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Not 'dead letters', just 'blind eyes': the Europeanisation of drinking water risk regulation in Estonia and Lithuania

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Abstract

This paper draws on a detailed empirical study of the implementation of the EU's Drinking Water Directive in Estonia and Lithuania in order to understand the factors shaping the Europeanisation of risk regulation regimes in Eastern accession states. Adopting a 'whole-regime' methodological approach, the paper explores the key drivers and constraints shaping the transposition as well as the practical implementation of the law. The study shows how 'conditionality' pressures to adopt the EU acquis in order to access European economic and financial support networks have reinforced, rather than overcome, historically entrenched regulatory cultures. Going beyond well-known typologies of Europeanisation, the paper identifies a distinctive 'blind-eye' style of Europeanisation in which conditionality pressures have favoured selective compliance with ill-suited EU rules at the expense of tackling significant drinking water risk problems. The paper shows how such symbolic policy practices have been shaped through a combination of the countries' shared Soviet legacies of elite-centred and legalistic governance cultures, the active coping strategies of street-level inspectors, as well as wider socio-political contexts that have limited the impact of civil society actors such as scientists, NGOs, and the general public in strengthening risk regulation in the Baltic states. The paper also shows, however, that the different post-Soviet ideological orientations and administrative reform programmes of Eastern European accession states can override their common Soviet legacies and lead to significant national variation in risk regulation processes and outcomes.

Keywords: risk regulation, Europeanisation, Eastern Europe, drinking water

1 Introduction

Quantitative studies of the transposition of the EU's *acquis communautaire* have shown that new member states are outperforming established ones in transposing Environmental Directives and, indeed, Directives in general (Knill and Tosun, 2009; Sedelmeier, 2008). Recent research, however, suggests that new member states' transposition records are masking serious implementation problems, such as lax enforcement practice and inadequate resourcing (EC, 2011; Falkner, 2010; Falkner and Treib, 2008; Sedelmeier, 2011). This paper adds to that research by examining how far the implementation of EU risk governance regimes in new member states are shaped both by the character of their national risk bureaucracies, and by their wider socio-political contexts. The paper

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explores these issues through an in-depth case study of the 'Europeanisation' of drinking water safety regulation in Estonia and Lithuania.

Early research suggested that the exemplary transposition records of Central and Eastern European (CEE) states that joined the EU in 2004 were principally driven by the EU's conditionality requirements, which made access to European economic and financial support networks dependent on the adoption of the *acquis* and the principles of liberal democracy (Schimmelfennig and Sedelmeier, 2005). Later research, however, suggested that, despite strong conditionality pressures, accession states—like older member states—have taken diverse approaches in implementing EU requirements (Börzel and Risse, 2007; Meyer-Sahling 2009). Falkner and colleagues' (Faulkner, 2010; Faulkner and Treib, 2008) well-known fourfold typology of the transposition styles of old and new member states captures some of that variety in terms of: (1) the 'world of law observance', where transposition is well considered and adapted to national circumstances; (2) the 'world of domestic politics', where domestic political resistance blocks transposition, although swift enforcement may follow successful transposition; (3) the 'world of transposition neglect'; where little attempt is made at transposition; and (4) drawing in particular on their research on Eastern Europe, 'the world of dead letters', where transposition is not supported by adequate monitoring and enforcement practice on the ground.

Studies have suggested that such implementation gaps can emerge in accession states where the demands of particular environmental policies come into conflict with wider prevailing norms, structures, and cultures of domestic regulatory bureaucracies (Gouldson and Murphy, 1998; Knill and Lenschow 2000; Paavola et al, 2009). For example, research on the use of EU Cohesion Funds has suggested that local political and administrative traditions in former state-socialist countries, including clientelism and politicisation of regional institutions, can constrain the implementation of EU-imported norms and practices (Dabrowski, 2012; Fagan, 2012). Others have pointed to the importance of entrenched bureaucratic cultures in shaping the varied responses of Eastern European member states to EU rules, such as their opacity, corruptibility, and resistance to reform (eg, Dimitrova and Toshkov, 2009; Meyer-Sahling, 2006; 2009). Most recently, Kluvánková-Oravská et al, (2013) have shown how deliberative modes of EU environmental governance have been more readily adopted in those CEE countries that have the longest traditions of democratising and decentralising governance institutions.

Domestic regulatory architectures can also amplify such problems. For example, simple changes of regulatory rule may fail to change entrenched enforcement behaviours if policy making and implementation are poorly coordinated or have misaligned incentive structures (Hood et al, 2001). Bureaucratic fragmentation can also help explain varied transposition and implementation patterns amongst accession states. For example, states with strong centralised bureaucracies, such as Latvia and Lithuania, have transposed EU Directives faster than states with fragmented bureaucracies, such as Estonia and the Czech Republic (Dimitrova and Toshkov, 2007).

Recent studies have also shown how varied post-Soviet ideological attitudes towards administrative reform have shaped accession states' regulatory capacities. For example, some commentators have suggested that Estonia's post-communist individualistic political culture has favoured neoliberal market reforms and new public management style decentralisation of state services rather than investment in maintaining state infrastructures (Adam et al, 2009; Norkus, 2011). By contrast, Lithuania's more socialist political culture has emphasised the securing of social welfare, equality, and security through strengthening, rather than reforming, existing state infrastructures (Aidukaite, 2009; Norkus, 2011).

The wider socio-political contexts of Europeanisation can also shape regulatory design and practice. For example, some have argued that the legitimacy of the EU's institutions and policy objectives amongst key domestic political constituencies can shape the adoption of EU rules (Epstein, 2008; Schimmelfennig and Sedelmeier, 2005). Such issues may well be pertinent in CEE states, where tight accession deadlines typically left little room for parliamentary discussions or stakeholder consultations (Raik, 2002; Sadurski, 2006).

Likewise, business groups can exploit their comparative advantage in organised lobbying to shape risk regulation in their own interests. Notable examples include lobbying to weaken the financial burden of regulation or to raise regulatory barriers to competition (Peltzman, 1976; Wilson, 1980). In the Eastern accession countries, for example, hopes for aid and foreign investment can make private interest groups influential supporters of EU regulatory frameworks (Vachudova, 2005).

Public interest groups are also commonly held to play a significant role in shaping risk regulation regimes. Studies suggest, however, that CEE NGOs have tended to have little impact on domestic regulatory agendas and practices because of their poor managerial capacities and their dependence on the agendas of foreign financial donors (Börzel and Buzogany, 2010b; Sissenich, 2010). In such contexts, NGO oversight of policy implementation in accession states has tended to depend on the ad hoc supply of expertise and resources by transnational NGO networks (Börzel and Buzogany, 2010a).

Public attitudes are also commonly argued to shape risk regulation regimes, particularly in the aftermath of tragedies when electoral and reputational anxieties make regulators sensitive to public concerns (Breyer, 1993, Sunstein, 2004). In the Eastern European context, it might be expected that public attitudes towards risk issues will reflect particular national economic, political, and cultural contexts. For example, research on the Eastern accession states suggests that, while the environment provided a focus for political protest under Soviet rule, those concerns have tended to subside following re-independence (Liubiniene, 2002; Yesilada et al, 2007).

