BALANCING INTERESTS IN THE EU AND THE US:

A COMPARISON OF ENVIRONMENTAL POLICYMAKING

INSTITUTIONS AND WATER POLICY OUTPUTS

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ABSTRACT

In multi-level political systems such as the European Union (EU) and the United States (US), governing institutions balance the influence of territorially and functionally based interests in the policymaking process. This paper argues that --- in comparative terms --- EU institutional structures for environmental decision-making provide relatively strong opportunities for influence by territorially based interests, while environmental policymaking institutions in the US tend to allow for the exercise of relatively greater levels of influence by functionally based interests. It further argues that these institutional differences have implications for water policy outputs in the two political jurisdictions. Specifically, it suggests that the EU's more geographically oriented institutional structures enable a relatively high level of horizontal integration across policy sectors during the formulation stage of the policy process. In the US, by contrast, relatively high levels of institutional receptiveness to functionally oriented interests have contributed to more vertically integrated structures for drinking water and surface water policy implementation.

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I. INTRODUCTION

With the evolution of the European Union (EU) toward a supra-national polity, scholars have sought to analyze its governing institutions and policymaking processes through the eyes of federal principles (Sbragia, 1992B). These scholarly efforts are appropriate. While the EU is a long way from ever becoming a "United States" of Europe, it is becoming a multi-level political entity of its own unique variety. As with any polity that is organized around separate and geographically defined sovereign political jurisdictions, the EU faces challenges associated with constructing an institutional balance between representational structures for territorial and functionally oriented interests (Sbragia, 1993). While the EU's efforts to address these challenges are evident in its general governance structures, they are also reflected in the EU's institutional structures for environmental policymaking (Haigh, 1989). This paper seeks to illuminate the ways in which the EU has responded to these challenges by comparing the effects of territorial and functional interest representation on environmental policymaking in the EU and the United States (US). It argues that differing institutional balances relating to territorial and functional interest representation foster different kinds of institutional structures for water related policymaking in the two polities. These structures, in turn, have "real world" impacts on water policy outputs on both sides of the Atlantic.

In this context, water policy outputs can be seen as eventual by-products of differing institutional arrangements for governance. In the EU, current institutional governance structures favor territorial interests and give rise to broadly defined organizational responsibilities for environmental and water policymaking, as well as relatively under-developed tools of central influence over Member State water policy activities [1]. In the end, these arrangements provide significant opportunities for "horizontal" integration of water policies. By contrast, older US governance structures that favor functional interests are characterized by narrowly defined institutional responsibilities for water policymaking, relatively strong tools of national influence over State water policy activities [2], and relatively high levels of "vertical" policy integration. The end result is a different mix of water policy outputs in the EU and the US [3].

With regard to policy outputs, on both sides of the Atlantic there are calls for better "integration" of environmental policies generally and water policies in particular. However, while the terminology used to express these problems can sound similar, the most important problems underlying the criticisms are different. In the EU, the most pressing problems of policy integration involve issues of "vertical integration" associated with consistency and effectiveness in policies across the member states. The major concerns here are inconsistent and weak implementation of EU environmental policies by the member states. While US environmental

and water policies also face problems associated with "vertical integration," the most pressing problems in American environmental policy have to do with "horizontal integration" -- the extent to which policymaking institutions identify important tradeoffs across policy sectors and address them appropriately. The concerns here include cross-media pollution transfers, costly administrative redundancies, unnecessary program gaps, and broad policy confusion. And while both of these kinds of policy integration problems are present in the EU and the US, this paper suggests that differences in the magnitudes of these two problems in the two polities can be explained in large part as a result of differences in institutional design.

To make this argument, I suggest that differing stages of political development and fundamental cultural differences affect current institutional balances of territorial and functional interest representation in EU and US. Section II compares governance structures in the two systems, and argues that the EU's balance of institutional representation favors territorial interests of the Member States, while the US maintains a more mixed representational structure in which functional interests have a relatively strong voice. Section III provides an overview of four major policy sectors in the water policy arena and describes their importance and relevance to water policymaking in the EU and the US. Section IV then provides an outline of how differing mixes of territorial and functional influence in the two systems of governance outlined in Section II have led to the creation of different kinds of water policymaking institutions and implementation practices in the two systems. Section V then overviews policy integration related characteristics that would be expected to result from these differing environmental institutions and practices, while Section VI reviews available evidence regarding environmental policy integration in the two systems. The paper closes in Section VII with an overview of the argument presented, and some larger questions growing out of this research.

II.BALANCING TERRITORIAL AND FUNCTIONAL INTERESTS IN THE EU AND US

The EU is in the midst of an evolution toward some kind of incompletely defined political entity, while the US is an integrated 200+ year-old nation state. Largely because of this fundamental difference and differing cultural characteristics, the EU and the US structure institutional representation for territorial and functional interests in very different ways. The narrative that follows and Table 1 on page 6 overview institutional arrangements for governance in the EU and the US, and highlight the differing ways in which the two governance systems balance territorial and functional interests. They also demonstrate the relatively high level of influence accorded to territorial interests in EU governance structures at the constitutional, statutory, and implementation levels compared to what exists in the US.

Policymaking efforts at the "Constitutional" level are infrequent events in the US, and are now occurring approximately every three to seven years in the EU. In the EU, policymaking at the "constitutional" level is made at conferences among the member states. Because these conferences are held as a result of Member State interest and Members State consensus' are the vehicle through which Treaty changes are made, territorial interests are of central importance in EU policymaking at this level. In recent years, these intergovernmental conferences have become more frequently utilized, as four major intergovernmental conferences have been held in the last fifteen years (1986, 1993, 1996, 2000) and they have had major impacts on institutions and policy outputs in the EU. Yet another such conference is likely to be held in 2004 or so. By contrast, the last Constitutional Amendment adopted in the US was in 1971 (when the voting age was reduced from 21 to 18). While territorial interests are represented in the amending process through the US Senate and the requirements for State ratification, functional interests can and do play significant roles in many efforts to amend the US Constitution [4]. Thus, "constitutional" policymaking has been both more frequent in the EU in recent years and more dominated by territorial interests than is the case in the US. This significant influence of territorial interests in intergovernmental conferences is reflected in the importance accorded to the principle of subsidiarity, which suggests generally that policies should be legislated and implemented by Member State governments rather than at the EU level when this can be done effectively.

Institutional responsibilities for statutory policymaking also differ significantly between the EU and the US, with the former possessing stronger opportunity structures for territorial input than the latter. The EU's legislative powers are shared or "mixed" in three institutions --- the European Commission (EC), the Council of Ministers (CM), and the European Parliament (EP). In broad terms, the right of legislative initiative lies with the EC, while the CM is responsible for passing or rejecting the legislation that is brought to it for consideration. In addition, the EP and the cross-national functional interests to whom it responds are becoming increasingly important parts of the legislative process as a result of the co-decision procedures adopted in the 1990's. However, territorial interests are represented in some manner in all three of these EU institutions (for an overview of how, see Sbragia, 1992A), and are highly influential in the Council of Ministers – the major EU legislative decision-making body. These major policymaking institutions are supplemented by the European Court of Justice (ECJ), and a European Council that provides important avenues for territorial influence by giving national Heads of State opportunities to guide the development of both the evolving polity itself and the specific policies it undertakes. Functional interests are also represented within the three EU legislative institutions, but their input is filtered primarily through the EP and bureaucratic decision-making

structures underlying the EC and CM (See Peters, 1992 for a discussion of bureaucratic decision-making institutions). Functional interests also find support in the ECJ, but their access there is limited by the extent to which they can claim to be directly affected by EU laws and the ability of the court to hear their cases. Overall, as Table I suggests, current structures of representation provide many avenues of influence for territorial interests in the EU policymaking process, and are supplemented by growing – but still less influential – representational opportunities for functional interests.

The opposite balance of territorial and functional interest representation is apparent in the US. American statutory policymaking powers are divided between the Congress and the Executive. Because of the strength of Congress in the U.S. political system and its heavy reliance Committees and Subcommittees to do its work, American domestic policy is often built around Committee jurisdictions [5]. While legislative proposals emanating from Congressional Committees are subject to change on the floors of the House and Senate, changes made at these points in the process are often of less importance than the work that has already been completed in Committees and Sub-committees. Executive branch officials, however, can play important roles in suggesting proposals, structuring them to accommodate outside interests and the requirements of Congressional decision-making processes, and in interpreting and implementing them after passage. Furthermore, because of the wide latitude provided in many US statutes, agency interpretations of legislation passed by Congress also play an important role in the policy formulation process. These agency interpretations, Congressionally passed legislation itself, and National and State implementation of these statutes are all subject to judicial review in the US courts. In the US, there is no organizational equivalent to the European Council. While the National Governor's Association (NGA) and other organizations of state environmental officials have become more active and influential in recent years, their influence is not sanctioned in founding documents (as are those of the European Council) and they do not have direct oversight over officials involved in national level policymaking. Thus, while territorial interests are represented in the US Senate and increasingly through input provided by groups representing the interests of State governments, functional interests exercise a large share of national level influence on policy formulation in the US through their close connections with Congressional Committees, the bureaucracy, and through judicial review in the courts.

