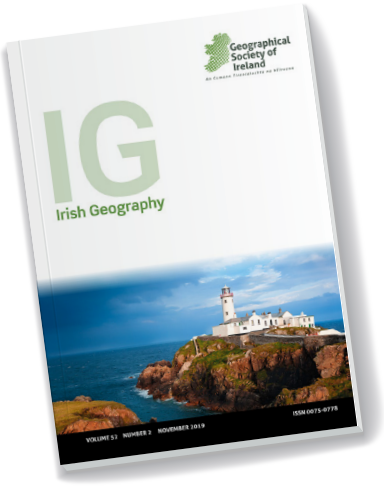

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Spaces for public participation: valuing the cross-border landscape in North West Ireland

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Abstract: Landscape is no respecter of territorial or administrative borders and is a highly pertinent policy-praxis arena within which cross-border cooperation can progress. Although a supportive soft policy space for cooperation on landscape exists on the island of Ireland through the European Landscape Convention (ELC) and the key bilateral spatial planning framework, two interrelated imperatives have not featured substantively on cross-border agendas: engendering active public involvement in landscape management, and harnessing digital technology as a means of enabling such participation. Thus, this paper elaborates upon the findings of #MyValuedPlaces, an online map-based pilot survey aimed at capturing the perceptual values attributed by the public to the places special to them in the cross-border cultural landscape of North West Ireland. Public Participation GIS (PPGIS) offers one accessible method of engaging with the multiple, subjective understandings of landscape, including in the Irish Border region. To this end, the methodology and potential uses of the place-based data generated by the #MyValuedPlaces survey are discussed, including challenges encountered with survey completion. The article concludes with critical reflections on how such 'soft' approaches to public participation in the cross-border landscape on the island of Ireland can be mobilised better in future, particularly through embedding them within official public consultation processes.

Keywords: *landscape, public participation, North West Ireland, PPGIS, soft spaces, cross-border cooperation*

Introduction

The Irish Border region is centre stage once again in the unfolding constitutional drama surrounding the United Kingdom and its fracturing internal and external relationships over exiting the European Union (Anderson, 2018). While avoiding a 'hard' border on the island of Ireland has dominated political negotiations over Brexit, this article is focused on landscape as a highly pertinent 'soft policy space' within which the positive

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momentum and achievements of cross-border cooperation over the past several decades can be advanced productively. By soft space, I refer to 'non-statutory', 'informal' governance spaces co-existing with (and usually complementing) the official territorial spaces of government, typically incorporating multi-sectoral actors within new action-oriented networks and characterised by 'fuzzy boundaries' spanning multiple political-administrative borders, both within and out-with nation states (Allmendinger *et al.,* 2015, 3). In a world characterised by fluidity and rapid change, a driving logic of soft policy spaces is their capacity 'to allow new thinking to emerge and… provide testing grounds for new policy interventions' (ibid, 4). A supportive policy context is evident on the island of Ireland in the space of landscape. Thus, fertile ground exists for testing new ideas and practical approaches to landscape that give material effect to these soft policy aspirations, particularly over how to strengthen participatory processes involving cross-border publics.

Landscape is foregrounded here as a dynamic space for cross-border cooperation on the island of Ireland. Specifically, it engages with two contemporary imperatives that have not featured substantively in cross-border spatial planning agendas on the island to date, including within the *Framework for Cooperation*. First, how to engender active public involvement in place making processes pertinent to cross-border cooperation, particularly over landscape. Second, how better to harness digital technology as a means of enabling participation, especially taking advantage of its capacity to readily transcend territorial and administrative boundaries. To illuminate these issues, an online map-based survey, #MyValuedPlaces, was piloted capturing the perceptual values people attribute to places in the cross-border cultural landscape of North West Ireland. However, rather than provide a full-blown statistical analysis of the data collated, instead this article seeks to reflect upon key lessons and findings emerging from the pilot survey and the methodology employed.

This article begins with a discussion of landscape as a soft policy space and an important subject matter for cross-border cooperation, emphasising the centrality of citizens' perceptions and experiences to its definition. Then, Public Participation GIS (PPGIS) as a mapping approach to involving people in the 'where' of place-based policy and decision-making is reviewed, establishing several pros and cons of the method identified in the scholarly literature. The study area of North West Ireland is subsequently introduced, proceeded by an illustrated overview of #MyValuedPlaces and the rich data that it generated. The final section comprises a critical reflection on several of the key learning points arising from the case, pointing towards important praxis considerations for those contemplating future exercises of this nature.

Landscape as European cross-border soft policy space

The European Landscape Convention (ELC) defines landscape as 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' (COE, 2000, art. 1). Hence, landscape within this key policy framework

is recognised as being more than simply characterised by its physicality and tangible attributes, but is a dynamic values-based phenomenon, with diverse people and groups perceiving the same places differently, deriving its meanings and significance from the relationships developed with, and through, the landscape over time. As Olwig (2007, 581) states: '[landscape] is not so much the objective scenic spatial framework of a location, but a place constituted through the tangible and intangible social and cultural practices that shape the land'. In short, recognising people's lived experiences and the complex place-attachments they forge, is critical to advancing a nuanced appreciation of landscape alive to its manifold richness and the conflicts that sometimes arise from differing interpretations, aspirations and worldviews. Capturing this reality in practice presents numerous challenges, of course, not least because of the continued dominance of expert 'objective outsiders' in landscape character and other assessments (Butler, 2016).

