

Litigating the Precautionary Principle in Domestic Courts†

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This article reflects on the challenges and opportunities associated with litigating the precautionary principle in the domestic judicial realm as a basis for seeking review of governmental action. While domestic courts are increasingly being called upon to consider the principle, in much of the emerging jurisprudence it is treated as a discretionary consideration or background interpretive canon. To what extent, therefore, can the principle be given, in the words of one leading jurist, "some specific work to do." Drawing on a diverse range of caselaw and scholarship, the authors conclude that a "tamed and trained" version of the principle can indeed play a more robust role in the judicial review process. In support of this conclusion, they offer a detailed discussion and critique of a pioneering recent judgment of the Land and Environment Court of New South Wales.

Cet article traite des enjeux liés à la présentation, devant une instance judiciaire nationale, d'une demande de révision de l'action gouvernementale en ayant recours au principe de précaution. Bien que les tribunaux nationaux soient de plus en plus sollicités pour se prononcer au sujet de ce principe, ce dernier est employé dans la plupart des jugements récents de façon discrétionnaire ou comme une règle d'interprétation complémentaire. Aussi, dans quelle mesure peut-on prêter à ce principe une «utilité particulière», pour reprendre les paroles d'un éminent juriste? À partir d'une panoplie de jurisprudences et de d'ouvrages de doctrine divers, les auteurs en viennent à la conclusion que ce principe, une fois « apprivoisé et dressé », peut vraiment servir plus utilement dans le processus de contrôle judiciaire. Ils

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fondent cette conclusion sur une analyse et une critique en profondeur d'un jugement récent de la Land and Environment Court de New South Wales.

1. INTRODUCTION

The rise to global prominence of the precautionary principle both as a legal concept and public policy tool has prompted extraordinary scholarly and public attention and debate. While controversy surrounding its meaning and implications continues to rage, increasingly the principle is being incorporated into domestic legislation and invoked in litigation before domestic courts and tribunals.

This article reflects on the challenges and opportunities associated with litigating the precautionary principle in the domestic judicial realm as a basis for seeking review of governmental action. A variety of reasons make it timely to embark on this inquiry. One is growing interest in the potential of the principle to structure the discretion exercised by administrative decision makers that are increasingly being called upon to take climate change impacts into account in the discharge of their statutory duties.¹ Another is the emerging critical mass of domestic jurisprudence on the application and interpretation of the principle. To date, within much of this jurisprudence, it has been adverted to as a discretionary consideration or background interpretive canon. However, there is also growing evidence of a judicial appetite to engage with the principle in a more systematic doctrinal fashion: in the words of one leading jurist, to give it "some specific work to do".²

Of course, whether and to what extent this aspiration can be realized depends on whether the precautionary principle can be rendered sufficiently coherent and predictable to serve as a basis for judicial decision-making. Critics of the principle have voiced skepticism about this prospect, arguing that its inherent ambiguity and indeterminacy render it fundamentally ill-suited to the task of judging regulatory (in)action.³

1 For example see *Gray v. Minister of Planning* (2006) 152 LGERA 258 discussed *infra* in text accompanying notes 86-89 where an environmental assessment of a major mining project in New South Wales was held to be inadequate for failing to address downstream impacts of the production of greenhouse gases in a manner consistent with the requirements of the principle.

2 See the extra-judicial reflections of Stein J. of the NSW Court of Appeal in "A Cautious Application of the Precautionary Principle", (2000) 2 *Envtl. L.R.* 1 at 2.

3 See, for example, Robert W. Hahn and Cass R. Sunstein, "The Precautionary Principle as a Basis for Decision Making," (2005) 2:2 *The Economists' Voice*, Article 8; C. Sunstein, *Laws of Fear* (Cambridge: Cambridge University, 2005); G. Marchant and K. Mossman, *Arbitrary and Capricious: The Precautionary Principle in the European Union* (London:

Other scholars and jurists, while acknowledging that there are vexing conceptual uncertainties to be resolved, offer a more sanguine view about the principle's current status and future prospects.⁴

In Part 2 of the article that follows we provide a brief overview of the ongoing controversy over the meaning and implications of the precautionary principle that seeks to distill the voluminous writing on this subject. In Part 3 we reflect on the various avenues through which the principle has found its way into domestic litigation (through direct or indirect application of international law, as a common law principle or via statutory interpretation) and on the jurisprudence it has generated. Part 4 focuses on what is, to date, the most extended and sophisticated analysis and application of the precautionary principle by a domestic court: the recent judgment of the New South Wales Land and Environment Court in *Telstra Corporation v. Hornsby Shire Council (Telstra)*.⁵ In this part, we also consider academic commentary on the decision and discuss *Gray v. Minister of Planning*⁶ where *Telstra* is applied in the context of a challenge to the adequacy of an environmental assessment of climate change impacts. Finally, in Part 5, we offer some concluding thoughts on the future of the principle in domestic litigation.

2. MULTIPLICITY AND AMBIGUITY: DIVINING THE MEANING AND IMPLICATIONS OF THE PRECAUTIONARY PRINCIPLE

The origins and implications of the precautionary principle are the subject of a considerable and growing scholarly literature.⁷ Derivative of the maxim "better safe than sorry", at its core the principle seeks to formalize precaution as a regulatory obligation in the face of environ-

Int'l Policy Press, 2005).

4 See, for example, John S. Applegate, "The Taming of the Precautionary Principle", (2002-2003) 27 *Wm. & Mary Envtl. L. & Pol'y Rev.* 13; Elizabeth Fisher "Is the Precautionary Principle Justiciable?" (2001) 13 *J.E.L.P.* 315.

5 [2006] NSWLEC 133 [*Telstra*].

6 *Supra* note 1.

7 See generally David Freestone and Ellen Hey, eds., *The Precautionary Principle and International Law* (The Hague: Kluwer Law International, 1996); Arie Trouwborst, *Evolution and Status of the Precautionary Principle in International Law* (The Hague: Kluwer Law International, 2002); Harold Hohmann, *Precautionary Legal Duties and Principles of Modern International Environmental Law* (London: Graham & Trotman, 1994); Ronnie Harding and Elizabeth Fisher, *Perspectives on the Precautionary Principle*, (Sydney: Federation Press, 1999); Simon Marr, *The Precautionary Principle in the Law of the Sea*, (The Hague: Kluwer Law, 2003).

mental threats and scientific uncertainty. In the domain of international law, the principle began to emerge in the early 1980s most notably in the World Charter for Nature (1982). Since that time, it has become a central feature of close to 100 international agreements and been incorporated into scores of domestic environmental and public health laws worldwide.

