



COMMONWEALTH GRANTS COMMISSION

DRAFT ASSESSMENT PAPER CGC 2003/42

NATIONAL PARKS AND WILDLIFE SERVICES

Prepared for the Commission's 2003 Conferences on Draft Assessments

AUGUST 2003

NOTE

Included in this paper are the results of preliminary calculations based on the methods proposed throughout the paper and using the data currently available. Those results are indicative only and should be seen as work in progress. Ongoing changes are being made to standards and factor calculations as new data come to hand. Moreover, the calculations have been done using a prototype assessment system and are subject to ongoing revision as checking processes proceed.

CONTENTS

INTRODUCTION	1
THE 1999 REVIEW ASSESSMENT	1
Scope of the expenses category	1
Importance of current assessment	1
Structure of the expenses assessment	2
User charges assessment	4
2004 REVIEW PROPOSED CATEGORY DEFINITION AND ASSESSMENT STRUCTURE	5
Scope of the category	5
FIXED COSTS COMPONENT	7
Administrative scale	7
Input costs	8
ABORIGINAL INVOLVEMENT IN PARKS COMPONENT	9
Dispersion	9
Input costs	11
Socio-demographic composition	12
VISITOR IMPACT COMPONENT	15
Dispersion	15
Input costs	15
Economic environment	15
CONSERVATION COMPONENT	18
Dispersion	18
Input costs	19

Physical environment	19
Urban influences	24
Cross-border	30
ISOLATION COMPONENT	31
Isolation	31
LAND RIGHTS COMPONENT	31
Land rights	31
NATIVE TITLE COMPONENT	32
Native title	32
NATIONAL CAPITAL COMPONENT	33
National capital	33
SUMMARY OF RESULTS	36
Calculating the category factor	36
Calculation formula	39
Comparison of category factors	39
Standardised expenses	39
ANALYSIS	40
USER CHARGES	42
Scope of the category	42
Assessment method	42
Summary of results	44
Analysis	45
ATTACHMENT A: IUCN GUIDELINES FOR PROTECTED AREA MANAGEMENT CATEGORIES	47
ATTACHMENT B: METHODS USED TO COUNT VISITOR NUMBERS	49

INTRODUCTION

1. This paper presents a draft assessment for the National Parks and Wildlife Services category for the 2004 Review. It builds on the staff proposals set out in *Discussion Paper CGC 2002/42, National Parks and Wildlife Services* and State comments on them provided at the 2002 Conferences and in the 2003 Rejoinder Submissions.

2. The proposed assessment structure for this category in the 2004 Review is shown in Table 29 on page 38.

THE 1999 REVIEW ASSESSMENT

Scope of the expenses category

3. In the 1999 Review, the National Parks and Wildlife Services category comprised expenses on administration, regulation, support, provision and operation of national parks and wildlife services. The category also included expenditure on national estate matters such as historic houses and sites which are part of national parks and wildlife services as well as research into protecting flora and fauna.

Importance of current assessment

4. Table 1 shows the standard expenses and user charges for the six years ended 2001-02. In 2001-02, this category represented 0.72 per cent of total gross standard expenses. In 2001-02, user charges recovered 15.57 per cent of category gross standard expenses.

Table 1 GROSS STANDARD EXPENSES AND USER CHARGES — NATIONAL PARKS AND WILDLIFE SERVICES, 2003 UPDATE

	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
Standard expenses (\$pc)	18.55	20.25	30.17	35.82	36.26	35.99
% of total standard expenses	0.50	0.52	0.66	0.77	0.75	0.72
Standard user charges (\$pc)	4.17	5.03	4.76	4.94	5.29	5.60
% of category standard expenses	22.45	24.86	15.78	13.78	14.60	15.57

5. Compared with an equal per capita assessment, the 2003 Update assessment redistributed \$110.0 million in grants from New South Wales, Victoria and Queensland to the other States. Table 2 sets out the redistribution between States in the 2003 Update.

Table 2 EFFECT OF ASSESSMENT ON GRANT DISTRIBUTION —
NATIONAL PARKS AND WILDLIFE SERVICES, 2003 UPDATE

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total ^(a)
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Contribution to 2003 Update relativities	-37.4	-67.6	-5.1	38.9	6.3	3.6	9.0	52.2	110.0

(a) Total redistribution.

Structure of the expenses assessment

6. The assessment structure used in the 1999 Review is shown in Table 3.

Table 3 1999 REVIEW ASSESSMENT STRUCTURE — NATIONAL PARKS AND WILDLIFE SERVICES

Expenses component	Component weight	Factors	Basis of calculation
Scale-affected expenses	10.30	Input costs	General method with weights of 80% for wages, 2% for accommodation and 1% for electricity.
		Administrative scale	General method.
Aboriginal involvement in parks	4.98	Dispersion	General method.
		Input costs	General method with weights of 50% for wages, 2% for accommodation and 1% for electricity.
		Socio-demographic composition	Captures the relative impact of States Indigenous populations on the cost of providing national parks and wildlife services.
Visitor impact	46.28	Dispersion	General method.
		Economic environment	Based on the estimated number of visitors.
		Input costs	General method with weights of 50% for wages, 2% for accommodation and 1% for electricity.
Conservation	36.33	Dispersion	General method.
		Input costs	General method with weights of 50% for wages, 2% for accommodation and 1% for electricity.
		Physical environment	Based on the number of species of flora and fauna, average of forest, woodlands biophysical regions and climatic zones, and per capita area of national parks.
		Urbanisation	Based on populations contiguous to national parks.
Isolation	0.53	Isolation	General method.
Land rights	1.35	Land rights	The additional costs in the Northern Territory arising from the Commonwealth <i>Aboriginal Land Rights (Northern Territory) Act 1976</i> .
Native title administration	0.23	Native title administration	Based on actual per capita expenditure over the last three years.

7. The factors which had the largest redistributive effect in the 2003 Update, are set out in Table 4. The economic environment factor was based on visitor numbers. The physical environment factor reflected flora and fauna counts, biophysical regions and climatic zones counts, and areas of national parks. The urbanisation factor took account of the costs caused by the proximity of urban areas to parks.

Table 4 REDISTRIBUTIVE IMPACT OF KEY FACTORS, 2003 UPDATE

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total ^(a)
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Visitor Impact Component									
Economic environment ^(b)	-15.8	-8.2	13.3	5.8	-9.6	3.8	2.9	7.9	33.7
Conservation Component									
Physical environment ^(b)	-52.8	-25.5	8.2	29.8	17.6	1.5	3.8	17.4	78.3
Urbanisation ^(b)	38.6	-0.9	-26.1	0.7	7.3	-8.0	0.1	-11.8	46.7
	-30.0	-34.6	-4.6	36.3	15.3	-2.7	6.8	13.5	71.9

(a) Total redistribution.

(b) Assuming same pool and a constant population.

User charges assessment

8. A differential assessment of National Parks and Wildlife Services User Charges was made in the 1999 Review. The assessment of revenue raising capacity was based on the number of visitors. The redistributive impact of the user charges assessment in the 2003 Update is set out in Table 5.

Table 5 NATIONAL PARKS AND WILDLIFE SERVICES USER CHARGES — EFFECT OF ASSESSMENT ON GRANT DISTRIBUTION

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total ^(a)
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Contribution to 2003 Update relativities ^(b)	2.6	1.4	-2.4	-1.0	1.7	-0.7	-0.5	-1.1	5.8

(a) Total redistribution.

(b) Assuming same pool and a constant population.

2004 REVIEW
PROPOSED CATEGORY DEFINITION AND ASSESSMENT STRUCTURE

Scope of the category

9. **Preliminary State views.** States did not comment on the assessment structure.

10. **Staff proposals.** In *Discussion Paper CGC 2002/42 National Parks and Wildlife Services*, staff proposed that:

- (i) the scope of the category be maintained and a national capital component be introduced;
- (ii) the related SPPs continue to be treated by exclusion;
- (iii) the component weights be reviewed;
- (iv) the socio-demographic composition factor in the Aboriginal involvement in parks component be changed to reflect new Indigenous population data and the new definition of remoteness;
- (v) the economic environment factor be assessed for the visitor impact component and user charges assessment using a similar method to that adopted in the last review;
- (vi) the physical environment factor in the conservation component be recalculated using new data;
- (vii) the urbanisation factor in the conservation component be recalculated using new data; and
- (viii) the dispersion factor be changed to reflect dispersion of parks and not people.

11. **Further State views.** Tasmania and the Northern Territory supported the current assessment structure for the 2004 Review. The Northern Territory said that the Indigenous involvement in parks component should be increased, because the level of participation by Indigenous people in the management and promotion of parks will increase (by \$5 million per year from 2004-05) in the next few years. Presently, the Territory spent more on this category than the current assessment implied. No other State commented.

12. **Commission decision.** The Commission has decided to continue the existing category scope as set out in paragraph 3 and as proposed in *Discussion Paper CGC 2002/42 National Parks and Wildlife Services*.

13. The Commission has decided to assess component weights as set out in Table 6 and covered in other parts of this paper. The proportions of expenses affected by

isolation and administrative scale were estimated using the general approaches for those factors. The proportions of expenses affected by native title and land rights were estimated by apportioning the actual expenses on these functions according to total category expenses, as covered in the relevant draft assessment papers.

14. The assessment for land rights is specifically related to costs incurred by the Northern Territory government arising from the land rights legislation and is not related to Indigenous involvement in parks.

15. The size of the national capital component is based on the proportion of total category expenses accounted for by the national capital allowance assessed.

16. The component weights for the Aboriginal involvement in parks, visitor impact, and conservation components were calculated as 7/39/54 per cent of the balance of the category, respectively. The weight for the visitor impact component has been reduced and the weight for the conservation component strengthened, based on information provided by South Australia and the Northern Territory in their rejoinder submissions, and by South Australia in its Workplace Discussions.

17. The weight for the Aboriginal involvement in parks component has risen because the combined weight of the minor components (fixed costs, isolation, native title, land rights and national capital) is smaller than it was for the 1999 Review. This component size will be reconsidered in future years if the Northern Territory expense on Aboriginal involvement in parks increases, as was predicted in the Territory's bilateral discussions with the Commission. The expenses associated with this component could be folded into the other two major components — because expenses on providing conservation and services to park visitors will be influenced by issues associated with Aboriginal involvement in parks. This would mean that factors assessed in the Aboriginal involvement in parks component would be applied, suitably expense weighted, to the conservation and visitor impact components.

