

Exploring the scale dimensions of water governance: a comparative federalism perspective on EU policy-making

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Abstract

Conflicts over how to ‘scale’ specific standard-setting tasks have characterised the development of EU environmental governance since its inception in the 1960s. These are particularly evident in water governance, raising questions over the democratic legitimacy, economic efficiency and effectiveness of scaling. In assessing the ‘optimality’ of scaling in one specific governance issue, water quality, this paper adopts a comparative federalism perspective. It compares the scaling of recreational water quality tasks in the EU with practice in Australia, which is a more fully fledged federal system. Patterns of scaling are then analysed using arguments drawn from federal theory. This reveals that while it could be theoretically ‘optimal’ to re-scale EU tasks to lower levels, in this case, greater governance flexibility does not necessarily equate to a coherent policy response – a feature also apparent in Australia. Greater consideration of the overtly ‘political’ construction of scale is therefore needed. The research does, however, demonstrate the wider potential of comparative federalism to frame debates over the scaling of water governance in the future.

Introduction

Debates over ‘scaling’ powers within multi-level governance have become widely discussed in several related academic sub-disciplines, including economic federalism (e.g. Oates 1998), political geography (e.g. Delaney

and Leitner 1997), EU studies (Hooghe and Marks 2003) and international public policy (Young 2002). For example, conflicts over the appropriate 'scale' (Young 2002) or institutional level of policy-making characterise multi-level water governance. A past response has been to scale water policy 'tasks' (Weale *et al.* 2000: 68) for standard-setting upwards to higher institutional levels: a familiar pattern seen in contexts globally. However, recent decades have witnessed a discernible paradigm shift with some tasks re-scaled downwards to the ecosystem level (e.g. Sabatier *et al.* 2005). In our research, task scaling is examined in one leading multi-level system, the European Union (EU), using a comparative federalism perspective to focus on one problem, namely recreational water governance. Of particular interest is how comparing EU approaches with fully federated systems can generate cross-contextual learning on scaling.

Conflicts over scale have been particularly evident in the development of water governance in the EU. Originally, water pollution problems were governed at the national or even local scales. Over time, policy tasks have been incrementally re-scaled to the EU triggering disputes over its legitimacy, costs and effectiveness. These arguments culminated in attempts by Member States to 'repatriate' or re-scale water governance tasks during the 1990s (Jordan 2000). Although repatriation *per se* did not occur (*ibid.*), recent initiatives such as the Water Framework Directive (WFD) are leading to increased downward scaling of tasks so that they are shared more functionally between institutional levels.

One controversial measure to emerge from this ongoing debate was the Bathing Water Directive 1976. The Directive seeks to protect bathers by establishing recreational water quality standards for beaches. Considered by the EU to be 'one of the most successful...elements of European Water Policy' (*OJ C45*, 25.2.2003: 127), it has nonetheless generated much conflict. Critics have consistently argued that bathing water should be governed at the national scale (see Haigh 2004). In response, recent amendments to the Directive have allegedly sought to provide greater 'flexibility', i.e. lower level autonomy. However, the Directive effectively still leaves tasks in EU hands while actually tightening standards. Member States now face whole new compliance challenges meaning arguments will undoubtedly continue. Therefore, how 'optimal' is recreational water scaling in terms of democratic legitimacy, economic efficiency and environmental effectiveness? As this question is normative it can only be answered theoretically and/or comparatively.

