

**Environmental Law 1927-2007:
Retrospect and Prospect**

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Introduction

Between 1927, the year the *Australian Law Journal* was first published, and 2007, the nation and the environment of Australia have been radically transformed.

In 1927, Australia as a nation was only just over a quarter of a century old. In that year, on 9 May, Parliament House in Canberra was officially opened. Two months beforehand, on 24 March 1927, Federal Parliament had its final sitting in Melbourne before moving to Canberra. Federal Parliament had not enacted any legislation directly dealing with the environment – that was not to come for another four and a half decades. Australia was not a party to any international conventions in relation to the environment and there was no international customary law in relation to the environment. The Commonwealth had a very limited role in relation to environmental matters.

By 2007, the Commonwealth has a key role to play, legislatively and executively, in relation to the environment. The recent concern about anthropogenic climate change and water management, and the debate about the extent of the Commonwealth's role in their solution, is illustrative of the change in the Commonwealth's involvement. The Commonwealth has, since the early 1970s, increased its legislative regulation of persons and activities affecting the environment. Initially cautious because of doubts as to the constitutional power of the Commonwealth, today the Commonwealth would be emboldened in believing that, in particular, the external affairs power, corporations power and trade and commerce power support far more reaching legislative and executive action in relation to the environment.¹

In 1927, the nation had a population of 6,182,500. New South Wales had a population of 2,433,655 of which 43% or 1,044,770 was in Sydney. Contrast these modest population figures with those today. As of 16 March 2007, the estimated population of Australia is 20,775,466 at 7:32.37am. New South Wales' population, at 2005, was 6,774,249, of which 63% or 4,254,894 was in Sydney. Australia's population has therefore increased over the 80 years since 1927 by 14,592,966 or 236%.²

Transportation has radically changed. In 1927, the motor vehicle was still rare. Motor vehicles were largely imported from overseas. The Ford Motor Company had begun assembling motor vehicles in Australia in 1921. On 31 March 1925, it had bought a 100 acre site in Geelong, Victoria for two auto plants. On 1 November 1926, General Motors had opened assembly plants in Sydney, Melbourne, Adelaide and Perth. However, it was not for another two decades before the first Holden car came off the assembly line at Fisherman's Bend in Melbourne on 1 September 1948.

¹ *New South Wales v Commonwealth of Australia; Western Australia v The Commonwealth of Australia* [2006] HCA 52 (14 November 2006).

² Australian Bureau of Statistics 2007, *Australian Historical Population Statistics*, 'Table 18: Population (a), capital city and balance of state (b), states and territories, 30 June, 1901 onwards', data cube: Excel Spreadsheet, Cat.no. 3105.0.65.001 and 'Table 19: Population (a), age and sex, Australia, 1901 onwards', viewed 14 March 2007, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3105.0.65.0012006?OpenDocument>.

The Sydney Harbour Bridge, which celebrates this year its 75th Anniversary, was under construction. The foundation stone of the north shore section of the Sydney Harbour Bridge had been laid on 26 March 1925. It was to open on 19 March 1932.

In 2007, Australia has one of the highest rates of motor vehicle ownership in the world, second only to the United States. Just under 1 in 2 people own cars (484 vehicles per 1,000 persons in 1996).³

In 1927, air travel was rare. International flights to and from Australia were unknown. It was not until 22 February 1928 that Bert Hinkler completed the first solo flight from England to Australia and 9 June 1928 that Charles Kingsford-Smith completed the flight from America to Australia. Kingsford-Smith's and Charles Ulm's Australian National Airways had its first flight from Sydney to Brisbane on 1 January 1930. Amy Johnson completed her solo flight from London to Darwin on 25 May 1930. Australian National Airways did not last long, folding after one of its aircraft, Southern Cloud, disappeared over the Great Dividing Range on 2 July 1931. Bert Hinkler did not last much longer either, his body being discovered near his wrecked plane in Florence, Italy on 28 April 1933 while attempting to fly from England to Australia. So too, Charles Kingsford-Smith died with his co-pilot after the Lady Southern Cross disappeared over the Bay of Bengal on 8 November 1935. More successful was the then Qantas Empire Airways, which had its first scheduled international flight from Darwin to Singapore on 26 February 1935. Qantas had been registered in Winton, Queensland on 16 November 1920. The first Qantas flight was a regular service between Charleville and Cloncurry, Queensland beginning on 2 November 1922.

In 2007, of course, air travel is common and is under the spotlight for its contribution to greenhouse emissions and climate change. The Intergovernmental Panel on Climate Change stated in its 2001 report that the demand for air travel, as measured in revenue passenger kilometers, is projected to grow by 5% per year for the next 15 years, but improvements in efficiency and operations are projected to hold the growth in CO₂ emissions to 3% per year. Aircraft also emit water vapor, NO_x, SO_x and soot; trigger the formation of condensation trails; and may increase cirrus cloudiness. All of these effects contribute to climate change.⁴

Communications have improved remarkably over the past 80 years. In 1927, radio was being used for sending messages, both within Australia and internationally. The first radio message between London and Sydney had been sent in 1918. Radio was also being used as an entertainment and information service. The first live radio program in Australia was broadcast in Melbourne in 1920. The first radio stations began broadcasting in Sydney,

³ Professor P W Newton (Lead Author), "Human Settlements Theme Report", Source Material for the *Australia State of the Environment Report 2001*, Federal Department of the Environment and Heritage at 60.

⁴ Intergovernmental Panel on Climate Change, *Climate Change 2001: Working Group III: Mitigation*, section 9.2.8.1 Aviation

Melbourne and Perth in 1923. The telephone was being used domestically. In 1907, the first trunk telephone link between Sydney and Melbourne was opened. In 1912, the first automatic telephone exchange for public use was opened in Geelong. But it was not until 1930 that the first international telephone call was made, by Prime Minister James Scullin. Post was delivered by transportation on land and sea. The air mail service to the United Kingdom did not commence until 1931. Television, although just invented in 1927 in the United States, was not to be introduced for another 30 years. The first telephone broadcast in Australia was in 1956. The first television programs from the United Kingdom were transmitted via satellite to Australia in 1966. Colour television broadcasting was not introduced in Australia until 1975.

In 2007, hi-tech communications are the norm. Television transmits, by satellite and cable, graphic images of world events, often as they happen. Telephones, increasingly mobile or cell phones, enable instantaneous communications by satellite, including television and news. The most dramatic change in communications has been the computer and the internet which permits access to information at a speed, quantity and manner of processing unheard of in 1927. In 2005-06, 60% of Australian households had home internet access and 70% of households had access to a computer. Over the years from 1998 to 2005-06, household access to home internet in Australia increased by 44%. During this period, access to computers also increased by 26 % to 70%.⁵

In retail, shops were small and specialised. The supermarket was unknown. Today's prominent grocery retailing market leader in Australia, Woolworths, had only just begun back in 1927. Australia's first Woolworth's store had opened on 5 December 1924 in the Imperial Arcade on Sydney. In 2007, retailing is concentrated in shopping centres and malls in particular. There is a definite trend towards bigger is better. Retailing in Australia reached over \$170 billion in 2005, with supermarkets accounting for the largest proportion of total retailing sales in 2005.⁶

In industry, Australian Iron and Steel Limited were constructing its blast furnace at Port Kembla, beginning production on 29 August 1928. This was the plant that acquired notoriety in 1939 when Robert Menzies' government pressured waterside workers to load pig iron for Japan.

The environment has also been transformed in this 80 year period. The extent and rate of transformation has increased with changes in population, technology, consumption and trade.

The mechanisation of farming has enabled radical changes to be made to the natural environment. The development of agricultural machinery led to low

⁵ Australian Bureau of Statistics 2007, *Household Use of Information Technology*, 2005-06, at 6, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/B1A7C67456AE9A09CA25724400780071/\\$File/81460_2005-06.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/B1A7C67456AE9A09CA25724400780071/$File/81460_2005-06.pdf).

⁶ Euromonitor International, *Retailing in Australia* available at http://www.euromonitor.com/Retailing_in_Australia, June 2006

cost, low labour, extensive systems of production.⁷ Mechanisation enabled much larger areas to be cropped, under an extensive system of husbandry. It also enabled cropping, particularly wheat cropping, to be transferred far into the drier areas such as the Mallee.⁸

The investment in agricultural science also enabled increased production both in terms of area and intensity. In 1926, the Commonwealth Council for Scientific and Industrial Research (CSIR) was founded. In 1949, this became the Commonwealth Scientific and Industrial Research Organisation (CSIRO).⁹

Since 1788, at least 61% of the original native vegetation of New South Wales has been cleared, thinned or significantly disturbed.¹⁰ In 1988 and 1990 some 700,000 ha and 650,000 ha of native vegetation (including regrowth) respectively were cleared nationally. The scale of native vegetation lost during 1990 equates to 'over one million rugby football fields, or over two rugby football fields being cleared every minute.'¹¹ Around 25,000-33,000ha of New South Wales' moderate to high density woody native vegetation was removed each year in the early to mid-1990s dropping to between 12,000 to 15,000 ha per year in the late 1990s.¹² Land clearing is considered the dominant cause of the loss of species biodiversity. By 2006, of the 138 mammal species in New South Wales, 26 are listed under the *Threatened Species Conservation Act 1997* as presumed extinct, 17 as endangered, 40 as vulnerable and 7 as having endangered populations, giving a total of 90 or 65%. For other mammals, of the 92 species of amphibians, 28 or 30% are listed under the Act; of the 619 species of birds, 132 or 21% are listed under the Act; and of the 257 species of reptiles, 43 or 17% are listed under the Act. For plants, of the 5,248 species of plants, 626 or 12% are listed under the Act.¹³

Urban sprawl is another aspect of environmental change that has greatly altered the natural landscape of Australia. As previously mentioned, rapid population growth necessitated increased housing. In Sydney in 1927, houses were generally single storey dwellings of modest floor area.¹⁴ By 1984-1985, new houses in NSW had an average floor area of 159.3 m². This increased dramatically within two decades to 244.9 m² in 2002-2003, an increase of 53.8%.¹⁵ The trend shows little sign of abating. This has many consequences, including increased building resources needed, increased power demand, particularly air-conditioning, increased built upon area and concomitant decreased natural environment.