Differing formulations of the precautionary principle abound. The most widely-cited version of the precautionary principle is found in Principle 15 of the Rio Declaration (1992):

Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.⁸

This relatively permissive or “weak” version of the principle is frequently contrasted with a more rigorous version famously approved by environmental activists and scholars at the 1998 Wingspread Conference:

When an activity raises threats to the environment or human health, precautionary measures should be taken, even if some cause-and-effect relationships are not fully established scientifically.⁹

The chameleon-like nature of the principle has tended to undermine reasoned consideration and debate of its precise meaning and implications. In an effort to provide an operational taxonomy of the principle, Sandin argues that its various formulations can be usefully analyzed along four key dimensions: *threat*, *uncertainty*, *action* and *command*.¹⁰ Under Sandin’s approach, *threat* refers to the nature of the imminent harm to the “state of the world” (particularly its seriousness and (ir)reversibility), while *uncertainty* connotes “our (lack of) knowledge as [to] whether and how this threat might materialize.” Under most formulations of the principle, where both the threat and uncertainty meet defined thresholds, an *action* obligation is triggered (e.g. to consider “cost effective measures to prevent environmental degradation,” “preventative measures” or “regulatory steps”). Finally, the *command* dimension prescribes the legal status of the action to be taken (which may be framed in either mandatory or permissive language, “shall” or “may.”)¹¹

According to Sandin, a key challenge to operationalizing the precautionary principle lies in the imprecision with which the dimensions of

“threat”, “uncertainty”, “action” and, to a lesser extent, “command” are typically framed. This imprecision problem may be difficult to remedy due to what is, in effect, a “lowest common denominator” phenomenon: namely, that the overall precision of particular formulation of the principle is directly correlated to its least precise dimension.¹² This, he argues, is also true of what he terms the “strength” of the principle (the degree of precaution required by the principle). Thus, the robustness of any particular formulation of the precautionary principle is a function of its weakest element.

Sandin’s analysis provides an instructive counterpoint to what appears to be a growing backlash against the principle in academic circles, particularly amongst American scholars. While some of these critiques raise compelling questions about the coherence and viability of precaution as a legal principle, others seem motivated by a desire to discredit the principle by portraying it, and its proponents, in alarmist and provocative terms.

One of the more vocal critics of the precautionary principle in its various formulations is Cass Sunstein.¹³ Dismissing weak versions of the principle as “unobjectionable, even banal”, he attacks stronger versions with surprising ferocity:

The real problem with the Precautionary Principle in its strongest forms is that it is incoherent; it purports to give guidance, but it fails to do so, because it condemns the very steps that it requires. The regulation that the principle requires always gives rise to risks of its own—and hence the principle bans what it simultaneously mandates. I therefore aim to challenge the Precautionary Principle not because it leads in bad directions, but because read for all its worth, it leads in no direction at all. The principle threatens to be paralyzing, forbidding regulation, inaction, and every step in between.¹⁴

While critiques such as this are usually targeted at more robust formulations of the principle,¹⁵ Sunstein and others nonetheless advocate for a highly restrictive application of the precautionary principle to “catastrophic risks” so as to avoid its misapplication to lesser risks as a result of irrational fear.

Other academics, however, contend that a proper understanding of the precautionary principle can reduce, not amplify, the effects of irrational fear. Important groundwork on this front has been laid by Professor Applegate. Applegate argues that a “tamed” understanding of the precau-

8 The United Nations Conference on Environment and Development, *Rio Declaration on Environment and Development*, Principle 15.

9 See Hileman, 1998 cited at 891 in Sandin, “Dimensions of the Precautionary Principle” (1999) 5 *Human and Ecological Risk Assessment* 889.

10 Sandin, *ibid.*

11 *Ibid.* at 891-95.

12 *Ibid.* at 898.

13 See Sunstein, *supra* note 3.

14 *Ibid.* at 14.

15 *Ibid.* at 24.

tionary principle is beginning to emerge.¹⁶ Under this emerging conception, the precautionary principle can provide a procedural vehicle for decision-making in the face of uncertainty. Traditionally, where the principle has not been considered as part of a decision-making process, regulators have only taken a risk into account when it rises to a relatively high standard of certainty. In contrast, where the principle is part of the regulatory equation, a decision-maker is empowered to (and, in some instances, obliged) to take it into account. However, the response must be proportional to the risk, and must adapt as knowledge of the risk becomes more certain.

The tension between this “tamed” iteration of the principle and its more unconstrained cousin has also been addressed by Fisher and Harding.¹⁷ They contend that two theories of administrative constitutionalism — in their terminology, the “rational-instrumental” and “deliberative-constitutive” models — have competed to explain and legitimate deployment of the principle in the domestic realm. The rational-instrumental model draws heavily on traditional administrative law concepts, conceiving of administrative decision-makers as instruments of the legislature exercising a strictly delimited statutory discretion based on “rational methodologies derived from science. . . that ensure that decisions are made on an ‘objective basis. . .’.”¹⁸ In the context of the precautionary principle debate, the overarching goal of this model is to show that action taken pursuant to the principle can be rendered “accountable and consistent with pre-existing legal obligations.”¹⁹ In contrast, the deliberative-constitutive framework seeks to respond to the complexity and uncertainty surrounding environmental and public health questions by vesting in administrative decision-makers a broad and flexible mandate that is “regulated” less through legal rules than by an expectation that they will thoroughly deliberate over and provide reasoned justification for their decisions. The overarching objective of this model, within the precautionary principle

debate, is to demonstrate “how the principle can be implemented in any institutional setting.”²⁰

As to which framework offers a superior means of operationalizing the principle, Fisher and Harding are agnostic. Acknowledging that proponents of the principle have tended to promote the deliberative-constitutive model and criticize its rational-instrumental counterpart, they point out that preferences are shaped by functional role and disciplinary perspective: “. . . different actors will tend to promote different theories. . . crudely speaking, the deliberative-constitutive theory tends to be the choice of policy makers while the rational-instrumental paradigm tends to be the choice of lawyers.”²¹ It may be, they argue, that determining which model works best will depend on the nature of the risk involved, with the deliberative-consultative model being better positioned to address more uncertain risks.²²

Even if Applegate and other legal scholars of a “rational-instrumental” stripe are correct in arguing that a tamed version of the precautionary principle can provide decision makers with new procedural means of taking risk into account in a manner that is consistent with established administrative law principles, a host of important questions about the meaning and implications of the principle remain. Can the principle’s imprecision, as chronicled by Sandin in terms of threat, uncertainty, and action, be remedied or reduced? More specifically, in what circumstances should the principle apply; in other words, what threshold level of threat/uncertainty should trigger its application? Moreover, how ought the principle to be applied; in particular, what standards of proof should be applied and to whom should the onus of proof be assigned? And, finally, how is hard science to be weighed against competing social values?