To date, however, few studies have brought together these diverse literatures to explain the impact of EU regulatory frameworks on risk regulation regimes in the Eastern member states. In order to address that gap, this paper will look at the Europeanisation of drinking water safety in Estonia and Lithuania. Drawing on a detailed examination of those countries' risk bureaucracies and wider socio-political contexts, the paper will explore the factors shaping their approaches to drinking water safety regulation and the impact of those approaches on regulatory outcomes.

2 Drinking water safety in Estonia and Lithuania

Drinking water safety is a major global concern, with water-borne pathogens and toxins having the potential to create widespread acute, chronic, and fatal illnesses (WHO, 2012). In the EU, drinking water safety is subject to the Drinking Water Directive (DWD) (EC, 1998), which sets out strict safety standards and monitoring requirements. That regime was established in 1980 (EC, 1980) and initially attracted considerable controversy: the UK, for example, took ten years to adopt the original Directive, fearing its significant implementation costs (Hood et al, 2001). European Commission (EC) reports, however, now show 98% compliance with the Directive's requirements across both new and established member states (EC, 2007).

These data, however, conceal important variation since only the water quality of large supplies, serving more than 5000 people, is formally reported to the EC. While such large supplies serve much

of Western Europe (although smaller systems do exist in some 'old' member states, such as France and Spain), significant swathes of Eastern member state populations are served by smaller water supplies that are not subject to formal reporting requirements [Estonia 41%; Lithuania 47%; Czech Republic 28% (WHO Europe, 2010)]. Yet, across Eastern Europe, those small supplies are often the most contaminated by, for example, nitrates, fluorides, and trihalomethanes and radioactive isotopes (WHO Europe, 2010).

Moreover, although the DWD applies to all supplies serving more than fifty people or, 10 m³ /day, it does not require the inspection and control of smaller non-commercial water supplies. Consequently, the monitoring of dilapidated private wells used by up to one third of Eastern member state populations (Estonia 14%; Lithuania 30%; Romania 37%), and of non-commercial communal supplies serving fewer than fifty people but used by up to 5% of those populations is dependent on member state initiatives (WHO Europe, 2010). Yet the risks are very real. For example, nitrate concentrations exceed the DWD safety threshold of 50 mg/l in almost 37% of shallow dug wells in Lithuania (Kusta and Sileka, 2007), and significant exceedence have been found in wells in Central Estonia (Henrikson, 2007). Indeed, up to five babies have been killed each year and many more hospitalised by nitrate poisoning from private rural wells in Lithuania and Romania (EEHC, 2007; Government of Lithuania, 2008).

In that context, the DWD is an interesting case through which to explore the impact of EU Directives on risk regulation in Eastern member states. In order to do so, this paper examines the contrasting responses of Estonia and Lithuania—two small Baltic member states of 1.3 million and 3.4 million people, respectively, separated only by their common neighbour, Latvia. Both countries share similar social and environmental contexts and a common legacy of Soviet sanitary legislation which, in the case of drinking water, largely comprised strict, but often poorly enforced, standards (UNEP, 2008). Following the collapse of the Soviet Union, both Estonia and Lithuania adopted significant liberal democratic reforms and were invited to the EU accession negotiations in 1998 and 2000, respectively, gaining full membership in 2004. Following accession, both countries adopted the DWD, which tightened up national standards for contaminants, while EC oversight and Cohesion Fund support boosted both inspection capacities as well as supply infrastructure, particularly in larger conurbations.

Notwithstanding those similarities, these countries took different approaches towards public sector reform following re-independence. Estonia took a 'shock-therapy' approach by embracing wide-ranging market reforms and decentralisation of state services. In contrast, Lithuania, like its neighbour Latvia, adopted a more gradualist approach with many of the old-guard nomenklatura retaining key posts and resisting changes to existing regulatory mechanisms and architectures. Given their otherwise similar contexts, Estonia and Lithuania therefore offer a good opportunity to explore how the post-Soviet trajectories of Eastern accession states have shaped their implementation of European risk regulation regimes.

Certainly Estonia and Lithuania have taken noticeably different approaches to implementing the DWD. In terms of setting national standards, whereas the Estonian government set derogation periods for meeting several contaminant standards, Lithuania adopted EU requirements without objection. However, during the EC's current revision of the DWD, Estonia has made minimal demands, but Lithuania has lobbied to extend the Directive's scope to include the smallest water supplies that are used by large swathes of its rural population.

In terms of implementing the Directive, both countries have focused inspections on the largest supplies serving over 5000 people, but less is known about the safety of water available from the

smaller supplies serving large areas of each country (UNECE, 2010a; 2010b). EU Cohesion Fund money has helped improve the infrastructure needed to supply safe water during the last EU programming period (up to 2006), but whereas Estonia utilised 85% of its allocated funds, Lithuania experienced severe delays and used only 45% of the available funds (GHK, 2006a; 2006b). Data on the EU's financial programming period for 2007–13 are not yet available, but research suggests only slow changes in both countries. By 2010 Estonia had connected only 10000 additional people to sewage systems and public water supplies against a target of 55 000 by 2015 (Kalvet, 2011); but Lithuania had only renovated or established four sewerage systems and public water supplies against a final target of 220 by 2015 (Miseliuniene, 2011).

Moreover, the two countries have adopted different control strategies for private wells, which are beyond the official scope of the DWD. Whereas testing and decontaminating well water is voluntary in Estonia, Lithuania mandates the monitoring of wells used by vulnerable users, such as pregnant women and children, and the provision of clean water in case of contamination (Ministry of Health, 2002). In that context, official reports suggest that, while the largest municipal water supplies are largely compliant with safety requirements, 30% of Estonians and 65% of Lithuanians are served by poorly maintained and noncompliant smaller supplies (Estonian Health Board, 2010; Lithuanian State Food and Veterinary Service, 2010).

In order to explore why these two similar countries have responded so differently to the DWD, we have adopted a comparative case-study methodological framework that focuses attention on the broad set of institutional geographies, rules, practices, and animating ideas that are associated with the regulation of societal problems. This 'regime' approach (Demeritt et al, 2015; Hood et al, 2001), which draws on the cybernetics tradition of analysing regulation as control systems for achieving policy goals, directs research attention not just to the factors shaping those goals, but also to the factors shaping regulatory inspection and other behaviour-change activities. In so doing, we were able to investigate a broad set of institutional drivers and constraints shaping the impacts of the DWD on drinking water safety, which narrower, micro case studies, such as those on inspection practices or the legal transposition of EU Directives into national law, would miss.

The paper draws on three sources of data from both countries. The first source comprises an extensive analysis of official documents and archival records. The second source comprises over sixty in-depth semi-structured qualitative interviews conducted between 2008 and 2011 with key state and non-state representatives with stakes in regulatory transposition, regulatory inspection, and/or the upgrading of water supplies. Those actors included regulators working for WHO's European Centre for Environment and Health, the EC, various relevant Estonian and Lithuanian ministries, regional and local administrations, as well as scientific experts and representatives of the water industries and civil society organisations. The third source comprises a media analysis of the salience of drinking water safety in four popular Estonian and Lithuanian daily newspapers between 1996 and 2008, as a proxy indicator of public attitudes towards the topic in the absence of existing relevant research. In the next section, we draw on this empirical material to explore the factors shaping the processes and outcomes of the legal transposition of the DWD; the inspection of water supplies; and the upgrading of water supplies to meet the Directive's requirements in both countries.