⁷ Australian Academy of Technological Sciences and Engineering, *Technology in Australia 1788-1988*, 2000, p 15 available at <http://www.austehc.unimelb.edu.au/tia/about.html>.

⁸ Australian Academy of Technological Sciences and Engineering, n 7, p 16.

⁹ Australian Academy of Technology Sciences and Engineering, n 7, p 30.

¹⁰ State of the Environment Report NSW 2006, s.6.1 available at <http://www.epa.nsw.gov.au/soe/soe2006/chapter6/chp6.1.htm#6.1.12>

¹¹ Native Vegetation Clearance, 'Habitat Loss and Biodiversity Decline – An Overview of Recent Native Vegetation Clearance in Australia and its Implications for Biodiversity', *Biodiversity Series Paper No 6 – Executive Summary*, Department of Environment and Water Resources, June 1995.

¹² State of the Environment Report NSW 2006, n 10, s 6.1.

¹³ State of the Environment Report NSW 2006, n 10, s 6.3, Table 6.7.

¹⁴ John Toon and Jonathan Falk (eds), *Sydney Planning or Politics – Town Planning for Sydney Region since 1945*, Sydney University Publishing Services, Sydney, 2003 at 27.

¹⁵ Australian Bureau of Statistics 2007, '1301.0 Yearbook Australia 2005', <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1301.02005?OpenDocument>.

As would be expected with these massive changes in the nation and its environment, the law has also been radically transformed. It is difficult in one article to capture the full scope and nature of the changes in the law relating to the environment. Nevertheless, some understanding of the changes can be provided by grouping the changes in phases. The phases are roughly consecutive in chronology, however, there is some chronological overlap between the phases. Also, as with any classification of complex phenomena, judgment calls need to be made. The process of identifying and labelling a phase can squeeze out other trends and interrelationships between trends. Nevertheless, it is hoped that the phases that have been identified give some appreciation of the transformation of environmental law in the 80 year period from 1927-2007. I will primarily use the legislative enactments in New South Wales and the Commonwealth to illustrate the changes.

The inter-war period: allocation of land and resources for development

The law in relation to the environment in the period between the two world wars had, as now, two sources: the common law and statute.

The common law regulated essentially the rights and duties of the propertied class. The causes of action in trespass and private nuisance protected the rights of property owners against damage or harm to their property such as by pollution of the air and water. Public nuisance protected a wider class of the public, and not just owners of private property, and for that reason the Attorney-General was the proper plaintiff to remedy or restrain a public nuisance. The doctrine of strict liability in *Rylands v Fletcher*¹⁶ still held sway. It was not to be abandoned in Australia until the High Court's decision in *Burnie Port Authority v General Jones Pty Ltd.*¹⁷ The doctrine held that a person who uses his land in a non-natural way, such as where he, for his own purposes brings upon his land and collected and kept there anything likely to do mischief if it escaped, must keep it in at his peril. He was prima face answerable for all the damage which was the natural consequence of its escape, unless he excused himself by showing that the escape was due to the plaintiff's fault, or was the consequence of *vis major* or act of God.

The law of negligence was still inchoate in 1927. The classic decision of the Privy Council in *Donoghue v Stevenson*¹⁸ was not to come for another five years. After it did, the law of negligence burgeoned and became the most influential of the tortious causes of action.

The statute law of the interwar period basically fell into three categories: land allocation, land use regulation and resource allocation and development.

The Crown, since the establishment of the colonies, allocated land by grants of fee simple, leases, licences or permits. By 1927, the power of the Crown to

¹⁶ (1868) LR 3 HL 330.

¹⁷ (1994) 179 CLR 520.

¹⁸ [1932] AC 562.

manage the land resources of Australia derived from legislation. In New South Wales, the then applicable legislation included the *Crown Lands Consolidation Act 1913*, *Western Lands Act 1901* and *Closer Settlement Act 1904*. These laws conferred power to grant interests in land and to attach conditions to instruments of development. The purpose was to facilitate the use and development of the land. This “improvement” of the land involved environmental degradation.

The early land use regulation was concerned with the urban environment of the cities and municipalities of the time. The objects of land use regulation included public health and safety. The erection of buildings in cities and municipalities was regulated to ensure proper health and safety for the buildings. Subdivision was regulated to ensure that new urban areas had proper water and sewerage and adequate streets and lanes. The *Public Health Act 1902* (NSW) and the *Local Government Act 1906* (NSW) and the *Local Government Act 1919* (NSW) were examples of this early land use regulation. Such regulation also had an object of ensuring that private development did not have untoward consequences for the public sector. The regulation of the opening of public roads in new subdivisions was an illustration of this concern. This was an object of the *Local Government Act* of 1906 and of 1919 (NSW).

However, planning as we know it now was not a feature of this early land use regulation. Wilcox, in his pioneering work on *The Law of Land Development in New South Wales*, noted that even after the *Local Government Act 1919*, the powers available to control development were minimal:

“A council might now be able to avoid the worst evils of *laissez-faire* development, sub-standard buildings and inadequate sites, but it could do little to avoid buildings being thrust into disharmonious proximity. No building control could prevent factories and shops being placed amongst cottages. Economic factors were decisive, outweighing considerations of living amenity, the availability of transport and public services, traffic problems and the preservation of natural beauty”.¹⁹

The regulation of natural resources, including minerals, was intended to allocate such resources for private exploitation between competing interests and allow their development. The right to exploit water, timber, minerals, flora and fauna resources, to name the key ones, were regulated for the purposes of allocation and development of the resources. Examples of statutes at the time include in New South Wales, the *Irrigation Act 1912*, *Murrumbidgee Irrigation Act 1910*, *Water Act 1912*, *Mining Act 1906*, *Forestry Act 1909*, *Forestry Act 1916*, *Wild Flowers and Native Plants Protection Act 1927* and the *Birds and Animals Protection Act 1919*, *Fauna Protection Act 1948*.

¹⁹ M Wilcox, *The Law of Land Development in New South Wales*, Law Book Company, Sydney, 1967 at 188.

The early post-war period: the introduction of planning

The Second World War ended when Germany surrendered to the Allies on 8 May 1945 and the Japanese surrendered on 15 August 1945. By this time, Australia's population had increased to 7,579,400 in 1947, an increase of 1,396,900 or 23% over the twenty years. New South Wales' population in 1947 was 3,002,634, of which 50% or 1,489,620 was in Sydney.²⁰

In New South Wales, the development of the cities and municipalities had been haphazard and largely uncontrolled, owing to the lack of any legislative requirements for planning. The Government sought to remedy this problem by the *Local Government (Town and Country Planning) Amendment Act 1945*. This Act inserted into the *Local Government Act 1919*, Part 12A entitled "Town and Country Planning Schemes". The Act was largely modelled on the English *Town Planning Act 1932*.²¹ The Government's purpose in introducing the Bill to Parliament was described by the then Minister for Local Government, the Honourable J J Cahill MLA, as follows:

"The need for adequate town and country planning machinery is now so insistent, having regard to the need for the orderly regulation of the post-war development and for the correction of the evils of the largely haphazard and uncontrolled development of our cities, towns and villages in the past, that satisfaction of these needs can no longer be denied...

The principles of town and country planning may be stated simply as an attempt to regulate, in advance, the orderly arrangement and use of land in town and country, so as to promote, for the greatest good and the greatest number, the improvement of community life and of the environment in which our people live; to enable the people to enjoy the benefits of social security, good health, safety, education, recreation, employment and shelter, good communication, public utilities and amenities. It has been said that man is the product of the environment in which he lives. Much has been said but little has been done, to improve the environment. This Bill...will provide the legislative means to effect such improvements".²²

The *Local Government (Town and Country Planning) Amendment Act 1945* applied to municipalities and shires under the City of Sydney. As noted, the Act inserted into the *Local Government Act 1919* a new Part 12A to enable the making of town and country planning schemes. The process commenced with the Council, by resolution, deciding to prepare a scheme with respect to any land within its area.²³ A resolution of the Council did not, however, take effect unless and until it was approved by the Minister and notice of such

²⁰ Australian Bureau of Statistics, n2.

²¹ JG Starke, *The Law of Town and Country Planning in New South Wales*, Butterworths, Sydney, 1966 at 39.