The *Telstra* decision, discussed in Part 4, offers some intriguing thoughts on these important questions. However, before turning our attention to *Telstra*, we propose to reflect more broadly on the state of domestic precautionary principle jurisprudence.

3. BRINGING THE PRECAUTIONARY PRINCIPLE INTO DOMESTIC LITIGATION

There are two distinct avenues for the precautionary principle to enter domestic litigation: through the domestic application of international law,

16 *Supra* note 4.

17 See Elizabeth Fisher and Ronnie Harding, “The precautionary principle and administrative constitutionalism: the development of frameworks for applying the precautionary principle” in Fisher, Jones and von Schomberg, *Implementing the Precautionary Principle: Perspectives and Prospects* (Edward Elgar: 2006) 113-36. Fisher has since authored a book that elaborates many of the arguments set out in her earlier piece with Harding: see E. Fisher, *Risk Regulation and Administrative Constitutionalism* (Hart Publishing: 2007).

18 *Ibid.* at 124.

19 *Ibid.* at 129.

20 *Ibid.*

21 *Ibid.* at 131-32.

22 *Ibid.*

or through its application as a principle of domestic law.²³ Each of these categories may be further subdivided. International law may be applied directly, as binding in its own right; or it may apply indirectly, as an interpretive aid. Likewise, stand-alone principles of domestic law may be derived either from common law or statutory sources.

(a) Direct Application of International Law

Domestic legal systems are broadly classified as either monist or dualist.²⁴ In monist jurisdictions, both international and domestic law tends to be conceived as elements of a unitary system of law administered by the judiciary. As a result, in these jurisdictions, international law is directly binding on courts, without any further action by the legislature or executive. In contrast, dualist jurisdictions treat international and domestic law as two discrete systems. Before international law can be applied by a court, steps must be taken to render it part of domestic law according to ordinary constitutional principles. For example, a treaty provision is not binding on domestic courts until the legislature has enacted a statute that implements its terms.

Of course, theory rarely maps directly to reality. Some states which are typically thought to be dualist may require treaties to be implemented by legislatures, but may apply customary international law directly. Other states, though considered to be monist, place limits on the direct application of international law, such as requirements that treaties be "self-executing" before they can have domestic effect. Canada is an example of the former;²⁵ while the U.S. exemplifies the latter.²⁶ Thus, in many situations, whether a particular rule of international law can be applied directly by the courts will be a contentious issue.

To date, few courts have accepted that the precautionary principle, as a rule of international law, can be directly applied in domestic litigation. One prominent exception is the Supreme Court of India. In *Vellore Citizens Welfare Forum v. Union of India (Vellore)*, it held that the principle should be deemed to be incorporated into domestic law:

Even otherwise once [the precautionary principle and polluter pays principle] are accepted as part of the Customary International Law there would be no difficulty in accepting them as part of the domestic law. It is almost an accepted proposition of law that the rules of Customary International Law which are not contrary to the municipal law shall be deemed to have been incorporated in the domestic law and shall be followed by the courts of law.²⁷

The significance of this statement must be tempered by the fact that the court had already held that, by operation of applicable constitutional and statutory provisions, the precautionary principle was part of domestic Indian environmental law.²⁸ This leaves open the question of whether the court would have so readily applied the principle had this not been the case. Also unanswered by the *Vellore* decision is the nature and the weight of the evidence necessary to conclude that the precautionary principle has become a binding norm of customary international law. There are certainly good arguments to be made that, by virtue of state practice, the precautionary principle has now achieved this status, though this conclusion remains controversial.²⁹

(b) Indirect Application of International Law

An alternative way for international law to affect domestic litigation is for it to be applied indirectly as an interpretive aid. Generally, courts will be reluctant to apply the precautionary principle in this way if it is inconsistent with applicable domestic law. However, if domestic law is capable of being interpreted in a manner consistent with the precautionary principle, it may play a persuasive interpretive role. This opens the door to the principle being considered in domestic litigation by courts that would otherwise shy away from direct application of the principle as a norm of international law.

The Supreme Court of Canada's decision in *114957 Canada Lee (Spraytech) v. Hudson (Town)*³⁰ is a good example of the indirect appli-

23 Preston C.J., author of the *Telstra* decision, has recently published a very thorough comparative overview of the relevant caselaw: see "The Role of the Judiciary in Promoting Sustainable Development: The Experience of Asia and the Pacific" 9 (2&3) Asia Pac. J. of Env'tl. L.

24 See van Erp, *Using International Law in Canadian Courts*, (The Hague: Kluwer Law International, 2002), at 49-51 for a discussion of the theories of monism and dualism.

25 *Ibid.* at 51.

26 Daniel Bodansky and Mary Manous, "International Environmental Law in US Courts" in Anderson and Galizzi, *International Environmental Law in National Courts* (London: British Institute of International and Comparative Law, 2002) 233 at 234-35.

27 *Vellore Citizens Welfare Forum v. Union of India*, WP 914/1991 (1996.08.28) at para. 15. The *Vellore* decision was later affirmed in *M.C. Mehta v. Kamal Nath* (1997) 1 SCC 388.

28 *Ibid.* at para. 14. See also *A.P. Pollution Control Board v. Prof. M.V. Nayudu*, [1999] INSC 9 (27 January 1999), discussing the holding in *Vellore*.

29 See e.g. Arie Trouwborst, *Evolution and Status of the Precautionary Principle in International Law*, (The Hague: Kluwer Law International, 2001) and see comments of the Supreme Court of Canada in the *Spraytech* decision, *infra*.

30 [2001] 2 S.C.R. 241.

cation of international law. While the status of the principle in international law was not fully argued before the Court, the majority reasons cite scholarly opinion to the effect that “a good argument” could be made that it had become “a principle of customary international law.”³¹ The majority went on to employ the principle as a relevant consideration in upholding the validity of a municipal ban on pesticide use. As such, the decision makes it clear that principles of international law—even those that are not binding on Canada—may be taken into account when interpreting domestic law.

