

# **Ecologically Sustainable Development in the Courts in Australia and Asia**

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## **1. INTRODUCTION**

Environmental law, as a field of learning, is comparatively recent, evolving mainly over the last forty years. One area of increasing importance, but comparatively little explored in judicial decisions, is the law concerning sustainable development. International, national, provincial and local law and policy-making bodies may have embraced principles of sustainable development, but they have been reticent to explicate their meaning, circumstances of application and precise details of the means of implementation. The judiciary, particularly at national levels, is therefore faced with the task of explicating the law of sustainable development, case by case.

This paper has this information-sharing goal as its purpose. It outlines, in brief, the role of the judiciary. It explicates the history and concept of sustainable development. It then focuses on four key elements or principles of sustainable development: the precautionary principle, inter and intragenerational equity, the conservation of biological diversity and ecological integrity, and the internalisation of environmental costs. For each of the elements or principles, the history and concept are explained, as well as, where applicable, decisions of national judiciaries in the Asia-Pacific Region. In addition, the concept of the public trust is addressed in a similar fashion.

## **2. ROLE OF THE JUDICIARY**

The achievement of ecologically sustainable development depends on the commitment and involvement of all arms of government – the legislature, executive and judiciary – as well as other relevant stakeholders.

*Agenda 21*, the programme of action for sustainable development, emphasises in Chapter 8, the need to provide an effective legal and regulatory framework:

“8.14 To effectively integrate environment and development in the policies and practices of each country, it is essential to develop and implement integrated, enforceable and effective laws and regulations that are based upon sound social, ecological, economic and scientific principles. It is equally critical to develop workable programmes to review and enforce compliance with the laws, regulations and standards that are adopted...”

8.18 Governments and legislators, with the support, where appropriate, of competent international organisations, should establish judicial and administrative procedures for legal redress and remedy of actions affecting environment and development that may be unlawful or infringe on rights under the law, and should provide access to individuals, groups and organisations with a recognised legal interest”.<sup>1</sup>

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<sup>1</sup> *Agenda 21*: paras 8.13 – 8.15 and 8.18. The full text of *Agenda 21* can be accessed via <http://www.un.org/esa/sustdev/documents/agenda21/english/Agenda21.pdf>

The judiciary has a crucial role to play in the interpretation, explication and enforcement of laws and regulations. As Kaniaru, Kurukulasuriya and Okidi state:

“The judiciary plays a critical role in the enhancement and interpretation of environmental law and the vindication of the public interest in a healthy and secure environment. Judiciaries have, and will most certainly continue to play a pivotal role both in the development and implementation of legislative and institution regimes for sustainable development. A judiciary, well informed on the contemporary developments in the field of international and national imperatives of environmentally friendly development will be a major force in strengthening national efforts to realise the goals of environmentally-friendly development and, in particular, in vindicating the rights of individuals substantively and in accessing the judicial process”.<sup>2</sup>

### 3. SUSTAINABLE DEVELOPMENT

#### 3.1 History

In 1972, 113 nations of the world gathered in Stockholm, Sweden to address growing concerns about the undesirable environmental and social spill over effects of economic growth.<sup>3</sup> The Stockholm Conference embraced the then embryonic concept of promoting economic development in an ecologically sustainable fashion. Two instruments, namely *The Declaration on the Human Environment*<sup>4</sup> and *The Action Plan for the Human Environment*<sup>5</sup> were produced at the Conference and the United Nations Environment Programme (UNEP) was established.

Following the Stockholm Conference, international governmental and non-governmental organisations took action to formulate programmes to implement the policies and principles enunciated at the Conference. Such international instruments and strategies included the *World Conservation Strategy* in 1980,<sup>6</sup> the

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<sup>2</sup> D Kaniaru, L Kurukulasuriya and C Okidi, “UNEP Judicial Symposium on the Role of the Judiciary in Promoting Sustainable Development”, a paper presented to the Fifth International Conference on Environmental Compliance and Enforcement, Monterey, California, USA, November 1998, p. 22 of conference proceedings.

<sup>3</sup> The conference was called the United Nations Conference on the Human Environment. See A Kiss and D Shelton, *International Environmental Law*, Transnational Publishers, 1991, p. 7; and P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed., Cambridge University Press, 2003, pp. 35–39.

<sup>4</sup> Reprinted in (1972) 11 ILM 1416. See also L B Sohn, “The Stockholm Declaration on the Human Environment” (1973) 14 *Harvard International Law Journal* 423; A Kiss and D Shelton, *International Environmental Law*, Transnational Publishers, 1991, pp. 36–42; and V Koester, “From Stockholm to Brundtland” (1990) 20 *Environmental Policy and Law* 14.

<sup>5</sup> Reprinted in (1972) 11 ILM 1421.

<sup>6</sup> IUCN, UNEP and WWF, *World Conservation Strategy: Living Resource Conservation for Sustainable Development*, Gland, Switzerland, 1980. The *World Conservation Strategy* was prepared by the International Union for the Conservation of Nature and Natural Resources (now known as The World Conservation Union or IUCN) collaborated with UNEP, the World Wildlife Fund (now known as the Worldwide Fund for Nature or WWF) and the United Nations Food and Agriculture Organisation (FAO). It identified a range of priorities and actions designed to achieve three main objectives: the maintenance of essential ecological processes and life support systems, the preservation of genetic diversity, and the sustainable use of species in ecosystems: see sections 2–7.

*World Charter for Nature* in 1982,<sup>7</sup> and *Caring for the Earth: A Strategy for Sustainable Living* in 1991.<sup>8</sup> Of particular importance was the 1987 report, *Our Common Future* (also known as the Brundtland Report), which was prepared by the World Commission on Environment and Development (WCED), an independent body established by the United Nations to address global environmental problems.<sup>9</sup> *Our Common Future* sets out a programme for integrating environmental concerns with economic goals by governments and the private sector at international, national and local levels.

On the recommendation of WCED, the United Nations General Assembly resolved to hold a comprehensive global conference on the environment and development. The United Nations Conference on the Environment and Development (also known as the Earth Summit) was held in 1992 in Rio de Janeiro, Brazil and attended by approximately 20,000 people from 178 countries.<sup>10</sup> Five documents enunciating the concept of ecologically sustainable development and recommending a programme of action for the implementation of the concept were signed at UNCED. They were:

- The *Rio Declaration on Environment and Development*;
- *Agenda 21*;
- The *Convention on Biological Diversity*;
- The *Framework Convention on Climate Change*; and
- The *Statement of Forest Principles*.

Building on the *Stockholm Declaration on the Human Environment*, the *Rio Declaration* adopted the principle of integration,<sup>11</sup> the precautionary principle,<sup>12</sup> the principle of intergenerational equity<sup>13</sup> and the “polluter pays” principle.<sup>14</sup> In addition, the *Rio Declaration* recognised, in Principle 11 that “States shall enact effective environmental legislation”.<sup>15</sup>

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<sup>7</sup> This was created by the United Nations General Assembly as a supplement to the *World Conservation Strategy*. It is reprinted in (1983) 22 ILM 455.

<sup>8</sup> IUCN, UNEP and WWF, *Caring for the Earth: A Strategy for Sustainable Living*, Earthscan, London, 1991. This report was designed to update the *World Conservation Strategy*. See P W Birnie and A E Boyle, *International Law and the Environment*, Clarendon Press, Oxford, 1992, pp. 428–430; and P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed., Cambridge University Press, 2003, pp. 47–48.

<sup>9</sup> See WCED, *Our Common Future*, Australian ed, Oxford University Press, Melbourne, 1990, p. 392; and E Brown Weiss, D Magraw and P Szasz, *International Environmental Law: Basic Instruments and References*, Transnational Publishers, 1992, p. 188; P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed., Cambridge University Press, 2003, pp. 48–50; and MC Cordonier Segger and A Khalfan, *Sustainable Development Law: Principles, Practices and Prospects*, Oxford University Press, 2004, pp. 18–19.

<sup>10</sup> B Boer, “The Globalisation of Environmental Law: The Role of the United Nations” (1995) 20 *Melbourne University Law Review* 101 at 103; and P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed., Cambridge University Press, 2003, pp. 52 – 53.

<sup>11</sup> *Rio Declaration*: Principle 4. The full text can be accessed via

<http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=78&ArticleID=1163>.

<sup>12</sup> *Rio Declaration*: Principle 15.

<sup>13</sup> *Rio Declaration*: Principle 3.

<sup>14</sup> *Rio Declaration*: Principle 16.

<sup>15</sup> For a discussion of the *Rio Declaration on Environment and Development*, see P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed., Cambridge University Press, 2003, pp. 54-57.

*Agenda 21*, comprised of 40 chapters and hundreds of programme areas, was created as a plan of action designed to integrate environmental development concerns for the “fulfilment of basic needs, improved living standards for all, better protection and managed ecosystems and a safer, more prosperous future”.<sup>16</sup> The programme areas are grouped into four topics, namely, social and economic dimensions, conservation and management of resources for development, strengthening the role of major groups, and the means of implementation.

In Australia, Commonwealth and State and Territory Governments, in response to action plans at the international level, adopted the *National Conservation Strategy for Australia* in 1983, and in 1992, agreed upon the *Intergovernmental Agreement on the Environment* (IGAE). The IGAE set out the four well-known principles of ecologically sustainable development – the precautionary principle, intergenerational equity, conservation of biological diversity and ecological integrity, and improved valuation, pricing and incentive mechanisms. It recognised that the principles should inform policy-making and programme implementation.<sup>17</sup>

Following UNCED, Australia finalised the *National Strategy for Ecologically Sustainable Development* which includes as appendices a summary of the IGAE, the *Rio Declaration*, and *Agenda 21*, and thus, in effect, incorporates both national and international instruments as policies of both the Commonwealth, and State and Territory Governments.<sup>18</sup>

Meanwhile, on the international stage, the Economic and Social Council of the United Nations established the Commission on Sustainable Development in 1993 to monitor the implementation of *Agenda 21*. In June 1997, the General Assembly of the United Nations held a Special Session (known as Earth Summit + 5) for a five-year review of the progress of the UNCED goal and objectives. It adopted a Programme for the Further Implementation of *Agenda 21* prepared by the Commission of Sustainable Development.

In 2000, the General Assembly of the United Nations adopted the *Millennium Declaration*.<sup>19</sup> This Declaration stated certain “fundamental values” to be essential to international relations in the 21<sup>st</sup> Century including “respect for nature” and identified key objectives including “protecting our common environment”.<sup>20</sup>

In 2002, at the World Summit on Sustainable Development held in Johannesburg, South Africa, the *Johannesburg Plan of Implementation* was adopted which built upon the achievements made since UNCED and sought to expedite the realisation of the goals by promoting “the integration of the interpretation of the three components of sustainable development – economic development, social

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<sup>16</sup> *Agenda 21*: Chapter 1, para 1.1. For a discussion of *Agenda 21*, see P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed., Cambridge University Press, 2003, pp. 57–59.

<sup>17</sup> *Intergovernmental Agreement on the Environment*: Clause 3.5. The IGAE can be accessed via <http://www.deh.gov.au/esd/national/igae/index.html>

<sup>18</sup> *National Strategy for Ecologically Sustainable Development*: Appendices A B & C respectively. The Strategy can be accessed via <http://www.deh.gov.au/esd/national/nsesd/strategy/index.html>

<sup>19</sup> *United Nations Millennium Declaration*, GA Res. 55/2 (2000). The Declaration can be accessed via <http://www.ohchr.org/english/law/millennium.htm>

<sup>20</sup> *United Nations Millennium Declaration*: paras 6-7.

development and environmental protection – as interdependent mutually reinforcing pillars.”<sup>21</sup> The Plan emphasised the need for implementation of appropriate policies at the domestic level and the need to strengthen institutional arrangements on sustainable development.

Also, in Johannesburg in 2002, UNEP organised a Global Judges Symposium on Sustainable Development and the Role of Law. The representatives adopted the *Johannesburg Principles on the Role of Law and Sustainable Development*, which enunciated various affirmations and principles that should guide the judiciary in promoting the goals of sustainable development through the application of the rule of law and the democratic process.<sup>22</sup>

### 3.2 Concept

The original concept of sustainable development articulated in *Our Common Future* is of “development that meets the needs of the present without compromising the future of generations to meet their own needs.”<sup>23</sup> In Australia, the adjective “sustainable” is qualified by “ecologically” to emphasise the necessary integration of economy and environment.<sup>24</sup>

Ecologically sustainable development involves a cluster of elements or principles. Six are worth highlighting.

First, from the very name itself comes the principle of sustainable use - the aim of exploiting natural resources in a manner which is “sustainable” or “prudent” or “rational” or “wise” or “appropriate”.<sup>25</sup> The concept of sustainability applies not merely to development but to the environment. The *Australian National Strategy for Ecologically Sustainable Development* makes this explicit in defining ecologically sustainable development as “development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends”<sup>26</sup>.

Secondly, ecologically sustainable development requires the effective integration of economic and environmental considerations in the decision-making process<sup>27</sup>. This is the principle of integration. It was the philosophical underpinning of the

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<sup>21</sup> *Johannesburg Plan of Implementation*: para 2. The Plan can be accessed via [http://www.johannesburgsummit.org/html/documents/summit\\_docs/2309\\_planfinal.htm](http://www.johannesburgsummit.org/html/documents/summit_docs/2309_planfinal.htm) See also MC Cordonier Segger and A Khalfan, *Sustainable Development Law: Principles, Practices & Prospects*, Oxford University Press, 2004, pp. 25-43; and P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> edn, Cambridge University Press, 2003, pp. 66-69.