3 Explaining the impact of the DWD in Estonia and Lithuania

3.1 Transposing the DWD into national law

The first factor limiting the impact of the DWD on drinking water quality in Estonia and Lithuania, has been the poor fit of the Directive's requirements with those countries' drinking water problems. Estonia—in contrast to Lithuania—secured an extension until 2013 to meet the regulatory limits for some contaminants, such as chlorides and sulphates. Beyond that derogation, however, both countries transposed the DWD without tailoring it to meet their country-specific needs, such as regionally problematic contaminants in small supplies, outdated infrastructure, and poor enforcement capacities. The failure to address those country-specific needs stemmed from a number of causes.

The first problem was that political pressure to speed EU accession processes left little opportunity for reflection on the drinking water safety needs of either country. This problem was compounded by transposition decisions across policy domains being concentrated in the hands of small circles of advisors and officials who had little tradition of consultative practices (Mažylis and Unikaite, 2003; Pettai and Veebel, 2005). According to a senior public health specialist at the Estonian Ministry of Social Affairs, the need to coordinate action across Estonia's relatively fragmented bureaucracy did provide a limited opportunity for the Water Works Association to press the government to secure a derogation period to upgrade its water systems. However, Lithuania's more centralised bureaucracy provided no such institutionalised opportunities for consultation, particularly given its late invitation to join the EU. As a senior official from the State Environmental Health Centre commented, "Lithuania's delayed entry into accession negotiations simply left too little time to analyse policy impacts and negotiate with the unconsolidated water supplies."

Indeed, there was a sense that serious consultation would have stood in the way of accession. As a Lithuanian Ministry of Health public health specialist observed: "We so desperately wanted to join. Were there possibilities to negotiate at all? In reality, we didn't get a chance." One ironic consequence of hasty transposition was that the Commission was disappointed with the low profile of national interest groups in EU negotiations. As a DG Environment representative complained: "We're operating with limited information from the member states. Even if there are issues with the Directive, we can't deal with the problems if we aren't aware of them."

Moreover, national environmental health experts who had concerns about the poor targeting of the Directive had neither opportunity nor incentive to challenge decision making. Part of the problem was that the legalistic bureaucratic cultures of both countries focused more attention on the fit of the DWD with national law than on its compatibility with local safety needs. As a representative of the Estonian Health Inspectorate explained: "The lawyers dominated the whole process and their aim was to ensure that the transposition of the Directive was legally correct." Those bureaucrats saw little value in consulting domestic scientific expertise when the DWD had been designed by international experts. As a public health specialist in the Estonian Ministry of Social Affairs put it: "I don't really see a need for redeveloping the wheel by paying attention to local scientists ... [when] international studies have been made." Moreover, given the politics of patronage in small political systems such as Estonia and Lithuania, and the ingrained Soviet tradition of politicised science (Dalmedico, 2004; Massa and Tynkkynen, 2001), scientists refrained from criticism for fear of suffering a reduction of state support. As a Lithuanian university professor commented: "I'm not interested in criticising the government's drinking water regulation. There's no need to create additional problems for myself if I want to remain active in this field."

Likewise, regulators at the Estonian Ministry of Social Affairs and Lithuanian Ministry of Health were under little pressure from either the general public or civil society groups to consider local specificities when adopting the DWD. Drinking water risks had briefly captured public attention prior to reindpendence in the context of environmental protest against Kremlin-imposed phosphorus mining in Estonia and oil extraction plans in the Curonian Spit in Lithuania (Agarin, 2009; Galbreath, 2009). After reindpendence, however, those environmental movements quickly lost momentum as the rebuilding of economic and political systems became politically more important (Liubiniene, 2002; Yesilada et al, 2007).

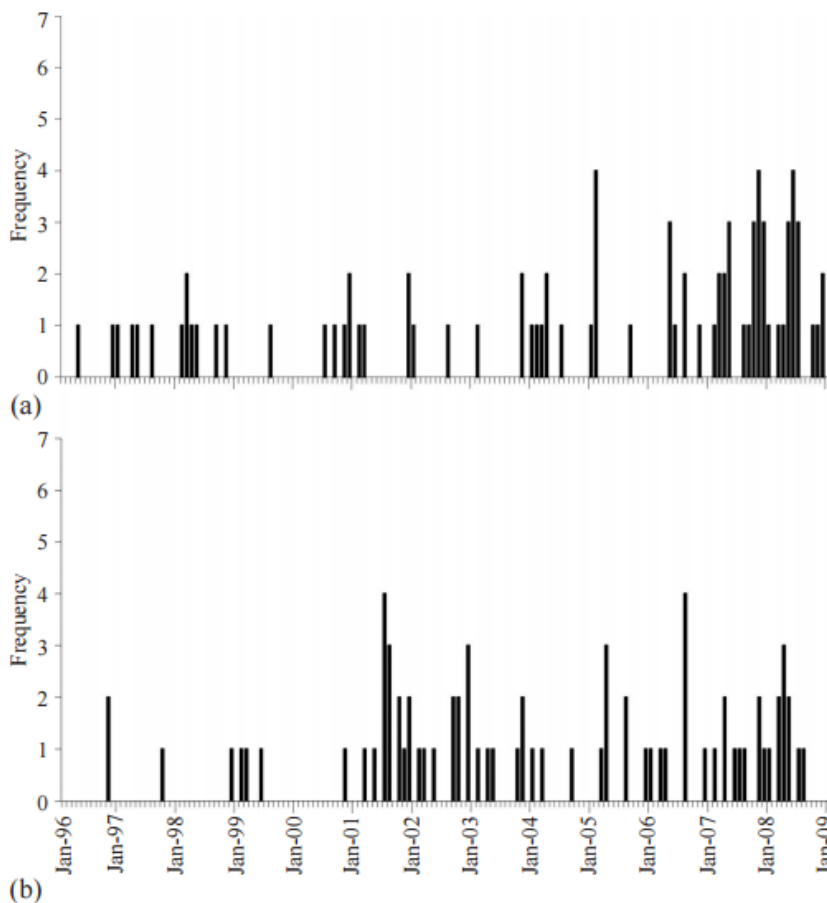


Figure 1. Combined frequency of articles/month on drinking water between 1996 and 2008 in two national daily newspapers in (a) Estonia: Postimees and Äripäev, and (b) Lithuania: Lietuvos Rytas and Verslo Žinios.

In the absence of available research on public attitudes to drinking water safety in the Baltics, our systematic study of four popular daily newspapers between 1996 and 2008 provides proxy evidence of the issue's low public salience.³ Figure 1 shows that only a handful of articles on the topic have appeared each year, with the DWD implementation going unnoticed. This pattern reflects the strong sense amongst Estonian and Lithuanian government officials that neither the public nor even environmental groups have had much interest in the new regime. As a Lithuanian Consumers

³ Two newspapers were selected in each country: the popular and business-orientated daily newspapers Postimees and Äripäev were chosen in Estonia and Lietuvos Rytas and Verslo Žinios were chosen in Lithuania. The electronic archives were scanned for articles containing the phrase "drinking water risks", "drinking water quality", and "drinking water safety". Given the low salience of the issue, figure 1 combines the articles from the pairs of national newspapers in each country to bring out the media coverage dynamics more clearly.