The EU and the US also differ in the way they implement legislation. In the EU, the European Commission serves as the oversight body for legislation that is generally implemented by the Member States. Legislation in the form of Regulation is applicable across the European Community in the same form in which it is approved. However, most legislation comes in the

form of Directives that are binding as to objectives, but not necessarily as it relates to specific means or language. These directives, once approved by the Council of Ministers and the European Parliament, become a part of EU law, and must be implemented by the Member States. This implementation process essentially occurs in two stages. First, the Member State must translate (transpose) the EU directive into its legal code. While the Member States are given flexibility regarding how this is to be accomplished, the transposition is required to accomplish the objectives set forth in the EU directive. Once the directive is transposed into national law, it is to be implemented and enforced by authorities within the nation-state. And even though the Member States have tremendous flexibility and influence in this implementation process, the EU independent agencies (including one for environmental information) established in the 1990's are now providing at least nominal counter-balances to Member State informational advantages in this area. And this kind of outside influence may very well increase in future years. In addition, if the nation-state fails to properly transpose, implement, or enforce the EU directive, Article 169 of the Treaties allows the Commission to take legal action against the infringing nation-state in the European Court of Justice [6]. And while the ECJ has favored functional interests over territorial interests in a number of its decisions, its policymaking influence is limited to those cases that come before it. However, even though the European Commission can be responsive to functional interests in responding to complaints and taking cases to the ECJ, it cannot step in and directly implement the (EC) law as can US agencies which have been granted pre-emptive powers in particular areas. Overall, therefore, while opportunities for functional influence clearly exist and appear to be growing, territorially based national interests continue to be largely dominant in EU implementation processes.

Unlike the European Commission, US executive agencies have both direct administrative authorities for the implementation of national statutes and potentially strong oversight roles. The exact role(s) performed by national agencies vary depending on the structure of the statutory authorization provided by Congress and the willingness and interest of the States to implement national laws (they can refuse, and occasionally do). When States do not have authority to implement national laws in their jurisdictions, national executive branch agencies do so directly. In many cases, national agencies also provide oversight for state implementation activities, and they often retain the rights to both revoke state authority to administer national statutes and step in and administer national laws directly. While territorial state interests are generally well represented by the states in this implementation process, they are not dominant in the way that European Member States are in the EU. National executive branch agencies have important oversight powers, and they are often responsive to functional interests that play counter-balancing

roles by calling deficiencies in state administration to the attention of national authorities and the courts, and by seeking to influence the conditions under which national authorities are transferred to the states. Thus, in the US territorial interests are influential in policy implementation, but they do not dominate the process in the same way they do in the EU. National executive branch agencies and the functional interests with which they deal also have very important influences on policy implementation.

Table 1 summarizes the representational balances between territorial and functional interests in major EU and US governing institutions. As the preceding discussion suggests, territorial interests are heavily represented in EU governing structures. Territorial interests also have important representational avenues in US governing institutions, but these representational structures are more than counter-balanced by avenues for input from functional interests.

Table 1
Balance of Territorial and Functional Representation
In EU and US Governing Institutions

	EU BALANCE	US BALANCE
POLICY FORMULATION		
"Constitutional" Level	**Territorial** Interests often Dominate Intergovernmental Conferences, & these conferences occur periodically (about one time in five years).	**Mix** of Territorial and Functional Interests Affect the Constitutional Amendment Process. Constitutional Amendments are rare.
Policy Guidance and Advisory Level	**Territorial** Interests Are Dominant in the European Council, and the Council is influential in policy direction.	**No Equivalent** Level in the US, although State based Associations provide Territorial input
Statutory level	**Mix** of Territorial and Functional Influence, with **Stronger Structures for Territorial Influence**. (However, functional influence is growing in both the Commission and the Parliament)	**Mix** of Functional and Territorial Influence, with **Stronger Structures for Functional Influence**.
POLICY IMPLEMENTATION	**Territorial Interests Are Largely Dominant, but Functional interests provide some oversight**. New "independent agencies" now counter-balance previous information monopolies at the national level.	**Mix** of Territorial and Functional Influence. Often **Territorial Implementation with Functional oversight**.

As we shall see below in Section IV, these differing balances have important impacts on institutional responsibilities and policy outputs relating to environmental policy generally, and water policy in particular. However, before turning to a comparative discussion of EU and US processes for formulating and implementing environmental and water policies, it is important to reach a common understanding regarding the nature of water policy and the differing sectors into which it can be divided.

III. AN OVERVIEW OF WATER POLICY

As a physical substance, water is ubiquitous. It knows few pre-designated boundaries. Consequently, water policy addresses a wide array of relationships between human beings and the environment (Richardson, 1996). Nevertheless, it is useful to focus on four issue areas that are often at the center of public policy concern. These four areas of policy concern include the quality of waters for human consumption (eg. Drinking water), the quality of surface waters in streams, lakes, and rivers, the quality of ground water, and the quantity of water available.

These four water policy "sectors" confront somewhat different policy problems, varying political interests, and – as such – they have often been addressed through different kinds of regulatory systems. However, in the end, the problems in each sector tend to pit different kinds of functional economic interests against functional interests that are concerned about differing aspects of environmental quality and public health. Territorially based public institutions – that presumably represent territorially based concerns – are often put in mediating and decision-making roles in efforts to reach compromises among these functionally based interests. And they do so in an interrelated context in which water related problems are connected with one another in reality even if the human systems that are developed to manage them are not.

One of the most important uses of water is human consumption. Water must be safe to drink if humans are to survive and remain healthy. These **drinking water quality** issues appear in all human settings, and they raise issues regarding appropriate levels of safety or water purity, treatment costs, and water source protection. These issues can lead to conflict and disagreements between water utilities, environmental groups, and the general public in the areas being served. Policy solutions in this area often focus on setting standards of cleanliness, developing and implementing cost effective treatment processes, and --- increasingly --- implementing source water protection measures to guarantee continued use of those sources at relatively low cost.

The issues associated with the overall cleanliness and purity of **surface water** in streams, lakes and rivers are a focus of concern in both the EU and the US. In both polities, the quality of fresh water in ambient conditions is important for a variety of purposes, including bathing,

outdoor recreation, commercial use, and drinking as well. The policy problems arising from concerns about surface water quality often pit economic interests against the diffuse interests of the general public, which are often represented by environmental groups. These issues generally relate to appropriate standards of cleanliness, and the means for ensuring that these standards – once developed and agreed upon – are met. Policy solutions in this area generally involve setting water quality standards and implementing discharge controls or land use requirements that minimize the impacts of human activities on surface water quality.

The issue of **groundwater quality** relates to the cleanliness and purity of water underlying the soil. Concerns about groundwater are based on both ecological quality and human health. Polluted groundwater can harm plants and animals. It can also have negative effects on human beings if it is drawn through wells for human consumption or if it pollutes surface waters with which it is connected. Like problems associated with surface water quality, problems with groundwater quality often pit economic interests associated with industry and agriculture against diffuse environmental interests that are often represented in the political process by environmental groups. Policy solutions in this area generally involve either land use controls or specific restrictions on the manner in which wastes are disposed of on land – as is the case with landfills, underground injection, and onsite wastewater disposal.

Water quantity issues deal with the amount of water available for use by both plants and animals comprising an ecosystem and human beings. These issues vary in significance based on geographic, geologic, and hydrologic conditions. Some areas have lots of readily available water, while others do not. This kind of variation exists in the United States, where water is generally plentiful and readily available in the east, and scarce in large portions of the west. Variation also exists in the European Union, where northern European nations have relatively plentiful water supplies, and southern European nations tend to have more limited supplies of fresh water. Often, water quantity issues pit economic interests such as industrial, agricultural, and residential water users against one another in battles over the allocation of available water. They may also involve diffuse interests of environmental groups -- particularly in cases where water supplies are limited. Policy solutions relating to water quantity issues may involve systems of legal rights to available supplies, conservation measures, and pricing systems designed to ensure that users pay fair or true costs of the water they use.

It is important to note that these four water policy sectors all have impacts on one another, and these impacts run in many directions. Limited quantities of water make water quality issues more important. Polluted groundwater can affect both surface water quality and drinking water quality. And polluted surface waters can raise the costs of treating drinking water

to acceptable levels. The real-world interconnections among these four policy sectors are numerous and they run in all directions. It also important to note that addressing impacts across these four water policy sectors generally involves trading environmental gains and/or economic costs in one sector for gains and/or costs in another sector. Economic interests focus on minimizing the costs of their operations, often regardless of the environmental impacts. Environmental groups, by contrast, focus on ensuring available and pure water – often regardless of the costs.

As a result of these tradeoffs and the largely functional alignment of economic and environmental interests around them, public institutions are left to impose unwanted economic or environmental costs on functional interests if they are to reach appropriate and cost-effective solutions to water policy issues. Their ability to do this optimally and effectively, and to make their decisions "stick" -- varies according to institutional design. And it is a discussion of the design of policymaking institutions involved in environmental and water policy in the EU and the US that we now turn.

