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Transnational learning, policy analytical capacity, and environmental policy convergence: Survey results from Canada

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ABSTRACT

In this article, we seek to clarify further the effects of internationalization on environmental policy convergence by focusing on a country's policy analytical capacity as a mechanism mediating transnational policy learning. We argue that without significant policy analytical capacity, it is unlikely for transnational communication to produce policy learning crucial to this potential mechanism of international environmental policy convergence. Based on a survey of Canadian provincial public servants, we find that while policy analysts in the environmental policy sector have some interaction with those outside of their own jurisdictions, their particular training, employment patterns, and work activities mean they are unlikely to use knowledge drawn from external sources in their decision-making processes.

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1. Introduction

Given increasing economic integration between countries, the crosscutting nature of prominent policy issues, and the rise of resourceful extra-national actors in domestic policy processes, it is not surprising that the content of domestic public policy often has non-domestic origins (McBride and Williams, 2001; Johnson and Mahon, 2005). However, both policy convergence and divergence have been observed in the environmental policy sector (Howlett and Rayner, 2006; Howlett, 2001). As a result, Holzinger et al. (2008a,b) sought to clarify the general effects of internationalization on domestic policy, distinguishing between three explanatory factors: international harmonization, transnational communication, and regulatory competition. Of note in their work are the weak effects of regulatory competition and the strong effects of international harmonization and transnational communication on domestic public policy and environmental policy convergence. In further investigating these strong effects, however, they found the impact of transnational communications to be uneven and to differ by policy component: positively and strongly affecting the range of policy ideas present in policy deliberations, but with a weak and often negative influence on the choice and content of policy instruments. In this article, we seek to clarify further the processes of internationalization in the environmental sector, positing that the extent of policy analytical capacity found in a particular sector is an important, and typically unexamined, mediating variable affecting the degree to which actors engage in, and can learn from, the process of transnational communication.

2. Macro, micro and meso-level factors affecting policy convergence and divergence

The factors which lead countries to adopt similar or dissimilar policies are manifold, ranging from similarities and differences in the economic and social systems within which political institutions operate to variations in the micro-level behaviour of its individual decision makers (Duncan, 2009). In this context, the finding that there are differential effects of transnational communication on domestic policy ideas and policy instruments raises several challenges to those who wish to theorize and understand these processes and variations.

Beginning in the 1960s, studies examining policy convergence tended to focus on the macro level alone, concluding that countries with similar economic, social and demographic structures could be expected to have roughly similar types of public policies (Wilensky, 1975; Dye, 1972). By the 1970s and 1980s however, scholars were confronted with the empirical reality that similar policy problems were not always dealt with in similar ways across different countries. A focus on more micro-level variables – such as the nature of the party system and the behaviour of political decision-makers added this list of factors to those affecting policy convergence and divergence (Von Beyme, 1984; Allison and Halperin, 1972).

Over time, however, scholars have found that theories of policy change based on only micro or macro level variables have

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also failed to capture important domestic and international forces which significantly mediate public policy outcomes. By the late 1980s, new "meso-level" theories emerged to reconcile previous "micro-level" and "macro-level" approaches. These theories highlighted the role played by policy networks, and transnational policy agents involved in them, learning or drawing lessons from each other's experiences (Rose, 1991; Sabatier, 1987: Bennett and Howlett, 1992), Much domestic policy-making came to be understood through a "policy subsystems" lens, in which attention was focussed on the activities of small groups of individuals bound together by their expertise and knowledge in the subject concerned (McCool, 1998). Members of different coalitions within policy subsystems were found to be engaged in a constant learning process which often drew upon the lessons and experiences not only of their own jurisdiction, but also those of other countries. While in some cases the networks themselves originated in international organizations, in most instances there was, at minimum, international contact among members of domestic networks. Given that these networks controlled the range of options discussed in the policy process, scholars contended that countries would arrive at similar policies since they drew upon each others' experiences in both an informal and formal manner in terms of problem definitions, policy proposals and solutions (Dolowitz, 2009).