Landscape, like other social, economic and environmental phenomena, is no respecter of borders. Both 'special' and 'everyday' (e.g., those that are officially protected by the state, and those that are not) landscapes are salient manifestations of the 'diverse environmental spaces' that do not 'map readily onto territorial planning spaces', necessitating open and creative ways to facilitate collaborative working among diverse stakeholders (Allmendinger *et al.,* 2015, 15). Consequently, significant resources are directed towards improving the transboundary management of valuable environmental assets, such as river basin districts (Priest *et al.,* 2016), protected public woodland (de la Fuente *et al.,* 2018), and natural/cultural World Heritage Sites (Svels and Sande, 2016). The ELC explicitly encourages cooperation on 'transfrontier landscapes' (COE, 2000). Thus, increasing attention is paid to understanding better the diverse approaches to landscape management currently employed throughout Europe (Garcia-Martin *et al.,* 2017; Tully *et al.,* 2019), and determining effective ways of combining governance know-how in tackling common challenges rendered more complex in cross-border regions (Brüll *et al.,* 2017; Spyra *et al.,* 2019). In the past, 'back-to-back' planning limited the scope for effective cooperation across borders, with consequences for the capacity to act in concert on pressing concerns. The emergence of thinking on soft policy space responds to such challenges.

That our everyday lives are increasingly 'mobile, fluid and multiple' across borders (Allmendinger *et al.,* 2015, 8), inevitably impacts how landscape is inhabited, encountered and perceived by people, which is highly consequential for the official processes attending its definition and ongoing management. Viewing landscape as co-constituted between people and place is particularly resonant in cross-border contexts, especially those with a long history of conflict like on the island of Ireland (McClelland, 2016). Although landscape is recognised as a positive expression of 'shared cultural and natural heritage' (COE, 2000, art. 5), where different 'ethno-national communities' coexist, it may conversely be a source of local sensitivities, misunderstanding and potential conflict (McCall, 2011; McClelland, 2016). These tensions are additional to the contestation that attends everyday decision-making over the use of urban and rural landscapes (Svels and

Sande, 2016; Butler, 2016; Tatum *et al.,* 2017). Nonetheless, as Haselsberger (2014, 506) argues, pursuing positive 'relational geographies' through soft spaces for cooperation, including over the intersecting boundaries pertaining to landscape, is necessary to overcome negative border effects and 'enable different kinds of coexistence' to emerge.

The ELC provides a broadly supportive policy framework within which to pursue a progressive approach to cross-border cooperation on landscape.[1] On the island of Ireland, the cross-border soft policy space constructed since the Good Friday Agreement in the late 1990s, is especially evident with regards to strategic planning, where an accumulation of 'spatial public diplomacy' initiatives has generated 'a subtle – if not symbolic – shift from collaboration to cooperation' (Peel and Lloyd, 2015, 2224; see also Blair *et al.,* 2007; Walsh, 2015; Rafferty and Lloyd, 2014). In respect of landscape, the policy context is also favourable. For example, the key 'bilateral spatial planning framework for joint working across the two jurisdictions' (Peel and Lloyd, 2015, 2211), the *Framework for Co-operation*, identifies landscape management on a cross-border basis as an 'important emerging planning issue' (DRD and DEHLG, 2013, 21). While positive, this 'non-statutory framework' largely sets out to guide co-operation between authorities in both jurisdictions when implementing their respective spatial strategies (Cave and Semple, 2018, 42), principally under the strategic themes of economic competitiveness, environmental quality, and evidence gathering for spatial analysis. The envisaged nature of cooperation on landscape and how it might be implemented is not prescribed, representing an opportunity space for innovation.

Landscape and online participatory mapping using GIS

A critical facet in conceiving of the landscape as a cross-border soft policy space is the centrality of public perceptions to its definition and management. Whereas the 'physicality of landscape' and its 'intrinsic' qualities dominated thinking in the past, and remains influential to some extent in practice, the ELC has shifted policy emphasis towards recognising the landscape as a values-based phenomenon and democratic concern (Butler, 2016, 240). In this latter view, holistically defining the landscape demands knowledge of both the 'subjective' values people actively attribute as participants in its creation and valuation, as well as the 'objective' assessments of geophysical landforms deriving from experts such as landscape planners and geomorphologists. These values are socially constructed, subject to change over time, and drawing upon an array of factors such as gender, age, and peoples' experiences in the landscape. As Stoffelen *et al*. (2019) explore in relation to UNESCO Geoparks, landscape values pertain to the affinity that inhabitants have for their living environment which, among other things, influences their identification (or not) with the boundaries of these designated sites of international geological significance. Capturing the diverse values associated with landscapes has especially occupied geographers in recent decades, including progressing the development of digital tools and mapping methodologies.

Therefore, citizen science approaches to landscape have gained in prominence since the ELC was elaborated in October 2000 (Shaw *et al.,* 2017). This term broadly encompasses online participatory mapping and PPGIS, which are increasingly popular mechanisms for assessing people's development preferences and the values they attribute to rural and urban landscapes, coastlines and other environments (Strickland-Munro *et al.,* 2016; Garcia-Martin *et al.,* 2017; Pietrzyk-Kaszyńska *et al.,* 2017; Santé *et al.,* 2019; Kahila-Tani *et al.,* 2019). Although a singular definition of PPGIS remains 'nebulous' (Tulloch, 2008), it is taken to represent a system of capturing geospatial knowledge, typically through digital platforms, from 'non-experts' and the lay public to augment and complement expert generated data (Brown *et al.,* 2014). PPGIS within the Irish context was underexplored until relatively recently (de Róiste, 2009). However, a growing number of crowdsourcing initiatives are evident, for instance, through the National Biodiversity Data Centre, as well as research projects utilising online map-based surveys to elicit local place-based knowledge on social and cultural values (e.g., Ryfield *et al.,* 2019). This upward trajectory is likely to continue as digital tools become more sophisticated and ever-present in people's daily lives, particularly as government agencies embrace online methods for public consultation processes and service delivery.

