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Environmental Sociology and the Legal Calculation of Uncertainty and Precaution

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Abstract

In the face of perceived environmental threats, especially from climate change, environmental sociology has become increasingly focused on uncertainty and precaution. Various contributors to the sociological literature (for example, Furedi, Ewald, and Shaw) offer useful insights into the way uncertainty and precaution are being formulated in regard to environmental risk, particularly the risk of climate change. Their insights can be complemented by a different set of insights, into the nitty-gritty of the complex legal mechanisms being forged in common-law countries to guide institutional and individual actors as to how the law calculates risk, particularly by formulating a technical legal device, 'the precautionary principle'. This paper, in addressing a small element of this lacuna in the impressive sociological literature about environmental risks, focuses on legal deliberations of the risks of climate change in one region of Australia, the Gippsland coast in Victoria.

Keywords: risk, uncertainty, precautionary principle, legal calculation, climate change

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Introduction

In the face of perceived environmental threats, especially from climate change, environmental sociology has become increasingly focused on uncertainty and precaution.

Frank Furedi, for example, argues that scepticism about the capacity of science and technology to adequately identify and manage environmental risks has encouraged the dramatisation of uncertainty. As a result, probabilistic risk management of the environment 'competes with and often gives way to possiblistic-driven worst case policies', energised largely by 'intuition' rather than reason-based calculation (Furedi 2009: 205-6).

Francois Ewald makes a similar claim. In the face of a 'disturbed relationship with science', the certainty founded on risk calculation is being displaced by an assumption of uncertainty and the necessity for precaution. Echoing Ulrich Beck's (1982) theoristion of the rise of the 'risk society' and politics, Ewald makes the claim that a new 'economy of rights and duties' is emerging wherein responsibility reflects precaution (Ewald 2002: 247).

For his part, Chris Shaw argues that high-stakes environmental uncertainty, such as that associated with climate change, is both discursively constructed and limited. Through an analysis of the widely held consensus that 2° is the 'dangerous limit' of global warming, Shaw (2010: 106) argues that the response of policy makers to uncertainty is to try to

emulate rather than displace risk calculation. But in adopting this strategy, Shaw contends (2010: 117), this 'dangerous limit' narrative of the policy makers resists the more complex and indeterminate aspects of the uncertainty of climate change, becoming 'a "convenient trope", a "necessarily simple abstraction", which turns the problem into "a viable object of decision making"'.

These are valuable sociological insights into the way uncertainty and precaution are being formulated in regard to environmental risk, particularly the risk of climate change. They can be complemented by a different set of insights, into the nitty-gritty of the complex legal mechanisms being forged in common-law countries to guide institutional and individual actors as to how the law calculates risk, particularly through the formulation of a technical legal device, 'the precautionary principle'. This paper, in addressing a small element of this lacuna in the sociological debate about environmental risks, focuses on legal deliberations of the risks of climate change in one region of Australia, the Gippsland coast in Victoria.

Climate change adaptation in coastal areas has become a matter of significant policy interest at all levels of government. There has been a push to develop coordinated strategies and alliances to manage adaptation[i], but also a consensus that there is no one-size-fits-all adaptation strategy available. Rather, this policy strategy, emphasises that adaptation needs to be tailored to the specific risks presented by local social and environmental conditions. As Jan McDonald (2010: 11) observes, 'law and legal institutions constitute a critical component of society's adaptive capacity'. The law

operates at both a general and particular level to shape climate change adaptation. It establishes general rules, such as those which direct decision makers to evaluate climate change effects as part of a larger environmental assessment, and through litigation the law defines the local and particular application of those general rules. In this way, the law is a prime means by which the risks associated with climate change are evaluated. Indeed, as Nicholas de Sadeleer (2002: 3) puts it, risk evaluation is the 'activating concept of environmental law'; it is a pivotal technique in the legal calculation and delineation of environmental responsibilities and rights.

In this spirit, the present paper focuses on recent litigation in the Victorian Civil and Administrative Tribunal (VCAT)[ii] relating to planning and development in Gippsland which has both highlighted and generated legal uncertainty as to how adaptation strategies and regulations will impact on the rights and obligations of councils, land owners, developers and communities. The litigation has been an impetus to action on climate change adaptation, not only because it has effectively prohibited development in certain coastal areas vulnerable to the effects of climate change, but also because it has drawn political and public attention to the apparent seriousness of the risk of coastal climate change damage.

The law, risk and uncertainty in the *Gippsland Coastal Board* case

Land use planning has become one of the most visible ways by which the law has been used to introduce climate change adaptation in coastal areas (McDonald 2010: 14). However, prior to the 2008 decision of Victorian Civil and Administrative Tribunal

(VCAT) in *Gippsland Coastal Board v South Gippsland Shire Council (No. 2)*[iii] the possible adverse impact of climate change was not a matter which planning law in Victoria took into consideration at all. The Gippsland VCAT cases are among the first planning cases which were required to consider the legal obligations that attach to predicted adverse climate change impacts. The decisions forced a departure from the assumed planning status quo. They were confronting because they directed attention to 'relevance of climate change to planning decision making process', which VCAT notes is in 'an evolutionary phase'[iv].