Scaling could be viewed through the lens of comparative federalism, currently a ‘hot topic’ in EU studies (Menon and Schain 2006: 1). Although manifestly not a federation, the EU, according to a growing literature, nonetheless exhibits distinctly federal characteristics thereby allowing comparison with more fully federated states (Benson and Jordan 2008a). Indeed, comparison has already proved useful for examining EU environmental policy (e.g. Kelemen 2004). Recreational water policy is attaining higher political saliency globally, due in part to recent World Health Organization (WHO) guidelines. Measures have been introduced in Australia (NHMRC and ANZECC guidelines), the USA (the Beach Act 2000) and Canada (Guidelines for Canadian Recreational Water Quality). Australia, for example, has adopted a contrasting multi-level policy response to the EU, due in part to its cooperative federal political structures. Recreational water quality is managed through an integrated water quality framework involving Commonwealth (federal), state and local (ecosystem/watershed) scales that appears to offer significant flexibility. If Australian approaches offer more ‘optimal’ solutions to water quality problems, lessons could then be drawn for re-scaling EU tasks. Two broad questions are therefore important, namely: ‘*what can comparative federalism teach us about the scaling of EU recreational water quality tasks?*’; and, ‘*what can comparative federalism teach us about the scaling of water governance tasks more generally?*’.

This paper thus adopts the following format. Firstly, it describes how the EU copes with the issue of scale. Secondly, it develops a theoretical framework for analysing the ‘optimality’ of scale in water quality governance, using arguments from the federalism literature. Thirdly, it compares scaling in EU and Australian recreational water quality governance. Fourthly, it analyses empirical material from a federalism perspective to discuss the theoretical ‘optimality’ of the approaches and identify what lessons, if any, can be drawn.

Coping with problems of scale: experiences in the EU

Conflicts over the optimum scale of policy responses have dominated the historical development of EU environmental governance (Benson and Jordan 2008a,b). Environmental tasks were originally scaled to the national level. After the first Environmental Action Programme (EAP) in 1973,

tasks were gradually re-scaled to the EU level resulting in a broad-ranging environmental *acquis communautaire* (see Hildebrand 2005). However, upward re-scaling of tasks did not occur without resistance from Member States, culminating in the attempted ‘repatriation’ of environmental legislation after the Treaty on European Union (TEU) in 1993 using subsidiarity (Jordan 2000; Benson and Jordan 2008b).

Scale conflicts have been most graphically played out in EU water governance (Benson and Jordan 2008a). Transboundary disputes over pollution of the Rhine were evident in the 1930s (Bennett 1992). Indeed, acute marine and freshwater quality problems were cited as critical reasons for an EU environmental policy (CEC 1971). Thus, early EU directives focused on establishing mandatory environmental quality standards for specific uses, including bathing water, shellfish harvesting and drinking water. According to Haigh (2004: 4.2-1), Member States were given some freedom in implementing standards, considered ‘a realistic approach, especially since there was some criticism about the appropriateness of Community intervention in such areas as standards for bathing water... which could be construed as essentially local issues’. In the late 1980s, the Commission introduced directives on nitrates and urban wastewater. As costs of all these standards began to bite, pressures from Member States to re-scale water tasks intensified. Member States reacted by attempting, unsuccessfully, to ‘repatriate’ measures using subsidiarity after the TEU (Jordan 2000). Criticism of the water *acquis* then led to the Commission withdrawing a proposal on the ecological quality of surface waters in 1994 (Haigh 2004: 4.15-9). It was replaced by the Water Framework Directive - a more integrated approach that repeals earlier directives and re-scales some tasks back to lower levels. Here, water governance is primarily fixed on the river basin, with Member States responsible for classifying waters and ensuring they meet environmental objectives.

Yet, debates over scaling water governance tasks have not entirely subsided. Significant water quality problems still exist in the EU, most notably from non-point source pollution such as agriculture. In addition, most tasks are still scaled to the EU. As discussed below, the Bathing Water Directive still allocates standard-setting to the EU level, suggesting scale conflicts will continue.

Assessing the ‘optimality’ of scaling is, however, problematic. Although improvements to environmental quality can be quantitatively assessed, policy implications for democratic legitimacy and efficiency are more difficult to ascertain and raise normative questions over the appropriateness of

scaling tasks within the EU more generally. One way of viewing these questions is to engage in existing theoretical debates on EU integration. For example, Benson and Jordan (2008a) assess the relative value of federal theories for framing debates on EU environmental policy-making, focusing on water governance at a more general level. Moreover, scale conflicts in water governance have engaged scholars in federal states, providing existing theoretical arguments that could be employed comparatively (e.g. Dinan *et al.* 1999).