Further accelerating the application of PPGIS are its numerous practical and analytical advantages, including bolstering the capacity to capture, overlay, and visualise large volumes of place-based data, while facilitating the monitoring of change over time (Brown and Weber, 2012). For decision-makers, such integrated knowledge aids the identification of 'blind spots' and previously unknown or overlooked issues and places. The rapidity with which online surveys can be disseminated and the potential reduction in the time required for data entry is also advantageous for those organising participatory processes (Pocewicz *et al.,* 2012). Moreover, identifying the synergies and conflicts in how diverse stakeholders value places informs about competing priorities over their use, management, and development, thus supporting robust and sustainable decisions socially acceptable to the local populous (Kyttä *et al.,* 2013; Strickland-Munro *et al.,* 2016; McLain *et al.,* 2017). For the public, online participation typically allows a greater number of people to take part, at their own pace, and at a time and place of their choosing, thereby overcoming pitfalls of traditional face-to-face approaches (Brown and Kyttä, 2014; Kahila-Tani *et al.,* 2016). This can include individuals from heterogeneous backgrounds often underrepresented in participatory processes, such as young people or those unable to attend public meetings (Kahila-Tani *et al.,* 2016). Lastly, the ability to span administrative boundaries and transcend multiple scales is especially useful in geographically dispersed and cross-border contexts (Brown and Brabyn, 2012).

On the other hand, exponents of digital participatory methods emphasise that they are complementary to traditional face-to-face processes rather than alternatives (Kleinhans *et al.,* 2015; Kahila-Tani *et al.,* 2016; Babelon *et al.,* 2017). There is insufficient space here to elaborate upon their comparative strengths in detail, and in-depth reviews of the pros and cons of PPGIS are available elsewhere (e.g., Brown and Kyttä, 2014; Kahila-Tani *et al.,* 2019). However, the 'digital divide' is a notable concern impacting participation

rates, whether due to poor broadband infrastructure in rural areas – a particular problem in Ireland – limited access to computer hardware and software for socio-economic reasons, as well as digital skills gaps, for instance, between older and younger people (Rinner and Bird, 2009; Huck *et al.,* 2014; Gottwald *et al.,* 2016). Question marks over the levels of citizen empowerment, inclusiveness and democratic governance actually facilitated by participatory processes utilising digital tools, ally these potential limitations (Haklay, 2013; Shaw *et al.,* 2017). In short, complications arise over the application of PPGIS stemming from what Brown and Kyttä (2014, 126) characterise as the 'intellectual tug of war between its dominant components'; namely, public participation as social processes, and GIS as technology. These tensions demand careful consideration by those involved in the early stages of (co)creating participatory processes to ensure the needs and capabilities of the public are foregrounded.

Case Study of North West Ireland

The 'spatial imaginary' of North West Ireland as an integrated cross-border region is conveyed in the recently published *National Planning Framework* (DHPLG, 2018), reflecting the intensifying policy relations and practices now taking place after many decades characterised by 'back-to-back planning'. Thus, as a governance space, the 'North West City Region' is actively promoted by Derry City and Strabane District Council, and Donegal County Council, with formalised structures and associated discussion fora, comprising an array of multi-sectoral stakeholder organisations, created with central government support to provide strategic leadership towards realising common objectives (DCSDC, 2018).

As a functional territory, vehicular commuting patterns evidence the significant flows of people crossing the border for work, education, shopping and recreational activities, with County Donegal accounting for the largest number of cross-border commuters in the Irish border region, largely oriented towards the city of Derry-Londonderry (CSO, 2017).

As a cultural landscape, the Foyle Valley is recognised as a coterminous cross-border character area in the *Northern Ireland Regional Landscape Character Assessment* (NIEA, 2016) and *Landscape Character Assessment of County Donegal* (Donegal County Council, 2016). This shared landscape is celebrated in initiatives such as the Foyle Landscape Project (Foyle Civic Trust, 2013) and the 'Local People' exhibition (Purkis, 2017). Indeed, the recent joint commissioning of an 'Atlas for a City-Region' by the local councils (DCSDC, 2019) is perhaps indicative of the opportunity space that the North West represents for testing innovative approaches to public participation in landscape.

#MyValuedPlaces methodology

The #MyValuedPlaces case focused on the Derry City and Strabane District Council, and Donegal County Council areas. The case comprised an online map-based survey of places valued by people within the study area, with the broad aims of demonstrating the application of PPGIS and deriving insights for policymakers and practitioners on

adopting such methods in the future. The survey launched via a Twitter talk during Irish National Heritage Week in late August 2017 and was open for public participation over an eight-week period. As well as inclusion within the Heritage Week online and printed publicity materials, the survey was primarily promoted via social media (Twitter, Facebook), hence the hashtag naming. Several face-to-face drop-in sessions were also held in the North West, including during the European Heritage Open Days and Culture Night in September 2017. Critically, both councils disseminated information and survey hyperlinks via email to their heritage and community planning contacts, which bolstered the number of people taking part. However, it is important to stress that no claims are made concerning the representativeness of the collated data, with the participants ultimately self-selecting rather than drawn from a sample, and emphasis within the case maintained on piloting the method rather than drawing out statistical conclusions.