²² New South Wales Parliamentary Debates Vol, 176 at 1720 and 1767 extracted in M Wilcox, n16 at 189.

²³ *Local Government Act 1919*, s 342C(1)(a).

approval was published in the Gazette.²⁴ The process then continued through notification and consideration until submission of the scheme to the Minister for approval.²⁵ There then followed further consideration by the Minister until ultimately the Minister could, if he so desired, recommend to the Governor the making of an ordinance prescribing the scheme.²⁶ The Governor, on the recommendation of the Minister, could then make an ordinance prescribing the scheme.²⁷

As could be envisaged, the process of preparing and making prescribed schemes could take considerable time. In the interim, there was considered to be a need to control development. This was done by inserting a new Division 7.²⁸ Division 7 commenced upon the day appointed by the Governor and notified by proclamation published in the Gazette.²⁹ This day was 9 November 1945. Division 7 provided for the making of an ordinance and then provided that “interim development” should not be carried out except as may be permitted by the ordinance or except as may be permitted by the Council under the authority of the ordinance subject to such conditions, restrictions and provisions as may be contained in the ordinance.³⁰ The ordinance that was made for the purposes of Division 7 was Ordinance No 105. Ordinance 105 was proclaimed on 9 November 1945, the same day that Division 7 commenced.³¹

“Interim development” was defined in s 342T(1) of the *Local Government Act* 1919. The definition was such that there could be two dates for the commencement of the interim period. One of those dates became 12 July 1946. The other date was the date upon which a resolution of the Council or two or more Councils acting together to prepare a scheme had taken effect. The commencement date of the interim period was whichever of these two dates occurred first.³²

The planning rationale for the legislative provisions was that development could be controlled whilst the Cumberland County Council was preparing its scheme and during the subsequent period before the Scheme could be prescribed. Ultimately, however, the County of Cumberland Planning Scheme Ordinance was prescribed not by means of the provisions that were inserted in the 1945 Act, but by another enactment, the *Local Government (Amendment) Act* 1951.³³ The County of Cumberland Planning Scheme Ordinance took effect on 27 June 1951. It was the first statutory planning scheme in Australia. Subsequently, other planning schemes were made under the provisions of Part 12A of the *Local Government Act* 1919.

²⁴ *Local Government Act* 1919, s 342C(2)(a).

²⁵ *Local Government Act* 1919, s 342H.

²⁶ *Local Government Act* 1919, s 342J(5).

²⁷ *Local Government Act* 1919, s 342K(1).

²⁸ *Local Government Act* 1919, ss 342S-342Z.

²⁹ *Local Government Act* 1919, 342S.

³⁰ *Local Government Act* 1919, s 342U(1) and (2).

³¹ JG Starke, n 21 at 114 and 115.

³² M Wilcox, n 19 at 190.

³³ See s 2 and the Schedule thereto containing the County of Cumberland Planning Ordinance.

The planning schemes employed the planning tool of zoning.³⁴ Conventionally, zoning divides an area, such as a local government area into zoning districts on the basis of the functional incompatibility and compatibility of various types of uses. Generic categories of functionally incompatible types of uses, such as housing, business and industry, are segregated into separate zoning districts which are typically labelled to indicate the generic category of use such as residential, business and industrial zones. The typical generic zoning districts, segregated by the functional incompatibility of types of uses, include: non-urban or rural; residential, commercial or business, industrial; special uses (such as transport infrastructure or institutions including educational and religious institutions); open space and conservation.

Within each zoning district, there may be sub-districts segregating, at a more specific level, the generic categories of uses. For example, within a generic residential zone, there may be specific sub-districts for low density (detached dwelling houses), medium density and high density residential uses. Similar distinctions, based on the intensity of use are often found in business and industrial zoning districts (such as light industry versus heavy industry).

Often the planning scheme will include one or more special purpose zones addressing the particular characteristics of the environment, such as hazard areas (flood, geotechnical or foreshore hazards), scenic landscape areas and heritage areas. These special purpose zones are often applied as “overlays” so that the particular land subject to special overlaid zones are also within an underlying zoning district. For example, land within a residential zone might also be located within a flood hazard zone. The land would be subject to the controls on development of both the underlying zone (in the example, residential) and the overlay zone (flood hazard).

Having segregated blocks of land on the basis of the functional incapability of types of uses, the planning scheme typically prescribes the rules that apply in each zoning district or sub-district. These rules typically establish a list of developments permitted in each zoning district or sub-district. The permitted developments are those that are functionally compatible with one another. Functionally incompatible developments are prohibited.

The rules also typically specify the standards and requirements in relation to the carrying out of permitted developments, such as lot size; built upon area; location, siting and setbacks; and bulk, scale, shape, size, height, design, density or external appearance of the permitted development. These standards also have as their aim the fostering of compatibility between permitted development.

The introduction of planning also brought the use of land for resource exploitation within the planning regulatory system. A famous case, involving the regulation of the controversial mineral sands mining at North Entrance on the New South Wales coast, was *Associated Minerals Consolidated v Wyong*

³⁴ See the discussion of zoning in *Retirement by Design Pty Ltd v Warringah Council* [2007] NSWLEC 87 at [46] – [52].

Shire Council.³⁵ The Privy Council held that the *Mining Act* 1906 and the *Local Government Act* 1919 were both of general application to land in New South Wales and could and did co-exist in relation to a given piece of land. The purpose of the mining legislation was to enable prospecting and mining of land in the State and the purpose of the planning legislation was to enable restrictions as to use to be imposed on all such land. There was no indication in Part 12A of the *Local Government Act* 1919 of an intention to exclude land used or useable for mining or to reserve the application of the mining legislation. Accordingly, Part 12A and the planning scheme made under it effectively operated over all of the lands proposed to be mined.

This approach to planning, established under Part 12A of the *Local Government Act*, has continued to date, with some refinements, in modern planning legislation both in New South Wales and elsewhere.

The 1950s to early 1970s: regulating the spill over effects from uncontrolled development

The Second World War devastated the Allied countries, including Australia. There was a determination to repopulate and indeed to increase the population of Australia, to rapidly industrialise and otherwise develop the nation. All of this, as it turned out, was to be done without adequate regard to the environmental consequences of these actions. Enormous changes occurred.

Australia had a long economic boom through the 1950s until the early 1970s. These were “years of plenty, profit and industrialists”.³⁶ During the late 1950s and the 1960s the Australian economy experienced rapid growth, despite the credit squeeze of 1960. The expansion of manufacturing and the immigration schemes that supplied both workers and consumers were major factors in the boom, benefiting in particular Melbourne, Sydney and Adelaide. The biggest gains in each city were made in car and appliance manufacturing and their feeder industries, which expanded with the boom in consumer spending after the war. This also boosted city centre business.³⁷

In regional Australia, advances in transport communication technology made the exploitation of mineral resources in remote regions possible. Overseas funds were used to buy extensive mineral deposits in the Northern Territory, Queensland and Western Australia, setting off huge mining booms in the 1960s.³⁸

Symbolic of the industrial boom was the development of the Snowy Hydro Scheme. The Snowy Mountains Hydro Electric Authority had been established on 7 July 1949. Construction continued through the 1950s. On 4

³⁵ [1975] AC 538.

³⁶ S Marsden, *Urban Heritage: the rise of post war development of Australia's capital city centres*, Australian Council of National Trusts and Australian Heritage Commission, Canberra, 2000, Part 2, Section 1.1, Economic cycles.

³⁷ Marsden, n 36, *ibid*.

³⁸ Marsden, n 36, *ibid*.

May 1959, the Snowy Mountain Scheme's first big hydro electric power station, Tumut 1, began operation.

Australia's population swelled significantly, in response to the Government's deliberate immigration policy. As noted earlier, back in 1947, just after the Second World War, Australia's population was 7,579,400 and New South Wales' population was 3,002,634 of which 50% or 1,489,620 was in Sydney. Ten years later, in 1957, Australia's population had increased to 9,640,200 and New South Wales' population had increased to 3,624,969 of which 55% or 1,996,010 was in Sydney. Ten years later again, in 1967, Australia's population had increased even further to 11,799,078 and New South Wales' population had increased to 4,295,239 of which 60% or 2,583,650 was in Sydney. The consequence was that Australia's population swelled in the 20 years after the Second World War by 4,219,678, an increase of 56%.³⁹ Australia's population reached the 10 million mark on 10 March 1959.

The scale and rate of industrialisation and development of Australia led to significant concerns about the spill over effects on the environment, including on human health. Pollution of the air and of the waters, both terrestrial and marine, was the most obvious spill over effect.

People could experience first hand the problem by breathing foul air and seeing polluted waters and the consequences of polluted waters such as loss of fish. However, advances in technology and communication also meant people could vicariously experience the problem. Mercer notes that:

“From the 1960s onwards things began to change very rapidly, partly...as a consequence of the world's attention being focused on the series of dramatic environmental catastrophes through the medium of television. These included Minamata disease⁴⁰ in Japan, the Santa Barbara⁴¹ and Torrey Canyon⁴² oil spills and a spate of serious smog

³⁹ Australian Bureau of Statistics, n2.