Proponents of the precautionary principle would no doubt have preferred the Supreme Court to have found that, where possible, domestic law must be interpreted in accordance with the precautionary principle. Arguably, this would have been the result if the principle had been shown to be a binding norm of international law.³² However, until Canadian courts have accepted the precautionary principle as binding, *Spraytech* allows the principle to be invoked in a persuasive manner. If an advantage in this result can be found, it is that parties will not be required to convince a court that Canada would be in breach of its international obligations if the court did not apply the principle.³³

Another example of the indirect application of international law is the Supreme Court of Pakistan’s decision in *Zia v. WAPDA*.³⁴ The defendant WAPDA planned to build high-voltage transmission lines near the homes of the plaintiffs without engaging in a public consultation process or reviewing recent scientific literature. The plaintiffs were concerned about potential health effects from the electromagnetic fields that would be produced by the transmission lines; however, they were unable to prove with scientific certainty that these risks were real. In the Court’s opinion, the nature of the scientific uncertainty in the case made it appropriate to adopt a precautionary approach. In reaching this conclusion, the Court acknowledged the persuasive value of Principle 15 of the Rio Declaration even though its terms had not been domestically implemented:

An international agreement between the nations if signed by any country is always subject to ratification . . . it can be enforced as a law only when legislation is made by the country through its legislature. . . This is the legal position of

31 *Ibid.* at para. 32.

32 van Ert, *supra* note 24, ch. 5.

33 van Ert, *ibid.* at 160-63, distinguishes between mandatory customs of international law, which are directly incorporated into domestic law, and permissive customs, which must be incorporated through legislation.

34 P L D 1994 Supreme Court 693 (Pakistan).

such documents, but the fact remains that they have a persuasive value and command respect. The Rio Declaration is the product of hectic discussion among the leaders of the nations of the world and it was after negotiations between the developed and the developing countries that an almost consensus declaration had been sorted out. . . Principle No. 15 [of the Rio Declaration] envisages rule of precaution and prudence. According to it if there are threats of serious damage, effective measures should be taken to control it and it should not be postponed merely on the ground that scientific research and studies are uncertain and not conclusive. It enshrines the principle that prevention is better than cure. It is a cautious approach to avert a catastrophe at the earliest stage.³⁵

In the result, the Court ordered the government to adopt a precautionary procedure in deciding where and how to build transmission lines. To this end, it required an independent commissioner to investigate how the risks from power lines could be minimized, and ordered the government to engage in public consultation before finalizing its construction plans.

(c) The Common Law

The precautionary principle may also emerge within the common law of a domestic legal system. Where international law is applied, directly or indirectly, the development of a common law precautionary principle may be accelerated. Of course, it is also possible for the principle to emerge completely independently of international law. The common law of Australia, perhaps more than that of any other jurisdiction, has been receptive to arguments about the precautionary principle. In 1998, Charmian Barton explored the use of the principle by Australian courts and argued that, “The acceptance of the principle as a necessary consideration in environmental cases is evidence of its emergence as a common law doctrine.”³⁶

One of the best known and earliest Australian decisions is *Leatch v. National Parks and Wildlife Service*.³⁷ In this case, a municipal council planned to build a road through an area that may have contained several endangered species. Although alternative routes could have been chosen, the Director-General of the National Parks and Wildlife Service issued the city a permit to allow it to take or kill endangered fauna in the area they had selected. The decision to issue the permit was appealed to the Land and Environment Court of New South Wales. The relevant legis-

35 *Ibid.* at para. 9.

36 Charmian Barton, “The Status of the Precautionary Principle in Australia: Its Emergence in Legislation and as a Common Law Doctrine”, (1998) 22 Harv. Envtl. L. Rev. 509 at 535.

37 (1993) 81 L.G.E.R.A. 270.

lation did not require the precautionary principle to be applied. Thus, the plaintiffs argued that the principle should be incorporated from international law. Stein J. stated:

It seems to me unnecessary to enter into this debate. In my opinion the precautionary principle is a statement of common sense and has already been applied by decision-makers in appropriate circumstances prior to the principle being spelt out. It is directed towards the prevention of serious or irreversible harm to the environment in situations of scientific uncertainty. Its premise is that where uncertainty or ignorance exists concerning the nature or scope of environmental harm (whether this follows from policies, decisions or activities), decision makers should be cautious.³⁸

As a principle of "common sense" that was not excluded by the relevant legislation, Stein J. held that the precautionary principle was a relevant factor to take into account when deciding whether the permit to take or kill should be issued. In applying the principle, he concluded that the permit should not be granted. In his view, there was insufficient information about the impact that the road would have on a giant burrowing frog population, which was believed to be in the area. Alternative routes which had been deemed to be more expensive had to be reconsidered, taking into account the environmental costs of each proposal. It is important to note, however, that Stein J. did not hold that the precautionary principle prohibited road-building of the road through frog habitat but rather, that, prior to authorizing construction, regulators were required to secure reliable information about habitat impacts and to properly weigh the advantages and disadvantages of alternative routes.

The New South Wales Land and Environment Court also applied the precautionary principle in *Simpson v. Ballina Shire Council*.³⁹ Here, a proposed subdivision had the potential to pollute a nearby creek. Because no independent risk analysis was performed, the approval authority did not have evidence about the likelihood of a landslide causing damage to the ecosystem, or about the quantity of pollutants that would reach the creek. Nevertheless, it concluded that the subdivision should not proceed because, on the balance of probabilities, it would cause a significant adverse effect on the local environment. This decision was upheld on appeal to the Court.

Despite these promising first steps, there have been other Australian decisions that have not treated the precautionary principle as favourably.

In *Nicholls v. Director-General of National Parks and Wildlife*,⁴⁰ the issuance of a license to take and kill endangered fauna was upheld despite anomalies and deficiencies in the fauna impact statement. Talbot J. demonstrated skepticism towards the precautionary principle, stating that, "taken literally in practice [it] might prove unworkable."⁴¹

Nevertheless, on balance, it appears clear that the precautionary principle has come to play an important role in Australian environmental decision-making. As concluded by Stein J. after reviewing the application of the principle in domestic law:

One thing is clear—the precautionary principle will not go away. It is here to stay with or without legislative prescription. Decision-makers and courts (hearing appeals or challenges) will not be able to avoid it or merely pay lip-service. Undeniably the courts will be required to review its application and attempt to apply it. Courts will be called upon to evaluate the principle and its place in environmental decision-making.⁴²

A key benefit of a common law-based approach to bringing the precautionary principle into domestic litigation is the lack of facility and ill-ease of many common law judges with international law. The notion that the principle can have application without the need to resort to international law is thus likely to find resonance particularly within Commonwealth jurisdictions. For example, the High Court of Kenya has recently cited the *Leatch* decision with approval in *Odera v. National Environmental Management Authority*⁴³ in a judgment that overturned a decision of a government regulator for failing to take the principle into account.