In the environmental area, Holzinger et al.'s (2008b) study of environmental policies spanning 24 countries lent support to this approach, finding a strong relationship between transnational communication and policy convergence. Changes in domestic public policy in this sector, they argued, could thus often be understood to result from the learning processes occurring between members of separate or overlapping networks operating across national boundaries.

However, exactly how these macro, micro and meso-level variables combine to produce specific patterns of convergence and divergence in particular countries and sectors, as Holzinger et al. (2008a) acknowledged, remains a subject of much empirical research and theoretical speculation. Their work, for example, did not delve into finer gradiations of transnational communications, including what type of communications existed between which actors and at what level, and which, if any, particular structures or issues promoted or served as barriers to such communication. Similar work on learning and policy change also typically featured a paucity of attention being paid to the actual mechanisms of learning; for example, how the policy and knowledge utilization processes of government could either impede or support communications and any learning which might result from them ((Bennett, 1991: 225)).

This gap is disconcerting to those who study policy change in the environmental sector and especially the ability of domestic governments to react in unison to challenges posed at the international or transnational level by large-scale phenomena such as climate change. Governments and, increasingly, nongovernmental actors in most countries are being asked to design and implement effective long-term policy measures to deal with these problems and enhanced trans-national interaction and learning is often suggested as a route to overcoming scale-related problems (Bulkeley, 2005; Young, 1994; Urwin and Jordan, 2008). As Beem (2009: 498) has written, "by engaging in "global public policy networks" and assuming intellectual leadership roles within them, government officials (can) help define, frame, implement, and enforce new conceptualizations of what is good and/or appropriate policy."

But whether governments have the right kinds of structure and resources to effectively learn from international collaborations remains unknown. In most countries empirical data on almost every aspect of the impact of policy analysis and knowledge utilization on government activity and the content of policy outcomes are lacking (Dunn, 2004; Patton and Sawicki, 1993; MacRae and Whittington, 1997) and reliable knowledge of the behaviour and behavioural characteristics of in-house policy analysts in supplying advice to domestic governments, let alone those analysts working outside it, are exceedingly rare (Nelson, 1989; Aberbach and Rockman, 1989; Wollmann, 1989; Thompson and Yessian, 1992; Radin, 1992; Boston et al., 1996; Bushnell, 1991; Binz-Scharf et al., 2008).

Here, we use the results of a large-scale survey of policy analysts in 13 Canadian jurisdictions to investigate the day-to-day work of public policy analysts responsible for environmental policy analysis, including their networking activities, knowledge processes and use of evidence in various stages of policy making, to assess whether domestic policy analysts are contributing to or impeding inter-jurisdictional learning and policy convergence around environmental issues. The focus of the study is on the level of transnational communication of policy analysts responsible for Canadian environmental policy-making and specifically on their policy analytic capacity to affect policy outcomes through this mechanism.¹

3. Policy analytical capacity and policy learning

Policy analytical capacity is an essential precondition for the adoption of transnational policy ideas and instruments; one often ignored or downplayed in the literature on policy convergence. Policy capacity can be defined as:

a loose concept which covers the whole gamut of issues associated with the government's arrangements to review, formulate and implement policies within its jurisdiction. It obviously includes the nature and quality of the resources available for these purposes – whether in the public service or beyond – and the practices and procedures by which these resources are mobilized and used (Fellegi, 1996: 6).

While *policy capacity* can be thought of as extending beyond analysis to include the actual administrative capacity of a government to undertake the day-to-day activities involved in policy implementation (Painter and Pierre, 2005; Peters, 1996), policy *analytical* capacity is a more focused concept related to knowledge acquisition and utilization in policy formulation and decision-making processes (Adams, 2004; Leeuw, 1991; Lynn, 1978; MacRae, 1991; Radaelli, 1995). It refers to the amount of basic research a government can conduct or access, its ability to apply statistical methods, applied research methods, and advanced modelling techniques to this data and employ analytical techniques such as environmental scanning, trends analysis, and forecasting methods in order to gauge broad public opinion and attitudes, as well as those of interest groups and other major policy players, and to anticipate future policy impacts (O'Connor et al.,

