



# Assessment of transboundary environmental effects in the Pearl River Delta Region: Is there a role for strategic environmental assessment?

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## ABSTRACT

China's EIA Law does not require transboundary proposals to be assessed, despite recognition of this globally, for example in the Espoo Convention and Kiev Protocol, and in the European EIA and SEA Directives. In a transboundary context assessment *within* a state is unusual, as regulating these effects is primarily about the relationship *between* states. However where a state has more than one legal system such as in the Pearl River Delta (PRD) Region of southern China, transboundary effects should also be addressed. Yet despite the geographical connections between Guangdong Province in mainland China (where the EIA Law applies) and the Hong Kong and Macau Special Administrative Regions (which have their own provisions, neither of which requires transboundary assessments), EIA and SEA are carried out separately. Coordinated or joint approaches to transboundary assessment are generally absent, with the legal autonomy of Hong Kong and Macau a major constraint. As a result institutional responses at the policy level have developed. The article considers global experiences with regulating transboundary EIA and SEA, and analyses potential application to land use, transport and air and water planning in the PRD Region. If applied, benefits may include prevention or mitigation of cumulative effects, broader public participation, and improvements to environmental governance. The PRD Region experience may encourage China to conduct and coordinate EIA and SEA processes with neighbouring states, which has been non-existent or extremely limited to date.

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## 1. Introduction

This article examines the potential application of transboundary strategic environmental assessment (SEA) in the Pearl River Delta (PRD) Region of southern China. It is an exploratory study based on interdisciplinary literatures and recent developments with law and policy that have seen an expansion of institutional measures designed to address environmental issues in the PRD. The proliferation of cross boundary major infrastructure development in the absence of an assessed strategic framework has provided the motivation, together with emphasis placed on difficulties regulating cross border environmental problems in the PRD (e.g. Lee, 2002), and underlying contextual constraints (e.g. Bina, 2008) upon which this article attempts to build. It is also informed by the recent focus given to transboundary dimensions of environmental impact assessment (EIA) and SEA globally which is proving to be a useful tool for this purpose. This is further seen to be influenced greatly by context, which if not supportive may undermine effectiveness (Kersten, 2009).

While referring to experience with transboundary EIA (TEIA) globally for comparisons and differences, (which is primarily limited to the project level), the key structural impediments to coordinated or joint EIA and SEA processes in the PRD Region (which derive from the

reality of constitutional law) are emphasized. Comparisons with the experiences of other jurisdictions are tentative because the socio-economic and political-legal differences mean that there are inevitably limitations to the application of lessons from elsewhere. There are, however, reasons to be positive about the role of TEIA and SEA in the future development of the PRD Region. This is for the very reason that cooperation between the jurisdictions has been policy rather than law based which is consistent with much SEA experience to date, especially concerning application to policy and legislative proposals.

The article will begin by defining TEIA and SEA, and consider briefly international experience and its relevance to the Region. It will then explain the legal relationships between the jurisdictions and their implications, outline current jurisdiction specific regulation of EIA and SEA (primarily in Hong Kong and mainland China where the law is most developed), before providing an overview of the development situation in the PRD Region, giving examples of economic development projects and their environmental effects which have been separately assessed under the relevant law of each of the jurisdictions. It will then give some examples of strategic documents which influence this development activity but which have not to date been subject to assessment. In a discussion section, constraints and opportunities for TEIA and SEA in the PRD Region are examined. The relevance of TEIA and SEA in the relationship between China and other neighboring states will also be briefly considered, and the political context of operation emphasized in the conclusion.

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## 2. Transboundary EIA and SEA

### 2.1. Definition and global experience

TEIA is the evaluation of environmental effects from project proposals that originate in one jurisdiction and affect others.<sup>1</sup> It is of particular interest to lawyers because it concerns the interaction between legal systems, whether they are of the same or of different types (Marsden, 2008, pp. 11–12; Marsden, 2009a). It is therefore not surprising that recent research efforts in this area have been dominated by legal academics (Bastmeijer and Koivurova, 2008; special issue of *Impact Assessment and Project Appraisal* 2008 edited by Schrage and Bonvoisin). The relevant law is usually public international law, which concerns the relationship between states. International experience with transboundary assessments have mainly been limited to the project EIA level (Schrage and Bonvoisin, 2008, p. 234). Schrage and Bonvoisin identify several procedural matters (p. 235) which are relevant to most systems of TEIA (and could apply to transboundary SEA also). These include: notification by the 'state of origin' to the 'affected state' of the planned activity and likely significant effects (or the opportunity of the affected state to request such a procedure), response by the affected state as to whether it wishes to be involved in the EIA procedure, sharing of information, preparation of documentation and distribution in the affected state, consultation between authorities and participation of the public in both states, decision making taking into account documentation and comments, sharing of information as to the decision and monitoring and post project analysis.

While global measures for TEIA focus primarily on project proposals, some attention has been placed upon the effects from policies, plans and programs (PPPs) that may originate in one jurisdiction and impact upon another, or indeed that may physically cross a border. Transboundary SEA therefore applies similar procedures to strategic proposals. It has been underexplored in the literature to date, which is surprising given that many plans and programs are prepared for border areas including water bodies that cross them, particularly international rivers (Cassar and Bruch, 2003; Bruch et al., 2008; Koyano, 2008). There have only been a handful of articles published in this area, which is likely to change in the near future as advantages of this approach are seen from the application of new regulatory requirements in Europe especially (Albrecht, 2008; de Mulder, 2008).