(d) Statutory Law

The precautionary principle may also become domestic law through implicit or explicit adoption in domestic statutes. A growing number of jurisdictions have enacted legislation that explicitly incorporates the precautionary principle either as a substantive decisional criterion or in preambular language. These include the European Union, Australia, Canada, Kenya, and Brazil. In Canada, for example, the principle finds expression in a variety of federal statutes including the *Species at Risk Act*, the *Oceans Act*, the *Canadian Environmental Protection Act*, the *Can-*

³⁸ *Ibid.*
³⁹ (1994), 82 L.G.E.R.A. 103.

⁴⁰ (1994), 84 L.G.E.R.A. 397.

⁴¹ *Ibid.* at 419.

⁴² Stein, *supra* note 2 at 10.

⁴³ Unreported, H.C. Misc. Civil Application No. 400 of 2006.

dian *Environmental Assessment Act*, and recently tabled amendments to the *Fisheries Act*.⁴⁴

The principle is also beginning to play an important role in domestic law through what is often termed "implicit incorporation." This commonly occurs in the context of statutory regimes governing pharmaceuticals, food, and pesticides. Often, these regimes will shift the burden of proof to the proponent of a new product. Thus, rather than being allowed to manufacture and distribute products until they have been shown to cause harm to humans or the environment, proponents are required to demonstrate that their products have undergone testing that ensures designated safety standards. For example, U.S. federal law prohibits the introduction of new drugs into interstate commerce until the Federal Drug Administration is satisfied that the results of "adequate tests by all methods reasonably applicable" show that the drugs are safe for their intended use.⁴⁵

At first blush, these illustrations of implicit legislative incorporation of the principle may not seem particularly relevant in litigation that does not bear on the validity of the applicable legislation. Nonetheless, we would argue that these illustrations can be of indirect assistance in various ways. These include reassuring the judiciary that the precautionary principle can and does operate as a norm of state practice; and bolstering arguments that the principle forms part of emerging domestic common law and/or is evolving toward achieving the status of customary international law.

These arguments will be made even stronger when the principle is explicitly adopted. The European Community (EC) added the precautionary principle to the EC Treaty with the Maastricht Treaty of 1992.⁴⁶ Article 174(2) of the EC Treaty now reads:

Community policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Community. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.

44 In all of the above-noted statutes, the principle is invoked in either preambular or "purposes" provisions.

45 See 21 U.S.C. §355 generally; §355(d) for the grounds upon which an application can be refused.

46 Treaty on European Union, [1992] OJ C 244/1, Article 130r(2).

This Article is both explicitly referred to and implicitly implemented in Directives and Regulations.⁴⁷ For example, the *Habitats Directive*⁴⁸ provides that a plan or project "likely to have a significant effect" may proceed only after national authorities have "ascertained that it will not adversely affect the integrity of the site."⁴⁹ The European Court of Justice has referred to Article 174(2) when interpreting subsidiary legislation. For example, in *ARCO Chemie Nederland Ltd and Vereniging Dorpsbeland Hees*,⁵⁰ the Court was asked to interpret the meaning of "waste" in the *Waste Directive*.⁵¹ The Court held that "waste" could not be interpreted restrictively because pursuant to Article 174(2), "Community policy on the environment is to aim at a high level of protection and is to be based, in particular, on the precautionary principle and the principle that preventive action should be taken."⁵² The inclusion of the precautionary principle in EC treaties and subsidiary legislation has also had an impact on the domestic law of member states.⁵³

Australia has codified the precautionary principle, and other principles of environmental law, in the *Environment Protection and Biodiversity Conservation Act, 1999*.⁵⁴ Section 3A sets out "principles of ecologically sustainable development", including the precautionary principle:

(b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;

The principle has also been incorporated into the 1992 *Intergovernmental Agreement on the Environment*⁵⁵ and the legislation of some territorial governments.⁵⁶ Inclusion of the principle in domestic legislation

47 Jonathan Verschuuren, *Principles of Environmental Law*, (Baden-Baden: Nomos Verlagsgesellschaft, 2003) at 90-92.

48 92/43/EEC.

49 *Ibid.*, Article 6.

50 C-418/97.

51 Directive 2006/12/EC of the European Parliament and Council of 5 April 2006 on waste.

52 *ARCO Chemie*, *supra* note 50 at paras. 39-40.

53 Verschuuren, *supra* note 47 at 113-26, discussing environmental principles in the domestic law of Germany, the Netherlands, Belgium, and Finland. See also Chris W. Backes and Verschuuren, "The Precautionary Principle in International, European, and Dutch Wildlife Law", (1998) 9 *Colo. J. Int'l Envtl. L. & Pol'y* 43.

54 Act No. 91 of 1999.

55 Barton, *supra* note 36 at 523.

56 See e.g. the *Contaminated Land Management Act, 1997*, New South Wales Act 140 of 1997, s. 10(2).

has led to much greater consideration of the principle by courts and administrative tribunals.⁵⁷

4. PUTTING THE PRINCIPLE TO WORK: *TELSTRA* AND BEYOND

If the precautionary principle is to find traction and yield benefit in the context of judicial review, courts must do more than pay it lip-service. When the principle is viewed as little more than “common sense”, at best it provides little decisional guidance and at worst promotes uncertainty and subjectivity. At the same time, the principle must respect the discretion of elected decision-makers to make judgments about the public good. Leaving aside concerns about interpretive uncertainty, courts are unlikely to adopt a principle that unduly fetters judicial discretion to balance competing interests. In the words of the European Court of Justice:

...the precautionary principle has a future only to the extent that, far from opening the door wide to irrationality, it establishes itself as an aspect of the rational management of risks, designed not to achieve a zero risk, which everything suggest does not exist, but to limit the risks to which citizens are exposed to the lowest level reasonably imaginable.⁵⁸

Arguably, this is precisely what Applegate’s “tamed” conception of the precautionary principle, introduced in Part 2, seeks to do by providing a tool to guide decision-makers, not dictate to them.⁵⁹ However, as we have argued above, procedurally “taming” the precautionary principle is not enough; for it to be useful in domestic litigation and as means of supervising administrative action, the principle must also be *trained* to play a role in judicial review.