¹ This is not to say or assume that bureaucratic policy analysts are always or necessarily the most influential policy actors when it comes to inter-jurisdictional learning, only that the questions remain unanswered, when is domestic public policy affected by transnational communication? Who affects it? And how? However, given the significance of public sector analysts in the policy advice system of government, studies of the activities, behaviour, and impact of policy analysts in government should greatly inform studies of policy convergence and trans-national learning. Through their framing of domestic policy and interaction with foreign governments and non-governmental actors, policy analysts working in public bureaucracies can potentially affect the expectations within other jurisdictions and cultivate a particular policy discourse subsequently informing policy development and implementation elsewhere (Beem, 2009). And, of course, they can also act as transmitters or recipients of this information. As such, they are a good first choice for further investigation and analysis.

2007; Preskill and Boyle, 2008). It also involves the ability to communicate policy-related messages to interested parties and stakeholders and includes "a department's capacity to articulate its medium- and long-term priorities" and integrate information into the decision-making stage of the policy process ((Fellegi, 1996: 19)).²

In order to make decisions based on information, the essence of policy learning, policy actors need to be presented with 'evidence' supporting or refuting specific policy positions and alternatives (Sanderson, 2006, 2002; Nutley et al., 2007). This is typically gathered by analysts who must have the capability or capacity to collect appropriate data and ideas and make them useable in the course of policy-making activities. These policy functions require either a highly trained, and hence expensive, workforce that has far-seeing and future-oriented management and excellent information collection and data processing capacities, as well as the opportunity for employees to strengthen their skills and expertise (O'Connor et al., 2007) or the ability to outsource policy research to similarly qualified personnel in private or semi-public organizations such as universities, think tanks, research institutes and consultancies (Boston, 1994; Anderson, 1996). It also requires sufficient vertical and horizontal coordination between participating organizations to ensure that the research being undertaken is relevant and timely. The existence of "boundary-spanning" links between governmental and non-governmental organizations are also critical (Weible, 2008).

As such, a significant factor affecting the ability of policy-makers to engage at all in policy learning pertains to the level of the "policy analytical capacity" found in their administrative and policy support systems. Organizations both inside and outside of governments require a level of human, financial, network and knowledge resources enabling them to perform the basic tasks which serve as pre-requisites for policy learning of any type (Howlett, 2009; Wellstead and Stedman, 2010). If transnational policy convergence is to be achieved through meso-level networking and learning processes, policy analysts require the ability to collect and aggregate information about other governments and their activities in order to be able to effectively develop medium- and long-term projections, proposals for, and evaluations of, future government activities which take these into account.

Thus whether or not, and to what degree, government and non-governmental policy analysts in a policy analytical community have the capacity to actually fulfil these tasks remains an important and largely unanswered empirical question in the study of policy convergence and transnational policy learning (Turnpenny et al., 2008; Wollmann, 1989). This raises to the fore the question "what do policy analysts actually do in government?" And, in a sphere such as that of environmental policy, are their training and resources appropriate to allow them to meet contemporary governance challenges such as designing effective policies for climate change adaptation which reflect international norms and best practices?

4. Previous studies of policy work in governments

Until recently, only very weak and partial, usually anecdotal, information existed on the situations found in different countries with respect to the activities of policy analysts in general. Thirty-five years ago, for example, Meltsner (1976) observed in the case of the U.S. that analysts undertook a number of roles in the policy-

making process, most of which did not involve neutral information processing and analysis and which could not be said to amount to activities linked to policy learning. Later observers, such as Radin (2000), Shulock (1999) and Gailmard and Patty (2007) observed much the same situation, along with a propensity for politicians to continually re-enact the same failed policies in many problem areas (Schultz, 2007). In the U.K. and Germany, for example, contrary to the picture of carefully recruited analysts trained in policy schools to undertake specific types of microeconomicinspired policy analysis (Weimer and Vining, 1999), investigators such as Page and Jenkins (2005) and Fleischer (2009) have provided some empirical evidence that British and German policymaking typically features a group of "policy process generalists" who rarely, if ever, deal with policy matters in the substantive areas in which they were trained and who have, in fact, very little training in formal policy analysis.³