#MyValuedPlaces was publicly accessible via a dedicated webpage created through Maptionnaire, one of the best-known PPGIS survey tools, initially developed in Finland and subsequently used for diverse purposes around the world (Kahila-Tani *et al.,* 2019).[2] The survey was designed for completion anonymously by individuals, whether at home, in workplaces or elsewhere with an internet connection, on a range of internet-enabled desktop and mobile devices, and not necessarily in one sitting when using the same device and web browser. A substantial number of technical and functional choices critical to the usability of PPGIS surveys were made during the survey design, including providing a selection of base maps for participants to choose from, and preferring the use of point data rather than lines and/or polygons, especially as the former are 'easy for participants to understand and simple to process and analyze' (Besser *et al.,* 2014, 147). In terms of structure, the survey comprised three principal sections:

- An informed consent page that participants were required to read and complete before proceeding;
- A mapping exercise during which participants identified 'Positively perceived' and 'Negatively perceived' places within the study area, as well as those places they 'Most identify with';
- A small number of socio-economic questions concerning participants, as well as eliciting feedback about their experiences when completing the survey.

Central to #MyValuedPlaces was the identification of places positively perceived by participants, which consisted of several interrelated tasks. Firstly, participants located their selected places (one at a time) on an online mapping interface by dragging and dropping pins using a mouse/touchpad and the zoom function. Once confirmed, a popup window requested that they indicate the ways in which they value the identified places, initially by ticking all those deemed applicable from a predetermined typology of twelve value-statements adapted from Brown and Weber (2012) – see Figure 1. Variants have been used elsewhere to elicit place-based knowledge, for example, in determining the values attributed to forest landscapes (Beverly *et al.,* 2008), public parklands (Brown, Weber and de Bie, 2014), and marine protected areas (Strickland-Munro *et al.,* 2016).

The value statements represent a type of 'relationship value', bridging the 'held values' representing the ideas or principles individually important to people, and the 'assigned' values referring to 'conceptions of what appears important to the individual in the physical landscape', both of which interact in the 'attribution of meaning and the valuing of specific landscapes and places' (Brown and Weber, 2012, 317). Finally, participants were free to articulate why they valued the selected places in the ways they did, producing nuanced statements revelatory of people's sense of place and how it develops over time.

Value	Statement
Aesthetic	I value this place for its aesthetic qualities, attractive scenery, sights, smells, or sounds
Economic	I value this place for economic benefits such as tourism, forestry, agriculture, or other commercial activity
Recreational	I value this place because it provides outdoor recreation opportunities
Life sustaining	I value this place because it helps produce, preserve, and renew air, soil, and water
Learning	I value this place because we can use it to learn about the environment
Biological	I value this place because it provides for a variety of plants, wildlife, marine life, or other living organisms
Spiritual	I value this place because it is spiritually special to me
Intrinsic	This place is valuable for its own sake, no matter what I or others think about it or whether it is actually used
Heritage	I value this place for its history and heritage significance
Therapeutic	I value this place because it makes people feel better, physically and/or mentally
Wilderness	I value this place because it is wild
Social	I value this place as it provides opportunity for social encounters and meeting with friends, family and others

Figure 1: Value statement typology employed for 'positively perceived' places in North West Ireland

#MyValuedPlaces results

Socio-economic profile of survey participants

Over 600 unique visits were made to the #MyValuedPlaces web link during the eight-week period, 348 of which proceeded past the consent page. From this latter group, 123 participants fully completed the socio-economic and feedback questions component. Somewhat disconcertingly, however, 49 of the 123 did not identify any places on the mapping interface, while another 41 from the 348 who proceeded past the consent stage, but did not fully complete the socio-economic survey questions (and hence not counted as part of the 123), mapped numerous places within the study area. These discrepancies are briefly referenced in the next sub-section.

Beginning with the demographic profile of participants – see Figure 2 – a majority were female, representing some 56 per cent of completed responses. A significant majority

were born in the 1970s and 1960s, comprising 46 and 36 individuals respectively, with fewer younger participants than anticipated – only 6 of the participants were born in the 1990s (18 was the lower age limit for completing the survey), while 5 were born in the 1940s. With respect to religious affiliation, approximately three-fifths of participants selected Roman Catholic as their religious denomination, with 5 individuals choosing Presbyterian, and a further 38 indicating they had no religion. On the question of national identity, 84 participants identified solely as Irish, 8 solely as British, and a further 13 as solely Northern Irish, while 6 participants choose the other category, including a Brazilian, a Finn, a French national, two self-identifying as Scottish and European, with a sixth not elaborating further. In line with the approach taken in Northern Ireland census, participants were free to select more than one national identity category. The predominance of participants identifying as Irish is broadly consisted with the census profiles of both council areas (see, for example, Gleeson, 2015).

Figure 2: Demographic profile of survey participants

Insofar as other socio-economic characteristics are concerned, a majority of participants completed third level education, including 61 holding a postgraduate qualification or higher, 35 with a bachelor's degree, and 16 with a third level qualification at non-degree level, suggesting a marked skew towards the highly-educated in terms of educational attainment. Furthermore, a majority are currently working as employees, with the self-employed representing the second largest grouping of those who fully completed the socio-economic questions, consisting of 92 and 14 individuals respectively. Those that are retired, students, the unemployed, and looking after the home, also appear underrepresented in the survey responses when considering the wider population of the region.

