts of oil for host communities come up repeatedly across a range of sites, primarily energy companies and government (Energy Authority). Here oil development is positioned as contributing to community economic and social wellbeing in terms of employment and the potential to create an oil wealth fund. For Eykon Energy, oil development builds on the existing “maritime expertise” of Icelandic society.  - There are only a few sites directly speaking to the negative impacts and risks of oil development, focused on the health of whales and wilderness values, and invoking Iceland`s renewable energy wealth as part of ENGO opposition to oil development.  - In coding for social futures, the main theme (though not a dominant discourse across a broad range of sources) is the renewable energy transition. This comes up in two ways: 1) for ENGOs, Iceland`s renewable energy wealth and ongoing transition means it does not need to pursue offshore oil extraction, and is part of Iceland`s image as a green society. 2) for government actors (National Energy Authority), there can be a co-existence of fossil fuels and the renewable energy transition in envisioning coastal environments as spaces of oil prospectivity. | -N/A | - In general, oil extraction is rather peripheral to public and political discourse in Iceland at present.  - When oil does come up, it is around prospectivity and future-oriented development. More often, this is linked to talk about positive impacts, both in terms of the northeastern part of the country (which has not especially benefitted from the tourism boom), but also the nation as a whole. Positive impacts are framed mostly in economistic terms.  - There is a less visible critical discourse, focused on oil posing risks to wildlife and wilderness values (KB: also impacts on the marine environment, in case of accidents – this is brought up every now and then), and talk about whether oil development is compatible with Icelandic climate change commitments, the self-image as a green society, which also connects to Iceland’s tourism image. With its renewable energy wealth and tourism boom that is premised on wilderness and an image of a green society, is there an imperative to Icelandic oil development? |
| **Culture:**  **Dominant discourse of relationship between oil & tourism as different development pathways – antagonism, co-existence, or silos (black-boxing)** | - Oil is generally peripheral, while tourism is quite central. Oil does appear within one of the tourism nodes, though. But, mostly black-boxing, with tourism development more of a dominant topic. | - Mostly, the dominant theme is that oil is off the political agenda, has fallen off the radar of political & public discussion, and more attention is now focused on the tourism boom and managing it. So, the dominant discourse may be more of black-boxing, by virtue that oil is peripheral while tourism has become central to public debate.  -Several participants engage in envisioning Iceland as a post-oil society as part of thinking about oil prospectivity, and in talking about oil & tourism as incompatible development paths. This is also connected to talk about Icelandic climate change policy, Iceland as a green nation, and also with talk about automobility.  - A few participants (3) talk about tourism and oil as incompatible development paths, connecting this to the notion of Iceland as a green society, and in envisioning post-oil futures. There is also some talk here about tourism as a basis for opposition to oil development. | - Mostly, the relationship is black-boxed or siloed, with much more attention on tourism development and oil development being much more peripheral. There is a relatively peripheral discourse, though, that oil can have positive impacts and serve as an economic driver for the northeastern region that is marginal to the current tourism boom, and so might be seen implicitly as potentially complementary.  - Also relevant here, perhaps: Not a dominant discourse, but the main recurrent theme related to ecological dimensions of oil focuses on Arctic oil frontiers, which is linked to oil prospectivity, climate change impacts, and notions of a global Arctic. This is also linked to discussion of cruise ship tourism and Arctic nature in talk about potential benefits/opportunities of climate change – in terms of increasing accessibility of Arctic for oil prospectivity, shipping and tourism. So, here we see more of a co-existence discourse in relation to Arctic oil frontiers and nature based tourism. | - Mostly, the relationship is black-boxed or siloed, with more attention on tourism development, and oil development being more peripheral. Generally, we see a tourism-environmentalism alignment and collaboration, with tourism generally framed as having positive social-economic-environmental impacts. By contrast, oil is less visible, but more contested. The positive impacts of oil are asserted by energy sector and government actors, while oil development is opposed by ENGOs (more in web 2.0 data than elsewhere).  - The main contact points between oil and tourism are around the carbon intensity of tourism (including ecological reflexivity, tourism sustainability discourse, and the role of tourism in responding to climate change), and the potential impacts of climate change on tourism environments. The role of the energy sector (and explicit mentions of the Icelandic coastal environment as a site of oil prospectivity and extraction) are not often made explicit, but are more backgrounded here. | -N/A | - Mostly, the relationship is siloed (or black-boxed) between tourism development and oil development. Oil development is hypothetical, future-oriented, based on prospectivity, and given cooling interest in Arctic oil exploration (in general) and Icelandic oil exploration (in particular) in the wake of recent price declines and uncertainty, oil development is largely out of the public and political sphere. Rather, more of the focus is on tourism development and the tourism boom, including how to cope with the “challenges of success.”  - Around the margins, though, there are a few “contact points,” which are often more implicit than explicit: a) noting that oil development may be incompatible with the tourism economy because it is based on notions of Iceland as a green nation and images of wild nature (interviews); b) the changing Arctic, which opens opportunities for both increased tourism and resource exploration (fieldnotes); c) the carbon intensity of Icelandic tourism, with its reliance on aeromobility and automobility and prominence of boat tours (interviews, netnographies). |
| **Governance:**  **“Connective” dimension - Political spaces for engagement across oil & tourism** | - Not present. | - Main related recurrent themes about oil governance are that oil conversation is below the surface, and that there is little engagement from tourism in oil discussion. These are cross-coded with talk about Arctic oil frontiers, the coast as site of oil prospectivity, boat tours, whales, and oil creates environmental risk, as well as the notion that there should be more engagement from tourism in oil discussions.  - Relatedly, another recurrent theme is the lack of engagement from tourism in oil debates.  - The main critical event (in terms of political opportunity structure) that comes up is the 2008 Icelandic financial crisis. Mostly, this comes up as one of the cascading events (like the volcanic eruption) that led to the interest in tourism as a development pathway and mechanism for economic recovery, and the tourism boom. This also connects to talk about challenges of tourism for host communities, with claims that government pursued tourism promotion without sufficient attention to planning and governance. Interestingly, a couple other participants connect the 2008 Icelandic crisis to government interest in offshore oil exploration and Icelandic oil frontiers. So, while not necessarily a shared governance space, the 2008 crisis was a critical event that had ripple effects in terms of building political interest & support for both tourism & oil development. | - Generally not a lot here. But perhaps relevant here, the notion that the oil issue itself has largely moved to the margins of public and political debate, and for some there is a need to re-open the conversation about Icelandic oil in the context of the new reality of the country. This is cross coded with the notion that tourism has not really engaged in the oil debate. | - Generally not a lot here. For ENGOs, oil development is opposed on the basis of protecting natural areas, wilderness values, and in relation to Iceland’s image as a green society. Tourism is not generally explicitly linked to this, but these are also things that are implicit as they are at the core of the Icelandic tourism imaginary. | -N/A | - Generally not a lot here. The oil issue/governance has largely moved to the margins of public and political discourse. Rather, the tourism sector is a higher priority and topic of public and political debate.  - Around the margins, a few notable themes are: a) that the tourism sector is not really engaging with issues of oil prospectivity, governance, etc… ; b) oil development is opposed by some ENGOs based on wilderness values, Iceland’s image as a green society – this is not explicitly linked to tourism, but this is also implicitly part of the Icelandic tourism imaginary.  - While generally not made explicit, it is interesting that the 2008 crisis comes up in narratives of both oil and tourism development as a critical event driving the emergence/acceleration of both development pathways as part of the recovery. (KB: Yes. And it will be interesting to see what happens now, with tourism growth levellingl off. Some lsee similarities bwetween the situation now and that just before the 2008 crash… signs of instability in the most important companies (then banks, now airlines) etc… Will oil again come up for serious consideration if things turn sour? |