Assessing ‘optimality’ in task scaling: a federal theoretical perspective

Federalism, according to Elazar (1987: 12), can be defined as ‘*self-rule plus shared rule*’. In other words, groups within political unions retain exclusive powers over specific issues but submit themselves by mutual constitutional agreement to joint decision-making over others. Federalism has evolved to become both a political practice, for organising power in multi-level systems, and a theoretical approach that explains or normatively prescribes this process.

Multiple competing theoretical conceptions of federalism appear in the literature for analysing how tasks or powers should be scaled to specific levels to enhance the democratic legitimacy, economic efficiency and effectiveness of policy. In this study, environmental federalism and new democratic federalism are used to comparatively assess the ‘optimality’ of scaling between federal contexts. Key features of these arguments are shown in Table 1.

Environmental federalism

Environmental task scaling has preoccupied US scholars since the early 1970s. The so-called environmental federalism debate (see Esty 1996) centres on the relative merits of centralizing or decentralizing regulatory tasks within federal governance. Although multiple arguments exist, environmental federalism generally presents a case for scaling tasks to lower levels (‘decentralization’), except for example where scaling up to the federal level (‘centralization’) is more efficient.

Within these arguments, decentralization is viewed as generally more economically efficient, democratically legitimate and effective than centralization. Oates (1998: 2) distils these arguments through reference to the principle of 'allocative efficiency'. Here, it is argued that scaling tasks so that 'the provision of each publicly provided good to the smallest jurisdiction in spatial terms... encompasses the benefits and costs associated with the provision of the good' (*ibid.*). In environmental policy terms, standard-setting should occur at the lowest tax-paying jurisdiction commensurate with the scale of the specific problem. By scaling tasks in this manner, Oates argues that 'relevant costs and benefits are fully internalized, the levels of the public service are tailored to the particular tastes and circumstances of the individual jurisdictions' (*ibid.*). Scaling does not therefore aim at harmonization but promotes variability in regulations according to jurisdictional context.

Although theorists diverge on the exact conditions (see Esty 1996), the only acceptance to this criterion is when decentralization is deemed inefficient. It is, however, widely accepted that the presence of spillovers (Stewart 1992) provides one argument for centralization. Spillovers are defined as external effects caused by one jurisdiction's activity on another for which no compensation is paid, thereby warranting centralized intervention to 'internalize' impacts. Several spillovers are described in the literature, the most common being 'pollution spillovers', generated by physical movements of pollutants across boundaries (Stewart 1992: 45). More controversially, 'competitive spillovers' (*ibid.*) occur where differences in regulatory standards cause market distortions such as product discrimination, or the 'race to the bottom' scenario whereby states compete for custom through lowering standards (Revesz 2000). However, arguments persist over whether the 'race to the bottom' does exist in environmental standards (*ibid.*). Lastly, Stewart (1992: 45) makes reference to 'preservation spillovers' or natural resources in one state, whose loss would cause reduced welfare for citizens in another, e.g. rainforests.

Table 1. Federal theoretical arguments on scaling ‘optimality.’

Theory	Scaling ‘optimality’	Key concepts
Environmental federalism	Tasks should be decentralized (scaled down) unless this is inefficient.	Centralization Decentralization Spillovers
New Democratic Federalism: FOCJ	Tasks should be scaled to specific jurisdictions	‘Task specific jurisdictions’

New Democratic Federalism: Functionally Overlapping Competing Jurisdictions (FOCJ)

Issues of democratic legitimacy and economic efficiency also feature in Frey and Eichenberger (2004) (see also the ‘Type II’ governance arguments of Hooghe and Marks 2003). In developing their theory of a ‘New Democratic Federalism for Europe’, the authors introduce the notion of Functional, Overlapping and Competing Jurisdictions (FOCJ). This concept is developed as a prescription to a perceived ‘democratic deficit’ in EU multi-level governance and provides powerful arguments on task allocation efficiency (Frey and Eichenberger 2004: 3).