Studies of policy analysts in federal countries have echoed these results but have traditionally focused almost exclusively at the central level (Voyer, 2007; Prince, 1979; Prince and Chenier, 1980; Hollander and Prince, 1993) despite the fact that sub-national governments in many such countries often control important areas of social, economic, and political life, including that of the environment (Voyer, 2007; Wellstead et al., 2007). Information on analytical activities and the supply of policy advice at this level remains extremely rudimentary, often generated or collected from personal reflections and anecdotes of former analysts and managers, or from a small number of single-government interviews or surveys (McArthur, 2007; Rasmussen, 1999; Singleton, 2001; Hicks and Watson, 2007; Policy Excellence Initiative, 2007).

5. Data and methods

In order to address this gap and generate an assessment of the general and trans-national learning capacity of policy analysts working on environmental policy, this article uses the results of a survey of policy analysts employed by Canadian provincial and territorial civil services carried out in November and December of 2008 using an online commercial software service. Canada is a jurisdiction often argued to be heavily influenced by policies developed in other countries, notably the US (Hoberg, 1991, 1997; Manfredi, 1997; Howlett, 2001) and approximately half of the more than 10,000 bureaucratic policy analysts employed in the country work at the sub-national level in the civil services of the 10 provinces and three territories. It is this level of government which is most intimately involved in day-to-day environmental issues and policy-making (Holland et al., 1996; Hessing et al., 2005).⁴

The survey involved the completion of a 64-item questionnaire by provincial and territorial civil servants situated in each of the 13 Canadian sub-national jurisdictions. Mailing lists of

² The willingness of policy-makers to use the information generated in the way it was intended to be used is not always present, of course, and must be considered separately. However the former remains a pre-condition of the latter. On the "strategic" and "argumentative" versus "evaluative" uses of research and analysis, see Whiteman (1985) and Landry et al. (2003).

³ Similar findings have been made in the cases of the Netherlands, Australia and New Zealand, by Hoppe and Jeliazkova (2006), Weller and Stevens (1998) and Boston et al. (1996), respectively.

⁴ With the possible exception of some major Canadian business associations and corporations (Stritch, 2007), capacity in the non-governmental sector is very limited. This is true of a majority of actors involved in the Canadian labour movement (Jackson and Baldwin, 2007), the voluntary sector (Laforest and Orsini, 2005; Phillips, 2007), as well as the media (Murray, 2007), think tanks (Abelson, 2002, 2007), and political parties (Cross, 2007), most of which have very few if any permanent employees employed to conduct policy analysis of any kind. In many cases, analysis is carried out by consultants rather than paid staff, contributing to the transitory nature of much program design and policy analysis in Canada. However, even less is known about the training and activities of this "invisible public service" (Bakvis, 2000; Perl and White, 2002; Saint-Martin, 1998; Speers, 2007). This portrayal of a generally impoverished and low-capacity policy analytical community pushes the emphasis for the prospects of enhanced evidence-based policy-making back onto Canadian governments and the policy bureaucracy, which potentially have access to the personnel, treasure and organizational resources that would allow them to construct substantial policy analytical capacity.

Table 1Length of time, environmental policy analysts.

Valid	Employed as a professional policy analyst		Employed in present organization		Expected to remain in present position	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
00-01 years	14	7.2	30	15.4	20	10.5
01-05 years	73	37.6	80	41.0	93	48.7
05-09 years	39	20.1	24	12.3	33	17.3
10-14 years	18	9.3	13	6.7	26	13.6
15-19 years	22	11.3	20	10.3	8	4.2
20 or more	28	14.4	28	14.4	11	5.8
Total	194	100.0	195	100.0	191	100.0

analysts for the survey were compiled wherever possible from publicly available sources such as online government telephone directories, using keyword searches for terms such as "policy analyst" appearing in job titles or descriptions. In some cases additional names were added to lists from hard-copy sources such as government organization manuals. In other cases lists or additional names were provided by provincial public service commissions, who also checked initial lists for completeness and accuracy. From 2846 valid email addresses in seven jurisdictions, 1258 valid survey completions were gathered for a total response rate of 44.2%. Data were divided into five topic areas: Demographic Characteristics and Job Experience; Education and Training; Day-to-Day Duties; and Techniques and Data Employed.