Association official explained: “Members of the public didn’t have much understanding of what EU accession would bring, let alone what benefits or obligations implementing specific Directives like the DWD would entail.”

The low public salience in part reflected the largely technical nature of the Directive. Few members of the public, for example, were likely to look beyond the headline offering of a new drinking water regime. That passivity, however, also reflected traditional public attitudes towards policy debate across the Baltic states in the face of historic government disregard for public concerns. Given that water provision has traditionally been a state responsibility, it is perhaps not surprising that there was little public engagement. As one Estonian water engineer poetically commented on the low impact of public attitudes on drinking water regulation: “If you want to know how important you are, dip your finger into the water and pull it out. Then you see how important you really are.”

Figure 1 shows that the topic gained marginally more media attention in Lithuania after 2001, with the newspapers particularly critical of nitrate poisonings in rural areas. That media attention encouraged the Lithuanian government to lobby the Commission to include small supplies within the Directive’s remit during the revision phase of the DWD. As a Lithuanian Ministry of Health official commented: “We’re constantly in contact with the Commission officials, trying to explain our problems and proposing solutions to help alleviate the problems of rural people.” The media’s role should not be overestimated however. As the Director of the Lithuanian Environmental Agency Water Department put it: “If a child is poisoned by a dug well, there’s a big public and media outcry. But in a short while, it calms down again.” Nevertheless, in pushing to extend the Directive’s remit, the government has hoped to build trust amongst both domestic and international constituencies, as well as gain EU infrastructure funding to upgrade rural water supply systems.

By contrast, since 2004 the Estonian media has concentrated on optimistic progress reports on the upgrading of water supplies. In the absence of any other pressures from business or civil society groups, the Estonian delegation has made only modest requests for extending deadlines for smaller communal supplies. Likewise, it has not sought to renegotiate EU requirements on private wells.

3.2 Regulatory inspection of water supplies

While the formal scope of the DWD has limited its impacts in Estonia and Lithuania, local inspection practice has also limited the Directive’s impacts. In both countries, state inspectorates have focused inspections mainly on the largest supplies serving over 5000 people. While that strategy may be efficient in Western European countries whose populations are served mainly by such large supplies, almost half the Baltic populations are served by smaller, often contaminated, supplies. That inspection practice is driven largely by the need to maintain political legitimacy within the EU, since the EC requires reports only on supplies that serve more than 5000 people. As a representative of the Lithuanian Water Suppliers Association put it: “The country wants to comply so it isn’t punished or prosecuted, but also to demonstrate it’s a good and compliant EU partner.”

By contrast, inspection of smaller water supplies is discretionary. Records of such inspections are regionally uneven, and national reports overlook the smallest private supplies—which sometimes have the worst problems. In part, inspection strategies for smaller supplies have been driven by health concerns. As a representative of the Lithuanian Food and Veterinary Service argued: “We tend to focus on those supplies where we see poor internal controls that threaten the health of large numbers of people.” The inspection culture, however, has also been driven by the financial problems facing smaller companies: 97% of supplies provide water for less than 5000 people and consequently

have insufficient revenue from water bills to monitor drinking water quality adequately (Estonian Health Board, 2010; Lithuanian State Food and Veterinary Service, 2010). As a senior public health official at Lithuanian Ministry of Health pointed out: "The smaller capacities of supplies often serving small, scattered clientele in rural areas limits their ability to meet regulatory requirements." Consequently, inspectors are more reluctant to impose sanctions on small suppliers than on large ones in both countries.

That implementation gap is also shaped by inspectors' critical attitudes towards the DWD's requirements and their perceived lack of fit with local safety needs, such as expensive tests for compounds, irrespective of whether they have ever been used or found in supplies. As a senior Lithuanian water inspector observed: "There's no point in harassing small municipal companies with nitpicking demands. With current capacities, it's just not feasible to meet all the requirements." Likewise, a senior Estonian inspector commented: "Despite harsher requirements and EU oversight, inspectors understand that coercion doesn't take us anywhere. Some requirements are simply absurd and shouldn't be taken so seriously."

Inspectors are rarely under any public pressure to do more. While some observed that they received occasional calls from worried city residents each month, inspectors received almost no complaints from rural areas. For some water experts, the low public salience of the safety of drinking water from small communal supplies was reinforced by the long-term cumulative effects of contaminants such as fluoride, trihalomethanes, and radioactive isotopes. As an Estonian health expert on water quality argued: "There's a public scare when there's a microbiological problem because the consequences are apparent immediately. But the effects of chemically contaminated water are too long-term, so perceptions of hazard disappear."

Those problems are more acute when it comes to often dilapidated private rural wells. In particular, the cultural value of well water as a "sacred elixir of everyday life", as a representative of the Lithuanian Association of Rural Communities expressed it, diminishes owners' perceptions of the potential risks. Likewise, a public health specialist at the Lithuanian Ministry of Health explained: "Dug-well owners are very happy, even if they know the water is very bad quality. They say their great-grandparents grew up on the water, and therefore it must be good for them."

Nevertheless, the two countries have adopted different strategies for private wells. In Lithuania, state monitoring programmes have been extended to small private wells. This move, which went beyond the DWD's requirements, was in part driven by nitrate poisoning cases and by scientific studies that identified other concerns (eg, Kutra et al, 2002). As a senior specialist from the State Food and Veterinary Service commented: "Of course we needed to react to these dreadful poisoning cases; it's our job to ensure public safety." The cases were also raised in meetings between community organisations and state officials on the wider problems of rural life. As the representative of the Association of Rural Communities commented: "Regulators sensed a need to re-establish their legitimacy among rural well owners as well as the wider public."

Lithuanian action on private wells also reflected a Soviet-era paternalistic ideology that the state should protect its citizens. These paternalistic expectations were sustained by frustrated attempts to restructure public administration in the face of resistance from entrenched state elites who wanted to retain their positions and maintain high levels of state intervention (Norkus, 2011). One consequence was that all thirty-eight municipal branches of the Food and Veterinary Service retained their Soviet-era responsibilities for drinking water. That outcome, however, did keep inspectors sensitive to local rural concerns. As a Lithuanian Ministry of Environment specialist

commented: "Although they may not always work very efficiently, municipal inspectors can alert us to rural water issues."

Estonia, by contrast, did not extend monitoring to include private wells, even though it has similar hydrological and agricultural conditions to those of Lithuania. One likely reason is that, although significant nitrate exceedences have been found in some wells, no nitrate poisonings have so far been recorded in Estonia. In the absence of systematic studies of Estonian well water, it is not known whether this is a result of luck or design. However, in that context owners have shown little interest in monitoring their wells. Likewise, none of the environmental groups or rural organisations interviewed extensively for this research had put small water supplies on their agendas. Consequently, government has been under little pressure to require monitoring of private wells.