In basic terms, FOCJ calls for the scaling of tasks to specific jurisdictions. Institutional levels tend to ‘bundle’ tasks together, providing uniform services that may not match preferences of different citizen groups, i.e. services are sub-optimal. The answer, according to Frey and Eichenberger (2004: 3) is to strengthen ‘political competition’ since it ‘makes governments suppliers of policies that take care of citizens’ demands and thus increase welfare’. The concept of FOCJ does this by allowing ‘the emergence of political bodies whose size corresponds to the tasks to be fulfilled’ (*ibid.*) – what Hooghe and Marks (2003: 236) call ‘task specific jurisdictions’. Indeed, such jurisdictions can cross-cut traditional institutional levels and even national borders within the EU multi-level governance system. In theory, resultant jurisdictions should be more democratic, efficient and effective since policies can be matched to specific contexts. In essence, FOCJ is characterized by jurisdictions that are: (1) ‘goal or

function' oriented; (2) 'overlapping' in geographical extent; (3) democratically competitive; and (4) have powers to regulate and finance their specific functions (*ibid.*: 4).

In terms of environmental governance, it could be expected that specific problems would be addressed by dedicated jurisdictions, instead of centralised 'one-size-fits-all' institutional responses. Tasks would logically be allocated to institutions determined by the scale of the environmental problem. In the case of water governance, the 'task specific jurisdiction' (Hooghe and Marks 2003: 236) would be located at the catchment scale since only here can the majority of the causes and effects of water pollution be addressed. Jurisdictions, therefore, could traverse different national political controls and involve multiple institutional levels where catchments are geographically extensive.

Comparing coastal recreational water governance: EU and Australia

In order to analyse scaling in EU and Australian recreational water quality governance, the next section provides an overview of: water quality problems and multi-level policy responses; multi-level task scaling patterns; and, successes and failures of scaling.

European Union

In Europe, coastal pollution first became politically salient in the early 1970s when tasks were primarily scaled to the national level. Problems were particularly acute in the North Sea, Baltic and Mediterranean, leading to a growing political consensus for action. Contamination of beaches in France, Spain and Italy then became widely publicised in the European popular press, threatening a lucrative tourism industry.

Given the acute pollution of their bathing waters, some Member States promoted the scaling up of tasks. A Commission directive proposal, pub-

lished in 1975, proposed establishing harmonised, mandatory values for inland and coastal water quality. Reasons given for the legislation included the movement of pollution between Member States and the impacts on tourism through limitations it placed on the freedom of movement of citizens on holiday. Member States would have to adhere to an implementation regime, including designation of bathing waters, monitoring pollutants, and reporting to the Commission. Council negotiations proved contentious, with UK politicians in particular questioning the *vires* (legal scope), environmental effectiveness, costs and implementation practicality of the measure (House of Lords Debates 1975: 743). One argument forwarded, since constantly revisited, was that bathing water pollution remains localised in terms of causes and effects (Jordan 1997: 121), therefore requiring national scale responses.

Implementation of the Directive was then fraught with controversy. In the UK, government policy initially sought to limit costs to water authorities through under-reporting bathing beaches (Haigh 2004: 4.5). Under threat of Commission legal action, the UK government eventually announced a major pollution prevention investment programme (*ibid.*). The Commission also enacted enforcement notices on other Member States, spreading political dissent. As discussed above, the Directive became targeted for 'repatriation' during the great subsidiarity debate of the 1990s (Jordan 2000; Wurzel 2002: 238). Environment Commission officials then campaigned successfully against ditching what they considered a critical measure to its overall water policy (Wurzel 2002: 239). The Commission subsequently introduced a revised Directive proposal in 1994 which was amended in 2002.