IV. EU AND US ENVIRONMENTAL POLICYMAKING INSTITUTIONS

The organizations that formulate and implement environmental policies in the EU and the US are products of both the multi-level governance structures in which they are embedded (discussed in Section II) and the political forces in place at the time of their inception. While environmental policymaking institutions in both the EU and the US first came of age during the late 1960's and early 1970's, the specific constellations of interests underlying these early environmental policy efforts were different in the two polities. In Europe, where territorial interests associated with the European Economic Community (EEC) were dominant, member states played important roles in bringing environmental policy to the forefront of the policy agenda. In the US, by contrast, environmental groups served as the catalyst for a more active national presence in environmental policy. As a result of these differing political pressures and the institutional settings within which they grew, environmental policymaking institutions and practices are also quite different in the two polities from constitutional, statutory, and implementation-related points of view. In general, territorial interests remain highly influential in formulating and implementing water policies in the EU. In the US, functional interests have much greater relative influence.

A. "Constitutional" Foundations For Environmental Policy: The EU And US

Territorial interests in the EU established a clear and relatively broad "constitutional" foundation for EU environmental policies through intergovernmental conferences. By contrast, due in part to cumbersome and difficult constitutional amendment processes in the US, the efforts of functional interests in the US resulted in environmental policies based upon Constitutional provisions that do not explicitly mention or recognize the value environmental protection.

Environmental policy in the EU began in 1972, after the Paris Summit of the Heads of State -- a pre-cursor to the European Council. At that summit, the Heads of State of the Member nations declared support for the development of an Environmental Action Program (EAP) for the European Economic Community (EEC) that would be developed by European level institutions (Johnson & Corcelle, 1989, p.2). Following that endorsement, the European Commission developed the first EAP for the European Community, a broadly based document that outlined the importance of environmental protection in the context of EEC policies. Since that time, four EAP's have followed, and the Commission has recently completed its 6th EAP. All of the EAP's are developed by the Commission, and serve as a guide for European environmental policymaking. Throughout the 1970's and through much of the 1980's EU environmental policy was founded on the initial agreements developed at the Paris Summit, subsequent agreements in the European Council, and the EAP's developed by the Commission. In 1986, with the establishment of the Single European Act (SEA), EC environmental policy gained a clear and broadly stated Constitutional base in Article 130 of the new Treaty (Axelrod, 1994). This environmental commitment at the "constitutional" level was subsequently re-enforced and strengthened in the Maastricht (1993) and Amsterdam (1996) Treaties [7].

Unlike the EU, there is no specific constitutional foundation for US environmental policy. Federal regulatory powers are generally grounded in Congress's power to regulate interstate commerce. Congress expanded its regulatory authorizations in environmental policy generally and water policy in particular through statutory enactments in the 1970's. These enactments came largely in response to demands by environmental groups for Federal intervention in a policy area that the US States were perceived to be handling poorly. One needed only to observe the smog in Los Angeles or Pittsburgh, or watch the Cuyahoga River burn to be convinced of the need for a more forceful US environmental policy. While functional interests pursued constitutionally based environmental protections in the courts (Rosenberg, 1990) – sometimes with positive results, their major successes during the 1970's occurred through Congressional exercises of its existing powers under the commerce clause of the Constitution.

This difference in the Constitutional foundation for environmental policy in the EU and the US is important. It means that the formulation of environmental policy is a fundamental and broad-based area of competence for the European Union. In the US, this is not the case. Environmental policy generally and water policy in particular is subject to Federal involvement only in those cases where Congress specifically initiates national level action in response to clear and identified problems or pressures – pressures that are generally instigated by functional interests. In the absence of these pressures, water policies are both developed and implemented by the States. Partially as a result, the institutional arrangements for formulating environmental policies generally and water policy in particular are quite different in the EU and the US.

B. Water Policy Formulation in the EU and US

The organizations responsible for formulating environmental policies in the EU have broad responsibilities across a number of environmental policy sectors. By contrast, responsibility for environmental policy formulation in the US is divided up among a large number of institutional entities, each of which tends to have a relatively narrow range of responsibilities. This difference in breadth of responsibility applies not only to environmental policy broadly, but also to water policy in particular. It has its origins in the principles underlying institutional arrangements in the two polities. The influence of territorially based interests in the EU leads to the establishment of policymaking institutions that tend to be responsible for a range of environmental issues. By contrast, the functional interests that are so influential in American governance lead to the creation of institutional management structures built around rather narrow and functionally defined water policy problems. The result is fragmented structures for water policy formulation.

Tables 2A through 2D summarize the major institutional roles for the formulation of water policies in the EU and the US. The institutional roles shown are divided by water policy sector so that variations in institutional involvement among the four previously discussed water policy sectors can be discerned by comparing major water policymaking institutions across the four water policy sectors. *The tables illuminate a major difference in EU and US governance systems for water policy formulation. The important institutional actors are basically the same across the four water policy sectors in the EU, while they are highly variable in the US depending on the policy sector under discussion.*

Table 2A
Institutional Roles in EU and US Drinking Water Policy Formulation

	Major EU Institutions	Major US Institutions
Drinking Water Quality	European Commission • Environment Directorate Council of Ministers • Environment Council European Parliament • Environment & Consumer Protection Committee Economic & Social Committee	US Congress • Senate Environment & Public Works • Senate Appropriations Committee/ VA/HUD Subcommittee • House Commerce • House Appropriations Committee – VA/HUD Executive Branch • USEPA Office of Water • Drinking Water Office

Table 2B
Institutional Roles in EU and US Surface Water Quality Policy Formulation

	Major EU Institutions	Major US Institutions
Surface Water Quality	European Commission • Environment Directorate Council of Ministers • Environment Council European Parliament • Environment & Consumer Protection Committee Economic & Social Committee	US Congress • Senate Environment & Public Works • Senate Appropriations Committee – VA/HUD • House Transportation & Infrastructure Committee • House Appropriations Committee – VA/HUD Executive Branch • USEPA Office of Water ♦ Wastewater Office ♦ Science/Tech Office ♦ Watershed Mgt.

Table 2C
Institutional Roles in EU and US Goundwater Policy Formulation

	Major EU Institutions	Major US Institutions
Groundwater Quality	European Commission • Environment Directorate Council of Ministers • Environment Council European Parliament • Environment and Consumer Protection Committee Economic & Social Committee	Congress: • Senate Energy & Natural Resources • Senate Environment & Public Works • Senate Appropriations/ HUD-VA • House Commerce • House Appropriations/ HUD-VA Executive Branch • USEPA Office of Water ♦ Drinking Water Office

Table 2D
Institutional Roles in EU and US Water Quantity Policy Formulation

	Major EU Institutions	Major US Institutions
Water Quantity	European Commission • Environment Directorate Council of Ministers • Environment Council European Parliament • Environment and Consumer Protection Committee Economic & Social Committee	Congress: • Senate Energy & Natural Resources • Senate Environment & Public Works • Senate Appropriations/ HUD-VA, Interior, & Water Development Subcommittees • House Public Works & Infrastructure • House Appropriations/ HUD-VA, Interior, & Water Development Subcommittees Executive Branch • USEPA Office of Water ♦ Drinking Water Office • - US Dept. of Interior

In the EU, the European Commission has formal responsibility for initiating legislative action. Because all four water policy sectors outlined above are dealt with in the same unit within the Environment Directorate, there is significant opportunity for coordination across the four policy sectors in the Commission. Proposals developed by the Environment Directorate are forwarded to the full Commission for approval. If approved by the College of Commissioners, the proposal is forwarded to the Economic and Social Committee and the European Parliament for review and comment. Within the Economic and Social Committee and the European Parliament are Committees that specialize in environmental matters that review the proposed legislation prior to the provision of comments to the Commission by each of their parent institutions. Upon receipt of these comments, the Commission then makes any adjustments it desires before forwarding the proposal to the Council of Ministers for review by the Environment Ministers from the Member States. If the proposal is approved by the Council of Ministers and not changed in negotiations with the European Parliament, the proposal then becomes a Council Directive that will carry the force of law in the Community. It is important to note in this context, however, that the move toward greater use of the co-decision procedure endorsed by the Amsterdam Treaty has given the Parliament an effective veto on environmental matters. As a result, statutory decision-making processes for environmental legislation are increasingly likely to involve conciliation committees that provide a forum for negotiations between the Parliament and

the Council. In this sense, the Parliament has become a "co-legislator" with the Council for environmental matters --- a change that strengthens the overall role of (functional) environmental interests in the EU policymaking process.