<sup>22</sup> *Johannesburg Principles on the Role of Law and Sustainable Development*, adopted at the Global Judges Symposium on Sustainable Development and the Role of Law, Johannesburg, South Africa, 18-20 August 2002.

<sup>23</sup> WCED, *Our Common Future*, 1987, p. 44.

<sup>24</sup> G Bates, *Environmental Law in Australia*, 5<sup>th</sup> edn, Lexis Nexis Butterworths, 2002, p. 125[5.15].

<sup>25</sup> P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed, Cambridge University Press, 2003 at p. 253.

<sup>26</sup> *National Strategy for Ecologically Sustainable Development*, Australian Government Publishing Service, 1992 at p. 8.

<sup>27</sup> see the chapeau to the definition of ecologically sustainable development in s 6(2) of the *Protection of the Environment Administration Act 1991* (NSW) adopted by s 4(1) of the EPA Act and Principle 4 of the *Rio Declaration on Environment and Development*.

report *Our Common Future*. That report recognised that the ecologically harmful cycle caused by economic development without regard to and at the cost of the environment could only be broken by integrating environmental concerns with economic goals.

The principle of integration ensures mutual respect and reciprocity between economic and environmental considerations. The principle recognises the need to ensure not only that environmental considerations are integrated into economic and other development plans, programmes and projects but also that development needs are taken into account in applying environmental objectives.<sup>28</sup>

The principle has been refined in recent times to add social development to economic development and environmental protection. The Plan of Implementation of the World Summit on Sustainable Development held in Johannesburg, 2002, notes that efforts need to be taken to:

“promote the integration of the three components of sustainable development – economic development, social development and environmental protection – as interdependent and mutually reinforcing pillars. Poverty eradication, changing unsustainable patterns of production and consumption and protecting and managing the natural resource base of economic and social development are overarching objectives of, and essential requirements for, sustainable development”.<sup>29</sup>

Thirdly, there is the precautionary principle. There are numerous formulations of the precautionary principle but the most widely employed formulation adopted in Australia is that stated in s 6(2)(a) of the *Protection of the Environment Administration Act 1991* (NSW). This provides:

“...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.

In the application of the precautionary principle, public and private decisions should be guided by:

- (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
- (ii) an assessment of the risk-weighted consequence of various options”.<sup>30</sup>

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<sup>28</sup> See P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed, Cambridge University Press, 2003 at p. 253.

<sup>29</sup> at paragraph 2.

<sup>30</sup> See also s 3.5.1 of the *Intergovernmental Agreement on the Environment*, 1992.

Principle 15 of the *Rio Declaration on Environment and Development* is expressed in similar terms.

Fourthly, there are principles of equity. There is a need for inter-generational equity - the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.<sup>31</sup>

There is also a need for intra-generational equity. This involves considerations of equity within the present generation, such as use of natural resources by one nation-state (or sector or class within a nation-state) needing to take account of the needs of other nation-states (or sectors or classes within a nation-state).<sup>32</sup> It involves people within the present generation having equal rights to benefit from the exploitation of resources and from the enjoyment of a clean and healthy environment.<sup>33</sup>

Fifthly, there is the principle that conservation of biological diversity and ecologically integrity should be a fundamental consideration.<sup>34</sup>

Sixthly, ecologically sustainable development involves the internalisation of environmental costs into decision-making for economic and other development plans, programmes and projects likely to affect the environment. This is the principle of the internalisation of environmental costs. The principle requires accounting for both the short-term and the long-term external environmental costs. This can be undertaken in a number of ways including:

- (a) environmental factors being included in the valuation of assets and services;
- (b) adopting the polluter pays (or user pays) principle, that is to say, those who generate pollution and waste should bear the costs of containment, avoidance or abatement;
- (c) the users of goods and services paying prices based on the full life cycle of the costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste; and

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<sup>31</sup> see s 6(2)(b) of the *Protection of the Environment Administration Act 1991*; s 3.5.2 of the *Intergovernmental Agreement on the Environment*; and Principle 3 of the *Rio Declaration on Environment and Development*.

<sup>32</sup> P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed, Cambridge University Press, 2003 at p. 253 and E Brown Weiss, "Intergenerational Equity: a legal framework for global environmental change" in E Brown Weiss (ed), *Environmental Change and International Law: New Challenges and Dimensions*, UN University Press, 1992, p. 385 at pp. 397-398.

<sup>33</sup> B Boer, "Institutionalising Ecologically Sustainable Development: The Role of National, State and Local Governments in Translating Grand Strategy into Action" (1995) 31 *Willamette Law Review* 307 at 320.

<sup>34</sup> s 6(2)(c) of the *Protection of the Environment Administration Act 1991*; s 3.5.3 of the *Intergovernmental Agreement on the Environment*; and *Bentley v BGP Properties Pty Ltd* (2006) 145 LGERA 234 at 243-244 [58]-[63].

- (d) environmental goals, having been established, being pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.<sup>35</sup>

These principles do not exhaustively describe the full ambit of the concept of ecologically sustainable development, but they do afford guidance in most situations. These principles, if adequately implemented, may ultimately realise a paradigm shift from a world in which the development of the environment takes place without regard to environmental consequences, to one where a culture of sustainability extends to institutions, private development interests, communities and individuals.<sup>36</sup>

I will elaborate on four of these principles: the precautionary principle, inter and intra generational equity, conservation of biological diversity and ecological integrity and internalisation of environmental costs and improved valuation and pricing.

## 4. THE PRECAUTIONARY PRINCIPLE

### 4.1 History

The precautionary principle (termed *Vorsorgeprinzip*) had its origins in German law, and is still considered to be the most important principle of German environmental policy.<sup>37</sup>

The principle was first formally acknowledged internationally in the Preamble to the 1985 *Vienna Convention for the Protection of the Ozone Layer*, in which the Parties acknowledged the “precautionary measures” which had already been undertaken at both the national and international levels in relation to the protection of the ozone layer.<sup>38</sup> Building on this recognition, in 1987, the Parties to the *Montreal Protocol on Substances that Deplete the Ozone Layer* agreed to take “precautionary measures” to control global emissions of ozone depleting

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<sup>35</sup> See s 6(2)(d) of the *Protection of the Environment Administration Act* 1991 and s 3.5.4 of the *Intergovernmental Agreement on the Environment* 1992.

<sup>36</sup> B Boer, “The Globalisation of Environmental Law” (1995) 20 *Melbourne University Law Review* 101 at 111.

<sup>37</sup> S Boehmer – Christiansen, “The Precautionary Principle in Germany- enabling Government” in O’Riordan and J Cameron (eds), *Interpreting the Precautionary Principle*, Earthscan Publications, 1994, pp. 31–60; J Cameron and J Abouchar, “The precautionary principle: A fundamental principle of law and policy for the protection of the global environment” (1991) 14 (1) *Boston College International and Comparative Law Review* 1 at 6-7; N de Sadeleer, *Environmental Principles, From Political Slogans to Legal Rules*, Oxford University Press, 2002, pp. 93, 125-130 MC Cordonier Segger and A Khalfan, *Sustainable Development Law: Principles, Practices & Prospects*, Oxford University Press, 2004, pp. 143-144; and P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed., Cambridge University Press, 2003, p. 267;.

<sup>38</sup> *Vienna Convention for the Protection of the Ozone Layer*: Preamble. Reprinted in 26 ILM 1516 (1987).

substances and noted the “precautionary measures” already undertaken at national and regional levels in relation to the emission of chlorofluorocarbons.<sup>39</sup>

The need for a “precautionary approach” was also recognised in the sequences of conferences on the North Sea.<sup>40</sup> In the Third North Sea Conference in 1990, the participants agreed to:

“continue to apply the Precautionary Principle, that is to take action to avoid potentially damaging impacts of substances that are persistent, toxic and liable to bioaccumulate even where there is no scientific evidence to prove a causal link between emission and effects”.<sup>41</sup>

This process led to the inclusion of the precautionary principle in the *Convention on the Protection of the Marine Environment of the North-East Atlantic* (the OPSAR Convention) of 1992.<sup>42</sup>

In 1990, the *Bergen Ministerial Declaration on Sustainable Development in the Economic Commission for Europe Region* was the first international instrument to treat the principle as one of general application and linked to sustainable development. The Declaration states:

“In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent, and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation”.<sup>43</sup>

Following this, the precautionary principle appeared in a number of international instruments including the *Convention on the Ban of Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa* (the Bamako Convention) of 1991,<sup>44</sup> the *Convention on the Protection of the Marine Environment of the North-East Atlantic* (the OPSAR Convention) of 1992,<sup>45</sup> and the *Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes* of 1992.<sup>46</sup> Many other

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<sup>39</sup> *Montreal Protocol on Substances that Deplete the Ozone Layer*: paras 6 and 8. Reprinted in 26 ILM 1541 (1987).

<sup>40</sup> P Sands, *Principles of International and Environmental Law*, 2<sup>nd</sup> ed, Cambridge University Press, 2003, p. 269 and N. de Sadeleer, *Environmental Principles, From Political Slogans to Legal Rules*, Oxford University Press, 2002, p. 94.

<sup>41</sup> *Third North Sea Conference Ministerial Declaration*, 1990: Reprinted in 1 *Yearbook of International Environmental Law* 658 at 662-673 and quoted in MC Cordonier Segger and A Khalfan, *Sustainable Development Law: Principles, Practices & Prospects*, Oxford University Press, 2004, p. 146.

<sup>42</sup> *Convention on the Protection of the Marine Environment of the North-East Atlantic*: Article 2(2)(a). Reprinted in 32 ILM 1069 (1993). This Convention is not yet in force.

<sup>43</sup> *Bergen Ministerial Declaration on Sustainable Development in the Economic Commission for Europe Region*: para 7. As quoted in P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed., Cambridge University Press, 2003, p. 269.

<sup>44</sup> The Bamako Convention came into force April 1998. Reprinted in 30 ILM 773 (1991).

<sup>45</sup> *Convention on the Protection of the Marine Environment of the North-East Atlantic*: Article 2(2)(a). Reprinted in 32 ILM 1069 (1993). This Convention is not yet in force.

<sup>46</sup> *Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes*: Article 2(5)(a). Reprinted in 31 ILM 1312 (1992).

conventions have subsequently committed their Parties to apply the precautionary principle.<sup>47</sup>

The four instruments signed at the UNCED (the Earth Summit) in Rio de Janeiro also refer to the precautionary principle.<sup>48</sup> The *Rio Declaration* states in Principle 15:

“In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used a reason for postponing cost-effective measures to prevent environmental degradation”.

In Australia, as mentioned above, the precautionary principle is expressed in the 1992 *Intergovernmental Agreement on the Environment* as a key principle to be considered in environmental decision-making.<sup>49</sup> At the Commonwealth level, the precautionary principle is stated in a number of enactments including the *Great Barrier Reef Marine Park Act 1975* (Cth),<sup>50</sup> and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).<sup>51</sup>

In New South Wales, the precautionary principle has been included in many pieces of legislation.<sup>52</sup> However, it was not until the enactment of the *Protection of the Environment Administration Act 1991* (NSW) that the precautionary principle was explicitly referred to. Section 6(2) of the *Protection of the Environment Administration Act 1991* (NSW) includes the precautionary principle as a key element of ecologically sustainable development, in addition to the other generally accepted elements of intergenerational equity, conservation of biological diversity and improved valuation, pricing and incentive mechanisms. Other pieces of legislation in New South Wales which now expressly refer to the principles of ecologically sustainable development include the *Environmental Planning and Assessment Act 1979* (NSW) and the *Threatened Species Conservation Act 1995* (NSW).<sup>53</sup>

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<sup>47</sup> See the Conventions cited in P Sands, *Principles of International and Environmental Law*, 2<sup>nd</sup> ed, Cambridge University Press, 2003, p. 271 and N. de Sadeleer, *Environmental Principles, From Political Slogans to Legal Rules*, Oxford University Press, 2002, p. 98.

<sup>48</sup> The two Conventions have now come into force and are thus binding under international law: the *Convention on Biological Diversity* on 29 December 1993; the *United Nations Framework Convention on Climate Change* on 24 March 1993.

<sup>49</sup> *Intergovernmental Agreement on the Environment*: Section 3.5.1.

<sup>50</sup> *Great Barrier Reef Marine Park Act 1975* (Cth): s 39Z(1)

<sup>51</sup> *Environment Protection and Conservation Act 1999* (Cth): Section 3.

<sup>52</sup> A list of the legislation, as at 1999, which expressly include the principles of ecologically sustainable development can be found in P Stein and S Mahony, “Incorporating Sustainability Principles in Legislation” in P Leadbeater, N Gunningham and B Boer (eds) *Environmental Outlook No 3: Law and Policy*, Federation Press, 1999, pp. 73–74. As at 2004, see the discussion in *BGP Properties Pty Ltd v Lake Macquarie City Council* (2004) 138 LGERA 237 at 253–254.

<sup>53</sup> See P Stein and S Mahony, “Incorporating Sustainability Principles in Legislation” in P Leadbeater, N Gunningham and B Boer (eds) *Environmental Outlook No 3: Law and Policy*, Federation Press, 1999, pp. 62–63. For examples of where the precautionary principle has been held to be a relevant consideration in environmental decision-making, see *BGP Properties Pty Ltd v Lake Macquarie City Council* (2004) 138 LGERA 237 at 262[113]; and *BT Goldsmith Planning Services Pty Limited v Blacktown City Council* [2005] NSWLEC 210 at [56]–[57].