18. The Commission's decisions are summarised in Table 6.

Table 6 COMMISSION DECISIONS — SCOPE, ASSESSMENT STRUCTURE AND COMPONENT WEIGHTS

Decisions	Reason
Scope. Unchanged from 2003 Update.	
Treatment of SPPs. Continue to treat the Management of World Heritage Properties (World Heritage Areas) SPP, by exclusion.	The allocation of the SPP reflects needs.
Assessment structure and component weights^(a):	
<ul style="list-style-type: none"> • Fixed Costs: 3.29% • Aboriginal Involvement in Parks: 6.64% • Visitor Impact: 37.01% • Conservation: 51.25% • Isolation: 0.24% • Land Rights: 0.96% • Native Title: 0.58% • National capital: 0.02% 	<p>The Commission decided to partition this category into these components because evidence available from States suggested that these were the most important groups of services provided. The data provided were used to estimate the component weights.</p> <p>The component weights for the fixed costs, isolation, land rights and native title components were estimated by the general method.</p> <p>The component weight for the national capital component represents the proportion of category expenses accounted for by the allowance assessed.</p> <p>The component weights for the Aboriginal involvement in parks, visitor impact and conservation components were 7%, 39% and 54% of the balance of the category expenses.</p>

(a) The component weights are for 2001-02.

FIXED COSTS COMPONENT

19. As in the 1999 Review, the Commission has decided to assess an administrative scale and input cost factor for this component.

Administrative scale

20. **1999 Review.** The administrative scale factor was assessed to account for differences in per capita costs of providing central office functions and whole of State services. Scale-affected expenses for this category were assessed as \$4 million, of which \$2 million was considered as fixed cost and \$2 million as variable cost. The scale-affected expenses component represented 10.3 per cent of expenses in this category.

21. **2004 Review.** *Draft Assessment Paper CGC 2003/60 Administrative Scale* discusses the issues raised by the States regarding the assessment of this factor. The paper sets out the Commission's decisions on the general method of assessment adopted for the 2004 Review and on the size of the fixed costs component in each category. The States did not raise issues specific to this category.

22. The Commission has decided that administrative scale will be assessed for this category to recognise the unavoidable costs each State would incur to have the policy and administrative infrastructure necessary to provide the service regardless of the size of the task.

23. The administrative scale factors, shown in Table 7, have been calculated using the 2004 Review general method. Fixed costs for this category have been estimated to be \$2.0 million per State, and represent 3.29 per cent of the category standard in 2001-02.

Table 7 ADMINISTRATIVE SCALE FACTORS — FIXED COSTS COMPONENT, 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1997-98	0.36858	0.50382	0.68027	1.28668	1.56812	4.92560	7.52310	12.32319
1998-99	0.36853	0.50445	0.67767	1.28097	1.57795	4.99478	7.55742	12.25346
1999-2000	0.36854	0.50478	0.67478	1.27836	1.58830	5.05782	7.57230	12.19839
2000-01	0.36846	0.50489	0.67161	1.27768	1.60144	5.12202	7.57722	12.18130
2001-02	0.36891	0.50461	0.66745	1.27717	1.61320	5.17750	7.59249	12.25311

24. The factor which is based on estimated resident populations and the component weight will be updated annually.

Input costs

25. **1999 Review.** The input costs factor was assessed to recognise differences between States in per capita costs of labour, office accommodation and electricity. A separate factor was calculated for each of those inputs. For the scale-affected costs component, those factors were applied to the following proportions of standard expenses:

- wages and salaries 80 per cent;
- accommodation 2 per cent; and
- electricity 1 per cent.

26. **2004 Review.** *Discussion Paper CGC 2003/04 Input Costs* discusses the issues raised by the States regarding the assessment of wages and salaries costs. The paper sets out the Commission's decisions for the general method of assessment to be adopted for the 2004 Review. *Draft Assessment Paper CGC 2003/79 Input Costs — Electricity and Accommodation* discusses the issues raised by the States regarding the assessment of input costs relating to accommodation and electricity. The paper sets out the Commission's decisions on the general method of assessment to be adopted for the 2004 Review and on the size of the standard expense proportions in each category for accommodation costs and electricity costs. The States did not raise issues specific to this category.

27. The Commission considered that the prices of labour, accommodation and electricity relating to fixed costs in providing services differ across States for reasons beyond the control of individual States. It has therefore decided that input costs will be assessed for this component.

28. The input costs factors for the fixed cost component of this category, shown in Table 8, have been calculated according to the 2004 Review general methods. The standard expense proportions applied were 80 per cent for wages and salaries, 2 per cent for accommodation and 1 per cent for electricity.

Table 8 INPUT COSTS FACTORS — FIXED COSTS COMPONENT, 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1997-98	1.03302	0.98766	0.98151	0.98039	0.97094	0.93703	1.00802	1.09279
1998-99	1.03482	0.98866	0.97958	0.97693	0.96902	0.93459	1.01228	1.08820
1999-2000	1.03762	0.98781	0.97671	0.97892	0.96546	0.92795	1.01666	1.08353
2000-01	1.03819	0.98920	0.97482	0.97886	0.96427	0.92509	1.01589	1.08084
2001-02	1.03714	0.99034	0.97354	0.97996	0.96824	0.92479	1.01291	1.07737

29. The factors will be updated annually. The proportions represented by wages and salaries, accommodation and electricity will not be re-examined until the next review.

ABORIGINAL INVOLVEMENT IN PARKS COMPONENT

30. This component comprises expenses incurred by States on programs which allowed Indigenous Australians to be involved in the administration and operation of national parks and wildlife services. The Commission has concluded that these expenses are influenced by dispersion, input costs and socio-demographic composition factors. It has decided to assess factors to recognise this.

Dispersion

31. **1999 Review.** The dispersion factor was assessed to account for differences in per capita costs of providing services arising from differences between States in the spread of their population. The factor reflects the effects of population dispersion on State expenses associated with telecommunication, freight, travel and staffing on-costs.

32. There were seven indexes within the dispersion factor, each reflecting the effect of interstate differences in population dispersion on a separate type of dispersion-affected cost. Each index was weighted by the proportion of standard expenses affected by each type of dispersion-affected cost. The indexes were combined to form the

overall dispersion factor. The proportions of standard expenses estimated for this component are shown in Table 9.

Table 9 DISPERSION COST WEIGHTS — ABORIGINAL INVOLVEMENT IN PARKS COMPONENT, 1999 REVIEW

Telephone	Freight	Air Travel	Road Travel		Remote Removals	Locality Allowances
			Inter Regional	Local		
0.01747	0.00588	0.01863	0.02970	0.01980	0.00000	0.00399

Source: 2003 Update Working Papers Volume 4, p506.

33. **Preliminary State views.** States provided no comments on this assessment.

34. **Staff proposals.** Staff proposed that the assessment method for dispersion disabilities in this category be changed to reflect the location of national parks and not the location of population.

35. **Further State views.** Queensland, Western Australia, South Australia and the Northern Territory agreed that the assessment should be changed to reflect the dispersion of national parks, because:

- (i) it is the location of parks that determines where many costs are incurred; and
- (ii) the locations of national parks are invariably not related to where populations are located.

36. **2004 Review.** *Draft Assessment Paper CGC 2003/63 Dispersion* discusses the issues raised by the States regarding the assessment of dispersion. The paper sets out the Commission's decisions on the general method of assessment adopted for the 2004 Review and on the size of the standard expense proportions estimated for each of the nine elements of dispersion-affected expenses. Queensland, Western Australia, South Australia and the Northern Territory argued that dispersion should be based on the location of national parks rather than the population.

37. The Commission noted that many expenses incurred in this component (travel, communications, freight and locality allowances) are affected by the location of the parks relative to regional centres and State capitals. It has therefore decided that a dispersion disability will be assessed, and that it should be based on the location of national parks.

38. There were nine indexes within the dispersion factor for the 2004 Review. Table 10 shows the proportions of standard expenses estimated for each of the nine elements of dispersion affected expenses for this component. Table 11 shows the dispersion factors assessed for Aboriginal involvement in parks component for the 2004 Review. The factors for this category were based on the location of national parks rather than the population.

Table 10 DISPERSION COST WEIGHTS — ABORIGINAL INVOLVEMENT IN PARKS COMPONENT, 2004 REVIEW

Telecommunication		Freight, General	Air Travel	Road Travel		Repairs and Maintenance	Remote Staff Turnover	Locality Allowances
Voice	Non-voice			Inter Regional	Local			
0.0098	0.0011	0.0141	0.0115	0.0123	0.0305	0.0227	0.0000	0.0041

Table 11 DISPERSION FACTORS — ABORIGINAL INVOLVEMENT IN PARKS COMPONENT, 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1997-98	0.90272	0.90113	0.95102	1.44065	1.28661	0.93388	0.89482	1.42323
1998-99	0.90263	0.90104	0.95093	1.44051	1.28648	0.93379	0.89473	1.42310
1999-2000	0.90266	0.90108	0.95097	1.44056	1.28653	0.93382	0.89476	1.42315
2000-01	0.90283	0.90124	0.95114	1.44082	1.28676	0.93399	0.89492	1.42341
2001-02	0.90299	0.90140	0.95131	1.44108	1.28700	0.93416	0.89509	1.42366

39. Neither the factor nor the dispersion costs weights will be updated before the next review.

40. The factors shown in Table 11 were also applied in the other components where most of the services are provided in parks, such as the visitor impact and conservation components.

Input costs

41. **1999 Review.** The following standard expense proportions were applied to each of the factors assessed for this component:

- wages and salaries 50 per cent;
- accommodation 2 per cent; and
- electricity 1 per cent.

42. **2004 Review.** The input costs factors for the Aboriginal involvement in parks component of this category, shown in Table 12, have been calculated according to the general method outlined in *Discussion Paper CGC 2003/04 Input Costs* and in *Draft Assessment Paper CGC 2003/79 Input Costs — Electricity and Accommodation*. The standard expense proportions applied were 50 per cent for wages and salaries, 2 per cent for accommodation and 1 per cent for electricity.