The variable picture of institutional involvement in the formulation of US water policies provided by the tables is a significant contrast to the relatively unified approach that is apparent in the EU. While all water policy legislation must be initially introduced and finally approved in Congress, the Committees that are most influential in formulating water policy proposals are different for each of the four water policy sectors outlined above. Furthermore, while the EPA is heavily involved in surface water quality and drinking water quality issues, it plays a more limited role in groundwater protection and water quantity issues because its authorities in these areas are not comprehensive or expansive. In addition, within the EPA, different offices deal with surface water and drinking water issues. The Drinking Water Office also plays a technical assistance role on some issue areas in the groundwater policy sector. Along with EPA, the Department of Interior is involved in a number of water quantity management issues. A number of other Federal Agencies and Authorities (that are not included in the table) also have water related responsibilities [8].

The picture that emerges from this discussion is one of two very different processes for formulating water policies. The EU process appears to be relatively similar across water policy sectors, and involves organizations that have broad responsibilities associated with the full range of water policy issues. The US water policy formulation processes involve highly variable institutional actors in Congress and the executive branch, all of which have relatively narrow responsibilities in the water policy arena. To a significant degree, these differences in breadth of responsibilities are products of governance structures that balance geographic and functional interests differently. Strong structures for territorial interest representation in the EU give rise to broad structures designed to reconcile varying functional interests, while strong structures for functional interest representation in the US give rise to narrower structures that largely mirror the interests that gave rise to them. However, these differences in institutional balancing of territorial and functionally based interests yield a different kind of picture in the area of water policy implementation.

C. Water Policy Implementation in the EU and the US

Table 3 provides an overview water policy implementation structures in the EU and the US across the four water policy sectors outlined above. It includes elements addressing oversight responsibility, oversight tools, and implementation responsibility. As in the case of policy

formulation, the EU processes are relatively uniform across policy sectors, while the US implementation processes have more variability among the four water policy sectors. However, across all four policy sectors, the oversight tools available in the US are generally stronger than those available in the EU. In this case, strong territorial interests expressed through the Member States appear to limit the ability of the Environment Directorate, the Commission, and other EU institutions to influence member state implementation.

Table 3
Water Policy Implementation In the EU and US: Oversight Responsibilities, Oversight Tools and Implementation Responsibilities – by Water Policy Sector

Water Policy Sector	EU	US
Drinking Water Quality	Oversight Responsibility • Environment DG/The Commission Oversight Tools • Complaints/Article 169 procedures • Structural/Cohesion $'s for Water Projects – limited Environment DG control Implementation Responsibility • Member States	Oversight Responsibility • USEPA & "Citizens" Oversight Tools • Delegation agreements • $'s for Water Projects • Program Operation $'s • Concurrent enforcement resources & authority • "Citizen" Monitoring & Enforcement Implementation Responsibility • State Governments • USEPA, when necessary
Surface Water Quality	Oversight Responsibility • Environment DG/The Commission Oversight Tools • Complaints/Article 169 procedures • Structural/Cohesion $'s for Water Projects – limited Environment DG control Implementation Responsibility • Member States	Oversight Responsibility • USEPA & "Citizens" Oversight Tools • Delegation agreements • $'s for Water Projects • Program Operation $'s • Concurrent enforcement resources & authority • "Citizen" Monitoring & Enforcement Implementation Responsibility • State Governments ▪ USEPA, when necessary

Table 3 - Continued
Water Policy Implementation In the EU and US: Oversight Responsibilities, Oversight Tools and Implementation Responsibilities – by Water Policy Sector

Water Policy Sector	EU	US
Groundwater Quality	Oversight Responsibility • Environment DG/The Commission Oversight Tools • Complaints/Article 169 procedures • Structural/Cohesion $'s for Water Projects – limited Environment DG control Implementation Responsibility • Member States	Oversight Responsibility • No broad oversight, but some USEPA oversight of authorized & targeted controls in related areas. Oversight Tools • Funding & Guidance • Targeted regulatory controls – landfill design, watershed planning, underground injection controls. Implementation Responsibility • State Governments • Limited EPA implementation authority over targeted controls.
Water Quantity	Oversight Responsibility • Environment DG/The Commission Oversight Tools • Complaints/Article 169 procedures? • Structural/Cohesion $'s? Implementation Responsibility • Member States	Oversight Responsibility • None, except for regulation of conservation plumbing products -- USEPA, & authorized water projects – Dept. of Interior & Army Corps of Engineers Oversight Tools • $'s and guidance on water quantity policies – USEPA Implementation Responsibility • EPA • State/Local Governments • Interior Dept. & Army.

In the EU, the Environment Directorate in the Commission provides oversight of Member state implementation of EU water policy directives. The Member States are responsible for implementing policies across all four water policy sectors, including the water quantity sector – a sector in which EU level involvement has been minimal until recently. The principle of subsidiarity and the mutual recognition system used in the EU permits substantial flexibility for member states to structure national laws implementing EU water directives according to their own desires and preferences. The Commission has no direct involvement in this process, other

than its review of notices provided by the member states upon completion of the transposition process. The Commission has no independent authority to commence enforcement actions against violators of EU directives in the member states. Its recourse in instances where member states do not transpose or carry out the requirements of EU directives lie in the relatively cumbersome corrective processes outlined in Article 169 of the Treaties. As noted in a previous footnote, these processes allow for consultation, informal warnings, formal opinions, and – eventually – referral of cases to the European Court of Justice. And, in recent years, the ECJ has also imposed fines for continuing Member State non-compliance with EU directives (Garvey, 2001).

While this Article 169 power is a very significant one when viewed in the context of Member State sovereignty, its cumbersome nature serves as a reminder that the Commission still has (understandably) under-developed oversight tools in comparison to those of the US Federal government. While the Commission does provide funding to some Member States for water related projects through its Structural and Cohesion Funds, the Environment Directorate apparently exercises relatively little influence over how these funds are expended (Sbragia, 1992). Structural funds distributed by the EU are managed outside of the Environment DG, and coordination of these funds has been a source of continuing problems in the past (Marks, 1992). Even if the Environment Directorate were to be successful in gaining effective oversight over structural and cohesion fund expenditures for water related projects, this leverage would be limited to a relatively small number of projects in the EU's poorer Member States. Unlike the situation in the US, EU institutions do not provide ongoing funds for water program operations in the Member States, so the Commission does not have an opportunity to influence Member State implementation of EU directives through this kind of mechanism. Given the volume of activity relating to water policy and the relatively limited oversight tools and resources available to the Commission, there is relatively minimal external incentive for consistent and effective Members State implementation and compliance with EU water policy directives.

The situation is somewhat different in the US, where national oversight – while variable in extent – is aided by relatively strong tools of policy influence. As is the case with water policy formulation, oversight and implementation responsibilities in the US vary according to water policy sector. In the drinking water and surface water policy sectors, the USEPA has broad oversight responsibilities, relatively strong oversight tools, and the ability to directly implement and enforce Federal requirements within the 50 states. The situation in the groundwater and water quantity sectors is different. In these policy sectors, the Federal government does not have broad oversight authority, its oversight tools are largely limited to money and guidance (with a

few exceptions), and it does not have concurrent implementation authorities except in specific areas.

In the drinking water and surface water policy sectors, the EPA has a number of opportunities to exercise influence over state implementation of Federal water programs. The Federal programs in these two policy sectors are frequently implemented by the states according to authorizing agreements that are signed by both the States and EPA. State violations of these agreements constitute grounds for removing the Federal program from the State. Added to these control mechanisms are the ongoing enforcement capabilities that EPA retains in all 50 states. If EPA believes that significant instances of non-compliance are not addressed by a state, it has authority to step in and carry out appropriate enforcement actions in its own right. In so doing, it may use either its own administrative enforcement authorities or take legal action in the Federal Courts. In addition, Federal environmental laws also provide for suits by citizens groups to bring about compliance, so Federal oversight of state programs is often supplemented by active monitoring and enforcement activities conducted by environmental groups. Like Federal and State regulatory agencies, these groups may bring non-compliant parties to the courts to obtain orders and penalties to ensure environmental compliance.

The EPA gains further leverage in creating incentives for policy consistency through funds that it provides to States for surface water quality and drinking water quality related activities. For both its drinking water and surface water quality programs, EPA provides substantial grant funds to the States (and Tribes), and these funds are used for program operations associated with Federally sanctioned purposes. In 1998, these funds totaled about $200 million for Surface Water related programs alone (EPA, 1998). And, in both the drinking water and water quality sectors, EPA provides seed funds for drinking water and water quality infrastructure through its "State Revolving Fund" programs. These funds provide another opportunity for the EPA to influence State government implementation of drinking water and surface water quality programs.

In the groundwater quality and water quantity sectors, broad standard setting and program operational responsibilities remain with the States and are not technically subject to any broad form of Federal oversight. However, in both of these policy sectors, there are targeted areas in which the Federal government has oversight and/or implementation responsibilities. In the groundwater policy sector, these areas include landfill design, watershed management, and underground injection control programs. In the water quantity sector, the federal government has undertaken significant projects involving hydro-electric power, navigation, and flood control. It has also set standards for water conservation plumbing fixtures. However, in these areas, there

are no broadly based Federal standards to oversee (except those related to plumbing fixtures), and the tools currently available to influence state programs are largely limited to relatively small streams of funding, guidance and technical assistance. While these assistance activities may yield some greater level of policy consistency in these sectors than would have occurred in their absence, their overall effect on policy consistency is not likely to be substantial.