Following protracted exchanges between the Council and European Parliament, a new Directive was agreed in 2006 (*OJ L 64, 4.3.2006*). It reduces monitoring parameters to just two microbiological criteria: *E. Coli* (EC) and Intestinal Enterococci (IE). Member States must conduct a bathing water quality assessment of sites, classifying them according to four criteria: 'poor'; 'sufficient'; 'good'; or 'excellent' (*OJ L 64, 4.3.2006: 40-41*). The 'sufficient' standard must be met in all bathing waters by 2015, and is in effect a pass/fail for water quality. The Directive allows the temporary classification of waters as 'poor', providing Member States adopt certain management measures, e.g. prohibitions on bathing. Additional measures are introduced on public participation and dissemination of information.

Yet, the Directive provides little visible flexibility in task scaling and may increase regulatory burdens, producing further conflict. For example, considerable threats to water quality exist from non-point pollution sources such as agriculture. Meeting the stricter mandatory standard will impact compliance levels and increase costs (see below). From 2012, the Water Framework Directive will also require Member States to tackle bathing water problems at the catchment scale, adding to management complexity (*ENDS Report 386, 2007*).

Multi-level task scaling

Tasks have therefore been scaled between the EU and Member States in both the formulation and implementation of these Directives. Primarily, standard-setting has been scaled upwards from Member States to the EU level, although they still have retained a share in formulation. Member States have then become responsible for implementing these standards through their own national regulations, although they have little actual autonomy. Although the revised Directive re-scales some tasks downwards, in reality its effects are limited.

Implementation occurs through actors at the national and sub-national level. In the UK, the Directive is administered in England by DEFRA (the UK government Department for Environment, Food and Rural Affairs) and devolved administrations in Wales, Scotland and Northern Ireland. In England, monitoring of waters is conducted by the Environment Agency which publishes results to the public. UK local authorities are also encouraged to provide information on beach water quality to bathers. Improvements in beach water quality are also promoted by several voluntary initiatives, including the Blue Flag Scheme. However, private water companies exercise significant control over point source pollution through their investments in sewerage infrastructure. These have been increasingly necessitated by a parallel EU measure, the Urban Waste Water Treatment Directive.

Successes and failures: empirical evidence on scaling

After three decades it could be expected that significant inroads would have been made into EU bathing water pollution. In absolute terms, the Di-

rective may be considered an effective tool for managing recreational coastal water quality. In 2005, 96% of the 14,230 officially listed coastal bathing sites complied with mandatory standards (CEC 2006a). Bathing waters meeting the non-mandatory guideline values was lower at 86% (*ibid.*). Compliance has generally risen in all EU states in the last decade, with most reaching near full achievement of mandatory standards by 2003. Even the UK reported a near-perfect compliance rate for the mandatory standard in 2006, reflecting a steady improvement in water quality since 1997.

Yet, these statistics alone can be misleading. Firstly, the original Directive target was total compliance with mandatory standards by 1985, but by 2005 this still had not been reached (EEA 2005). Secondly, progress towards meeting the non-mandatory (guideline) standards has been slow with no Member States achieving them, even after 27 years (*ibid.*). Thirdly, there is considerable variation in standards between Member States (even between coastal areas within Member States), meaning a harmonized approach has not been achieved (*ibid.*). Fourthly, this situation has occurred despite significant expenditure on sewage treatment infrastructure across the EU. Requirements of the new Directive may also reduce compliance with the mandatory standards in the absence of further investment in non-point source pollution prevention, which could be £7 billion to UK agriculture (*ENDS Report 330, 2002: 13*). Fifthly, the figures do not account for the wide-scale practice of 'de-listing'. Since the 1990s, Member States have progressively removed coastal and inland sites from official lists (CEC 2006b). Finally, multiple legal cases have been instigated by the Commission over the Directive (see Krämer 2002). In consequence, scaling of tasks to the EU may be less effective than officially publicised.