The Estonian approach to well-water quality has also been reinforced by the country's neoliberal political orientation which, in contrast to the situation in Lithuania, emphasises individual rather than state responsibilities. An Estonian Health Inspectorate official expressed the policy principle thus: "If I wish to, I'll test my well; if I don't wish to, I won't." That liberal ideological tradition presented more favourable conditions for state reform after re-independence than had been the case in Lithuania (Adam et al, 2009; Aidukaite, 2009). One consequence, however, was a reduction in state inspection capacities: local regulatory structures were reduced to four regional inspectorates that employed a handful of inspectors with far less resource than their Lithuanian counterparts to oversee small supplies, let alone private wells. As one regional inspector explained, "I'm operating alone in the whole county. There's no way I can pay enough attention to water supplies of any size."

3.3 Upgrading water supplies

The disparity of regulatory attention paid to large urban water supplies compared with the numerous smaller rural supplies goes a long way to explain the poor quality of much drinking water across the Baltics. That disparity does not, however, fully explain the poor compliance rates amongst all but the largest supplies. Nor does it explain why two thirds of the Lithuanian population has access only to substandard water compared with one third in Estonia, given Lithuania's more interventionist regulatory approach (Estonian Health Board, 2010; Lithuanian State Food and Veterinary Service, 2010). In order to explain those puzzles, attention needs to be paid to the factors shaping investment in water supply infrastructures.

One key factor shaping poor compliance in both Estonia and Lithuania has been the politics of water pricing. In both countries, municipal governments control water pricing and, in the face of electoral pressures, they are reluctant to raise prices for infrastructure investment. Lithuania has tried to centralise pricing policies through its State Commission for Prices and Energy (CPE) since 2001, but only 30% of water supplies follow the CPE's cost-recovery principles. As a CPE representative explained: municipal council members "never know whether they'll be in the same post in four years' time or not. As they have short-term goals to preserve the status quo until after the next elections, it's difficult for them to understand why they need to raise water prices." Estonia, however, has actively adopted a more deregulatory stance, which suggests that revenues from water bills, particularly from small rural supplies that serve communities with smaller paying and consumption capacities (Poom et al, 2014), will be insufficient to support future infrastructure investment.

The concerns of municipal council members reflect public resistance to higher water bills in both countries. Willingness-to-pay studies suggest that, whereas water bills account for 4% of household

income in Western European countries, they account for only 1% in the Baltics (Frankhauser and Tepic, 2005; Monarchova and Gudas, 2009). Indeed, the desire to minimise costs of metered water has made Estonians and Lithuanians amongst the lowest consumers of water across Europe (Eurostat, 2010). According to representatives of the Association of Estonian Towns and the Lithuanian Ministry of Environment official interviewed for this research, any increase in prices would make it difficult to maintain basic hygiene standards in both countries. Consequently, public concerns have hindered—rather than driven—investment in small water supplies, particularly in sparsely populated poor rural areas.

In that context, EU Cohesion Fund money has provided much-needed investment. For efficiency reasons, however, investment has tended to focus on the largest supplies, at the expense of addressing the acute problems facing smaller supplies, which have struggled to gain political attention given their diffuse and weak organisation. Moreover, infrastructure projects have been poorly managed. During the boom years of 2005–08, national reconstruction efforts provided opportunities for engineering and construction companies to dictate their terms to the market. According to an EC official at DG Regional Policy, some companies delayed water infrastructure work in order to maximise profits, and, in Estonia, abused the use of pre-accession funds “to build pipelines to the bears and wolves in the middle of forests”, as he put it. Likewise, Nordic donors made loans for infrastructural regeneration dependent on the use of their own favoured engineering companies and technological solutions.

According to Lithuanian and Estonian officials, when the construction boom ended in 2008 and international companies started to lose interest in the opportunities offered by the Baltics as the potential profits waned, prices normalised, and work on improving infrastructure gained some speed in both countries. Nevertheless, Estonia has used EU funds more efficiently than Lithuania, leading to much higher compliance rates amongst Estonian water supplies (GHK, 2006a; 2006b; Kalvet, 2011; Miseliuniene, 2011).

Estonia’s relative success has largely been due to the involvement of its decentralised regional environmental boards in water management and project-funding decisions which have promoted horizontal and vertical coordination across government and other state actors. As a river basin management coordinator explained: “[Decentralisation] has facilitated exchange with health boards, county governments, and, most importantly, with the municipalities on their specific water infrastructure renovation needs.” According to an EC official at DG Environment, that decentralisation has been accompanied by a professionalisation of infrastructural funding allocations, which also reduced the scope for distortion by business and political pressures.

In Lithuania, by contrast, progress has been slowed by the centralisation of water management and funding allocations within the overburdened State Environmental Projects Management Agency (EPMA). For example, while municipal water management plans—a prerequisite for allocating EU support funds—were largely completed in Estonia by 2008, only 42% of Lithuanian municipalities were ready by 2009. According to the Lithuanian National Audit Office (2008, page 41) EPMA’s inefficiencies reflected “weaknesses in the clarity of project selection ... and insufficient capacities of the EPMA to ensure that the declared expenditures are eligible and correct.” Or, as a Lithuanian municipal water company representative put it more colourfully: “It’s crazy to see how they’re working at the Agency. They have many projects, but not enough staff. They want to do a lot, but they know very little about local details.”

That lack of professionalisation has also made Lithuanian funding allocations more susceptible to pressure from engineering and construction companies than Estonian allocations. According to one

water engineering professor: "The engineering and construction companies know very well how to wheedle officials towards favourable decisions for their businesses." Indeed, a Transparency International study (2008) suggested that, on average, Lithuanian government officials 'pocket' up to 10% of water infrastructure contracts.

4 Discussion

At first sight, the Europeanisation of drinking water regulation in Estonia and Lithuania appears to have helped strengthen drinking water standards in both countries; enhanced their inspection and enforcement capacities; and improved their supply infrastructure, particularly in larger conurbations. Indeed, EU reports of Estonia and Lithuania's transposition and application of the DWD suggests that they could be typologised as members of Faulkner et al's (Faulkner, 2010; Faulkner and Treib, 2008) 'world of law observance' group of member states. At the same time, our research has also shown that the EC's crude indicators fail to capture regulatory practices that appear to be closer to a 'world of dead letters', in which countries go through the rituals of transposition but do little to put rules into practice.

Our regime analysis of the transposition and implementation patterns in Estonia and Lithuania, however, suggests that it would be wrong to conclude that the implementation of EU rules in these two accession states is like a proverbial curate's egg of unconnected good and bad regulatory practices. Rather, our research suggests that there are common variables that can explain this observed pattern which might be best characterised by a new and more nuanced typological 'world of turning blind eyes', in which selective attention is paid to complying with ill-fitting EU rules at the expense of addressing the greatest risk problems facing each country. One notable example is the targeting of regulatory inspection and infrastructure investment on the largest water supplies that fall under the watchful eye of the EC, while paying less attention to the numerous smaller water supplies serving large swathes of the Baltics, which are off the EC's 'radar' but which are most in need of improvement.

Given that Estonia and Lithuania are two small, almost neighbouring countries that share very similar geographies and political histories, it is perhaps unsurprising to find, in common with an increasing number of studies on the implementation of EU rules (eg, Falkner, 2010; Falkner and Treib, 2008; Gouldson and Murphy, 1998; Paavola et al, 2009), that they suffer from many similar regulatory problems. The adoption of a regime approach, however, provides a comparative methodological framework which has revealed how the post-Soviet trajectories of Eastern accession states can also explain both similarities and differences in the way in which they have implemented EU risk regulation regimes.