While these variable financial and oversight tools for policy consistency are significant when viewed in the aggregate, it is important to note that the EPA actually uses programmatic or financial sanctions on relatively rare occasions. For, the EPA is reluctant to risk its already stressed relationships with state governments on minor instances of non-compliance. Nevertheless, the mere existence of these oversight tools and controls (along with their occasional use) provides significant incentives for minimum levels of consistency and effectiveness among state water programs – particularly when the US system is compared to the situation in the EU.

Thus, to summarize the argument above, the relative influence of territorial and functional interests in the early years of environmental and water policy were structured by differing institutional arrangements for governance in the EEC and the US. These differing levels of territorial and functional influence, in turn, affected institutional arrangements for environmental policymaking and implementation in the EU and the US. In the EU, institutional arrangements fostering territorial representation led to a broad based "constitutional" foundation for environmental policies, governing organizations with broad environmental policy formulation responsibilities, and relatively limited tools of central influence over member state activities in the water policy arena. In the US, institutional arrangements and relatively strong functional interests fostered the use of existing constitutional authorities for environmental policies, narrowly defined organizational responsibilities in environmental and water policy formulation, and relatively strong tools for oversight of water policy implementation at the state level. These differences in environmental policymaking institutions and practices can be expected to have differing kinds of effects on policy outputs and the levels and kinds of policy integration achieved in the two polities.

V. WATER POLICY INTEGRATION: EU & US EXPECTATIONS

In multi-level political jurisdictions, two broad sets of policy concerns are particularly important if a policy is to become "integrated." The first set of concerns involves reconciling pressures from different functional or sector based interests. The process of reconciling these kinds of interests can be referred to as a process of "horizontal" policy integration. This process

occurs during policy formulation and requires determinations regarding specific tradeoffs among policy sectors or between program goals and cost considerations. Examples of these kinds of tradeoffs in the water policy arena include water quantity vs. quality interests, economic vs. environmental interests, water vs. air related interests, or interests associated with water and other policy sectors such as agriculture.

The second set of concerns relates to "vertical" policy integration. Vertical policy integration tends to become important at the implementation stage of the policy process. It relates to the extent to which policies are carried out consistently and effectively not only at the center of the political structure, but also by the peripheral jurisdictions with policy responsibilities. Functional and territorial interests both tend to push their interests during the implementation process, and vertical policy integration refers to the process of making original policy agreements made at higher levels "stick" during implementation at lower levels. Policies that are not well integrated from a "vertical" perspective are characterized by inconsistencies in policies across political jurisdictions. They tend to be particularly important in policy areas in which agreements developed at the center of the system are implemented by peripheral jurisdictions.

The discussion above regarding institutional roles in EU and US environmental and water policy suggests several expected "institutional propensities" relating to water policy integration in the EU and US. The relatively broad institutional responsibilities of major actors in EU water policy suggest that it is likely to be more capable than the US of achieving horizontal integration of its water policies. However, the US's relatively strong tools of vertical integration suggest that it may be able to accomplish greater levels of vertical integration than the EU. These two sets of expected propensities are summarized in Table 4 below.

Table 4
Expected Institutional Propensities for Water Policy Integration

Institutional Propensity for:	EU	US
Horizontal Integration --- primarily in policy formulation.	Relatively High	Relatively Low
Vertical Integration --- primarily in policy implementation.	Relatively Low	Relatively High*

* This analysis of US vertical integration is applied only to drinking water and surface water policies because strong and comprehensive Federal level policies regarding groundwater standards and water quantity do not exist in the US. Consequently, the measures vertical integration described below cannot be applied.

In order to evaluate horizontal and vertical policy integration, it is important to identify characteristics of policy outputs that are likely to be prevalent when the two forms of integration are actually occurring. The breadth of responsibility required of major institutions involved in formulating water policies in the EU suggests that we should be able to find significant signs of horizontal policy integration in its water policy outputs. More specifically, we would expect to find:

- Signs of policy integration across water policy sectors. These signs might include major EU legislation in all four water policy sectors and mechanisms for balancing concerns among the policy sectors;
- Mechanisms for integrating water policy concerns with concerns that grow out of other sectors of environmental policy --- air, waste, etc.
- Mechanisms for integrating water policy concerns with policy concerns in non-environmental policy sectors (Finance, agriculture, etc.).
- Signs that implementation concerns are taken seriously during the policy development process.

As was noted above, the institutional responsibilities for water policy formulation in the US tend to be more narrowly based than in the EU. Consequently, we would expect to find less evidence of these four attributes of horizontal policy integration in US water policy outputs.

We would expect to find a different distribution of advantages and disadvantages between the EU and the US when we deal with issues associated with vertical integration and implementation. Here we would expect that the US's relatively strong oversight tools would enable us to identify the following characteristics of its drinking water and surface water quality policy outputs:

- Evidence that water policies developed at the Center of the governance system are legally applicable in the peripheral governmental units;
- Evidence that water policies developed at the Center of the governance system are actually being applied to appropriate circumstances and enforced in the peripheral government jurisdictions.

And finally, because of the relatively under-developed oversight tools available in the EU, we would expect to find less evidence of vertical integration in EU water policies than in US drinking water and surface water policies.

With this general outline of expected relationships in mind, we now turn to an overview of the comparative extent to which indicators of horizontal and vertical integration are found in the two water policymaking systems.

VI. EU & US WATER POLICY INTEGRATION: REVIEW OF EVIDENCE

The following review combines an array of evidence organized around the measures of horizontal and vertical integration outlined in the previous section. While the evidence provided does not suggest that either the EU or the US water policy system is anywhere near perfectly integrated by either horizontal or vertical criteria, it does suggest areas of relative strength and weakness. As expected, the evidence suggests that EU water policies are better integrated from a "horizontal" perspective, while US water policies are better integrated from a vertical point of view -- at least as they relate to drinking water and surface water quality. Consequently, the results are consistent with the hypotheses above, and the suggestion that differing governance structures for balancing territorial and functional interests lead to differences in water policy outputs.

A. Horizontal Integration

The next four sections address EU and US policy integration from a horizontal perspective, using the measures outlined in the previous section. The evidence reviewed relates to integration among water policy sectors, between water policy and other environmental policy areas, between water policy and other policy sectors outside of the environment, and – finally – integration of implementation related concerns.

A.1. Integration Involving Water Policy Sectors

Horizontal policy integration requires at least some level of governance over the policy sectors being integrated, as well as mechanisms for identifying and resolving trade-offs across water policy sectors. What follows is a discussion of the extent of EU and US level involvement in the four water policy sectors, and the major mechanisms available for coordinating among these policy sectors.

As Table 5 below suggests, the EU has passed major legislation affecting all four water policy sectors [9]. The US, by contrast has passed major legislation addressing only two of the four water policy sectors – surface water quality and safe drinking water. While the US has passed relatively targeted legislation relating groundwater and water quantity, this legislation is relatively limited in scope and leaves state governments as primary regulators in these areas [10].

In both the EU and the US, there has been major legislation affecting drinking water and surface water quality. EU legislation dealing with drinking water and surface water quality has been complex and controversial. The first drinking water directive (80/778/EEC) received significant criticism (Matthews, 1999, p.8), and the Dangerous Substances Directive

(76/464/EEC) has proven difficult to implement effectively (for a discussion, see European Commission, 1997 & Hunter & Muylle, 1999). During the early 1990's, these surface water directives were supplemented with major directives dealing with urban wastewater and nitrate controls. The EU has also attempted to address groundwater in its 1980 directive, and now again in its Water Framework directive which also seeks to deal with water quantity issues. This new Water Framework Directive is also significant because it provides a common framework at the EU level for dealing with the full range of water policy issues.

Table 5
Major EU and US Legislation Affecting Various Water Policy Sectors

	EU Major Legislation	US Major Legislation
Drinking Water	Quality of Water for Human Consumption (80/778/EEC & 98/83/EC) Water Framework Directive (2000/60/EC)	Safe Drinking Water Act – 1974, with major amendments in 1986 & 1996
Surface Water Quality	Introduction of Dangerous Substances into the Aquatic Environment (76/464/EEC & "daughter" directives). Urban Wastewater Treatment Directive (91/271/EC) Nitrates Directive (91/676/EC). Water Framework Directive (2000/60/EC)	Clean Water Act – 1972, with major amendments in 1977 and 1987.
Groundwater Quality	Groundwater Directive (80/68/EEC) Water Framework Directive (2000/60/EC)	No major legislation.
Water Quantity	Water Framework Directive [2000/60/EC)	No major legislation.