| **Governance:**  **“vertical” dimension – governance as local, regional, national, international** | - Not present. | - Most key organizational actors work at more local or national scale, and are tourism focused. Exceptions are a couple international tourism operators (Grey Line, I think?) and NGOs (International Fund for Animal Welfare). The government actors that come up here are local, rather than national or regional. Loosely connected governance network on vertical dimension, with main focus on local & national.  - In terms of oil governance, while not a dominant theme, the notion that current national governance regimes facilitate oil development comes up for two participants, both from the energy sector, and this is linked to Arctic oil frontiers, the coast as site of oil prospectivity, as well as the notion that Iceland as an oil nation is premature.  - A key theme that comes up is that tourism governance is underdeveloped, which is often linked to the notion of tourism development/governance as a local issue. This is also often linked to talk about challenges of tourism, especially around automobility and infrastructure, as well as to talk about the rapid growth in tourism numbers.  - Relatedly, though less prominent, is talk that tourism is not a political priority. This is cross-coded with talk about tourism governance as underdeveloped, the rapid growth of tourism numbers, that the tourism field is fragmented and diffuse. This is also, however, linked with talk about the positive impacts of tourism for host communities.  - In the social network coding, a few participants (3) emphasize experiences of/need for social learning by looking at other cities or countries for building tourism governance, and for best practices for sustainability. | - Talk about climate change, mostly from Arctic Circle, focuses on the notion of the global Arctic, which is often cross-connected to talk about developing climate governance and policy responses, along with talk about impacts. In this context, the Paris COP agreement also is invoked repeatedly as a critical event for structing international climate governance.  - One thing that comes up often at Arctic Circle is the tension between a “global Arctic” that is an object of concern, political debate, scientific inquiry, for a broad range of transnational players, and the multiplicity of “local Arctics” inhabited by local communities and within specific national jurisdictions.  - There is some material from Arctic Circle focused on Arctic oil exploration (with discussion of Iceland, Norway, Greenland), and the tension between oil as generally a subject of national governance, and the need to respect local communities, ensure FPIC @ local level, especial WRT Indigenous communities. There is the idea that the recent price decline has created a “pause” in Arctic oil exploration to work on bridging & improving national-local FPIC and oil governance.  - Another interesting idea that comes up, though not a highly recurrent theme, is that the Icelandic government seeks to increase the weight and power of the Arctic Council WRT Arctic oil development to better structure governance for oil risk mitigation.  - UN sustainable development goals are invoked several times in Arctic Circle event fieldnotes, tied to issues of Indigenous governance, changing Arctic, with specific connections to Greenland and Denmark, also invoked more broadly. Tourism is also invoked as a way for northern societies to work towards Sustainable Development Goals as a more sustainable way of implementing development. | - The Paris climate agreement comes up in relation to government performance and policy on climate change, which is linked to the need to protect natural areas and wilderness (implicitly, the basis of the tourism economy).  - The Paris agreement, as a critical event, is invoked by ENGOs.  - Relatively marginal (appearing only in the Iceland oil web 2.0 analysis) but interesting is that opposition parties and environmental movements are targeting the national government to join the Paris Agreement and quit moves towards offshore oil extraction. Appeals by ENGOs, opposition parties to the intersection of national politics and the international sphere.  - Though relatively marginal, the EU Blue Flag program comes up a couple times (ENGO and tourism operator) as a designation for protected coastal environments that also serve as tourism attractors. | -N/A | - What emerges of interest is mostly tourism focused (and primarily from interviews), where key actors are mostly local (tourism, government) or national (tourism), with a sense of relatively weak connectivity along the vertical dimension. There is the notion that tourism governance is relatively underdeveloped, linked to the notion of tourism development/governance as primarily a local issue. (KB: Not sure. There has certainly been a lot of talk of the need for some central agency to take care of tourism planning etc. Some attempts have been made by the central govt, but these have not been particularly successful. )  - There are other interesting international dynamics going on along the vertical dimension, though these are not as central: a) Iceland is embedded within tensions between emerging attention to the “global Arctic” and local Arctics, with relevance to issues of oil prospectivity and climate policy and governance (fieldnotes); b)Tourism is connected to international agencies/initiatives such as the UN Sustainable Development Goals (SDGs) and EU Blue Flag program (fieldnotes, netnography); c) The Paris Agreement comes up as a critical event, including being leveraged by ENGOs, linked to the need for better environmental protection. |