Australia

On a smaller scale, coastal water quality problems in Australia have mirrored those experienced in the EU. Pressures on coastal recreational water quality come from several inter-related sources, most notably coastal population growth, point and non-point source pollution, and over-exploitation of coastal resources.

Although coastal cities have historically struggled with the problem of sewage pollution, beach water quality received little national political attention until the 1990s. The *State of the Marine Environment Report* (SOMER) published in 1995, the first comprehensive analysis of Australian marine resources, concluded that '[o]ver 80% of the Australian population reside in large coastal cities with aging and inadequate sewage treatment systems... [that] carry disease-causing micro-organisms into the sea, endangering bathers and seafood consumers with illnesses' (Department of the Environment, Sports and Territories 1995: Chap. 4). More recently, in its *State of the Environment Report 2006*, Australia's Department of the Environment and Water Resources noted '[t]he discharge of sewage and stormwater, land runoff, groundwater and river inputs of nutrients and sediments to estuaries and the coastal waters is arguably Australia's greatest coastal management challenge' (Beeton *et al.* 2006: Chap.6). There is, conversely, no coherent national monitoring of these growing problems.

Recreational water quality governance in Australian coastal areas is determined by actors at Commonwealth, state and local levels. In policy prescription terms, the federal government advocates a flexible, multi-level governance solution to recreational and coastal water quality on the catchment scale. This approach occurs within a framework of federal non-statutory, non-regulatory guidelines that states are supposed to be implemented under agreements with the Commonwealth.

The Australian system of environmental governance involves cooperative interactions between three non-hierarchical levels, each with their own responsibilities, namely: Commonwealth, state, and local governments. In Constitutional terms, states are responsible for managing natural resources (Fisher 2003: 88). In this sense, 'the Commonwealth has no formal involvement in the management of Australia's natural resources unless the Parliament of the Commonwealth can justify its involvement on the basis of one or more of the heads of legislative capacity in s. 51 of the *Commonwealth Constitution*' (*ibid.*: 89). In practice, this Constitutional constraint has not limited the Commonwealth's role in environmental governance. Since the 1970s, the Commonwealth has intervened to introduce a range of national level legislation and policies, although it must still cooperate with states in their implementation. As a result, cooperative federal arrangements have gradually developed in Australian environmental governance, with tasks scaled between Commonwealth, state and local actors. Important mechanisms for levels to cooperate on environmental resource issues are inter-ministerial councils and agreements.

Coastal water resource management at lower levels now occurs within the context of national policy and programmes. Coastal water quality is primarily managed through guidelines provided by the National Health and Medical Research Council (NHMRC), although separate guidelines are issued by the Australian and New Zealand Conservation Council (ANZECC). Originally introduced in 1990, the NHMRC guidelines are non-mandatory and were developed ‘as a tool for state and territory governments to develop legislation and standards appropriate for local conditions and circumstances’ (NHMRC 2006: 1). Based on WHO guidance on managing health risks, an aim is to stimulate development of a nationally consistent approach to recreational water quality governance.

Multi-level task scaling

Scaling of tasks within this system of multi-level environmental governance is therefore more fluid and complex than that imposed by the EU Directive. These in turn reflect the structure of Australian cooperative federalism.

As discussed, the Commonwealth level provides a coordinating role through setting the framework of national policy. Cooperation with states is channeled through inter-ministerial councils, first the NHMRC, then ANZECC and now the Natural Resource Management Ministerial Council. Federal funding is also provided for tackling specific pollution “hotspots”, as identified by state agencies, through the Coastal Catchment Initiative (CCI).