In the US, there is no statutory framework for integrating policies across water policy sectors. Congress's fragmented jurisdiction over water issues has not facilitated passage of any form of integrated water policy statute, as has been done in the EU through the new water framework directive. There are, however, efforts to integrate water policies – often initiated in the executive branch of the US government. There are frequent – if not always successful --

efforts to integrate drinking water and surface water quality issues, and these efforts are showing some signs of progress. For example, several years ago Congress and the EPA worked to both create a new Drinking Water State Revolving Fund (SRF) under the Safe Drinking Water Act (SDWA) to fund drinking water projects, and to allow the transfer of funds between this new SRF and the existing SRF for surface water quality projects contained in the Clean Water Act. Nevertheless, even though there are examples of successful policy coordination across the drinking water and surface water quality sectors, water policy integration efforts in the US are limited by the lack of an overarching statutory umbrella and the EPA's limited authorities in the areas of groundwater quality and water quantity.

In summary, while integration across water policy sectors holds challenges for both the EU and the US, water policy outputs in the EU to date seem better equipped to deal with these challenges --- at least when viewed from the perspective of those at the highest levels of governance in the two polities. Authorities across all four water policy sectors contained in the recently enacted water framework directive are not matched by similar mechanisms in the US. For, while the US is seeking to better integrate its water policies, its national level authorities are limited in this area. Perhaps not surprisingly in this context, efforts to integrate water policies in the US are – to a significant degree – occurring at the state rather than the national level.

A.2. Water and Other Environmental Policy Sectors

A second important strategic arena for the horizontal integration of water policies relates to their integration with other environmental policies. In this area, both the EU and the US have made progress in recent years. In the EU, the progress has been fostered by both coordinated environmental policy programs contained in the EU's EAP's and – more recently – through legislative enactment. Progress in this area has also been apparent in the US, but it has been largely limited to efforts within the executive branch because of the inability of Congress to enact any form of comprehensive statutory reform in environmental policy.

As was noted previously, the EU environmental policymaking process includes the development and approval of Environmental Action Programmes (EAP) to guide overall policy direction. These EAP's contain broad goals and objectives that may be used to guide tradeoffs among differing kinds of environmental policies – including those relating to water. The emphasis of the Fifth EAP on sustainable development provides a good example of this kind of overarching goal. The sustainable development goals contained in the Fifth EAP helped set the EU water policy agenda for the mid-to-late 1990's, and this agenda has led to further efforts to

integrate water pollution related concerns with concerns in other areas of water policy (air, waste, etc.).

The Integrated Pollution Prevention and Control [IPPC Directive (96/61/EC)] is probably the most important single piece of legislative progress made toward the goal of integrating concerns across environmental policy sectors in the EU. It focuses on creating an integrated set of pollution controls on certain types of industrial organizations, and allows specifically for the establishment of Best Available Technology limits by "installation" for the industries covered in the Directive (Hunter & Muylle, 1999). Member state compliance with this new Directive was required by late in 1999. This Directive is "the keystone of the European industrial pollution control scheme and will be the vehicle used to apply new and strengthened air and water quality programs to a wide range of industrial facilities (Hunter & Muyelle, p. 10305)." Because it establishes a required multi-media application and permitting approach in EC law, it is also likely to provide a powerful integrating tool in dealing with cross-media pollution transfers.

Over the last decade, the US EPA has also sought to integrate water pollution control schemes with other environmental policies. Initiatives in this area go back to the first Bush administration, and Administrator Reilly's Cluster System of integrated rulemaking. Building upon this groundwork, the Clinton administration under Administrator Browner established integrated rulemaking efforts for certain industry sectors. However, because this system is not grounded in Congressionally approved statutes regarding integrated permitting (as is the case in the EU), the process of expanding these efforts is somewhat slow. The Congress did, however, pass a Pollution Prevention Act in 1990 that established pollution prevention as an important US environmental policy goal and a general hierarchy for EPA pollution control efforts. This Act has provided an impetus for many pollution prevention efforts, but it stops short of serving as a tool of deep policy integration because it leaves the existing air, water, and waste regulatory structures largely in place. Unlike the IPPC, for example, it did not establish a new multi-media permitting program. While permitting initiatives in some states are seeking to integrate cross media concerns, practices vary across the country.

Once again, while both the EU and the US face challenges in integrating water policymaking with other environmental policies, relatively coordinated planning and statutory direction in the EU provides it with advantages over the US in addressing these challenges at the formulation stage of the policy process.

A.3. Water and Other (non-environmental) Policy Sectors

The integration of environmental policies generally and water policies in particular with other (non-environmental) policy sectors has been an area of continuing concern in both in the EU and the US. Both the EU and the US water policy systems have been accused of being too costly, and insufficiently sensitive to cost-benefit related issues. In both polities, concerns have also been raised about the extent to which environmental policies are well integrated with other (non-environmental) policy sectors such as agriculture, transportation, and others. Consequently, there are visible and continuing efforts to accomplish horizontal integration of water policies with other non-environmental policy sectors. Of this broad array of concerns, cost and agriculture related trade-offs are particularly important in the water context.

While the EU Treaties explicitly recognize the importance of cost considerations in environmental policies, the EU's institutional processes for water policymaking have not always integrated cost considerations as well as some might hope. At bottom, the criticism made in this regard relates to the fact that the major players in the process – the Environment Directorate, the Council of Environmental Ministers, and the European Parliament's Environment Committee all have vested environmental interests that exceed their concerns over economic costs. In the EU, concerns over this situation probably reached their zenith in the aftermath of the first drinking water directive. However, it is important to point out that the approval of all Commissioners is necessary to forward a proposal to the Council of Ministers and there are Treaty based grounds that can be used to challenge environmental policies on the basis of cost. It is also worth noting that a number of EU Directives, including the new IPPC Directive, provide an opportunity for Member States to consider costs when they develop Best Available Technology limits on pollutant emissions pursuant to that Directive (Hunter & Muylle, 1999). Nevertheless, in spite of these opportunities for balancing costs with water related concerns, it is probably fair to say that the EU has not yet succeeded as well as some might like in its efforts to integrate cost and water related concerns on a continuing basis.

The EU is not alone in this respect. Many have also criticized US water policies on the grounds that they are too costly. These concerns grow in part out of the fact that neither the CWA nor the SDWA provides strong grounding for the consideration of costs in setting drinking water standards or water quality based effluent regulations and limits. However, in the early 1980's, the Reagan administration initiated a major effort to ensure that costs were considered in the establishment of Federal Regulations. Executive Order 12291 issued by President Reagan in 1981 required Federal Agencies to conduct Regulatory Impact Analyses (RIA's) of major regulations (Farrow, 1999). However, while this order was applied to major regulations under the

CWA and the SDWA, reviews conducted pursuant to it during the Republican administrations (Reagan & Bush) of the 1980's faced significant resistance stemming from the fact that the underlying statutes did not specify costs as a legitimate basis for standard setting. This resistance was often bureaucratic in origin, but it was frequently supported by additional resistance from the Democrat controlled House of Representatives in Congress. Since that time, cost has continued to be a major concern, but one that is not dealt with systematically. Regulatory impact analyses were also reviewed by the Office of Management and Budget under President Clinton, although their efforts in this area were probably not quite as rigorous as they were under Reagan and Bush. Cost related concerns are also raised in Congress, wherein they have found receptive ears in recent years as Congress rolled back a number of monitoring requirements associated with the SDWA amendments of 1996. Thus, as in the case of the EU, there still does not appear to be a widely accepted and regularly utilized mechanism – statutory or otherwise – to deal effectively with water policy/cost tradeoffs.

In recent years, there have also been continuing concerns expressed about the negative impacts of government policies in other sectors on environmental quality. In the EU, the European Environment Agency's (EEA) Second Assessment of the European environment concluded that failures to integrate environmental considerations into other policies was a significant factor contributing to environmental problems in Europe. This led the Heads of State meeting in Aarhus in 1998 to declare a major new effort among the various Directorates within the Commission to review their existing policies with a focus on environmental improvement (Garvey, 1999). While the actual results stemming from this review are not yet clear, it is clear that attention is being paid to this issue.

The EU is not alone in having these concerns about integration of environmental and water policies with other activities. For, in spite of significant advances achieved through environmental impact statements required by the National Environmental Policy Act (NEPA) for federally funded infrastructure projects, water quality concerns have frequently taken a back seat to other concerns in policymaking relating to land use, agricultural, transportation and other policies. The Clinton administration recognized this in their 1998 Clean Water Action Plan (EPA, 1998). This plan sought to integrate water policies across a number of Federal Agencies in an effort to improve surface water quality throughout the United States. It included a broad range of water related US government agencies, a number of new and/or re-packaged initiatives, and very high level support from the Clinton Administration. For these reasons alone, it was influential in helping re-focus some aspects of water quality management in the US. However, the long-term effectiveness of this plan as a tool of horizontal integration will be limited by its

lack of a statutory base, and its inability to address comprehensively water quantity and groundwater issues that remain under the primary authority of state governments in the United States. It is not yet clear, for example, whether or how the second Bush administration will follow through on these efforts. At this writing, there appears to be reason for skepticism.

At this point, major challenges face both the EU and the US in integrating environmental policy concerns with other policy sectors. The high level attention paid to this issue in both the European Environment Agency's Second Assessment and the Heads of State at Aarhus provide some level of assurance that these issues are receiving attention at the European level. And, overall, the evidence to date suggests that Europe is slightly – although not overwhelmingly – ahead of the US in this area.