| **Governance**  **“horizontal” dimension –range of actors involved** | - There is a distinct politics & law topic that includes most government-related terminology. This is most connected to the topic on technology, finance and economy. However, it is also moderately connected with the topic on tourism, nature, and place (which includes terms around nation, community, development). | - In coding about practices of media work, this is one place we see talk about tourism-government collaboration for tourism promotion. A particularly key actor here is Promote Iceland.  - A key theme on tourism governance is the need for/processes of building tourism governance, which often focuses on challenges of tourism (here, often referencing Air BnB issues, and the need for rules of conduct for nature tourists to protect against environmental damage). This also often connects with talk about tourism sector-government collaboration in terms of building tourism governance to address issues.  - Coding for “power of key actors in network” has a couple interesting observations from different interviewees, though no particularly dominant recurrent themes emerge. There is the notion, though, that a relatively small number of “big actors” dominate the tourism field, and that they have more interest and capacity to be involved in quality assurance/certification schemes, and can/should take more of an environmental leadership role given their greater resources and capacities.  - Key organizational actors are predominantly tourism sector, then a couple local government and ENGO. No oil orgs come up repeatedly as key actors. Tourism orgs come up here more than government actors.  - In social network coding, 4 participants talk about government-tourism collaboration, which is thematically connected with talk about tourism governance as undeveloped and building tourism governance; but also with practices of media work, and with aeromobility. So, where collaboration is happening it appears to be more about promotion and building tourism flows/connectivity, and less about governance – though this may be emerging.  - A few (3) participants also talk about collaboration across industry actors, which is linked with whales, boat tours, sustainability discourse, corporate environmental responsibility, and industry self-regulation.  - Similarly, a few (4) participants talk about ENGO-tourism collaboration. This is connected to many of the same themes (whales, boat tours, sustainability discourse, industry self-regulation), as well as to talk about anti-whaling campaigning. | - The main related themes on tourism governance are that tourism governance is currently underdeveloped, and that there needs to be more work to build tourism governance. In the wake of the tourism boom, tourism governance has been more reactive than proactive, slow to evolve. There is an emerging public/media narrative of “tourism fatigue” but this is 1) more applicable to RVK, where tourism is much more concentrated and negative impacts are more pronounced, and 2) is less about tourists themselves and more about the lack of governance (rules, regulations) to structure the industry. Needs to be more contact across tourism sector and government, setting policies, regulations, etc.. that control flow/numbers of tourists, that encourage greater diffusion of tourism throughout the region (vs. concentration in RVK) and work to ensure quality of tourism sector/experience, not just quantity/volume of tourism flow.  -Relatedly, there are multiple references to tourism-government collaboration, which is more prescriptive (need more of it) than descriptive. Often linked to notion that tourism governance is underdeveloped, and needs to be developed to address the challenges for host communities, i.e. unequal terrain of benefits and costs that are largely regional, with some hubs being over-saturated and others not seeing the benefits of the tourism boom.  - There is also stuff around government-university collaboration around tourism development and research analyses of benefits and challenges, and public perceptions of tourism development. This also connects to the notion that tourism development is underdeveloped.  - In coding for parks & protected areas, there is material on the campaign to extend Highlands National Park (from Arctic Circle event ethnography) where we see evidence of tourism-ENGO collaboration and engagement with the state around ensuring parks & protected areas vs. other uses (incl. renewable energy infrastructure), and to improve infrastructure to ensure ecological integrity of key tourism attractor.  - In discussion of vertical dimensions of governance re: national-local, Indigenous groups (i.e. Sami, Inuit) seen as key actors, but more in discussion of Greenland & Norway than Iceland, specifically.  - When Icelandic oil was more of a subject of political controversy and debate, ENGOs were engaged and oppositional, but because oil debate has largely cooled and dropped from public sphere, ENGOs (with limited resources) are focused on other issues. If oil expansion re-emerges as a political issue, ENGOs would be likely to re-energize their opposition and campaigning. | - Tourism governance is not a major theme in the netnography data. However, two different eco-certification programs come up a few times. The VAKINN eco-certification program is invoked on 3 tourism operator cites to establish an environmentally-responsible tourism identity. The EU Blue Flag program is also mentioned on a couple sites (tourism & ENGO) as a way of demarcating protected coastal environments (by the EU) that are valued as tourism spaces.  - Looking at website links as one way of identifying key actors, we see key tourism and ENGO actors: IceWhale, Inspired by Iceland, Icelandic Travel Industry Association, as well as links to the VAKINN environmental certification program, which is part of tourism governance.  - Again, relatively marginal but interesting, we see debates over oil governance involving opposition parties (Pirate Party) and ENGOs (incl. international campaign for HFO-Free Arctic, Clean Arctic Alliance).  - There are several references (across multiple ENGO sites) of ENGO-government conflict around issues of protecting wild areas from industrial development, anti-whaling, and opposition to oil. There are also several instances of ENGO-tourism collaboration, primarily around whales, tourism as a space of environmental education, and anti-whaling. Here we see ENGOs as a participant in tourism and energy governance, often in conflict with government and more aligned with tourism. | -N/A | - The need to better develop tourism governance in order to address the emerging “challenges of success” and public/media narrative of “tourism fatigue” is particularly notable.  - Government-tourism sector collaboration is most visible around tourism marketing and promotion, more than around other forms of tourism governance, with Promote Iceland as a key actor.  - There is also collaboration within the tourism sector, and between tourism and ENGOs around things like environmental sustainability, industry self-regulation (i.e. VAKINN certification program in particular), boat tours, whales and whaling, as well as mobilizing to ensure the protection/integrity of natural areas.  - Within the tourism sector, we see that a relatively small number of “big actors” dominate the field, which have more interest and capacity to engage in tourism governance and collaboration.  - Oil sector actors are generally not central in terms of the horizontal dimension. Where oil governance does come up, we see engagement by opposition parties and ENGOs. |
| **Social movements: when does intervention happen** | - Not present. | - Social movements more involved in the tourism side of the interface, particularly in collaboration with boat tours around whales (anti-whaling, education).  - Otherwise, intervention is happening around renewable energy development, partly mobilized by perceived impacts on wilderness values (indirectly linked to tourism, as this is a key part of the tourism destination image). | - ENGOs were engaged when oil development was subject of political & public debate, however with oil debate cooling due to price decline, ENGOs (with limited resources) have largely turned to other campaigns. If oil re-emerges in the public sphere, ENGOs would be likely to re-energize opposition and campaigning.  - One environmental issue that comes up recurrently is anti-whaling, which is a site for tourism-environmentalism collaboration & alignment, which is also linked to coding for whales, tourism as a site of environmental reflexivity, boat tours.  - Coding for parks & protected areas includes talk (in Arctic Circle fieldnotes) about ensuring integrity of Highlands National Park, expanding the park to ensure sustainability of key tourism attractor, and protect area from other land uses (incl. renewable energy infrastructure).  - Renewable energy development is also a site of contestation, with environmental movements often mobilizing/critiquing renewable energy projects and infrastructure, often framed in terms of negative impacts on wilderness values. | - One of the main environmental issues that comes up recurrently is anti-whaling, which is cross coded with boat tours and whales as tourism attractors, as well as food and drink as tourism performance. Material on anti-whaling comes from both ENGO websites (especially IceWhale) and tourism operators (i.e. boat tours).  - Within coding for food & drink as tourism attractor and performance of collective identity, we also see some connections to contestation over whaling as a practice and tensions regarding whales as object of nature tourism (to be viewed) vs. as part of Icelandic food culture. This is a point of friction within tourism that engages ENGOs.  - There are also multiple instances of coding for the need to ensure the protection of natural areas (i.e. parks & protected areas), which is articulated by a range of ENGOs. This is linked to wilderness values in opposition to industrial development (including hydropower, for example). ENGOs also frame new protected areas as victories for the movement.  - ENGO opposition to oil only comes up in a couple sources, focused on risks to whales and wilderness values, getting less attention than more tourism-related issues (i.e. anti-whaling). | -N/A | - Movement interventions are more around tourism, taking a few forms: ensuring integrity/protections of parks and natural areas, around anti-whaling, and conversely environmental education around whale watching and boat tours.  - ENGOs have been engaged when oil prospectivity was more in the public and political sphere, but not more recently as it has become more peripheral (although exploratory work does continue, notably).(KB: See previous comment – I think exploration has stopped.)  - Where intervention around energy development comes up, this is also, interestingly, in relation to renewable energy projects and potential impact on wilderness values (and by extension, the Icelandic tourism image and attractors). |
| **Social movements:**  **Key discourses used to intervene in oil-tourism interface** | - Not present. | - Not oil-tourism interface, but broader “energy tourism interface”: one of the issues that comes up recurrently (5 participants, from sectors other than NGO) are conflicts over the negative impacts of renewable energy, framed around claims that energy infrastructure, transportation lines, etc… negatively impacts wilderness values of Icelandic landscape that are valued by tourists as an attractor.  - Conversely, however, coding for tourism as a site of environmental education/reflexivity is also frequently cross-coded with claims about tourism-renewable energy synergies. | - Similar to interviews, not much of an oil-tourism interface, but broader energy-tourism interface, wherein renewables are often contested, challenged, and critiqued by ENGOs, framed in terms of power development vs. wilderness values. This also comes up in material on the campaign to expand Highlands National Park. | - ENGO opposition to oil is grounded in appeals to whales and wilderness. While not explicitly invoking tourism, these are also key objects/discourses of the tourism economy.  - A more marginal discourse (appearing in web 2.0 analysis) grounds opposition to oil development in reference to the Paris Agreement and climate change commitments.  - Also marginal, but appearing in the web 2.0 analysis is the notion that Iceland`s ongoing renewable energy transition & renewable energy richness means that Iceland does not need to pursue oil extraction (i.e. invoked by Greenpeace UK)..  - ENGOs mobilize in support of ensuring the protection of natural areas via parks & protected areas, connecting these to wilderness values and framing the creation of protected areas as movement victories. | -N/A | - This case highlights not just an oil-tourism interface, but broader energy-tourism interface where renewable energy projects are also subject to controversy, in terms of power development vs. wilderness values (which underlie the tourism destination image).  - Whales are also invoked as objects of ENGO discourse around tourism issues, in aligning tourism & environmentalism. Wilderness values and wildlife (i.e. whales) are key elements of discourse. |
| **Social movements: repertoire of action, tactics** | - Not present. | - Not really present. | - Not really present. | - Not a lot here to speak of. The Saving Iceland netnography features talk about protest camps and marches, but these are less specific to tourism or oil development, rather are geared at protecting wilderness values from other forms of industrial development (i.e. hydropower, aluminium). However, the web 2.0 netnography also includes mentions of protest rallies against offshore oil that are linked to the Pirate Party (opposition party) and HFO-Free Arctic, a transnational ENGO campaign of the Clean Arctic Alliance. | -N/A | - Not a lot in the data to work with. Some references in the netnography data to use of protest camps, marches, rallies, in relation to protecting wilderness values from industrial development more broadly, as well as contention around offshore oil, HFO-free Arctic. (KB: There were some regular marches in Reykjavík organised by activists when the exploration licences had been issued… starting at a small shop named “Drekinn” – iahumorous reference to the “Drekasvæðið” as the oil exploration are is called!)  - In terms of tourism-ENGO alignment, this is mostly based on public outreach & education/tourism as a site of environmental education (as noted above). |