Our analysis highlights six factors that have determined the common patterns of transposition and implementation in the two countries. First, our analysis shows that EU 'conditionality' pressures have had lasting effects by reinforcing, rather than overcoming, historically entrenched cultures of symbolic policy making in both countries. In the political rush towards the prize of EU accession, conditionality pressures focused political and bureaucratic attention on the accurate legal transposition of the Directive at the expense of considering the Directive's lack of 'fit' both with those countries' drinking water risks and the implementation problems posed by their fragmented supply networks. In other words, while conditionality pressures had some success in socialising accession countries into complying with EU rules, they also, ironically, reinforced Soviet-era

regulatory cultures of projecting concern for public health while ignoring the significant problems posed by rule implementation on the ground (cf Meyer-Sahling, 2009; UNEP, 2008).

Second, our analysis suggests that this pattern of symbolic policy practice was sustained in both countries by their policy-making architectures and cultures that provided few institutionalised opportunities for consultation with scientific experts and other stakeholders who could have pointed out problems posed by the Directive. While there was a little more opportunity for consultation in Estonia than in Lithuania because of the need to coordinate transposition across its more fragmented bureaucracy, both countries' elite-centred and legalistic policy-making cultures favoured swift rather than reflective transposition. One example was the absence of consultation with domestic scientific experts because the lawyer-dominated civil services were in thrall to European expert committees. That is not to say, however, that scientists were begging to be heard. Rather, the exclusion of scientific actors was tacitly mutual; reflecting both a Soviet legacy of scientific deference to political authority as well as the inevitable politics of patronage in small political systems.

Third, our regime approach also reveals the way in which 'street-level' bureaucrats in both countries have coped with the unreflective transposition of the DWD by paying selective attention to its implementation. While central state administrators 'turned a blind eye' to the problems posed by the DWD's requirements for small supplies, inspectors—whose practical knowledge and experiences were disregarded at the time of transposition—compensated for those problems by likewise turning a blind eye to enforcing some of those requirements. It would be wrong, however, to regard this as a world of 'dead letters' in which rules are ignored in favour of maintaining the status quo. Rather, it reflects an active coping strategy by street-level bureaucrats faced with having to make sense of demands that seem irrelevant or are simply unrealistic in the absence of adequate infrastructure investment.

Fourth, and relatedly, our interviews and media analysis suggest that the slow transformation of drinking water safety in the Baltics has also been shaped by a lack of societal demand for change. With the exception of transient interest in Lithuania following sporadic nitrate poisonings, the low media salience of the issue and general attitudes towards drinking water safety reflects generally weak public interest in environmental and health issues. In this case, it seems that drinking water risks have failed to capture the imagination of Baltic populations—through a combination of prevailing materialistic concerns [which have been observed in other environmental contexts (see Liubiniene, 2002; Yesilada et al, 2007)], cultural attachments to rural well water, and the intangible long-term effects of many contaminants. Indeed, if anything, our research suggests that public attitudes have had a broadly negative impact on safety; in particular because the fragmented supply network has concentrated clean-up costs on small groups of relatively poor customers who are unwilling to pay more to maintain the safety of water infrastructure, let alone finance upgrades.

Fifth, civil society groups have failed to compensate for that lack of public interest. While strong green and consumer lobbies played a significant role in shaping drinking water regulation in Western member states, such lobbies have been markedly weaker in the Baltics. As has been pointed out in a number of studies of post-Soviet, civil society groups have struggled to shape regulatory agendas and practice in the face of weak democratic traditions, poor access to funding and often poor managerial capacities (Börzel and Buzogány, 2010b; Sissenich, 2010). In that context, civil society groups have seen little point in pressing the issue of drinking water safety given that it garners little foreign or domestic public support.

The sixth and final common factor that has shaped regulatory practice in both countries has been the role of private sector interests, which have been observed in other Eastern accession state policy

contexts to actively support EU regulatory ambitions because of hopes for dividends from EU infrastructure funds (Vachudova, 2005). Our research suggests a differentiated picture of activity in the case of the DWD. Certainly, the interests of large engineering and construction companies coincided with the focus of funding allocations on larger rather than smaller supplies, given the more attractive returns from the larger projects. At the same time, the needs of smaller water companies—which had the greatest problems with water quality—went largely unheard because their size and geographical dispersal stood in the way of organised lobbying for assistance.

The results of our regime-based analysis, therefore, go a long way to explain how many of Estonia and Lithuania's common problems with drinking water regulation can be related to their similar bureaucratic and societal contexts. However, our analysis also contributes to recent scholarship on how entrenched configurations of governance institutions in different accession states shape their varied success in synchronising the goals and practices of EU environmental governance (see, eg, Kluvankova-Oravska et al, 2013). In particular, our approach has identified differences in regulatory approaches and outcomes in the two countries that can be related to their distinctive post-Soviet trajectories.

Most notably, our research suggests that Lithuania's efforts to extend the DWD rules to cover private wells can be explained, in part, by the persistence of strong paternalistic governance cultures. Those governance cultures have frustrated administrative reforms, leaving local regulatory infrastructures intact but relatively sensitive to regionalised public concerns over nitrates. In contrast, Estonia's focus on personal responsibility in managing risk from private wells was favoured by its more neoliberal ideological orientation. That neoliberal orientation also favoured speedy deregulatory reforms, which weakened regulatory inspection capacities for tackling fragmented water supplies.

While those distinctive differences in ideological orientation and administrative reform patterns help explain Lithuania's more interventionist regulatory stance than Estonia's, they paradoxically had the reverse consequence for the effective use of EU funds to upgrade water supplies. In Lithuania the slow pace of administrative reform has led to inefficient and sometimes corrupt allocation of EU support funds, as might be expected from experiences in other former Soviet countries with persistent legacies of politicised and opaque administrative traditions (eg, Dabrowski, 2012; Fagan, 2012). In Estonia, however, decentralisation has facilitated better coordinated, more efficient, and more transparent use of EU support funds. Consequently, while Estonia has had a less interventionist regulatory stance than Lithuania, it has had more success in actually improving water quality.

Whether Estonia is likely to continue to outperform Lithuania is unclear. Subsidising water companies' compliance costs through EU support schemes is unlikely to be sustainable in the long term. In this respect, compared with Estonia's deregulated pricing policies, Lithuania's centralised economic management reforms, if properly enforced, may prove ultimately more helpful in meeting cost-recovery principles to inspect, upgrade, and maintain even smaller drinking water supplies.

5 Conclusions

We draw three broad conclusions from our study. First, we have shown how the lasting effects of EU 'conditionality' pressures have reinforced rather than overcome historically entrenched regulatory cultures in Eastern accession states. The findings go beyond well-known typologies of Europeanisation, to show how such pressures have shaped selective attention towards complying

with ill-fitting EU rules at the expense of addressing the greatest risk problems facing each country. That 'blind-eye approach' of symbolic policy making can exacerbate existing differences, such as those between the exposures of rural and urban populations to environmental harms.