A majority of survey participants live within the Derry City and Strabane District Council, and the Donegal County Council areas, with 44 and 47 participants respectively – see Figure 3. From the remainder, 24 participants indicated that they live in another council area within Northern Ireland, with those named including Belfast City Council, Causeway, Fermanagh and Omagh District Council, and North Down and Ards Borough Council. Another four participants currently live in other council areas within Ireland, with a further four living outside of the island of Ireland.

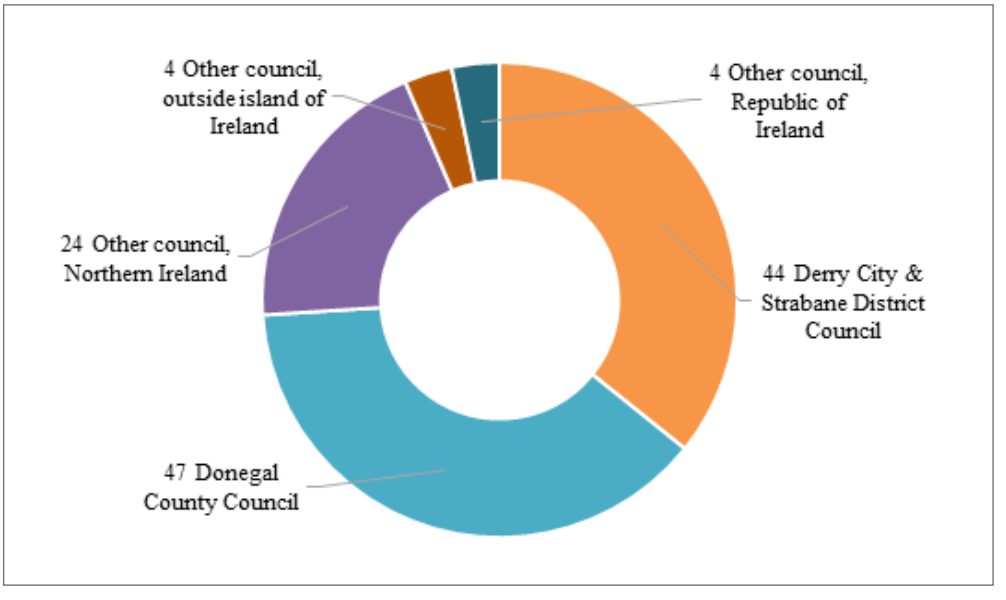

Figure 3: Council areas where survey participants currently live

Places identified by participants

In total, 551 place-based points were identified across the three #MyValuedPlaces mapping tasks, including 455 by those that completed the socio-economic survey questions and a further 96 by those that did not complete the survey – see Figure 4. A further 19 points not included in the 551 figure were stripped out for analysis purposes, predominantly because they are located outside the study area. Positively perceived places dominate the mapped responses – and are the predominant focus here – with 348 identified by those who fully completed the survey, and 93 by those who did not, representing a combined total of 441. In contrast, many fewer negatively perceived places, as well as those places people most identified with, were selected by participants. Furthermore, the highest number of positively perceived places identified by a single individual was 14, while 40 participants identified only one place each within the study area that they positively perceived. Many of those identifying multiple places did so on a cross-border basis irrespective of the council area that they presently live in.

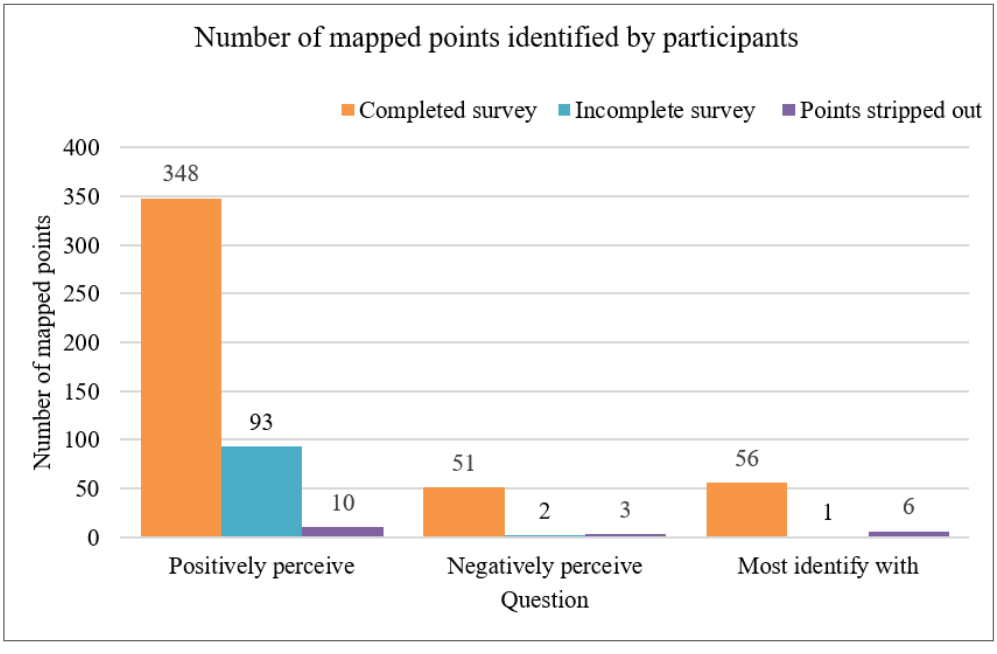

Figure 4: Number of place-mapped data points identified and number of positively perceived points per participant