A.4. Implementation Considerations

A final consideration relating to horizontal integration relates to the manner in which concerns relating to program implementation are factored into the policy formulation process. While both the US and EU are regularly criticized in this area, their relative lack of attention to this measure is hard to know for sure.

Two possible measures of sensitivity to implementation concerns, however, relate to simplicity and the overall reasonableness of statutory deadlines. Complex legal instructions are harder to implement than simple ones, and short and impossible deadlines only make the difficult work of policy implementation harder. By these admittedly crude measures, the EU appears to be more sensitive to implementation concerns than the US. Its Directives are far shorter in length than US statutes and contain fewer and more lenient deadlines than the corresponding US statutes, for example. And this is the case even before one seeks to account for Federal Register volumes of administrative law that affect state implementation of water policy in the US. To my knowledge, there is no parallel to these implementing regulations at the EU level. While the EU's apparently greater sensitivity in this area could be attributed to the very broad array of legal systems with which it must deal, it might also be attributed to the kinds of input that predominate the EU environmental policy formulation process. As was emphasized above, Member State input is of critical importance throughout the EU policy process, and many of the officials providing this input have experience in implementing environmental policies. The same cannot necessarily be said of the Congressional Committees that are responsible for developing water policy authorizations in the US. Thus, while both the EU and the US are often criticized regarding the sensitivity of their policymaking processes to implementation concerns, the crude

measures used here suggest that implementation concerns may be integrated to a greater degree in the EU than in the US.

Table 6 provides a snapshot summary of the evidence reviewed above relating to horizontal integration of water policies in the EU and the US [11]. As expected, it suggests that horizontal policy integration is achieved more successfully in the EU than in the US. The one apparent exception to this finding relates to integration between water policies and other (non-environmental) policy sectors, where relatively limited evidence of effective horizontal integration is found in either polity. Thus, in this case, it appears that the EU is having problems equal to that of the US. One possible explanation for this difficulty is that the major environmental policymaking institutions in the EU have no direct control or authority over the other policy areas in question (finance, agriculture, transportation, etc.). However, given the concerns expressed about this issue in the Aarhus meetings and the Treaty based language providing broad support for environmental goals, it would not be surprising to see EU progress in this area in the coming years.

Table 6
Extent of Horizontal Integration: EU and US

Sectors Integrated	EU	US
Among Water Policy Sectors	+	*
Water Policy & Other Environmental Policies	+	–
Water Policy & Non-Environmental Policies – Finances & Agriculture	–	–
Water Policy & Implementation	+	–

++ = Highly integrated
\+ = Somewhat Integrated
* = Neutral
__ Poorly integrated
_ Not well integrated

B. Vertical Integration

This subsection overviews evidence of vertical integration in the EU and US according to the two measures outlined in Section V: consistency and effectiveness. Measures of consistency relate to the legal application of policies developed at the center of a system across the geographic jurisdictions that comprise the system. Measures of effectiveness relate to the extent to which legal codes are actually put into effect by applying and enforcing the policy requirements relating to specific regulated entities.

B.1. Consistent Legal Application

In the US, there is relatively consistent application of basic water quality and drinking water standards set at the federal level. By virtue of their promulgation alone, US drinking water and surface water regulations are applicable in all 50 States. In addition, most States in the US now have authority to operate the CWA permitting program and the SDWA program within their jurisdiction [12]. In authorized states, agreements have been put in place and verified between the states involved and the EPA that specify the program elements and the means by which the state has ensured that they are in place. In the cases where agreements have not been negotiated, the EPA is responsible for operating the Federal CWA and SDWA programs in those states.

In the EU, directives must be transposed into national law before they take effect. Consequently, legal consistency in the EU depends upon the extent to which EU Directives are (appropriately) transposed into national law. Consistent applicability of EU law among the Member States has been a continuing problem that is recognized by both the Commission (See European Commission,COM (96) 500 final, 22 October, 1996, for example) and outside observers (see Johnson & Corcelle, 1995 & Sbragia, 1992, for example). Member state difficulties in transposing water directives are apparent in the surface water quality, drinking water quality, and groundwater quality sectors (see Com(96) 500 final, 22, 1996 and EC Committee, pges. 135-164, for example), and in the surface water quality sector particularly. There is now a major effort being undertaken by the Commission to improve this situation, as it has placed new and increased emphasis on taking Member States to the ECJ for failures or errors in implementation (Garvey, 2001).

Nevertheless, it is worth repeating here that the EU currently has regulatory authorities or is developing them for all four water policy sectors identified – a contrast to the situation in the US where only two of the four sectors are subject to comprehensive bodies of Federal water quality law. Consequently, there is a legally based potential in the EU for greater consistency in future years. However, in the meantime, it still appears that consistent application of EU water standards is lacking --- in spite of significant recent efforts to achieve improvements in this area.

B.2. Effectiveness: Specific Requirements and Enforcement

The US and the EU also differ regarding the extent to which they apply water-related requirements to specific organizations and individuals, and enforce the requirements that they apply. In general, the US appears to apply and enforce drinking water and surface water quality requirements with greater consistency than does the EU. However, because of differences in the

way the two regulatory systems are organized, it is necessary to use different kinds of data to demonstrate the differences in the two systems.

In the US, the EPA and the States communicate with some minimum level of regularity with both organizations that discharge wastewater to surface waters and Public Water systems. Wastewater dischargers are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit if they discharge to the waters of the United States. Public water supply systems are not necessarily required to obtain a permit, but they are required to submit monitoring data to their State regulatory agency and/or EPA. Currently, discharge permits limiting both industrial and municipal wastewater discharges have been issued to over 60,000 permittees nationwide under the Clean Water Act (Hunter & Waterman, 1996). Regulatory controls have also been applied to approximately 54,000 Community Water systems.

While non-compliance is certainly a widespread problem in the US that requires continuing attention and more resources for its correction, the vast majority of requirements applicable to water and wastewater systems are met on a regular basis. A recent EPA report on water system compliance with the SDWA shows that 77% of community water systems had no reported violations of applicable maximum contaminant levels (MCL's) or significant violations of monitoring requirements in 1997 (EPA, 1999). And EPA and the States do undertake enforcement actions in cases where violations are significant and continuing (See Hunter & Waterman, 1996 and EPA, 1999 for more discussion and details). In 1997, for example, EPA and the states together issued almost 2,000 enforcement actions under the SDWA (EPA, 1999, p. 20).

The situation in the EU appears to be different. Statistics regarding levels of compliance with EU standards that have already been transposed into EU law do not yet appear to be available, and there is evidence that those water policies that have been transposed into national laws have not yet been actually carried out in many instances. In 1991, for example, the Commission received approximately 480 complaints regarding Member State non-compliance with EU environmental directives, and it was in the process of taking action against 372 of them (Sbragia, 1992A). Many of these complaints involved water issues. A 1997 study of follow-up to the 1976 dangerous substances directive found that while most Member States had transposed the appropriate daughter directives into their laws, the process of including those limits in permits was still ongoing. In these cases compliance is not yet a problem, because in many instances there are not yet formal legal requirements in place with which particular industrial wastewater discharges must comply. In the EU, it still appears that inconsistencies in the codification of EU requirements are still coupled with limited implementation and enforcement of those requirements that have been put in place in a number of instances. While these deficiencies are

not necessarily evident in all the member states, they do appear to characterize the system as a whole and are likely to grow in magnitude with enlargement.

The Commission and the Member States are aware of this problem, and they have recently been taking actions to address it. Weaknesses in existing enforcement systems were recognized at the mid-term review of 5th EAP, and drew attention from both the Commission and Member States. The subsequent establishment of the "IMPEL" network to foster administrative cooperation between Member State Environmental Inspectorate and European level officials represents one significant effort to foster more consistent and effective enforcement efforts. Member States have responded to these efforts, and appear -- in many cases – to be pursuing enforcement actions in their territories with increasing vigor (Garvey, 2001).

Table 7 provides a snapshot summary of the evidence presented above relating to vertical integration of water policies in the EU and the US [13]. The measures of vertical integration used and the overview evidence provided above yield results consistent with expectations. As was expected, the EU does appear to be having more trouble than the US in ensuring vertical integration of its water policies.

Table 7
Extent of Vertical Integration: EU and US

Integration Measure	EU	US Drinking Water and Surface Water Policy Sectors Only
1 Consistent Legal Codification	--	+
2 Effective Actual Application		
2a Application to Regulated Entities	--	+
2b Enforcement	----	+

++ = Well integrated
+ = Somewhat Integrated
* = Neutral
-- Not well integrated
---- Poorly integrated

VII. CONCLUSION

If this paper suggests anything, it suggests that analyses of the structures and institutions of governance are not simply academic exercises. The institutional balances struck between territorial and functional interest representation in multi-level governmental jurisdictions have real world impacts. Water policies in the European Union and the United States are different in no small part due to these impacts.

