IN THE ADMINISTRATIVE APPEALS TRIBUNAL
OF AUSTRALIA
GENERAL ADMINISTRATIVE DIVISION
NEW SOUTH WALES DISTRICT REGISTRY — No. N535 of 2007

WILDLIFE PROTECTION ASSOCIATION OF AUSTRALIA INC
Applicant

MINISTER FOR THE ENVIRONMENT, HERITAGE AND THE ARTS (CTH)
Respondent

DIRECTOR-GENERAL OF THE DEPARTMENT OF ENVIRONMENT AND CLIMATE CHANGE (NSW)
Joined Party

SUBMISSIONS FOR THE APPLICANT

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Introduction

1 This is an application, pursuant to s. 25 of the *Administrative Appeals Tribunal Act 1975* (Cth) ('the AAT Act') and s. 303GJ (1) the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) ('the EPBC Act') for review of the decision, made by the respondent on 19 December 2006 pursuant to subs. 303FO (2) of the EPBC Act, to declare that the 'New South Wales Commercial Kangaroo Harvest Management Plan 2007–2011' ('the Plan') is an approved wildlife trade management plan.

2 The Plan has replaced the 'New South Wales Kangaroo Management Program 2002–2006' ('the 2002 Program'), which was the subject of the decision recorded in *Wildlife Protection Association of Australia Inc. & anor v. Minister for Environment and Heritage & anor* [2003] AATA 236. The statute under which the 2002 Program was approved by the former Minister and then the Tribunal, the *Wildlife Protection (Regulation of Exports and Imports) Act 1982* ('the repealed WP Act'), has been repealed and replaced by significantly different provisions in the EPBC Act. Concerns advanced by the applicant in 2003 that the Tribunal in 2003 held to be 'legitimate and sincere'[1] but 'not relevant' because they were not covered by the repealed WP Act[2]—*e.g.*, 'matters relating to animal welfare'[3]—are now relevant under the EPBC Act.

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1 *Wildlife Protection Association of Australia & anor v. Minister for the Environment and Heritage* [2003] AATA 236 at [95].

2 *Wildlife Protection Association of Australia & anor v. Minister for the Environment and Heritage* [2003] AATA 236 at [32] and [95].

3 *Wildlife Protection Association of Australia & anor v. Minister for the Environment and Heritage* [2003] AATA 236 at [32].

3 Upon the present application, the Tribunal 'may exercise all the powers and discretions' that were conferred on the respondent.[4] The Tribunal is to make its own assessment of the material before it and reach what it considers to be the correct and preferable decision.[5]

4 In this case the decision to be made is whether or not to approve the Plan. That decision arises upon the application of the NSW Minister for the Environment ('the NSW Minister') for such approval. Those seeking approval of the Plan had the onus of persuading the respondent to do so, and in these proceedings those contending that the Tribunal should approve the Plan have the onus of persuading the Tribunal to do so.

The legal framework

The legislation

5 A decision to approve a plan such as the Plan is made pursuant to subs. 303FO (2) of the EPBC Act. Section 303FO relevantly provides:

> **Approved wildlife trade management plan**
>
> (1) . . .
>
> (2) The Minister may, by instrument published in the *Gazette*, declare that a specified plan is an ***approved wildlife trade management plan*** for the purposes of this section.
>
> (3) The Minister must not declare a plan under subsection (2) unless the Minister is satisfied that:
>
> (a) the plan is consistent with the objects of this Part; and
>
> (b) there has been an assessment of the environmental impact of the activities covered by the plan, including (but not limited to) an assessment of:

[4] *Administrative Appeals Tribunal Act 1975* (Cth), subs. 43 (2).

[5] See *Drake v Minister for Immigration & Ethnic Affairs* (1979) 46 FLR 409 at 419.

(i) the status of the species to which the plan relates in the wild; and

(ii) the extent of the habitat of the species to which the plan relates; and

(iii) the threats to the species to which the plan relates; and

(iv) the impacts of the activities covered by the plan on the habitat or relevant ecosystems; and

(c) the plan includes management controls directed towards ensuring that the impacts of the activities covered by the plan on:

(i) a taxon to which the plan relates; and

(ii) any taxa that may be affected by activities covered by the plan; and

(iii) any relevant ecosystem (for example, impacts on habitat or biodiversity);

are ecologically sustainable; and

(d) the activities covered by the plan will not be detrimental to:

(i) the survival of a taxon to which the plan relates; or

(ii) the conservation status of a taxon to which the plan relates; or

(iii) any relevant ecosystem (for example, detriment to habitat or biodiversity); and

(e) the plan includes measures:

(i) to mitigate and/or minimise the environmental impact of the activities covered by the plan; and

(ii) to monitor the environmental impact of the activities covered by the plan; and

(iii) to respond to changes in the environmental impact of the activities covered by the plan; and

(f) if the plan relates to the taking of live specimens that belong to a taxon specified in the regulations—the conditions that, under the regulations, are applicable to the welfare of the specimens are likely to be complied with; and

(g) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.

(4) In deciding whether to declare a plan under subsection (2), the Minister must have regard to:

(a) whether legislation relating to the protection, conservation or management of the specimens to which the plan relates is in force in the State or Territory concerned; and

(b) whether the legislation applies throughout the State or Territory concerned; and

(c) whether, in the opinion of the Minister, the legislation is effective.

. . .

6 It follows from this provision that the Tribunal cannot make an order declaring the Plan to be an approved wildlife trade management plan unless satisfied of each of the seven matters listed in subs. (3). If not so satisfied, the Tribunal must set aside the respondent's decision. If the Tribunal is satisfied as required by subs. (3) then the Tribunal must decide, in its discretion, whether or not to approve the Plan. Mere satisfaction of the matters prescribed by subs. (3) does not, of itself, justify approval of the Plan: it merely gives rise to the power to grant such approval. The discretion that arises once the prerequisites listed in subs. (3) have been met is a broad one that requires the Tribunal to reach the correct and preferable decision taking into account all relevant considerations, including those mentioned in subs. (4) and elsewhere in the EPBC Act (*e.g.*, in s. 391).

7 The applicant recognizes that the Tribunal's broad discretion is augmented by subss. 303FT (4) and (7), which allow the Tribunal to vary the respondent's decision so as to make approval of the Plan subject to conditions or to suspend the Plan until conditions are met.

8 Paragraph 303FO (3) (a) requires the Plan to be consistent with the objects of Pt 13A (ss. 303BA–303GY) of the EPBC Act. Those objects are listed in subs. 303BA (1) of the EPBC Act, which provides:

The objects of this Part are as follows:

(a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention;

(b) to protect wildlife that may be adversely affected by trade;

(c) to promote the conservation of biodiversity in Australia and other countries;

(d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way;

(e) to promote the humane treatment of wildlife;

(f) to ensure ethical conduct during any research associated with the utilisation of wildlife;

(h) to ensure that the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife.

9 Of these paragraphs, the applicant places more reliance on pars. 303BA (1) (c), (d), (e) and (h). In addition to the objects of Pt 13A, the Minister (now the Tribunal) must also be satisfied that the Plan is consistent with the overall objects of the EPBC Act. The objects of the EPBC Act are found in ss. 3 and 3A of the Act, which relevantly provide:

3. Objects of Act

(1) The objects of this Act are:

(a) to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance; and

(b) to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources; and

(c) to promote the conservation of biodiversity . . . .

(2) In order to achieve its objects, the Act:

(a) recognises an appropriate role for the Commonwealth in relation to the environment by focussing Commonwealth involvement on matters of national environmental significance and on Commonwealth actions and Commonwealth areas; and

. . .

(e) enhances Australia's capacity to ensure the conservation of its biodiversity by including provisions to:

 (i) protect native species (and in particular prevent the extinction, and promote the recovery, of threatened species) and ensure the conservation of migratory species; and

 (ii) establish an Australian Whale Sanctuary to ensure the conservation of whales and other cetaceans; and

 (iii) protect ecosystems by means that include the establishment and management of reserves, the recognition and protection of ecological communities and the promotion of off-reserve conservation measures; and

 (iv) identify processes that threaten all levels of biodiversity and implement plans to address these processes; and

. . .

(g) promotes a partnership approach to environmental protection and biodiversity conservation through:

 (i) bilateral agreements with States and Territories; and

 (ii) conservation agreements with land-holders; and

 (iii) recognising and promoting indigenous peoples' role in, and knowledge of, the conservation and ecologically sustainable use of biodiversity; and

 (iv) the involvement of the community in management planning.

3A. Principles of ecologically sustainable development

The following principles are ***principles of ecologically sustainable development***:

(a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations;

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

(c) the principle of inter-generational equity—that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;

(d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making;

(e) improved valuation, pricing and incentive mechanisms should be promoted.

10 These provisions are also relevant generally to the proper interpretation, application and administration of the Act—in particular, in this case, of ss. 303BA and 303FO—and should affect exercises of discretion, especially that conferred by subs. 303FO (2). A statutory construction of the objects of Pt 13A should therefore be read consistently with the overall objects of the EPBC Act. In *Brown v. Forestry Tasmania (No. 4)*[6] Marshall J said:

> Construction of the EPBC Act is informed by the Conventions which it implements in compliance with Australia's international obligations. So much was recognised by a Full Court of this Court in *Minister for Environment and Heritage v. Queensland Conservation Council Inc and Anor* (2004) 139 FCR 24 (‘*Queensland Conservation Council*’) at [2]:
>
> > ‘The EPBC Act was enacted to implement the provisions of the *Convention on Biological Diversity 1992*, and other international environmental agreements into Australian law. It also represents an attempt to consolidate and clarify the Commonwealth’s responsibilities for environmental protection within the Australian Federation (see Second Reading Speech, House of Representatives, Hansard, 19 June 1999, at 7770). . . .’

At [297] his Honour continued:

> The Biodiversity Convention referred to by the Full Court in *Queensland Conservation Council* underpins the EPBC Act. It obliges Australia to take steps to promote conservation and the recovery of threatened species; see Arts 8(d), (e) and (f).

His Honour also recognized:[7]

> The requirement in s 18(3) of the EPBC Act that an action not occur which is likely to have a significant impact on a listed threatened species must be seen in the context of an Act and Conventions which underlie the promotion of recovery of threatened species. Similarly, the exemption for

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[6] [2006] FCA 1729 at [295].

[7] Brown v. Forestry Tasmania (No. 4) [2006] FCA 1729 at [301].

> RFA forestry operations in s 38 of the EPBC Act must be seen, in context, as providing an exception only if an alternative means of promoting the recovery of a species is achieved by a Regional Forest Agreement. Such an approach is consistent with the High Court's view of the influence of Conventions as an aid in interpreting domestic legislation designed to give effect to them; see *Minister for Immigration and Ethnic Affairs v. Ah Hin Teoh* (1995) 183 CLR 273 at 287 where Mason CJ and Deane J said:
>
> > 'It is accepted that a statute is to be interpreted and applied, as far as its language permits, so that it is in conformity and not in conflict with the established rules of international law.'
>
> That proposition, their Honours said, required courts to:
>
> > '. . . favour a construction, as far as the language of the legislation permits, that is in conformity and not in conflict with Australia's international obligations.'

11 As provided by s. 391 of the EPBC Act, the Tribunal in the present proceedings is also required to take the precautionary principle into account when considering whether or not to affirm the decision of the respondent. The precautionary principle is defined in s. 391 as follows:

> The ***precautionary principle*** is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.

12 The application of the precautionary principle in the present matter, for example, compels the conclusion that the killing of 15% of the population of the four species of kangaroos will, of itself, be serious environmental harm. There is a clear impact that has not been assessed, namely the impact of this killing on joeys and young at foot.

13 As was accepted by Branson J in *Booth v Bosworth*[8] at [99], 'The parties were in broad agreement that in the context of s 12 of the Act a "significant

[8] [2001] FCA 1453__ at [99].

impact" is, as expressed in the applicant's written submissions, an "impact that is important, notable or of consequence having regard to its context or intensity."'

14 The impact may be direct or indirect. The Full Court of the Federal Court held in *Minister for Environment and Heritage v. Queensland Conservation Council Inc and Another*:[9]

> It is unhelpful, we consider, to attempt to paraphrase the expression 'all adverse impacts' in s 75(2)(a) of the EPBC Act by recourse to phrases like "inextricably involved" or 'natural consequence'. 'Impact' in the relevant sense means the influence or effect of an action: Oxford English Dictionary, [2nd ed] 5. As the respondents submitted, the word 'impact' is often used with regard to ideas, concepts and ideologies: 'impact' in its ordinary meaning can readily include the 'indirect' consequences of an action and may include the results of acts done by persons other than the principal actor. Expressions such as 'the impact of science on society' or 'the impact of drought on the economy' serve to illustrate the point. Accordingly, we take s 75(2) to require the Environment Minister to consider each way in which a proposed action will, or is likely to, adversely influence or effect the world heritage values of a declared World Heritage property or listed migratory species. As a matter of ordinary usage that influence or effect may be direct or indirect. 'Impact' in this sense is not confined to direct physical effects of the action on the matter protected by the relevant provision of Pt 3 of Ch 2 of the EPBC Act. It includes effects which are sufficiently close to the action to allow it to be said, without straining the language, that they are, or would be, the consequences of the action on the protected matter. Provided that the concept is understood and applied correctly in this way, it is a question of fact for the Environment Minister whether a particular adverse effect is an "impact" of a proposed action. However, we do not consider that the Environment Minister did apply the correct test in answering the question of fact which had arisen in the present case.'

Ecologically sustainable development and the precautionary principle

15 In *Telstra Corporation Ltd v. Hornsby Shire Council*,[10] the Chief Judge of the Land and Environment Court of NSW, Preston CJ, said:

> Ecologically sustainable development, in its most basic formulation, is 'development that meets the needs of the present without compromising the

[9] (2004) 139 FCR 24 at [92].

[10] (2006) 67 NSWLR 256 at [108].

> ability of future generations to meet their own needs': World Commission on Environment and Development, *Our Common Future,* 1987 at p 44 (also known as the Brundtland Report after the Chairperson of the Commission, Gro Harlem Brundtland).

His Honour proceeded to highlight six of the principles of ESD as follows:

> [109] 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': P Sands, *Principles of International Environmental Law*, 2nd ed, Cambridge University Press, 2003 at p. 253. The concept of sustainability applies not merely to development but to the environment. The *Australian National Strategy for Ecologically Sustainable Development* makes this explicit in defining ecologically sustainable development as 'development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends': *National Strategy for Ecologically Sustainable Development*, Australian Government Publishing Service, 1992 at p. 8.
>
> [110] Secondly, ecologically sustainable development requires the effective integration of economic and environmental considerations in the decision-making process: see the chapeau to the definition of ecologically sustainable development in s 6(2) of the *Protection of the Environment Administration Act* 1991 (NSW) adopted by s 4(1) of the EPA Act and Principle 4 of the *Rio Declaration on Environment and Development*. 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.
>
> . . .
>
> [113] Thirdly, there is the precautionary principle….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".
>
> . . .

> [116] Fourthly, there are principles of equity. There is a need for inter-generational equity - the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations: see s 6(2)(b) of the *Protection of the Environment Administration Act* 1991; s 3.5.2 of the *Intergovernmental Agreement on the Environment*; and Principle 3 of the *Rio Declaration on Environment and Development*.
>
> [117] There is also a need for intra-generational equity.
>
> …
>
> [118] Fifthly, there is the principle that conservation of biological diversity and ecologically integrity should be a fundamental consideration: s 6(2)(c) of the *Protection of the Environment Administration Act* 1991; s 3.5.3 of the Intergovernmental Agreement on the Environment; and *Bentley v BGP Properties Pty Ltd* [2006] NSWLEC 34 (6 February 2006) at [58]-[63].
>
> [119] Sixthly, ecologically sustainable development involves the internalisation of environmental costs into decision-making for economic and other development plans, programmes and projects likely to affect the environment. This is the principle of the internalisation of environmental costs.

16 His Honour then proceeded to a detailed discussion of when and how the principles of ecologically sustainable development and the precautionary principle are to be applied:

> [121] The principles of ecologically sustainable development are to be applied when decisions are being made under any legislative enactment or instrument which adopts the principles: *Murrumbidgee Ground-Water Preservation Association v. Minister for Natural Resources* [2004] NSWLEC 122 (7 April 2004) [per McClellan CJ] at [178]; and *Bentley v BGP Properties Pty Ltd* [(2006) 145 LGERA 234] (6 February 2006) [per Preston CJ] at [57].
>
> . . .
>
> [128] The application of the precautionary principle and the concomitant need to take precautionary measures is triggered by the satisfaction of two conditions precedent or thresholds: a threat of serious or irreversible environmental damage and scientific uncertainty as to the environmental damage. These conditions or thresholds are cumulative. Once both of these conditions or thresholds are satisfied, a precautionary measure may be taken to avert the anticipated threat of environmental damage, but it should be proportionate: N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at p. 155.

. . .

> [129] Two points need to be noted about the first condition precedent that there be a threat of serious or irreversible environmental damage. First, it is not necessary that serious or irreversible environmental damage has actually occurred—it is the *threat* of such damage that is required. Secondly, the environmental damage threatened must attain the threshold of being *serious or irreversible*.
>
> [130] Threats to the environment that should be addressed include direct and indirect threats, secondary and long-term threats and the incremental or cumulative impacts of multiple or repeated actions or decisions.

17 Preston CJ also noted (at [134]) that '[t]he threat of environmental damage must be adequately sustained by scientific evidence':[11]

> [134] . . . As was held in *Monsanto Agricoltura Italia v Presidenza del Consiglio dei Ministri*, European Court of Justice, Case C-236/0 (13 March 2003) at [138]:
>
> > 'not every claim or scientifically unfounded presumption of potential risk to human health or the environment can justify the adoption of national protective measures. Rather, the risk must be adequately substantiated by scientific evidence'.
>
> …
>
> [138] If there is not a threat of serious or irreversible environmental damage, there is no basis upon which the precautionary principle can operate. The precautionary principle does not apply, and precautionary measures cannot be taken, to regulate a threat of negligible environmental damage: N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at p. 163.
>
> . . .
>
> *Scientific uncertainty*
>
> [140] The second condition precedent required to trigger the application of the precautionary principle and the necessity to take precautionary measures is that there be "a lack of full scientific certainty". The uncertainty is as to the nature and scope of the threat of environmental damage: *Leatch v National Parks and Wildlife Services* (1993) 81 LGERA 270 at 282.
>
> [141] Assessing the degree of scientific uncertainty also involves a process of analysis of many factors: see A Deville and R Harding,

[11] *Telstra Corporation Ltd v. Hornsby Shire Council* (2006) 67 NSWLR 256 at [134].

Applying the Precautionary Principle, Federation Press, 1997 at pp. 31–37. The assessment of the degree of uncertainty might include consideration of the following factors:

(a) the sufficiency of the evidence that there might be serious or irreversible environmental harm caused by the development plan, programme or project;

(b) the level of uncertainty, including the kind of uncertainty (such as technical, methodological or epistemological uncertainty); and

(c) the potential to reduce uncertainty having regard to what is possible in principle, economically and within a reasonable time frame.

[142] One issue that the formulation of the precautionary principle raises is how much scientific uncertainty must exist. On a literal reading, the threshold is crossed whenever there is a lack of 'full' scientific certainty. Yet, such a literal interpretation of the principle would render this condition meaningless.