## 4.2 Judicial decisions

### 4.2.1 Australia

The precautionary principle was embraced by the Australian courts shortly after the UNCED (Earth Summit) and adoption of the *Rio Declaration* in 1992. The case of *Leatch v National Parks and Wildlife Service*<sup>54</sup> was the first to discuss the precautionary principle in a meaningful way. The case was an appeal in the Land and Environment Court of New South Wales which involved a merits review of a decision of the Director-General of National Parks and Wildlife to issue a licence which gave permission to a local government authority, Shoalhaven City Council, to take and kill endangered fauna from an area of natural bushland where a road was proposed to be constructed. The endangered fauna included the Giant Burrowing Frog and the Yellow-bellied Glider.

After surveying the adoption of the precautionary principle in international, national and state jurisdictions, Stein J referred to the submission on behalf of the Director-General that the precautionary principle could be seen to have been incorporated into domestic law and continued:

“On behalf of the Director-General, Mr Preston made submissions on the incorporation of international law into domestic law. It seems to me unnecessary to enter into this debate. In my opinion the precautionary principle is a statement of commonsense 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”.<sup>55</sup>

On this basis, Stein J held that:

“While there is no express provision requiring consideration of the ‘precautionary principle’, consideration of the state of knowledge or uncertainty regarding a species, the potential for serious or irreversible harm to an endangered fauna and the adoption of a cautious approach in protection of endangered fauna is clearly consistent with the subject matter, scope and purpose of the Act”.<sup>56</sup>

Upon applying the precautionary principle, Stein J held there had been inadequate assessment of the need for the particular road, and that a “cautious approach” should be taken in respect of the Giant Burrowing Frog.<sup>57</sup>

The precautionary principle was next raised in *Nicholls v Director-General of National Parks and Wildlife*,<sup>58</sup> another appeal by a third party objector involving merits review. Talbot J accepted Stein J’s approach, holding that the precautionary

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<sup>54</sup> (1993) 81 LGERA 270.

<sup>55</sup> (1993) 81 LGERA 270 at 282.

<sup>56</sup> (1993) 81 LGERA 270 at 282-283.

<sup>57</sup> (1993) 81 LGERA 270 at 284, 286-287.

<sup>58</sup> (1994) 84 LGERA 397.

principle was a practical approach which the Court found axiomatic when dealing with environmental assessment.<sup>59</sup> However, Talbot J characterised the precautionary principle as a “political aspiration”<sup>60</sup> and refused to accept the applicant’s submission, that the Court was obliged to go further and take Australia’s international obligations into account when determining the application for a licence to take or kill endangered fauna.

Talbot J determined that, in this case, the Court could make an informed evaluation of the potential for damage to endangered species on the basis of the environmental impact statement and the fauna impact statement.<sup>61</sup> The Court decided to issue the licence “subject to conditions which take account of the need for ongoing survey research and assessment which enables the Director General to be kept up to date so that the conditions of the licence can be varied or the licence revoked according to the evolving circumstances.”<sup>62</sup>

In *Greenpeace Australia Ltd v Redbank Power Company Pty Ltd and Singleton Council*,<sup>63</sup> Greenpeace Australia Ltd appealed as a third party objector to the Land and Environment Court against a decision of Singleton Council to grant development consent for the construction of a power station and ancillary facilities in the Hunter Valley. While Greenpeace contended that the impact of the development would unacceptably exacerbate the “greenhouse effect” and thus the Court should apply the precautionary principle, the power company emphasised the countervailing, environmentally beneficial effects of the project. After considering the precautionary principle, Pearlman J evaluated the need for the project and concluded that the “greenhouse issue should not outweigh all other factors relevant to a determination of whether or not to grant consent”.<sup>64</sup> Development consent was approved on conditions, including that there be a tree planting programme.

In *Northcompass Inc. v Hornsby Shire Council*<sup>65</sup> and *Alumino (Aust) Pty Ltd v Minister Administering the Environmental Planning and Assessment Act 1979 (NSW)*,<sup>66</sup> the precautionary principle was again discussed and considered by Stein J and Talbot J respectively. However, the Land and Environment Court still did not explore the concept or explicate what was required for its implementation at any great length.

In *Friends of Hinchinbrook Society Inc v Minister for Environment*,<sup>67</sup> the applicant challenged consents granted by the Commonwealth Minister for the Environment under the *World Heritage Properties Conservation Act 1983* (Cth) to dredge a marina access channel and to cut and remove mangroves in certain areas. Amongst many grounds of judicial review raised, the applicant submitted that the Minister’s decision was vitiated by his failure to have regard to a relevant

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<sup>59</sup> (1994) 84 LGERA 397 at 419.

<sup>60</sup> (1994) 84 LGERA 397 at 419.

<sup>61</sup> (1994) 84 LGERA 397 at 419.

<sup>62</sup> (1994) 84 LGERA 397 at 421.

<sup>63</sup> (1994) 86 LGERA 143.

<sup>64</sup> (1994) 86 LGERA 143 at 155.

<sup>65</sup> (1996) 130 LGERA 248.

<sup>66</sup> [1996] NSWLEC 102 (29 March 1996).

<sup>67</sup> (1997) 93 LGERA 249.

consideration, namely the precautionary principle. To succeed on this ground, the applicant had to establish that the Minister was bound by necessary implication to consider the precautionary principle having regard to the subject matter, scope or purpose of the *World Heritage Properties Conservation Act* 1983 (Cth).<sup>68</sup>

After referring to the approaches taken in *Leatch v National Parks and Wildlife Service*<sup>69</sup> and *Nicholls v Director-General of National Parks and Wildlife*,<sup>70</sup> Sackville J of the Federal Court held that, to the extent that the Minister was required to take into account the “commonsense principle that caution should be exercised where scientific opinion is divided or scientific information is incomplete,” he did so.<sup>71</sup>

In *Carstens v Pittwater Council*,<sup>72</sup> the applicant appealed to a judge of the Land and Environment Court against the decision of a Commissioner to refuse the applicant’s appeal against the decision of the local council not to approve a development application for a dwelling house and associated works. In determining whether the Commissioner erred in law by holding that the principles of ecologically sustainable development were a relevant factor to be considered under s 79C(1) of the *Environmental Planning and Assessment Act* 1979, Lloyd J held that:

“it is not an irrelevant consideration for the decision-maker to take into account a matter relating to the objects of the Act. One of those objects is to encourage ecologically sustainable development (s 5(a)(vii)). Moreover, one of the considerations expressly mentioned in s 79C(1) is “(e) the public interest”. In my opinion it is in the public interest, in determining a development application, to give effect to the objects of the Act. For these reasons I do not accept the submission that the Commissioner erred in holding that the principles of ESD must be a factor in the consideration of a combined development application and construction certificate”.<sup>73</sup>

In *Conservation Council of South Australia v Development Assessment Committee and Tuna Boat Owners Association (No. 2)*,<sup>74</sup> the Conservation Council of South Australia, appealed by way of merits review to the Environment, Resources and Development Court of South Australia (ERD Court) against the decision of the Development Assessment Commission to grant development consent to the establishment of tuna farms in the waters of Louth Bay in Spencer Gulf, South Australia. After explaining the rationale underlying the precautionary principle and discussing the reversal of the burden of proof, the Court assessed the development application against the principles of ecologically sustainable development and the precautionary principle and concluded that the appeal should be upheld and development consent refused.

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<sup>68</sup> See *Minister for Aboriginal Affairs v Peko Wallsend Ltd* (1986) 162 CLR 24 at 39-40.

<sup>69</sup> (1993) 81 LGERA 270.

<sup>70</sup> (1994) 84 LGERA 397.

<sup>71</sup> (1997) 93 LGERA 249 at 297.

<sup>72</sup> (1999) 111 LGERA 1.

<sup>73</sup> (1999) 111 LGERA 1 at 25.

<sup>74</sup> [1999] SAERDC 86 (16 December 1999).

This decision was subject to an appeal to a Full Court of the Supreme Court of South Australia in *Tuna Boat Owners Association of SA Inc. v Development Assessment Commission*.<sup>75</sup> One ground of appeal was that the ERD Court was in error in determining for itself whether the proposed development was ecologically sustainable. The appellant submitted that the ERD Court should leave it to the Minister to determine whether the proposed development would be operated in an ecologically sustainable manner.<sup>76</sup> The Full Court rejected that submission, holding that “the terms of the DP [Development Plan] are such that the ERD Court, as a planning authority, was required to consider whether the proposed development would be ecologically sustainable”.<sup>77</sup> The Court also rejected the appellant’s submission that the ERD Court erred in placing the onus of proof on the proponent of the development to justify the grant of development consent.<sup>78</sup>

In *Hutchinson Telecommunications (Australia) Pty Limited v Baulkham Hills Shire Council*,<sup>79</sup> the applicant appealed to the Land and Environment Court for a merits review of the decision of the local council to refuse development consent for the installation of telecommunications infrastructure. The evidence established that the levels of radiofrequency electromagnetic radiation from the development would comply, by a significant margin, with the adopted Radiation Protection Standard. Pain J accepted that the precautionary principle is a relevant consideration under s 79C of the *Environmental Planning and Assessment Act* 1979 given the reference to ecologically sustainable development in the objects of the Act.<sup>80</sup> After determining that there was no threat of serious or irreversible environmental damage from the proposed development, Pain J concluded that the Court should not impose conditions requiring a stricter level of precaution than was justified by the evidence and the relevant standard.<sup>81</sup>

In *BGP Properties Pty Ltd v Lake Macquarie City Council*,<sup>82</sup> the applicant appealed against the refusal of the local council to subdivide land into 48 lots for industrial land and storage. The land contained a threatened ecological community, the Sydney Freshwater Wetland, and a threatened species of plant, *Tetrapetra juncea*. McClellan CJ reviewed the evolution of the concept of ecologically sustainable development and its incorporation in various statutes in NSW as an object and as a factor for consideration in certain circumstances and/or by certain persons.<sup>83</sup> McClellan CJ disagreed with Talbot J’s characterisation of the precautionary principle as a “political aspiration,” and held that:

“113. In my opinion, by requiring a consent authority (including the Court) to have regard to the public interest, s 79C(1)(e) of the EP&A Act [*Environmental Planning and Assessment Act* 1979 (NSW)] obliges the decision maker to have regard to the principles of ecologically sustainable development in cases where issues relevant to those principles arise. This will have the consequence that, amongst other matters, consideration must

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<sup>75</sup> (2000) 110 LGERA 1.

<sup>76</sup> (2000) 110 LGERA 1 at 9[42].

<sup>77</sup> (2000) 110 LGERA 1 at 10 [48] per Doyle CJ with whom Duggan and Lander JJ agreed.

<sup>78</sup> (2000) 110 LGERA 1 at 6[27]–7[30] per Doyle CJ with whom Duggan and Lander JJ agreed.

<sup>79</sup> [2004] NSWLEC 104 (26 March 2006).

<sup>80</sup> [2004] NSWLEC 104 (26 March 2006) at [26].

<sup>81</sup> [2004] NSWLEC 104 (26 March 2006) at [27].

<sup>82</sup> (2004) 138 LGERA 237.

<sup>83</sup> (2004) 138 LGERA 237 at 252[85]-256[97].

be given to matters of inter-generational equity, conservation of biological diversity and ecological integrity. Furthermore, where there is a lack of scientific certainty, the precautionary principle must be utilised. As Stein J said in *Leatch*, this will mean that the decision-maker must approach the matter with caution but will also require the decision-maker to avoid, where practicable, serious or irreversible damage to the environment.

Consideration of these principles does not preclude a decision to approve an application in any cases where the overall benefits of the project outweigh the likely environmental harm. However, care needs to be taken to determine whether appropriate and adequate measures have been incorporated into such a project to confine any likely harm to the environment".<sup>84</sup>

The Court evaluated the evidence, applying this approach, and concluded that the impacts, particularly on the threatened ecological community, were such as to warrant refusal of the development application.<sup>85</sup>

McClellan CJ's approach to the precautionary principle was endorsed by Pain J in *BT Goldsmith Planning Services Pty Limited v Blacktown City Council*.<sup>86</sup> In that case, Pain J held that "the precautionary principle can have wide application"<sup>87</sup> and took a precautionary approach to the consideration of factors relevant to determine the likelihood of significant impact on a community listed as an endangered ecological community under the *Threatened Species Conservation Act* 1995 (NSW).<sup>88</sup>

In *Port Stephens Pearls Pty Ltd v Minister for Infrastructure and Planning*,<sup>89</sup> the applicant appealed by way of merits review against the decision of the relevant consent authority, the Minister, to refuse development consent to a development application to establish a pearl farm in the waters of Port Stephens, New South Wales. The Minister was concerned about the likely impacts of the pearl farm such as the risks and potential consequences of the development on marine life, including dolphins, the visual impact of a plume in the water created by cleaning and maintenance activities, incompatibility with other users of the waterway and inconsistency with the proposed creation of a marine national park.<sup>90</sup>

In evaluating the evidence on these issues, the applicability of the principles of ecologically sustainable development arose for determination. Talbot J held that, since the publication of the judgment in *Nicholls v Director General of National Parks and Wildlife Service*,<sup>91</sup> the precautionary principle had become more than a 'political aspiration'. Talbot J adopted the approach foreshadowed by the ERD Court of South Australia in *Tuna Boat Owners Association of SA Inc v Development Assessment Commission and Another*,<sup>92</sup> and concluded that:

<sup>84</sup> (2004) 138 LGERA 237 at 262 [113]-[114].

<sup>85</sup> (2004) 138 LGERA 237 at 271[150], 272[160], 278[202]-[203] and 280[220].

<sup>86</sup> [2005] NSWLEC 210 (1 July 2005)

<sup>87</sup> [2005] NSWLEC 210 (1 July 2005) at [72].

<sup>88</sup> [2005] NSWLEC 210 (1 July 2005) at [73].

<sup>89</sup> [2005] NSWLEC 426 (15 August 2005).