Second, our analysis suggests that, in the case of the DWD, such symbolic policy practices in both countries have been shaped, at least in part, by their shared Soviet legacies of elite-centred and legalistic policy architectures and cultures, a deferential scientific establishment, discretionary inspection practices, weak civil society organisations, public disinterest in environmental and health issues, and relatively weak private interest groups. It would be wrong, however, to conclude that their common Soviet legacy is a sufficient predictor of regulatory outcomes for other environmental risks. Regulatory politics and outcomes for other environmental risks might be rather different if, for example, those risks impose greater costs on urban than rural publics, if they suit the agendas of domestic and foreign NGOs, or if they impose costs on better organised and stronger private interest groups than we have seen in the case of drinking water.

Third, our comparative analysis also shows how the distinctive post-Soviet ideological orientations and administrative reform programmes of Eastern European accession states limit the extent to which their shared Soviet legacies shape regulatory outcomes. While Estonia's neoliberal reforms have limited its regulatory ambition and capacities, those reforms have helped the country reap considerable benefits from EU cohesion funds. In contrast, although Lithuania's more paternalistic and limited reform programme has made regulation more sensitive to local concerns, it has limited its ability to put EU funds to good use. Indeed, the comparison of Estonia and Lithuania shows how, at least in the short term, effective use of EU funds has been a more important driver of improving water quality than regulation itself.

Such conclusions point to the potential predictive value of taking a 'whole-regime' approach to analysing the impact of EU rules on risk regulation in accession states. For example, our analysis might lead us to expect that the implementation of the DWD in Latvia will most closely resemble the Lithuanian experience, given that Latvia resembles both its Baltic neighbours in terms of its environmental context, policy-making culture, and socio-political history but has taken Lithuania's gradualist approach to reform. Likewise, it might be expected that many other Eastern European countries with a high proportion of uncontrolled smaller water supplies, which may have swiftly transposed the DWD but have had great difficulties in handling EU funds, such as Romania and Bulgaria (KPMG, 2013), will struggle to provide properly controlled water supplies for significant proportions of their populations. Further research, however, is required to substantiate such predictions on drinking water regulation and, indeed, other risk issues in the Baltics and other Eastern accession states.

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References

Adam F, Kristan P, Tomašič M, 2009, "Varieties of capitalism in Eastern Europe (with special emphasis on Estonia and Slovenia)" *Communist and Post-Communist Studies* 42 65–81

Agarin T, 2009, "Where have all the environmentalists gone? Baltic Greens in the mid-1990s" *Journal of Baltic Studies* 40 285–305

Aidukaite J, 2009, "The Estonian model of the welfare state: tradition and changes", in *Diversity and Commonality in European Social Policies: The Forging of a European Social Model* Eds S Golinowska, P Hengstenberg, M Żukowski (Friedrich-Ebert-Stiftung, Warsaw) pp 110–139

Börzel T, Buzogány A, 2010a, "Environmental organisations and the Europeanisation of public policy in Central and Eastern Europe: the case of biodiversity governance" *Environmental Politics* 19 708–735

Börzel T, Buzogány A, 2010b, "Governing EU accession in transition countries: the role of non-state actors" *Acta Politica* 45 158–182

Börzel T, Risse T, 2007, "Europeanization: the domestic impact of EU politics", in *Handbook of EU Politics* Eds K Jørgensen, M Pollack, B Rosamond (Sage, London) pp 482–504

Breyer S, 1993 *Breaking the Vicious Circle* (Harvard University Press, Cambridge, MA)

Dabrowski M, 2012, "Shallow or deep Europeanisation? The uneven impact of EU cohesion policy on the regional and local authorities in Poland" *Environment and Planning C: Government and Policy* 30 730–745

Dalmedico A, 2004, "Early developments of nonlinear science in Soviet Russia: the Andronov school at Gorkiy" *Science in Context* 17(1–2) 235–265

Demeritt D, Rothstein H, Beaussier A-L, Howard M, 2015, "Mobilizing risk: explaining policy transfer in food and occupational safety regulation in the UK" *Environment and Planning A* 47 forthcoming

Dimitrova A, Toshkov D, 2007, "The dynamics of domestic coordination of EU policy in the new member states: impossible to lock in" *West European Politics* 30 961–986

Dimitrova A, Toshkov D, 2009, "Post-accession compliance between administrative co-ordination and political bargaining" *European Integration online Papers* 13(2) 1–18

EC, European Commission, Brussels

- 1980, "Directive 80/778/EEC of the Council of 15.7.1980 on the quality of water intended for human consumption" *Official Journal of the European Communities* L229 11–29, 30 August
- 1998, "Directive 98/83/EC of the European Parliament and of the Council of 3.11.1998 on the quality of water intended for human consumption" *Official Journal of the European Communities* L330 32–54, 5 December
- 2007, "The quality of drinking water in the EU: synthesis report on the quality of drinking water in the member states of the EU in the period 2002–2004"
- 2011, "28th Annual report on monitoring the application of EU Law (2010)", Commission staff working paper, Statistical Annex, AnnexesI-III, COM(2011)588 Final

EEHC, 2007, "Lithuanian country report to intergovernmental mid-term review", presentation at European Environment and Health Committee on CEHAPE Regional Priority Goal on Water and Sanitation, Vienna, 15 June

Epstein R, 2008 *In pursuit of Liberalism: International Institutions in Postcommunist Europe* (The Johns Hopkins Press, Baltimore, MD)

Estonian Health Board, 2010, "Drinking water quality control in 2009", Estonian Health Board, Tallinn

Eurostat, 2010 Environmental Statistics and Accounts in Europe (EC, Brussels)

Fagan A, 2012, "Building environmental governance in Bosnia-Herzegovina: Europeanisation and transnational assistance in the context of limited statehood" *Environment and Planning C: Government and Policy* 30 643–657

Falkner G, 2010, "Institutional performance and compliance with EU law: Czech Republic, Hungary, Slovakia and Slovenia" *Journal of Public Policy* 30 101–116

Falkner G, Treib O, 2008, "Three worlds of compliance or four? The EU-15 compared to new member states" *Journal of Common Market Studies* 46 293–313

Frankhauser S, Tepic S, 2005 *Can Poor Consumers Pay for Energy and Water? An Affordability Analysis for Transitional Countries* European Bank for Reconstruction and Development, London

Galbreath D, 2009, "From phosphate springs to Nordstream: contemporary environmentalism in the Baltic States" *Journal of Baltic Studies* 40 279–284

GHK, 2006a *Strategic Evaluation on Environment and Risk Prevention under Structural and Cohesion Funds for the Period 2007–2013. National Evaluation Report for Lithuania* GHK Consulting Ltd, Brussels

GHK, 2006b *Strategic Evaluation on Environment and Risk Prevention under Structural and Cohesion Funds for the Period 2007–2013. National Evaluation Report for Estonia* GHK Consulting Ltd, Brussels

Gouldson A, Murphy J, 1998 *Regulatory Realities: The Implementation and Impact of Industrial Environmental Regulation* (Earthscan, London)

Government of Lithuania, 2008 *6th Report on Implementation of the European Social Charter: Group 2 Health, Social Security and Social Protection* (Government of Lithuania, Vilnius)