⁴⁰ Minamata disease is named after the Japanese town of Minamata where the inhabitants, particularly the fishermen, were afflicted by the disease. The Chisso Corporation manufactured plastics, drugs and perfumes using acetaldehyde. Acetaldehyde is produced using methyl mercury compounds as reaction catalysts. From 1932 to 1968, the Chisso Corporation discharged effluent containing methyl mercury into the sea of Minamata Bay. The methyl mercury, working its way up the food chain, bio-accumulated in the fish. The fishermen had a dominant fish diet. The mercury affected their central nervous system. About 3,000 people contracted the disease and over half died. The fishermen started protesting in 1959. The event was magnified by the national news media. The corporation did not stop dumping mercury until 1968. See Environmental Health Department, Ministry of the Environment, Government of Japan, “Minamata Disease: The History and Measures”, 2002, accessed at <http://www.env.go.jp/en/chemi/hs/minamata2002/index.html> and Jun Ui “Chapter 4 - Minamata disease” in Jun Ui (ed), *Industrial Pollution in Japan*, United National University Press, Tokyo, 1992.

⁴¹ A blow out while drilling for oil at an offshore drilling rig 5 miles off the coast from Santa Barbara, California in January 1969 released approximately three million gallons of oil over 11 days. The wind and ocean dispersed the spilled oil into the pristine and biologically diverse Santa Barbara channel and coast. There was huge publicity and public backlash: see JC Clarke and JJ Hemphill, “The Santa Barbara Oil Spill, A Retrospective” (2002) *Yearbook of the Association of Pacific Coast Geographers*, University of Hawaii Press, Vol 64, pp 157-162.

⁴² The Torrey Canyon was an oil super tanker which struck a reef off the Isles of Scilly about 120 miles off the coast of Cornwall, UK, in March 1967, releasing its load of 120,000 tons of crude oil. The oil washed up on the southern coast of England and Normandy and Brittany in France. Approximately 15,000 sea birds were killed. The incident attracted worldwide attention and was the catalyst for the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties

outbreaks in cities like Los Angeles and London in the 1950s and 1960s. (In 1952 in London alone 4,000 deaths were directly attributed to a “killer” smog).⁴³

There had been an increased use of science to deliver increased agricultural production. This included the development of synthetic chemicals. After the Second World War, there was a profligate use of synthetic pesticides in agriculture.

Rachel Carson, the American zoologist and biologist, became concerned about the use and long term effects of pesticides. In 1962, Carson published her classic book *Silent Spring*, in which she described the detrimental effects of pesticides, including DDT⁴⁴, on the environment. She described the chronic bio-accumulative effects pesticides can have up the food chain, particularly on birds. Carson’s book facilitated a ban on DDT in 1972 in the United States. The title “*Silent Spring*” referred to Carson’s fear that the uncontrolled use of pesticides would eventually result in a spring season in which no birds could be heard because they had all died from pesticides. The title was inspired by the John Keats’ poem “*La Belle Dame Sans Merci*” which contained the lines: “The sedge was wither’d from the lake / And no birds sing”.

Up until the mid-twentieth century, the means of control of pollution largely had been by the common law causes of action such as trespass, private nuisance and public nuisance⁴⁵. Trespass and private nuisance depend on private owners whose property interest has been adversely affected, taking action against the wrongdoer, normally another property owner undertaking the harmful activity on their land. Public nuisance requires damage, inconvenience or injury to the public in the exercise of rights common to all citizens but in order for a private claimant to complain of public nuisance, the claimant must have incurred some particular or special loss over and above the ordinary inconvenience or annoyance suffered by the public at large. Otherwise, the Attorney-General or other public body must take action, which rarely happened.

and the Convention on Civil Liability for Oil Pollution Damage, both adopted in Brussels on 29 November 1969.

⁴³ D Mercer, *A Question of Balance, Natural Resources Conflict Issues in Australia*, Federation Press, Sydney, 1991 at 34.

⁴⁴ Dichloro-Diphenyl-Trichloroethane (DDT) was a chlorinated organic insecticide.

⁴⁵ There were some earlier examples of anti-pollution legislation. Bates notes that in the United Kingdom, “As early as 1273, for example, it is said that Edward I prohibited the use of coal because the fumes were considered detrimental to human health. For the same reason, in 1388, a statute prohibited the throwing of dung and other filth into rivers and ditches close to any towns or villages [12 Ric 2c 13]. The Bill of Sewers, [23 Hen 8c 5] enacted in 1531, empowered the Crown to issue commissions to keep sewers, trenches and ditches cleansed and deal with land drainage, flood prevention, and coastal erosion. Even as late as 1875, water pollution problems in England were still being dealt with under the great Public Health Act of that year. Indeed, only the sensitive noses of 19th century members of parliament, who could not bear to take tea on the terraces of the Houses of Parliament at Westminster due to the appalling stench coming from the River Thames, finally secured the passing of the Rivers (Prevention of Pollution) Act 1876 (UK)”: G Bates *Environmental Law in Australia*, LexisNexis Butterworths, 6th ed, 2006 at 5.

The increased scale and nature of industrialisation and development in the post-war period led to more diffuse, pervasive and chronic effects. This posed at least two problems for a successful common law action: first, identifying the person responsible for the diffuse, pervasive and chronic effects and second, the persons who suffer are the public at large and not just individual property owners. The common law was not up to the task of adequately controlling this type of pollution.

Indeed, the impotency of the common law to deal with air and water pollution had already been exposed by at least the mid-nineteenth century in England. The law of nuisance had had little effect on preserving the quality of the environment or regulating the progress of industrialisation.⁴⁶ Proof of the inadequacy of the common law was the existence of widespread pollution. As Elder perceptively states:

“Where has the common law been throughout the environmental crisis? The answer seems to be “the same place where it was throughout the industrial revolution in England”. The common law doctrines, even in their full rigour, must always have appeared irrelevant to the masses toiling in the urban slums of industrial England. The genteel doctrines, developed to protect landed gentry and early water powered mills involved in the grain and wool trades, may have assisted some land owners to maintain the bucolic nature of their estates, but one familiar with the history of industrial England could point out the fantastic wastelands created, particular after the development of the chemical industry. Vast areas of the English countryside were laid waste by the irresistible development of a self-adjusting market economy, the earlier stages of which had probed too much even for legislation”⁴⁷

In the United States, United Kingdom and Australia, the legislature responded to the spill over effects of industrialisation and development by enacting pollution control statutes. These statutes of the time had three characteristics. First, pollution control was seen as an adjunct to the responsibility of government for maintaining public health. Polluted air and water were harmful to human health, as was excessive or nuisance noise. Second, these pollution statutes were focused on the specific environmental media polluted: the air, by pollution or noise, and the waters. Third, the pollution statutes implemented end of pipe solutions; that is to say, they controlled waste and regulated pollution that was being discharged into the environmental media of air or water. The regulatory system under these statutes identified the activities (such as factories or industries) that were the source of the waste or pollution and brought these sources under the licensing arrangements. This was done by the means of licence conditions which controlled the quality and quantity of waste or pollutants being discharged.

⁴⁶ JF Brenner, “Nuisance Law and the Industrial Revolution”, *The Journal of Legal Studies*, Vol 3, No 2 (June 1974), 402 at 431-432.

⁴⁷ P S Elder, “Environmental Protection through the Common Law” (1973) 12 W Ontario L Rev 107 at 170. See also J C Juergensmeyer, “Common Law Remedies and Protection of the Environment” (1971) 6 U Brit Colum L Rev 215 at 233.

In the United States, the first federal air pollution legislation was passed in 1955. This legislation and subsequent efforts in 1960 and 1962 placed responsibility for reducing air pollution at the state and local level while beginning research and training on air pollution at the federal level with the Public Health Service. The US Federal Government began taking a more active role in controlling air pollution with the *Clean Air Act* 1963. This Act provided for more research and education, a federal enforcement authority to abate inter-state problems and the development of air quality criteria. The state and local jurisdictions continued to be the primary enforcement and monitoring agencies. After other amendments, the *Clean Air Act* 1970 was passed. This Act became the primary statute for controlling clean air and established the Environment Protection Agency.⁴⁸

In England, the *Clean Air Act* 1956 was adopted. This was designed to control particulate pollution, smoke. A major catalyst for the legislation was the Great Smog of 1952 in London. The smog lasted for five days during which the death rate more than doubled. 4,000 deaths occurred above the number that prevailed in normal circumstances.⁴⁹

In New South Wales, the *Clean Air Act* 1961 was assented to on 15 December 1961 and became effective on 1 May 1962. The regulatory scheme was to identify certain types of industries and activities that typically cause air pollution, as scheduled premises.⁵⁰ Occupiers of scheduled premises were required to obtain a licence.⁵¹ Licence conditions could then be imposed regulating the quantity and quality of air emissions from scheduled premises. Occupiers of scheduled premises were not to exceed prescribed standards of air impurities.⁵² In addition, occupiers were required to maintain and operate control equipment in a proper and efficient manner⁵³ and not carry out work on scheduled premises without a pollution control approval.⁵⁴

In relation to pollution of waters, the United States led the way with a federal *Water Pollution Control Act* in 1948. This was amended throughout the 1950s and 1960s. It was wholly replaced by the *Clean Waters Act* 1972.