| **Social movements:**  **structure of field** | - Not present. | - The only orgs that come up repeatedly in the interviews are IceWhale and International Fund for Animal Welfare, both oriented around whaling, whale education, etc… | - The main org that comes up here is WWF, but largely in the context of Arctic Circle and the context of campaigns around Artic issues. Otherwise, we see the presence of IceWhale and Landvernd (Iceland Environmental Association), oriented around tourism-related issues.  - Iceland 2008 crisis comes up as a critical event, noting this provides an example of culture of grassroots democracy and mobilization, a characteristic of Icelandic political culture. | - Coding for whales and for seabirds, which is often linked with boat tours, also demonstrates IceWhale as a key ENGO actor, which is largely aligned with nature tourism.  - Coding for anti-whaling also shows IceWhale as a key actor, as well as the Icelandic Nature Conservation Society.  - Looking at website links, we also see IceWhale coming up repeatedly as a key organization that others link to.  - Oil conflict is relatively peripheral, but the key actors that raise the issue include Greenpeace UK (in the Twitter netnography) and Saving Iceland. The Twitter netnography also notes that government is targeted around oil development by HFO-Free Arctic, a transnational NGO campaign organized by Clean Arctic Alliance (though this is relatively marginal within the data as a whole).  - Coding for protecting natural areas touches on a broad range of key Icelandic ENGOs including Landvernd, Icelandic Nature Conservation Society, Saving Iceland, and the South Iceland Nature Centre. | -N/A | - IceWhale comes up across data sources as a key organization that serves as a “bridging tie” between environmentalism and tourism, focused on issues of whales, whaling, tourism as site of public education and outreach, etc…  - Other key organizations that come up at different points include the Icelandic Nature Conservation Society, Saving Iceland, Greenpeace, WWF. ENGO field mostly seems oriented around a small cluster of national organizations, with more occasional involvement of international groups.  - That said, the response to the 2008 crisis does come up as an exemplar of the tradition and potential for grassroots mobilization and Icelandic political culture, though this is less evident in the project data oriented around the oil-tourism interface. |
| **Social movements:**  **Collaboration & conflict networks** | - Not present. | - Talk about whales as a tourism attractor often connects to tourism-environmentalism collaboration, as well as to use of tourism sustainability discourse. One of the main ENGOs is actively supported by many whale watching operators, and has a focus on anti-whaling.  - A few (4) participants talk about ENGO-tourism collaboration. This is connected to many of the same themes (whales, boat tours, sustainability discourse, industry self-regulation), as well as to talk about anti-whaling campaigning. | - There are several references to ENGO-tourism collaboration, primarily involving IceWhale and whale watch operators, which is linked to whales, tourism as a space for environmental education, and tourism sustainability discourse.  - In coding for parks & protected areas, there is material on the campaign to extend Highlands National Park (from Arctic Circle event ethnography) where we see evidence of tourism-ENGO collaboration and engagement with the state around ensuring parks & protected areas vs. other uses (incl. renewable energy infrastructure), and to improve infrastructure to ensure ecological integrity of key tourism attractor.  - Coding for tourism as a site of environmental reflexivity/learning also has a few points of connection to tourism-ENGO collaboration, (which are further linked to whales, puffins, sustainability discourse). | -Among the coding for social network dynamics, tourism-ENGO collaboration is noteworthy, coming up in the web 2.0 netnography and on a couple tourism websites. This is mostly around boat tours, whales, tourism as a site of environmental education, and anti-whaling.  - Anti-whaling discourse/action shows an alignment of ENGO tourism collaboration between IceWhale and boat tour operators, linked with whales and boat tours.  - Oil is fairly peripheral to social movement web material, but where it is invoked it is through ENGO-oil conflict and opposition. In the Twitter netnography we also see the Pirate Party (opposition party) aligned with ENGOs in targeting government and opposing oil development.  - Coding for ENGO-government conflict is present on several sites (ENGO and in the web 2.0 netnography), linked to protecting natural areas (i.e. from industrial development), anti-whaling, and oil development. Here, we see more evidence of antagonism/conflict between ENGOs and government. | -N/A | - Across data sources, there is a sense of ENGO-tourism alignment and collaboration, with IceWhale as a particularly important bridging tie, where tourism works as a space of environmental education, sustainability discourse, developing sustainable tourism models & business practices, and space for anti-whaling discourse  - Oil development is peripheral (future-oriented, hypothetical, and focused on exploration and prospectivity), but where it does emerge, there is more ENGO-oil conflict and opposition.  - There are also examples of ENGO-government conflict linked to protecting the integrity of natural and protected areas (linked, by extension, to the Icelandic tourism destination image), anti-whaling, and opposition around oil development. |