Henrikson A, 2007, "Agri-environmental extension services in Estonia, Latvia, Lithuania and Poland", County Administrative Board of Stockholm, Stockholm

Hood C, Rothstein H, Baldwin R, 2001 *The Government of Risk: Understanding Risk Regulation Regimes* (Oxford University Press, Oxford)

Kalvet T, 2011, "Country report on achievements of Cohesion Policy: Estonia. A report to the EC Directorate-General Regional Policy", Tallinn University of Technology, Tallinn

Klůvnkov-Oravsk T, Chobotov V, Smolkov E, 2013, "The challenges of policy convergence: the Europeanization of biodiversity governance in an enlarging EU" *Environment and Planning C: Government and Policy* 31 401–413

Knill C, Lenschow A, 2000, "Do new brooms really sweep cleaner? Implementation of new instruments in EU environmental policy", in *Implementing EU Environmental Policy: New Directions and Old Problems* Eds C Knill, A Lenschow (Manchester University Press, Manchester) pp 251–282

Knill C, Tosun J, 2009, "Post-accession transposition of EU law in the new member states: a cross-country comparison" *European Integration online Papers* 13(2)

KPMG, 2013, "EU funds in Central and Eastern Europe: Progress Report 2007–2012", KPMG Eastern and Central Europe, Warsaw

Kusta A, Sileca A, 2007, "Implementation of the Nitrate Directive in Lithuania", presentation for the Union of European Academies for Science Applied to Agriculture, Food and Nature Seminar, Yalta, 16 May, http://www.euracadagri.com/eng/activities/yalta_doc_li.php

Kutra S, Kusta A, Rutkoviene V, 2002, "Variance of dug well water quality indices" *Vandens ūkio inžinerija* 20(42)28

Lithuanian National Audit Office, 2008, "Report on management of the EU's Financial Assistance in 2004–2007", National Audit Office of the Republic of Lithuania, Vilnius

Lithuanian State Food and Veterinary Service, 2010, "Overview of the water quality testing in 2009", Lithuanian State Food and Veterinary Service, Vilnius

Liubiniene V, 2002, "Change of values in Lithuania in the process of European integration" *Sociologija: Mintis ir veiksmai* 2 50–61

Massa I, Tynkkynen V, 2001 *The Struggle for Russian Environmental Policy* (Kikumora Publications, Helsinki)

Mažylis L, Unikaite I, 2003, "The Lithuanian EU accession referendum 10–11 May 2003", Referendum Briefing 8, European Parties Elections and Referendums Network, <https://www.sussex.ac.uk/webteam/gateway/file.php?name=epern-ref-no-8.pdf&site=266>

Meyer-Sahling J-H, 2006, "The institutionalization of political discretion in East-Central European civil services: the case of Hungary" *Public Administration* 84 693–716

Meyer-Sahling J-H, 2009, "Varieties of legacies: a critical review of legacy explanations of public administration reform in East Central Europe" *International Review of Administrative Sciences* 75 509–528

Ministry of Health, 2002, "Order No.250 of the Minister of Health of the Republic of Lithuania of 30.5.2002 on the diagnostics and prevention of poisoning caused by nitrites and nitrates", *Official Gazette* 205(58–2361)

Miseliuniene A, 2011, "Country report on achievements of cohesion policy in Lithuania", a report to the European Commission Directorate-General Regional Policy, *Europos socialiniai, teisiniai ir ekonominiai projektai*, Vilnius

Monarchova J, Gudas M, 2009, "Contingent valuation approach for estimating the benefits of water quality improvement in the Baltic States" *Environmental Research, Engineering and Management* 47 5–12

Norkus Z, 2011, "Estonian, Latvian and Lithuanian post-communist development in the comparative perspective", in *Estonian Human Development Report 2010–2011: Baltic Way(s) of Human Development Twenty Years On* Ed. P Vihalemm (Eesti Ajalehed, Tallinn) pp 22–30

Paavola J, Gouldson A, Kluvánková-Oravská T, 2009, "Interplay of actors, scales, frameworks and regimes in the governance of biodiversity" *Environmental Policy and Governance* 19(3) 148–158

Peltzman S, 1976, "Toward a more general theory of regulation" *Journal of Law and Economics* 19 211–240

Pettai V, Veebel V, 2005, "Navigating between policy and populace: Estonia, its accession referendum and the EU convention" *Politique Européenne* 1(15) 113–135

- Poom A, Ahas R, Orru K, 2014, "The impact of residential location and settlement hierarchy on ecological footprint" *Environment and Planning A* 46 2369–2384
- Raik K, 2002, "Bureaucratization or strengthening of the political? Estonian institutions and integration into the EU" *Cooperation and Conflict* 37 137–156
- Sadurski W, 2006, "Introduction. The law and institutions of new member states in year one", in *Après Enlargement: Legal and Political Responses in Central and Eastern Europe* Eds W Sadurski, J Ziller, K Zurek (European University Institute, Florence) pp 3–18
- Schimmelfennig F, Sedelmeier U, 2005, "The politics of EU enlargement: theoretical and comparative perspectives", in *The Politics of EU Enlargement: Theoretical Approaches* Eds F Schimmelfennig, U Sedelmeier (Routledge, London) pp 3–32
- Sedelmeier U, 2008, "After conditionality: post-accession compliance with EU law in East Central Europe" *Journal of European Public Policy* 15 806–825
- Sedelmeier U, 2011, "Europeanisation in new member and candidate countries" *Living Reviews in European Governance* 6(1), <http://www.livingreviews.org/lreg-2011-1>
- Sissenich B, 2010, "Weak states, weak societies: Europe's East–West gap" *Acta Politica* 45 11–40
- Sunstein C, 2004 *Risk and Reason: Safety, Law, and the Environment* (Cambridge University Press, Cambridge)
- Transparency International, 2008, "Transparency in public procurement: survey of Lithuanian companies participating in public procurement", Transparency International Lithuania, Vilnius
- UNECE, 2010a, "Summary report under the Protocol on Water and Health: Estonia", UN Economic Commission for Europe, Geneva
- UNECE, 2010b, "Summary report under the Protocol on Water and Health: Lithuania", UN Economic Commission for Europe, Geneva
- UNEP, 2008, "Water policies and institutions in Europe", UN Environmental Programme, Châtelaine
- Vachudova A, 2005, "Historical institutionalism and the EU's eastward enlargement", State of the EU Conference, University of North Carolina, Princeton, 16 September, <http://www.princeton.edu/~smeunier/Vachudova%20Memo.pdf>
- WHO, 2012 *Global Analysis and Assessment of Sanitation and Drinking-water: The Challenge of Extending and Sustaining Services* World Health Organisation, Geneva
- WHO Europe, 2010 *Small-scale Water Supplies in the pan-European Region: Background, Challenges and Improvements* World Health Organisation Regional Office for Europe, Copenhagen
- Wilson J Q, 1980 *The Politics of Regulation* (Basic Books, New York)
- Yesilada B, Noordijk P, Webster C, 2007, "Changing value systems in the new EU", The EU Studies Association Tenth Biennial International Conference, Montreal, 17–19 May, <http://www.unc.edu/euce/eusa2007/papers/yesilada-b-12a.pdf>