Table 12 INPUT COSTS FACTORS — ABORIGINAL INVOLVEMENT IN PARKS COMPONENT, 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1997-98	1.02193	0.99178	0.98752	0.98797	0.98051	0.95809	1.00459	1.05868
1998-99	1.02306	0.99241	0.98632	0.98580	0.97931	0.95657	1.00725	1.05580
1999-2000	1.02481	0.99188	0.98452	0.98705	0.97709	0.95242	1.00998	1.05289
2000-01	1.02516	0.99275	0.98334	0.98701	0.97634	0.95063	1.00950	1.05120
2001-02	1.02451	0.99346	0.98254	0.98770	0.97882	0.95044	1.00764	1.04904

43. The factors shown in Table 12 were also applied in the visitor impact and conservation components in this category.

Socio-demographic composition

44. **1999 Review.** A socio-demographic composition factor was assessed for this component. This assessment was undertaken to reflect how the Indigenous population affected States' expenses in providing services relating to national parks. The assessment recognised that the overall Indigenous population in a State had a small impact on park expenses. The use of Indigenous people in the management and operation of parks and the presence in and around national parks of Indigenous people pursuing a customary lifestyle, had a larger impact because of their close cultural association with the land and environment.

45. These influences were reflected in the socio-demographic composition factor. That factor was calculated as the weighted average of two sub-factors — one based on the total Indigenous population in each State (weighted by 30 per cent), and the other on the remote Indigenous population in each State (weighted by 70 per cent).

46. **Preliminary State views.** The ACT argued that this factor should be removed because it did not provide an accurate assessment of cost and resulted in double-counting of the remote Indigenous population. South Australia suggested that the data used to calculate the factor be reviewed, due to the implausible result for Tasmania.

47. **Staff proposals.** Staff proposed that a socio-demographic composition assessment would continue to be made using new ABS Indigenous population data (related to the 2001 Census) and a new definition of remoteness (related to ARIA+).

48. **Further State views.** Queensland proposed using total Indigenous population weighted according to the amount of States' national parks subject to native title claims. Western Australia and Northern Territory proposed that the existing assessment method continue to recognise all remote area Indigenous populations. They said that the weight attached to these populations should be increased to reflect the higher costs imposed on States because Indigenous people in remote locations still practice culture and traditions that require close involvement with the land and the environment.

49. Tasmania noted that it had spent a significant amount of funds preserving Aboriginal cultural heritage. However, a specific budgetary allocation is not made in its accounts, because this expense is part of its normal national parks activities.

50. The Northern Territory asked the Commission to continue to assess the needs associated with all Aboriginal involvement in parks.

51. **Analysis.** In the 1999 Review, a judgement based assessment of this factor was made. Based on the State submissions and its observations at workplace discussions, the 1999 Review Commission decided that Indigenous population affected State's expenses on national parks in two ways:

- (i) there was a small impact due to the presence of the Indigenous population in a State; and
- (ii) there was a larger impact due to the presence in and around national parks of Indigenous people pursuing a customary lifestyle.

52. The 1999 Review Commission measured these influences with two sub-factors — one based on total Indigenous population and the other based on remote Indigenous population. Remote Indigenous populations were assumed to have a larger impact on the operating costs of parks because of the additional consultation processes necessitated by their close cultural association with the land and environment. By judgment based on this qualitative information, the sub-factor based on total Indigenous population was allocated a weight of 0.3 and the sub-factor based on the remote Indigenous population was allocated a weight of 0.7.

53. The States incur higher costs because there is a tendency to use and consult Indigenous people in managing parks. This results in higher costs due to the extra time required to carry out parks related activities. The larger the Indigenous population the greater the pressure to accommodate traditional access to parks. The Indigenous population in remote locations has a larger impact because of their culture and traditions in pursuing a customary lifestyle that require close association with the land and environment. The Northern Territory bilateral discussions emphasised the growing importance of Indigenous involvement in the management and operation of parks and the associated expenses.

54. **Commission decisions.** The Commission accepts that a conceptual case for assessing socio-demographic composition in this component remains strong. Based on the strong conceptual case for the assessment, broad State support for the existing assessment method and the qualitative information collected in the last review and judged to be still relevant, the Commission decided to continue an assessment based on Indigenous populations. However, it considered the effects would be material in remote areas only. Thus, it decided to focus on the remote Indigenous populations only.

55. Population data derived from the ABS 2001 Census are available to measure this influence.

56. The Commission's decisions are summarised in Table 13.

Table 13 COMMISSION DECISIONS — ABORIGINAL INVOLVEMENT IN PARKS COMPONENT: SOCIO-DEMOGRAPHIC COMPOSITION FACTORS

Decision	Reason
To assess a socio-demographic composition factor based on the Indigenous population in remote areas only.	Gives States the capacity to provide the average level of services by assessing the additional costs that States face because of the presence in and around national parks of remote Indigenous people pursuing a customary lifestyle.
To change the Rural, Remote and Metropolitan Area (RRMA) classification to one based on the Accessibility / Remoteness Index of Australia (ARIA+) used by the ABS in the 2001 Census.	To produce a more current classification by location.

57. **Proposed method and results.** For the 2004 Review draft assessment, the Commission used ABS 2001 Census data cross tabulated using the ARIA+ classification. The method used to calculate the socio-demographic composition factors is as follows:

- (i) Calculate the ratios of the total remote Indigenous population in each State and Australia to the total population of each State and Australia (based on census data); and
- (ii) Divide the ratio for each State by the Australian ratio, to derive the factors.

58. Table 14 summarises the population data used in the calculation.

Table 14 DERIVATION OF THE SOCIO-DEMOGRAPHIC COMPOSITION FACTORS, ABORIGINAL INVOLVEMENT IN PARKS COMPONENT

Population	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Remote Indigenous ^(a)	7 311	57	26 397	26 210	5 172	537	0	41 203	106 887
Total pop	6 371 747	4 644 947	3 655 134	1 851 255	1 467 264	456 650	311 946	210 661	18 969 604
Remote Indigenous per capita (x 1000)	1.15	0.01	7.22	14.16	3.52	1.18	0.00	195.59	5.63
2004 Review	0.20363	0.00218	1.28169	2.51266	0.62558	0.20870	0.00000	34.71188	1.00000
2003 Update	0.46031	0.07818	1.41955	2.26970	0.53860	0.49678	0.13532	28.96945	1.00000

(a) Population by ARIA+ classification — based on 'remote Australia' and 'very remote Australia' counts.
Source: 2001 Census of Population and Housing.

59. **Reality check.** The factors calculation meet expectations. Victoria has the lowest factor, having the lowest proportion of Indigenous population and very little remote areas. The Northern Territory has a high factor because the proportion of remote Indigenous people in its population is the highest of all States.

60. **Updateability.** The Indigenous population data for this factor are sourced from the ABS 2001 Census, and therefore will not be updated until after the next census.

VISITOR IMPACT COMPONENT

61. This component comprises expenses incurred by States in the management and provision of recreation type services to national park visitors. The Commission has concluded that these expenses are influenced by dispersion, input costs and economic environment factors. It has decided to assess factors to recognise this.

Dispersion

62. **1999 Review.** The dispersion factors assessed for this component were the same as those for the Aboriginal involvement in parks component.

63. **2004 Review.** The Commission considers that approach remains appropriate for the 2004 Review because the proportion of dispersion-affected costs in the Aboriginal involvement in parks and visitor impact components would be similar. The dispersion factors shown in Table 11 have also been applied in the visitor impact component.

Input costs

64. **1999 Review.** The input costs factors assessed for this component were the same as those for the Aboriginal involvement in parks component.

65. **2004 Review.** The Commission considers that approach remains appropriate for the 2004 Review because the proportion of costs affected by wages and salaries, accommodation and electricity in the visitor impact and Aboriginal involvement in parks components would be similar. The input costs factors shown in Table 12 have also been applied in the visitor impact component.

Economic environment

66. **1999 Review.** An economic environment factor was assessed to capture the impact of the number of visitors on the operating costs of parks. It was measured using the estimated number of visitors to all terrestrial national parks and reserves.

67. Since the 2001 Update, States have generally provided visitor numbers separately for each type of protected area, using the World Conservation Union (IUCN) management categories I to VI as contained in the Collaborative Australian Protected Areas

Database (CAPAD)¹ 1999. Thus, a more consistent data set has been produced. The factor has been based on this data set for all six IUCN categories (refer Attachment A).

68. **Preliminary State views.** Victoria suggested using Annual Reports to determine the number of visitors.

69. South Australia argued that a comprehensive and consistent definition of national parks should be used throughout this assessment. It observed that the National Parks and Wildlife South Australia (NPWSA) agency considered that South Australia's methods of estimating visitor numbers were more accurate and conservative than those used by other States. It argued that States use different methods to count park visitors. Thus, while South Australia said that an economic environment assessment should be continued, it should be discounted to reflect the influences arising from different collection and estimation methods.

70. **Staff proposals.** Staff noted that Annual Report visitor counts data, if published, were unlikely to be consistent. Staff suggested that counts based on all six IUCN categories were more likely to be consistent, because they were at least based on a consistent set of land definitions. Nevertheless, staff sought information on how visitors were counted by the States, so that adjustments to the data could be made, if necessary. Therefore, staff proposed that the existing assessment method be continued.

71. **Further State views.** Queensland, Western Australia, South Australia, Tasmania and the Northern Territory supported the use of visitor data based on six IUCN categories.

72. Queensland said that it based its annual visitor data on permits and counters to both terrestrial and marine parks². It added that the data are conservative because they broadly represent commercial visitors and exclude many private visitors. It said that complete enumeration of all visitors is not technically possible.

73. Western Australia noted that visitor numbers would be influenced by State policies on the provision of visitor facilities and the establishment of protected areas. However, it was unable to suggest a better measure of need. South Australia remain concerned that the estimates of visitor numbers were compromised by the different estimation methods used.

74. Tasmania asked that the same range of IUCN categories be used in all factor calculations for the 2004 Review. According to Tasmania and the Northern Territory, the visitor numbers definition used by the World Conservation Union are consistent with that of the Australian and New Zealand Environment Conservation Council (ANZECC).

¹ The CAPAD is a database containing information on all statutory protected areas in Australia, including their IUCN (World Conservation Union) category. Environment Australia has accepted responsibility for the maintenance of CAPAD with the co-operation of State agencies.