In New South Wales, the *Clean Waters Act* 1970 was enacted. Norberry notes that this Act was a response to the public outcry in the 1960s to the effects of the unregulated industrialisation in Sydney where waterways were used as disposal sites for factory waste.⁵⁵ Another statute of the time was the *Pollution Control Act* 1970 (NSW).

⁴⁸ Thad Godish, *Air Quality – Second Edition*, Lewis Publishers, 1991 at 247.

⁴⁹ V Guissani, "The UK Clean Air Act 1956: An Empirical Investigation", CSERGE Working Paper GEC 94-20 at 2.

⁵⁰ *Clean Air Act* 1961 (NSW) s 5 and the Schedule.

⁵¹ *Clean Air Act* 1961, s 10.

⁵² *Clean Air Act* 1961, s 15.

⁵³ *Clean Air Act* 1961, s 14.

⁵⁴ *Clean Air Act* 1961, s 16.

⁵⁵ J Norberry, "Australian Pollution Laws – Offences, Penalties and Regulatory Agencies", at 2 available at <http://www.aic.gov.au/publications/proceedings/26/norberry.pdf>.

Concern about the uncontrolled use of pesticides in agriculture, particularly the effect of spray drift on humans and the environment through aerial spraying of pesticides led to legislation such as the *Aerial Spraying Control Act 1966* (NSW) and more generally the *Pesticides Act 1978* (NSW).

The increased population, consumption and industrialisation also resulted in the generation of far greater quantities and more hazardous qualities of waste. There was a need to tackle the methods of and sites for disposal of society's waste. The legislature responded with the enactment of various statutes establishing governmental authorities with the responsibility for the collection and disposal of waste and other legislation regulating the disposal of waste. Over time, this legislation was amended to minimise the amount and the quality of waste disposed of by requiring recycling and processing. Examples of legislation of this period are the *Waste Disposal Act 1970* (NSW) and the *Waste Recycling and Processing Service Act 1970* (NSW).

Late 1960s and 1970s: Prior assessment of environmental impacts and public participation

The three legal approaches described above that have characterised earlier phases were, first, the allocation and development of resources; second, land use planning, including separating functionally incompatible uses; and thirdly, regulating the disposal of waste and discharge of pollutants from industry and development. These approaches were proving, however, to be insufficient. Economic decisions were being made without regard to and without integrating environmental factors. Where environmental factors were being considered, problems were being dealt with segmentally and not holistically. Furthermore, they were being considered too late in the process after some problem had already been caused and where it was difficult to retrofit solutions.

Society's perception of the problem was also altering. Events had occurred around the world which transformed the way the world and the environment were being viewed. One such event was the launching of man into space. On 20 February 1962, US astronaut John Glenn circled the earth. The city of Perth turned on its lights and Glenn named Perth "The City of Lights". On 21 July 1969, Neil Armstrong became the first man to walk on the moon. For the first time, we could see the earth, isolated and fragile in the enormity of space. It was a catalyst for a new look at environmental problems.

The view of the earth floating in the abyss of space like a spaceship led to the description by the American economist, Kenneth Boulding, of the earth as "spaceship earth". Boulding said the earth was like "a single spaceship, without unlimited reservoirs of anything, either for extraction or for pollution, and in which, therefore, man must find his place in a cyclical ecological system which is capable of continuous reproduction of material form even though it cannot escape having inputs of energy".⁵⁶ Boulding said this meant

⁵⁶ K E Boulding, "The economics of the coming spaceship earth" in *Environmental Equality in a Growing Economy*, reproduced in G de Bell (ed), *The Environmental Handbook*, Ballantine Books, New York, 1970 at 96.

the earth had a closed economy. The essential measure of the success of a closed economy is not production and consumption at all (the measures in an open economy), but rather the nature, extent, quality and complexity of the total capital stock, including the state of human bodies and minds included in the system. In this closed economy of spaceship earth, the primary concern is capital stock maintenance. Any technological change which results in the maintenance of a given total stock with a lessened throughput (that is, less production and consumption) is clearly a gain. The closed economy, therefore, is concerned with capital stock concepts, not income flow concepts.⁵⁷

As Joseph Sax notes:

“At the very heart of the spaceship image is the idea of a community of people endowed with a limited source of sustenance upon which they are mutually dependent. Because the survival of all of them depends upon its continuing ability to sustain them, their relation to it is inevitably one of mutual dependence, common enterprise, joint responsibility. The earth is our spaceship and it doesn't take much imagination to transfer the spaceship images of a common destiny to problems such as global warming, acid precipitation, deforestation or intensifying species extinction”.⁵⁸

Another change in the way society viewed the problem came with the mobilisation of civil society. The 1960s were “a turbulent period...of political ferment and change”⁵⁹. There was a reaction to materialism and consumerism (Ralph Nader was a prominent advocate). There was a concern about continual economic growth and its spillover effects and a call for a steady-state economy. There was growing opposition to the war in Vietnam with increasing numbers and scale of protests. And there was a more basic antiestablishment impulse.⁶⁰ These factors generated a wave of environmentalism. Citizens were no longer content to allow paternalistic government and industry to make decisions as to what was best for citizens and for the earth. They wanted to participate in the decision making process. One means of citizen participation was by citizen action in the courts challenging governmental decisions.

One of the catalysts for environmental law as we now know it today was the US Court of Appeals' decision in *Scenic Hudson Preservation Conference v Federal Power Commission* decided on 29 December 1965.⁶¹ The citizen action group had brought proceedings challenging the decision of the Federal Power Commission approving Consolidated Edison's plans to build a power

⁵⁷ Boulding, n 46 at 97. See also HE Daly, *Toward a Steady State Economy*, WH Freeman & Co, San Francisco, 1973, 152, 234-235 and E F Schumacher, *Small is Beautiful: A Study of Economics as if People Mattered*, Blond and Briggs, London, 1973 at 193.

⁵⁸ JL Sax, “The Law of a Liveable Planet”, in *NELA and LAWASIA Proceedings of the International Conference on Environmental Law*, 14-18 June 1989, Sydney at 8.

⁵⁹ LS Bacow and M Wheeler, *Environmental Dispute Resolution*, Plenum Press, 1984, at 2.

⁶⁰ Bacow and Wheeler, n 59 at 2.

⁶¹ 354F 2d 608 (2d Cir 1965) cert. denied sub nom *Consolidated Edison v Scenic Hudson Preservation Conference* 384 US 941 (1966).

plant on Storm King Mountain near the Hudson River, in New York State. The Court of Appeals set aside Consolidated Edison's licence and ordered the Federal Power Commission to hold new hearings. The Court stated the renewed hearing "must include as a basic concern the preservation of natural beauty and national historic shrines, keeping in mind, that in our affluent society, the cost of a project is only one of several factors to be considered".⁶²

The decision was a legal landmark. For the first time, a conservation group had been permitted to sue to protect the public interest. Although Scenic Hudson had no economic interest in Storm King, the usual basis for standing, the Court ruled that it nevertheless was an injured party and was entitled to judicial review of an agency ruling. The Court's ruling also mandated the consideration and integration of environmental factors with economic considerations. The Storm King Mountain battle would be fought for another decade before Consolidated Edison was finally forced to abandon plans for the power plant.

Sax, in his groundbreaking book, *Defending the Environment: A Handbook for Citizen Action*, developed the argument for citizen participation by public interest litigation in the courts. Sax identified a role for the courts not only in the management of the environment, but also in upholding and implementing our systems of democracy, government and law and of promoting social values.⁶³

Sax was also instrumental in drafting and persuading the legislature to enact the *Michigan Environmental Protection Act* 1970. This Act was pioneering in a number of respects. One was the recognition that air, water and other natural resources are held in trust by the government, reviving the Roman law concept of the public trust. Another was allowing the beneficiaries of that public trust, the citizens, to have standing to bring proceedings against any other person "for the protection of the air, water and other natural resources" and the public trust therein from pollution, impairment or destruction.⁶⁴ This liberal standing approach in the Michigan Act paved the way for the opening standing provisions in New South Wales, such as in s 153 of the *Heritage Act* 1977 and s 123 of the *Environmental Planning and Assessment Act* 1979.

The identified inadequacies of the previous approaches to regulation of the environment, the need to take a holistic, integrated approach to environmental problems and the need for a more democratic, participatory process, led to the development of a new tool called environmental impact assessment. The first statutory implementation of environmental impact assessment was in the *National Environmental Policy Act* 1969 of the United States. NEPA (as it is known) required federal agencies to undertake environmental impact assessment for "major Federal actions significantly affecting the quality of the

⁶² *Scenic Hudson Preservation Conference v Federal Power Commission*: 354F (2d Cir 1965) 608 at 624.

⁶³ J L Sax, *Defending the Environment: A Handbook for Citizen Action*, Vintage Books, New York, 1971.

⁶⁴ See J L Sax "The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention" (1969-1970) 68 *Mich L Rev* 471 and J L Sax and R L Conner, "Michigan's Environmental Protection Act of 1970: A Progress Report" (1972) 70 *Mich L Rev* 1003.

human environment”.⁶⁵ Symbolically, the then president Richard Nixon, signed the NEPA into law on New Years Day 1970. The *Environmental Quality Act 1970* shortly followed creating the Office of Environmental Quality to assist federal agencies in carrying out their functions concerning environmental issues. The requirements of NEPA were quickly duplicated at state and local levels across the United States. One example is the California *Environmental Quality Act 1970*.