<sup>90</sup> [2005] NSWLEC 426 (15 August 2005), [32].

<sup>91</sup> (1994) 84 LGERA 397

<sup>92</sup> (2000) 110 LGERA 1 at [35]

“...after adopting the principle expressed and taking account of the proposed conditions of consent, in this case I am satisfied there can be a monitoring regime that will detect any emerging adverse impacts in regard to water quality, the effect on seagrasses and the impact on marine animals (particularly the population of resident dolphins) and thus enable the appropriate authority to require them to be addressed if and when they arise”.<sup>93</sup>

In *Providence Projects Pty Ltd v Gosford City Council*,<sup>94</sup> the applicant appealed to the Land and Environment Court by way of merits review against the refusal of a proposed retirement village by Gosford City Council on a site which contained an endangered ecological community, the Umina Coastal Sandplain Woodland (“UCSW”). There was scientific uncertainty as to the threat or risk of serious or irreversible environmental damage that might be caused to the endangered ecological community by the carrying out of the proposed development. Bignold J invoked the precautionary principle to resolve the scientific uncertainty.<sup>95</sup>

Bignold J also followed the decision in *B T Goldsmith Planning Services Pty Limited v Blacktown City Council*<sup>96</sup> that the precautionary principle was applicable to the consideration of the factors enumerated in s 5A of the *Environmental Planning and Assessment Act 1979* (NSW) relevant to determine the likelihood of significant impact on a community listed as an endangered ecological community under the *Threatened Species Conservation Act 1996* (NSW).<sup>97</sup>

In *Gales Holdings Pty Limited v Tweed Shire Council*,<sup>98</sup> the applicant appealed against the deemed refusal by Tweed Shire Council of a shopping and commercial development. Located on the development site was a threatened species, the Mitchell’s Rainforest Snail. The Council raised a preliminary point of whether the development application should be accompanied by a species impact statement (“SIS”). A SIS is required to accompany a development application under the *Environmental Planning and Assessment Act 1979* (NSW) if the development proposed in the development application is likely to significantly affect threatened species, populations or ecological communities, or their habitats.<sup>99</sup>

Talbot J held that the precautionary principle is a relevant factor to take into account in the determination of whether an SIS is required and that, as the proposed development was likely to significantly affect the threatened species, an SIS was required before the development application could be determined.<sup>100</sup>

In *Telstra Corporation Limited v Hornsby Shire Council*,<sup>101</sup> the applicant appealed to the Land and Environment Court by way of merits review against the refusal of

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<sup>93</sup> [2005] NSWLEC 426 (15 August 2005) at [58].

<sup>94</sup> [2006] NSWLEC 52 (17 February 2006)

<sup>95</sup> [2006] NSWLEC 52 (17 February 2006)

<sup>96</sup> [2005] NSWLEC 210 (1 July 2005).

<sup>97</sup> [2006] NSWLEC 52 (17 February 2006), [80].

<sup>98</sup> [2006] NSWLEC 85 (27 February 2006)

<sup>99</sup> Section 78A(8)(b) of the *Environmental Planning and Assessment Act 1979* (NSW).

<sup>100</sup> [2006] NSWLEC 85 (27 February 2006), [56], [61], [69].

<sup>101</sup>(2006) 146 LGERA 10.

the relevant consent authority, Hornsby Shire Council, of a proposed mobile telephone base station. The primary ground of refusal was the concern of the Council and certain residents that the radiofrequency electromagnetic energy emitted from the proposed facility might adversely affect the health and safety of the residents in the vicinity. The Council and the residents urged the Court to apply the precautionary principle to refuse consent to the proposed facility.

The judgment contains one of the most detailed and comprehensive elaborations of the precautionary principle in a national court decision to date. Preston CJ offered the following guidance on the concept of the precautionary principle and its application:

1. The application of the precautionary principle and the concomitant need to take precautionary measures is triggered by the satisfaction of two conditions precedent or thresholds: a threat of serious or irreversible environmental damage and scientific uncertainty as to the environmental damage. These are cumulative.<sup>102</sup>
2. As to the first condition precedent, it is not necessary that serious or irreversible environmental damage actually have occurred – it is the *threat* of such damage that is required. The environmental damage threatened must attain the threshold of being *serious or irreversible*.<sup>103</sup>
3. The threat of environmental damage must be adequately sustained by scientific evidence.<sup>104</sup>
4. If there is no threat of serious or irreversible environmental damage, there is no basis upon which the precautionary principle can operate.<sup>105</sup>
5. As to the second condition precedent, the lack of full scientific certainty, the uncertainty is in relation to the nature and scope of the threat of environmental damage.<sup>106</sup>
6. The degree of scientific uncertainty that needs to exist in order to trigger application of the precautionary principle varies, depending on the magnitude of environmental damage used in the formulation of the first condition precedent of the precautionary principle. For the formulation of “serious or irreversible environmental damage”, the correlative degree of certainty about the threat is “highly uncertain of threat”<sup>107</sup> or “considerable scientific uncertainty”.<sup>108</sup>
7. There must be reasonable scientific plausibility as to the threat of environmental damage. This condition would be fulfilled when empirical

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<sup>102</sup> (2006) 146 LGERA 10 [128]

<sup>103</sup> (2006) 146 LGERA 10 [129]

<sup>104</sup> (2006) 146 LGERA 10 [129]

<sup>105</sup> (2006) 146 LGERA 10 [138], [139]

<sup>106</sup> (2006) 146 LGERA 10 [140]

<sup>107</sup> (2006) 146 LGERA 10 [146]

<sup>108</sup> (2006) 146 LGERA 10 [147]

scientific data (as opposed to simple hypothesis, speculation or intuition) make it reasonable to envisage a scenario, even if it does not enjoy unanimous scientific support.<sup>109</sup>

8. If there is not considerable scientific uncertainty (the second condition precedent is not satisfied), but there is a threat of serious or irreversible environmental damage (the first condition precedent is satisfied), the precautionary principle will not apply. Measures will still need to be taken but these will be *preventative* measures to control or regulate the relatively certain threat of serious or irreversible environmental damage, rather than *precautionary* measures which are appropriate in relation to uncertain threats.<sup>110</sup>
9. If each of the two conditions precedent or thresholds are satisfied – that is, there is a threat of serious or irreversible environmental damage and there is the requisite degree of scientific uncertainty – the precautionary principle will be activated. At this point, there is a shifting of an evidentiary burden of proof. 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 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.<sup>111</sup>
10. The precautionary principle permits the taking of preventative measures without having to wait until the reality and seriousness of the threats become fully known. This is the concept of preventative anticipation.<sup>112</sup>
11. A zero risk precautionary standard is inappropriate. Not every risk is unacceptable and needs to be prevented.<sup>113</sup> A preventative measure may be taken only if the risk, although the reality and extent of the risk have not been “fully” demonstrated by conclusive scientific evidence, appears nevertheless to be adequately backed up by the scientific data available at the time when the measure was taken.<sup>114</sup>
12. The type and level of precautionary measures that will be appropriate will depend on the combined effect of the degree of seriousness and irreversibility of the threat and the degree of uncertainty. This involves assessment of risk in its usual formulation, namely the probability of the event occurring and the seriousness of the consequences should it occur. The more significant and the more uncertain the threat, the greater the degree of precaution required.<sup>115</sup>
13. Prudence would also suggest that some margin for error should be retained until all the consequences of the decision to proceed with the development

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<sup>109</sup> (2006) 146 LGERA 10 [148]

<sup>110</sup> (2006) 146 LGERA 10 [129]

<sup>111</sup> (2006) 146 LGERA 10 [150]

<sup>112</sup> (2006) 146 LGERA 10 [156]

<sup>113</sup> (2006) 146 LGERA 10 [158]

<sup>114</sup> (2006) 146 LGERA 10 [157], [159]

<sup>115</sup> (2006) 146 LGERA 10 [161]

plan, programme or project are known. This allows for potential errors in risk assessment and cost-benefit analysis. Potential errors are weighted in favour of environmental protection. Weighting the risk of error in favour of the environment is to safeguard the ecological space or environmental room for manouvre.<sup>116</sup>

14. One means of retaining a margin for error is to implement a step-wise or adaptive management approach, whereby uncertainties are acknowledged and the area affected by the development plan, programme or project is expanded as the extent of uncertainty is reduced.<sup>117</sup>
15. The precautionary principle embraces the concept of proportionality. In applying the precautionary principle, measures should be adopted that are proportionate to the threats.<sup>118</sup> Consideration of practicability need to be taken into account.<sup>119</sup> There must be proportionality of response or cost effectiveness of margins of error to show that the selected precautionary measure is not unduly costly.<sup>120</sup>
16. The selection of the appropriate precautionary measure requires assessment of the risk-weighted consequences of various options.<sup>121</sup>
17. The precautionary principle, where triggered, does not necessarily prohibit the carrying out of a development plan, programme or project until full scientific certainty is attained.<sup>122</sup>
18. The precautionary principle should be viewed not in isolation, but as part of the package of principles of ecologically sustainable development. Precautionary measures selected should not only be appropriate having regard to the precautionary principle itself, but also in the context of the other principles of ecologically sustainable development.<sup>123</sup>

#### **4.2.2 Pakistan**

The precautionary principle has been accepted in Pakistan. In *Zia v WAPDA*,<sup>124</sup> citizens were concerned about the construction and operation of a grid station, in particular about being exposed to the hazards of electromagnetic fields. The citizens petitioned the Supreme Court of Pakistan for consideration as a human rights case raising two questions, one of which was whether any government agency has a right to endanger the life of citizens by its actions without the latter's consent.

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<sup>116</sup> (2006) 146 LGERA 10 [162]

<sup>117</sup> (2006) 146 LGERA 10 [163]

<sup>118</sup> (2006) 146 LGERA 10 [166], [167]

<sup>119</sup> (2006) 146 LGERA 10 [169]

<sup>120</sup> (2006) 146 LGERA 10 [170], [171]

<sup>121</sup> (2006) 146 LGERA 10 [172]-[178]

<sup>122</sup> (2006) 146 LGERA 10 [179], [180]

<sup>123</sup> (2006) 146 LGERA 10 [182]

<sup>124</sup> PLD 1994 SC 693.

The Supreme Court noted that there was scientific uncertainty as to the likelihood of adverse effects of electromagnetic fields on human health, and as such, the authorities should observe the rules of “prudence and precaution”.<sup>125</sup> Referring to Principle 15 of the *Rio Declaration*, the Supreme Court stated:

“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. Pakistan is a developing country. It cannot afford the researches and studies made in developed countries on scientific problems particularly the subject at hand. However, the researches and their conclusions with reference to specific cases are available, the information and knowledge is at hand and we should take benefit out of it. In this background if we consider the problem faced by us in this case, it seems reasonable to take preventative and precautionary measures straightforward instead of maintaining status quo because there is no conclusive finding on the effect of electromagnetic fields on human life.”<sup>126</sup>

The Court concluded:

“Therefore, a method should be devised to strike balance between economic progress and prosperity and to minimise possible hazards. In fact a policy of sustainable development should be adopted. It will thus require a deep study into the planning and the methods adopted by Authority for the construction of the grid station”.<sup>127</sup>

#### **4.2.3 India**

The Indian courts have particularly embraced the precautionary principle. In *Vellore Citizens Welfare Forum v Union of India*,<sup>128</sup> the petitioners filed a petition in the public interest under Article 32 of the Constitution of India, directed against the pollution caused by enormous discharge of untreated effluent by the tanneries and other industries in the State of Tamil Nadu. The Supreme Court of India (Kuldip Singh J, Faizan Uddin and K Venkataswami JJ), in a judgment delivered by Kuldip Singh J, recognised that “(t)he traditional concept that development and ecology are opposed to each other, is no longer acceptable; ‘Sustainable Development’ is the answer.”<sup>129</sup> The Supreme Court reviewed the history and concept of sustainable development at the international level,<sup>130</sup> defined the precautionary principle in the context of the municipal law including the reverse onus of proof,<sup>131</sup> and held that “the precautionary principle and the polluter pays principle are part of the environmental law of the country.”<sup>132</sup>

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<sup>125</sup> PLD 1994 SC 693 at [8].

<sup>126</sup> PLD 1994 SC 693 at [9].

<sup>127</sup> PLD 1994 SC 693 at [10].

<sup>128</sup> AIR 1996 SC 2715.

<sup>129</sup> AIR 1996 SC 2715 at 2720[10].

<sup>130</sup> AIR 1996 SC 2715 at 2720[10].

<sup>131</sup> AIR 1996 SC 2715 at 2720[11]-2721.

<sup>132</sup> AIR 1996 SC 2715 at 2721[13]-2722.

In *M.C Mehta v Kamal Nath*,<sup>133</sup> the Supreme Court of India affirmed the decision in *Vellore Citizens Welfare Forum v Union on India*<sup>134</sup> upholding the precautionary principle as part of the environmental law of India.<sup>135</sup>

In *AP Pollution Control Board v Prof. M V Nayudu*,<sup>136</sup> the Supreme Court of India comprehensively reviewed the precautionary principle. An application was submitted by a company to the Pollution Control Board for permission to set up an industry for production on “BSS Castor Oil Derivatives”. The Pollution Control Board, refused consent, and following a successful appeal to an appellate authority, the High Court directed the Pollution Board to grant consent subject to such conditions as may be imposed by it. The decision of the High Court was the subject matter of challenge in the Supreme Court of India.