Discourse network: key categories for discourse network analysis

CULTURE & COLLECTIVE IDENTITY

* Art, craft & culture as tourism attractors
* Food & drink as performance …
* History as a tourism attractor
  + Vikings
* Image as a green society
* Nordic right to nature
* Oil harms image as tourism destination
* Rural coastal communities = history & authenticity

ECOLOGICAL NETWORKS

* Horses
* Puffins
* Seabirds
* Whales
* Climate change\_global Arctic
* Climate change\_governance
* National performance & policy\_climate change
* Risks & impacts of climate change
* Tourism contributes to climate change
* Tourism role responding to climate change
* Arctic nature
* Being close to nature
* Coastline, seascape as focal point
* Glaciers
* Hot springs\_geysers\_geothermal
* Mountain landscape as focal point
* Northern lights
* Volcanic landscape
* Waterfalls
* Wilderness
* Anti-whaling
* Negative impacts of renewable energy
* Boat tours
* Hiking
* Horse riding
* Sport fishing
* swimming
* Off-Highway Vehicles
* Arctic oil frontiers
* Coast as site of oil extraction
* Coast as site of oil prospectivity
* Offshore oil creates environmental risks
* Parks & protected areas >> Iceland
* Lake Myvatn
* Thingvellir National Park
* Vatnajokull National Park
* Need to ensure protection of protected areas
* Corporate environmental responsibility
* Environmental drawbacks of tourism
* Rules of conduct for nature-based tourists
* Tourism is site for environmental education
* Tourism\_sustainability discourse

MEDIA COMMUNICATION NETWORKS

* Icelandic volcano eruption as critical media event.
* Photography as tourist practice
* Practices of media work
* Social media orders tourism mobility

MOBILITY NETWORKS

* Aeromobility
* Automobility

NETWORK POWER

* Classs, profession
* Global region
* Power of key actors in network
* Race & ethnicity

POLITICAL NETWORKS

* Close down new offshore oil extraction
* Iceland oil conversation is below surface
* Lack of engagement from tourism in oil debate
* 2008 Iceland crisis
* 2015 Paris COP agreement
* Protest rally, march
* Blue Flag program
* Building tourism governance
* Tourism development not political priority
* Tourism governance is undeveloped
* VAKINN environmental certification

SOCIAL FUTURES

* Envisioning post-oil society
* New oil exploration & development\_future orientation
* Renewable energy transition

SOCIAL NETWORK DYNAMICS

* Tourism\_collaboration across industry actors
* ENGO-government conflict
* ENGO-tourism collaboration
* Tourism-government collaboration
* Cross-case linkages
* Social learning

SOCIAL-ECONOMIC NETWORKS

* Positive social-economic impacts of oil for host communities
* Oil-tourism interface\_incompatible development paths
* Challenges of tourism for host societies
* Positive social-economic impacts of tourism for host communities
* Renewable energy-tourism synergy
* Tourism cycle
* Tourism numbers are growing
* Tourism\_unequal terrain of benefits

KEY ORGANIZATIONAL ACTORS (for two-mode analysis)

Energy sector

* CNOOC-Nexen
* Eykon Energy

ENGOs

* Greenpeace
* IceWhale
* International Fund for Animal Welfare
* Landvernd – Iceland Environmental Association
* WWF

Government

* Akureyri Municipality
* City of Reykjavik
* Iceland National Energy Authority
* Prime Minister of Iceland

International Agencies

* Arctic Council
* European Union

Media sector

* Facebook
* Instagram
* Twitter
* YouTube

Tourism Sector

* Air BnB
* Blue Lagoon
* Grey Line
* Icelandair
* North Sailing
* Promote Iceland
* Reykjavik Excursions
* Trip Advisor
* WOW Airline