² The annual data collections for the 2002 and 2003 Updates contain details on how Queensland prepared its visitor data for the Commission.

75. *Visitor counting methods.* Victoria, Queensland, Tasmania and the Northern Territory provided details of how they estimate visitor numbers for all parks. Details of these methods are at Attachment B.

76. *Analysis.* The information provided by States indicates that the range of visitor counting methods are similar. Visitor counts could be considered broadly comparable for a particular class of park.

77. *Commission decisions.* The Commission accepts that a conceptual case for assessing economic environment disabilities exists, because park management costs are related to patronage. Data are available to measure visitation, and measuring such demand in all six IUCN categories seems appropriate to reflect overall State costs. States generally supported this approach.

78. However, there is a possibility that the current assessment method is subject to policy influence and allows a potential design inefficiency to exist, because of the differences in how park visitation is measured. Large relative increases in patronage brought about by changes in the method used to count visitors, for example, could mean the factor's calculation would be compromised.

79. Nevertheless, given States general support for the assessment approach, the Commission has decided to base the assessment for the 2004 Review draft assessment on visitor counts for all six types of IUCN categories of park, as supplied by States in their annual data returns. However, a more policy neutral assessment method would be preferable.

80. The Commission's decision is summarised in Table 15.

Table 15 COMMISSION DECISION — VISITOR IMPACT COMPONENT: ECONOMIC ENVIRONMENT FACTORS

Decision	Reason
To assess an economic factor for the visitor impact component in the 2004 Review, based on the per capita number of visitors to all six IUCN categories of protected areas.	Give States the capacity to provide the average level of services by assessing the additional costs that States face in providing recreation type services for park visitors.

81. *Method and results.* The economic environment factor is based on the per capita numbers of visitors to all six IUCN categories of parks, according to the visitation data supplied by States in their annual data returns. Table 16 and Table 17 show the number of visitors for the 2003 Update and the economic environment factors for the 2004 Review draft assessment.

Table 16 STATE ESTIMATES OF VISITOR NUMBERS

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	'000	'000	'000	'000	'000	'000	'000	'000
1997-98	21 157	14 468	12 500	8 094	4 575 ^(a)	2 638 ^(a)	1 484	2 920
1998-99	22 589	13 473	17 611	7 168	3 530	2 049	2 196	2 616
1999-2000	23 496	13 920	18 062	8 895	3 802	2 949	2 159	2 511
2000-01	23 642	15 192	18 675	9 720	3 747	2 962	2 147	2 531
2001-02	24 132	25 476	19 013	9 720 ^(b)	3 796	3 158	2 191	2 495

(a) Estimated using the percentage change in visitor numbers based on States who supplied data for 1997-98.

(b) No 2001-02 data were provided by Western Australia. The 2000-01 figures were used in the calculation.

Source: State Data Returns.

Table 17 ECONOMIC ENVIRONMENT FACTORS — VISITOR IMPACT COMPONENT, 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1997-98	0.91964	0.85964	1.00282	1.22819	0.84603	1.53229	1.31645	4.24333	1.00000
1998-99	0.93494	0.76331	1.34035	1.03122	0.62558	1.14941	1.86389	3.60007	1.00000
1999-2000	0.91398	0.74165	1.28643	1.20020	0.63738	1.57432	1.72558	3.23299	1.00000
2000-01	0.88645	0.78054	1.27631	1.26376	0.61062	1.54385	1.65547	3.13736	1.00000
2001-02	0.79150	1.14295	1.12827	1.10371	0.54444	1.45369	1.47899	2.71804	1.00000

82. **Reality check.** The factors meet broad expectations. States which attract the highest number of visitors to national parks (of all types) - Tasmania, the ACT and the Northern Territory - have the highest factors.

83. **Updateability.** Data are available from the States on a yearly basis, to update the factors.

CONSERVATION COMPONENT

84. This component comprises expenses incurred by States in the management and conservation of flora and fauna and the natural environment generally through national parks and similar facilities. The Commission has concluded that expenses in this component are influenced by dispersion, input costs, physical environment, urban influences and cross-border factors. It has decided to assess factors to recognise this.

Dispersion

85. **1999 Review.** The dispersion factors assessed for this component were the same as those for the Aboriginal involvement in parks component.

86. **2004 Review.** The Commission considers that approach remains appropriate for the 2004 Review because the proportion of dispersion-affected costs in the conservation and Aboriginal involvement in parks components would be similar. The dispersion factors shown in Table 11 above have also been applied in the conservation component.

Input costs

87. **1999 Review.** The input costs factors assessed for this component were the same as those for the Aboriginal involvement in parks component.

88. **2004 Review.** The Commission considers that approach remains appropriate for the 2004 Review because the proportion of costs affected by wages and salaries, accommodation and electricity in the conservation and Aboriginal involvement in parks components would be similar. The input costs factors shown in Table 12 have also been applied in the conservation component.

Physical environment

89. **1999 Review.** The physical environment factor was intended to measure the size and importance of the conservation task, calculated as a cost weighted average of four separate sub-factors based on:

- (i) the number of flora species;
- (ii) the number of fauna species with a cost weight of 2 applied to protected species;
- (iii) the average number of forest and wood alliances, bio-physical regions and climatic zones; and
- (iv) the per capita area of national parks and reserves.

90. The per capita area of national parks was intended to provide a broad measure of the scope of the conservation task in each State. The other elements reflect particular aspects of the conservation task.

91. The relative contribution of each sub-factor to the physical environment factor were largely based on qualitative evidence provided by experts during workplace discussions. The 1999 Review Commission was advised that the costs of maintaining flora and fauna had the largest impact on States conservation expenditure. Therefore flora and fauna sub-factors were each allocated a weight of 35 per cent. Forest alliances, biophysical regions and climatic zones were considered a lesser influence on conservation costs than flora and fauna. This influence was therefore allocated a lesser weight of 20 per cent. The park area influence was intended to measure any residual impact on States conservation expenses and was given a weight of 10 per cent. Since the area per capita of parks could be influenced by differences in State's policy decisions, this factor was given a small weight in the combined physical environment factor.

92. **Preliminary State views.** Victoria said that more current and accurate data should be used to determine the number of flora and fauna species, such as *A Census of Vascular Plants of Victoria*. It also proposed that a cost weight be included in the physical environment factor for the additional costs of treating salinity in national parks.

93. The ACT sought the removal of the biophysical regions element from the factor because it did not reflect cost or demand influences associated with the provision of national parks and wildlife services.

94. **Staff proposals.** Staff were inclined to continue the current assessment of the four sub-disabilities. Staff proposed that updated data on biophysical regions be used in the calculation.

95. Staff also said there was some merit in reflecting the additional costs of treating salinity in parks in the factor. The States were asked to describe the extent of the problem and to supply relevant cost data to assist in deliberations.

96. **Further State views.** Queensland, South Australia, Tasmania and the Northern Territory supported the retention of the four sub-factors updated as far as possible with new data. Those four States as well as Western Australia suggested that the conservation component should be larger than the visitor impact component. Western Australia supported the ACT argument for removal of the existing biophysical regions sub-factor.

97. Victoria proposed that the Commission undertake a ‘reality check’ using independent data to test the reliability of the outcome of this factor. Some States suggested also the following sources of new data:

- (i) Natural Heritage Trust of Australia;
- (ii) The Interim Biographic Regionalisation for Australia (IBRA);
- (iii) The Bureau of Rural Sciences, Flora and Fauna of Australia Series;
- (iv) The Australia Virtual Herbarium; and
- (v) The National Vegetation Information System (EA).

98. Queensland suggested that conservation costs for the flora and fauna elements are higher than implied by the weights currently applied.

99. Western Australia said more weight should be given to specially protected species and that better quality data on flora and fauna be used. It said that the Commission gave insufficient weight to specially protected species. It considered that a better data source would be the Commonwealth’s threatened flora and fauna lists provided in the Schedules to the Commonwealth Environment Protection and Biodiversity Conservation Act 1999. Western Australia provided the cost estimates of salinity in national parks.

100. Tasmania did not agree with the ACT that the biophysical regions should be removed from the physical environment factor because it would eliminate an important perspective on the costs of the overall conservation task.

101. **Commission decisions.** The Commission accepts that the conceptual case exists for assessing physical environment disabilities for this component. We heard in workplace discussions and noted in submissions that conservation was one of the primary purposes of national parks. The assessment of disabilities for interstate differences in the size and nature of the conservation task was strongly supported. Some States argued that the assessment of this component should be strengthened relative to the other components assessed.

102. It is reasonable to consider that conservation costs are related to the flora and fauna counts, the characteristics of the various types of region being conserved and the sheer extent of the conservation task as indicated by the area of the parks managed by States. The data indicate that there are substantial differences between the States in flora and fauna species, the bio-physical regions and the area of parks. The data on each of those variables are of reasonable quality.

103. It is difficult, however, to quantitatively determine the relative contribution of the four influences (flora, fauna, bio-physical regions and the area of parks) to the costs of conservation tasks. The current weights applied to the four influences were estimated by past Commissions based on evidence, largely qualitative, provided by expert advice and during workplace discussions. No new data have been provided to justify changes to the cost weights applied to each of the sub-factors. On the basis of judgement, the Commission concluded that continuing with this factor, using the existing weights, will enhance equalisation.

104. The Commission's decisions are summarised in Table 18.

Table 18 COMMISSION DECISIONS — CONSERVATION COMPONENT:
PHYSICAL ENVIRONMENT FACTORS

Decisions	Reason
A physical environment factor should be assessed for this component in the 2004 Review, to reflect interstate differences in the size of the conservation task. Flora and fauna should continue to be assessed, updated with new data if possible. Forest alliances, biophysical regions and climatic zones should continue to be assessed, updated with new IBRA data. Per capita area of national parks should continue to be assessed, updated using new data from CAPAD 2002 and 2001 usual resident populations.	Conservation is an important role of national parks and there are large differences between States in the influences which drive these costs (flora, fauna, bio-physical regions, areas of parks).
The relative contributions of flora and fauna species, bio-physical regions and the area of parks to the factor should remain at 35:35:20:10 per cent respectively.	No compelling evidence was provided by States to justify changing the weights from those adopted in the 1999 Review.