[143] Certainly, 'full' scientific certainty as to the threat of environmental damage would be an unattainable goal: *Nicholls v Director-General of National Parks and Wildlife* (1994) 84 LGERA 397 at 419. It is impossible to be completely certain about the threats of environmental damage: C Barton, 'The status of the precautionary principle in Australia: Its emergence in legislation and as a common law doctrine' (1998) 22 *Harvard Environmental Law Review* 509 at 518.

[144] It cannot be unequivocally stated that a particular phenomenon will never cause adverse effects. This is because a null hypothesis can never be proven through processes of inductive logic. Indeed, this point is made in the Australian Standard RPS3 at p. 41. Karl Popper, the eminent scientific philosopher, has also explained why it is impossible to prove, with certainty and finality, a scientific theory. No matter how many positive instances of a generalisation are observed, it is still possible that the next instance will falsify it. However, a sound and reliable scientific theory will be one which, while being capable of being falsified, has been put to the test and has resisted falsification whenever it is put to the test: see K Popper, *Conjectures and Reputations*, 5th ed, Routledge, London, 1989, p 37 and *Daubert v Merrell Dow Pharmaceuticals [1993] USSC 114;* 509 US 579 (1993) at 593; 125 L Ed 2d 469 (1993) at 482-483. See also B J Preston, 'Science and the Law: Evaluating evidentiary reliability' (2003) 23 *Australian Bar Review* 263 at 271, 280-282 and 287.

. . .

[149] If there is no, or not considerable, scientific uncertainty (the second condition precedent is not satisfied), but there is a threat of serious or irreversible environmental damage (the first condition precedent is satisfied), the precautionary principle will not apply. The threat of serious

irreversible environmental damage can be classified as relatively certain because it is possible to establish a causal link between an action or event and environmental damage, to calculate the probability of their occurrence, and to insure against them. Measures will still need to be taken but these will be *preventative* measures to control or regulate the relatively certain threat of serious or irreversible environmental damage, rather than precautionary measures which are appropriate in relation to uncertain threats: A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at p. 31 and 34; J Cameron, "The precautionary principle: Core meaning, constitutional framework and procedures for implementation" in R Harding and E Fisher (eds), *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 29 at p. 37; and N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at pp. 74-75 and 158.

Shifting of the burden of proof

[150] If each of the two conditions precedent or thresholds are satisfied – that is, there is a threat of serious or irreversible environmental damage and there is the requisite degree of scientific uncertainty – the precautionary principle will be activated. At this point, there is a shifting of an evidentiary burden of proof. A decision-maker must assume that the threat of serious or irreversible environmental damage is no longer uncertain but is a reality. The burden of showing that this threat does not in fact exist or is negligible effectively reverts to the proponent of the economic or other development plan, programme or project.

. . .

[156] The precautionary principle permits the taking of preventative measures without having to wait until the reality and seriousness of the threats become fully known: *Pfizer Animal Health SA v Council of the European Union* [2002] ECR II–3305 (11 September 2002), European Court of First Instance (11 September 2002) at [139]; 15 *Journal of Environmental Law* 372 at 378; *Monsanto Agricoltura Italia v Presidenza dei Consiglio dei Ministri*, European Court of Justice, Case C-236/01 (13 March 2003) at [111]. This is the concept of preventative anticipation: T O'Riordan and J Cameron, "The History and Contemporary Significance of the Precautionary Principle" in T O'Riordan and J Cameron (eds), *Interpreting the Precautionary Principle*, Earthscan Publications, 1994, p. 12 at p. 17; and P Sands, *Principles of International Environmental Law*, 2nd ed, Cambridge University Press, 2003 at p. 269.

Degree of precaution required

[161] The type and level of precautionary measures that will be appropriate will depend on the combined effect of the degree of seriousness and irreversibility of the threat and the degree of uncertainty. This involves assessment of risk in its usual formulation, namely the

> probability of the event occurring and the seriousness of the consequences should it occur. The more significant and the more uncertain the threat, the greater the degree of precaution required: A Deville and R Harding, *Applying the Precautionary Principle,* Federation Press, 1997 at p. 37; and J Cameron, "The precautionary principle: Core meaning, constitutional framework and procedures for implementation" in R Harding and E Fisher, *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 29 at pp. 37-38; and Commission on Environmental Law of IUCN (the World Conservation Union), *Draft International Covenant on Environment and Development*, 3rd ed., Environmental Policy & Law Paper No. 31, Rev. 2, 2004 at p. 45.
>
> . . .
>
> *Proportionality of response*
>
> [166] The precautionary principle embraces the concept of proportionality. The concept of proportionality is that measures should not go beyond what is appropriate and necessary in order to achieve the objectives in question. Where there is a choice between several appropriate measures, recourse should be had to the least onerous measure and the disadvantages caused should not be disproportionate to the aims pursued.
>
> . . .
>
> *Precautionary principle in context of other ESD principles*
>
> [182] The precautionary principle is but one of the set of principles of ecologically sustainable development (highlighted earlier in the judgment). It should not be viewed in isolation, but rather as part of the package. This means that the precautionary measures that should be selected must not only be appropriate having regard to the precautionary principle itself, but also in the context of the other principles of ecologically sustainable development including inter-generational and intra-generational equity and the conservation of biological diversity and ecological integrity: see A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at p. 43. . . .

18 Preston CJ returned to the principles of ecologically sustainable development in *HUB Action Group Inc v Minister for Planning and Orange City Council*,[12] in which his Honour said:

> [1] The need for development to be ecologically sustainable is no longer seriously in debate. The principles of ecologically sustainable development are reasonably settled. They include: sustainable use of

[12] [2008] NSWLEC 116.

natural resources; integration of economic, environmental and social considerations in decision-making; the precautionary principle; inter-generational equity and intra-generational equity; conservation of biological diversity and ecological integrity; and internalisation of external, environmental costs by use of improved valuation, pricing and incentive mechanisms.

> [2] In order to achieve sustainability, however, hortatory statements of principle and aspirational goals are insufficient; the grand strategy must be translated into action. This involves not only institutionalising the principles of ecologically sustainable development in policies and laws, but also ensuring that functions under those policies and laws are exercised in a way so as to promote and implement the principles of ecologically sustainable development. This involves good governance.

19 An extensive review of the development of the principles of ecologically systainable development, both in the policy sphere and also by the courts, was conducted by Biscoe J in *Walker v. Minister for Planning*,[13] where it was observed that 'the goal of ESD is critical to the survival and well-being of the human race and other species'.[14] Biscoe J's discussion of ecologically sustainable development may be useful to the Tribunal:

> **ESD: A Global Phenomenon**
>
> [47] In the last decade of the twentieth century and the first decade of the twenty-first century, the seed of ESD was planted in numerous Australian statutes and has blossomed in a significant number of cases.
>
> [48] This has been part of a global phenomenon. The concept of ESD evolved in a number of documents adopted at international conferences on the environment beginning in 1972 at the United Nations Conference on the Human Environment in Stockholm attended by 113 nations. This Conference created two instruments: the *Declaration on the Human Environment* which proclaimed 26 principles for international cooperation; and the *Action Plan for the Human Environment*. Principle 13 of the former touched on ESD as follows:
>
>> 'In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and coordinated approach to their development planning so as to ensure that

[13] [2007] NSWLEC 741.

[14] At [46].

> development is compatible with the need to protect and improve the environment for the benefit of their population.'

[49] In 1980, the *World Conservation Strategy*,[15] prepared by the International Union for Conservation of Nature and Natural Resources (now known as the World Conservation Union), aimed to achieve three main objectives of living resource conservation: to maintain essential ecological processes and life-support systems; to promote genetic diversity; and to ensure the sustainable utilisation of species and ecosystems. This strategy identified the failure to integrate conservation with development as one of the main obstacles to achieving conservation. It made the following legislative proposal (section 11 paras 8 and 9):

> 'There should be specific legislation aimed at achieving the objectives of conservation by providing for both the sustainable utilisation and the protection of living resources and of their support systems. Comprehensive conservation legislation should provide for the planning of land and water uses and should regulate both direct impacts on the resource, such as exploitation and habitat removal, and indirect ones, such as pollution or introduction of exotic species. In addition, it should include requirements to undertake ecosystem evaluations, environmental assessments, and like mechanisms to ensure the incorporation of ecological considerations into policy making. The law should also provide for the participation of citizens in the elaboration of policies, for the provision of sufficient information for participation to be effective, and for legal recourse to implement these rights. In addition there is a need to revise traditional concepts of the law of remedy, which currently envisage compensation only for economic loss, narrowly defined, and do not provide for indirect or long term damage to individuals and communities through the depletion of species or the destruction or degradation of ecosystems.
>
> Special attention should be paid to the enforcement of conservation law.'

[50] In response, in 1983, Australia adopted the *National Conservation Strategy for Australia: Living Resource Conservation for Sustainable Development*.[16] Also in 1983, the United Nations established the World

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[15] IUCN, UNEP and WWF, *World Conservation Strategy: Living Resource Conservation for Sustainable Development*, Gland, Switzerland, 1980.

[16] *National Conservation Strategy for Australia: Living Resource Conservation for Sustainable Development*, AGPS, Canberra, 1984

Commission on Environment and Development.

[51] In 1987 the World Commission on Environment and Development, established by the United Nations, published an influential report, *Our Common Future* (commonly referred to as the *Brundtland Report*), which called for the promotion of sustainable development that would guarantee "*the security, well-being and very survival of the planet*" (p 23). It defined *"sustainable development"* as development that meets the needs of the present while not compromising the ability of future generations to meet their own needs (p 8). This has come to be known as inter-generational equity and has endured as the fundamental principle of ESD. The report noted that : "*The burning of fossil fuels puts into the atmosphere carbon dioxide, which is causing gradual global warming. This* greenhouse effect *may by early next century have increased average global temperatures enough to shift agricultural production areas, raise sea levels to flood coastal cities, and disrupt national economies"* (p 2). The report recognised that the world's current pattern of economic growth was not ecologically sustainable. It contained proposals for long term environmental strategies for achieving ESD. The report emphasised that the environment and development must no longer be regarded as separate concerns but were interlocked.

[52] In response to the Brundtland Report's recommendations, the *"Earth Summit"*, the United Nations Conference on the Environment and Development, was held in Rio de Janeiro in June 1992. Its mandate was to "*elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of increased national and international efforts to promote sustainable and environmentally sound development in all countries*" (Resolution 44/228 of the United Nations General Assembly 85th Plenary Meeting, 22 December 1989). Australia was among the 172 nations represented. Documents created at the conference included the *Rio Declaration* which was a statement of 27 general principles; *Agenda 21* which was a lengthy action plan; the *United Nations Framework Convention on Climate Change;* the *Convention on Biological Diversity*; and an agreed *Statement of Principles on Forests*. Four of the Rio Declaration principles are substantially reflected in subsequent Australian legislation, namely:

> 'Principle 3. The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.
>
> Principle 4. In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.
>
> Principle 15. In order to protect the environment, the precautionary approach shall be widely applied by States

> according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.
>
> Principle 16. National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.'

[53] The central concept of ESD, the integration of environmental protection and development, appeared in Principle 4. Three of the four principles of ESD—the principle of intergenerational and intra-generational equity, the precautionary principle and the internalisation of environmental costs principle—were embodied in, respectively, Principles 3, 15, and 16. However, Principle 16 was qualified. The fourth ESD principle, the principle of conservation of biological diversity, was reflected in the accompanying *Convention on Biological Diversity* where Articles 1 and 14 relevantly stated:

> '1. The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.
>
> . . .
>
> 14. Each contracting Party, as far as possible and as appropriate shall:
>
> (a) Introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and, where appropriate, allow for public participation in such procedures;
>
> (b) Introduce appropriate arrangements to ensure that the environmental consequences of its programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account.

. . .'

[54] The role of the law in relation to sustainable development was stated in Principle 11 of the Rio Declaration:

> 'States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries[.]'

[55] *Agenda 21* described itself as a '*blueprint for action in all areas relating to the sustainable development of the planet*'. It provided mechanisms, in the form of policy, plans, programs and guidelines, for national governments to apply the principles contained in the *Rio Declaration*. Chapter 8 of *Agenda 21* provided that laws and regulations suited to the conditions of each country were among the most important instruments for transforming environment and development policies into action. Chapter 28 acknowledged the importance of local authorities in furthering ESD and contemplated, among other things, the establishment of *Agenda 21* programmes in local government jurisdictions and the implementation of local authority programmes, policies and laws. Principle 10 of the *Rio Declaration* proclaimed that environmental issues were best handled with informed public participation. Similarly, *Agenda 21* in Chapter 23 emphasised that '*one of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making*'.

[56] In 1993, a United Nations Commission on Sustainable Development was created to progressively administer the implementation of *Agenda 21*. Many nations, including Australia, committed to reporting regularly to the Commission on their actions to achieve sustainable development.

[57] The 2000 *Millennium Declaration*[17] adopted by the United Nations General Assembly identified fundamental values that were essential to international relations in the twenty first century including:

> 'Respect for nature. Prudence must be shown in the management of all living species and natural resources, in accordance with the precepts of sustainable development. Only in this way can the immeasurable riches provided to us by nature be preserved and passed on to our descendants. The current unsustainable patterns of production and consumption must be changed in the interest of our future welfare and that of our

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

descendants.'[18]

The *Millennium Declaration* identified objectives to translate these values into action, one of which was '*Protecting our common environment*'.

[58] In 2002, the World Summit on Sustainable Development took place in Johannesburg, South Africa, and adopted the *Johannesburg Declaration on Sustainable Development* and the *Johannesburg Plan of Implementation*. The former affirmed a will to '*assume a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development—economic development, social development and environmental protection—at the local, national, regional and global levels*'. Thus, social development came to be highlighted as one of the pillars of ESD, joining economic development and environmental protection.

[59] The Global Judges Symposium held in conjunction with the Johannesburg World Summit adopted the *Johannesburg Principles on the Role of Law and Sustainable Development*. The Symposium agreed four principles to guide the judiciary in promoting the goals of sustainable development through the application of the rule of law and the democratic process:

> '1) A full commitment to contributing towards the realization of the goals of sustainable development through the judicial mandate to implement, develop and enforce the law, and to uphold the Rule of Law and the democratic process,
>
> 2) To realise the goals of the Millenium Declaration of the United Nations General Assembly which depend upon the implementation of national and international legal regimes that have been established for achieving the goals of sustainable development,
>
> 3) In the field of environmental law there is an urgent need for a concerted and sustained programme of work focused on education, training and dissemination of information, including regional and sub-regional judicial colloquia, and
>
> 4) That collaboration among members of the Judiciary and others engaged in the judicial process within and across regions is essential to achieve a significant improvement in compliance with, implementation, development and enforcement of environmental law.'

[60] For the realisation of these principles, the Global Judges Symposium proposed that the program of work should include the following:

[18] *United Nations Millennium Declaration*: para 6

‘a) The improvement of the capacity of those involved in the process of promoting, implementing, developing and enforcing environmental law, such as judges, prosecutors, legislators and others, to carry out their functions on a well informed basis, equipped with the necessary skills, information and material,

b) The improvement in the level of public participation in environmental decision- making, access to justice for the settlement of environmental disputes and the defense and enforcement of environmental rights, and public access to relevant information,

c) The strengthening of sub-regional, regional and global collaboration for the mutual benefit of all peoples of the world and exchange of information among national Judiciaries with a view to benefiting from each other’s knowledge, experience and expertise,

d) The strengthening of environmental law education in schools and universities, including research and analysis as essential to realizing sustainable development,

e) The achievement of sustained improvement in compliance with and enforcement and development of environmental law,

f) The strengthening of the capacity of organizations and initiatives, including the media, which seek to enable the public to fully engage on a well-informed basis, in focusing attention on issues relating to environmental protection and sustainable development,

g) An Ad Hoc Committee of Judges consisting of Judges representing geographical regions, legal systems and international courts and tribunals and headed by the Chief Justice of South Africa, should keep under review and publicise the emerging environmental jurisprudence and provide information thereon,

h) UNEP and its partner agencies, including civil society organizations should provide support to the Ad Hoc Committee of Judges in accomplishing its task,

i) Governments of the developed countries and the donor community, including international financial institutions and foundations, should give priority to financing the implementation of the above principles and the programme of work,

j) The Executive Director of UNEP should continue to provide leadership within the framework of the Montevideo

> Programme III, to the development and implementation of the programme designed to improve the implementation, development and enforcement of environmental law including, within the applicable law of liability and compensation for environmental harm under multilateral environmental agreements and national law, military activities and the environment, and the legal aspects of the nexus between poverty and environmental degradation, and
>
> k) This Statement should be presented by the Chief Justice of South Africa to the Secretary-General of the United Nations as a contribution of the Global Judges Symposium to the forthcoming World Summit on Sustainable Development, and for broad dissemination thereof to all member States of the United Nations.

ESD: Australian Developments

[61] Impetus for Australian legislation on ESD came from three 1992 instruments: the *Rio Declaration* of June 1992; the *Intergovernmental Agreement on the Environment*[19] between the Commonwealth, States and Territories of Australia and the Australian Local Government Association of May 1992; and the *National Strategy for Ecologically Sustainable Development* of December 1992.

[62] Section 3 of the *Intergovernmental Agreement on the Environment* provided:

> 'SECTION 3 - PRINCIPLES OF ENVIRONMENTAL POLICY
>
> 3.1 The parties agree that the development and implementation of environmental policy and programs by all levels of Government should be guided by the following considerations and principles. 3.2 The parties consider that the adoption of sound environmental practices and procedures, as a basis for ecologically sustainable development, will benefit both the Australian people and environment, and the international community and environment. This requires the effective integration of economic and environmental considerations in decision-making processes, in order to improve community well-being and to benefit future generations
>
> . . .
>
> 3.3 The parties consider that strong, growing and diversified economies (committed to the principles of

[19] The *Intergovernmental Agreement on the Environment* was signed in May 1992. It can be accessed via http://www.deh.gov.au/esd/national/igae/index.html

ecologically sustainable development) can enhance the capacity for environmental protection. In order to achieve sustainable economic development, there is a need for a country's international competitiveness to be maintained and enhanced in an environmentally sound manner.

3.4 Accordingly, the parties agree that environmental considerations will be integrated into Government decision-making processes at all levels by, among other things:

(i) ensuring that environmental issues associated with a proposed project, program or policy will be taken into consideration in the decision making process;

(ii) ensuring that there is a proper examination of matters which significantly affect the environment; and

(iii) ensuring that measures adopted should be cost-effective and not be disproportionate to the significance of the environmental problems being addressed.

3.5 The parties further agree that, in order to promote the above approach, the principles set out below should inform policy making and program implementation.

3.5.1 precautionary principle –

Where 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 consequences of various options.

3.5.2 intergenerational equity –

the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.

3.5.3 conservation of biological diversity and ecological integrity –

conservation of biological diversity and ecological integrity should be a fundamental consideration.

> 3.5.4 improved valuation, pricing and incentive mechanisms -–
>
> - environmental factors should be included in the valuation of assets and services.
> - polluter pays i.e. those who generate pollution and waste should bear the cost of containment, avoidance, or abatement
> - the users of goods and services should pay prices based on the full life cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any wastes
> - environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, which enable those best placed to maximise benefits and/or minimise costs to develop their own solutions and responses to environmental problems.'