The data collected from the survey allowed the first profile of provincial and territorial policy analysts to be constructed and within that profile, the profiles of particular policy sectors such as the environment. Here we focus on the experience of the over 200 surveyed policy analysts who indicated they work predominantly on environmental policy issues. Their activities are evaluated against those of analysts who focussed on five other policy sectors (health, social welfare, education, industry/trade, and finance) in order to assess both the absolute and relative analytical capacities of environmental policy analysts and, the prospects for interjurisdictional learning to occur in this sector.

6. Results

6.1. Who are provincial environmental policy analysts?

Basic demographic data revealed that provincial policy analysts in all sectors are predominantly (58.4%) female, and fairly young, 70% of whom are under 50 years of age. Environmental policy analysts are even younger, nearly half (47.9%) of whom are under 40 years of age. Provincial environmental policy analysts also tend to have come to their present career path and positions fairly recently. Over 40% of provincial analysts had been involved in professional policy analytical activities for five years or less (Table 1). Over 65% had also been in their present organizations for less than five years, including 15% for less than one year. This contrasts sharply with the federal situation described by Wellstead et al.

(2007) where a majority of analysts are male and a sizable number have been in their positions for over 20 years.

These analysts also do not expect to stay very long in their current positions, with more than half expecting to stay less than five additional years. In addition to being young, inexperienced, and mobile, provincial and territorial environmental policy analysts also possess diverse work experience and high academic credentials. They are well-educated as 54.9% had some graduate or professional education and 89.2% hold a university degree. Five degree fields – environmental studies, natural sciences, geography, natural resource management, and planning – together account for 61% of degrees held by environmental policy analysts. Another five degrees boasting a policy, research, or management orientation (political science, public administration, economics, public policy, and business management) together accounted for an additional 20.9% of degrees.

6.2. Policy analytical capacity in practice

How do these analysts shape up with regard to environmental policy analytical capacity? In this section, we seek to assess the extent to which provincial and territorial environmental policy analysts actually engage in evidence-based policymaking, in order to help assess their capacity for inter-jurisdictional learning.

As Table 2 indicates, environmental policy analysts are more likely than their non-environmental counterparts to deal with issues that necessitate long term thinking, require significant technical expertise and interorganizational coordination, operate at a national or international level, and lack clear, simple solutions. Thus, prima facie, they require greater capacity to analyze, than many of their counterparts in other sectors.

In the environmental sector, 48% of analysts surveyed reported high departmental policy capacity. While this may speak favourably of capacity to address environmental issues, there are several caveats worth mentioning.

First, it is not clear if environmental policy analysts' diverse work backgrounds or high academic credentials have adequately prepared them to utilize evidence from inter-organizational communication and incorporate it into decision-making processes. For one, these environmental policy analysts have had little training in formal policy analysis, in terms of both post-secondary

Table 2Nature of issues dealt with on a weekly basis.

	Percentage of respondents who weekly deal with issues					
	for which data is not immediately available	that require coordination across regions	that require coordination with other levels of government	that lack a single, clear, simple solution		
Environment	54.1	44.0	33.7	66.7	69.0	
Health	50.2	32.5	16.6	63.3	41.2	
Social development	55.8	40.0	24.9	63.0	52.1	
Education	45.8	22.3	17.6	47.1	37.4	
Industry and trade	58.3	27.2	29.0	62.6	59.9	
Finance	49.5	17.3	20.9	59.2	61.9	
Total	52.6	32.5	24.1	61.6	61.9	

Table 5

Table 3 Environmental policy analysts, policy training experience.

Valid	Completion of post-sec- ondary policy analysis course		Completion of ployment train	
	Frequency	Percent	Frequency	Percent
No	124	64.9	100	52.4
Yes	67	35.1	91	47.6
Total	191	100.0	191	100.0

Table 4Department policy capacity, by sector.