In the *Gippsland Coastal Board* case VCAT was asked to review planning approval given by the South Gippsland Shire Council for the building of six dwellings on low-lying coastal agricultural land. The Gippsland Coastal Board challenged the approval, arguing on the basis of a 2006 CSIRO climate change study of the Gippsland coast that the proposed properties would be at risk from rising sea levels and coastal inundation caused by climate change. The interests and views heard by the Tribunal were limited to those of the applicant, the objector and any experts that each party called upon. No individuals who had alternate or conflicting interests took any part in the proceedings. Within the limited parameters of the matters considered by VCAT, the expert CSIRO prediction of adverse climate change effects took on a special significance in the case. It allowed the Tribunal to link its reasoning to a wider climate change discourse beyond the evidence elicited in the case. VCAT expressly stated that it did not adopt the CSIRO's findings, because they had not been subject to any 'rigorous examination in the proceedings'. The Tribunal nevertheless found the findings were in line with,

> a general consensus that some level of climate change will result in extreme weather conditions beyond the historical record that planners and others rely on in assessing future potential impacts. It is, in our view no longer sufficient to rely only on what has gone before to assess what may happen again in the context of coastal processes, sea levels or for that matter inundation from coastal or inland storm events (para 40).

The untested CSIRO evidence in combination with this 'general consensus' persuaded VCAT that the predicted adverse effects of climate change were so 'significant' (in terms of section 60(1)(e) of the *Planning and Environment Act* 1987), as to impose an obligation on the Tribunal to consider the predicted 'environmental effect' of climate change on the proposed 'use or development' of the coastal land. Ultimately, from VCAT's perspective, the CSIRO's scientific evidence framed an understanding that rendered the uncertainty associated with the potential impact of climate change less significant than the confident consensus that there will inevitably be adverse impacts in coastal areas.

The *Gippsland Coastal Board* case was notable because VCAT determined that it was obliged to act outside the established parameters of planning law and policy to avoid harm, the Tribunal justified its decision by reference to the fact that:

> The relevance of climate change to the planning decision making process is still in an evolutionary phase. Each case concerning possible impacts of climate change will turn on its own facts and circumstances (para 47).

The 'facts and circumstances' of the *Gippsland Coastal Board* case led the Tribunal to decide it was necessary to adopt a precautionary approach and overturn the Shire's planning approval. The application of the precautionary principle was a device, which simultaneously recognised environmental and legal uncertainty while transforming each into matters certain enough to invoke legal responsibility and enable a decision.

Legal and policy implications of taking a precautionary approach

The *Gippsland Coastal Board* decision directly led to the introduction of a new policy framework in Victoria[v], mandating consideration of climate change impact in coastal areas. The new coastal policy regime entrenches the precautionary approach, which in the context of available scientific predictions of sea level rise and the extent of coastal inundation, places significant limits on small-scale development in established coastal settlements as well as larger subdivisions on the coast outside existing settlement (Allens Arthur Robinson 2010).

In a subsequent 2009 case, *Myers v South Gippsland Shire Council*[vi], VCAT summed up the current legal and policy position:

> Combined, the breadth of documents addressing climate change that are now available as background information or policies, identify that one thing is *certain*, the issue of climate change and the impact on coastal communities is an issue that can no longer be ignored. As decision makers we can no longer leave the issue for the next generation to sort out. … [48] *Common sense* tells us that, following this approach, the Tribunal should not approve coastal developments that are likely to be unduly threatened by future flooding and/or coastal inundation, creating a mess to be dealt with by future generations (emphasis added).

Despite the claimed 'common sense' of what now seems to be an entrenched legal and policy position, VCAT's decision in the *Gippsland Coastal Board* case was not inevitable or unproblematic. As already noted there was no available policy or regulation on climate change adaptation available to guide the Tribunal's deliberations or direct it to adopt the precautionary approach. This policy and regulatory vacuum, in combination with the limited scope of the VCAT hearing process, and the necessarily ad hoc and selective impact of this type of litigation, exacerbates the potential for the *Gippsland Coastal Board* decision to be perceived as undermining recognised proprietorial interests, and cultural expectations. In addition, by raising the spectre of future legal liability for regulatory authorities and developers who fail to take appropriate adaptive action, the decision potentially prioritises climate change impact over other environmental concerns in Gippsland such as subsidence and lake salinity.