[63] It can be seen that section 3.5 incorporates the four recognised principles of ESD: the precautionary principle, intergenerational equity, conservation of biological diversity and ecological integrity, and improved valuation, pricing and incentive mechanisms. The principle of intra-generational equity is not expressly mentioned. However, it may be included by implication on the basis that it is necessarily incorporated within the notion of inter-generational equity. The implication is supported by one of the recitals to the first part of the *Intergovernmental Agreement* where it is recognised that the concept of ESD provides potential for integration of environmental and economic considerations in decision making and for '*balancing the interests of current and future generations*'. Those inclusions and the omission later carried through to New South Wales legislation. The precautionary principle is expressed in the *Intergovernmental Agreement* in similar terms to Principle 15 of the Rio Declaration.

[64] Implementation and application of the principles are addressed in nine schedules to the Intergovernmental Agreement dealing with specific areas of environmental policy and management. They are: (1) data collection and handling; (2) resource assessment, land use decisions and approval processes; (3) environmental impact assessment; (4) national environment protection measures; (5) climate change; (6) biological diversity; (7) national estate; (8) world heritage; and (9) nature conservation.

[65] Schedule 3.3(iii) of the *Intergovernmental Agreement* provided that all levels of government would ensure that their environmental impact

assessment processes were based on, inter alia, assessing authorities providing all participants in the process with guidance on the criteria for environmental acceptability of potential impacts, including the concept of ESD. Schedule 2 includes the following provisions:

> '1. The parties agree that the concept of ecologically sustainable development should be used by all levels of Government in the assessment of natural resources, land use decisions and approval processes.
>
> 2. The parties agree that it is the role of government to establish the policy, legislative and administrative framework to determine the permissibility of any land use, resource use or development proposal having regard to the appropriate, efficient and ecologically sustainable use of natural resources (including land, coastal and marine resources).'

[66] In December 1992, as foreshadowed in the *Intergovernmental Agreement* of May 1992 and following the Rio Conference a month later, the Australian *National Strategy for Ecologically Sustainable Development* was endorsed by the Council of Australian Governments. It sets out the broad strategic and policy framework under which governments would cooperatively make decisions and take actions to pursue ESD. It states that it was to be used by governments to guide policy and decision-making, particularly in key industry sectors which rely on the utilisation of natural resources. The *National Strategy's* goal, core objectives and guiding principles are defined as follows:

> '**Australia's goal, core objectives and guiding principles for the Strategy**
>
> **The Goal is:**
>
> Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.
>
> **The Core Objectives are:**
>
> – to enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations
>
> – to provide for equity within and between generations
>
> – to protect biological diversity and maintain essential ecological processes and life-support systems
>
> **The Guiding Principles are:**
>
> – decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations

> – where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation
>
> – the global dimension of environmental impacts of actions and policies should be recognised and considered
>
> – the need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised
>
> – the need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised
>
> – cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms
>
> – decisions and actions should provide for broad community involvement on issues which affect them
>
> These guiding principles and core objectives need to be considered as a package. No objective or principle should predominate over the others. A balanced approach is required that takes into account all these objectives and principles to pursue the goal of ESD.
>
> **Who will be affected by ESD?**
>
> Every one of us has a role to play in national efforts to embrace ESD. The participation of every Australian—through all levels of government, business, unions and the community—is central to the effective implementation of ESD in Australia.'

[67] Both the *Intergovernmental Agreement* and the *National Strategy* acknowledge that while the Australian Local Government Association endorsed the ESD policy and promised that it would do all within its power to ensure compliance, it could not bind local government authorities to observe its terms. Nevertheless, it has been held by this Court that a proper exercise of the powers of local government authorities would mean that they (and the Court on a merits appeal) would apply the ESD policy unless there were cogent reasons to depart from it: *BGP Properties Pty Ltd v. Lake Macquarie City Council* (2004) 138 LGERA 237 at [93] per McClellan CJ.

[68] In 1996 the *National Strategy for the Conservation of Australia's Biological Diversity* was adopted. This document commits the Australian government to implement it as a matter of urgency, subject to budgetary priorities and constraints in individual jurisdictions. The stated goal is to

protect biological diversity and maintain ecological processes and systems. It recognises ESD and adopts the following principles as a basis for its objectives and actions and as a guide for implementation:

> ‘1. Biological diversity is best conserved in-situ.
>
> 2. Although all levels of government have clear responsibility, the cooperation of conservation groups, resource users, indigenous peoples, and the community in general is critical to the conservation of biological diversity.
>
> 3. It is vital to anticipate, prevent and attack at source the causes of significant reduction or loss of biological diversity.
>
> 4. Processes for and decisions about the allocation and use of Australia's resources should be efficient, equitable and transparent.
>
> 5. Lack of full knowledge should not be an excuse for postponing action to conserve biological diversity.
>
> 6. The conservation of Australia's biological diversity is affected by international activities and requires actions extending beyond Australia's national jurisdiction.
>
> 7. Australians operating beyond our national jurisdiction should respect the principles of conservation and ecologically sustainable use of biological diversity and act in accordance with any relevant national or international laws.
>
> 8. Central to the conservation of Australia's biological diversity is the establishment of a comprehensive, representative and adequate system of ecologically viable protected areas integrated with the sympathetic management of all other areas, including agricultural and other resource production systems.
>
> 9. The close, traditional association of Australia's indigenous peoples with components of biological diversity should be recognised, as should the desirability of sharing equitably benefits arising from the innovative use of traditional knowledge of biological diversity.’

20 In a paper presented to the Kenya National Judicial Colloquium on Environmental Law in Mombasa, Kenya in January 2006, Preston CJ outlined the 12 principles of sustainable development:[20]

i) *The principle of public environmental order*

This principle recognises the complex mix of environmental, cultural, social and economic considerations that contribute to the planning and implementation of development decisions and, as such, holds that for sustainable development to be achieved, regulation must not be left to market forces. Instead, the State has a responsibility to control the environment in which reform takes place through effective legislative reform and the implementation of national strategic plans for sustainable development.[21]

ii) *The principle of sustainability*

This fundamental principle concerns the organisational elements of sustainable development. Any further degradation of natural, cultural and social capital must be prevented for the sake of survival of both the present and future generations. This may only be achieved through a shift in development goals from quantitative to qualitative and the harmonisation of sustainable development policies at all levels.[22]

iii) *The principle of carrying capacity*

This principle emphasises the importance of carrying capacity, defined as the number of species or units of a species which can be perpetually maintained without the degradation of an ecosystem. On a broader level, this principle states that the construction and management of man-made systems must not transcend their own carrying capacity or that of the ecosystems upon which they have influence. Otherwise, destabilisation and eventual collapse of both human and natural systems is likely to occur.[23]

iv) *The principle of the obligatory restoration of disturbed ecosystems*

Where destabilisation of ecosystems has already occurred, this principle demands any possible restoration that can be achieved through deliberate human intervention such as the reforestation of depleted forests. It is only

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[20] Preston B, 'The Role of the Judiciary in Promoting Sustainable Development: The Experience of Asia and the Pacific', January 2006..

[21] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 67–75.

[22] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 76–84.

[23] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 85–90.

through an attempt to restore ecosystems to as close to their original natural condition as possible that the reduction of "natural capital" can be averted.[24]

v) *The principle of biodiversity*

This principle recognises the inherent value of all wild flora and fauna species as "biogenetic reserves" and constituents of ecosystems and seeks to protect the variety of these species and their habitats. In accordance with other principles developed under international law, this principle demands the conservation of biodiversity in order to preserve and restore the stability of natural ecosystems.[25]

vi) *The principle of common natural heritage*

This principle concerns the preservation of "common natural heritage", or natural resources that belong to all of mankind. If our common natural heritage is protected and maintained as public property, it is hoped that environmental degradation will be prevented. Implicit in this principle is the concept of the "public trust" which is based on the notion that certain natural resources are held in trust by the State for the benefit of the general public.[26]

vii) *The principle of restrained development of fragile ecosystems*

Ecosystems that are easily disturbed and are sensitive to man-made interference must be considered in planning and development decision-making. In particular, development should be restrained in fragile forest, coastal and mountain areas, upon small islands and in areas of natural beauty. To achieve this, this principle requires that fragile ecosystems be governed by special regulatory systems.[27]

viii) *The principle of spatial planning*

Under this principle, planning policies must take account of the functional division and distribution of land in accordance with its characteristics and utility in order to attain a level of sustainability and equilibrium between human systems and natural ecosystems. When formulating spatial planning policies, including energy, communication and water resource

[24] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 91–93.

[25] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 94–98.

[26] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 99–100. See the discussion on public trust in the Section 8 of this paper below.

[27] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 101–105.

policies, it is important to consider the natural and cultural capital to be conserved, as well as the existence of any fragile ecosystems.[28]

ix) *The principle of cultural heritage*

This principle aims to conserve and perpetuate the most important man-made systems, namely monuments, architectural complexes and sites which hold universal cultural value. The aim is to ensure the stability and historical continuity of the man-made environment. This may be achieved through a legal protection regime, combined with an increase in public awareness of the importance of cultural development.[29]

x) *The principle of the sustainable urban environment*

This principle recognises the advancing degradation of modern cities, and strives to reverse the uncontrolled spread of settlements and building activity, hence improving the quality of life of residents, and minimising the strain on the surrounding natural environment. A sustainable urban environment can be achieved through effective and consistent planning and development policies.[30]

xi) *The principle of the aesthetic value of nature*

According to this principle, the natural beauty of the landscape and nature generally must be preserved. Human intervention with nature should harmonise and not spoil the landscape. If this is achieved, and qualitative development is pursued as opposed to quantitative development, man's aesthetic needs will be served, and further environmental degradation will be prevented.[31]

xii) *The principle of environmental awareness*

In recognising the legitimate interest that global citizens have in environmental conservation, this principle emphasises the importance of instilling environmental values and the encouragement of public awareness. If a significant level of environmental awareness is reached, it will serve as a guarantee and check on the entire control system of environmental management.[32]

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[28] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 106–112.

[29] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 113 –115.

[30] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 116–120.

[31] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 121–122.

[32] M Decleris, *The Law of Sustainable Development: General Principles*, Office for Official Publications of the European Communities, 2000 at pp. 123–124.

His Honour also noted:[33]

> The principle of precautionary action requires that the burden of proof rest with persons responsible for potentially harmful activity to demonstrate that their actions are not or will not cause environmental harm.[34] Thus, once the scientific uncertainty and risk has been shown by those who seek to restrain the potentially harmful activity, and not refuted by the proponent of that activity, the precautionary principle is activated. The public policy reason underlying this principle holds that if the burden of proof were not shifted in this way, the process would result in an 'inevitable bias against protection of the environment and preservation of natural resources'.[35]

Early cases

The first Australian case on an ESD principle was *Leatch v National Parks and Wildlife Services*[36]. The Shoalhaven City Council proposed to construct a road in an area known to be a habitat of the Giant Burrowing Frog which was listed as an endangered species. The council applied to the Director-General of the National Parks and Wildlife Service for a licence to "*take or kill*" endangered fauna, as was required by the *National Parks and Wildlife Act 1974* (NSW) ('the NPW Act'). Section 5 (since amended) defined "*take*" to include the disturbance, injury or "*significant modification of the habitat of the fauna which is likely to adversely affect its essential behavioural patterns*". The licence was granted on conditions. An objector appealed on the merits of the decision to this Court. Neither the *National Parks and Wildlife Act 1974* or the *Land and Environment Court Act 1979* expressly referred to ESD or the precautionary principle. Stein J decided that the licence should not be granted. His Honour noted that the precautionary principle had been referred to in almost every recent

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[33] At 45.

[34] For further discussion of the reverse burden of proof, see D Farrier, "Factoring Biodiversity Conservation into Decision-making Processes: The role of the precautionary principle" in R Harding and E Fisher (eds) *Perspectives on the Precautionary Principle*, Federation Press, 1999, p. 99 at pp. 107–110; J Cameron and J Abouchar, "The Precautionary Principle: A fundamental principle of law and policy for the protection of the global environment" (1991) 14 *Boston College International and Comparative Law Review* 1 at 22; B J Preston, *Environmental Litigation*, Law Book Co, 1989, pp. 287–289; MC Cordonier Segger and A Khalfan, *Sustainable Development Law Principles: Principles, Practices and Prospects*, Oxford University Press, 2004, p. 150; T O'Riordan and J Cameron, "The History and Contemporary Significance of the Precautionary Principle" in T O'Riordan and J Cameron (eds) *Interpreting the Precautionary Principle*, Earthscan Publications, 1994, p. 12 at pp. 15–16; B A Weintraub, "Science, International Environmental Regulation, and the Precautionary Principle: Setting Standards and Defining Terms" (1992) 1 *NYU Environmental Law Journal* 173 at 204–207.

[35] B J Preston, *Environmental Litigation*, Law Book Co, 1989, p. 288.

[36] (1993) 81 LGERA 270

international agreement including the *Rio Declaration* of 1992, as well as the Australian *Intergovernmental Agreement on the Environment* of 1992. However, Stein J declined to enter into a debate as to whether it had become part of Australian domestic law by incorporation of international law.

Stein J determined that having regard to the nature of the appeal under the relevant enactment, s 92C of the *National Parks and Wildlife Act* 1974 (NSW), it was "relevant to have regard to the precautionary principle or what I refer to as consideration of whether a cautious approach should be adopted in the face of scientific uncertainty and the potential for serious or irreversible harm to the environment".[37] Stein J held that:

> "While there is no express provision requiring consideration of the 'precautionary principle', consideration of the state of knowledge or uncertainty regarding a species, the potential for serious or irreversible harm to an endangered fauna and the adoption of a cautious approach in protection of endangered fauna is clearly consistent with the subject matter, scope and purpose of the Act".[38]

Having determined that the precautionary principle could properly be applied, Stein J did so. Stein J noted that in respect of the key threatened species with which the appellant was concerned, the Giant Burrowing Frog, it had only recently been added to the schedule of endangered species as vulnerable and rare and hence the factors threatening extinction of the species were still operating and had not been abated. In these circumstances:

> "…caution should be the keystone to the Court's approach. Application of the precautionary principle appears to me to be most apt in a situation of a scarcity of scientific knowledge of species population, habitat and impacts. Indeed, one permissible approach is to conclude that the state of knowledge is such that one should not grant a licence to 'take or kill' the species until much more is known. It should be kept steadily in mind that the definition of 'take' in s 5 of the Act includes disturb, injure and a significant modification of habitat which is likely to adversely affect the essential behavioural patterns of a species. In this situation I am left in doubt as to the population, habitat and behavioural patterns of the Giant Burrowing Frog and am unable to conclude with any degree of certainty that a licence to 'take or kill' the species should be granted".[39]

[37] (1993) 81 LGERA 270 at 282.

[38] (1993) 81 LGERA 270 at 282-283.

[39] (1993) 81 LGERA 270 at 284.

Stein J found that there had been inadequate assessment of the need for the particular road and of the alternatives to it. Adequate alternatives assessment is, of course, an element of the precautionary principle. Stein J concluded:

> "It is in the context of a thorough examination of alternatives, especially ones which have minimal environmental impact, that one must balance the issue of a licence to take or kill endangered fauna. The need for a link road is accepted but I question, when all pertinent factors are weighed in the balance, whether the need is for this particular road. The issue of the best route, taking account of all relevant circumstances, including environmental factors, needs to be carefully assessed. It appears to me that alternatives need to be further explored. I am not satisfied that a licence to take or kill the Yellow-bellied Glider, or any of the other species discussed in the fauna impact statement, is justified. The applicant for such a licence needs to satisfy the Court, on the civil standard on the balance of probabilities, that it is appropriate in all the relevant circumstances to grant the licence. I am not convinced of the strength and validity of the economic arguments presented to the Court by the Council, nor do I take such a predictable view of human behaviour as Mr Nairn.
>
> Following an examination of the evidence, I am not satisfied that a licence under s 120 of the *National Parks and Wildlife* Act to take or kill endangered fauna should be granted to the Council. However, it should be emphasised that refusal of this licence application should not necessary be assumed to be an end of the proposal. Further information on endangered fauna and advances in scientific knowledge may mean that a licence could be granted in the future. Also, changes in the proposal and ameliorative measures may lead to a different assessment. This case has been determined, as it must, on the evidence produced to the Court at the hearing and the Court cannot speculate as to the future".[40]

In *Greenpeace Australia Ltd v Redbank Power Company Pty Ltd and Singleton Council*[41], there was an objector merits appeal to this Court by Greenpeace Australia against the decision of a council to grant development consent to the construction of a coal fired power station. The objector's concern was that, when fully operational, the project would increase the total amount of carbon dioxide emitted from State power stations, consequently contributing to the greenhouse effect. The Court was invited to

[40] (1993) 81 LGERA 270 at 286-287.

[41] (1994) 86 LGERA 143

apply the precautionary principle and refuse development consent because of the greenhouse gas emissions. Pearlman J found that the project's carbon dioxide emissions would contribute to the greenhouse effect but that there was uncertainty about the effect the emissions would have on global warming. Taking into account other beneficial environmental effects of the project, Pearlman J decided that the development application should be approved. Reference was made to the formulation of the precautionary principle in the *Australian Intergovernmental Agreement on the Environment* of 1992. Her Honour referred to the approach adopted in *Leatch* and concluded at 154:

> The application of the precautionary principle dictates that a cautious approach should be adopted in evaluating the various relevant factors in determining whether or not to grant consent; it does not require that the greenhouse issue should outweigh all other issues.

Pearlman J considered the precautionary principle and its use in cases involving scientific uncertainty:

> "There are, however, instances of scientific uncertainty on both sides of the issues in this case. For example, Redbank has contended that tailing dams pose environmental problems surrounding current methods of tailing disposal. On the other hand, Greenpeace has asserted that CO2 emission from the project will have serious environmental consequences, whilst Redbank has asserted that there is considerable uncertainty about its consequences. The important point about the application of the precautionary principle in this case is that 'decision-makers should be cautious' (per Stein J in *Leatch v National Parks & Wildlife Service* (1993) 81 LGERA 270 at 282). The application of the precautionary principle dictates that a cautious approach should be adopted in evaluating the various relevant factors in determining whether or not to grant consent; it does not require that the greenhouse issue should outweigh all other issues".[42]

In ***Tuna Boat Owners Association of SA Inc v Development Assessment Commission*** (2000) 110 LGERA 1 the applicant sought and obtained development consent for the establishment of tuna farms. There was a successful appeal by the Conservation Council of SA Inc to the Environment, Resources and Development Court of South Australia. Under the relevant legislation, the development had to be assessed against the provisions of a prescribed development plan which contained as an objective that development of the marine environment should be in an

[42] (1994) 86 LGERA 143 at 154.

ecologically sustainable way. The Environment, Resources and Development Court of South Australia said: "*We accept that an adaptive management approach, implemented by way of licence conditions to achieve ecologically sustainable development, which could be varied in response to new knowledge is one means by which the development could proceed in an ecological (sic) sustainable manner*". It also held that the onus lay on the proponent to show that the development would meet the policies set out in the development plan.