Sector	Policy-making capacity rating of one's department or agency, by % of respondents		
	Low	Moderate	High
Environment	21.4	31.0	47.7
Social welfare	19.2	34.9	45.9
Health	25.3	45.2	29.4
Education	19.3	40.4	40.3
Trade	17.5	43.8	36.9
Finance	11.5	37.5	51.1
Total	19.8	37.9	42.2

education coursework and post-employment training. As Table 3 shows, 65% of analysts have never completed a post-secondary course specifically dealing with formal policy analysis or evaluation and more than half of provincial analysts (52%) have never completed any formal professional training on these subjects.

Second, the survey results present a picture of a very "lumpy" or uneven distribution of policy analytical capacity by issue area, supporting previous anecdotal evidence (Bakvis, 2000; Dobuzinskis et al., 2007). Policy capacity, as perceived by provincial policy analysts varies markedly by sector, with high policy capacity being (self-) reported by only 29.4% of analysts in the health sector, for example, compared with 51.1% of analysts in the finance sector (see Table 4).

Third, the spread of responses on the question suggest strong variability within the environmental sector itself. While environmental analysts are the second most likely to cite strong departmental capacity, they are also the second most likely to cite weak departmental capacity (21%) as well. As well, of course, in absolute terms, more than half of environmental policy analysts do not rate their department's capacity to address policy issues positively. Also, when policy capacity is examined at the governmental rather than departmental level and over time, environmental analysts report they no longer enjoy greater organizational capacity more frequently than their peers working in other sectors. In Table 5, we find an overall diminished capacity to address environmental issues compared with other policy issues. Analysts in the environmental sector are most likely to state that the policy capacity of the government has been declining, followed by analysts in trade, education, and social welfare, though the differences across these sectors is not pronounced.

Table 6 Scope of policy issues.

Government policy capacity by sector.

	Responses to the statement that "there seems to be less governmental capacity to analyze policy options than there used to be"		
Sector	Percent who disagree	Percent who agree	
Environment	15.6	48.2	
Social welfare	21.1	43.2	
Health	20.5	37.7	
Education	23.4	43.3	
Trade	22.2	47.8	
Finance	28.3	33.3	
Average	21.0	43.0	

Finally, across all sectors, immediate, urgent, and short-term work dominate the day-to-day and week-to-week work agenda of policy analysts.

As Table 6 shows, just over half of environmental policy analysts report working on a weekly basis on issues that are ongoing for more than a year, about the same proportion as report working on a weekly basis on long, medium, and short-term issues. However, 62 percent also report working on a weekly basis on issues and problems that demand immediate attention (i.e., "firefighting"). Environmental policy analysts are less likely to deal with urgent issues than counterparts in trade (73%), education (69%), and welfare sectors (68%); nonetheless, these types of issues remain the most common issues to consume their day-to-day work. Given that environmental policy issues lack simple solutions and require greater coordination and technical knowledge than other policy issues, the degree to which 'policy firefighting' comprises the principal policy activity of environmental policy analysts is problematic.

6.3. International and trans-national linkages

With respect to transnational influences, 54% of analysts in the environmental sector work on a weekly basis on issues for which data is also not immediately available. This suggests that the demand for additional communication and inter-jurisdictional learning should be high. However, the supply of external knowledge and expertise to meet this enhanced demand is generally low, if we take policy analysts' networking behaviour as a cue.

Table 7 shows that while environmental policy analysts are most likely to engage in networking. However Table 8 shows that the bulk of the analysts' networks is made up of staff from other ministries within their own provincial government. Foreign governments – a potentially valuable source of transnational learning – are a rare contact of provincial environmental policy analysts, and provincial analysts generally. Only 6.6% of analysts in the environmental sector report being contacted by foreign governments at least once over a year, significantly less than contact ministries within their government, the federal government, local government and other provincial governments.

	% of respondents who deal with type of issue weekly					
	Immediate and urgent	Short-term	Medium-term	Long-term	On-going	
Environment	62.1	53.8	47.7	51.0	51.9	
Welfare	68.2	62.3	49.1	41.3	39.4	
Health	66	57.5	57.0	54.4	48.0	
Education	68.5	63.0	42.5	42.6	38.0	
Trade	73.3	61.1	47.7	50.7	47.0	
Finance	60.5	60.4	41.7	36.4	30.2	
Total	66.5	59.4	48.1	46.6	43.3	

Table 7 Prevalence of networks.