Positively perceived places, as indicated in Figure 5, are well-distributed throughout the study area, particularly along the Donegal coastline and within key urban centres such as Derry-Londonderry. The types of places identified by participants were highly diverse and liberally interpreted, including those of recognised cultural significance, such as protected archaeological sites and historic streetscapes; favoured coastal walks and beaches; vernacular island landscapes; scenic driving routes; and even popular sporting

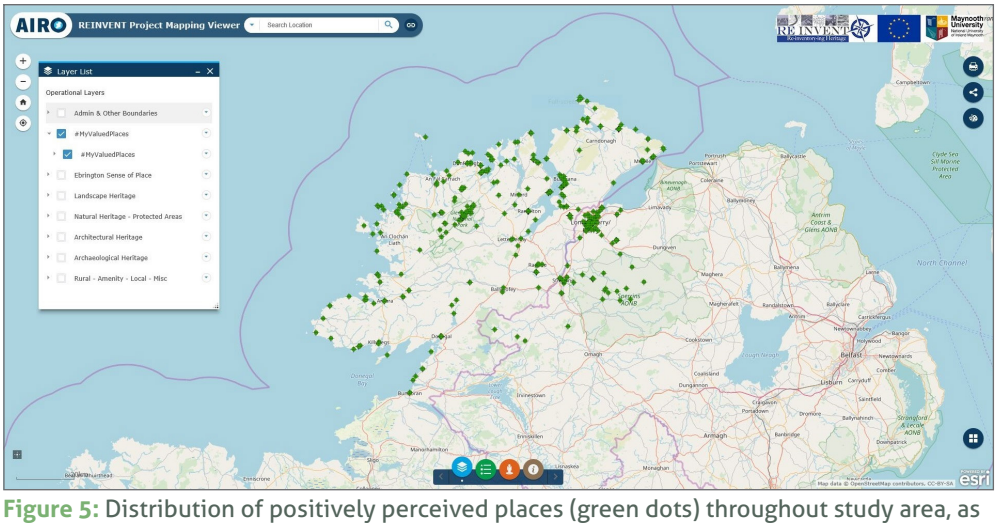

Figure 5: Distribution of positively perceived places (green dots) throughout study area, as represented by the REINVENT Project Mapping Viewer hosted by AIRO

venues. However, positively perceived place value clusters are evident in relation to several well-known, publicly-accessible cultural heritage sites, including Glenveagh National Park in County Donegal, and St Columb's Park and Brooke Park, both of which are located in close proximity to the centre of Derry-Londonderry – see Figure 6. The qualitative statements made by participants accompanying these positively perceived places emphasise, in particular, their recreational, scenic, natural and therapeutic qualities.

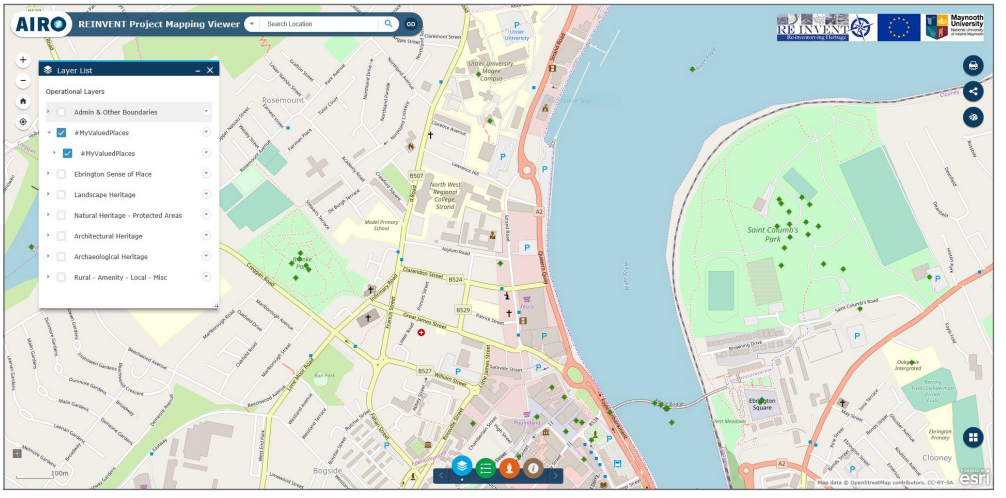

Figure 6: Positively perceived place value clusters at St Columb's Park and Brooke Park, as represented in the REINVENT Project Mapping Viewer hosted by AIRO

In terms of the twelve value-statements, aesthetic was the most frequently selected by participants, with 251 attributed by those that fully completed the socio-economic survey and a further 58 by those that did not. Recreational, therapeutic, social and biological diversity are the next most prevalent values identified, with life sustaining and spiritual values the least frequently selected by those who fully completed the socio-economic survey – see Figure 7. A small number of positively perceived places were not attributed with any of the values. However, 243 of the 441 positively perceived places combined across those participants that fully completed the socio-economic questions and those that did not, were accompanied by qualitative statements, representing a rich source of nuanced insights into how people value and construct their attachment to their valued places.

Following Cerveny *et al.* (2017), future statistical analysis could conceivably compare how well the identified landscape values are reflected in the associated qualitative statements made by participants, partly as a means of determining spatial accuracy/data quality, but also to provide a more nuanced understanding of landscape values. Other quantitative analyses could illuminate, for example, the influence of participants' place of residence, national identity and religious affiliation on the location and strength of

affinity with the places identified. Furthermore, the official landscape characterisations conveyed in the *Northern Ireland Regional Landscape Character Assessment* and *Landscape Character Assessment of County Donegal* could be coded and usefully compared with the values attributed by participants, helping determine how closely the participants' interpretation of landscape match those of the official assessments.