There was an appeal to a Full Court of the Supreme Court of South Australia by the unsuccessful proponent of the tuna farm proposal in *Tuna Boat Owners Association of SA Inc. v Development Assessment Commission.*[43] One ground of appeal was that the ERD Court was in error in determining for itself whether the proposed development was ecologically sustainable. Another ground of appeal was that the ERD Court erred in placing an onus on the proponent of the development to justify the grant of development consent. The appellant argued that it was for the objector, the Conservation Council of SA, to show that damage to the environment would result from the proposed development rather than for the proponent to show that such damage would not result. The Full Court rejected this submission:

> "27. I disagree. It is true that generally there is no onus on an applicant for development consent to establish that the development consent should be granted. The relevant authority must simply assess the proposed development against the relevant DP. But in this case, the Development Plan contains an objective and principle that invokes the concept of ESD. That in turn, in a case like the present, invites the use of the precautionary principle, simply because all of the consequences of the proposed development are not known and fully understood.
>
> 28. In such a case, assessing the proposal against the DP requires a consideration of whether it is a development which is ecologically sustainable. As the longer term consequences of the proposed development are not known, it is appropriate to require measures that will avert adverse environmental impacts that might emerge.
>
> 29. That was the ERD Court's approach. It was open to it to so proceed. The Court did not wrongly impose an onus on the Association in relation to the assessment of the proposal against the DP. The approach of the Court simply reflected

[43] (2000) 110 LGERA 1.

what was inherent in one of the matters that the Court had to consider, the issue of ESD.

30. There can be no hard and fast rules about what is required in a case such as this. Everything will depend upon the circumstances of the particular case, especially the level of knowledge about the environmental impacts of the particular proposal. I agree broadly with what the Court said:

> 'The proponent would have to satisfy the burden of proof by evidence as to the likely consequences of the proposal, including scientific evidence (with its limitations), evidence as to the proposed management regime and measures, and evidence to assist the Court in the assessment of the risk-weighted consequences of the proposal'.

This should not be taken as a proposition of law, but simply as an expression in the particular case of what, in general terms, was required before the ERD Court could properly find for the Association when considering whether the development would be managed so as to be ecologically sustainable".[44]

In *BGP Properties Pty Ltd v Lake Macquarie City Council,*[45] the applicant appealed in the NSW LEC by way of merits review against the refusal of the local government authority of an integrated development application to subdivide land into 48 lots for industrial use and storage. The land was located at Redhead in the City of Lake Macquarie and contained a threatened ecological community, the Sydney Freshwater Wetland, and a threatened species of plant, *Tetratheca juncea*. The land was also located nearby to residential areas. Development of the land would impact on the threatened ecological community and the threatened species and on the residents in terms of traffic and noise generated by the industrial development.

McClellan CJ held:

> Consideration of these principles does not preclude a decision to approve an application in any cases where the overall benefits of the project outweigh the likely environmental harm. However, care needs to be taken

[44] (2000) 110 LGERA 1 at 6[27]–7[30] per Doyle CJ with whom Duggan and Lander JJ agreed.

[45] (2004) 138 LGERA 237.

to determine whether appropriate and adequate measures have been incorporated into such a project to confine any likely harm to the environment".[46]

In *BGP Properties Pty Ltd v Lake Macquarie City Council*[47] the applicant lodged an integrated development application with a local council seeking consent to subdivide land into 48 lots for industrial use and storage. The site was located in an area of environmental sensitivity and encroached on a wetland. It contained the threatened species known as *Crinia tinnula* (the Wallum Froglet) and the threatened population *Tetratheca juncea*. It also contained some threatened ecological communities. A species impact statement prepared in accordance with the *Threatened Species Conservation Act 1995* concluded that the proposed industrial subdivision would provide an opportunity to improve the environmental management of the land. There was a deemed refusal by the council of the application. The applicant appealed on the merits to this Court. The *EPA Act* applied and included within its objects the encouragement of ESD. Matters which a consent authority were required to take into consideration under s 79C(1) of the *EPA Act* included "*the public interest*".

McClellan CJ held, following *Carstens*[48], that by requiring a consent authority to have regard to "*the public interest*", s 79C obliged the decision-maker to have regard to the principles of ESD in cases where issues relevant to those principles arose. This would have the consequence that, among other matters, consideration had to be given to matters of inter-generational equity, conservation of biological diversity and ecological integrity: at [113]. His Honour held that where there was a lack of scientific certainty, the precautionary principle must be utilised. This meant that the decision-maker must approach the matter with caution but also required the decision-maker to avoid, where practical, serious or irreversible damage to the environment. Consideration of these principles would not preclude a decision to approve an application in cases where the overall benefit of the project outweighed the likely environmental harm. However, care needed to be taken to determine whether appropriate and adequate measures had been incorporated into such a project to confine any likely harm to the environment. The applicant's proposal would destroy a substantial area of the Sydney Freshwater Wetland and, in time, the indirect effects could remove it entirely and affect the resilience and the integrity of the wetland system, both on and off the site. Due to these known impacts, together with the possible future impacts, the development application was refused.

[46] (2004) 138 LGERA 237 at 262 [113]-[114].

[47] (2004) 138 LGERA 237

[48] (1999) 111 LGERA 1

21 As recognized in the above analysis, it is not always possible to have clear evidence of a threat to the environment before the damage occurs, hence the precautionary principle. The principle recognizes that delaying action until there is compelling evidence of harm will often mean that it is then too costly or impossible to avert the threat.[49]

22 Upon applying the precautionary principle to the matter before the Tribunal, it becomes evident that the Plan does not promote the conservation of biodiversity, but potentially threatens it. This potential threat is serious, and, if realized, may lead to irreversible harm.

23 As recognized in the IUCN's Policy and Global Change Group paper, *The Precautionary Principle in Biodiversity Conservation and Natural Resource Management: An Issues paper for policy-makers, researchers and practitioners*: [50]

> threats to biodiversity are often posed not by a new, poorly understood technology or process, but by the expansion or intensification of well-understood activities such as the harvesting of wild species or clearing forests.

24 On the evidence, the Tribunal cannot be certain that the Plan does not present a threat of significant reduction or loss of biodiversity. Therefore, this lack of certainty must not be used as a reason for postponing measures to avoid or minimize the threat. Such precautionary measures include suspension of the Plan until firm scientific evidence can be obtained to show that the Plan meets the objective of promoting the conservation of biodiversity.

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[49] Cooney, R. (2004), *The Precautionary Principle in Biodiversity Conservation and NaturalResource Management: An issues paper for policy-makers, researchers and practitioners*. IUCH, Gland, Switzerland and Cambridge, UK xi + 55pp. Viewed www.pprinciple.net/publications/Precautionary Principleissuespaper.pdf

[50] Cooney, R. (2004), *The Precautionary Principle in Biodiversity Conservation and NaturalResource Management: An issues paper for policy-makers, researchers and practitioners*. IUCH, Gland, Switzerland and Cambridge, UK xi + 55pp.

Kangaroos, the Plan and the Code

25 It is ultimately necessary to examine the requirements listed in subs. 303FO (3), but it is convenient first to make some observations about some of the factual context in which the decision is to be taken (*e.g.*, the biology, habitat and killing of kangaroos), about the Plan and about the 'Code Practice for the Humane Shooting of Kangaroos' ('the Code'), the contents of which are adopted by the Plan.

26 Kangaroos are a species native to, and only found naturally in, Australia. They are a significant part of the Australian ecosystem[51] generally and, in particular, a significant part of the ecosystems relevant to this case. The species of kangaroo in issue in this case are the Red Kangaroo (*Macropus rufus*), the Western Grey Kangaroo (*Macropus fuliginsosis*), the Eastern Grey Kangaroo (*Macropus giganteus*) and the wallaroo (*Macropus robustus*, including both *M. r. robustus* and *M. r. erubescens*). The plan collectively refers to these four species as '*kangaroo*'.[52] All these kangaroos are 'protected fauna' within the meaning of the NPW Act[53] and it is accordingly an offence to harm them[54] unless pursuant to a relevant licence[55] or some other lawful authority.[56]

27 In 2004[57] the figures for the killing of kangaroos in NSW were:

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[51] The term 'ecosystem' is defined in s. 528 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) to mean 'a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.'

[52] Plan, p. 1.

[53] NPW Act, subs. 5 (1) and Sch. 11.

[54] NPW Act, par. 98 (2) (a).

[55] NPW Act, par. 98 (3) (a).

[56] See NPW Act subs. 98 (3) (b), (4) and (5). See also the defence provision: subs. 98 (6).

[57] See NP4, Olsen and Low, March 2006, p11.

	Red Kangaroo	Eastern Grey	Western Grey	Euro/ Wallaroo	Total Allowed	Total Killed	% of quota
	400,970	751,575	200,255	35,611	1,388,411	877,225	63%

28 According to the Department of Environment and Heritage (Cth), the commercial kangaroo harvest in 2005 was: [58]

	Red Kangaroo	Eastern Grey	Western Grey	Euro/ Wallaroo	Total Allowed	Total Killed	% of quota
	445,300	550,820	143,963	35,616		1,091,299	48%

29 The commercial kangaroo kill in 2006 was: [59]

	Red Kangaroo	Eastern Grey	Western Grey	Euro/ Wallaroo	Total Allowed	Total Killed	% of quota
	254,988	338,984	61,705	20,334		676,011	74%

30 The commercial kangaroo kill in 2007 was: [60]

	Red Kangaroo	Eastern Grey	Western Grey	Euro/ Wallaroo	Total Allowed	Total Killed	% of quota
	371,074	313,350	98,029	31,216	940,756	813,669	86%

[58] See NP4, Olsen and Low, March 2006, p.12.

[59] See Affidavit Croft, Annexure 11.

[60] See Affidavit Nicole Payne NP12p.2.

31 The proposed commercial kangaroo kill in 2008 is: [61]

	Red Kangaroo	Eastern Grey	Western Grey	Euro/ Wallaroo	Total Allowed		
	429,156	455,403	108,954	17.245	1,010,758		

32 The respondent, in his (now predecessor's) Statement of Reasons, accepted that a quota of 17% per annum and the addition of the special quota would be unsustainable in the long-term: [62]

> I found that if within a zone the special quota is fully utilised then the total commercial harvest would be 20% of the population estimate for eastern grey kangaroos, western grey kangaroos and wallaroos and 22% of the population estimate for red kangaroos. These harvest rates are not considered sustainable in the long-term but would not be detrimental in the short-term . . . .

33 However, the EPBC Act does not make any reference to 'long-term' and 'short-term' sustainability and the respondent provided no clarity on his assessment of long-term and short-term impacts. This statement relies on the assumption that populations will recover following periods of decline. However, the assumption has not been proven in periods of substantial decline, due to both natural occurrences such as drought and commercial harvesting.

34 Given that the quota in NSW has rarely been over 65% it cannot be logically accepted that if trappers killed 100% of the quota over the next 4 years that this would be sustainable, especially if there is also a special quota of 5%. The Tribunal does not need to make a finding in relation to the actual number of kangaroos being killed, but rather in relation to the total amount (quota) allowed by the Plan

[61] See NP4, Olsen and Low, March 2006, p.12.

[62] T Documents, T20, p. 335

35 The Plan was developed for the purpose of satisfying the requirements of the EPBC Act and 'legislative and other requirements' of the NSW Government.[63] Even if it is not approved, the Plan will continue to have at least the status of a NSW Government policy that informs the administration of the NPW Act. Approval of the plan will have the significance of making it legally possible to export kangaroo meat harvested pursuant to the Plan.

36 The Plan is in five parts:

1. Introduction
2. Legislative Framework
3. Biology, Ecology and Conservation of *Kangaroos*
4. Goals and Aims
5. Management Actions and Performance Indicators.

37 The operative provisions of the Plan are found in Part 5, although particular attention is also due to §3.4.1 and Table 2 (both headed 'Threats and issues pertinent to the conservation status of *kangaroos'* and to §3.4.2 and Table 3 (both headed 'Assessment of the impacts of commercial kangaroo harvest of other species, habitats and ecosystems').

38 The understanding of the biology and ecology of kangaroos upon which the Plan is based is summarized in §3.2 ('Biology and Ecology') of the Plan, a section 'largely adapted' from a single source, namely 'the background information for

[63] Plan, p. 1.

kangaroo management in *Commercial Harvesting of Kangaroos in Australia* (Pople and Grigg 1999).'[64]

39 The Plan relates 'only to the commercial harvest of *kangaroos* within New South Wales.'[65] The Plan allows for the killing of kangaroos only in 'commercial Kangaroo Management Zones' ('KMZs') and not, *inter alia*, in the 7% of the State's land dedicated or declared under Pt 4 or Pt 4A of the NPW Act.[66] Most of the State is covered by KMZs[67] and almost all of the NSW Red Kangaroo population is within the KMZs[68] and the entire NSW Western Grey Kangaroo population is within the KMZs.[69]

40 The non-commercial killing of kangaroos is not regulated or prevented by the Plan:[70] thus, the killing of kangaroos pursuant to the Plan is killing in addition to other killings of kangaroos.

41 The Plan provides for studies directed at ascertaining from time to time estimates of kangaroo populations and for the calculation of quotas of kangaroos that may be killed pursuant to the Plan. The importance of accurately estimating kangaroo populations is noted in the Plan: 'Monitoring commercially harvested kangaroo populations . . . is essential to effectively maintaining viable populations of kangaroos throughout their ranges.'[71] In other words, errors in monitoring, at least in the longer term, may threaten the viability of kangaroo populations.

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[64] Plan, p. 12. This is not to say that many other sources are not cited in the summary.

[65] Plan, p. 1.

[66] Plan, p. 1.

[67] Plan, Fig. 1, p. 5.

[68] Plan, Fig. 3, p. 17.

[69] Plan, Fig. 5, p. 19.

[70] Plan, p. 1.

[71] Plan, p. 34.

Nevertheless, the Plan notes that no monitoring of the least common kangaroo species covered by the Plan—wallaroo *erubescens*—has occurred since 2002, at which time the population was estimated to be only 12,000 (compared with the 2006 estimate of 5.8 million of the other types of kangaroos).[72]

42 The Plan provides that the basic 'commercial quotas' (not counting 'approved adaptive management experiment[s]' or special quotas) for the Red Kangaroo are to be fixed at 17% of the estimated population.[73] The equivalent 'commercial quotas' for the other species are 15% of each estimated population.[74] Specific estimates and quotas are reached for each KMZ.[75] Special quotas of a further 5% of the estimated population can be authorized.[76]

43 Subject to one qualification, these commercial quota percentages are fixed for the life of the Plan: the Plan contains no provision for a reduction in these percentages or for a suspension (whole or partial) of killing, regardless of the circumstances that arise in the five year course of the Plan. The qualification arises from the evidence of Ms Payne that 'the Plan provides for quotas to be reduced or suspended if considered necessary in response to new information about kangaroo populations.'[77] In oral evidence she explained that this was based

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[72] Plan, p. 34. The Plan (at p. 34) describes the kangaroos other than wallaroo *erubescens* as being '[t]he four currently commercially utilised kangaroo taxa', implying that the relatively low numbers of wallaroo *erubescens* would not be threatened by commercial killing pursuant to the Plan. However, the Plan expressly covers the wallaroo *erubescens* and provides for its killing.

[73] Plan, p. 36.

[74] Plan, p. 36.

[75] Plan, p. 36.

[76] The respondent, when declaring the Plan to be an approved wildlife trade management plan, imposed a condition that the accumulated special quotas for the State not amount to more than 1.5% of the surveyed population.

[77] Affidavit of N. Payne, par. 62.

on the remarks subscribed to Performance Indicator 13.1 in the Plan.[78] Performance indicator 13.1 is directed at measuring the success (or otherwise) of Action 13, which is that 'Kangaroos will continually be monitored indirectly throughout the life of this plan' in order to achieve Aim 4 (Monitor kangaroo populations). The remarks subscribed to Performance Indicator 13.1 1 include:

> If necessary, management action will be taken to ensure the sustainability of the kangaroo population. Actions may include reducing or suspending the commercial harvest for that species in that zone, or increasing survey intensity at next survey.

This, with respect, is an unsatisfactory way to express one of the most important features of the Plan. It tends to obscure and relegate to insignificance a matter that should be prominent. The extent to which these remarks would properly prevail over actual Aims and Actions that might not be consistent is not entirely clear. More importantly, the Plan makes no provision for the criteria by which such a decision should be taken or even when it should be taken, leaving the respondent (and now the Tribunal) simply to trust that a critical issue will be addressed appropriately. Moreover, the Plan does not say who will make such decisions: the Plan fails to allocate to anyone responsibility for a critical matter (it is to be noted that the Department of Environment and Climate Change (formerly the Department of Environment and Conservation) ('the NSW Department') itself is neither a legal person nor sufficiently small in a practical sense to make it appropriate just to leave the issue to the Department corporately).

44 The 'overarching goal' of the Plan is said to be: 'To maintain viable populations of kangaroos throughout their ranges in accordance with the principles of *ecologically sustainable development*.'[79] Strictly speaking, the overarching goal of the Plan really is to allow for the commercial utilization of kangaroos, in

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[78] Plan, p. 38.

[79] Plan, p. 27.

particular by allowing for the killing of kangaroos for export purposes: the Plan is, ultimately, a plan for killing kangaroos rather than for preserving them, and the purpose is commercial. However, the Plan is directed at placing limits on the killing and the reference to the 'overarching goal' is best understood as being a reference to the primary limitation to be placed on the killing of kangaroos for commercial purposes.

45 There is no other suggested purpose for the Plan nor any other benefit incidental to the killing that has been identified in the evidence.

46 As the Plan explains, the 'overarching goal' is pursued through seven 'Aims', each of which is in turn pursued through one or more described 'Actions'. The success of the 'Actions' is to be measured against 'Performance Indicators'. Part 5 of the Plan is arranged according to these Aims, Actions and Performance Indicators and it is in this Part that measures are prescribed to meet environmental and other concerns. The adequacy (or otherwise) of the measures described in Part 5 of the Plan is a central issue in this case: the Tribunal must be satisfied that they satisfy the mandatory requirements of subs. 303FO (3) of the EPBC Act and are sufficient to warrant the exercise of discretion that is needed before the Plan is approved pursuant to subs. 303FO (2).

47 The Plan requires the killing of kangaroos to be done in accordance with the Code. This incorporation by reference is one of the most significant aspects of the Plan—especially with respect to animal welfare issues.

48 The Code was originally endorsed in 1985 and was revised in 1990.[80] It is not legislation nor has been adopted or endorsed by any legislation identified by

[80] Code, p. 1.

the applicant. (Subscribed to reg. 9A.05 of the EPBC Regulations is a notation referring the Code, but that notation is not a part of the regulation.[81])

49 The Code purports only to set a 'minimum' 'achievable standard' 'based on the knowledge and technology available at the time of publication'.[82] It does not purport to prescribe 'best practice' or even appropriate standards, only the 'minimum' standard as at 18 years ago. It is not strong evidence of what is acceptable practice in 2007, let alone evidence of what—with 21st century technology and according to 21st century sensibilities—is considered humane or otherwise acceptable or of what would minimize pain and suffering. Its endorsement by Ministerial councils in 1985 and 1990 does not attract to it the status of expert evidence. Nor does that endorsement give it considerable weight as evidence of standards acceptable to the community (or any part thereof) 18–22 years later. Indeed, the fact that it is now under review suggests that it is considered to be out-of-date and capable of improvement.