105. While some States observed that salinity is a problem in national parks, the relevant costs incurred by service providers have not yet been measured. Thus, while the conceptual case for assessing the costs of treating salinity in national parks is a reasonable one, the Commission had no information that could be used to make a judgement about the extent of the problem or the expenditure involved in addressing it. The Commission therefore decided not to make an assessment. It could review that decision of suitable information became available.

106. **Method and results.** The 1999 Review method will be continued for the 2004 Review. The sub-factors for flora and fauna were calculated as follows:

- (i) Weight the protected species by two.
- (ii) Calculate a per capita level of flora (and fauna) species for each State and Australia by dividing the number of species of flora (and fauna) in each State and Australia by the 2001 Census usual resident population.
- (iii) Divide the per capita level of flora (and fauna) for each State and Australia by the Australian per capita level of flora (and fauna) to obtain raw factors.

107. The sub-factor for forest alliances, biophysical regions and climatic zones was calculated by the following method:

- (i) Calculate the average of the number of forest and woodland alliances, biophysical regions and climatic zones for each State and Australia. The data were sourced from *An Interim Biographic Regionalisation of*

Australia (IBRA Version 5.1), 2001. The same data are used by the Natural Heritage Trust of Australia.

- (ii) Calculate the per capita levels of forest and woodland alliances, biophysical regions and climatic zones using the 2001 Census usual resident population.
- (iii) Divide the per capita level for each State and Australia by the Australian per capita level to obtain raw factors.

108. The sub-factor for areas of national and reserves parks per capita was calculated by the following method.

- (i) Compute the total area of all parks in each State, as listed under all six IUCN categories of land area, as contained in CAPAD 2002.
- (ii) Calculate the per capita area of these six categories of park in each State and Australia using the 2001 Census usual resident population.
- (iii) Divide the per capita area of national parks in each State and Australia by the Australian per capita area of parks to derive raw factors.

109. Data on the area of national parks excludes the area of Commonwealth parks. The new data from CAPAD 2002 are summarised in Table 19.

Table 19 AREA OF NATIONAL PARKS AND CONSERVATION RESERVES^(a)

	Total land area	National parks and nature reserves area	National parks and nature reserves area to total land area
	hectares	hectares	%
New South Wales	80 121 268	5 329 996	6.7
Victoria	22 754 364	3 424 341	15.0
Queensland	172 973 671	7 120 217	4.1
Western Australia	252 700 808	27 174 021	10.8
South Australia	98 422 137	24 679 804	25.1
Tasmania	6 840 133	2 549 914	37.3
Australian Capital Territory	235 813	128 212	54.4
Northern Territory	134 778 762	4 377 156	3.2
AUSTRALIA	768 826 956	74 783 661	9.7

(a) IUCN categories 1 to 6 inclusive.

Source: CAPAD 2002, Environment Australia.

110. Table 20 shows the individual component factors and the resulting physical environment factors, calculated for the 2004 Review draft assessment.

Table 20 PHYSICAL ENVIRONMENT FACTORS — CONSERVATION COMPONENT, 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Per capita flora	0.00071	0.00057	0.00207	0.00392	0.00181	0.00344	0.00426	0.01646	0.00162
Flora factor	0.43793	0.35584	1.28278	2.42300	1.12263	2.12902	2.63564	10.18848	1.00000
Flora factor * 0.35 (a)	0.15327	0.12454	0.44897	0.84805	0.39292	0.74516	0.92247	3.56597	0.35000
Per capita fauna	0.00026	0.00020	0.00046	0.00074	0.00077	0.00095	0.00118	0.00498	0.00045
Fauna factor	0.58305	0.44233	1.02284	1.64669	1.71152	2.11215	2.60843	11.05348	1.00000
Fauna factor * 0.35 (b)	0.20407	0.15482	0.35799	0.57634	0.59903	0.73925	0.91295	3.86872	0.35000
Per capita bio-physical regions	0.00001	0.00001	0.00001	0.00001	0.00001	0.00003	0.00000	0.00007	0.00001
Bio-physical regions factor	0.68663	0.59000	1.23851	1.32269	1.40278	2.89398	0.44786	7.20275	1.00000
Bio-physical regions * 0.20 (c)	0.13733	0.11800	0.24770	0.26454	0.28056	0.57880	0.08957	1.44055	0.20000
Per capita area of national parks	0.80644	0.71005	1.95873	14.25624	16.29187	5.39173	0.39857	21.88370	3.83796
Area of national parks factor	0.21012	0.18501	0.51036	3.71454	4.24493	1.40484	0.10385	5.70191	1.00000
Area of national parks *0.10 (d)	0.02101	0.01850	0.05104	0.37145	0.42449	0.14048	0.01038	0.57019	0.10000
Physical environment factor, 2004 Review									
(a) + (b) + (c) + (d)	0.51568	0.41586	1.10571	2.06038	1.69700	2.20369	1.93538	9.44543	1.00000
Physical environment factor, 2003 Update	0.51723	0.39825	1.18451	2.02894	1.64390	1.88814	1.85726	10.16527	1.00000

111. *Updateability.* Data on the area of national parks and reserves sourced from CAPAD 2002 and the IBRA data on biophysical regions etc from Environment Australia, are available every two years. This factor will be updated at that frequency.

Urban influences

112. *1999 Review.* An urbanisation factor was assessed for the conservation component, to reflect the indirect costs associated with the populations contiguous to national parks who were not direct users of parks. The factor calculation was based on the relative size of populations contiguous to national parks in each State. Contiguous populations were measured using the total population 0-10 kilometres and half the population 10-15 kilometres from national parks.

113. In the 2001 Update, the Commission used new data from a Public Sector Mapping Agency (PSMA) data set for the gazetted national parks to calculate the

urbanisation factor. It did not accept that areas covered by the National Capital Open Space Scheme (NCOSS) in the ACT were equivalent to gazetted national parks because NCOSS lands are not classified as IUCN II national park protected areas and do not have biodiversity conservation as a primary objective.

114. ***Preliminary State views.*** Victoria proposed the abolition of the urbanisation factor. Alternatively, it said that the size of national parks should be considered when determining the radius of influence, rather than applying a set kilometre radius to all national parks. It said that a large park often has higher environmental values which are more under threat by contiguous populations. The management task is larger in such cases. It proposed that the radius for a large park such as the Dandenong Ranges should be 35 to 50 kilometres, the distance that its visitors travelled.

115. Queensland supported the Commission's judgement that States should provide evidence of the additional per capita costs attributed to conservation resulting from populations contiguous to national parks. It argued that the redistribution due to the conservation component in this category, which was strongly driven by the urbanisation factor and largely benefits New South Wales, was too large. Nevertheless, it supported the Commission's decision to use the IUCN definition of national parks — that is, IUCN Category II *National Park: Protected area managed mainly for ecosystem conservation and recreation*³. Queensland proposed that an empirical model be used to calculate urbanisation factors and that the model be consistent with the method for assessing dispersion factors, and weighted to reflect that proportion of costs identified by States for conservation where populations are adjacent to national parks. Such a model could continue to be used irrespective of issues regarding the definition of a national park.

116. South Australia argued the problem of comparability of definitions between States would not be overcome if the IUCN Category II definition were adopted. Due to inconsistencies in nomenclature between States, it proposed that the Commission base its definition of a 'National Park' on areas dedicated by gazettal/legislation for conservation purposes. If those data prove unreliable or unusable, it said the Commission should use all six IUCN categories.

117. Tasmania was concerned that the urbanisation factor could be significantly influenced by State policy. It observed that its activity in relation to the conservation of flora and fauna was expanding beyond the boundary of national parks, and was increasingly being undertaken in conjunction with non-government organisations and individuals. It argued that a change in State government policy in relation to designating areas as national parks could significantly influence the Commission's current assessment.

118. The ACT argued that the existing urbanisation assessment framework should be retained, and supported the use of the IUCN II National Parks definition as the best measure of national parks for each State. It said that all National Capital Open Space

³ Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for this and future generations, (b) exclude exploitation of occupation inimical to the purpose of designation of the area, and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally acceptable.

Scheme (NCOSS) land should be included within the urbanisation factor calculations, as these areas were subject to significant planning and management constraints and large areas of NCOSS land are IUCN defined National Parks.

119. **Staff proposals.** Some States supported the adoption of the IUCN II classification of protected areas (national parks). A couple preferred the abolition of the urbanisation factor. South Australia argued for the inclusion of all six IUCN categories, or at least I, II and III. Western Australia also favoured the inclusion of IUCN III, if the factor were to continue.

120. Staff proposed that the urbanisation assessment continue to be made based on the IUCN II classification of protected areas (national parks).

121. **Further State views.** At the 2002 Conference, New South Wales, Victoria, Western Australia, South Australia and the ACT supported the IUCN II classification, as the best measure available to assess urbanisation in this component.

122. Western Australia's preferred approach, however, was that the assessment should avoid using factors based on actual parks and conservation areas because policy neutrality would be compromised. It argued that the costs of urbanisation would not be picked up by the proposed method. It submitted that national parks data are very inconsistent and the quality varies significantly across the States.

123. *In the rejoinder submissions*, Victoria, Queensland, the ACT and the Northern Territory supported the continuation of the urbanisation assessment method based on the IUCN II National Parks definition. But Victoria said that, under the proposed method, contiguous populations would be double-counted because some national parks were located quite close to each other. It proposed that population which is double-counted (or more) should be uniformly discounted at least by 50 per cent.

124. South Australia said that the assessment should not be based on the IUCN II definition alone, but on all six IUCN categories or at least categories I, II & III. South Australia and the Northern Territory argued that the conservation component weight should be reviewed because it is understated at present.

125. Western Australia's first preference was to discontinue the assessment entirely if the problems with the proposed method were not resolved. For example, it noted that King's Park and Bold Park in Western Australia, like Belair National Park in South Australia, were excluded from IUCN category II — these three parks fall within the IUCN III National Monuments category — and argued that this would mean an (essentially arbitrary) reduction in the assessment of needs for these States.

126. Tasmania argued that the urbanisation factor should be discontinued because of State policy influence on the designation of national parks. It said that the focus should be on the number of persons visiting parks rather than their proximity to urban areas.

127. The ACT rejected Western Australia's suggestion that IUCN Category III land areas, like King's Park in Perth, be included within the calculation base for the urbanisation factor, as the range of landscapes defined under this category varies

significantly between States. The ACT said that the proposed urbanisation assessment method represented a sound basis for determining States' relative disabilities.