As a result of its birth as an international organization made up of Nation-states representing territorial interests, the governance institutions of the EU are structured to a large

degree around territorial interests. And because territorial interests deal with a wide range of problems in differing functional areas, they tend to build structures of governance that expand broadly across a number of functional policy areas. In the EU, this has resulted in environmental policymaking institutions in the Commission, Council of Ministers (& the European Council), and the European Parliament that have a broad range of responsibilities extending across a number of different functional policy areas within the environmental policy arena. These institutions enable a relatively high level of horizontal integration of policies across these environmental policy sectors generally, and water policy sectors in particular. The new Water Policy Framework Directive is the most recent evidence of these horizontally based integrative capabilities.

These same territorial interests, however, can have negative effects on the consistency and effectiveness of policy implementation. Because territorial interests guard their autonomy, they tend to erect institutional barriers shielding themselves from the influences of the center of the governance system. These tendencies and the EU institutional structures built around them have led to relatively weak systems of "vertical" integration for water policies in the EU. Institutions in the EU have relatively few oversight tools to ensure consistent and effective implementation of water policies by the Member States. Consequently, EU water policies are not always transposed effectively into national laws, and the effectiveness of these laws once transposed remains a question mark in a number of instances.

While the institutions of governance in the United States include avenues for representation of territorial interests, these avenues are not as strong and influential as the avenues of influence available to territorial interests in the EU. In the environmental policymaking arena, strong functional interests have contributed to narrowly defined and fragmented jurisdictional structures for water policy in Congress, and these fragmented structures are mirrored in the executive branch. One important result of these narrowly defined scopes of institutional responsibility has been that US water policymaking institutions have had difficulty coordinating with one another, and this difficulty has often led to an inability to achieve high degrees of horizontal policy integration. These horizontal integration problems are widely recognized by water policy professionals, but they have yet to be overcome.

However, these same functional interests have in some cases contributed toward the achievement of relatively consistent and effective implementation of US water policies. For in cases such as drinking water and surface water policies, strong functional interests have prevailed in their efforts to build relatively strong national level programs regulating drinking water and wastewater discharges to surface waters. And with their successes in these areas have come

relatively strong tools for Federal oversight of water and surface water programs by State governments. These tools have contributed toward the creation of relatively consistent legal requirements in these policy areas, and relatively effective application and enforcement of these requirements in specific situations. Thus, in the US, relatively strong federal level representational structures for functional interests have led to focused institutional management of drinking water and surface water quality policies. This relatively high level of institutional focus, in turn, has contributed to relatively high levels of vertical policy integration.

Like most other studies, this analysis raises as many questions as it answers. On an empirical level, we are led to ask whether the differing balances among territorial and functional interests struck by the EU and the US are attributable to enduring and fundamental differences in the two polities, or their relative age? While the US has probably never been best conceived of as an international organization, long ago it did have stronger institutional structures for territorial representation. However, the representational impacts of these structures have been eroded over time. Will EU institutions undergo a similar transformation? If they do experience this kind of change, is this good or bad?

One can also ask this kind of normative question in the context of institutional reform. In the EU there is a major and broadly based effort to improve the management capabilities of its institutions. While much of this focus is on financial management, the concerns also extend to cooperative implementation relationships between the Commission and the Member States (Laffan, 1997). To accomplish better management, is it necessary to shift the EU's current institutional balance between territorial and functional interest representation? Is it necessary, for example, to drastically strengthen the oversight tools available to the Commission? If so, would this be a good thing or a bad thing when viewed from a macro perspective? At this point, it is difficult to know for sure.

In the US, there is much discussion regarding the desirability of an all-encompassing environmental statute that would provide for overall coordination of US environmental programs. While these proposals have not gone anywhere as yet (for reasons that are probably evident from the preceding analysis), it is appropriate to ask whether this kind of change would be sufficient to bring about significant improvements in the overall "horizontal" coordination of environmental policies? Might it also be necessary to re-organize institutional responsibilities to enable more broadly based oversight of environmental policies to ensure adequate coordination? If this kind of institutional re-structuring did prove to be necessary, would it be desirable from the standpoint of its likely impacts on structures of interest representation and consistent implementation? Again, it is difficult to know for sure.

And finally, normative questions can be asked at the level of specific environmental policies. Is the apparent tradeoff between horizontal and vertical policy integration absolutely necessary, or are there particular ways to combine institutional capabilities in order to achieve an optimal mix? If the relationship between these two forms of policy integration requires tradeoffs, is horizontal or vertical integration more important in the environmental policy arena? Or, to put the question differently, are inconsistently applied and enforced policies better if they take adequate account of important policy tradeoffs? Or, conversely, are policies that are poorly conceived in terms of their cross-sector tradeoffs still good if they are consistently applied, implemented, and enforced?

While definitive answers to the above questions are not yet apparent, it is clear that they constitute a substantial part of the environmental and water policy agendas in the EU and the US in the coming years. My hope is that the comparison provided here lends some useful perspective to these upcoming efforts. In the end, however, the perspectives provided by these comparisons must be accompanied by strong and reliable analyses of both environmental conditions and institutional progress on both sides of the Atlantic. For strong knowledge in all of these areas is necessary to enable the long-term success of European and American water policy efforts.

EXPLANATORY FOOTNOTES

1. While the EU's tools of influence over Member State water policies are "under-developed" when compared to those of the US Federal government over the States, they are quite well developed when compared to other international organizations. Throughout this paper we use the term "relatively" as a term of comparison between the EU and the US. Obviously, the conclusions would often be different if other frames of reference were used.

2. Here again, the strength of the US's tools are based on a comparison with the EU.

3. This paper focuses on differences between US and EU water policy outputs. However, there are also numerous similarities between the ways in which the two systems manage water policies. For example, both systems are moving toward geographically based management schemes that coincide with watershed boundaries. In addition, both systems are seeking to incorporate pollution prevention oriented activities and non-point source pollution control efforts into their water pollution control programs. These are just several examples, from a potentially long list. It is not yet clear to me whether these similarities represent parallel learning curves in the process of developing water pollution control programs within multi-level systems of governance or whether they are the product of some form of cross-national learning process (Majone, 1991). This, in and of itself, is also an interesting question, but it is not the subject of this particular paper.

4. Over the last several decades, for example, functional groups seeking anti-abortion amendments, balanced budgets amendments, and an 18 year old voting age have led the ranks of those seeking amendments to the US Constitution.

5. As one prominent scholar and practitioner of American government once said, "Congress in its Committee rooms is Congress at work," (Wilson, 1887).

6. The procedures undertaken by the Commission to ensure compliance typically involve the following: (1) informal consultation; (2) a formal notice or warning letter; (3) a reasoned opinion of the Commission outlining the rationale underlying its belief that a particular country has failed to live by its Treaty obligations and: (4) the filing of a case in the European Court of Justice (ECJ). If the ECJ finds that the nation-state is in violation of an EU Directive, it may impose penalty payments on the defaulting country (Kunzlik, 1994).

7. For example, Article 174 of the Treaty (formerly article 130r) indicates that community policy on the environment should seek preservation, protection, and improvement of the environment, the protection of human health, and prudent and rational utilization of resources. It also states that, "Community policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Community. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at sources and that the polluter should pay." (European Union Consolidated Treaties, 1997).

8. For example, both the Department of Agriculture and the Department of Housing and Urban Development fund water related infrastructure projects in cooperation with the States.

9. For good overviews of EU water legislation through the 1990's, see Duncan Matthews, 1997 and 1999.

10. The Clean Water Act, originally passed in its current form in 1972, regulates discharges to the "waters of the United States." And the Safe Drinking Water Act, passed in 1974, establishes standards in the form of Maximum Contaminant Level (MCLs) for public drinking water systems. The functionally based interests that pressured for greater Federal involvement in water policy focused on obvious and visible problems associated with surface water quality and drinking water. They were not as focused on "invisible" groundwater or more regionally based concerns about water quantity.

11. The evaluations summarized in Table 6 represent a snapshot in time at the turn of the century (2000/01). They do not fully recognize current efforts in both the US and the EU to improve horizontal policy integration, and clearly include subjective elements. Nevertheless, they do reflect overall strengths and weaknesses in the two systems and are therefore useful for general comparative purposes.

12. Based on my last understanding, 49 States enjoyed "primacy" to administer the SDWA within their jurisdiction (Wyoming, I believe, is the only exception). Over forty states have "delegated" authority to administer the NPDES permitting program authorized by the Clean Water Act (There is further discussion of CWA delegations contained in Hunter & Waterman, 1996 and Ringquist, 1993). Updated statistics on delegations are available through the Environmental Council of the States world-wide web site (www.ecos.org).

13. Like the evaluations of horizontal policy integration shown in Table 6, these evaluations represent a snapshot in time and also include clear elements of subjective judgment. Once again, however, I would suggest that they are essentially accurate for comparative purposes. Efforts are underway in both the EU and the US that affect vertical policy integration. Major EU efforts are underway to improve communication and information relating to environmental policy implementation, and – conversely – in the US efforts are underway to provide states with both greater flexibility and accountability in the administration of federal environmental and water policies.

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