According to Fisher, whether this can occur—in her words, whether the principle can be rendered “justiciable”—depends heavily on the creativity and initiative of lawyers and courts alike.⁶⁰ For their part, litigators must avoid framing the principle in rigid terms that “can furnish only one result.”⁶¹ Rather, in the spirit of the approach advocated by Applegate, she urges that the principle must be framed in procedural terms, consistent

with prevailing notions of judicial competence and mindful of the ever-present tension in judicial review between the goals of executive accountability and administrative flexibility. Even so, she argues, the fate of the principle as a justiciable concept ultimately lies with the judiciary. This is because, in the final analysis, what is at stake is judicial competence. Thus for courts to put the concept to work, they must perceive that to do so is consistent with the tradition and values embedded in judicial review and that they have the wherewithal—including informational resources and procedural tools—to apply the principle in a coherent way. To this end, she underscores that to achieve recognition of the precaution as a procedural principle of judicial review will require its integration within the broader ambit of traditional judicial supervision of “good administration.”⁶²

To date, the best illustration of a judicial attempt to train the precautionary principle to play a meaningful role in domestic litigation is *Telstra Corporation Ltd. v. Hornsby Shire Council*.⁶³ The *Telstra* case arose out of a proposal to construct a mobile telephone base station in a suburb of Sydney, Australia. The Shire Council, responding to community fears about the health effects of radiofrequency electromagnetic energy (RF EME), refused the development application for the base station despite the fact that the installation complied with peer-reviewed, applicable national safety standard (the Australian Standard RPS3). The Council’s decision was appealed to the Land and Environment Court of New South Wales, pursuant to the *Environmental Planning and Assessment Act, 1979* (the *EPA*).⁶⁴

The *EPA* requires the principles of sustainable development, including the precautionary principle, to be taken into account when considering the development application.⁶⁵ As this was the first time the Land and Environment Court had been called upon to consider the principle in detail, Preston C.J. undertook an in-depth analysis of the relevant academic literature and cases from other jurisdictions. His discussion of the principle is framed in three stages: (1) conditions precedent to application of the precautionary principle including threats of “serious or irreversible damage” and “scientific uncertainty”; (2) shifting the burden of proof; and (3) governmental response.

57 Verschuuren, *supra* note 47 at 112. See e.g. *Dixon and Ors v. Australian Fisheries Management Authority*, [1999] AATA 1024 (21 December 1999), *Pt Vincent Progress Association v. DAC & Colmion P/L*, [1999] SAERDC 7 (14 April 1999).

58 *National Farmers’ Union v. Secretary Central of the French Government* ECJ C-241/01 (2 July 2002), at 76.

59 See *supra* in text accompanying note 16.

60 *Supra* note 4.

61 *Ibid.* at 333.

62 *Ibid.* at 334.

63 [2006] NSWLEC 133 [*Telstra*].

64 *Environmental Planning and Assessment Act, 1979* (NSW).

65 *Telstra*, *supra* note 63 at paras. 121-26.

(a) Conditions Precedent to Application of the Precautionary Principle

At the outset, Preston C.J. emphasized that the principle is not intended to be applied in every decision. Rather, it should only be applied when two conditions precedent are met where there is: “a threat of serious or irreversible environmental damage *and* scientific uncertainty as to the environmental damage.”⁶⁶

While first condition precedent does not require damage to have actually occurred, there must be a real *threat* that damage will occur, and the threatened damage must be *serious or irreversible*. To determine if a threat is serious or irreversible, Preston C.J. urges that a variety of factors be considered including:

- (a) the spatial scale of the threat (e.g. local, regional, statewide, national, international);
- (b) the magnitude of possible impacts, on both natural and human systems;
- (c) the perceived value of the threatened environment;
- (d) the temporal scale of possible impacts, in terms of both the timing and the longevity (or persistence) of the impacts;
- (e) the complexity and connectivity of the possible impacts;
- (f) the manageability of possible impacts, having regard to the availability of means and the acceptability of means;
- (g) the level of public concern, and the rationality of and scientific or other evidentiary basis for the public concern; and
- (h) the reversibility of the possible impacts and, if reversible, the time frame for reversing the impacts, and the difficulty and expense of reversing the impacts.⁶⁷

He goes on to underscore that the seriousness of the threat should be determined by consulting a broad range of experts, stakeholders, and rightholders. Thus, even if experts might not consider a threat to be serious, this would not end the inquiry, as the values and perceptions of the stakeholders and rightholders need to be considered. Nevertheless, ultimately he warns that “the threat of environmental damage must be adequately sustained by scientific evidence.”⁶⁸ Evidence must be grounded in scientific method and procedures, and the existence of the threat must be based on more than subjective belief or unsupported spec-

ulation. However, at this stage of the analysis, detailed assessment of the scientific uncertainty surrounding the threat should be avoided.

Once it has been established that there is a threat of irreversible or serious harm, then the second condition precedent—scientific uncertainty—must be considered. When assessing whether the degree of scientific uncertainty concerning the nature and scope of the threatened environmental damage meets the requisite standard, he suggested courts should consider:

- (a) the sufficiency of the evidence that there might be serious or irreversible environmental harm caused by the development plan, programme or project;
- (b) the level of uncertainty, including the kind of uncertainty (such as technical, methodological or epistemological uncertainty); and
- (c) the potential to reduce uncertainty having regard to what is possible in principle, economically and within a reasonable time frame.⁶⁹

Mindful of the need to calibrate the level of scientific uncertainty about the threat to the nature and scope of the apprehended environmental harm, Preston C.J. opined that “where the relevant degree or magnitude of potential environmental damage is greater, the degree of certainty about the threat is lower.”⁷⁰

Citing de Sadeleer (2005), he suggested that the threshold test for this stage of the analysis should be one of *reasonable scientific plausibility*:

When is there ‘reasonable scientific plausibility’? When risk begins to represent a minimum degree of certainty, supported by repeated experience. But a purely theoretical risk may also satisfy this condition, as soon as it becomes scientifically credible: that is, it arises from a hypothesis formulated with methodological rigour and wins the support of part of the scientific community, albeit a minority.⁷¹

(b) Shifting the Burden of Proof

If the conditions precedent, as set out above, are satisfied then the precautionary principle is triggered. At this juncture, according to Preston C.J., a shift in the burden of proof occurs:

A decision-maker must assume that the threat of serious or irreversible environmental damage is no longer uncertain but is a reality. The burden of showing

66 *Ibid.* at para. 128.

67 *Ibid.* at para. 131.

68 *Ibid.* at para. 134.

69 *Ibid.* at para. 141.

