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The role of map-based environmental information in supporting integration between river basin planning and spatial planning

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ABSTRACT

Numerous drivers are encouraging greater integration between spatial planning systems and the river basin planning systems associated with the European Water Framework Directive (WFD). However, there is often limited understanding of how this might be accomplished in practical terms. This paper presents one facet of a wider project that examined the emerging relationship between river basin planning and spatial planning in Scotland. The results presented here show that there is considerable emphasis on developing map-based tools to communicate complex environmental information (related to the ecological status of water bodies) as a means of securing integration between the two policy regimes. However, these tools are also helping to shape how the wider policy discourse of integration is understood and put into practice in this context. Specifically, the reliance on such tools may serve to downplay the need for broader discussion and dialogue. This paper does not argue that map-based tools should be disregarded, but rather that their use should be situated within (and not used to replace) a meaningful discursive context. Otherwise, they may help to obscure the fundamental tensions and tradeoffs that are inherent in the governance of the land–water interface.

1. Introduction

The process of governing is underpinned by a range of seemingly contrasting ideas. For instance, many have highlighted a shift from government to governance, which involves the 'pluralisation' of policy making – that is, the increasing role of quasi – and non-government actors in the policy landscape – and the redistribution of decision making authority within this more diffuse set of actors (Rhodes, 2000). These ideas often sit alongside those that advocate greater integration in the policy landscape (Meijers and Stead, 2004). In other words, as pluralisation fragments responsibilities among policy actors, it also increases the perceived need to unite this wider range of actors within more 'integrated' decision making frameworks. This can create tension and results in the reformulation of relationships between stakeholders.

Integration is often promoted in specific policy discourses. For instance, the EU Water Framework Directive (WFD) has underscored the need for greater integration between water management and land use planning (White and Howe, 2003). Additionally, spatial planning – another prominent concept advocated at the European level (e.g. EC, 1999) – promotes the

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incorporation of wider social, economic and environmental objectives within planning practices (Harris and Hooper, 2004; Thompson, 2000). In the UK, ongoing reforms within land use planning systems have been geared, in part, towards aligning these systems with the ideals of spatial planning.[1] In keeping with this, British land use planning systems are being 'recast as mechanisms to improve policy integration' (Counsell et al., 2006, p. 243). Combined, these policy discourses are therefore encouraging a greater level of integration between spatial planning systems and the river basin planning system associated with the WFD. However, in the UK (and potentially in other EU countries) building linkages between these two systems involves bridging widely separate policies and institutions. There is limited understanding of how this might be accomplished, or what it means in practical terms for those involved (particularly spatial planners).

This paper draws from an empirical study whose aim was to help address this limited understanding. The study explored the emergence and reformulation of relationships between the river basin planning and spatial planning regimes in Scotland (Smith, 2011). The research approach was rooted in interpretive policy analysis (e.g. Yanow, 2000). It involved 27 in-depth interviews in 2009, primarily with spatial planning staff from local authorities, and with staff from relevant public agencies, such as the Scottish Environment Protection Agency (SEPA) and Scottish Water. It also involved examining around 30 key policy documents, such as the River Basin Management Plan (RBMP) for Scotland, as well as national planning policy and guidance. The study focused on two case study areas – Glasgow and the Clyde Valley, and the Highlands. The analysis explored how the relationship between the two regimes was being 'actively constituted' (Healey, 1999, p. 113) by those involved in building the linkages. The findings highlight a complex and evolving picture. The principle organisations involved – notably SEPA and local authority planning departments – interact with each other in a variety of arenas, and use a range of mechanisms to communicate relevant information and interests. This allows them to build their understandings of what integration between the two regimes looks like in practice. These communication mechanisms include formal, written consultation responses, as well as more informal opportunities for discussion and dialogue. Together, these arenas of interaction and mechanisms of communication were understood as pathways for securing integration between the river basin planning and spatial planning regimes.

This paper does not present the full results of this wider study, but focuses on one element that has particular relevance for this special issue. As with other papers in this issue, we explore how science is being mobilised to address policy problems (e.g. promoting integration). However, the focus here is not just on science but also on the use of a particular tool to communicate scientific information – specifically the use of map-based tools to convey information relating to the ecological condition of water bodies. The potential importance of these tools (as they were not yet in place at the time of writing) was repeatedly emphasised in the data – their development was seen as a crucial means of integrating the two regimes. The significance attributed to these tools highlights the importance of communicating environmental information. The overall purpose of this paper is to explore the significance of these GIS-based mapping tools within the wider policy discourse of integration that underpins this relationship. The paper also draws from wider work on the science–policy interface, and concepts such as boundary objects and performativity, to explore the role of these tools and the underlying logic and assumptions that support their use.

Within the body of work that explores the 'boundary' between science and policy, there is recognition that scientific knowledge can be utilised in different ways to address different policy problems. Some authors highlight a typology of policy problems (e.g. Turnhout et al., 2008; Wesselink and Hoppe, 2011) including: (1) well-structured problems, where there is a high degree of consensus around the policy goals and the means to achieve them; (2) unstructured problems, which are characterised by lack of consensus and a high degree of scientific uncertainty; and (3) moderately structured problems, in which there is some consensus, but also a need for negotiation, either to establish common goals or agree on the means to achieve them. The role of science differs within each of these problem types. For instance, in well-structured problems (one example might be setting quantitative water quality standards) scientific data is often used in a straightforward, instrumentalist manner – its use and validity would rarely be questioned. The development planning process might seen as an example of a moderately structured problem – while the goals of future development are debated, there is some consensus around the plan-making process itself. In such problems, scientific information might be used as a tool for advocacy, in that different interest groups might use scientific arguments to back up their positions, while questioning the science used by other groups. Such ideas help to unpack how the map-based tools are used in this context.

The paper starts by reviewing some of the relevant literature on integration, as well as on the role of map-based tools in that context. It then highlights the setting for this research, first by outlining the overall structure of the river basin planning and spatial planning regimes in Scotland, and then by discussing how the relationship between the two regimes is emerging. The paper then examines why map-based communication tools have been proposed as an important feature of this emerging relationship, and considers the (potentially unseen) implications of relying on such tools. The paper argues that, while these tools no doubt have value as a means of visualising and communicating environmental information (an important exercise within this process of integration), there is a risk if they are used *in place of* more discursive forms of interaction.

2. Integration – policy necessity or chimera?

The concept of integration has long been a feature of environmental policy literature (e.g. Lafferty and Hovden,

[1] Indeed, the term 'spatial planning' is increasingly replacing the term 'land use planning' in UK policy. Therefore, in this paper, the two terms are used more or less interchangeably, though it is recognised that this may not be appropriate in other European contexts.