	Respondents who agree that their policy-related work increasingly involves networks of people	
	N	Percent
Environment	135	71.5
Social welfare	121	57.9
Health	95	67.4
Education	61	57.5
Industry and trade	85	67.0
Finance	53	58.9
Total	550	63.8

 Table 8

 Contact with other government organizations.

	% of respondent who report being contacted at least once a year		
	Environmental	Non-environmental	
	policy analysts	policy analysts	
Ministries within your provincial government	85.0	79.2	
Federal government	44.6	31.3	
Local governments	28.9	18.1	
Other provincial or territorial governments in Canada	22.4	25.7	
International governments	6.6	2.2	

The prospect for inter-governmental learning at the national level on the part of provincial environmental policy analysts, however, is also extremely limited as Table 8 also reveals less than a quarter of respondents report being contacted on at least one occasion over a single year by other provincial governments and less than half report having being contacted as least once over a year by the federal government.

It is worth noting that compared with analysts in other sectors, environmental policy analysts do interact more with foreign and some domestic governments in the course of their work. However, we can see from Table 9 that they are also less likely than analysts in other sectors to actually utilize information from other governments as well as academia and think tanks in the course of their work as well.

This finding is important because the intensity of contact alone tells us very little about the nature and utility of the contact. Table 10 allows us to better grasp whether analysts utilize information, including information developed through networks, in the course of their policy work. Here we find that the primary sources of evidence they use in their day-to-day work are professional advice, government platforms, and personal experience. This

Table 9Types of evidence used in policy work, by sector.

	Percent of respondents who use frequently use type of evidence	
	Environmental policy analysts	Non- environmental policy analysts
Professional advice	47.1	41.8
Government platforms	43.7	25.6
Personal experience	44.8	41.5
Scientific findings	47.7	34.8
Information from other governments	45.2	49.3
Consultants reports	38.8	39.1
Academic research	38.5	45.7
Industry- provided information	33.1	35.4
Non-governmental organization- provided information	26.3	31.6
Budget and cost data	23.9	33.8
Personal opinion	23.9	18.1
Evaluation results	19.4	23.9
Think-tank findings Survey data	15.7	23.6

would indicate either that the nature of communication with network members is not predominantly information gathering or that information, if gathered, fails to be subsequently incorporated as evidence into policy decisions.

Both realities are supported by Table 10, which demonstrates a lack of support for and prevalence of, evidence-informed policy research and development in the environmental sector.

Environment policy analysts are the least likely to use an evidence-informed method or feel that evidence is used to inform decision-making processes. The difference across sectors is significant. Sixty percent of analysts in the health sector feel evidence is used to inform decisions, a sentiment shared by only 33% of analysts in the environmental sector. Further, only 33% of analysts in the environmental sector report frequent use of evidence-based methods, compared with 60% of analysts in health, 52% of analysts in social welfare and 51% of analysts in education. Only 10% of environment policy analysts are routinely provided with the appropriate resources to implement evidence-based methods, a figure that is almost three times less than peers in the health and education sectors (see Table 10).

In sum, though analysts in the environmental sector would clearly benefit from inter-jurisdictional communication given the types of policy issues they deal with, their lack of information and the high demands on their sector, they are also the least likely of analysts across all sectors to first, seek out evidence from other jurisdictions and second, utilize it in decision making processes.

Table 10Use of evidence informed methods (EIM), by sector.