States have the primary role in recreational water quality standard setting within this national framework. For example, the New South Wales (NSW) Government has developed Marine Water Quality Objectives for each Catchment Management Authority (CMA) under its jurisdiction (NSW DEC 2005). Established under state law, CMAs report directly to the NSW Government and are responsible for water quality issues within designated watersheds. They are also the key mechanism for channeling state and federal funding to environmental improvement projects. The NSW Government has also initiated the state-wide Beachwatch monitoring programme, administered by its Environmental Protection Authority (EPA). Beachwatch also provides assistance to local councils in monitoring beaches.

Most important management decisions are taken at thus taken at local levels, with CMAs and councils important players. In NSW, each CMA produces a Catchment Action Plan, integrating state guideline objectives for recreational water quality. Local councils also use the objectives in guiding their strategic planning, assessment of development applications and water quality monitoring. The burden of implementation therefore often falls on local councils, meaning ultimately they are the key stakeholders in the attainment of water quality objectives.

Successes and failures: empirical evidence on scaling

Evidence on the success of scaling is mixed. The State of the Environment report (DEWR 2006) notes Australian coastal water quality is generally good. Implementation of the NHMRC guidelines is also spreading (Department of Health WA 2007). Tasmania has probably the most advanced programme to date. National guidance has been incorporated into the state Recreational Water Quality Guidelines 2007, with local governments now obliged to apply them. Western Australia has just introduced the Guidelines, using them to classify 90 beaches according to a 'traffic light' warning system. Monitoring of coastal waters in Victoria has occurred since the early 1970s. Although the NHMRC Guidelines have not yet been incorporated into State legislation, they are being adopted in monitoring programmes. New South Wales has been monitoring waters on this basis since 1989. National guidelines would then appear to be influencing state programmes. However, a lack nationally consistent data on water quality monitoring prevents an overview of the success of scaling.

Despite these gains, criticisms can be levelled against the Australian system. While water quality monitoring through integrated catchment management is now established in states, NHMRC guideline usage has been manifestly uneven. Monitoring strategies in terms of the uptake and implementation of national guidelines also differs between states, making comparison and assessment of environmental protection impractical. In these circumstances, considerable variation in recreational water quality could exist between jurisdictions – a significant problem with such a flexible approach. A major concern is then the lack of coherent national control - a result of constraints imposed by Australia's federal structure - since scope exists for less environmentally concerned states to adopt lax responses.

Assessing scaling ‘optimality’: a federal theoretical analysis

One conspicuous problem with lesson-drawing in policy analysis is that analysts often fail to consider how contextual factors (economic, cultural, political, environmental) shape responses (Rose 1993). Clearly, the EU and Australia cannot be compared ‘like-for-like’ in these terms. But when viewed through a common federalism lens it could be concluded that the EU *could* learn from Australia in terms of the ‘optimality’ of scaling but that lessons are not easily transferable.

When analysed with federalism arguments, scaling of tasks in EU governance could be interpreted as ‘sub-optimal’. An environmental federalism argument would view the centralisation of tasks as inefficient. Although pollution can, and undoubtedly does, cross national boundaries (particularly in the Mediterranean) major ‘pollution’ spillovers are difficult to demonstrate. In its original directive proposal, the Commission did not quantify such impacts, nor the alleged inter-jurisdictional trade effects on tourism (i.e. ‘competitive’ spillovers) – the case on which legislation was largely predicated. Moreover, a subsequent Commission cost-benefit analysis was unable to quantify all the EU-wide impacts of pollution (CEC 2002). It also appears difficult to explain the pollution as a ‘preservation spillover’ although public concerns over pollution were used as justifications by EU legislators. Neither can EU bathing water governance be understood entirely through FOCJ arguments. While pollution will be addressed at the catchment level, in effect through ‘task-specific jurisdictions’ (Hooghe and Marks 2003: 236), actual standard setting will still be allocated to the EU level. In this sense, jurisdictions cannot be democratically competitive since citizens will be unable to meet their preferences. Because it remains unclear whether scaling up is ‘optimal’, normative theoretical arguments would support the scaling down of tasks.