128. **Analysis.** In the 1999 Review, the Commission concluded an urban influences factor was required to measure the indirect costs associated with populations contiguous to national parks who are not direct users of parks. Urban and rural development close to parks will increase the risks of environmental pollution and fire affecting parks. The costs of park conservation would be greater in such circumstances. But there are concerns with the assessment method.

129. No expert in the field has refuted the presumption that conservation costs rise as the distance between urban areas and park borders reduces. The cost weights assessed in the 1999 Review (full weight to population 0-10 kilometres from assessed parks, and half weight to population 10-15 kilometres distant) were judgement based. We asked States for information to test those weights currently assessed but nothing was provided. It seems logical, however, that conservation costs in parks would diminish as population density reduces around parks.

130. We have also been advised by some parties that the use of IUCN II parks will not produce a policy neutral assessment. If an assessment were undertaken, it seemed that three options were available — to base the assessment on the protected areas classified under:

- (i) the IUCN II category definition;
- (ii) the IUCN I, II and III category definitions; or
- (iii) all six IUCN categories.

131. All three options had conceptual merit. However, we were inclined to think that, in practice, State policy plays some role in the classification of IUCN categories. We concluded that at least some conservation costs must be incurred by States in all six categories of protected land areas. A check of the definitions of all six IUCN categories indicated that categories 2 through 5 specifically mentioned conservation in some way, in describing their purposes.

132. **Commission decisions.** The Commission accepts that a conceptual case for an assessment of urban influences on the costs of conserving national parks and wildlife. This is because indirect costs associated with populations who live close to national parks but are not direct users of parks, continue to exist. Urban and rural development near protected areas continues to raise the risks of environmental pollution and fire affecting parks.

133. The Commission also accepts that a conceptual case exists to expand the assessment of urban influences to cover all six categories of IUCN protected areas. Any protected area which is close to a built-up urban area is at heightened risk of environmental pollution because of that close association between people and the protected area. States will incur additional costs in protecting designated areas in such circumstances.

134. We note that experts in the field have not rejected the premise that conservation costs rise as the distance between urban areas and the edges of protected areas reduces. We further note that the cost weights assessed in the 1999 Review (a full cost weight to population 0-10 kilometres from assessed parks, and half cost weight to population 10-15 kilometres distant) were based on judgment. States provided no information to test those judgment based weights. In the light of these circumstances, the Commission has decided:

- (i) to continue to assume that the costs of conserving protected areas diminishes as population density reduces around such areas;
- (ii) to retain the cost weight relationship assessed in the 1999 Review; and
- (iii) to continue to assess a zone of cost influence surrounding protected areas such that the full cost weight will be applied to the contiguous population 0-10 kilometres from the protected area, and the half cost weight will be applied to the population 10-15 kilometres distant.

135. The Commission has agreed with the Victorian argument that double-counting of contiguous populations could exist where assessed land areas are close to each other. Steps will be taken to remove such double-counting from the assessment.

136. In the ACT, all IUCN protected areas are classified as IUCN II national parks — there are no lands classified as other types of IUCN protected areas (categories 1, 3, 4, 5 and 6). Therefore, any areas covered by the NCOSS system outside of the areas classified as IUCN II national parks are not designated protected areas under the IUCN system. Land areas outside the IUCN classification, including these additional areas covered by the NCOSS system, do not have bio-diversity conservation as a primary objective.

137. The Commission has therefore decided not to extend the scope of land area coverage within the ACT to that covered by the NCOSS system, for the purposes of the urban influences assessment or any other factor which relates to the IUCN classification.

138. The Commission’s decision is summarised in Table 21.

Table 21 COMMISSION DECISION — CONSERVATION COMPONENT:
URBAN INFLUENCES FACTORS

Decision	Reason
To assess an urban influences factor for the conservation component in the 2004 Review. The Commission has decided to base this factor on all 6 IUCN categories of protected land areas. Double-counting of contiguous populations will be addressed in the assessment.	Gives States the capacity to provide the average level of services by assessing the additional costs that States face because of the size of populations contiguous to protected areas.

139. **Method and results.** The process for calculating the urban influences factor will be as follows:

- (i) Calculate the contiguous population for each State as the sum of the contiguous population 0 to 10 kilometres from all six IUCN categories of protected land area boundaries, and half the contiguous population 10 to 15 kilometres from assessed protected land area boundaries⁴ - ensuring that no double-counting of contiguous population occurs.
- (ii) Calculate the ratio of the contiguous population to the total population for each State and Australia.
- (iii) Calculate the raw factor by dividing the per capita contiguous population for each State by the Australian per capita contiguous population.

140. Table 22 shows the calculation of the urban influences factors in the 2003 Update. When the PSMA data are received, the calculation will be updated.

Table 22 URBAN INFLUENCES FACTORS — CONSERVATION COMPONENT

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Contiguous pop 0 to 10 km (a)	2 668 750	854 940	289 540	318 147	347 969	16 709	33 489	28 987	4 558 531
Contiguous pop 10 to 15 km	891 676	563 334	391 943	312 518	270 222	31 519	97 281	7 292	2 565 785
Contiguous pop 10 to 15 km*0.5 (b)	445 838	281 667	195 972	156 259	135 111	15 760	48 641	3 646	1 282 893
Total weighted contiguous pop (c) = (a) + (b)	3 114 588	1 136 607	485 512	474 406	483 080	32 469	82 130	32 633	5 841 424
Total 1996 Census population (d)	6 038 689	4 373 520	3 368 844	1 726 095	1 427 943	459 660	299 245	195 101	17 889 097
Per capita contiguous population (e) = (c)/(d)	0.51577	0.25988	0.14412	0.27484	0.33830	0.07064	0.27446	0.16726	0.32654
Urban influences factor	1.57953	0.79588	0.44136	0.84170	1.03604	0.21632	0.84051	0.51223	1.00000

141. **Updateability.** As data are sourced from the PSMA and the ABS 2001 Census of population and housing, this factor can be partially updated every two years.

⁴ Any collection districts whose centroid is within a protected land area would also be included.

Cross-border

142. ***1999 Review.*** This component did not exist — factors were not assessed.

143. ***Preliminary State views.*** The ACT proposed that an assessment of cross-border demand be made to reflect the cost of controlling feral species originating from New South Wales (using the ACT's proposed modified general method). It argued that it has unavoidably incurred costs in controlling feral animals and weed species originating in New South Wales. It claimed that these species were previously eradicated or significantly reduced within the ACT by intensive control programs. Currently, the ACT is spending about \$130 000 per annum to prevent these species re-establishing themselves.

144. ***Staff proposals.*** In *Discussion Paper CGC 2002/5 Cross Border Disabilities and Special Circumstances of the Australian Capital Territory*, staff proposed that a cross-border factor not be assessed for National Parks and Wildlife Services, because all States face similar problems of controlling feral species and many of larger magnitudes than those of the ACT.

145. ***Further State views.*** Tasmania did not support the ACT's argument for the additional costs associated with feral species originating in other States, unless more compelling evidence was provided.

146. ***Commission decision.*** The Commission did not consider that a conceptual case had been made for assessing a cross border factor, because it was not convinced that controlling feral species coming into the ACT from New South Wales causes the ACT to bear additional costs over and above what other States face across their borders in similar circumstances. It therefore decided not to assess a cross-border factor for the conservation component in the 2004 Review.

147. The Commission's decision is summarised in Table 23.

Table 23 COMMISSION DECISION — CONSERVATION COMPONENT:
CROSS-BORDER FACTORS

Decision	Reason
Cross-border will not be assessed for the 2004 Review.	A conceptual case has not been made that costs incurred by the ACT are larger than those which are incurred by other States for similar purposes.

ISOLATION COMPONENT

Isolation

148. **1999 Review.** The isolation factor was assessed to account for differences in per capita costs of service provision for some States because of their economic and geographical isolation from the main interstate sources of supply in South Eastern Australia. It reflected the combined effect of isolation on labour-related costs, interstate freight costs, professional infrastructure costs, commercial goods costs, airfares, travel allowances and other travel-related subsidies. The isolation-affected expenses component represented 0.53 per cent of expenses in this category.

149. **2004 Review.** *Draft Assessment Paper CGC 2003/65 Isolation* discusses the issues raised by the States regarding the assessment of isolation. The paper sets out the Commission's decisions on the general method of assessment adopted for the 2004 Review and on the size of the isolation-affected expenses component for relevant categories. The States did not raise issues specific to this category.

150. The isolation factors for the isolation component, shown in Table 24, have been calculated according to the 2004 Review general method. Isolation-affected expenses for this category have been estimated to be 0.24 per cent of the category standard.

Table 24 ISOLATION FACTORS, 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
All years	0.05107	0.10737	0.17783	0.74776	0.56469	3.49490	1.51842	68.27218

151. The factor and component weight will not be updated until the next review. This means that isolation-affected expenses will grow at the same rate as category expenses.

LAND RIGHTS COMPONENT

Land rights

152. **1999 Review.** The land rights factor was assessed to take account of the additional costs incurred by the Northern Territory arising from the operation of the Commonwealth *Aboriginal Land Rights (Northern Territory) Act 1976* (ALRA).

153. **2004 Review.** *Draft Assessment Paper CGC 2003/69 Land Rights* discusses the issues raised by the States regarding the assessment of this factor. The paper sets out the Commission's decisions on the general method of assessment adopted for the 2004 Review and the categories in which the factor would be assessed.

154. Land rights-affected expenses for this category have been estimated to be \$4.6 million, which represents 0.96 per cent of the category standard. Table 25 shows the 2004 Review disability factors implied by those levels of costs.

Table 25 LAND RIGHTS FACTORS, 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1997-98	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	98.58552
1998-99	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	98.02771
1999-2000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	97.58712
2000-01	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	97.45037
2001-02	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	98.02489

155. The factors and the component weight determined by the expense proportion will be updated annually.

NATIVE TITLE COMPONENT

Native title

156. **1999 Review.** Native title factors were assessed to allow for the additional costs incurred by the States arising from the operation of the Commonwealth *Native Title Act* 1993.