The legal narrative of precaution in the face of climate change

Just as there was a policy vacuum, there was no straightforward legal precedent for the governance of climate change adaptation available to guide VCAT's deliberations in the *Gippsland Coastal Board* case. However, a precautionary legal rationale was developing almost simultaneously in 'mitigation litigation' in the New South Wales Land and Environment Court[vii]. This rationale focuses on whether there should be an obligation on greenhouse gas (GHG) intensive developments, such as big mines and industrial sites, to account for and mitigate downstream emissions[viii]. In this mitigation litigation, the precautionary principle and intergenerational equity, both key principles of ecologically sustainable development, have been taken up and do substantial rhetorical work justifying and insisting upon an interpretation of environmental law which requires stronger accountability for the downstream effects of GHG (Bonyhady 2007: 19-20; Peel 2008). These arguments have met with some notable success in the NSW Land and Environment Court. Brian Preston, the Court's Chief Justice has argued judicially[ix] and extra-judicially (Preston 2005; 2010) that the approach taken by his court has been justified because 'the impacts of climate change are of such seriousness, magnitude and extent' (Preston 2010: 201). VCAT has taken a similar position in the coastal climate change litigation.

The precautionary principle has been used as an aid to environmental decision making for at least a decade (E. Fisher 2007). It has served to supplement the concept of intergenerational equity, which was merely aspirational and 'devoid of legal life' before the NSW mitigation litigation discussed above (Bonyhady 2007: 20). Now, through this climate change litigation, these two principles of sustainable development, working in combination, provide a normative basis for the legal recognition of the need to mitigate

and take adaptive action to prevent irreversible damage, in the name of future social and environmental wellbeing. Significantly, as environmental lawyer Douglas Fisher has observed, invoking these two key principles of sustainable development extends the scope of the environmental law to incorporate the longer term, and geographically more extensive, impacts of greenhouse gas emissions and climate change (D. Fisher 2007: 217).

Conclusion – making the possible probable

The operation of the precautionary principle 'does not direct a particular outcome to occur … it regulates reasons for a decision and the process by which a decision is made' (E. Fisher 2007: 41). The *Gippsland Coastal Board* case and subsequent VCAT decisions, while ruling against certain development applications, do not specify how regulators should respond to the uncertainties of climate change or what adaptive measures they should implement. The Tribunal assumes that adaptation is an ongoing task for all levels of government, requiring an integrated, holistic approach mindful of localised impact and interests. Although not prescriptive, VCAT's application of the precautionary principle has had a substantive normative impact. As de Sadeleer observes, the precautionary principle 'transforms doubt into possible certainty and hence strengthens action by public authorities in the face of uncertainty' (2002: 222). Ewald might conclude it has become the basis for justifying a new set of environmental responsibilities in the face of climate change. Not unlike the emergence of the 2° 'dangerous limit' of global warming narrative analysed by Shaw (2010), the *Gippsland*

Coastal Board case has been the impetus for the emergence of another type of narrative, which makes the coastal impact of climate change 'a viable object' of legal decision-making. The risk of legal liability coupled with VCAT's insistence on the commonsense of a precautionary approach, effectively renders the uncertainty attaching to predicted adverse effects of climate change otiose – the possible has become, for legal and policy purposes, the probable.

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[i] Examples of institutions and inquiries aimed at developing coordinated policy strategies include the *National Sea Change Taskforce* representing over 68 coastal councils and communities established 2004; *National Climate Change Adaptation Framework* 2007; Federal Parliamentary Coastal Inquiry 2009; anticipated Australian Law Reform Commission Inquiry and Productivity Commission Inquiry.

[ii] *Gippsland Coastal Board v South Gippsland Shire Council (No. 2)* [2008] VCAT 1545; *Myers v South Gippsland Shire Council* [2009] VCAT 1022; *Myers v South Gippsland Shire Council (No. 2)*[2009] VCAT 2414; *Tauschke v East Gippsland Shire Council* [2009] VCAT 2231 at 42.

[iii] [2008] VCAT 1545

[iv] *Gippsland Coastal Board v South Gippsland Shire Council (No. 2)* [2008] VCAT 1545 para 47

[v] *Victorian Coastal Strategy* 2008; Ministerial Direction no.13 *Managing Coastal Hazards and the Coastal Impacts of Climate Change;* General Practice Note December 2008.

[vi] *Myers v South Gippsland Shire Council (No. 2)* [2009] VCAT 2414, paras 47-8.

[vii] *Gray v Minister for Planning* [2006] NSWLEC 720; *Minister for Planning v Walker* (2007) 157 LGERA 124; *Minister for Planning v Walker* (2008) 161 LGERA 423.

[viii] *Re Australian Conservation Foundation v Latrobe City Council* (2004) 140 LGERA 100; *Drake Brockman v Minister for Planning* (2007) LGERA 349; *Gray v Minister for Planning* [2006] NSWLEC 720; *Re Xstrata Coal Queensland Pty Ltd & Ors* [2007]; *Wildlife Preservation Society of Queensland Proserpine/Whitsunday Branch Inc v Minister for the Environment & Heritage* [2006] FCA 736.

[ix] *Taralga Landscape Guardians v Minister for Planning* [2007] NSWLEC 59; *Telstra Corporation Limited v Hornsby Shire Council* [2006] NSWLEC 133; *Bentley v BGP Properties Pty Ltd,* (2006) 145 LGERA 234 [67]-[70]