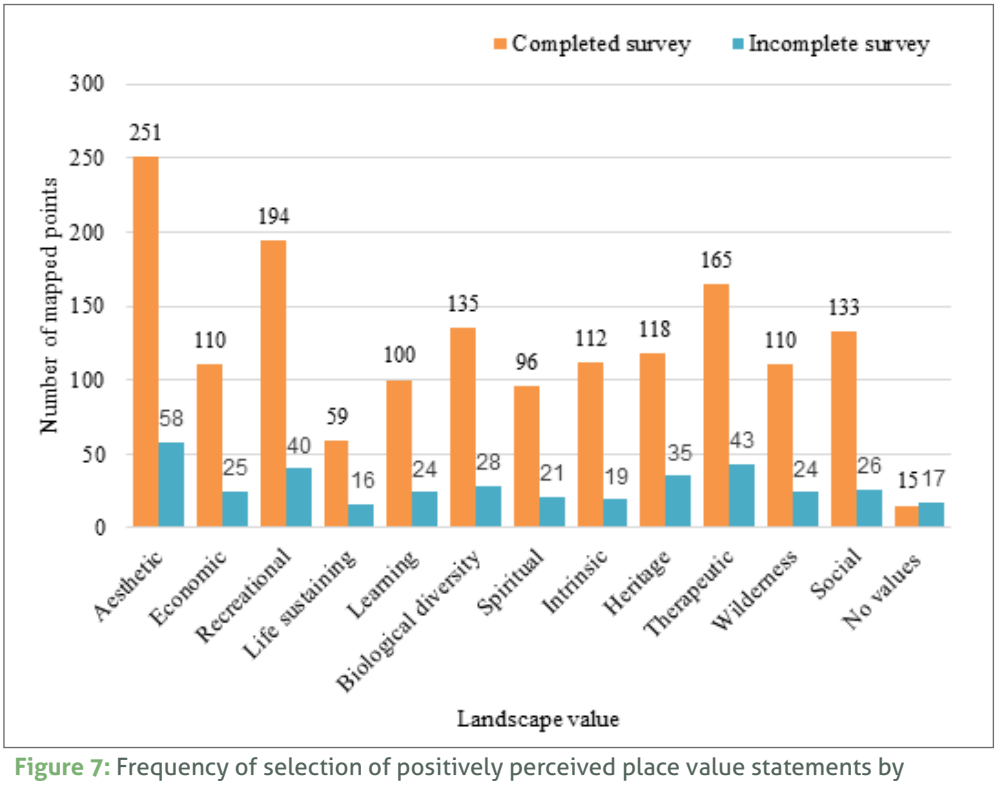

Figure 7: Frequency of selection of positively perceived place value statements by participants

Commentary on survey participation/representativeness

Several issues concerning survey participation and representativeness merit comment at this point. Fully assessing survey non-completion rates is difficult given that feedback questions posed at the end of the survey were not, by definition, completed by those dropping out. A majority of participants either strongly agreed or agreed that the survey was straightforward to complete. Nonetheless, among the concerns referenced in feedback responses, were technical difficulties in navigating the survey on certain types of devices, and particularly in zooming, dropping and dragging pins on the mapping interface, as well as the length of time required to complete the survey. It could arguably have been shorter and more focused.

Somewhat confusingly, a majority of the 49 participants who fully completed the socio-economic questions but did not identify any places on the mapping interface, strongly

agreed or agreed that the survey was straightforward to complete. This indicates a clear mismatch largely unaccounted for in the accompanying qualitative feedback. Of course, as a relatively novel approach for many people, completing the online mapping elements without support on-hand, may have posed overly challenging for some. Therefore, building in opportunities to assist participants in completing such map-based surveys, particularly through face-to-face engagement, would prospectively overcome these issues in future. Additionally, the survey tool could have been set up differently to ensure that participants identified places on the mapping interface, principally by making this element compulsory and preventing respondents from moving on to subsequent survey questions. This was not enforced in #MyValuedPlaces.

No claims are made over the representativeness of the collated data. A certain bias towards the highly educated was expected in line with other PPGIS surveys, albeit the educational attainment levels of #MyValuedPlaces participants was much starker than anticipated. Moreover, the age profile of those taking part was also somewhat unexpected, tending towards an older age cohort. While attempts were made to target underrepresented groups through the councils and local non-governmental organisations, the absence of a significant presence and survey infrastructure on-the-ground, and the lack of blending of PPGIS with face-to-face methods, arguably made this a more difficult task. As stated below, embedding the survey within an official landscape character assessment process would have enabled a more comprehensive approach to sampling and face-to-face engagement.

Reflections

#MyValuedPlaces reaffirmed PPGIS as an attractive method for eliciting place-based knowledge on landscape through public participatory processes. Although only a rudimentary analysis of the voluminous data collated in North West Ireland has been undertaken and presented here, the utility of the approach to policymakers and practitioners is readily apparent, particularly when this socially-produced data is combined with official datasets. For instance, the value clusters evident at two urban parks in Derry-Londonderry, Brooke Park and St Columb's Park, provide a level of validation for their pre-existing conservation protections as historic parks, gardens and demesnes. However, such designated heritage places tend to be officially defined in a rather narrow sense, typically for historic and aesthetic qualities alone, rather than by the wider plurality of values attributed to them by the public. As Butler (2016, 240-241) reiterates, understanding how people 'directly experience the landscape', as well as their 'relationships and practices' within, is central to its holistic definition and sustainable management. Participatory processes oriented towards revealing this plurality necessarily diversify the landscape away from being the sole domain of the 'outside' expert. Moreover, they usefully direct discourses on landscape towards a range of contemporary societal challenges prominent in the public consciousness, intersecting landscape with progressive policy agendas on wellbeing, local economic development, and social inclusion, amongst others.