50 Although the Code prescribes mere minimum standards, it does say that 'it is the shooter's responsibility to ensure a sudden and painless death for target animals'.[83] The Code acknowledges that shooters may have to exceed the prescribed minimums: for example, it says that 'under unusual conditions firearms and ammunition that exceed the minimum requirements may have to be used.'[84]

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81 The Tribunal erred in *Wildlife Protection Association of Australia Inc. v Minister for Environment and Heritage* [2004] AATA 1383 at [87] when it held that "Having carefully reviewed all the evidence, the Tribunal finds that in accordance with the intent of the legislation it is likely, if a kangaroo is killed, that this will be done in a way that is generally accepted to minimise cruelty, as specified by the Code. The Tribunal accepts, as has been already noted, that not every killing will, be in accordance with the ideals of the Code. If there is to be a kangaroo industry, then it necessarily follows that kangaroos must be killed and the legislation specifies that this is to be done in accordance with the Code."

82 Code, p. 1.

83 Code, p. 2.

84 Code, p. 2.

This latter proposition, however, is not accompanied by any definition of what would constitute 'unusual conditions' so as to require exceeding the minimum standards, nor accompanied by any formula for determining the required extent of exceedance. Accordingly, the Code itself contemplates that its own minimum standards will sometimes be inadequate, but does not prescribe when that will be or what, precisely, must be done about it. It follows that, other than appealing to the insight and responsibility of shooters, the Code does not prescribe adequate standards for all circumstances, even by 1990 standards.

51 The Code acknowledges that its provisions will not always achieve a quick and less painful death. Shooters sometimes miss their target. The Code effectively acknowledges that its own provisions are not sufficient always to ensure a humane killing. It must be concluded that to achieve a standard of ensuring that no inhumane treatment is meted out to kangaroos, mere compliance with the Code is not enough.

52 Due to the high numbers to be killed in accordance with the plan, a 1% miss rate still means 10,000 kangaroos will suffer as a result.

Prerequisite: Consistency with the objects of Part 13A of the EPBC Act

53 Paragraph 303FO (3) (a) of the EPBC Act requires the Plan to be consistent with the objects of Pt 13A of that Act. Those objects are listed in subs. 303BA (1), which is reproduced above. The applicant places more reliance on pars. 303BA (1) (c), (d), (e) and (h). Further, the applicant submits that the Minister must also be satisfied that the Plan is consistent with the overall objects of the EPBC Act (which are contained in s. 3, which is reproduced above).

54 The evidence supports conclusions that the operation of the Plan:

(a) will result in Australia contravening its obligations under the Biodiversity Convention, namely, the conservation of biological diversity and the sustainable use of its components;[85]

(b) will not promote the conservation of biodiversity in Australia;

(c) will not ensure that the commercial harvesting of kangaroos for the purpose of export is managed in an ecologically sustainable way;

(d) will not promote the humane treatment of wildlife; and

(e) does not correctly take the precautionary principle into account in making decisions relating to the utilisation of wildlife.

55 By reason of these matters, the Tribunal cannot be satisfied that the Plan is consistent with the objects of Pt 13A of the EPBC Act.[86]

56 As noted above, the aim of legislative objectives is to ensure that the legislation is interpreted and administered consistently with the policy objectives which the enactment was intended to further. A statutory construction of the objects of Pt 13A should be read consistently with the overall objects of the EPBC Act. Therefore, the Tribunal must also be satisfied that the Plan is consistent with the objects of the EPBC Act, set out in section 3, in particular:

(a) to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources[87]; and

(b) to promote conservation of biodiversity.[88]

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[85] In *Re Humane Society International and Minister for Environment and Heritage* [2006] AATA 298 the Tribunal stated that 'the enactment of Part 13A of the EPBC Act in 2001 appears to be a direct response to Australia's obligations under the [Biodiversity] Convention.'

[86] See EPBC Act, par. 303FO (3) (a).

[87] See EPBC Act, par. 3 (b).

[88] See EPBC Act, par. 3 (c).

57 The EPBC Act was enacted to implement the provisions of the *Convention on Biological Diversity 1992* ('the Biodiversity Convention'), along with other international agreements, into Australian law.[89] The Biodiversity Convention obliges Australia to take steps to promote conservation of biological diversity and sustainable use of its resources.[90]

58 In *Brown v. Forestry Tasmania*[91] Marshall J noted that the promotion of the conservation of biodiversity, as required under the EPBC Act, can only be achieved by favouring a construction of the EPBC Act which views 'protection of the environment as an act of not merely keeping threatened species alive, but actually restoring their populations so that they cease to be threatened.'[92]

59 Similarly, under Pt 13A of the EPBC Act, the Minister must be satisfied that a proposed wildlife trade management plan includes measures to promote the conservation of biodiversity. Such an approach is consistent with the High Court's view in *Minister for Immigration and Ethnic Affairs v Ah Hin Teoh*,[93] in which Mason CJ and Deane J said:

> It is accepted that a statute be interpreted and applied, as far as its language permits, so that it is in conformity and not in conflict with the established rules of international law . . . .

[89] *Minister for Environment and Heritage v Queensland Conservation Council Inc and Anor* (2004) 139 FCR 24 at 2.

[90] See generally Articles 1, 6, 8 and 10.

[91] *Brown v Forestry Tasmania* (No 4) [2006] FCA 1729.

[92] *Ibid,* at 300.

[93] (1995) 183 CLR 273.

Furthermore, their Honours went on to say that courts are required to 'favour a construction, as far as the language of the legislation permits, that is in conformity and not in conflict with Australia's international obligations'.[94]

60 On the evidence, and taking into account Australia's international obligations under the Biodiversity Convention, the Tribunal cannot be satisfied that the Plan promotes the conservation of biodiversity.

61 Paragraph 303FO (3) (a) requires the Plan to be consistent with the objects of Part 13A, which have been noted above.

62 The 'overarching' goal of the Plan is '[t]o maintain viable populations of kangaroos throughout their ranges in accordance with the principles of ecologically sustainable development".[95]

63 To satisfy the statutory prerequisite to approving the Plan, the fundamental consideration must be the promotion of conservation of biodiversity. The Plan must actually promote the conservation of biodiversity in the positive sense. This is of course to be balanced against the other objects of Pt 13A, including the commercial utilisation of native wildlife in an ecologically sustainable way. A discussion regarding ecological sustainability is contained below. However, it is not enough for the Plan to be sustainable. Its purpose must be for some conservation biodiversity benefit. If the Plan is inconsistent with these objectives then it must not be approved.

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[94] *Ibid*, at 287.

[95] Plan, p. 27.

64 The precautionary principle must also be considered in this decision-making process, not just when there is a threat of harm, but at each level of the decision-making process. In all circumstances where potential harm is identified, then action must be taken to minimise that harm.

65 The Plan, covering as it does the killing a large number of kangaroos and their progeny over a long period of time cannot be said to promote the objects of the Act.

Prerequisite: Has there been an environmental assessment?

66 Paragraph 303FO (3) (b) operates such that the Plan must not be approved unless the respondent or joined party persuades the Tribunal that there has been an assessment of the environmental impact of the activities covered by the Plan. It is to be noted that the phrase 'activities covered by the Plan' is a broad one. In this case, par. 303FO (3) (b) not only covers the impact of killing 15% or 17% of the kangaroo population for the purpose of 'harvesting' meat—it also covers matters such as the killing of joeys, and the abandoning of kangaroo parts in the field. The four matters listed in subpars. 303FO (3) (b) (i)–(iv) must be addressed, but so also must every environmental impact of the activities covered by the Plan.

67 The four matters listed in subpars. 303FO (3) (b) (i)–(iv) must be addressed, but so also must every environmental impact of the activities covered by the Plan. These four matters include (but are not limited to) an assessment of the following:

(a) the status of the species to which the plan relates in the wild;

(b) the extent of the habitat of the species to which the plan relates;

(c) the threats to the species to which the plan relates; and

(d) the impacts of the activities covered by the plan on the habitat or relevant ecosystems.

68 The EPBC Act defines 'impact' in subs. 527E (1) as follows:

> For the purposes of this Act, an event or circumstance is an impact of an action taken by a person if:
>
> (a) the event or circumstance is a direct consequence of the action; or
>
> (b) for an event or circumstance that is an indirect consequence of the action—subject to subsection (2), the action is a substantial cause of that event or circumstance.

69 The applicant does not dispute that there has been an assessment, to some extent, of the environmental impacts of the Plan. However, compliance with this provision requires that the environmental assessment be adequate and address all the relevant matters that are likely to be impacted by the activities.

70 The Tribunal must consider that there is a primary environmental impact caused by the activity itself. This is the proposed killing of 1,010,758 kangaroos during the current year and the continuation of the killing at a rate of 15% of the population each year for the next three years (except for Red Kangaroos, for whom the rate is 17%). The incidental environmental impacts would include the death, through starvation and killing, of the hundreds of thousands of in-pouch and young-at-foot joeys.

71 As the Plan specifically states, the conservation status of kangaroos in New South Wales has the potential to be threatened by a range of environmental and anthropogenic factors.[96] The Plan notes that occurrences outside the control of the Plan, such as drought, flood, disease and predation, are potential threats to the ecosystems and environmental processes of kangaroos. The impact of these

[96] Plan, p.21

potential environmental and anthropogenic factors must be adequately assessed before the Tribunal can approve the Plan. Yet, despite evidence to the contrary, the Plan concludes that these processes are not considered a threat to the conservation status of kangaroos.[97]

72 The evidence shows that kangaroos are highly susceptible to drought. The Plan accepts that rainfall, via its impact on plant productivity, is the single most important factor impacting on kangaroo populations and droughts can greatly reduce kangaroo numbers.[98] From 2001 to 2005, population estimates for all the four species targeted under the Plan have reduced by 50 to 70%. Olsen and Low[99] note that rainfall is the primary driver of kangaroo numbers and, since 2002, numbers of all species have fallen dramatically by more than 50%.

73 Threats such as drought, that cause both water shortage and a lack of biomass, have the potential to cause serious (and potentially irreversible) harm to populations of kangaroos. Yet the extent and impact of these threats on the long-term viability of kangaroo populations is largely unknown, giving rise to the need for a precautionary approach to be taken.

74 The Plan contends that kangaroos are well adapted to a dynamic environment and populations recover quickly after drought-driven population crashes, even with continued harvesting. The conclusion in the Plan is that drought is not considered a threat to the conservation status of kangaroos.[100]

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[97] Plan, p.21

[98] Table 2 at page 23

[99] See NP4, Olsen and Low, March 2006, p. 100.

[100] Plan, Table 2, p.23

75 The evidence shows that kangaroos breed at lower rates during drought. Red kangaroos, the most studied of the four species killed under the Plan, show diminished reproductive capacity during times of drought. Yet in Dr Croft's evidence he noted that eastern and western grey kangaroos live in different habitats from reds, and, whilst macropod reproductive systems are common to all species, there are different levels of fecundity between the species. Red kangaroos and wallaroos share similar reproductive capacities, but eastern and western grey kangaroos have a longer pouch life than red kangaroos or wallaroos, and therefore the rate of increase in populations will be lower for eastern and western greys than reds and wallaroos. Generalisations about the reproductive capacities of kangaroos should therefore be avoided across all four species. All species, but particularly reds, eastern and western grey kangaroos, have a highly sensitive and adjustable reproductive systems. Studies of the recovery capacity of reds cannot therefore be used as a measure of recovery of other species following drought.

76 It has also been shown that water is not a determining factor in kangaroo populations—forage biomass (*i.e.*, food) as a result of rainfall is. Olsen and Braysher[101] note that rainfall (especially lack of rainfall) and its impact on plant productivity have a profound impact on kangaroo populations. In fact the 1982–1983 drought

> resulted in population declines of about 40% in the three large kangaroo species over more than one million square kilometres, attributed to food shortages. Rainfall and biomass are correlated strongly with rates of increase in the kangaroo population and the relationships appear to be causal.

77 As the Plan accepts, kangaroo populations fluctuate primarily in response to seasonal conditions[102]. The Plan also notes that flooding rains can lead to

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[101] See NP3, Olsen and Braysher, 1999, p. 31.

[102] See Plan, page 34.

epidemic mortality and also that in some areas short-term reductions in populations greater than 50% have occurred.[103] It was noted by Croft that behaviour of the population is a function of its starting density, so that populations that are high will remain so until driven down by a lack of pasture, such as drought, and thereafter remain for some time[104].

78 Whilst it is contended by Pople that young-at-foot joeys have a relatively low survival rate (which he suggests is less than 50%), this is not necessarily true outside of drought conditions. In fact, populations coming out of drought, in which the conditions are very good, can have extremely good rates of survival for young-at-foot. The rates of recruitment are therefore highly dependent on conditions and difficult to predict, due to the unpredictability of natural events such as drought. In fact, as shown in the evidence of Croft, the modelling conducted to predict the recruitment of populations is only as good as its ability to predict future events. Without empirical data conclusively to prove the predictions of modelling, no certainty regarding the results can be ascertained.

79 The environmental assessment of the impacts on the relevant ecosystems of kangaroo is also insufficient. As noted by Olsen and Low, 'Management plans must demonstrate that harvesting does not impact on the species concerned or their ecosystems (DEH 2004), although the latter is seldom, if ever, audited or addressed.'[105] Such a statement highlights the lack of assessment of the overall impacts of the Plan on the broader ecosystem within which the kangaroo operates.

80 The Plan is based on a major literature study that rejects damage mitigation as a reason for killing kangaroos, stating that 'the discontinuation of damage

[103] See Plan, page 34.

[104] See Exhibit 9, DC2, page 4.

[105] See NP4, Olsen and Low, March 2006, p. 9-10.

mitigation as grounds for harvesting is in many ways a more honest approach to kangaroo management given that damage is difficult to monitor, predict and even to prove empirically to be an issue. It also removes the implication that kangaroos are pests.'[106]

81 This literature survey notes: [107]

> However, some landholders still perceive damage mitigation to be the main reason for harvesting and continue to call for greater quotas, mainly during the recent years of low rainfall. Arguably, this is a socio-economic problem rather than an ecological one. Certainly, the issue of land degradation will never be addressed by simple reduction in kangaroo numbers when there is no concomitant control of sheep and other introduced herbivore grazing impacts. Kangaroo management/commercial harvesting needs to be integrated with grazing management if land degradation is to be addressed.

82 The Plan contains no reference to the potential environmental impacts of the 'do nothing' approach. There is no assessment of the option to cease killing of kangaroos under a commercial program. The Plan does not have as one of its goals the continuation of a commercially viable kangaroo industry, yet this goal seems to underpin the reasons for the killing of kangaroos. As stated in the evidence of Ms Payne, the Plan is not designed to achieve population control or damage mitigation but for commercial harvesting. Ms Payne also agreed with the conclusion of Olsen and Low that damage mitigation as grounds for harvesting is unfounded.

83 The Plan also fails to address many other impacts of the Plan including the potential impacts of the burial of off-cuts. No source or evidence is cited for the propositions that 'many' trappers bury off-cuts and that the off-cuts are so dispersed that they will not sustain a population of foxes *etc* that will then threaten

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[106] See NP4, Olsen and Low, March 2006, p. 7. Evidence N Payne.

[107] See NP4, Olsen and Low, March 2006, p. 7.

endangered species. There is no evidence that buried off-cuts would not be dug up by such animals, or on the depth of burial used by the many trappers.

84 These impacts are unknown but can only have a detrimental environmental effect.

85 The Plan does not consider the environmental impacts from the 700 licensed trappers in the western division of NSW.

86 The assessment of the environmental impacts of the Plan on the extent of the habitat of the species to which the Plan relates has also been inadequate. Payne noted that the Plan aims to maintain kangaroo populations throughout their habitat, including at the edges of their ranges. However, the harvesting does not support the protection of kangaroos at the extent of their ranges. Cairns, in his evidence, also suggested that he was not really concerned about trying to maintain species at their distributional ranges, and attempts to do so would not be an effective management option.[108]

87 It is accepted that par. 303FO (3) (b) only requires that the Tribunal be satisfied that an assessment has been done. But that assessment must include the matters listed in subpars. (i) to (v). It is contended that the assessment must be sufficient. If the Tribunal finds that an aspect of the impacts of the activity has not been assessed then the Tribunal should not make the declaration.

88 There has been no assessment of the impact of the potential extinction of species at the edge of their range. As this is a part of the overarching goal of the

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[108] SC4, page 9.

Plan it is a significant omission. The impacts of this and its implications for pars. 303FO (3) (c) and (e) is discussed below.

Prerequisite: Measures to ensure the impacts are ecologically sustainability?

89 The EPBC Act requires that the Plan include management controls to ensure that 'the impacts of the activities' on each of the species of kangaroos are ecologically sustainable.

90 Paragraph 303FO (3) (c) requires the Plan to include management controls directed towards ensuring that the impacts of the activities covered by the plan on:

- a taxon to which the plan relates; and
- any taxa that may be affected by the activities covered by the plan; and
- any relevant ecosystem (for example, impacts on habitat or biodiversity);

are ecologically sustainable.

91 The terms 'ecosystem' and 'habitat' are defined in s. 528 of the EPBC Act as follows:

> ***ecosystem*** means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.
>
> ***habitat*** means the biophysical medium or media:
>
> (a) occupied (continuously, periodically or occasionally) by an organism or group of organisms; or
>
> (b) once occupied (continuously, periodically or occasionally) by an organism, or group of organisms, and into which organisms of that kind have the potential to be reintroduced.

92 The EPBC Act requires that the Plan include management controls to ensure that 'the impacts of the activities' on each of the species of kangaroos are ecologically sustainable. On the evidence, the Tribunal cannot be satisfied that

there are sufficient management controls included in the Plan that ensure the impacts are ecologically sustainable.

93 Pople concludes that sustainability in this context is the ability to maintain a harvest regime that does not jeopardise future harvests, and 'ecologically sustainable' means that the harvest should not adversely effect ecosystem functioning[109]. However, ecological sustainability requires some benefit of the use. The Plan cannot be shown to produce any conservation or biodiversity benefit. Killing part of the population is not necessary for the survival of the rest of the population of the species.

94 The management controls in the Plan currently include a quota based on a proportion of estimated populations (Action 11), the provision of special quotas (Action 12) and the gathering of data on weights of kangaroos (Action 13).

95 Action 13 notes that 'if average weights for any species (male and female) separately fall below the long term averages (at least the last ten years) by more than one standard deviation . . . weights will be monitored monthly and possible contributing factors examined.' The trigger only requires further study. As was noted by Ms Payne in her evidence, there is no reference in the Plan to a quasi-extinction rate below which harvesting would be assessed as unsustainable.

96 None of the Actions in the Plan provide for the suspension or reduction of the commercial killing of kangaroos if certain threshold situations are reached. There is no specific level of detriment or harm above which the Plan is suspended or the quotas are reduced.

[109] Pople Affidavit p.23

97 In the event of a specific decline in a population, either based on the annual or triennial surveys, there is nothing to provide assurances that the remaining population would be protected, or that the potential harm would be mitigated.

98 The management controls are deficient in this respect.

99 Dr Pople in his written work has identified a further safety measure, the use of a quasi-extinction level of 2–5 kangaroos per square kilometre (k/km^2) below which further commercial killing would not occur. However, of the issue of extinction rates and quasi-extinction levels, there appears to be little assessment of these rates. Dr. Pople accepted that this was one of the safety mechanisms that could be included in any type of wildlife management plan, although in oral evidence he disputed this need.