The Supreme Court discussed the earlier Supreme Court decision in *Vellore Citizens Welfare Forum v Union of India*,<sup>137</sup> and found it “necessary to explain the meaning of the [precautionary] principles in more detail, so that courts and tribunals or environmental authorities can properly apply the said principles in the matters which come before them”.<sup>138</sup> The Supreme Court continued:

“[35] The principle of precaution involves the anticipation of environmental harm and taking measures to avoid it, or to choose the least environmentally harmful activity. It is based on scientific uncertainty. Environmental protection should not only aim at protecting health, prosperity and economic interest, but also protect the environment for its own sake. Precautionary duties must not only be triggered by the suspicion of concrete danger, but also by (justified) concern or risk potential”.<sup>139</sup>

The Supreme Court next elaborated on the burden of proof referred to in the *Vellore* case as follows:

“[38] The Precautionary Principle suggests that where there is an identifiable risk of serious or irreversible harm, including, for example, extinction of species, widespread toxic pollution in major threats to essential ecological processes [sic], it may be appropriate to place the burden of proof on the person or entity proposing the activity that is potentially harmful to the environment (see Report of Dr Sreenivasa Rao Pemmaraju, Special Rapporteur, International Law Commission, dated 3 April 1998, para 61).

[39] It is also explained that if the environmental risks being run by regulatory inaction are in some way ‘uncertain but non-negligible’ then regulatory action is justified. This will lead to the question as to what is the ‘non-negligible risk’. In such a situation, the burden of proof is to be placed on those attempting to alter the status quo. They are to discharge this burden by showing the absence of a ‘reasonable ecological or medical concern’…

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<sup>133</sup> (1997) 1 SCC 388.

<sup>134</sup> AIR 1996 SC 2715.

<sup>135</sup> (1997) 1 SCC 388 at [37].

<sup>136</sup> AIR 1999 SC 812.

<sup>137</sup> AIR 1996 SC 2715.

<sup>138</sup> AIR 1999 SC 812 at 820[32].

<sup>139</sup> AIR 1999 SC 812 at 821[35].

The required standard now is that the risk of harm to the environment or to human health is to be decided in public interest, according to a ‘reasonable person’ test (see Precautionary Principle in Australia, Charmain Barton, (1998) 22 Harv Env L Rev p 509 at p 549).<sup>140</sup>

In *Narmada Bachao Andolan v Union of India*,<sup>141</sup> the Supreme Court of India was called upon to decide various legal questions arising from the Sardar Sarovar Project involving the construction of a dam on the Narmada River. An environmental clearance granted by the Prime Minister was challenged on the basis that the necessary particulars in regard to the environmental impact of the project were not available when it was given.<sup>142</sup> It was further alleged that the execution of the project, having diverse and far reaching environmental impact, without proper study and understanding of the environmental impacts and without proper planning of mitigative measures, was a violation of fundamental rights of life of the affected people guaranteed under Article 21 of the Constitution of India.<sup>143</sup> Neither of these arguments were accepted by the majority (B. N. Kirpal J with whom Dr. A. S Anand CJI agreed)<sup>144</sup> but were by the dissenting judge, S.P. Bharucha J.<sup>145</sup> Nevertheless, in the course of judgment, the majority noted the submission of the petitioners that “in cases pertaining to the environment, the onus of proof is on the person who wants to change the status quo and, therefore, it is for the respondents to satisfy the Court that there will be no environmental degradation”.<sup>146</sup>

The majority held that, “(m)erely because there will be a change is no reason to presume that there will be ecological disaster. It is when the effect of the project is known then the principle of sustainable development would come into play which will ensure that mitigative steps are and can be taken to preserve the ecological balance. Sustainable development means what type or extent of development can take place which can be sustained by nature/ecology with or without mitigation”.<sup>147</sup>

In *Sujatha v A. Prema*,<sup>148</sup> the High Court of Kerala, India, considered the precautionary principle in the context of the emission of chemicals from a tyre factory which, according to the petitioner, were creating a health hazard. M. Sasidharan Nambiar J considered the element of the precautionary principle, applied the decision in *Vellore Citizens Welfare Forum v Union of India*,<sup>149</sup> and held that the precautionary principle is “part of the environmental law of this country”.<sup>150</sup> Thus, the Court held that the onus of proof was on the tyre company

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<sup>140</sup> AIR 1999 SC 812 at 821[37]-[39].

<sup>141</sup> AIR 2000 SC 3751.

<sup>142</sup> AIR 2000 SC 3751 at 3769[14] and 3787[92]-[93].

<sup>143</sup> AIR 2000 SC 3751 at 3787[92].

<sup>144</sup> AIR 2000 SC 3751 at 3795[119], 3804[153]-[154].

<sup>145</sup> AIR 2000 SC 3751 at 3770[20].

<sup>146</sup> AIR 2000 SC 3751 at 3803[147].

<sup>147</sup> AIR 2000 SC 3751 at 3803[150]-3804.

<sup>148</sup> ILR 2005 (3) Kerala 258.

<sup>149</sup> AIR 1996 SC 2715.

<sup>150</sup> ILR 2005 (3) Kerala 258 at [10].

to establish that the functioning of the factory was not causing the nuisance alleged by the petitioner.<sup>151</sup>

## 5. INTERGENERATIONAL AND INTRAGENERATIONAL EQUITY

### 5.1 Concepts of intergenerational and intragenerational equity

Intergenerational equity is an umbrella concept which is based on the premise that “the present generation is required to ensure that the health, diversity and productivity of natural resources are maintained or enhanced for the benefit of future generations”.<sup>152</sup> A related concept is that of intragenerational equity or environmental justice which concerns equality within the present generation, such that each member has an equal right to access the earth’s natural and cultural resources.

The concepts of intergenerational and intragenerational equity are an integral elements of ecologically sustainable development, and have been incorporated into international law in instruments such as the 1975 *Charter of Economic Rights and Duties of States*<sup>153</sup> and Principle 3 of the 1992 *Rio Declaration*.

There are three fundamental principles which form the basis of intergenerational equity, and hence are integral to sustainable development. First, the “conservation of options” principle requires each generation to conserve the diversity of the natural and cultural resource base in order to ensure that options are available to future generations for solving their problems and satisfying their needs. Second, the “conservation of quality” principle holds that each generation must maintain the quality of the earth such that it is passed on in no worse condition than in which it was received. Third, the “conservation of access” principle provides that each generation should give its members “equitable rights of access to the legacy of past generations and should conserve this access for future generations”.<sup>154</sup>

To determine whether a decision is likely to be consistent with the principles of intergenerational equity, specific guidelines for implementation need to be established. Young argues that governments “will need to rely on a wide range of policy approaches and institutional arrangements that are conducive to the maintenance of intergenerational equity”.<sup>155</sup>

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<sup>151</sup> ILR 2005 (3) Kerala 258 at [12].

<sup>152</sup> M D Young, “The Precautionary Principles as a Key Element of Ecologically Sustainable Development” in R Harding and E Fisher, *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 127 at p. 129.

<sup>153</sup> *Charter of Economic Rights and Duties of States*, G.A Res. 3281, 1975: Article 50.

<sup>154</sup> E Brown Weiss, “Intergenerational Equity: a legal framework for global environmental change” in E Brown Weiss (ed) *Environmental Change and International Law: New Challenges and Dimensions*, UN University Press, 1992, p. 385 at p. 401.

<sup>155</sup> M D Young, “The Precautionary Principles as a Key Element of Ecologically Sustainable Development” in R Harding and E Fisher, *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 127 at p. 139.

## 5.2 Judicial decisions

### 5.2.1 Intergenerational equity

In the landmark decision of the Supreme Court of the Philippines, *Minors Oposa v Secretary of the Department of Environment and Natural Resources*,<sup>156</sup> the plaintiffs were minors represented by their parents. They sought an order that the government discontinue existing and further timber licence agreements, alleging that deforestation was causing environmental damage. After the trial court dismissed the complaint, the plaintiffs filed an action for certiorari asking the Supreme Court to rescind and set aside the dismissal order.

The Supreme Court first dealt with certain procedural matters, including the standing of the minors to bring the proceedings. The Supreme Court held that the case brought by the plaintiffs constituted a class suit, not merely because the plaintiffs were numerous and representative enough to ensure the full protection of all concerned interests but also because the plaintiffs represented present and future generations:

“Needless to say, every generation has a responsibility to the next to preserve that rhythm and harmony for the full enjoyment of a balanced and healthful ecology. Put a little differently, the minors assertion of their right to a sound environment constitutes, at the same time, the performance of their obligation to ensure the protection of that right for the generations to come.”<sup>157</sup>

Addressing the substantive issues, the Supreme Court found that the complaint focused on a specific fundamental legal right, namely the right to a balanced and healthful ecology, incorporated in the fundamental constitutional law.<sup>158</sup> The right to a balanced and healthful ecology carries with it the correlative duty to refrain from impairing the environment.<sup>159</sup> A denial or violation of the plaintiffs' right to a balanced and healthful ecology by the government who has the correlative duty or obligation to respect or protect the same gave rise to a cause of action.<sup>160</sup> The Supreme Court therefore granted the petition and reversed the trial court's order dismissing the complaint.

In India, in *State of Himachal Pradesh v Ganesh Wood Products*,<sup>161</sup> a writ petition was filed seeking issuance of a writ restraining the government of the State of Himachal Pradesh from permitting the establishment of any factory units for the manufacture of Katha in the State on the ground that the establishment of Katha manufacturing units would lead to indiscriminate felling of Khair trees which would have a deep and adverse effect upon the environment and ecology of the State.<sup>162</sup>

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<sup>156</sup> 33 ILM 173 (1994).

<sup>157</sup> 33 ILM 173 (1994) at 185 per Davide J.

<sup>158</sup> Section 16, Article II of the 1987 Constitution. See 33 ILM 173 (1994) at 187.

<sup>159</sup> 33 ILM 173 (1994) at 188.

<sup>160</sup> 33 ILM 173 (1994) at 191.

<sup>161</sup> AIR 1996 SC 149.

<sup>162</sup> AIR 1996 SC 149 at 152[10].

After considering the applicability and significance of the concept of sustainable development, the Supreme Court of India (B.P Jeevan Reddy J and M.K. Mukherjee J) in a judgment delivered by B P Jeevan Reddy J upheld the appeal. In relation to the concept of intergenerational equity, the Supreme Court held that the government body's actions were:

“contrary to public interest involved in preserving forest wealth, maintenance of environment and ecology and considerations of sustainable growth and inter-generational equity. After all, the present generation has no right to deplete all the existing forests and leave nothing for the next and future generations.”<sup>163</sup>

### **5.2.2 Intragenerational equity or environmental justice**

In India, the principle of intragenerational equity and environmental justice has been judicially recognised in a number of cases.

In *Ratlam Municipality v Vardhichand*,<sup>164</sup> residents of a locality within the municipality of Ratlam were tormented by the stench and stink caused by open drains and public excretion by nearby slum-dwellers. They moved the Magistrate under s 133 of the *Criminal Procedure Code* to require the Municipality to fulfil its duty to members of the public. The Magistrate gave directions to the Municipality to draft a plan for removing the nuisance within six months. After appeals to the Session Court and the High Court, the case came before the Supreme Court who affirmed the Magistrate's order. Krishna Iyer J, who delivered the judgment of the Supreme Court, emphasised that the role of the court is to deliver social justice, regardless of wealth or social standing. In an environmental context, all persons have a right to a clean and healthy environment. Krishna Iyer J stated:

“A responsible municipal council constituted for the precise purpose of preserving public health and providing better finances cannot run away from its principal duty by pleading financial inability. Decency and dignity are non-negotiable facets of human rights and are a first charge on local self-governing bodies.”

In *Rural Litigation and Entitlement Kendra v State of Uttar Pradesh*,<sup>165</sup> the petitioners were rural villagers concerned about the unauthorised and illegal mining of limestone in the Mussorie-Dehradun belt in the State of Uttar Pradesh which adversely affected the ecology of the area and led to environmental disorder. Over time, the public interest litigation expanded. The number of parties increased to include the Governments of the Union of India and of Uttar Pradesh, several government agencies and mining lessees. The Supreme Court appointed various Committees which inspected the mines and reported to the Supreme Court.<sup>166</sup> Over a period of two years, the Supreme Court ordered the closure of some mines (category C and some category B) mines and subjected the remaining mines to enquiry.<sup>167</sup>

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<sup>163</sup> AIR 1996 SC 149 at 163[51]-164.

<sup>164</sup> AIR 1980 SC 1622.

<sup>165</sup> AIR 1988 SC 2187.

<sup>166</sup> AIR 1988 SC 2187 at 2189[1].

<sup>167</sup> AIR 1988 SC 2187 at 2189[3]-2190[4].

In 1987, the Supreme Court found that limestone quarrying in the Doon Valley area should be stopped and directed the closure of three operating mines.<sup>168</sup> In 1988, following the consideration of further evidence, the Supreme Court gave reasoning for its conclusion that mining in the Doon Valley area should be stopped.<sup>169</sup> The Supreme Court surveyed the importance of maintaining the forests in the area, stating that “forests hold up the mountains, cushion the rains and they discipline the rivers and control the floods. They sustain the springs; they break the winds; they foster the bulks; they keep the air cool and clean. Forests also prevent erosion by wind and water and preserve the carpet of the soil.”<sup>170</sup>

The Supreme Court then described the environmental consequences caused by the excessive exploitation and clearing of the forests<sup>171</sup> and considered the impact of mines that were operating in the reserved forests. The Supreme Court held that:

“to allow mining in these areas even under strictest control as a permanent feature would not only be violative of the provision of Forest (Conservation) Act but would be detrimental to restoration of the forest growth in a natural way in this area. Once the importance of forests is realised and as a matter of national policy and in the interests of the community, preservation of forests is accepted as the goal, nothing which would detract from that end should be permitted. In such circumstances we reiterate our conclusion that mining in this area has to be totally stopped”.<sup>172</sup>

However, the Supreme Court considered that the three category A mines could be allowed to continue mining operations so long as appropriate conditions were complied with. One such condition was the giving of an undertaking to a Monitoring Committee that “all care and attention shall be bestowed to preserve ecological and environmental balance while carrying on mining operations” and that “25% of the gross profits of the three mines shall be credited to the Fund in Charge of the Monitoring Committee in such manner as the Committee may direct and the Committee shall ensure maintenance of ecology and environment as also reforestation in the area of mining by expending money from the fund.”<sup>173</sup>

The Supreme Court’s decision, therefore, addressed both intergenerational equity and intragenerational equity for the affected villagers in the valley.