70 *Ibid.* at para. 146, citing M-C Cordonier Segger and A Khalfan, *Sustainable Development Law: Principles, Practices and Prospects* (Oxford University Press, 2004) at 145-46.

71 *Ibid.* at para. 148, quoting Nicholas de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, (Oxford University Press, 2005) at 160.

that this threat does not in fact exist or is negligible effectively reverts to the proponent of the economic or other development plan, programme or project.⁷²

His reasons make it clear that this shifting of the burden of proof does not determine the outcome of the decision. On the contrary, this onus-shift operates only in relation to one input of the decision-making process: the question of environmental damage. As such, a decision-maker must, in these circumstances, assume that damage will occur; they must then engage in a balancing of this presumed damage against the benefits of the project:

There is nothing in the formulation of the precautionary principle which requires decision-makers to give the assumed factor (the serious or irreversible environmental damage) overriding weight compared to the other factors required to be considered, such as social and economic factors, when deciding how to proceed.⁷³

It follows that the precautionary principle is not a "zero risk" principle. Rather, it provides a structured way to determine the inputs to a cost-benefit analysis. However, this cost-benefit analysis must take into account both quantitative and qualitative values.

(c) Response

The response that is required by the precautionary principle will depend on the outcome of a risk assessment. As with any risk assessment, the more significant and likely the threat, the greater the degree of precaution required. Where uncertainty exists, a margin of error should be left so that serious or irreversible harm is less likely to occur. This margin of error may be maintained through step-wise or adaptive management plans.

Responses should be proportional to the relevant risk: "measures should not go beyond what is appropriate and necessary in order to achieve the objectives in question."⁷⁴ Proportionality is important because precautionary measures come at their own cost, such as financial, livelihood, and opportunity costs. Furthermore, the elimination of certain risks may cause adverse consequences, such as the elevation of untargeted risks.

(d) Application to the Facts

Intriguingly, in applying his proposed legal framework to the facts of the case, Preston C.J.'s reasons are highly conclusory entirely eschewing discussion of his proposed "eight factors" relevant to concluding if there is a threat of serious or irreversible harm. Instead, he assumes that the standard-setting process which led to the enactment of applicable national standard (Australian Standard RPS3) had properly applied the precautionary principle, thereby relieving him of the need to do so. As he puts it:

In this case, the first condition precedent for the application of the precautionary principle, that there be threats of serious or irreversible environmental damage, is not satisfied. The levels of RF EME emitted from the proposed base station will easily comply with the Australian Standard RPS3. Any harm to the health and safety of people or the environment caused by exposure to such extremely low levels of RF EME is negligible.⁷⁵

His approach to this issue is perhaps not surprising. The respondent (the Shire Council that had denied the development application) called no expert evidence, did not challenge the expertise of the appellant's expert witnesses, and was unable to cast doubt on their testimony through cross-examination.⁷⁶ As a result, the court accepted the evidence of the appellant's experts, including such statements as "[the RF EME which would radiate from the proposed base station] could not conceivably cause any adverse biological or health effect."⁷⁷ If more compelling "alternative" science had been available, it is possible that Preston C.J. would have adopted a different approach. However, this is by no means certain.

(e) Reflections on and Applications of the *Telstra* Approach

Preston C.J.'s ambitious attempt to operationalize the precautionary principle has provoked some intriguing academic commentary and was relied on heavily in a high profile case aimed at challenging the adequacy of an environmental assessment decision made in connection with a proposed coal mine due to its failure to take proper account of the impacts of associated greenhouse gas emissions.⁷⁸

⁷² *Ibid.* at para. 150.

⁷³ *Ibid.* at para. 154.

⁷⁴ *Ibid.* at para. 166.

⁷⁵ *Ibid.* at para. 184.

⁷⁶ *Ibid.* at para. 37.

⁷⁷ *Ibid.* at para. 89.

⁷⁸ See *Gray*, *supra* note 1.

In a recent paper,⁷⁹ Professor Peel argues that *Telstra* is vulnerable to criticism on three grounds: (1) the artificiality of its separation of the preconditions of serious threats and scientific uncertainty; (2) its implicit and questionable deployment of “scientific rationality” as the basis for assessing these preconditions; and (3) its all-or-nothing approach to the application of “precautionary measures.”

Peel contends that treating the two preconditions separately is “fundamentally out-of-step with the challenges of decision-making on health or environmental threats in conditions of scientific uncertainty.”⁸⁰ Rather than treating each precondition separately, she argues that they should be considered together because the more serious the potential harm, the less certainty should be required before it is taken seriously. She also argues that by treating the preconditions as thresholds, the approach assumes “that both factors are measurable and quantifiable.”⁸¹

She also takes issue with what she deems *Telstra*'s implicit designation of scientific rationality as an overarching and determinative evaluative criterion. Peel claims this approach ignores other sources of knowledge, such as anecdotal data and community perspectives, with the consequence that the precautionary principle will only be applied in very limited circumstances where there has been sufficient scientific inquiry to establish a threat with “reasonable scientific plausibility.” She claims that litigating the precautionary principle should not involve

... a competition between (scientific) irrationality and rationality; but between alternative rationalities that emphasize different time frames, draw on social knowledge of different breadths, and represent different beliefs about how risks and benefits should be shared across society.⁸²

Finally, she criticizes the “all-or-nothing” application of precaution that results from a threshold-based approach. Peel contends that the onus-reversal that results from an application of the principle “suggests that the effect of exercising precaution is to require development and technology proponents to prove the absence of risk.”⁸³ As proving the absence of risk is impossible, in her view, this will mean that courts will be extremely reluctant to apply the precautionary principle fatally undermining its analytic utility.

79 Jacqueline Peel, *When (Scientific) Rationality Rules: (Mis)Application of the Precautionary Principle in Australian Mobile Phone Tower Cases*, (2007) 19 J.E.L.P. No. 1 103-20.

80 *Ibid.* at 114.

81 *Ibid.*

82 *Ibid.* at 120.

83 *Ibid.* at 117.

We are sympathetic to the concerns Peel raises in relation to her first two criticisms. However, at least in principle, there is no reason why these concerns could not be addressed within the context of the approach set out by Preston C.J. Although two different preconditions are identified, it is clear that the findings related to each precondition may influence the other. Indeed, it would seem that Preston C.J. is mindful of the need to calibrate the magnitude of the required environmental damage to the likelihood of the risk in determining when the principle is triggered, as we have previously noted in our discussion of his judgment.⁸⁴ This said, we readily recognize the uncertainties and controversy associated with ascribing evidentiary weight to “alternative rationalities.” This is a worthy goal, and one consistent with Fisher and Harding’s “deliberative-constitutive” model of administrative constitutionalism, but also one likely to generate significant judicial discomfort insofar as it represents quite a profound departure from prevailing models of judicial review (in Fisher and Harding’s terminology, the “rational-instrumental” paradigm).