It did not take long before citizens resorted to the courts to force reluctant government agencies to comply with NEPA. One of the important early cases was *Calvert Cliffs’ Coordinating Committee v US Atomic Energy Commission*.⁶⁶ Local residents challenged the licensing of a nuclear plant. The plaintiffs claimed violation of NEPA. The Court of Appeal held that the citizens had the requisite standing and that NEPA set a high environmental standard and that the courts were prepared to review government agencies’ decisions under NEPA. Numerous other cases were brought by environmental groups to enforce NEPA in the next couple of years.⁶⁷ The courts held that the efficacy of the legislation depends in part on the vigilance of the public in enforcing compliance. As the court noted in *I-291 Why? Association v Burns*,⁶⁸ “dozens of cases have demonstrated that absent the advocacy of such [environmental action] groups, the procedural rights and protections enshrined in NEPA stand in jeopardy of being ignored with impunity”.

The development of the environmental impact assessment process in the United States in the early 1970s created substantial interest in Australia.

New South Wales was the first jurisdiction to adopt an environmental impact assessment policy. In January 1972, the then premier Sir Robert Askin declared that it was government policy that “before any action which could significantly affect the quality of the environment is undertaken, its implications shall be expressly identified and evaluated”.⁶⁹ Three months later, in April 1972, at the inaugural meeting of the Australian Environment Council, the Chairman, Mr Jack Beale, a NSW member, included the item “environmental impact policy – prospects for a national approach” for information and discussion. He outlined to the other members the nature of the New South Wales policy and advocated the adoption of similar policies by the other states.⁷⁰

The then Liberal Commonwealth Government announced in May 1972 the adoption of an environment impact policy which required that any Minister or Department putting forward a submission must take into account the impact

⁶⁵ *National Environmental Policy Act 1969*, s 102(2)(c).

⁶⁶ 449 F 2d 1109 (DC Cir. 1971).

⁶⁷ See for example *Environment Defence Fund v US Corp of Engineers* 470 F 2d 289 (8th Cir 1972), *Environment Defence Fund v US Corp of Engineers* 342 F Supp 1211 (Ed Ark 1972) and *Natural Resources Defence Council v Morton* 458 F 2d 827 (D Cir 1972).

⁶⁸ 372 F Supp 223, 237 (D Conn 1974).

⁶⁹ State Pollution Control Commission, *Handbook of Environmental Control in New South Wales* (EC-2) 1975 at 55-56.

⁷⁰ R J Fowler, *Environmental Impact Assessment, Planning and Pollution Measures in Australia*, Commonwealth of Australia, 1982 at 8.

on the environment and that State projects for which Commonwealth funding financial assistance was sought would need to be supported by assurances that all environmental practices have been considered and evaluated.⁷¹

After the change of Federal Government, the newly elected Labor Government advised in April 1973 its policy that Ministers submitting development projects would be required to provide an environmental impact statement and that requests for financial assistance by the States should also be accompanied by an environmental impact statement.⁷²

These policy statements were replaced by legislative requirements upon the enactment of the *Environment Protection (Impact of Proposals) Act 1974* (Cth). This became the first legislative requirement in Australia for environmental impact assessment. Consistent with the constitutional thinking of the time, the scope of the Act was limited to Commonwealth ministers and government agencies and Commonwealth land. The object of the Act, defined in s 5, was to ensure, to the greatest extent that is practicable, that matters affecting the environment to a significant extent are fully examined and taken into account in relation to the formulation of proposals; the carrying out of works and other projects; the negotiation, operation and enforcement of agreements and arrangements (including with the States); the making and the participation in the making of decisions and recommendations; and the incurring of expenditure by, or on behalf of the Australian Government or authorities of Australia. The matters extended to matters of the kind arising in relation to direct financial assistance granted or proposed to be granted to the States.

The new nature of the legislation, requiring upfront consideration of environmental impacts and, more importantly, the introduction of the Commonwealth into the environmental assessment process, generated opposition. The first constitutional challenge was in *Murphyores Incorporated Pty Limited v The Commonwealth*.⁷³ Murphyores was undertaking mineral sand mining on Fraser Island. Conservation groups had staged active campaigns against the mining owing to the high environmental qualities of Fraser Island⁷⁴. The mineral concentrates extracted by Murphyores were exported overseas. This required the grant of export licences by the Commonwealth Minister for Minerals and Energy. The Commonwealth Minister ordered the holding of a public inquiry under the *Environment Protection (Impact of Proposals) Act* as to the environmental impacts of the mining on Fraser Island. The Commonwealth Minister intended to take into account the report of the public inquiry in determining whether to grant export licences for mineral concentrates extracted by Murphyores on Fraser Island. Murphyores brought proceedings against the Commonwealth arguing that the Commonwealth Minister for Minerals and Energy was not entitled to take into account the report of the public inquiry in determining whether to grant the

⁷¹ Fowler, n 70 at 8.

⁷² Fowler, n 70 at 9.

⁷³ (1976) 136 CLR 1.

⁷⁴ Fraser Island was subsequently listed on the World Heritage List in 1992 in recognition of its outstanding natural heritage values.

export licences and further that the *Environment Protection (Impact of Proposals) Act* and the inquiry directed thereunder were invalid. The High Court rejected Murphyores' arguments.

Subsequently, the High Court further considered the Act in *Australian Conservation Foundation v The Commonwealth*.⁷⁵ The High Court held that a breach of the rules of conduct prescribed in the Administrative Procedures made under the Act raised a justiciable issue. That case, of course, is also famous for establishing the scope of the standing rule in Australia.

Although New South Wales was the first to adopt an environmental impact assessment policy, the honours for the first state to enact environmental impact assessment legislation went to Victoria when it enacted the *Environment Effects Act 1978* which came into effect on 1 August 1978. Ultimately, New South Wales took until 1979 before environmental impact assessment was given a statutory basis in the *Environmental Planning and Assessment Act 1979*. The Act commenced operation on 1 September 1980. New South Wales became the second state to adopt environmental impact assessment legislation.

The New South Wales *Environmental Planning and Assessment Act 1979* was innovative in a number of ways. First, it required the State government to be subject to the legislative requirements for environmental impact assessment. Whilst there had been policies, there had been no legislative requirement for State Government to undertake environmental impact assessment. State government had not been subject to the planning regulatory system under Part 12A of the *Local Government Act 1919*. Part 5 of the *Environmental Planning and Assessment Act* was modelled on the *National Environmental Policy Act 1969* of the USA. It required Ministers and government agencies in their consideration of an activity to examine and take into account to the fullest extent possible all matters affecting the environment by reason of the activity.⁷⁶ Furthermore, there was a requirement on the determining authority to consider an environmental impact statement if the proposed activity was likely to significantly affect the environment.⁷⁷

Second, the Act required environmental impact assessment for private development. The Act did this by classifying private development into two categories: designated development and other development. Designated development was development that had been prescribed in the regulations to be designated development. This was largely development involving the types of industries and activities that had identified as scheduled premises under the previous pollution legislation and were therefore considered to be likely to significantly affect the environment. Designated development required the preparation of an environmental impact statement. The environmental impact statement was required to be submitted with the development application seeking development consent for the carrying out of the development. Furthermore, there was a lesser form of environmental

⁷⁵ (1980) 146 CLR 493.

⁷⁶ *Environmental Planning and Assessment Act 1979*, s 111.

⁷⁷ *Environmental Planning and Assessment Act 1979*, s 112.

impact assessment in the form of a statement of environmental effects which was required to accompany development applications for other developments. This requirement for environmental assessment for private development went further than previous environmental impact assessment legislation in the United States and at the Commonwealth level which only applied to public decision making and in particular major governmental action.

Third, the Act required strategic environmental impact assessment as part of the process of the planning and zoning of land. Part 3 of the Act brought forward and modernised the town and country planning provisions of the previous Part 12A of the *Local Government Act 1919*. However, it required as a step in the process of preparing draft environmental planning instruments, the preparation of an environmental study. This involved a form of strategic environmental impact assessment.

Fourth, the Act was groundbreaking in the extent to which it allowed and encouraged public participation. One of the objects of the Act was expressly stated to be “to provide increased opportunity for public involvement and participation in environmental planning and assessment”.⁷⁸ Various provisions of the Act ensured this could occur. There were requirements for the public exhibition of and the opportunity for the public to comment on environmental studies and draft environmental planning instruments under Part 3 of the Act, development applications and environmental impact statements for designated development under Part 4 of the Act and environmental impact statements and activities under Part 5 of the Act. In addition, there was the open standing provision in s 123 of the Act which allowed any person, whether or not any right of that person had been or may be infringed by or as a consequence of a breach of the Act, to bring proceedings to remedy or restrain the breach. A new specialist court, the Land and Environment Court, was established to deal with these new citizen suits.

The Commonwealth *Environment Protection (Impact of Proposals) Act 1974* was ultimately repealed and replaced with wider environmental impact assessment legislation in the form of the *Environment Protection and Biodiversity Conservation Act 1999*.