## **6. CONSERVATION OF BIOLOGICAL DIVERSITY AND ECOLOGICAL INTEGRITY**

### **6.1 Concept**

The elements of sustainable development of the precautionary principle and intergenerational equity, properly applied, will operate to conserve biological

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<sup>168</sup> AIR 1988 SC 2187 at 2193[12]-[13].

<sup>169</sup> AIR 1988 SC 2187 at 2195[18].

<sup>170</sup> AIR 1988 SC 2187 at 2197[24]-2198[26].

<sup>171</sup> AIR 1988 SC 2187 at 2198[27]-2199[30].

<sup>172</sup> AIR 1988 SC 2187 at 2206[46].

<sup>173</sup> AIR 1988 SC 2187 at 2209[57].

diversity and ecological integrity<sup>174</sup>. Nevertheless, the conservation of biological diversity and ecological integrity are independently stated to be an element of ecologically sustainable development in their own right.

There are three aspects to biological diversity. First, genetic diversity refers to the totality of chromosomal information contained in the genes of plants and animals. Secondly, species diversity refers to the variety of living organisms on earth. Thirdly, ecosystem diversity is the diversity of habitats and biotic communities that exist on earth.<sup>175</sup> These three aspects are reflected in the definition of biological diversity in the *Threatened Species Conservation Act 1995* (NSW) which provides:

- “biological diversity means the diversity of life and is made up of the following 3 components:
- (a) genetic diversity – the variety of genes (or units of heredity) in any population,
  - (b) species diversity – the variety of species,
  - (c) ecosystem diversity – the variety of communities or ecosystems.”<sup>176</sup>

In relation to ecological integrity, Moffet and Bregha define the term as “the conservation of the earth’s life-support systems.”<sup>177</sup> These systems involve processes which “shape climate, cleanse air and water, regulate water flow, recycle essential elements, create and regenerate soil, and enable ecosystems to renew themselves.”<sup>178</sup> Thus, the ability of the environment to act as a provider of inputs and as a “sink” for wastes must be maintained and preserved.<sup>179</sup>

Maintaining ecological integrity involves maintaining ecosystem health. Ecosystems become unhealthy if their community structure (species richness, species composition or food web architecture) or ecosystem functioning (productivity, nutrient dynamics, decomposition) has been fundamentally upset by human pressures.<sup>180</sup>

Maintaining ecological integrity also involves maintaining ecosystem functioning and ecosystem services. Ecosystem functioning is “the sum total of processes such as the cycling of matter, energy, and nutrients operating at the ecosystem level.”<sup>181</sup> Ecosystem services are “the wide array of conditions and processes

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<sup>174</sup> See generally on the role of the precautionary principle in the conservation of biological diversity, R. Cooney and B. Dickson (eds), *Biodiversity and the Precautionary Principle Risk and Uncertainty in Conservation and Sustainable Use*, Earthscan, 2005.

<sup>175</sup> These aspects are discussed in J Moffet and F Bregha, “The Role of Law in the Promotion of Sustainable Development” (1996) 6 *Journal of Environmental Law and Practice* 1 at 5.

<sup>176</sup> *Threatened Species Conservation Act 1995* (NSW), s 4(1).

<sup>177</sup> J Moffet and F Bregha, “The Role of Law in the Promotion of Sustainable Development” (1996) 6 *Journal of Environmental Law and Practice* 1 at 4.

<sup>178</sup> IUCN, UNEP, WWF, *Caring for the Earth: A Strategy for Sustainable Living*, Oxford University Press, 1992 at p. 9, as quoted in J Moffet and F Bregha, “The Role of Law in the Promotion of Sustainable Development” (1996) 6 *Journal of Environmental Law and Practice* 1 at 4.

<sup>179</sup> J Moffet and F Bregha, “The Role of Law in the Promotion of Sustainable Development” (1996) 6 *Journal of Environmental Law and Practice* 1 at 4.

<sup>180</sup> M Begon, C R Townsend and J L Harper, *Ecology: From Individuals to Ecosystems*, 4<sup>th</sup> ed, Blackwell Publishing, 2006 at p. 645.

<sup>181</sup> R A Virginia and D H Wall, “Ecosystem Function, Principles of” in S A Levin (ed), *Encyclopaedia of Biodiversity*, Academic Press, 2001, Volume 2 at p. 345.

through which ecosystems, and their biodiversity, confer benefits on humanity; these include the production of goods, life support functions, life-fulfilling conditions, and preservation of options.”<sup>182</sup>

In Australia, one of the core objectives of the *National Strategy for Ecologically Sustainable Development* is “to protect biological diversity and maintain essential ecological processes and life-support systems.” At the national level, this objective was complemented in 1996 by the adoption of the *National Strategy for the Conservation of Australia’s Biological Diversity (National Biodiversity Strategy)* which adopts a number of important principles intended to be used as a guide for implementation.<sup>183</sup>

In New South Wales, the conservation of biological diversity is specified as an object of a number of pieces of legislation including the *National Parks and Wildlife Act 1974 (NSW)*<sup>184</sup> and the *Threatened Species Conservation Act 1995 (NSW)*.<sup>185</sup> In 1999, the *NSW Biodiversity Strategy* was launched. The strategy has a statutory basis<sup>186</sup> and “proposes a framework for coordinating and integrating government and community efforts (in relation to biodiversity conservation), ensuring that all available resources are efficiently and effectively applied”.<sup>187</sup>

*Agenda 21*, deals expressly with the conservation of biological diversity in Chapter 15. The objectives and activities stated are intended to improve the conservation of biological diversity and the sustainable use of biological resources, as well as support the *Convention on Biological Diversity*.<sup>188</sup> The *Convention on Biological Diversity* emphasises the role of the conservation of biological diversity in the achievement of sustainable development and sets out general measures for sustainable use.<sup>189</sup>

## 6.2 Judicial decisions

In *Corkill v Forestry Commission of New South Wales*,<sup>190</sup> the Forestry Commission of New South Wales had granted licences to three logging contractors to carry out a number of operations in forest areas which contained, or were likely to contain, over 30 different species of fauna protected under the *National Parks and Wildlife Act 1974 (NSW)*. The applicant claimed the respondents were in breach of s 98 and s 99 of the *National Parks and Wildlife Act 1974 (NSW)* which provided that it was an offence to take or kill any protected or

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<sup>182</sup> G Daily and S Dasgupta, “Ecosystem Services, Concept of” in S A Levin (ed), *Encyclopaedia of Biodiversity*, Academic Press, 2001, Volume 2 at p. 353.

<sup>183</sup> See “Principles” in *National Strategy for the Conservation of Australia’s Biological Diversity*: “Principles”. The Strategy can be accessed via <http://www.deh.gov.au/biodiversity/publications/strategy/goal.html#princ>

<sup>184</sup> *National Parks and Wildlife Act 1974 (NSW)*: Section 2A.

<sup>185</sup> *Threatened Species Conservation Act 1995 (NSW)*: Section 3.

<sup>186</sup> *Threatened Species Conservation Act 1995 (NSW)*: Section 140.

<sup>187</sup> *NSW Biodiversity Strategy* at p. 3. The NSW Strategy can be accessed via

<http://www.nationalparks.nsw.gov.au/PDFs/BIO.pdf>

<sup>188</sup> *Agenda 21*: Chapter 15, para 15.1.

<sup>189</sup> *Convention on Biological Diversity*, 1992. Reprinted in 31 ILM 822 (1992). See the Preamble, Article 6 and Article 10 in particular.

<sup>190</sup> (1991) 73 LGRA 126.

endangered fauna. Stein J held that s 98 and s 99 were not constrained to the direct and intended consequences of conduct constituting the taking or killing of fauna. In particular, Stein J discussed the meaning of the term “disturb” in the definition of “take” in s 5 of the *National Parks and Wildlife Act* 1974 (NSW). His Honour held that “disturb”:

“covers conduct which modifies habitat in a significant fashion thus placing the species of fauna under threat by adversely affecting essential behavioural patterns relating to feeding, breeding or nesting. In other words, it includes habitat destruction or degradation which disturbs an endangered or protected species by adverse impact upon it leading immediately or over time to a reduced population”.<sup>191</sup>

Stein J’s wholistic reasoning is consistent with the principle of the conservation of biological diversity and ecological integrity. The proposed logging operations were found to constitute an imminent breach of s 98 and s 99 of the *National Parks and Wildlife Act* 1974 (NSW) in relation to the many species of endangered and protected species of fauna.<sup>192</sup> Stein J’s decision was upheld by the New South Wales Court of Appeal.<sup>193</sup>

In the case of *Leatch v National Parks and Wildlife Service*,<sup>194</sup> discussed above in the context of the precautionary principle, Stein J recognised the importance of preserving biological diversity and ecological integrity, holding that:

“consideration of the state of knowledge or uncertainty regarding a species, the potential for serious or irreversible harm to an endangered fauna and the adoption of a cautious approach in protection of endangered fauna is clearly consistent with the subject matter, scope and purpose of the Act”.<sup>195</sup>

In *Booth v Bosworth*,<sup>196</sup> the Federal Court of Australia was concerned with whether the operation of electric grids had or was likely to have a significant impact on the world heritage values of the Wet Tropics World Heritage Area in north Queensland. The grids were being used by a farmer to electrocute thousands of Spectacled Flying Foxes, purportedly to protect his lychee crop. Following the refusal of the farmer to cease electrocuting the flying foxes, the applicant sought an injunction under s 475 of the *Environment Protection and Biodiversity Conservation Act* 1999 (Cth).

Justice Branson of the Federal Court of Australia took the opportunity to explore, *inter alia*, the meaning of “likely to have”, “significant impact” and “world heritage values” under the Act. The acknowledgement of the importance of biological diversity and ecological intergrity is implicit in her decision. In the result, Branson J granted the injunction, holding that the disappearance of the Spectacled Flying Fox within the Wet Tropics World Heritage Area would:

<sup>191</sup> (1991) 73 LGRA 126 at 139–140.

<sup>192</sup> (1991) 73 LGRA 126 at 161.

<sup>193</sup> *Forestry Commission of New South Wales v Corkill* (1991) 73 LGRA 247 per Mahoney AP, Meagher and Handley JJA.

<sup>194</sup> (1993) 81 LGERA 270.

<sup>195</sup> (1993) 81 LGERA 270 at 282-283.

<sup>196</sup> (2001) 117 LGERA 168.

“tend to detract from the biological diversity of the area and from the importance and significance of the habitats contained within it for in-situ conservation of biological diversity.”<sup>197</sup>

In *BGP Properties Pty Limited v Lake Macquarie City Council*,<sup>198</sup> as has been discussed above in relation to the precautionary principle, McClellan CJ held that the principles of ecologically sustainable development, including the conservation of biological diversity and ecological integrity, must be taken into account by decision-makers where relevant issues arise pursuant to s 79C(1)(e) of the *Environmental Planning and Assessment Act 1979* (NSW).<sup>199</sup>

This approach was followed by Pain J of the Land and Environment Court of New South Wales in the recent case of *BT Goldsmith Planning Services Pty Limited v Blacktown City Council*.<sup>200</sup> The case concerned whether a species impact statement in accordance with the *Threatened Species Conservation Act 1995* (NSW) was required to accompany a development application pursuant to s 78A(8)(b) of the *Environmental Planning and Assessment Act 1979* (NSW). The site in question was predominantly covered by Cumberland Plain Woodland which was classified as an endangered ecological community under the *Threatened Species Conservation Act 1995* (NSW). Pain J found that the objectives of the *Threatened Species Conservation Act 1995* (NSW), as well as the principles of ecologically sustainable development “need to be kept in mind when considering issues such as whether a SIS [species impact statement] is required”.<sup>201</sup> Relevantly, Her Honour held that in this case, the precautionary principle and the conservation of biological diversity and ecological integrity were “particularly pertinent”.<sup>202</sup> Pain J took a precautionary approach and held that a species impact statement was required to accompany the development application.<sup>203</sup>

In *Bentley v BGP Properties Pty Limited*,<sup>204</sup> the defendant was charged with picking a threatened species of plant, *Tetratheca juncea*, contrary to s 118A(2) of the *National Parks and Wildlife Act 1974* (NSW). The Court discussed the definition of the conservation of biological diversity and ecological integrity in the context of the statutory scheme in which the offence provision occurred.<sup>205</sup> Preston CJ held that “the statutory requirements for prior environmental impact assessment and approval before carrying out any action likely to damage threatened species, populations or ecological communities are important linchpins of the statutory scheme for conservation of threatened species, populations and ecological communities.”<sup>206</sup> The requirement for prior environmental impact assessment and approval is “a key means of achieving

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<sup>197</sup> (2001) 117 LGERA 168 at 194[103].

<sup>198</sup> (2004) 138 LGERA 237.

<sup>199</sup> (2004) 138 LGERA 237 at 262.

<sup>200</sup> [2005] NSWLEC 210 (1 July 2005).

<sup>201</sup> [2005] NSWLEC 210 (1 July 2005) at [57].