The identification of potentially conflicting values and public preferences is evident through the #MyValuedPlaces data, and not simply in relation to those places negatively perceived in North West Ireland. Value-conflicts emerged in numerous different forms, including over hypothetical future threats to places of cultural significance positively perceived for their relatively untouched nature and the values presently considered to make them special. Other clashes of value are apparent where places are positively perceived for their economic and recreational values, but which simultaneously engenders contestation over social, environmental priorities for the same sites, for instance, over possible wildlife and biodiversity loss. Of course, a significant ascribed benefit of facilitating public participation in landscape implicit in the ELC is the drawing out of differing stakeholder perspectives on development preferences, social sensitivities and prospective conflicts over place. PPGIS provides an innovative means of doing so and contributing to establishing what Jones (2007, 622) characterises as a 'modus vivendi'; in short, an informed basis for negotiating and mediating solutions to landscape conflict.

Critically reflecting on #MyValuedPlaces case, two interrelated issues concerning its setup arguably lessen its potential impact, and are therefore of relevance for those involved in designing future exercises of this nature. Firstly, this includes a lack of embeddedness within an official public consultation process co-produced with government agencies and civil society on both sides of the border, such as associated with a landscape character assessment, or as achieved by Kahila-Tani *et al*. (2016) as part of the Helsinki Masterplan. The case could conceivably have achieved a greater level of buy-in from policy and decision-makers than ultimately has transpired to date, particularly in relation to follow-on actions utilising the collated data, although it hopefully provided a measure of inspiration for the recently-completed 'Atlas for a City-Region'.

Secondly, embedding the case within an official setting would have provided for a more authoritative purpose in the public mind. An intended progression towards official policy and designatory outcomes may have incentivised higher participation rates, particularly from harder to reach groups and a more diverse public than ultimately transpired. Indeed, the additional human resources, supportive infrastructure and overall capacity available to roll out a series of marketing materials and mediated events throughout the study area under the auspices of an official process may have significantly bolstered the opportunity for face-to-face encounters with the public. However, a higher participant response rate is not automatically guaranteed, as evidenced by the mere 17 responses that were received to an online map-based consultation element feeding into the creation of NIEA's *Northern Ireland Regional Landscape Character Assessment* (LUC, 2015). These predominantly emanated from non-governmental organisations and private sector consultancies.

Another concern with the prevalence of standalone research cases on landscape values using PPGIS is the real-world integration of the method within decision-making (Brown *et al.,* 2014; Santé *et al.,* 2019). By way of addressing this lacuna, research-praxis examples are now emerging demonstrating the blending of public and expert knowledge into co-created official landscape characterisation processes, including incorporation into the published planning documents. For example, preparation of the Landscape

Inventory of Galicia in North West Spain incorporated public participation from an early stage, mixing face-to-face workshops with communities and PPGIS assessments of landscape values, to supplement the work of a technical team and panel of experts (Santé *et al.,* 2019). Crucially, the public directly influenced the final official designations, with, by way of example, 32 per cent of Special Interest Areas identified exclusively from the lay knowledge generated through the participation process (Santé *et al.,* 2019, 237). Lessons derived from such cases will be critical to advancing the practical application of PPGIS. Applying a similar process in a cross-border context will present a myriad of additional challenges, not least on the island of Ireland due to the differing multi-level governance arrangements pertaining to landscape, and the contrasting scales at which these processes have traditionally been organised within both jurisdictions.

Conclusions

The *Framework for Co-operation* talks about 'the conservation and enhancement of shared natural and cultural assets' on a cross-border basis on the island of Ireland as well as the 'creation of places valued by people' (DRD and DEHLG, 2013, 28). In echoing many of the sentiments expressed in the ELC, this soft policy document in the Irish context essentially recognises that 'communities of place' are not simply confined within administrative and jurisdictional boundaries, and that people are central to the process of valuing landscape. Thus, this article introduced online participatory mapping as an innovative means of involving the cross-border public in valuing landscape and the places that are special to them, illustrated by the #MyValuedPlaces case focused on North West Ireland. Such methods provide an accessible means of engaging with the public on a range of issues meaningful to people and places, not least in articulating their development preferences and the plurality of values attributed to diverse landscapes. A demonstrable appetite is evident amongst those that took part in #MyValuedPlaces for increased use of online public participatory mapping on a cross-border basis into the future. Although cases of this nature are useful for piloting ideas in the border region, 'soft' approaches ultimately demand firming and embedding within official processes to better integrate lay knowledge into decision-making and adopted plans.

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Endnotes

[1] Ireland and the UK ratified the ELC, otherwise known as the Florence Convention, in 2002 and 2006 respectively.

[2] The survey remains open to browse at the following web link: https://app.maptionnaire.com/en/2870.

[3] Access the REINVENT Project mapping viewer at this web link: http://airomaps.nuim.ie/id/REINVENT. An accompanying story map, *Place(ing) perceptions in North West Ireland,* can also be viewed here: https://www.arcgis.com/apps/Cascade/index.html?appid=9f6367a2854b44f8b616c08b50f6ee01.