The 1990s: Rationalisation of layers of regulation

The various phases of environmental law that have earlier been described led to a significant increase in the degree of regulation of activities affecting the environment. The almost universal tendency was not to abandon previous legislative approaches but to add further layers of regulation. The result was increased complexity. This led to the need for review and rationalisation of the body of environmental law.

There was also an increased recognition that the segmental approach that had characterised prior phases of environmental law needed to be reformed so as instead to take a more holistic approach.

⁷⁸ *Environmental Planning and Assessment Act 1979*, s 5(c).

In the area of planning and development control, the problem became particularly acute. A proposed development or activity might trigger the need for approval and assessment by multiple government agencies under multiple environmental laws. There was a need for integration and coordination.

An example where this need was answered was the reform of the *Environmental Planning and Assessment Act 1979* (NSW). The *Environmental Planning and Assessment Amendment Act 1997* with the *Statute Law (Miscellaneous Provisions) Act* which commenced on 1 July 1998, introduced the concept of integrated development. Integrated development was development that, in order for it to be carried out, required development consent under the *Environmental Planning and Assessment Act* as well as one or more approvals under a variety of other Acts, including the *Fisheries Management Act 1994*, *Heritage Act 1977*, *Mine Subsidence Compensation Act 1961*, *Mining Act 1982*, *National Parks and Wildlife Act 1974*, *Petroleum (Onshore) Act 1981*, *Protection of the Environment Operations Act 1997*, *Rivers and Foreshores Improvement Act 1948*, *Roads Act 1993*, *Rural Fires Act 1997* and *Water Management Act 2000*.

The amendments put in place a regulatory system whereby the determining authorities under those other Acts would be notified of the development application under the *Environmental Planning and Assessment Act* and could assess and notify the consent authority under the *Environmental Planning and Assessment Act* whether they would be prepared to grant the approval under that other Act and if so upon what conditions. The consent authority under the *Environmental Planning and Assessment Act*, if it determined that development consent should be granted under that Act, would impose as conditions the notified general terms of approval by the other authorities. In this way, all of the various other determining authorities' conditions of approvals were integrated into the one development consent. When the other determining authorities received an application under the other legislation, they would be required to grant the approval in accordance with the notified conditions.

The rationalisation process was also evident in the field of pollution control. New South Wales provides an illustration. First, there was a consolidation of the various offences and penalties for pollution. The *Environmental Offences and Penalties Act 1989* introduced tiering of offences: Tier 1 being *mens rea* offences, Tier 2 being strict liability offences and Tier 3 being absolute liability offences. Offences under environmental media-specific pollution statutes were classified into these tiers, depending on the mental element, parliament's view of the seriousness of the offence and other factors.

Next, a single Environment Protection Authority was established to provide integrated administration of the multifarious environmental protection statutes. This was achieved by the *Protection of the Environment Administration Act 1991* (NSW). This body has broader environmental functions than its predecessor, the State Pollution Control Commission. One of the core functions is to protect, restore and enhance the quality of the environment in

New South Wales having regard to the need to maintain ecologically sustainable development.⁷⁹

Finally, the most comprehensive rationalisation occurred with the enactment of the *Protection of the Environment Operations Act 1997* (NSW) which consolidated all of the previous environmental media-specific pollution legislation into one consolidated pollution statute.

Rationalisation can also be seen at the federal level. The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) consolidated the myriad different laws of the Commonwealth that had previously represented the Commonwealth's environmental legal response.⁸⁰

The 1970s to date: Influence of international law on domestic Australian law

Australia has always been influenced by overseas developments in the law. This is evidenced in the adoption in Australia of town and country planning, pollution control, environmental assessment and national parks and conservation laws from the United Kingdom and the United States.

Australia's environmental laws have also been influenced by legal developments at the international level. Many of the environmental laws that exist nationally and at the state level have been inspired by international law, both in the form of conventions and also soft law or non-binding declarations. An illustration of the influence of international law can be given by reference to heritage.

In 1972, the Convention concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention) was concluded. The Convention came into force in 1975. Australia became a party to the Convention in August 1974. The Convention provides for the nomination and listing of cultural and natural heritage properties that satisfy the definitions in the Convention. Common to both cultural and natural heritage definitions is the requirement that the properties be of "outstanding universal value".

Parties to the Convention are required to identify and delineate properties of cultural and natural heritage situated on their territory that meet the definitional requirements; submit to the World Heritage Committee for inclusion in the World Heritage List an inventory of such properties; protect, conserve, present and transmit to future generations the cultural and natural heritage satisfying the definitional requirements that are situated on its territory; and ensure effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage.

⁷⁹ *Protection of the Environment Administration Act 1991*, s 6(1)(a).

⁸⁰ The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) repealed the *Environment Protection (Impact of Proposals) Act 1974*, *Endangered Species Protection Act 1992*, *National Parks and Wildlife Conservation Act 1975*, *World Heritage Properties Conservation Act 1983*, *Whale Protection Act 1980* and *Wildlife Protection (Regulation of Exports and Imports) Act 1982*.

Australia embraced this holistic concept of heritage involving both cultural and natural components. On 17 May 1973, the then Prime Minister, Mr Gough Whitlam, appointed a Commission of Inquiry into the National Estate under the chairmanship of Justice R M Hope. The report of the Committee of Inquiry defined the national estate in terms of three components of the cultural and natural environment. The three components are those which are:

- “(a) of such outstanding world significance that they need to be conserved, managed and presented as part of the heritage of the world;
- (b) of such outstanding national value that they need to be conserved, managed and presented as part of the heritage of the nation as a whole;
- (c) of such aesthetic, historical, scientific, social, cultural, ecological or other special value to the nation or any part of it including a region locality, that they should be conserved, managed and presented for the benefit of the community as a whole”.⁸¹

The report noted that the components included parts of the natural environment, the man-made or cultural environment, archaeological or scientific areas, and cultural property.⁸²

The influence of the World Heritage Convention can be seen in at least two respects: first, the holistic view of heritage as including both natural and cultural heritage and second, the inclusion on the National Estate of world heritage sites.

The Hope Report led to the enactment by the Commonwealth of the *Australian Heritage Commission Act 1975*. That Act established the Australian Heritage Commission which had the responsibility of advising the Minister in relation to the conservation, improvement and presentation of the National Estate, and identifying and placing in a Register of the National Estate items comprising the National Estate. Again, it is notable that the legislation took a holistic view of heritage, including both natural and cultural heritage.

Also in 1975, the Commonwealth moved to protect one area which was undoubtedly of outstanding heritage value, the Great Barrier Reef. The Commonwealth passed the *Great Barrier Reef Marine Park Act 1975*.

In New South Wales, the government also embraced the holistic view of heritage. The *Heritage Act 1977 (NSW)* defined “environmental heritage” originally to mean “those buildings, works, relics or places of historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic

⁸¹ *Report of the Committee of Inquiry in to the National Estate*, Commonwealth of Australia, 1974 at 334.

⁸² *Report of the Committee of Inquiry in to the National Estate*, Commonwealth of Australia, 1974 at 335.

significance for the State”.⁸³ This Act became the first State legislation to deal with heritage in a holistic fashion, including natural heritage.

Back at the Commonwealth level, three properties were inscribed on the World Heritage List in October 1981: the Great Barrier Reef, Kakadu National Park Stage 1, and Willandra Lakes. Lord Howe Island Group was inscribed in 1982.

The first of the controversial listings was that of the West Tasmanian Wilderness National Park (the property was extended in 1989 and re-named the “Tasmanian Wilderness”). The World Heritage Committee decided to enter that property on the world heritage list on 17 December 1982. The decision was controversial because at the time the Tasmanian Hydro Electric Commission was proposing to build a dam on the Franklin River which would flood parts of this world heritage area.

The increasing citizen awareness and involvement in environmental issues through the 1960s and 1970s culminated with protests against the Tasmanian government’s proposed dam. Civil society had been increasingly disturbed at the proposals for development of South West Tasmania’s wilderness area. Lake Pedder had earlier been flooded in 1974. This loss led to the establishment in 1976 of the Tasmanian Wilderness Society, an environmental non-governmental organisation dedicated to protection of wilderness areas. The Society campaigned first in Tasmania, then nationally to stop the flooding of the Franklin and Gordon Rivers.

On 19 December 1982, just after the World Heritage Committee listed the area on the World Heritage List, hundreds of anti-dam protestors, led by Dr Bob Brown, descended on the Franklin River in a blockade to fight the proposed dam. The protests spread to the mainland. It became a key election issue in the lead up to the Federal election in 1983. On 6 March 1983, the ALP led by Bob Hawke, swept to power.

Responding to the electoral mandate, the Commonwealth government enacted the *World Heritage Properties Conservation Act* 1983. This was assented to on 22 May 1983 and proclamations made under the Act were gazetted on 26 May 1983. The effect of the proclamations was to prevent the Tasmanian government from constructing the dam and thereby damaging the world heritage listed property of the Western Tasmanian Wilderness National Park.

A constitutional challenge to the validity of the *World Heritage Properties Conservation Act* 1983 and various proclamations and regulations immediately followed. The case was expedited and on 1 July 1983, the High Court delivered its historic judgment in *Commonwealth v Tasmania*⁸⁴ (the Tasmanian Dams case). The High Court upheld the constitutional validity of the *World Heritage Properties Conservation Act* and the Proclamations made thereunder.