<sup>202</sup> [2005] NSWLEC 210 (1 July 2005) at [57].

<sup>203</sup> [2005] NSWLEC 210 (1 July 2005) at [92].

<sup>204</sup> (2006) 145 LGERA 234.

<sup>205</sup> (2006) 145 LGERA 234 at 243-244 [59]-[62].

<sup>206</sup> (2006) 145 LGERA 234 at 245 [65].

ecologically sustainable development".<sup>207</sup> The defendant's actions in picking the threatened species, without prior environmental impact assessment and approval, undermined the statutory scheme and thwarted the attainment of ecologically sustainable development.<sup>208</sup>

## 7. INTERNALISATION OF ENVIRONMENTAL COSTS AND IMPROVED VALUATION AND PRICING

### 7.1 Concepts of the user-pays and polluter-pays principles

Ecologically sustainable development involves the internalisation of environmental costs into decision making for policies and activities likely to affect the environment. This requires accounting for both the short-term and long-term external environmental impacts of development<sup>209</sup> and can be undertaken in a variety of ways including:

- environmental factors should be reflected in the valuation of assets and services;
- polluter pays i.e. those who generate pollution and waste should bear the cost of containment, avoidance, or abatement;
- the users of goods and services should pay prices based on the full life cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any wastes; and
- environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, which enable those best placed to maximise benefits and/or minimise costs to develop their own solutions and responses to environmental problems.<sup>210</sup>

The concept can be expressed in the form of a "user pays" principle and a "polluter pays" principle. The user pays principle requires that those who benefit from investment should pay for its creation.<sup>211</sup> The polluter pays principle requires that the polluter should bear the expenses of carrying out pollution prevention measures or paying for damage caused by pollution.<sup>212</sup>

Attempts to incorporate this principle are appearing in various national legislative and executive actions. In Australia, Bates notes the principle is:

"...now appearing in environment protection legislation through, for example, the introduction of load-based licensing for emission of pollution, that set fees by reference to the actual or potential impact on the environment of the

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<sup>207</sup> (2006) 145 LGERA 234 at 247 [76].

<sup>208</sup> (2006) 145 LGERA 234 at 259-260 [169]-[171].

<sup>209</sup> J Moffet and F Bregha, "The Role of Law in the Promotion of Sustainable Development" (1996) 6 *Journal of Environmental Law and Practice* 1 at 7.

<sup>210</sup> See *Intergovernmental Agreement on the Environment*, 1992: Section 3.5.4.

<sup>211</sup> See M D Young, "The precautionary principle as a key element of ecologically sustainable development" in R Harding and E Fisher, *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 127 at p. 148.

<sup>212</sup> See MC Cordonier Segger and A Khalfan, *Sustainable Development Law: Principles, Practices & Prospects*, Oxford University Press, 2004, pp. 82-83.

effluent discharged, rather than by simple reference to volumes discharged; by the establishment of incentive-based schemes for voluntary conservation agreements with private landholders; and by market-based approaches to contaminated sites and waste avoidance, reduction and disposal. Broad-based policy initiatives such as the reform of water supply and irrigation practices, fisheries management and forestry agreements also incorporate some of these principles".<sup>213</sup>

## 7.2 Polluter-pays principle

The polluter pays principle is an economic rule of cost allocation. The source of the principle is in the economic theory of externalities. As de Sadeleer explains, the polluter pays principle:

"requires the polluter take responsibility for the external costs arising from his pollution. Internalization is complete when the polluter takes responsibility for all the costs arising from pollution; it is incomplete when part of the cost is shifted to the community as a whole".<sup>214</sup>

The polluter pays principle was originally recommended by the Council of the Organisation for Economic Cooperation and Development (OECD) in May 1972. The definition of the principle in the 1972 OECD *Guiding Principles Concerning the International Economic Aspects of Environmental Policies*, is that the polluter should bear the expenses of carrying out measures deemed necessary by public authorities to protect the environment in "an acceptable state" or "in other words, the cost of these measures should be reflected in the costs of goods and services which cause pollution in production and/or in consumption. Such measures should not be accompanied by subsidies causing significant distortions in international trade and investment".<sup>215</sup>

The "polluter pays" principle and the internalisation of environmental costs were embraced at the 1992 UNCED (Earth Summit) and in Principle 16 of the *Rio Declaration*.

The language used in international instruments is more qualified than the statement of the polluter pays principle at the national level. As Sands explains, the reason for this is that the text "derives, at least in part, from the view held by a number of states, both developed and developing, that the polluter-pays principle is applicable at the domestic level but does not govern rights or responsibilities between states at the international level".<sup>216</sup>

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<sup>213</sup> G. Bates, *Environmental Law in Australia*, 5<sup>th</sup> ed, Lexis Nexis Butterworths, 2002 at p 138[5.41].

<sup>214</sup> N. de Sadeleer, *Environmental Principles, From Political Slogans to Legal Rules*, Oxford University Press, 2002, p 21.

<sup>215</sup> *Guiding Principles Concerning the International Economic Aspects of Environmental Policies*, OECD Recommendations C(72)128, reprinted in 14 ILM 236 (1975). See also P W Birnie and A E Boyle, *International Law and the Environment*, Clarendon Press, Oxford, 1992, pp 109-110; and P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed., Cambridge University Press, 2003, p 281.

<sup>216</sup> P Sands, *Principles of International Environmental Law*, 2<sup>nd</sup> ed, Cambridge University Press, 2003, pp 280-281.

## 7.3 Judicial decisions

### 7.3.1 India

In *Indian Council for Enviro-Legal Action v Union of India*,<sup>217</sup> a number of private companies operated chemical factories without the required licences and had not installed equipment for the treatment of highly toxic effluent which they discharged. The effluent polluted water aquifers and the soil in the area and endangered the villagers right to life. The Supreme Court of India dealt with the liability of the companies to defray the costs of the remedial measures. One of the ways that the liability of the companies could be viewed was from the “polluter pays” principle:

“The polluter pays principle demands that the financial costs of preventing or remedying damage caused by pollution should lie with the undertakings which cause the pollution, or produce the goods which cause the pollution. Under the principle it is not the role of Government to meet the costs involved in either prevention of such damage, or in carrying out remedial action, because the effect of this would be to shift the financial burden of the pollution incident to the taxpayer...(A)ccording to this principle, the responsibility for repairing the damage is that of the offending industry.”<sup>218</sup>

In *Vellore Citizens Welfare Forum v Union of India*,<sup>219</sup> the Supreme Court of India, in a judgment delivered by Kuldip Singh J, referred to the Supreme Court’s decision in *Indian Council for Enviro-Legal Action v Union of India*<sup>220</sup> and held that the polluter pays principle had been accepted as part of the environmental law of the country.<sup>221</sup>

In *M.C Mehta v Union of India*,<sup>222</sup> the Supreme Court of India was concerned with approximately 550 tanneries located in thickly populated residential areas. They were being operated in extremely unhygienic conditions and discharged highly toxic effluents over the areas. The Supreme Court (Kuldip Singh J and Saghir Ahmed J), in a judgment delivered by Kuldip Singh J, referred to the Supreme Court’s decisions in *Indian Council for Enviro-Legal Action v Union of India*<sup>223</sup> and *Vellore Citizens Welfare Forum v Union of India*<sup>224</sup> and held that “(i)t is thus settled by this Court that one who pollutes the environment must pay the to reverse the damage caused by his acts”.<sup>225</sup> The Court ordered the Calcutta tanneries to relocate and to pay compensation for the loss of ecology/environment of the affected areas and the suffering of the residents.<sup>226</sup>

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<sup>217</sup> AIR 1996 SC 1446.

<sup>218</sup> AIR 1996 SC 1446 at 1466[67].

<sup>219</sup> AIR 1996 SC 2715. The facts have been stated earlier in the discussion of this case in Section 4 on the precautionary principle above.

<sup>220</sup> AIR 1996 SC 1446.

<sup>221</sup> AIR 1996 SC 2715 at 2721[12]-[13].

<sup>222</sup> WP 3727/1985 (19 December 1996).

<sup>223</sup> AIR 1996 SC 1446.

<sup>224</sup> AIR 1996 SC 2715.

<sup>225</sup> WP 3727/1985 (19 December 1996) at [19].

<sup>226</sup> WP 3727/1985 (19 December 1996) at [20].

Similarly, in *M.C Mehta v Union of India*,<sup>227</sup> the Supreme Court of India (Kuldip Singh and Faizanuddin JJ), in a judgment delivered by Kuldip Singh J, ordered coke/coal consuming industries emitting air pollution that was damaging the Taj Mahal in Agra and the residents of the Taj Trapezium, to apply for gas connection or, on failing to do so, to relocate. The Court cited with approval the decisions in *Indian Council for Enviro-Legal Action v Union of India*<sup>228</sup> and *Vellore Citizens Welfare Forum v Union of India*.<sup>229</sup>

In *Research Foundation for Science Technology and Natural Resources Policy v Union of India*,<sup>230</sup> the Supreme Court of India was concerned with 133 containers of illegally imported oil which constituted hazardous waste which were lying at Nhava Sheva Port. The importers were given notice by order of the Supreme Court to show cause why the consignment should not be ordered to be re-exported or destroyed at their cost. Further, the importers were required to show cause why the costs incurred by the relevant government body on testing the oil to determine its status as hazardous waste should not be recovered from them and why they should not be directed to pay compensation on the basis of the polluter pays principle.

The Supreme Court (Y.K. Sabharwal and S.H. Kapadia JJ), in a judgment delivered by Y.K. Sabharwal J, held:

- “24. The liability of the importers to pay the amounts to be spent for destroying the goods in question cannot be doubted on applicability of precautionary principle and polluter pays principle. These principles are part of the environmental law of India. There is constitutional mandate to protect and improve the environment. In order to fulfil the constitutional mandate various legislations have been enacted with attempt to solve the problem of environmental degradation...
27. The polluter pays principle basically means that the producer of goods of other items should be responsible for the cost of preventing or dealing with any pollution that the process causes. This includes environmental cost as well as direct cost to the people or property, it also covers cost incurred in avoiding pollution and not just those related to remedying any damage. It will include full environmental cost and not just those which are immediately tangible. The principle also does not mean that the polluter can pollute and pay for it. The nature and extent of cost and the circumstances in which the principle will apply may differ from case to case...
31. The polluter pays principle was applied in *Indian Council for Enviro-Legal Action and others. vs. Union of India and others* ((1996) 3 SCC 212) to fasten liability for defraying the costs of remedial measures. The task of determining the amount required for carrying out the remedial measures, its recovery / realization and the task of undertaking the remedial measures was placed in this case upon the Central Government. In the present case the

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<sup>227</sup> WP 13381/1984 (30 December 1996).

<sup>228</sup> AIR 1996 SC 1446.

<sup>229</sup> AIR 1996 SC 2715.

<sup>230</sup> WP 657/1995 (5 January 2005).

approximate expenditure to be incurred for destroying the hazardous waste has been mentioned in report.”<sup>231</sup>

### 7.3.2 Australia

The rationale of the polluter pays principle has also informed courts in Australia in fixing the appropriate quantum of a fine in sentencing offenders who have committed environmental crime. A leading case illustrating this approach is the decision of the Court of Criminal Appeal of NSW in *Axer Pty Ltd v Environmental Protection Authority*.<sup>232</sup> In that case, the defendant company had been involved in aerial spraying of pesticides on irrigated fields of cotton which descended into a nearby river and caused pollution and the death of fish. In discussing the determination of the appropriate quantum of fine to be imposed on the offender, Mahoney JA considered the internalisation of environmental costs as follows:

“The cost of precautions to avoid pollution will no doubt become accepted, in due course, as an ordinary cost of operating in an industry where, absent precautions, pollution may occur. The legislature was no doubt conscious of the effect which increased costs may have in a market; what I have said is expressed in general terms and is, of course, subject to the circumstances of each case. But I believe legislation of this kind contemplates that, in general, the cost of preventing pollution will be absorbed into the costing of the relevant industries and in that way will be borne by the community or by that part of it which uses the product which the industry produces. In assessing the quantum of a fine considerations of this kind are to be taken into account. The fine should be such as will make it worthwhile that the cost of precautions be undertaken.” As the learned judge indicated, in the present case, in order to prevent pollution of the river, it was necessary, *inter alia*, that the company delay spraying until the conditions were appropriate for it. No doubt that delay costs money. Ordinarily, the fine to be imposed should be such as to make it worthwhile that costs of this kind be incurred.”<sup>233</sup>

The approach taken in *Axer Pty Lt v Environmental Protection Authority*<sup>234</sup> was adopted in both *Bentley v Gordon*<sup>235</sup> and *Bentley v BGP Properties Pty Limited*,<sup>236</sup> in the context of sentencing offenders who had committed the environmental offence of damaging and destroying a threatened species of plant, contrary to the *National Parks and Wildlife Act 1974* (NSW).

In *Environment Protection Authority v Waste Recycling and Processing Corporation*<sup>237</sup>, the Court took into account the polluter pays principle in the sentencing of an offender who had polluted waters contrary to s 120(1) of the *Protection of the Environment Operations Act 1997* (NSW):

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<sup>231</sup> WP 657/1995 (5 January 2005) at [24], [27] and [31].

<sup>232</sup> (1993) 113 LGERA 357.

<sup>233</sup> (1993) 113 LGERA 357 at 359-360.

<sup>234</sup> (1993) 113 LGERA 357.

<sup>235</sup> [2005] NSWLEC 695 (22 November 2005) at [99].

<sup>236</sup> (2006) 145 LGERA 234 at 257-258[156]-[157].

<sup>237</sup> [2006] NSWLEC 419 (10 July 2006).