Indeed, analysis of Australian governance would suggest greater theoretical ‘optimality’. Since environmental federalism would determine decentralisation in the absence of major spillovers, the scaling of tasks to states and local governments would be considered more efficient. In Australia, little pollution appears to cross state lines given the significant distances between large coastal cities. It also remains problematic to view recreational water quality in terms of ‘competitive’ or ‘preservation’ spillovers. When viewed from an FOCJ perspective, task allocation would also appear more optimal. Since tasks are primarily allocated to the catchment level,

citizens theoretically have greater control over environmental management, thereby enhancing democratic legitimacy and efficiency. Australian integrated catchment management therefore provides an example of FOCJ type 'task specific jurisdictions' (Hooghe and Marks 2003) that are democratically competitive and can cross-cut multiple governance structures. In this instance, it would appear Australian responses are more legitimate, efficient and effective.

However, these theoretical perceptions of scaling 'optimality' do not readily account for its overtly 'political' dimension. In the EU, measurable advances have been made in beach water quality despite obvious shortfalls in implementation. In the absence of EU regulatory responses it remains debatable whether Member States would all have introduced national responses. In addition, the Directive enjoys popular support amongst European publics and is a tangible symbol of the EU's relevance to citizens. Re-scaling tasks back to Member States may not therefore be universally politically acceptable. A lesson from Australia is that without some degree of overall federal level legal compulsion, lower level scaling is a double-edged sword. While theoretically more 'optimal', the downside is undoubtedly the potential for uneven implementation.

The research does, however, highlight the considerable potential of comparative federalism and federal theory for framing debates over environmental governance scale. Problems of environmental scale are endemic to multi-level governance. Federalism, as an analytical concept, has already been extensively used to understand these problems in federal states, with alternative theories available that can engage in the overtly 'political' construction of scale. Research opportunities are therefore evident at the interface between federalism, multi-level governance and environmental policy-making.

The applications to understanding scale issues in water governance, for example, are potentially significant. The WFD also raises issues over the legitimacy, efficiency and effectiveness of scaling that could be explored comparatively within a federal theoretical framework. Integrated catchment management is now a global phenomenon and has been extensively developed in federal, multi-level states. For example, the USA has considerable experience in 'watershed planning' and adaptive management with a large literature on governance now emerging (e.g. Sabatier *et al.* 2005). Comparative federalism could provide a framework for analysing how the EU copes with scale within this context, thereby enhancing the potential for learning and knowledge transfer.

Conclusions

In response to the question posed in section 1, two main points can be made about the 'optimality' of recreational water quality scaling. From a theoretical standpoint, Australian scaling approaches appears more 'optimal' than in the EU. In Australia, tasks are devolved downwards to state and local scales through integrated catchment management, broadly conforming to theoretical arguments. The Bathing Water Directive still retains most tasks at the EU level. It could therefore be considered 'sub-optimal' in terms of legitimacy, efficiency and effectiveness, despite measurable improvements to environmental quality. Yet, the political 'construction' of scale is largely underestimated within such theorising. The Bathing Water Directive has provided a solution to problems that, in its absence, may not have been seriously addressed by all Member States. Experience from Australia shows that where (federal) political structures favour downward scaling this does not necessarily result in coherent responses or better environmental protection.

Such research does, however, highlight the potential of federal theories for framing wider debates on scaling water governance tasks as the EU moves towards greater integrated catchment management. Federal theories can do this through allowing comparison of practices with those in other multi-level systems. On this basis, considerable potential exists for lesson drawing and knowledge transfer from comparative experience. Similar issues over legitimacy, efficiency and effectiveness have occupied federal scholars for some time. The rich tradition of federal theories could then add considerably to research agendas but should include greater consideration of the overtly political nature of scaling.

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