However, in our view, the third weakness identified by Peel arises out of a misapprehension of Preston C.J.’s approach. Ironically, her interpretation of the precautionary principle as “all-or-nothing” is the same as that taken by opponents of the principle who seek to discredit it. In fact, Chief Justice Preston’s approach would not require a proponent to “prove the absence of risk” before a project could continue. Instead, his approach requires the decision-maker to accept that the risk is real, and to balance this risk against the benefits of the project in question. While “[g]ood mobile phone reception is not a basic human right,”⁸⁵ a reasonable person could decide that the benefits of good mobile phone reception, such as better access to emergency fire, ambulance, and police services, outweigh the costs of a small number of serious health effects.

Fisher offers quite a different perspective on *Telstra*. She argues that the decision can be seen as an attempt to reconcile the deliberative-constitutive and rational-instrumental approaches to interpreting the principle discussed earlier.⁸⁶ To do this, she argues that Preston C.J. effectively divides the administrative decision-making process being reviewed into two sequential stages.⁸⁷ The approach that dominates the first stage, which addresses whether the two initial pre-conditions are met and thus whether the principle applies, is rational-instrumental. It is focused on yielding an

84 See *supra* text accompanying note 70 (citing paras. 145 and 146 of the *Telstra* judgment).

85 *Ibid.* at para. 115, referencing the evidence of one Mr. Jack Ray, a resident of Cheltenham, who opposed the base station’s construction.

86 See Fisher (2007) *supra* note 15 at 155-58.

87 *Ibid.* at 158.

answer to a discrete legal question, whereupon a legal consequence follows: namely, a shift in the burden of proof. In contrast, the second stage of the analysis is more open-ended and discretionary: in Fisher's terminology, the dominant methodology employed is deliberative-constitutive in nature. At this juncture, a range of policy factors (including social and economic considerations), interests and values become relevant and adaptive management is encouraged. And, while the threat of serious or irreversible environmental harm must be considered, it is not determinative of the outcome.

To date, the best known judicial application of *Telstra* is *Gray v. Minister for Planning*.⁸⁸ This case involved a challenge to a determination made by the NSW Director-General of Planning that an environmental assessment (EA) prepared by a mining company in support of its application to develop a coal mining operation (the Anvil Hill project) complied with applicable statutory requirements. The applicant, Gray, argued that the Director-General should have rejected the proponent's EA for failing to take into account downstream environmental impacts including GHG emissions produced by end users. In the result, Pain J. upheld the challenge concluding that the Director-General had failed to ensure that statutorily required principles of environmental sustainable development were addressed in the EA including both the precautionary principle and the intergenerational equity principle.

Based on the Director-General's written argument, Pain J. held that the Ministry had impliedly taken the position that the environmental impact of GHG emissions associated with the proposed project satisfied the two pre-conditions set out in *Telstra*: namely, that these emissions posed a threat of serious or irreversible environmental damage and there existed requisite scientific uncertainty as to the nature and extent of this threat. Assuming this to be the case,⁸⁹ she concluded that the burden of proof shifted to the Director-General to ensure that the EA addressed GHG emissions in a manner that allowed the Minister "to determine if there are measures he should consider to prevent environmental degradation in relation to this project."⁹⁰ While resting her legal conclusion that the Director-General's approval of the company's EA was in error (for failing to take account, *inter alia* of the precautionary principle in this regard), she went on at some length to underscore that hers was not "a final decision whether the project should be approved". This, she empha-

sized, was a power of decision vested in the Minister, and one which should be informed by a proper EA that facilitated a "careful evaluation to avoid serious or irreversible damage to the environment and an assessment of the risk weighted consequences for various options."⁹¹

An intriguing element of both the *Telstra* and *Gray* cases is that in neither did the applicant succeed in persuading the trial court, on the merits of their submissions, that the precautionary principle was triggered. In *Telstra*, as we have seen, Preston C.J. in rather short order dismissed this argument on the merits; while in *Gray* Pain J. concluded that the applicability of the principle had been conceded by counsel for the Director-General. Thus, while both decisions map neatly into Fisher's argument that a "new characterization of the decision-making process" is emerging that accommodates both the rational-instrumental and the deliberative-constitutive approaches to operationalizing the precautionary principle, as yet it is premature to conclude that Preston C.J.'s approach bridges these qualitatively distinct approaches.⁹²

5. CONCLUSION

The precautionary principle has traveled a great distance in legal and policy terms in its relatively short conceptual life. As yet, however, whether and how it can be tasked with "specific work to do" in domestic litigation is not clear. In this sense, the future of the principle is uncertain not only in settings where the principle has the status of "soft law" but also, we would argue, where the principle has found its way into "hard" domestic law. For the principle to secure its full potential as more than an "aspirational add-on", spelling out in specific terms what role it can and should play in domestic judicial analysis is a pressing priority. While some promising steps in this direction—most notably in *Telstra*—have been taken, the challenges associated with defining this role loom large. This is particularly true of the hope, evocatively posed by Peel, that in tackling this task courts will adopt a broad approach that gives weight to alternative modes of rationality in assessing and weighing risks and benefits. It is perhaps naïve to expect that through judicial efforts alone a formulation of the principle will emerge that can facilitate a broader inquiry of this type, respond to concerns invoked by the principle's critics

88 *Supra* note 1.

89 *Ibid.* at paras. 128-30.

90 *Ibid.* at para. 133.

91 *Ibid.* at para. 131.

92 Fisher, (2007) *supra* note 15 at 160 also registers some skepticism about the ultimate viability of Preston C.J.'s bifurcated approach noting that the experience of other jurisdictions suggests that "...the distinction between the scientific process of risk assessment and the political process of risk management is impossible to achieve in practice."

and provide meaningful judicial guidance in difficult cases. Still, these are early days. Scholarly work that elucidates the underlying tensions and perspectives that animate debate surrounding the principle remains in its infancy. In the end, the future role of the principle in domestic legal practice will depend both on the evolution of this scholarship and, as Fisher has rightfully emphasized, on the ability of lawyers to advocate for a nuanced approach to implementing the principle capable of persuading courts that, in very practical ways, it adds value to and is consistent with their competence and jurisdiction to supervise administrative action.