- “[229] Courts have repeatedly stated when sentencing for environmental crime that the sentence of the court needs to be of such magnitude as to change the economic calculus: *Axer Pty Ltd v Environment Protection Authority* (1993) 113 LGERA 357 at 369-360; *Bentley v BGP Properties Pty Ltd* [2006] NSWLEC 34 (6 February 2006) at [150]-[157]. It should not be cheaper to offend than to prevent the commission of the offence: Sentencing Advisory Panel (UK), “Environmental Offences: The Panel’s Advice to the Court of Appeal”, 1 March 2000, para 16. Environmental crime will remain profitable until the financial cost to offenders outweighs the likely gains: M Watson, “Environmental Offences: the Reality of Environmental Crime” (2005) 7(3) *Environmental Law Review* 190 at 199-200. The amount of the fine needs to be such as will make it worthwhile that the cost of precautions be undertaken: *Axer Pty Ltd v Environment Protection Authority* (1993) 113 LGERA 357 at 359. The amount of the fine must be substantial enough so as not to appear as a mere licence fee for illegal activity.
- [230] Sustainable and economically efficient development of environmental resources requires internalising the costs of preventing and controlling pollution as well as any environmental harm itself. This is the polluter pays principle. The polluter ought to pay for the costs of remedying any on-going environmental harm caused by the polluter’s conduct. This can be done by the polluter cleaning up the pollution and restoring the environment as far as practicable to the condition it was before being polluted. The polluter ought also to make reparation for the irremediable harm caused by the polluter’s conduct such as the death of biota and damage to ecosystem structure and functioning.”

## 8. PUBLIC TRUST

### 8.1 Concept

The concept of the “public trust” has its roots in Roman law, and was based on the idea that certain common resources such as the air, waterways and forests were held in trust by the State for the benefit and use of the general public. A broader conception of the public trust holds that the earth’s natural resources are held in trust by the present generation for future generations. In this way, public trust law may be “the strongest contemporary expression of the idea that the legal rights of nature and of future generations are enforceable against contemporary users”.<sup>238</sup>

The essence of the public trust is that the State, as trustee, is under a fiduciary duty to deal with the trust property, being the common natural resources, in a manner that is in the interests of the general public. Hence, the State cannot alienate the

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<sup>238</sup> W H Rodgers, “Bringing People Back: Toward a Comprehensive Theory of Taking in Natural Resource Law” (1982) 10 *Ecology Law Quarterly* 205 at 239 – 240.

trust property unless the public benefit that would result outweighs the loss of the public use or “social wealth” derived from the area.<sup>239</sup>

Although elements of the public trust doctrine can be seen in earlier cases, it was not until the 1970s that the concept was resurrected and expanded.<sup>240</sup> In a famous article published in the *Michigan Law Review*,<sup>241</sup> Professor Joseph Sax explored the extent to which the public trusteeship constrains the State, and concluded that three types of restrictions on government authority are imposed by a public trust. First, “the property subject to the trust must not only be used for a public purpose, but it must be held available for use by the general public”. Second, the trust property may not be sold. And third, “the property must be maintained for particular types of uses, such as navigation, recreation, or fishery”.<sup>242</sup>

The public trust doctrine has, to differing extents, become part of the law of all countries with a common law heritage, and many maintain that it should play a principal part in sustainable resource allocation and decision-making. While traditionally applied primarily to waterways and rivers, the doctrine has now been extended to protect other natural resources from private use and harm as a tool of environmental conservation.

## 8.2 Judicial decisions

### 8.2.1 United States

In *National Audubon Society v Department of Water and Power of the City of Los Angeles*,<sup>243</sup> the plaintiffs challenged the legality of diversion tunnels, constructed under government permit by the respondents, around California’s second largest lake, Mono Lake. The Supreme Court of California held that “the core of the public trust doctrine is the state’s authority as sovereign to exercise a continuous supervision and control over the navigable waters of the state and the lands underlying those waters”.<sup>244</sup> As the doctrine of public trust was found to be integrated with, and not independent to, the appropriative water rights system, the state had a duty to take the human and environmental uses of the lake into account when planning the allocation of water resources as “approval of (water) diversion

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<sup>239</sup> See J L Sax, “The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention” (1970) 68 *Michigan Law Review* 471; and W H Rodgers, “Bringing People Back: Toward a Comprehensive Theory of Taking in Natural Resource Law” (1982) 10 *Ecology Law Quarterly* 205.

<sup>240</sup> See J L Sax, “The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention” (1970) 68 *Michigan Law Review* 471; J L Sax, *Defending the Environment: A Handbook for Citizen Action*, Vintage Books, 1971.

<sup>241</sup> J L Sax, “The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention” (1970) 68 *Michigan Law Review* 471.

<sup>242</sup> J L Sax, “The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention” (1970) 68 *Michigan Law Review* 471 at 477.

<sup>243</sup> (1983) 658 P 2d 709.

<sup>244</sup> (1983) 658 P 2d 709 at 712.

without considering public trust values may result in needless destruction of those values".<sup>245</sup>

### **8.2.2 Australia**

In *Willoughby City Council v Minister Administering the National Parks and Wildlife Act*,<sup>246</sup> the applicant sought declarations that a lease and building consent relating to land reserved under the *National Parks and Wildlife Act 1974* (NSW) as being for the purpose of public recreation and enjoyment were void. In accepting the applicant's submission that there was a public trust over national parks, and the Minister could not lawfully make an administrative decision to harm the land, Stein J of the Land and Environment Court of NSW declared the lease and building consent to be void ab initio and ordered the building be demolished.<sup>247</sup> Relevantly, Stein J stated:

"...national parks are held by the State in trust for the enjoyment and benefit of its citizens, including future generations. In this instance the public trust is reposed in the Minister, the director and the service. These public officers have a duty to protect and preserve national parks and exercise their functions and powers within the law in order to achieve the objects of the *National Parks and Wildlife Act*".<sup>248</sup>

### **8.2.3 India**

The Indian courts have been keen to employ the public trust doctrine for the purpose of environmental conservation. In *M.C Mehta v Kamal Nath*,<sup>249</sup> a newspaper article alerted the Supreme Court of India that a private company had built a hotel on the bank of River Beas. The construction had allegedly involved the creation of new water channels.

The Supreme Court discussed the development of the doctrine and observed that:

"Our legal system – based on English common law – includes the public trust doctrine as part of its jurisprudence. The State is the trustee of all natural resources which are by nature meant for public use and enjoyment. Public at large is the beneficiary of the sea-shore, running waters, airs, forests and ecologically fragile lands. The State as a trustee is under a legal duty to protect the natural resources. These resources meant for public use cannot be converted into private ownership".<sup>250</sup>

In finding that "the public trust doctrine...is part of the law of the land",<sup>251</sup> and River Beas was in fact trust property, the Court ordered the lease to be quashed, directed the company to undertake various remediation works and ordered it to

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<sup>245</sup> (1983) 658 P 2d 709 at 712.

<sup>246</sup> (1992) 78 LGRA 19.

<sup>247</sup> (1992) 78 LGRA 19 at 34–36.

<sup>248</sup> (1992) 78 LGRA 19 at 34. For a discussion of this case, see T Bonyhady, "A Usable Past: The Public Trust in Australia" (1995) 12 EPLJ 329 at 330–331.

<sup>249</sup> (1997) 1 SCC 388.

<sup>250</sup> (1997) 1 SCC 388 at [34].

<sup>251</sup> (1997) 1 SCC 388 at [39].

pay compensation for “the restitution of the environment and ecology of the area”.<sup>252</sup>

In the recent decision of *T.N Godavarman Thirumulpad v Union of India*,<sup>253</sup> the Supreme Court of India endorsed the decision in *M.C Mehta v Kamal Nath*,<sup>254</sup> stating:

“The duty to preserve natural resources in pristine purity has been highlighted in M.C. Mehta v. Kamal Nath & Ors. [(1997) 1 SCC 388]... The Court accepted the applicability of public trust doctrine and held that it was founded on the ideas that certain common properties such as rivers, sea-shore, forests and the air were held by the Government in trusteeship for the free and unimpeded use of the general public...The doctrine enjoins upon the Government to protect the resources for the enjoyment of the general public rather than to permit their use for private ownership or commercial purposes”.<sup>255</sup>

#### **8.2.4 Pakistan**

The case of *In re: Human Rights Case (Environment Pollution in Balochistan)*<sup>256</sup> illustrates how the Indian approach has been followed in the neighbouring jurisdiction of Pakistan. Again, the Supreme Court of Pakistan was informed of impending environmental harm by a newspaper article that claimed that businessmen were attempting to buy a section of coastal area and convert it into a waste and nuclear waste dump. Notwithstanding that no such businessmen or potential waste dump were identified, the Supreme Court recognised that the relevant local government authority had a duty to “regularly check that allottees are not engaged in dumping industrial or nuclear waste of any nature on the land or in the sea or destroying it by any device”.<sup>257</sup> Although the doctrine of public trust was not explicitly referred to, it is clear that the notion that the coastal land belonged to the public underpinned the decision and Saleem Akhtar J praised those members of the public who had “shown their interest and keenness in tackling the problem”.<sup>258</sup>

The case of *General Secretary, West Pakistan Salt Miners Labour Union v The Director, Industries and Mineral Development*<sup>259</sup> involved residents concerned that salt mining in their area would result in the contamination of the local watercourse, reservoir and pipeline. The residents petitioned the Supreme Court of Pakistan to enforce their right to have clean and unpolluted water and filed their claim as a human rights case under Article 184(1) of the Pakistan Constitution.<sup>260</sup> The Supreme Court of Pakistan held that in human rights/public interests cases, procedural barriers could not bar the jurisdiction of the Court.<sup>261</sup>

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<sup>252</sup> (1997) 1 SCC 388 at [39].

<sup>253</sup> CDJ 2005 SC 713.

<sup>254</sup> (1997) 1 SCC 388.

<sup>255</sup> CDJ 2005 SC 713s at [70].

<sup>256</sup> PLD 1994 SC 102.

<sup>257</sup> PLD 1994 SC 102 at 102.

<sup>258</sup> PLD 1994 SC 102 at 103.

<sup>259</sup> 1994 SCMR 2061.

<sup>260</sup> 1994 SCMR 2061 at 2068.

<sup>261</sup> 1994 SCMR 2061 at 2072.

The Court held that as Article 9 of the Constitution provided that “no person shall be deprived of life or liberty save in accordance with the law” and “life” should be given an expansive definition, the right to have unpolluted water was a right to life itself.<sup>262</sup> The Court held that in human rights cases, procedural barriers could not bar the jurisdiction of the Court. In the result, the Court established a Commission to supervise and report on the activities of the salt mining for the purpose of protecting the watercourse and reservoirs, hence illustrating the public trust doctrine implicit in the decision.

### **8.2.5 Sri Lanka**

Sri Lankan courts have also adopted the doctrine of public trust. The case of *Bulankulama v Secretary, Ministry of Industrial Development* (the *Eppawela Case*)<sup>263</sup> concerned a proposed agreement between the government and a private company relating to the potential mining of phosphate and other minerals in the Eppawela area. Many residents of Eppawela objected to the contract, claiming carrying out of work would result in both an environmental and economic disaster.<sup>264</sup> The Supreme Court of Sri Lanka observed that the government was the “trustee” of natural resources in Sri Lanka and, as such, the individual residents had standing to sue as the case concerned “the rights of individual petitioners, even though their rights are linked to the collective rights of the citizenry of Sri Lanka”.<sup>265</sup> Moreover, the Court recognised that the public trust doctrine includes the notion of public guardianship as “the organs of state are guardians to whom the people have committed the care and preservation of the resources of the people”.<sup>266</sup>

The Court held that the government had not “acted correctly as trustee”, an imminent infringement of the Constitutional rights of the petitioners to object to the proposed agreement had been established, and that the government was to be restrained from entering into the contract until further studies and reports on the site had been carried out.<sup>267</sup>

## **9. CONCLUSION**

It is clear that the law on sustainable development is gaining momentum at local, national, regional, and international levels. While four of the fundamental elements of sustainable development – the precautionary principle, intergenerational and intragenerational equity, the conservation of biological diversity and ecological integrity, and the internalisation of environmental costs – have been much discussed and promulgated in various international and national legal contexts, there is still a long way to go in terms of their implementation.

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<sup>262</sup> 1994 SCMR 2061 at 2069.

<sup>263</sup> Application No. 884/99, Supreme Court of Sri Lanka 243 (7 April 2000).

<sup>264</sup> Application No. 884/99, Supreme Court of Sri Lanka 243 (7 April 2000) at 243 and 245.

<sup>265</sup> Application No. 884/99, Supreme Court of Sri Lanka 243 at 244, 257-260.

<sup>266</sup> Application No. 884/99, Supreme Court of Sri Lanka 243 at 253.

<sup>267</sup> Application No. 884/99, Supreme Court of Sri Lanka 243 at 320 – 321.

The role of the judiciary in relation to the law of sustainable development is thus of the greatest importance. If individual members of the judiciary each work towards the common goal of achieving an environmentally sustainable future, the law on sustainable development will gain strength and through collective effort the goal will be reached. To use a phrase of Victor Hugo's, "there is one thing stronger than all the armies in the world and that is an idea whose time has come".<sup>268</sup> It is clear that the time for sustainable development has come, and it is essential that individual judges and national judiciaries seize the opportunity.

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<sup>268</sup> The translation of this phrase differs. Its probable source is from V Hugo, "Conclusion-La Chute" in *Histoire d'un crime*, as quoted in a Nobel Lecture by Dr M L King, "The Quest for Peace and Justice". Accessed via <http://nobelprize.org/peace/laureates/1964/king-lecture.html> on 6 January 2006.