⁸³ *Heritage Act 1977*, s 4(1)

⁸⁴ (1983) 158 CLR 1.

The extent of the Commonwealth's power to implement domestically the World Heritage Convention continued to be explored in subsequent cases concerning potential world heritage areas.

The LEMONTHYME and Southern Forests of Tasmania adjoin to the east the Western Tasmania Wilderness National Park world heritage area. The conservation movement had been lobbying for the world heritage area to be expanded, including the LEMONTHYME and Southern Forests area. However, the Tasmanian government and private logging companies wished for these areas to be exploited for their timber.

The Commonwealth passed the *LEMONTHYME and Southern Forests (Commission of Inquiry) Act* 1987 which came into force on 8 May 1987. This Act established the LEMONTHYME and Southern Forests Inquiry chaired by Mr M Helsham QC, a retired judge of the Supreme Court of New South Wales. The Commission of Inquiry was to enquire as to the world heritage values of the LEMONTHYME and Southern Forests and whether any areas should be included in the world heritage area and preserved from logging. The Inquiry was due to report by the end of May 1988. To preserve the status quo in the meantime, Part 3 of the Act made provision for the interim protection of the inquiry area from a range of activities while the Commission was deliberating. Specifically, the Act prohibited logging, road construction and quarrying operations without the prior written consent of the Federal Minister for the Environment and the Arts.

However, the Forestry Commission of Tasmania's and the main logging company's attitudes of defiance prompted the Commonwealth to apply to the High Court for an interlocutory injunction to stop any further logging operations in the region. The interlocutory injunction was granted by Mason CJ. Subsequently, the High Court considered the constitutional validity of the Act. In *Richardson v Forestry Commission*⁸⁵ (the Tasmanian Forests case), the High Court held that the Act, including Part 3, was valid.

The decision of the High Court went further than that in the Tasmanian Dams case. In the Tasmanian Dams case, the Western Tasmania Wilderness National Park had already been listed on the World Heritage list. In the Tasmanian Forest case, however, the LEMONTHYME and Southern Forests area had been nominated for world heritage status but had not yet been listed. The High Court upheld the federal government's power under the *World Heritage Properties Conservation Act* to protect an area in these circumstances.

Subsequent to the High Court decision, the Commission of Inquiry presented its report in May 1988. The report failed to resolve the fundamental conservation versus development conflict. In a split 2-1 decision, the Commission recommended only about 10% of the region studied was worthy of inclusion on the World Heritage List. The debate continued both publicly

⁸⁵ (1988) 164 CLR 261.

and in the Federal Cabinet and in the Tasmanian Government. Ultimately in September 1989, the Federal Government announced the nomination of an extra 40,000 hectares to the world heritage area. This was on top of the 29,000 hectares extension earlier proposed by the Helsham Inquiry.⁸⁶ The nominated extension was inscribed on the World Heritage List in December 1989 and renamed the “Tasmanian Wilderness”.

In late 1987, the Commonwealth Government proposed nominating the Wet Tropic Rainforests in the Daintree region as a world heritage property, over the objection of the Queensland Government. Regulations were made in January 1988 under the *World Heritage Properties Conservation Act*, prohibiting logging in the nominated area. Queensland sought an interlocutory injunction restraining the Commonwealth from submitting to the World Heritage Committee a proposal that the property was suitable for inclusion in the World Heritage List. On 24 December 1987, Mason CJ refused the interlocutory injunction: *Queensland v Commonwealth*.⁸⁷ The Commonwealth then submitted the nomination and on 9 December 1988 the World Heritage Committee listed the Wet Tropics of Queensland on the World Heritage List. On 15 December 1988, the property was proclaimed by the Governor-General to be property to which the *World Heritage Properties Conservation Act* applied.

Queensland challenged the constitutional validity of the proclamations in *Queensland v Commonwealth*⁸⁸ (the Daintree Rainforests case). The High Court held that the inclusion by the World Heritage Committee of the area in the World Heritage List was conclusive of the validity of the proclamation in the *World Heritage Properties Conservation Act*. The inclusion of the area in the World Heritage List was conclusive of its status in the eyes of the international community and accordingly of Australia’s international duty to protect and conserve it.

These series of cases in relation to world heritage areas in Tasmania and Queensland raised the profile of the concept of world heritage. It also increased environmental awareness of and mobilised civil society. The body of environmental law that we have today is no doubt due in part to the disputes, campaigns and debates over these world heritage sites.

Subsequently, a more cooperative approach between the Commonwealth and States ensued. This cooperative federalism was reflected in the Intergovernmental Agreement on the Environment between the Commonwealth and the States in 1992. The *World Heritage Properties Conservation Act* was repealed and replaced by the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Interestingly, the recent decision of the High Court rejecting the States’ challenges to the constitutional validity of the Workchoices legislation on 14 November 2006 gives an even wider view of the constitutional power of the

⁸⁶ Mercer, n43 at 109.

⁸⁷ (1988) 62 ALJR 143.

⁸⁸ (1989) 167 CLR 232.

Commonwealth than that which was so controversial in the Tasmanian Dams case, Tasmanian Forest case and Daintree Rainforests case.⁸⁹

The 1990s to date: Ecologically Sustainable Development

Another illustration of the influence international law has had on domestic Australian environmental law is in relation to ecologically sustainable development. This also can be seen to be a phase of the growth of environmental law in Australia. The history of sustainable development as a concept and the principles it involves has been summarised in my article “The role of the judiciary in promoting sustainable development: the experience of Asia and the Pacific”.⁹⁰ I have also summarised the concept and the principles of ecologically sustainable development in *Telstra Corporation Ltd v Hornsby Shire Council*.⁹¹ The following summary draws on these discussions.

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.”⁹² In Australia, the adjective “sustainable” is qualified by “ecologically” to emphasise the necessary integration of economy and environment.

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”.⁹³ 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 “using, conserving and enhancing the community’s resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased”.⁹⁴

Second, ecologically sustainable development requires the effective integration of economic and environmental considerations in the decision-making process. This is the principle of integration. It was the philosophical underpinning of the 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.

⁸⁹ *New South Wales v Commonwealth; Western Australia v The Commonwealth of Australia* [2006] HCA 52 (14 November 2006).

⁹⁰ (2005) 9 *Asia Pacific Journal of Environmental Law* 109 at 114-129.

⁹¹ 146 LGERA 10 at 35 [108]- 37[120].

⁹² WCED, *Our Common Future* (also known as the Brundtland Report), Australian edition, Oxford University Press, Melbourne, 1990 at 44.

⁹³ P Sands, *Principles of International Environmental Law 2nd Edition*, Cambridge University Press, 2003 at 253.

⁹⁴ *Australian National Strategy for the Ecologically Sustainable Development*, December 1992 at 6.

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.⁹⁵

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”.⁹⁶

Third, 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”.⁹⁷

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

⁹⁵ Sands, n 93 at 253.

⁹⁶ Plan of Implementation of the World Summit on Sustainable Development, Johannesburg, 2002 at 2, http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf.

⁹⁷ See also s 3.5.1 of the *Intergovernmental Agreement on the Environment*, 1992.

Fourth, 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.⁹⁸

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).⁹⁹ 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.¹⁰⁰

Fifth, there is the principle that conservation of biological diversity and ecological integrity should be a fundamental consideration.¹⁰¹

Sixth, 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 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
- (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

⁹⁸ *Protection of the Environment Administration Act 1991*, 6(2)(b); *Intergovernmental Agreement on the Environment 1992*, at 3.5.2.

⁹⁹ Sands, n 93 at 253; 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, 385 at 397-398.

¹⁰⁰ 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.

¹⁰¹ *Protection of the Environment Administration Act 1991*, s 6(2)(c); *Intergovernmental Agreement on the Environment 1992* at 3.5.3.

maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.¹⁰²

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.¹⁰³

The influence of ecologically sustainable development has been enormous. In New South Wales it has been adopted legislatively in numerous environmental statutes. The first Act in which it was included was the *Protection of the Environment Administration Act 1991*. Subsequently, it has been incorporated in most environmental statutes.¹⁰⁴ The concept of ecologically sustainable development is a culmination of the various holistic and synthesising influences that have occurred over the history and development of environmental law.

Conclusion

Over the last 80 years environmental law has changed in nature, scope and reach. From being at the periphery of the body of law, environmental law is now at its core. The escalating environmental problems besetting the earth, Australia included, mean that environmental law will only continue to increase in importance. The principles of ecologically sustainable development will provide guidance to the environmental law of the future.

¹⁰² *Protection of the Environment Administration Act 1991*, s 6(2)(d); *Intergovernmental Agreement on the Environment 1992* at 3.5.4.

¹⁰³ B Boer, "The Globalisation of Environmental Law" (1995) 20 *Melbourne University Law Review* 101 at 111.

¹⁰⁴ See the list of statutes in P Stein and S Mahoney "Incorporating sustainability principles in legislation" in P Leadbeter, N Gunningham and B Boer, *Environment Outlook No 3: Law and Policy*, Federation Press, 1999 at 72-75 and in *BGP Properties Pty Ltd v Lake Macquarie City Council* (2004) 138 LGERA 237 at 253-254 [87].