100 This is a measure that has been proposed in the Murray Darling Basin Options Report ('the Murray Darling Report').[110] With the exception of the far north-west corner of NSW, all the KMZs are included in the Murray-Darling Basin. This is important because it is accepted that the use of a quasi-extinction rate was a useful tool in identifying which of the 900 management alternatives modelled would be appropriate to "meet the objectives of all major stakeholder groups"[111].

101 The Murray Darling Report refers to quasi-extinction as being "the nominal value of kangaroo density taken to be the effective loss of the species"[112].

[110] Exhibit 13

[111] Exhibit 13, p.i

[112] Exhibit 13, p.52

102 As a potential threat of serious harm, it was quite clear that the modelling predicted 'Density of unharvested populations in these simulations rarely fell below a minimum of 5 individual/sq km. Although the critical minimum density is not clearly defined, populations below 2/sq km would generally be considered at risk of extinction.'[113]

103 The potential threat is clearly identified in the report. It is not an appropriate response to categorise these modelling results as "silly"[114]. The literature review referred to by Dr. Croft[115] also note the use of the term.

104 One of the recommendations was to "Identify opportunities to reduce the complexity and cost of current kangaroo management programs in the light of findings that the commercial industry is not viable at kangaroo densities that might threaten the conservation of the species"[116].

105 Dr. Cairns' evidence with respect to the issue of quasi-extinction reveals a lack of understanding about the goal of the Plan. He expressed no concern about the potential for the reduction of numbers at the edge of the range of each of the species. This contradicts the 'over-arching' goal of the Plan which is to maintain viable populations of kangaroos throughout their ranges. References to previous habitats of the species are irrelevant. The definition of "habitat" in the EPBC Act includes a reference to the "biophysical medium", "occupied (continuously, periodically, or occasionally)" by an organism.

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[113] Exhibit 13, p/37

[114] Evidence Dr. Pople.

[115] NP 4, p.96.

[116] Ex 13, p.54

106 It cannot be seriously suggested that a risk that a species may become extinct or practically extinct at the edges of its distribution is not a matter that is covered by subpar. 303FO (c) (ii). The Tribunal must be satisfied that there are specific management controls directed towards ensuring that this impact is ecologically sustainable.

107 The Murray Darling Report[117] went further than Dr Pople and proposed that harvesting below the level of 2 k/km^2 'would be generally be considered at risk of extinction'.

108 This could be at the edge of the ranges but this is a matter that would impact on the habitat of the kangaroos. Extinction or quasi-extinction at the edges of the range is a consideration of ecological sustainability.

109 It must also be remembered that the Murray Darling Report was also about evaluating 'how well particular kangaroo management options might satisfy a range of interests.[118]

110 A key conclusion of the Report was that 'reduction of kangaroos to very low densities (less than 5/sq km) over large areas is neither commercially feasible, ecologically defensible nor economically justified'.

111 Dr. Croft was taken to Exhibit 12, the article by Caughley, and specifically to Figure 10.4 at p. 177. The figure shows that with a harvest rate of between 10% and 15% the mean harvest off take would be approximately 2.5 k/km^2.

[117] Ex 13, p. 37.

[118] Ex 13, p. v

112 This would accord with Dr. Pople's written work[119] and the Murray Darling Report that suggests that there is a risk of significant impact, at least at local or regional levels, of continuing to kill at 10%–15% quotas when the population density is at the 2.5 k/km^2.

113 There is a real risk of removing kangaroos from that area through killing alone. A risk that would clearly be compounded if there was a further significant mortality from drought or other causes.

114 Table B in Exhibit NP12 shows that Wallaroo densities are currently 1.5 k/km^2 in Glenn Innes, 2.3 in Armidale and 3.1 in the Upper Hunter. Table 17[120] shows that the population has also decreased by 74% from 2002 and 2007. The quota for Wallaroos in the Northern Tablelands has been set at 15%. Despite historical killing at levels of between 1.5% and 11.8% and despite reaching a level of density that has been termed 'quasi-extinction' there is no management options to suspend the plan to determine if the Plan is ecologically sustainable.

115 Compare this to the Wallaroo population in the Barrier Ranges where killing was suspended in 2002 as a consequence of a significant (78%) population decline over 4 years.

116 It is submitted that this is one instance where it can be shown that the Plan does not satisfy the prerequisite at s. 303FO (3)(c)(ii).

117 The Plan adopts no precautionary measures to allow assessment of the quota between the years.

[119] Ex 14, p.19 and Ex. 15, p.26.

[120] NP 12, Table B. p.34

118 The implementation of a management regime in the Plan that identified, on a KMZ basis or otherwise, any criteria that would provide for the automatic suspension of the Plan would satisfy the test under the section.

119 The literature review notes that quotas 'allowed a greater harvest during these years of declining offtake [post-2002] but they were not filled (Figure 4) indicating a degree of self-regulation in the system, such that economic considerations limit the harvesting of kangaroos during drought despite available quota.'[121] (NP4, p.101)

120 Dr. Pople accepted that, for the purposes of ESD, commercial factors should not be used as management controls.

121 The Plan should include measures, such as setting a risk of quasi-extinction (as in the 2007 Quota Report Croft Annexure 11 p.6), and a specific figure for the overall population reduction that would trigger a suspension or review of the quota.

122 None exists in the plan.

123 The edges of distributional ranges of the populations of each species of kangaroos can be identified, see Dr. Pople.[122]. There has been a reduction in the population of Red Kangaroos by 50% from 2002 – 2007, Eastern Grey Kangaroos in the Western Plains by 70% from 2002-2007 and Western Grey Kangaroos by 72% from 2002 – 2007. It is clear from the coloured maps annexed to these submissions that based on Dr. Pople's estimates and applying the general reduction

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[121] Exhibit NP4, p. 101.

[122] Exhibit 16, pages 22-23, Figures 3(a), (b) and (c).

across all areas of NSW that a number of KMZ have populations for each of those three species below 3 kangaroos per sq km.

124 The information contained in the Quota Reports notes that Western Grey Kangaroos are at a state-wide density of 1.55 and have been below 2 since 2004. In the individual management zones there is no division between Eastern and Western Greys. It is thus not possible to compare the State-wide density and the zone densities.

125 It is not sustainable, within the meaning of the legislation, to drive a species to extinction in an ecosystem that can be defined. Western Greys have been at densities below 2 k/km^2 for the past 4 years. From 2002 to 2007 the population of Western Greys declined 70%. On the maps in Ex. 16, assuming a decline of 60% across the whole area, the highest density of Western Greys would be 3–6 k/km^2. Apart from the main population centre, located in the Cobar zone, all other areas fall into an average density of less than 3 k/km^2.

126 In respect of Eastern Greys the areas west of the Cobar and Griffith KMZs all fall below 3 kangaroos per sq km. Griffith, Cobar and Bourke all show a significant reduction in density below 3.

127 The impact is less with Red Kangaroos. With a 50% loss from 2002–2007 the potential impact on density is noticeable at the eastern and southern ranges of the population. See the maps attached to these submissions: the areas marked thereon in green represent the areas calculated to be <3 k/km^2.

Prerequisite: Will the Plan be detrimental to the conservation status of the species and any relevant ecosystem?

128 .Paragraph 303FO (3) (d) of the EPBC Act requires that the activities of the Plan not be detrimental to the survival, conservation status or relevant ecosystem to which it relates.

129 The Plan in and of itself proposes the killing of 15%–17% of the population of four species of kangaroos with this being increased by a further 5% in certain circumstances. The reduction by 1/6th of the population of any species is certainly detrimental to that species.

130 The applicant does not contend that the Plan will result in the extinction of the kangaroo species in the short term, during the life of this Plan. It is submitted, however, that the activities may be detrimental to the conservation status of the species and that there will be detriment to habitat or biodiversity.

131 The analysis of the significant reductions in total numbers compared to the actual killing as a percentage of the population can only show that there has been a precipitate decline in the total population numbers of each of the four species of kangaroos.

132 Red Kangaroos have declined by 59% from 2002 to 2006[123] with a slight recovery the decline was 50% from 2002-2007.

133 Western Greys have declined 72% from 2002 to 2006[124] despite the kill being only 4.4% to 9.% of population and not 15% .

134 Eastern Greys have declined in the Western Plains by 72% from 2002 to 2006[125] or 70% from 2002 to 2007.[126]

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[123] Croft, Ex. DC–2. Annex. 11, Table 14.

[124] Croft, Ex. DC–2. Annex. 11, Table 16.

135 Wallaroos have declined from 2002 to 2007 by 75% in the Northern Tablelands.[127]

136 Despite accepting that a 10% kill rate would lead to a population decline of about 40% over 5 years, Dr. Pople did not accept that these rates of decline had any impact on the population. Dr. Cairns did not accept the killing of 10%–15% had any impact on kangaroo populations.

137 Ms Payne's literature review[128] revealed that kangaroos provide some benefits to biodiversity and, save for exceptional circumstances, are not competitors with sheep and cattle. At '3.4.3 Specific issues – Sheep compared to kangaroos' M Payne's report reviews the literature to note:

- Since previous assessment using a DSE (Dry Sheep Equivalent) of 0.7 Grigg (2002) has proposed that marsupials use food far more effectively than placentals: 'Grigg suggested that a DSE of 0.2 would be a more realistic (but still conservative) figure. A more recent study of captive Red Kangaroos also suggested that current estimates are too high and that a DSE of about 0.48 was appropriate'.[129]
- 'Pople and McLeod (2000) reviews previous studies of competition between sheep and kangaroos and concluded, as did Olsen and Braysher (2000), that competition seldom occurs, either because food is not limiting, or because food choices or feedings sites differ. When competition does occur, sheep have the

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[125] Croft, Ex. DC–2. Annex. 11, Table 15.

[126] Payne, Ex. 22 NP–12, Table 15.

[127] Payne, Ex. 22 NP–12, Table 17.

[128] Affidavit Payne NP 4.

[129] Payne, affidavit, Ex NP4, p. 64.

advantage, because their diet is more catholic and farmers manage to their advantage. Kangaroos, however, are more mobile.' [130]

- 'At Fowler's Gap, Witte (2002) reported a positive relationship between the biomass of both total pasture and green pasture and kangaroo density. . . . Several studies in the previous review also reported positive relationship between stocking rate and kangaroo density. These findings support the conclusion that kangaroos and livestock do not compete strongly for food (at least in the rangelands), that resource availability drives the grazing systems, and that mixed species grazing regimes are more productive and ecologically sound.' [131]
- Sheep need average of 10 litres per day compared to 1 litre for Red Kangaroo and 1.75 for a Grey Kangaroo.[132]
- Estimates of kangaroos at a DSE of 0.70 vastly overestimate the impact of the kangaroo. The better assumption would be 0.20 to 0.48. This would still reduce the 2000 estimates by about one third.[133]
- See table 2 at Olsen and Braysher 2000:[134]. This would reduce comparative total grazing pressure of kangaroos to about 27% compared to sheep and cattle with 62% and goats of 11%.

138 Ms Payne's review—at 'Specific Issues: Ecological and economic benefits of fewer kangaroos where domestic sheep, cattle or goats continue to graze' found:

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[130] Affidavit Payne NP 4, p.65

[131] Affidavit Payne NP 4, p.65

[132] Affidavit Payne NP 4, p66

[133] Affidavit Payne NP 4, p71

[134] Affidavit Payne NP 3, p.62

- ‘There have been no studies in the last five years that expressly considered the benefits of having fewer kangaroos where livestock graze. But the various studies reviewed in the previous section found that grazing by livestock has significantly more impact on vegetation than grazing by kangaroos, and this reinforces the argument that removing kangaroos does not necessarily allow for their replacement by livestock.’[135]
- ‘Hence, considering the various studies discussed in sections 3.4.3, removal of kangaroos appears likely to provide negligible ecological and economic benefits, expert perhaps very locally in dry conditions.’ [136]

139 This demonstrates a change in the basis on which the previous management plan was based. The Plan is now not predicated on producing benefits for cattle and sheep grazing. The respondent accepts this at [24] of the Fact and Contentions in that ‘it is not clear to what extent kangaroo harvesting contributes to biodiversity’.

140 The respondent, however, argues that the harvesting does not lead to any loss of biodiversity.

141 The applicant contends that due to the need for the Tribunal to ‘be satisfied’ that the activities will not be detrimental to ‘any relevant ecosystem’ which may include habitat, that the evidence of the following shows detriment both to biodiversity and habitat:

(a) the deaths of 4 million kangaroos;

(b) the deaths of thousands of in-pouch and young-at-foot joeys;

[135] Affidavit Payne NP 4, p.76

[136] Affidavit Payne NP 4, p.77

(c) the findings at Fowler's Gap that mixed species stocking is more productive and ecologically sound (NP 4 p.67);

(d) the potential loss of species at the edge of their ranges;

(e) the evidence that kangaroos are an integral part of the Australian ecosystem over the last 1 million years.

Prerequisite: Provision for mitigation, monitoring and response *etc*?

142 The failures to include specific and relevant management controls as required by par. 303FO (3) (c) of the EPBC Act directly impacts on the satisfaction by the Plan of the prerequisites contained in par. (e).

143 Without the requisite management controls it is not possible to either mitigate those impacts (the known impacts) or to response to changes in circumstances (the potential impacts).

144 A significant but not predicted mortality event (*e.g.*, drought) could combine with a maximum kill under the 15% quota to reduce a population by 78%. This has previously led to a cessation of killing yet there is no relevant trigger contained in the Plan. Ms. Payne could only point to reduced carcass weight as a potential trigger, but even that did not require suspension at any level.

Prerequisite: Is there likely to be compliance with applicable regulations?

145 Paragraph 303FO (3) (f) in effect provides that the decision under review must be set aside unless the Tribunal is satisfied that any conditions contained in applicable regulations 'are likely to be complied with'.

146 The *Environment Protection and Biodiversity Conservation Regulations 2000* ('the EPBC Regulations') have been made under the EPBC Act. Regulation 9A.05 thereof is applicable: it 'sets out conditions for', *inter alia*, par. 303FO (3) (f) of the EPBC Act.[137] Subregulation 9A.05 (4) provides:

> For paragraphs 303FN (3) (c) and 303FO (3) (f) of the Act, the conditions are as follows:
>
> (a) the animal is taken, transported and held in a way that is known to result in minimal stress and risk of injury to the animal;
>
> (b) if the animal is killed, it is done in a way that is generally accepted to minimise pain and suffering.

(For the purposes of Pt 13A of the EPBC Act, the term 'take' is defined to include 'in relation to an animal—harvest, catch, capture or kill'.[138])

147 Paragraphs (a) and (b) of the subregulation are cumulative in their operation. Paragraph (a) prescribes a rule that applies to all forms of taking of animals (*i.e.*, to harvesting, catching, capturing and killing). Paragraph (b) adds an extra rule when the taking in question is killing. Both paragraphs must be heeded.

The proper construction of subreg. 9A (4)

148 As with the EPBC Act (or any legislation), the EPBC Regulations are to be interpreted in accordance with applicable rules, maxims and principles. Their words are to be read in context and in the light of their purpose. Regulation 9A.05 is directed at preventing cruelty to animals and other derogations from animals' welfare and should be interpreted in the light of that purpose.

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[137] *Environment Protection and Biodiversity Conservation Regulations 2000*, par. 9A.05 (1) (e).

[138] Environment Protection and Biodiversity Conservation Act 1999 (Cth), s. 303BC.

149 In combination, par. 303FO (3) (f) of the EPBC Act and par. 9A.05 (4) (a) of the EPBC Regulations require the Tribunal to be satisfied that it is 'likely' that the taking of each kangaroo will be done 'in a way that is known to result in minimal stress and risk of injury to the animal' (else the Plan must not be approved).

150 The law is well familiar with the terms 'believe' (a high state of satisfaction that some fact exists) and 'suspicion' (a lower such state of satisfaction). The less used term 'known' refers to a state of satisfaction that is significantly higher than mere belief. Moreover, the provision is framed in objective terms rather than referring merely to the state of satisfaction of the Minister (or now the Tribunal). A known fact is an indisputable one. On its correction construction, par. 9A.05 (4) (a) requires any taking of animals to be done only in a way that is *known* to minimize stress and the risk of injury. The legislation requires that the matter be beyond reasonable dispute.[139]

151 Paragraph 9A.05 (4) (b), in using the term 'generally accepted', refers to a less certain level of satisfaction than 'known', but it is still a state of satisfaction higher than mere 'belief' or 'suspicion' and the provision is still expressed in objective terms. To satisfy par. (b), the respondent and joined party must not merely persuade the Tribunal on the balance of probabilities that that the modes of killing endorsed by the Plan will minimise pain and suffering: they must satisfy the Tribunal that those modes are 'generally accepted' to minimise pain and suffering—*i.e.*, so accepted by the community, or at least by that part of the community that is constituted by experts on animal pain and suffering (being experts on biology rather than, say, hunting). For the purposes of this provision,

[139] Of course, any fact or proposition, however well known and proved, will attract some who dispute it. On its proper construction, par. 9A.05 (4) (a) only requires the matter to be beyond *reasonable* dispute.

the Tribunal should not consider itself to be the community or a relevant part of the community: its role is to inquire by taking evidence.

152 The term 'generally accepted' also denotes a consensus opinion, not merely a majority opinion. The analogy with the law of professional misconduct and unsatisfactory professional conduct is instructive: a professional practitioner (*e.g.*, a medical practitioner) will not be liable to being disciplined merely for practising in a manner that is not the preferred method of the majority of practitioners; but it is not acceptable for practitioners to act ways that are neither endorsed by the majority nor endorsed by a respectable minority of professional opinion.[140] In other words, to establish unsatisfactory professional conduct or professional misconduct it is necessary to establish that some activity was generally unacceptable in the relevant profession, not merely unacceptable to the majority, leaving a respectable minority endorsing the activity. Likewise, a method of killing will only comply with par. 9A.05 (4) (b) if it is supported by a consensus from which there is no respectable dissent.

153 Paragraph 9A.05 (4) (a) speaks of '*minimal* stress and risk of injury to the animal' (emphasis added) and par. 9A.05 (4) (b) uses the term '*minimise* pain and suffering' (emphasis added). Although protean, these are (or almost are) superlative terms. Although they are not so stringent as the term 'eliminate', they are more stringent than merely requiring a 'lesser', 'lower', 'low' or 'reduced' level of stress, injury risk, pain and suffering. Nevertheless, 'minimal' and 'minimise' are terms capable of some range of meaning. That range includes construing the subregulation such that it:

- prohibits all suffering *etc* except that which is minimal in the sense understood by the *de minimis* rule;

[140] See *Qidwai v. Brown* [1984] 1 NSWLR 100 and *Pillai v. Messiter* (No. 2) 16 NSWLR 197.

- prohibits all suffering *etc* except that which is minimal in the sense of insignificant, being both minor and transitory;
- prohibits all suffering *etc* except that which cannot be avoided by presently available technology and techniques.

The first of these three possibilities is the most literal and also the most consonant with the purposive approach to construction, and it is the one urged by the applicants, but these submissions cover all three. On any construction the Plan does not satisfy subreg. 9A.05 (4). It should be noted, however, that the third of the three mentioned possible constructions could not be given unlimited application. In a case where there was no technology available to prevent significant suffering occurring as a result of some activity, the subregulation would operate to disallow that activity.