SEA has been recommended for transboundary regions by several recent general SEA studies (International Association for Impact Assessment, 2002; Regional Environmental Center/United Nations Development Program, 2003; United Nations Economic Commission for Europe (UNECE) and Regional Environmental Center, 2007, p. 14). Further ratification of the UNECE Espoo Convention and its SEA Protocol will increase interest (below), and it is recommended that more pilot studies of existing and suggested project and strategic proposals be carried out to consider domestic institutional and other constraints,<sup>2</sup> before examining transboundary constraints. In addition to these general recommendations for transboundary SEA, the following requirements and provisions exist which are illustrative of the range of assessments that have been carried out to date. It is not the purpose of this article to explain the provisions of each, which is ably done in the cited literature.

#### 2.1.1. Europe

In Europe, the following regulatory requirements for TEIA and SEA exist, with specific application in various parts of Europe, and which

have been analyzed in the cited literature: the Nordic Environmental Protection Convention 1974 (Koivurova, 2008a,b); Espoo Convention on EIA in a Transboundary Context 1991 and Kiev SEA Protocol 2003 (Schrage, 2008; Bonvoisin, in press; UNECE/REC, 2007, pp. 97–99); EIA Directive 1985/1995 and SEA Directive 2001, which were the basic reference for the Espoo Convention and SEA Protocol (Bonvoisin, in press); Trans-European Networks (European Commission, 2005, 2007); and Kiev Framework Convention on the Protection and Sustainable Development of the Carpathians 2003 (Bonvoisin, in press).

The Espoo Convention and Kiev Protocol are the most significant of these provisions and, as with others, deal primarily with activities in one state that impact upon another state, not with proposals which will physically cross borders. Despite this, the Convention and related provisions are applied to both types (Schrage and Bonvoisin, 2008, p. 237). The Convention also contains provisions for bilateral and multilateral agreements to be entered into between state parties to provide more detail on the practical arrangements; guidance on the Convention has been prepared on this and other matters. The exchange of good practices and case studies in relation to TEIA under the Espoo Convention further to implementation reviews are a useful basis for considering the role that SEA can also play, which as set out in Article 10 of the Kiev Protocol apply similar procedures to plans and programs as the Espoo Convention does to projects.

The European Community EIA and SEA Directives implement most aspects of the Espoo Convention (and SEA Protocol, not in force), with both allowing an affected country to request the establishment of a transboundary procedure (Marsden, 2008, pp. 75–80, 185, 188, 222–223). The Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters 1998 has also resulted in stronger procedures for these aspects in both Directives and others (Marsden, 2008, pp. 80–86, 190–195, 221, 223), and challenges and problems concerning transboundary consultation on land use planning in border regions has been considered in relation to European member states implementing the Espoo and Aarhus Conventions through the EIA and SEA Directives (Albrecht, 2008). At a European member state level, in Belgium requirements for TEIA and SEA apply EC law in a domestic context, which suggests transboundary assessments can apply outside the framework of state relationships (de Mulder, 2008). A particularly notable example of transboundary EIA and SEA is reported concerning the experience of the Scheldt Estuary bordering Belgium and the Netherlands (Bonvoisin, in press; de Mulder, 2008, pp. 285–287).

#### 2.1.2. Other examples

In North America examples of regulatory provisions and proposals include the North American Free Trade Agreement (NAFTA) Side Agreement on Environmental Cooperation 1993 (Craik, 2008a; Garver and Podhora, 2008); the US-Canada Air Quality Agreement 1991 (Craik, 2008a, pp. 103–105); the Boundary Waters Treaty 1909 (Craik, 2008a, pp. 106–108; Bonvoisin, in press); water diversion projects in the Missouri River Basin between Canada and the United States (which were subject to a legal challenge) (Phare, 2005); and the Porcupine Caribou Agreement 1987, a bilateral agreement between Canada and the United States dealing with a migratory species that is more broadly regulated under the Convention on Migratory Species (Craik, 2008a, pp. 105–106). Principles for transboundary EIA in the North American context were also adopted in 1995 (Garver and Podhora, 2008, p. 256) which could also be examined for their application to the PRD Region.

In Asia examples are found concerning the Protection of Caspian Sea (Tsutsumi and Robinson, 2008); the Nile Basin Initiative (Dalal-Clayton and Sadler, 2005, pp. 332–336); the Agreement on the Cooperation for Sustainable Development of the Mekong River Basin (Horberry, 2004); and regarding the Bay of Bengal (Hassan, 2008). All of these agreements and initiatives focus clearly on the effects from project proposals. There are also requirements under multilateral environmental agreements,

<sup>1</sup> See generally: <http://www.unece.org/env/eia/guidance/practical.html>.

<sup>2</sup> Research is currently being carried out by the Department of Geography and Resource Management, The Chinese University of Hong Kong into this. See: [http://www.grm.cuhk.edu.hk/en/research/5\\_researchproj0103.htm](http://www.grm.cuhk.edu.hk/en/research/5_researchproj0103.htm).

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