	Percent of respondents who "often" or "always" feel					
	evidence informs decision-making	they can access information and data relevant to their policy work	encouraged by managers to use EIM in policy work	required to use EIM in policy work	provided with support and resources to use EIMs in policy work	
Environment	33.0	32.6	28.0	33.0	10.2	
Welfare	52.4	31.7	48.3	52.4	22.9	
Health	60.0	48.2	54.0	60.0	31.7	
Education	51.4	44.9	49.5	51.4	30.7	
Trade	42.9	37.7	37.8	42.9	16.8	
Finance	43.2	38.7	36.3	43.2	25.0	

7. Conclusion

One of our arguments here is that it cannot simply be assumed that the existence of new evidence or information translates into policy development (Bennett, 1991). If transnational communication is a mechanism for the transformation of information, one must ask if evidence is actually being utilised so that insights being learned from others subsequently inform policy decisions? Consideration here must be given to the work of professional policy workers in government, their behaviour and their policy analytic capacity; that is, the extent to which governments can perform the tasks associated with managing the policy process in order to learn from the experiences of both themselves and others.

The profile of Canadian environmental policy analysts developed here allows us to better assess the prospects of governments to engage in the kinds of inter-jurisdictional learning often alleged to lie at the root of policy convergence and, arguably, to have become more important in order to deal with large-scale problems such as deforestation, species extinction or global warming. The article elaborated on the kinds of policy analytic activities and networking behaviours found among analysts operating in the environmental policy sector through the examination of survey evidence from over 200 analysts working on environmental issues within Canada.

We found these analysts to be highly educated, relatively young and mobile but without a great deal of formal training in policy analysis and who work on a relatively small number of issue areas, often on a "fire-fighting" basis. Their short-term orientation, relative inexperience, high levels of job mobility, and lack of training in formal policy analytical techniques has significant implications for the assessment of their policy analytical capacity and hence for policy learning. Our main finding in the area of transnational networking and learning, however, is that although environmental policy analysts engage in some forms of communication with non-governmental actors and other governments in the course of their work, they do so infrequently and fail to routinely use information from these sources in policy development and formulation.

These findings suggest that, at least in Canada, the potential for trans-national learning to lead to policy convergence is limited, or at best, indirect and weak. That is, the policy advisors closest to the ground lack the kinds of direct linkages envisioned by proponents of the trans-national learning-convergence hypothesis, and also lack the capacity to engage in this kind of behaviour in a less direct fashion. This suggests, following Bennett (1991), that some other process than trans-national elite networking, such as emulation (Howlett, 2001) or 'treaty-based harmonization' (Holzinger et al., 2008b), lies at the basis of any convergence found in Canadian environmental policies. It also suggests that enhancing the prospects for trans-national learning to help overcome scalerelated problems in environmental policy-making will require significant alterations both in existing analytical behaviour and routines, and a significant augmentation of existing policy analytical capacities.5

Transnational learning is a function of existing policy capacity interacting with both the kinds of policy process activities actors are involved in, as well as the substance of the issues with which they are dealing. Since network activities, decision-making structures and analytical behaviour vary significantly across countries and, within them, across policy stages and policy sectors (Baumgartner and Iones, 1993: Hogwood and Peters, 1985) it should be expected that the interaction of macro-, meso- and micro-level factors will lead to a more complex pattern of policy responses than often found in the existing literature on policy convergence through trans-national communication. The situation in other jurisdictions will no doubt vary from that of Canada. But, until further large-scale empirical work has been completed into the actual policy analytical behaviour and capacities in those countries, it should not be assumed a priori that other governments will have the capacity required to engage in the kinds of learning activities required to promote policy convergence through this mechanism.

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⁵ Efforts – such as the Policy Excellence Initiative in Nova Scotia, the Knowledge and Information Services initiative in British Columbia, the Policy Innovation and Leadership project in Ontario, as well as cabinet-level initiatives in Yukon, Manitoba, Newfoundland and Labrador, and Alberta – are underway in many Canadian jurisdictions to systematically grapple with the short term focus of policy and enhance policy analytical capacity (Ontario Executive Research Group, 1999; Hicks and Watson, 2007; Manitoba, Singleton, 2001; Nova Scotia, Policy Excellent Initiative, 2007). This study cannot comment on the success of these initiatives, many of which have only recently been established; nonetheless, survey results presented here demonstrate the importance of action to invigorate policy capacity given the limited application of formal analytical methods, minor use of external (non-governmental) sources of evidence and lack of evidence based decision-making in provincial policy development around environmental issues.

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