154 In short, subreg. 9A.05 (4) is doubly stringent. It sets a high threshold with respect to the suffering in question ('minimal' and 'minimise') and it demands a high level of satisfaction ('known' and 'generally accepted').

Is it likely that the subregulation will be 'complied with'?—Introduction

155 Subregulation 9A.05 (4) calls for a predictive exercise. In this case, that exercise involves several considerations, including:.

- Are the standards prescribed (in the Code and the Plan) for the 'humane' treatment of kangaroos ('the welfare standards') sufficiently stringent to satisfy the requirements of the subregulation?
- Do the means described in the Plan for ensuring compliance include measures that, if followed, might make it likely that the welfare standards will be enforced and, for example, breaches will be detected?

- Does the evidence establish that sufficient resources have been, or are likely to be, allocated to execute the Plan?
- Given that the Plan has been operational for a year and a quarter, does the evidence establish that the Plan is being executed appropriately according to its own terms?
- Does the evidence establish that the Plan and its execution (to the extent that it is being executed) are securing compliance with the policy of the subregulation (this being relevant to the predictive exercise about future compliance)?

156 An examination of the Plan's terms indicates that it was never likely that the Plan would achieve or ensure compliance with the conditions imposed by subreg. 9A.05 (4). The standards it sets, via adoption of the code, are too low and the strategies it has for ensuring compliance with even those low standards are inadequate. After a year and a quarter of the Plan's operation, and after five years of the 2002 Program's operation, the evidence establishes that compliance with subreg. 9A.05 (4) has not been achieved. As compliance has not been achieved so far, and as, because of its terms, it is inherently unlikely that the Plan will ever secure compliance, the Tribunal should find that it is unlikely that there will in future be compliance with the subregulation. Such a finding entails a finding that the precondition prescribed by par. 303FO (3) (f) is not satisfied and the Plan must not be approved. (Strictly speaking, the onus is on the respondent and joined party to demonstrate that there will be compliance with the subregulation and the Plan must not be approved if the Tribunal is not so persuaded.)

157 Relevantly to subreg. 9A.05 (4) of the EPBC Regulations and par. 303FO (3) (g) of the EPBC Act, the Plan contains requirements for the humane treatment of kangaroos and strategies directed at ensuring compliance with those requirements. Both the requirements imposed by the Plan (including the Code) and the strategies

contained in the Plan for securing compliance with those requirements must be adequate for subreg. 9A.05 (4), and therefore par. 303FO (3) (f), to be satisfied.

158 Of the operative provisions of the Plan, which are contained in Part 5 of the Plan, the most obviously relevant are those discussed under 'Aim 2: Ensure Humane treatment of kangaroos', but Aims 1 and 3 are important because they relate to securing compliance. Within in Aim 2, Action 4 deals with compliance and is conveniently discussed along with Aims 1 and 3.

Aim 2 (Ensure humane treatment of kangaroos) and the Code

159 This (entirely laudable) Aim is pursued through adoption of the Code and three Actions, each of which Actions is appropriate so far as it goes. However, even in combination, the measures in the Plan are inadequate to achieve Aim 2.

The Code

160 The introductory remarks about Aim 2 say that 'compliance with th[e] Code is required of the commercial kangaroo industry.'[141] The Plan proceeds on the assumption that the shooting of kangaroos in accordance with the Code will be humane. The respondent and joined party have the onus in these proceedings of proving that that assumption is correct. For the reasons given above and below in the discussion of the Code, the assumption should not be accepted by the Tribunal.

161 The Code says that '[w]hen shooting a kangaroo the primary objective must be to achieve instantaneous loss of consciousness and rapid death without regaining consciousness.' The basic method prescribed for achieving this is the

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[141] Plan, p. 30.

use of a centrefire rifle to execute a clear shot into the brain when the kangaroo is clearly visible and stationary.[142] Prof. Clive Phillips has testified that from his review of the literature, and in particular studies of despatching cattle, deer and humans, he has inferred that the most humane method of despatching a kangaroo is a gunshot to the brain. From these sources it is inferred that shooting a kangaroo in the brain will cause almost instantaneous loss of consciousness followed quickly by death. Prof. Phillips testified that he did not *know* that these inferences were correct but would be surprised if they were not.

162 The applicant accepts that the evidence does establish that shooting a kangaroo directly in the brain using a centrefire rifle is probably the most humane method of killing the kangaroo in that it will cause the least pain, suffering and stress that can be achieved by the methods mentioned in evidence (although it is to be noted that subreg. 9A.05 (4) of the EPBC Regulations requires not just satisfaction of that fact but a finding that such a fact is known [par. (a)] and generally accepted [par. (b)]).

163 Subregulation 9A.05 (4) also, however, requires a minimization of risk of injury. This is express in par. (a), which requires animals to be taken in a way known to result in minimal 'risk of injury' and it is implicit in par. (b)'s requirement that killing be undertaken in a way that is generally accepted to minimize pain and suffering. With every shot fired at a kangaroo with the intent of striking the animal's brain, there is a risk that the bullet will miss the brain and injure the kangaroo. Shots that hit kangaroos anywhere other than the brain will cause significant pain and suffering; indeed, according to Prof. Phillips shooting and wounding a kangaroo before proceeding to kill it will tend to maximize suffering.

[142] Code, p. 2.

164 Of shots that hit the kangaroo, but not the brain, some will strike the kangaroo in the head without causing instant loss of consciousness, some will strike the neck and others will strike other parts of the body. There is no evidence that quantifies the prevalence of such shots. The absence of evidence about shots that hit the head but not the brain is in part explained by the practice of removing heads in the field. It is open to the Tribunal to infer—and the applicant urges that the Tribunal should infer—that the neckless kangaroos that were seen by the applicant's lay witnesses in chillers (or at least some of them) were shot in the neck contrary to the Code. Although reasons for removing as little of the neck as possible have been advanced in evidence (namely, it is easier to sever at the top of the neck, and trappers are paid by the kilogram), no evidence has been adduced of any explanation for the removal of the neck, not even from Mr Snook, who regularly speaks with people in the industry to keep a grasp on its practices and who is the person most directly responsible for enforcement of the requirements of the Plan and Code.

165 Because of the real risk of significant injury arising from imperfect marksmanship, it is clear that the respondent and joined party cannot establish that the procedure of shooting kangaroos in the brain with a centrefire rifle will minimize pain, suffering, risk of injury or stress if the term minimize is taken to mean eliminating all but that which is minimal or insignificant.

166 If 'minimise' and 'minimal' in subreg. 9A.05 (4) are taken to involve a comparison of all available methods, however, then the matter requires careful judgement. Risk is a combination of the likelihood of an adverse event or consequence and the severity of that consequence. A low likelihood of extreme pain and suffering may constitute a greater risk to an animal's welfare than a moderate risk of minor pain and suffering. It is difficult to compare, for the

purposes of subreg. 9A.05 (4), the relative magnitudes of risk of injury posed by a strategy of aiming for the brain (but occasionally causing very bad injury to the body) and by a strategy of aiming a tranquilizer at the body (which might sometimes cause an injury, say one arising from sudden flight of the kangaroo[143]). However, it can be said that the correct comparison of methods takes account of the fact that any method will sometimes be executed unsuccessfully, causing unintended results. It is invalid to compare direct shots to the brain on the assumption that such shooting will always hit its target, with tranquilizer darting or any other method. The whole of each method, including the risk and actuality of error, must be considered. The evidence does not establish that sufficient research has been conducted into the comparative risks of different methods of taking kangaroos and does not allow the Tribunal to conclude that the method endorsed by the Code is the most appropriate. The use of tranquilizer guns, for example, has not been shown to be worse, overall, than the Code's preferred procedure.

167 Prof. Phillips' evidence makes it clear that considerations of the welfare of a kangaroo that is being killed cannot be confined to the immediate infliction of death. The context must be considered. Therefore, he opined on the basis of a literature review, killing a deer by a shot to the brain while the deer is in its ordinary habitat is less stressful for the animal and more humane than using the same method of killing after herding the animal into an enclosure. Such an approach appropriately reflects the proper application of the legislation and subreg. 9A.05 (4) in particular.

168 Kangaroos killed pursuant to the Plan are being, and will continue to be if the Plan is approved, killed at night using a procedure that involves suddenly

[143] See Prof. Phillips, page 53.

shining a spotlight on the animal and then, in some cases, shooting several animals in a group in short succession. There has been no study of the impact upon a kanagaroo of being subjected to a spotlight or the sound of several shots in its vicinity or of its seeing other animals killed. Prof. Phillips agreed that no assumptions should be made about what impact such things might have on a kangaroo, but there is clearly a possibility that the gunshots and bright lights (and even witnessing the deaths) might frighten a mammal. From the lack of research it follows that the primary method of killing kangaroos pursuant to the Code has not been shown to minimize stress, risk of injury, pain or suffering, even if that method is executed without error.

169 Although the Code is a code for 'Shooting' kangaroos, it also recommends or prescribes other methods of killing kangaroos, in particular bludgeoning and decapitation. It is not clear that the firearms expertise that might be thought to have been an input into the formulation of the Code was matched by any equivalent expertise on bludgeoning or decapitation and their effects.

170 The Code condones the killing of wounded adult kangaroos by shooting them in the heart or using 'a [*sic*] heavy blow to the skull to destroy the brain'. The former of these methods is justified as being the most humane on the ground that the circumstances may prevent the targeting of the brain. Although it may be accepted that a *chest* shot is obviously easier to execute successfully than a brain shot, there is no evidence that a *heart* shot is significantly easier to execute successfully than a brain shot. Dr Hopwood testified that the risks of inhumanity associated with heart shots and attempted heart shots were significantly higher than those associated with a brain shot. The Code's first recommendation for the dispatch of a wounded adult kangaroo is effectively a recommendation for a chest shot. This plainly risks causing pain and suffering. The pain and suffering may be less if the heart is actually hit (although it will still be more pain and suffering than

a brain shot), but there is a significant risk of serious harm if the chest is hit but the heart is missed. It must also be a factor that killing a wounded kangaroo with a shot to the heart will result in a carcass that cannot be sold.

171 More objectionably, the Code also condones the killing of wounded kangaroos by beating (or bludgeoning) their heads with solid objects. The circumstances in which it is appropriate to do this rather than execute a head or chest shot are not clear. During his evidence, Dr Hopwood said that he had difficulty thinking of a circumstance in which it would be possible to beat a kangaroo to death but not shoot it. He did, however, eventually think of the situation in which a wounded kangaroo falls to the ground right on the skyline: if this occurred on the very top of a hill then it may not be possible to find any angle from which to shoot without the risk of a missed shot travelling impermissibly into the background. The likely rarity of this circumstance must be balanced against other factors, including the addition of extra provisions to the Plan (*e.g.*, a prohibition on shooting in areas where the problem might arise, and providing for the use of handguns) and the danger that the procedure could be abused (*e.g.*, including in the Code and Plan permission to beat kangaroos to death in circumstances that fall within the discretion of the shooter opens the possibility that kangaroos that have been shot in the lower leg may be beaten to death in order to preserve the shooter's ability to sell the carcass, which would be lost if the kangaroo were despatched by a bullet to the chest). In any event, the Code does not specify the 'skyline problem' as a circumstance warranting bludgeoning; the Code gives insufficient guidance, let alone prescription, on when bludgeoning is appropriate.

172 Perhaps more importantly, the method of bludgeoning kangaroos to death does not comply with the requirements of subreg. 9A.05 (4). Whilst there is evidence that a sufficiently large and swift blow to the head will, in any animal,

kill the animal quickly, there is no evidence on what degree of force needs to be applied to an adult kangaroo's head, and how quickly, in order to achieve a humane death, and no evidence on the capacity of people to apply such force. The Tribunal could not find that the method meets the standard prescribed by the legislation.

173 Perhaps the most concerning matter in the Code is its recommendations for killing young kangaroos whose mothers have been killed. The Code's statement on what is to be done is:

> Shot females must be examined for pouch young and if one is present it must also be killed. Decapitation with a sharp instrument in very small hairless young or a properly executed heavy blow to destroy the brain in larger young are effective means of causing sudden and painless death.
>
> Larger young can also be dispatched humanely by a shot to the brain, where this can be delivered accurately and in safety.

174 This statement makes the killing of the young mandatory, but it does not make the use of the methods described mandatory. The Code expresses the opinion that those methods are 'effective' but it will not be a breach of the Code to use another method. Perhaps more important in practical terms is the fact that there is a gap between 'very small hairless young' and 'larger young'. What is to be done with, say, larger hairless young is not specified. Perhaps most importantly is the absence of definition for 'sharp' (with reference to the tool of decapitation) and 'properly', 'heavy' and 'blow' (in the phrase 'properly executed heavy blow').

175 The evidence establishes that decapitation is an unacceptable method of despatch. In terms of the legislative requirements, the evidence fails to establish that decapitation 'is known to result in minimal stress and risk of injury' or that it 'is generally accepted to minimise pain and suffering'.

176 The Royal Society for the Prevention of Cruelty to Animal's *Kangaroo Shooting Code compliance: A Survey of the Extent of Compliance with the Requirements of the Code of Practice for the Humane Shooting of Kangaroos* (2002)[144] ('the 2002 RSPCA Report') discussed decapitation at [5.2.1.1] in these terms:

> The use of decapitation as a euthanasia technique has been the subject of much debate. In 1986 the American Veterinary Medical Association (AVMA) issued a recommendation that decapitation should only be used after the animal has been sedated or lightly anesthetised as there was evidence that animals remained conscious for several seconds after the spinal cord has been severed. Following on from this, in 1993 an ANZCCART review of the euthanasia of animals used for scientific purposes concluded that there was very little support for decapitation as a method of euthanasia. The review recommended that decapitation be preceded by anaesthesia or stunning. A separate review by Blackmore, also in 1993, concluded that decapitation is not an acceptable form of euthanasia. However, in its 2000 report on euthanasia. The AVMA concluded that recent studies suggest that there is rapid loss of consciousness following decapitation and the recommendation for prior sedation was removed. The report does, however, make the point that the issue is still open to debate. Current advice from some institutional animal ethics committees is that decapitation must immediately be followed by a crushing of the brain to ensure unconsciousness.

177 Professor Phillips was called by the respondent to address welfare issues. His report advised:

> Decapitation results in brain wave patterns in laboratory rodents that probably indicate with some experience of pain for a mean of 13–14 sec, and up to 30 sec in some individuals, followed by loss of consciousness.

There have been no studies of kangaroos' experiences when being decapitated. However, it may be noted that Prof. Phillips agreed that marsupial pouch young in some respects develop more quickly than eutherian (placental) animals.

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[144] Reproduced in Ex. 9 as Annexure 3 to Exhibit DC–2 therein.

178 Professor Phillips declined to endorse decapitation as humane. Indeed there is no evidence that the Tribunal would accept to justify a conclusion that decapitation satisfies the requirement of subreg 9A.05 (4).

179 Professor Phillips' evidence also establishes that the Code's suggestion for a 'properly executed heavy blow' to the head (whatever that might mean) is not comparable to, say, the use of a pneumatic stunner as used to despatch cattle. The latter is a calibrated mechanical device that can consistently deliver a blow predetermined in advance. The heavy blow mentioned in the Code will vary from person and is not calibrated in advance by reference to the anatomy of the animal.

180 The 2002 RSPCA Report discussed bludgeoning in these terms at [5.2.1.2]:

> In general, the use of a heavy blow to the head is not considered a humane method of euthanasia for most species, in fact most reviews of euthanasia consulted in the preparation of this report did not list this as a method (even though other techniques considered unacceptable were listed and discussed). The 2000 AMVA report states that this technique must be evaluated in terms of the anatomy of the species concerned. For example, a blow to the head may be humane (if applied correctly) for neonatal pigs since these animals have a thin cranium, but the anatomical features of other species are likely to prevent immediate destruction of the brain using this method. The report states that the technique should only be used by people with proper training and that they should be monitored for their proficiency.

Professor Phillips did not know what the thickness of a joey's cranium was.

181 In addition to the problem of the Codes' prescribing inhumane methods of killing young kangaroos, there is the problem that an incident of the killing is that some young kangaroos will escape into the bush after their mothers have been killed, their perhaps to be taken by predators or starved.

182 Importantly, the Plan and Code contain no provisions to try to avoid the incidental suffering of joeys. The Plan does not have rule that the minimum weight of kangaroos that may be killed must be such that most female kangaroos will not be taken, let alone a rule proscribing the taking of females. The evidence indicates that males and females can be distinguished, that shooters can make reasonable estimates of the weights of kangaroos and that female kangaroos are smaller than male ones (and have less developed arms).

183 Professor Phillips also acknowledged that there had not been studies of the effects on kangaroos of various methods of killings. He said that it should not be assumed that kangaroos would suffer in the same way as people might when subjected to the same treatment. But he then conceded that it could not be assumed that kangaroos would suffer (or not suffer) in the same ways that other species might (or might not). The onus in the proceedings, however, is on the respondent and joined party.

184 Neither the respondent nor the joined party have adduced evidence to show that it is easy for a person to kill a young kangaroo instantly in the ways mentioned in the Code. The evidence establishes that decapitation cannot be done without pain and suffering, and the Tribunal would need firm evidence that such pain and suffering is only minimal or insignificant: no evidence on this point has been adduced. In respect of a massive blow to the head, there is evidence that, if accepted, could entitle the Tribunal to find that such a method is relevantly effective *if* the force is quick and big enough. There is no evidence, however, to establish what the level of force must be or that human beings (especially ones with any compassion and therefore inhibition) are regularly—indeed, invariably—capable of applying the needed force.

185 Given that the methods prescribed are lawful and said by the respondent and joined party to appropriate and in use, there is no reason why they should not have adduced to the Tribunal film of the Code's practices being implemented—successfully, with a sufficient degree of ease to give confidence in a general level of success, and humanely. They have not done so and a significant inference is available: see *Jones v. Dunkel*.[145]

186 The Plan does not in any material way elevate the standards of the Code. Therefore, if the Code itself prescribes methods of despatching kangaroos that do not satisfy—and are not proved to satisfy—the legislative tests set in subreg. 9A.05 (4) then the Plan does not satisfy the conditions prescribed in that subregulation and the Plan fails the criterion set by pars. 303FO (3) (f). If the respondent and joined party do not discharge their onus on this point then the applicant is entitled to succeed in these proceedings.

Action 3: Working to ensure the competence of shooters

187 Of course, the Plan and Code, even if satisfactory in theory (which is not conceded by the applicant) can only be as good as their execution by the trappers who shoot the kangaroos. The first Action under Aim 2 is Action 3, which seeks to address this issue. Action 3 calls for the NSW Department to work with NSW Firearms Safety and Training Council Ltd to ensure that all trappers are competent to achieve the standards set out in the Code. This is to be achieved by requiring trappers to complete an accreditation program and a shooting test and a written test.

[145] (1959) 101 CLR 298.

188 The shooting test is conducted in conditions that do not emulate the conditions that are applicable in the field when kangaroos are being hunted. Dr Hopwood explained that the reasons for this were human safety, availability of facilities and convenience.

189 The Tribunal has received no, or insufficient, evidence about the quality of the training course, both in theory and in implementation. Whether or not it has been accredited, e.g., under the *Vocational Education and Training Accreditation Act 1990* (NSW) is not revealed,

Action 5: Facilitating research

190 Action 5 would 'facilitate' research (although not actually ensure that it occurs). The evidence does not reveal that any such research has yet occurred. This is an Action that might, if implemented, be useful in the long term, but it is at best likely to be of peripheral value during the currency of this plan.