157. **2004 Review.** *Draft Assessment Paper CGC 2003/70 Native Title Assessment* discusses the issues raised by the States regarding the assessment of this factor. The paper sets out the Commission's decisions on the general method of assessment adopted for the 2004 Review and the categories in which the factor has been assessed.

158. Native title-affected expenses for this category in 2001-02 have been estimated to be \$2.8 million, which represents 0.58 per cent of the category standard. Table 26 shows the 2004 Review calculation of the factor for 2001-02 implied by those expenses.

Table 26 NATIVE TITLE FACTORS, 2001-02

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Administration expenses - actual	500	2 480	20 206	14 859	6 718	204	204	4 853	50 024
Compensation expenses – actual	765	0	0	34	0	0	0	4 650	5 449
Total expenses	1 265	2480	20 206	14 893	6 718	204	203	9 503	55 473
Factors	0.06730	0.18047	1.94495	2.74309	1.56301	0.15232	0.22312	16.79242	1.00000

159. The factors and the component weight determined by the expense proportion will be updated annually.

NATIONAL CAPITAL COMPONENT

National capital

160. **1999 Review.** This component did not exist — factors were not assessed.

161. **Preliminary State views.** The ACT argued that the requirements of the National Capital Plan resulted in it incurring additional costs in planning and managing the Canberra Nature Park because:

- (i) the costs of developing a management plan were higher than standard because:
 - the National Capital Plan was quite prescriptive in terms of controls on public and vehicular access, the development and maintenance of amenities, the treatment of historical cottages and homesteads and the Civil Aviation Authority Radio Link Station;
 - the reserve system was very complex; and
 - the plan had to find a balance between the conservation values of the park required by the National Capital Plan and recreation uses which meet community expectations;
- (ii) extensive consultation with the National Capital Authority (NCA) and the general public was required; and
- (iii) all works proposals must be approved by the NCA.

162. The ACT concluded that the Commonwealth imposed planning framework for the Canberra Nature Park resulted in it incurring extra expenses of \$0.5 million in

planning and managing National parks. It said a national capital allowance of that amount was justified.

163. **Staff proposal.** In *Discussion Paper CGC 2002/5*, staff proposed that a national capital assessment be made for National Parks and Wildlife Services for the 2004 Review, based on a cost estimate of \$0.1 million. The cost estimate was based on an assessment that one full-time senior officer could undertake the task.

164. **Further State views.** The ACT reiterated its arguments that it incurred additional planning and management costs in the Canberra Nature Park. The Territory repeated that the additional costs it incurred were estimated to be \$0.5 million. It said that it had a high degree of confidence in its cost estimate, which it considered conservative because costs, such as those relating to road and safety beacon maintenance, were not reflected in the estimate.

165. The Northern Territory suggested that the ACT should provide further evidence before the Commission made a recommendation for the inclusion of a national capital assessment in this category.

166. **Commission decision.** As outlined in *Draft Assessment Paper CGC 2003/71 National Capital Allowances for the ACT*, the Commission has decided that equalisation principles require national capital allowances to be assessed for the 2004 Review when the ACT incurs additional costs that are:

- (i) undeniably the result of mandated influences that arise because of Canberra's status as the national capital and the seat of government;
- (ii) not of a municipal government type nature; and
- (iii) assessed to be above standard.

167. The Commission accepts that the requirements of the National Capital Plan impose above standard costs on ACT park management. The Commission also accepts that a conceptual case has been made that above standard costs are incurred in:

- (i) producing a management plan which satisfies the prescriptions of the National Capital Plan and deals with the very complex reserve system; and
- (ii) implementing the plan because of additional consultation required with the NCA and the need to apply for works approval before any works can be undertaken.

168. The Commission does not accept that a conceptual case has been made that the National Capital Plan is responsible for increasing the ACT's costs in the production of the management plan or its implementation because:

- (i) finding a balance between the conservation values of the park required by the National Capital Plan and recreation uses which meet community expectations is difficult; or

(ii) consulting extensively with the general public is required.

169. These circumstances may be costly. However, it is not clear that the costs incurred by the ACT are substantially different from costs incurred by the States. That is, the link to the National Capital Plan has not been established.

170. The ACT has not dissected the allowance it sought according to the cause of the additional costs. Based on the Territory's overall cost estimate and a judgement-based assessment that one full-time senior officer could undertake the planning and consultation tasks involved, the Commission has decided to assess a national capital allowance of \$0.1 million per annum for this category for the 2004 Review.

171. The Commission's decision is summarised in Table 27.

Table 27 COMMISSION DECISION — NATIONAL CAPITAL FACTORS

Decision	Reason
A national capital allowance of \$0.1 million has been assessed for the 2004 Review, to account for the additional costs faced by the ACT in managing the Canberra Nature Park because of the requirements of the National Capital Plan. The assessment is based on judgment, guided by the overall estimate of additional costs provided by the ACT.	Gives the ACT the capacity to provide the average level of services by assessing the additional costs incurred by the ACT that arise because of Canberra's status as the national capital and the seat of government.

172. **Method and results.** The national capital factors for the ACT assessed for this component, shown in Table 28, were calculated by dividing the Australian mean resident population by the ACT mean resident population. The factors for all other States are zero.

173. The component weight of 0.02 per cent was calculated by dividing the assessed allowance by total category expenses.

Table 28 NATIONAL CAPITAL FACTORS — 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
All years	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	60.95242	0.00000

174. **Updateability.** The factors for the ACT will be updated annually with mean resident population data. The cost component will be re-estimated by increasing the original allowance by the CPI.

SUMMARY OF RESULTS

175. Table 29 summarises the proposed assessment for the 2004 Review.

Calculating the category factor

176. Table 30 summarises the components, component weights and disability factors assessed for the 2004 Review. It shows the calculation of the category factor.

Table 29 NATIONAL PARKS AND WILDLIFE SERVICES — PROPOSED ASSESSMENT STRUCTURE FOR THE 2004 REVIEW

Expenses component	Component weight	Factors	Basis of calculation
	%		
Fixed Costs	3.29	Administrative scale Input costs	General method. General method, with weights of 80 % for wages, 2 % for accommodation and 1 % for electricity.
Aboriginal involvement in parks	6.64	Dispersion Input costs Socio-demographic composition	General method, based on the location of national parks. General method, with weights of 50% for wages, 2% for accommodation and 1% for electricity. Based on Indigenous populations in remote areas.
Visitor impact	37.01	Dispersion Input costs Economic environment	General method, based on the location of national parks. General method, with weights of 50% for wages, 2% for accommodation and 1% for electricity. Based on the estimated number of visitors.
Conservation	51.25	Dispersion Input costs Physical environment Urban influences	General method, based on the location of national parks. General method, with weights of 50% for wages, 2% for accommodation and 1% for electricity. Based on the number of species of flora and fauna; average number of forest, woodlands biophysical regions and climatic zones; and per capita area of national parks. Based on populations contiguous to national parks.
Isolation	0.24	Isolation	General method.
Land rights	0.96	Land rights	The additional costs in the Northern Territory arising from the Commonwealth <i>Aboriginal Land Rights (Northern Territory) Act 1976</i> .
Native title	0.58	Native title	Based on the additional costs incurred by States in the administration of, and compensation claims arising from, the Commonwealth <i>Native Title Act 1993 (as amended)</i> .
National capital	0.02	National capital	General method.

Table 30 NATIONAL PARKS — CATEGORY FACTOR DERIVATION, 2004 REVIEW, 2001-02

Factors	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Fixed Costs (FC) (component weight = 3.29%)								
Administrative scale (s)	0.36891	0.50461	0.66745	1.27717	1.61320	5.17750	7.59249	12.25311
Input costs (ic_fc)	1.03714	0.99034	0.97354	0.97996	0.96824	0.92479	1.01291	1.07737
Component factor	0.38432	0.50197	0.65271	1.25719	1.56897	4.80956	7.72502	13.26033
Cont. to category factor	0.01264	0.01651	0.02147	0.04136	0.05162	0.15823	0.25415	0.43626
Aboriginal Involvement in Parks (AIP) (component weight = 6.64%)								
Dispersion (d)	0.90299	0.90140	0.95131	1.44108	1.28700	0.93416	0.89509	1.42366
Input costs (ic_oth)	1.02451	0.99346	0.98254	0.98770	0.97882	0.95044	1.00764	1.04904
Socio-demographic (sdc)	0.20363	0.00218	1.28169	2.51266	0.62558	0.20870	0.00000	34.71188
Component factor	0.15389	0.00159	0.97523	2.92511	0.64520	0.15042	0.00000	41.65190
Cont. to category factor	0.01022	0.00011	0.06479	0.19433	0.04287	0.00999	0.00000	2.76722
Visitor Impact (VI) (component weight = 37.01%)								
Dispersion (d)	0.90299	0.90140	0.95131	1.44108	1.28700	0.93416	0.89509	1.42366
Input costs (ic_oth)	1.02451	0.99346	0.98254	0.98770	0.97882	0.95044	1.00764	1.04904
Economic environment (e)	0.89575	1.07147	1.06413	1.05186	0.77222	1.22684	1.23950	1.85902
Component factor	0.83038	0.95833	0.99323	1.50210	0.97699	1.08471	1.11835	2.73637
Cont. to category factor	0.30736	0.35472	0.36764	0.55600	0.36163	0.40150	0.41395	1.01286
Conservation (CON) (component weight = 51.25%)								
Dispersion (d)	0.90299	0.90140	0.95131	1.44108	1.28700	0.93416	0.89509	1.42366
Input costs (ic_oth)	1.02451	0.99346	0.98254	0.98770	0.97882	0.95044	1.00764	1.04904
Urban influences (u)	1.57953	0.79588	0.44136	0.84170	1.03604	0.21632	0.84051	0.51223
Physical environment (ph)	0.51568	0.41586	1.10571	2.06038	1.69700	2.20369	1.93538	9.44543
Component factor	0.80653	0.31619	0.48652	2.64525	2.37591	0.45018	1.56770	7.60679
Cont. to category factor	0.41336	0.16205	0.24935	1.35572	1.21768	0.23073	0.80347	3.89857
Isolation (ISO) (component weight = 0.24%)								
Isolation (iso)	0.05107	0.10737	0.17783	0.74776	0.56469	3.49490	1.51842	68.27218
Component factor	0.05107	0.10737	0.17783	0.74776	0.56469	3.49490	1.51842	68.27218
Cont. to category factor	0.00012	0.00026	0.00043	0.00179	0.00136	0.00839	0.00364	0.16385
Land rights (LRTS) (component weight = 0.96%)								
Land rights (lr)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	98.02489
Component factor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	98.02489
Cont. to category factor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.94104
Native title (NT) (component weight = 0.58%)								
Native Title (nt)	0.06730	0.18047	1.94495	2.74309	1.56301	0.15232	0.22312	16.79242
Component factor	0.06730	0.18047	1.94495	2.74309	1.56301	0.15232	0.22312	16.79242
Cont. to category factor	0.00039	0.00105	0.01128	0.01591	0.00907	0.00088	0.00129	0.09740
National capital (NC) (component weight = 0.02%)								
National capital (nc)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	60.95242	0.00000
Component factor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	60.73988	0.00000
Cont. to category factor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01237	0.00000
CATEGORY FACTOR	0.74410	0.53470	0.71496	2.16512	1.68422	0.80973	1.48889	9.31720