Conclusions regarding Aim 2

191 Aim 2 will not be achieved because (i) the Code, upon which the Plan relies, does not require procedures that (even if followed) adequately ensure that kangaroos will be treated humanely pursuant to the Plan, and (ii) there is, as discussed below, no appropriate policing of the Code or Plan.

Compliance measures

192 Aim 1 is entitled 'Manage commercial operators via licensing' and Aim 3 is entitled 'Monitor industry compliance'. The title of Action 4 includes 'DEC

staff will monitor compliance with the Code . . . by commercial kangaroo industry operators'.

Aim 1: 'Manage commercial operators via licensing'

193 Perhaps the most significant safeguard contained in (or at least mentioned in) the Plan is the statutory scheme of licensing and tagging. The scheme provides that kangaroos may only be killed pursuant to the Plan if two licences are in place:

- an occupier's licence issued pursuant to s. 121 of the NPW Act, and
- a trapper's licence issued pursuant to s. 123 of the NPW Act.

194 The scheme provides that when an occupier's licence is issued it is issued only for the killing of a specified number of kangaroos and only for those kangaroos to be killed on specified land (being the land occupied by the licensee). At the time the licence issues, several tags are also issued—in the number allowed by the licence—and each tag is annotated to make it referable to the particular licence and landholding. The number of kills thus licensed, and the corresponding number of tags issued, is limited by the quota set for the KMZ in question. It is in this way that the licensing system is used to implement the quotas prescribed pursuant to the Plan. An occupier's license does not allow for the killing of kangaroo except by a person holding a trapper's licence, and the particular trapper must be nominated on the occupier's licence. The occupier is responsible—by way of a condition of the occupier's licence—for ensuring that any trapper he or she retains does not harm more than the permitted number of kangaroos (there are other conditions as well).

195 The trapper's licence is issued to the marksman or woman who does the killing. It does not allow the killing of any kangaroo: that is a function of the occupier's licence. The conditions attached to trappers' licences include:

- All kangaroos must be shot in accordance with the Code.
- The trapper must not possess or offer for sale any kangaroo carcase containing a bullet wound in the body.
- The trapper must 'immediately' tag each kangaroo with a tag referable to the applicable occupier's licence.
- The trapper must provide monthly returns of information to the NSW Department.
- The trapper must only sell whole carcases with the skins attached.

196 Reference should also be made to the fauna dealers' licences and the skin dealers' licences that can issue pursuant to the NPW Act.

197 The Plan provides for the achievement of Aim 1 through two Actions:

- '[a]ll relevant activies are licensed in accordance with the applicable New south Wales legislation and DEC policy'; and
- [l]icence conditions are effective and reflect current New South Wales legislation, DEC policy and the . . . Plan.'

These Actions have corresponding Performance Indicators.

198 The Actions and Performances Indicators for Aim 1 are entirely directed at ensuring that the staff of the NSW Department issue licences appropriately and otherwise manage the licensing scheme appropriately. They are in no way directed at ensuring that licensees comply with the law or their licence conditions.

Whilst there are audits of the NSW Department's offices and officers, there is no audit of licensees. Whilst there are to be reviews of the appropriateness of licence conditions, there are no reviews of compliance with those conditions.

199 Although subsequent Aims, and their subordinate Actions, provide for some limited monitoring of licensees, there are very significant failings in the enforcement regime.

200 Although Aim 1 is 'Manage commercial operators via licensing', the measures prescribed by the Plan to achieve the Aim are not directed at the management of operators: they are directed at the management of the staff of the NSW Department. The general integrity and competence of those staff is not the issue. The issue is whether or not trappers and occupiers will meet the requirements imposed on them.

201 It has never been thought that a scheme for issuing motor vehicle drivers' licences would, at least without more, ensure drivers' compliance with the road rules. As was pointed out by Mr Snook, whose policing experience extends over 30 years and several agencies, policing is required. Yet, the Plan relies very heavily on the system of issuing licences and makes almost no provision for the policing and enforcement of the licence conditions or the law.

202 Examples of matters that the system prescribed by the Plan fails to address are:

- There is nothing to ensure that trappers will comply with the Code, and in particular requirements such as the requirement that kangaroos be killed by a shot to the brain and the requirement that shooting operations be suspended

whenever a kangaroo is wounded but not killed, so that a *coup de grace* may immediately be administered.

- There is nothing to ensure that trappers will comply with the requirement that they immediately tag each shot kangaroo.
- There is nothing to ensure that the number of kangaroos killed will be limited to the number allowed by the licence and number of tags issued.

These examples interrelate. Given that a particular occupier and trapper are only permitted to kill a strictly licensed number of kangaroos, given that they may not lawfully sell a carcase with a bullet wound, given that they must tag every kangaroo killed (except that there is no policing of this requirement), and given that the tagging of a carcase with a bullet hole would both waste a tag (because the carcase could not lawfully be sold) and provide evidence of a shooting in breach of the Code—why would any trapper tag a kangaroo that did not die by way of a (first) brain-shot? The scheme contains considerable incentives to abandon, to rot in the field, any kangaroo that was first wounded in the body rather than shot in accordance with the standard procedures contained in the Code and thereby adopted by the Plan. Alternatively, such a kangaroo might not be tagged and might be sold illegally.

203 Nowhere in the Plan is provision made for effective policing 'in the field'. Compliance with the Code's requirements on how to kill kangaroos cannot be effectively monitored or achieved without some surveillance of actual shooting operations. It is not necessary to decide in this case how sophisticated or covert such operations need to be because Mr Snook testified that there is no such surveillance at all. He and his colleagues do not attend shootings at night. They are left to infer what happens from inspections of carcasses in chillers. This is no criticism of Mr Snook and his colleagues: the three of them have to cover the entire area of the Plan, and such operations as are necessary are not prescribed by

the Plan—even though the killing may result from a failed attempt to execute the Plan.

204 The Plan also makes no provision for the eradication of any black market in kangaroo skins or meat. Plainly, if a kangaroo is shot in a manner contrary to the Code, there is not only an incentive not to tag that animal but also the possibility that the animal's meat or skin or both will be harvested and sold privately outside the regulated market for kangaroo produce. It is not here suggested that there is an organized or sophisticated black market, but the opportunities for private selling of individual kangaroos killed in an inhumane way (albeit accidentally) are significant and unaddressed in the Plan.

205 The measures prescribed in the Plan to achieve Aim 1 must be considered inadequate.

Action 4 (within Aim 2)

206 The description in the Plan of what Action 4 entails indicates that this Action also does not amount to effective policing of the Code, the Plan or the law. The Action proposes 'opportunistic inspections of kangaroos taken by licensed trappers and all premises registered by licensed fauna dealers'.[146] It does not propose any observations of *how* kangaroos are 'taken'. The Action refers to the inspection of dead kangaroos, presumably with a view to checking, so far as such inspections allow, that they were shot in accordance with the Code—but this will only work if and when trappers decide to affix one of the valuable tags to the kangaroo and put the kangaroo in a place where it will be inspected (*e.g.*, by

[146] Plan, p. 30.

putting it in a registered chiller). Again, there will be no policing of what occurs in the field.

Aim 3: Monitoring industry compliance

207 The first Action ('Action 6') prescribed for achieving this Aim is 'DEC staff will undertake both regular and opportunistic monitoring of compliance by commercial *kangaroo* operators.' It appears to be the same regime of inspection as mentioned in Action 4, and it is inadequate for the same reasons—especially the failure to provide for any policing of actual shooting operations. The DEC's resources will not allow for any rectification of this problem. The second Action (Action 7)—prosecution—is dependent on the success of the first action, and is really a development of it rather than being an independent measure for the protection of animals.

208 The remarks subscribed to the Performance Indicators only serve to confirm the omission of in-the-field policing. The most useful measure in the Plan—inspection of trappers' vehicles—goes some way towards investigation of what is occurring the field. However, it will not ensure the humane treatment of kangaroos before they are put into the vehicles. Furthermore, Mr Snook's evidence indicates that the occurrences of opportunistic inspection of trappers' vehicles will not be common. They are confined to those occasions when trappers arrive later than average at a chiller that just happens to be being inspected early in the day by a compliance officer (and there are three full time such officers [counting Mr Snook] and 200 registered chillers across NSW).

209 Actions 8 and 9 provide for the analysis of 'industry returns' and the maintenance of a computer database. The analysis is based on the returns themselves rather than any checking of them by reference to external information.

There is nothing in the Plan or the evidence that would indicate that these measures (appropriate as they may be) are sufficient to deal with the problem that there is no policing of how animals are actually treated before being loaded onto trappers' vehicles.

210 Finally, it may be noted that the Plan has a policy of 'zero tolerance' with respect to offences that are detected.[147] Leaving aside the point that such policies are contrary to the general law's requirement that government officials invested with power must exercise discretion, the evidence of Mr Snook makes it clear that this part of the Plan is not being followed, nor is likely to be followed. Mr Snook testifies that '[v]erbal cautions, written warnings or infringement notices are issued . . . having regard to DECC procedure, the prior record of the offender, and relevant subjective factors in the matter'.[148]

211

Conclusions regarding enforcement of compliance

212 The compliance measures advanced by the Plan are primarily directed at maintaining the quality of the work of the NSW Department as a licensing agency and ensuring that that Department's officers comply with their duties. They are not directed at ensuring compliance with the Code by shooters, which is the most pressing issue. The Tribunal would not be satisfied that the Plan provided adequately for ensuring compliance by shooters with such standards as it sets.

Summary of conclusions regarding the prerequisites

213 On the evidence, the operation of the Plan:

[147] Plan. P. 31 (Action 4).

[148] A. Snook, affidavit, par. 21.

(a) will result in Australia contravening its obligations under the Biodiversity Convention, namely, the conservation of biological diversity and the sustainable use of its components;[149]

(b) will not promote the conservation of biodiversity in Australia;

(c) will not ensure that the commercial harvesting of kangaroos for the purpose of export is managed in an ecologically sustainable way;

(d) will not promote the humane treatment of wildlife; and

(e) does not correctly take the precautionary principle into account in making decisions relating to the utilisation of wildlife.

214 By reason of the matters listed above, the Tribunal cannot be satisfied that the Plan is consistent with objects of Part 13A of the EPBC Act.[150]

215 There is not only a *prima facie* case, but also a very powerful case, for concluding that the following prerequisites prescribed by subs. 303FO (3) have not been met by the Plan:

(a) assessment of the impact of the activities of the plan;

(b) management controls;

(c) requirement that the Plan not be detrimental to the conservation status of the taxon or any relevant ecosystem;

(d) lack of measures to mitigate, monitor and respond to the impact of the activities; and

(e) the Plan does not promote the welfare of kangaroos.

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[149] In *Re Humane Society International and Minister for Environment and Heritage* [2006] AATA 298 the AAT stated that 'the enactment of Part 13A of the EPBC Act in 2001 appears to be a direct response to Australia's obligations under the [Biodiversity] Convention.'

[150] See s.303FO(3)(a) EPBC Act.

Humane treatment of kangaroos

216 The difficulty in achieving compliance with the Code results in the unacceptable and inhumane treatment of an unacceptably high number of kangaroos who are body shot and as a result the inhumane treatment of kangaroos.

217 The Tribunal cannot be satisfied that the methods under the Code for killing in-pouch joeys are humane or the most humane available methods.

218 The Code results in the unacceptable and inhumane treatment of young-at-foot joeys who are orphaned and abandoned when their mothers are killed in accordance with the Plan.

219 On the evidence, the Tribunal cannot be satisfied that the Code will ensure that kangaroos will be killed in a way that is generally accepted to minimise pain and suffering.[151]

220 Furthermore, the Tribunal cannot be satisfied that the Code will be complied with.[152]

Assessment of Environmental Impacts

221 On the evidence, and applying the precautionary principle and the principles of ecologically sustainable development, the Tribunal cannot be satisfied that there has been a sufficient assessment of the environmental impacts,

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[151] See Regulation 9A.05(b) EPBC Regulations 1999 (Cth).

[152] See Regulation 9A.05 EPBC Regulations 1999 (Cth).

including the impacts on joeys and young at foot, having regard to the status of the species, their habitat and the threats to the species.[153]

Management Controls

222 On the evidence, and applying the precautionary principle and the principles of ecologically sustainable development, the Tribunal cannot be satisfied that the management controls in the Plan will ensure that the commercial harvesting of kangaroos is ecologically sustainable.[154]

The Survival and Conservation Status and the Relevant Ecosystem of the Species

223 On the evidence, and applying the precautionary principle and the principles of ecologically sustainable development, the Tribunal cannot be satisfied that the commercial harvesting of kangaroos under the Plan will not have a detrimental effect on either the conservation status especially at the margins of the range of habitat or the relevant ecosystem of the species of kangaroos targeted under the Plan. [155]

Mitigation Measures

224 On the evidence, and applying the precautionary principle and the principles of ecologically sustainable development, the Tribunal cannot be satisfied that the Plan includes sufficient measures to mitigate and/or minimise the environmental impact of commercial harvesting of kangaroos under the Plan, or

[153] Section 303FO(3)(b) EPBC Act.
[154] Section 303FO(3)(c) EPBC Act.
[155] See s.303FO(3)(d) EPBC Act.

respond to changes in the environmental impact of commercial harvesting of kangaroos.[156]

225 As it is necessary for the NSW Minister to persuade the Commonwealth Minister—and now necessary for the two respondents to persuade the Tribunal—that every prerequisite has been met else the Plan 'must not' be approved, a finding adverse the to respondent and joined party on even one prerequisite disposes of these proceedings in favour the applicant—and it is to be noted that the respondents have the onus of persuading the Tribunal.

226 It follows that these proceedings should be resolved in favour of the applicant.

227 That could be done in either of two ways. First: the decision under review could simply be set aside and, should the Tribunal so decide, replaced with a decision refusing to approve the Plan: the Plan would then not be approved pursuant to subs. 303FO (2). Second: the Tribunal could approve the Plan subject to conditions that will remedy the problems that it has identified. The question of imposing conditions on the approval of the plan is considered below. The applicant is proposing conditions that in its view would improve the Plan and its execution. But the applicant emphasises that the improvement would not be sufficient to permit approval of the Plan: the propsed conditions proposed by the applicant are advanced strictly in the alternative to the primary position that the Plan should not be approved at all.

[156] See s.303FO(3)(e) EPBC Act.

Discretion

228 Should the Tribunal hold that all of the prerequisites prescribed by subs. 303FO (2) have been met, then it its discretion to approve the Plan pursuant to the Plan pursuant to subs. 303FO (2) is enlived. The discretion is a broad one and all relevant factors must be taken into account, including those specifically prescribed by subs. 303FO (4):

> (a) whether legislation relating to the protection, conservation or management of the specimens to which the plan relates is in force in the State or Territory concerned; and
>
> (b) whether the legislation applies throughout the State or Territory concerned; and
>
> (c) whether, in the opinion of the Minister, the legislation is effective.

The exercise of discretion pursuant to subs. 303FO (2)

229 The discretion should be exercised against approval for at least the following reasons.

230 ***First:*** The satisfaction of the prerequisites notwithstanding, the evidence discloses several problems with the Plan and its execution that are sufficiently great to warrant not allowing the Plan to proceed. Those problems include:

1. The environment assessment has failed to include an assessment of the bidoversity benefits of the do nothing approach;
2. There are no criteria that would trigger the suspension of cessation of killing under the quota;

3. There is no mechanism to reduce the maximum quota in the event of sudden decline in populations;

4. There is insufficient data provided to be able to properly assess the impact of killing of eastern and western greys in each of the KMZ;

5. The is a lack of justification for the killing of kangaroos.

231 ***Second:*** There are a number of improvements that could be made to the Plan. Just because a plan meets the minimum requirements of the statute does not mean that the plan could not be improved, even significantly. Where a plan is capable of improvement, it is an appropriate exercise of discretion to reject the plan. It will then be open to the applicant for approval (here, the NSW Minister) to apply again after improving the plan. The following improvements to the Plan could be made:

(1) Inclusion of threshold level with respect to population decline and density rates below which the Plan would automatically be suspended, either in whole or in specific catchments;

(2) Adoption of all recommendations to reduce the suffering of animals;

(3) Increasing the weight of carcasses to exclude the killing of females as much as possible.

232 ***Third:*** The Plan effectively incorporates the Code and any successor the Code and approval of the Plan is dependent upon findings to the effect that in relevant respects the Code is appropriate. The Code, however, is presently under review. This is significant for at least two reasons. First: it can fairly be inferred that it is now considered, at least in some quarters (including government quarters), to be ripe for review and therefore capable

of improvement. A plan such as the Plan should only be approved if it has met all prerequisites and is the *best possible plan* that could reasonably be devised for the circumstances. As the Plan incorporates the Code and it is effectively acknowledged that the Code is not as good as it could be, the Plan is not the best possible plan. Second: the likelihood of changes to the Code means that the Tribunal is being asked to approve a Plan that probably will in significant respects be amended during the course of its life—not by the Tribunal and not with the Tribunal's approval. In a situation where, as here, the Tribunal is being asked to approve a plan that is likely soon to change, the correct and preferable decision is to reject the Plan and await an application for approval of the Plan after the amendments have been made. This is especially the case because it cannot be guaranteed that the revisions to the Code will all be improvements.

233 Accordingly, in discretion, should the discretion arise, the Tribunal should set aside the decision to approve the Plan.

Possible imposition of conditions

234 The imposition of conditions cannot make the Plan comply with the prerequisites listed in subs. 303FO (3), nor warrant a decision, in discretion, to approve the Plan,

235 Nevertheless, there are measures that could be imposed to ameliorate some of the Plan's inappropriate impacts. Whilst pressing primarily for a decion against approving the Plan at all, in the strict alternative the applicant urges that conditions should be imposed upon any approval.

236 The evidence of Dr Jones and Dr Croft is that is would be possible to ensure greater bias towards male harvesting by increasing, as a condition of the licence, the minimum weight of the kangaroo killed. Dr Croft identified that such a bias is already occurring in Wallaroo kills.

237 The modelling contained in Ex 23 identifies a very low risk of threats of harm when more males are killed as a proportion of the population.[157] Although the Applicant submits that the only way to ensure that joeys and YAF are not an unnecessary by-catch of the killings would be to prohibit the killing of females, an alternative is to reduce as much as possible the economic incentive to kill female kangaroos.

238 It has been accepted by Dr. Pople that the commercial viability of the killing of kangaroos should not be part of the assessment of the ecological sustainability, it can therefore be argued that a condition should not be opposed due to the possibility of making the killing of kangaroos uneconomic.

239 If the imposition of a condition will ensure that the Plan (and the Code) better meets the objectives of the Act, including to reduce the impact of the activity and to reduce inhumane treatment of young kangaroos, then it should be imposed. The commercialisation of native wildlife, although opposed by the Applicant, should only occur on the strictest of conditions.

240 Dr. Croft has recommended a weight of 25 kg.

[157] Exhibit 23 Figure 17.

Adoption of a quasi-extinction level

241 One method that will provide a further safety net is the adoption of a minimum density figure (or quasi-extinction level) for each of the KMZ. This can be used in conjunction will other measure to ensure that kangaroos do not disappear at the edges of their range. Further research would be need on this matter.

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