Calculation formula

177. The following formulas were used to calculate the contribution of each expenditure component to the overall category factor. In each case, the contributions are calculated as the expenditure component weight multiplied by the component factor (the bracketed terms in the formulas). Each contribution to category factor was rescaled to ensure that the sum of standardised equals the sum of actual expenditure.

$$\begin{aligned} \text{FC} &= 0.0329 (\text{ic_fc} * \text{s}) \\ \text{AIP} &= 0.0664 [(\text{ic_oth} + \text{d} - 1) * \text{sdc}] \\ \text{VI} &= 0.3701 [(\text{ic_oth} + \text{d} - 1) * \text{e}] \\ \text{CON} &= 0.5125 [(\text{ic_oth} + \text{d} - 1) * \text{ph} * \text{u}] \\ \text{ISO} &= 0.0024 (\text{iso}) \\ \text{LRTS} &= 0.0096 (\text{lr}) \\ \text{NT} &= 0.0058 (\text{nt}) \\ \text{NC} &= 0.0002 (\text{nc}) \end{aligned}$$

$$\text{Category Factor} = \text{FC} + \text{AIP} + \text{VI} + \text{CON} + \text{ISO} + \text{LRTS} + \text{NT} + \text{NC}$$

Comparison of category factors

178. Table 31 compares the category factors derived for the 2004 Review draft assessment with the 2003 Update.

Table 31 NATIONAL PARKS AND WILDLIFE SERVICES — CATEGORY FACTORS, 2004 REVIEW AND 2003 UPDATE

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2004 Review draft assessment	0.74410	0.53470	0.71496	2.16512	1.68422	0.80973	1.48889	9.31720
2003 Update	0.84056	0.60823	0.95868	1.56907	1.11862	1.21207	1.81593	8.38822

Standardised expenses

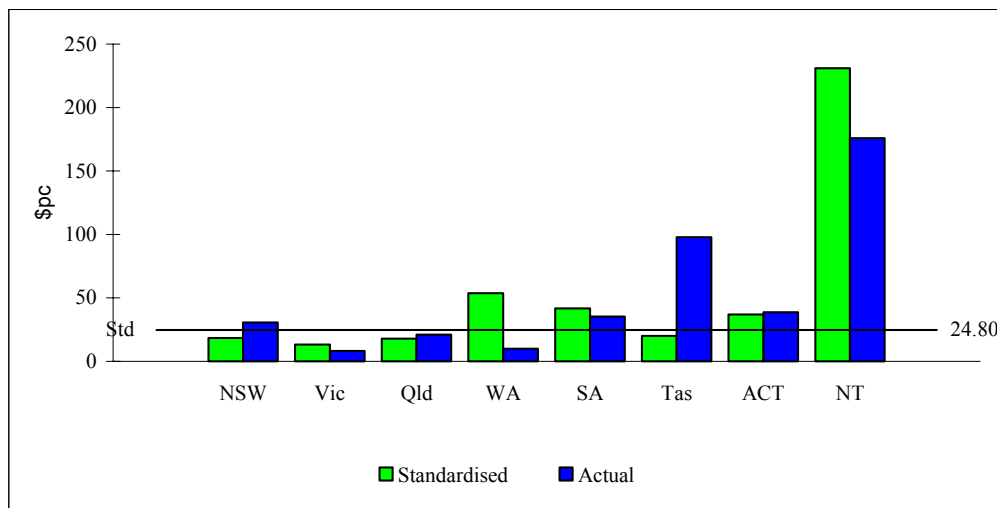
179. Table 32 shows the standardised expenses assessed for this category for 2003 Update in the draft assessment compared with that assessed in the 2004 Review.

Table 32 ACTUAL AND STANDARDISED AND EXPENSES, 2001-02

	Standard	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Actual Expenses									
\$ per capita	24.80	30.57	8.07	21.11	9.85	35.17	97.87	38.68	175.97
2003 Update - Standardised Expenses									
\$'000		200 904	106 279	126 645	108 325	61 140	20 642	21 089	60 361
\$ per capita	35.99	30.25	21.89	34.50	56.47	40.26	43.62	65.36	301.90
2004 Review Draft Assessment - Standardised Expenses									
\$'000		122 531	64 370	65 072	102 983	63 422	9 501	11 913	46 192
\$ per capita	24.80	18.45	13.26	17.73	53.69	41.76	20.08	36.92	231.03

180. Figure 1 shows the gross expenses per capita for 2004 Review in terms of standardised, estimated and standard expenses.

Figure 1 NATIONAL PARKS AND WILDLIFE SERVICES — GROSS EXPENSES PER CAPITA — STANDARDISED, ESTIMATED AND STANDARD, 2004 REVIEW



ANALYSIS

181. Table 33 shows the redistribution of grants resulting from the assessment in the 2003 Update and the 2004 Review draft assessment. It also shows the sources of change.

182. Compared to an equal per capita assessment, the 2004 Review Draft Assessment redistributed \$131.8 million away from New South Wales, Victoria, Queensland and Tasmania to the other States, \$43.4 million more than in the 2003 Update. This is consistent with our understanding that the category now has a much larger component assessed by the equal per capita method.

183. The main reasons for the change in grants were changes to assessment methods and data, including:

- (i) changes to the component weights, particularly the conservation and visitor impact components;
- (ii) changes in the assessment of several factors, so that they are now based on all six IUCN categories of protected areas;
- (iii) a change in the dispersion factor, so that it is now based on dispersion of protected areas (all six IUCN categories) and not population; and
- (iv) a change in the socio-demographic composition factor in the Aboriginal involvement in parks component, so that it is now based on remote Indigenous populations only.

184. Reducing the impact of the administrative scale assessment (by reducing the size of the component to which it applies) also had some impact on the assessment. The changes in the input costs factors also had substantial effects and led to increases in the redistribution towards New South Wales and mitigated the reduction for the Northern Territory.

Table 33 NATIONAL PARKS AND WILDLIFE SERVICES — EFFECT OF ASSESSMENT ON GRANT DISTRIBUTION

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total ^(a)
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Contribution to 2003 Update relativities^(b)	-38.8	-70.1	-5.3	40.4	6.6	3.7	9.4	54.2	114.2
Composition effect	11.9	21.5	1.6	-12.4	-2.0	-1.1	-2.9	-16.6	35.0
Assessment effect	-19.8	-21.6	-31.2	41.9	31.6	-6.7	-3.1	8.8	82.4
Interactions	6.1	6.7	9.3	-12.8	-9.6	2.1	0.9	-2.6	25.0
Contribution to 2004 Review Draft Assessments relativities^(b)	-40.7	-63.5	-25.6	57.1	26.6	-2.0	4.3	43.8	131.8
Total change	-1.9	6.7	-20.4	16.7	20.0	-5.7	-5.1	-10.4	43.4

(a) Total redistribution.

(b) Assuming same pool and a constant population.

USER CHARGES

Scope of the category

185. **1999 Review.** The National Parks and Wildlife Services User Charges category comprised user charges collected from fees and charges associated with the administration, regulation, planning, support and management of national parks and wildlife services. More specifically, the category included fees and charges collected from visitor entry fees, camping fees, publication sales, use of recreation facilities, leases and licenses, and fauna permits and licences.

Assessment method

186. **1999 Review.** A differential assessment of National Parks and Wildlife Services User Charges was made, based on the number of visitors to parks. The interstate differences in visitor numbers were discounted by 50 per cent before being used to derive revenue raising capacities. The discount was made because it is not economic for States to impose fees on all visitors.

187. **Preliminary State views.** States provided no comments on this assessment.

188. **Staff proposal.** Staff proposed that the current assessment approach be continued.

189. **Further State views.** Queensland said that the current method for assessing State's capacities to raise user charges was appropriate. The Northern Territory agreed with the Commission that it is inherently difficult to monitor park entry and collection fees.

190. **Commission decision.** The Commission accepts that a conceptual case exists for differentially assessing State capacities to raise National Parks and Wildlife Services user charges, based on per capita visitor numbers. This is because States generally charge fees when it is economically feasible to do so. The level of fees collected depends on the number of visitors to parks, and there are significant differences between States in the numbers of visitors to parks. Data are available on a yearly basis to measure the number of visitors to parks.

191. The number of visitors to parks does not translate directly into user charges raised. This is because:

- (i) States have different policy settings on park entry fees which can influence patronage;
- (ii) States have different policy settings on the methods used to count visitor numbers (various combinations of counters of traffic and pedestrians, visitor surveys, fee collection bases, and ranger observations were mentioned previously); and

- (iii) States generally have some parks where it is not economically feasible to charge fees.

192. Therefore, the Commission has decided to make an adjustment to the interstate differences in per capita number of park visitors, to better reflect the relative revenue raising capacities of States. States did not object to the level of discounting applied in the 1999 Review method — that is, to discount differences between States in the per capita number of park visitors by 50 per cent. Nor did the States provide any data which might assist the Commission in deciding whether an alternative adjustment should be made to per capita visitor numbers.

193. In the light of these circumstances, the Commission has decided to discount interstate differences in the per capita number of visitors by 50 per cent, by judgement, to adjust for policy influences on entrance fee settings and the methods use to count visitors to parks, as well as the economic infeasibility of charging all visitors to parks.

194. The Commission’s decision is summarised in Table 34.

Table 34 COMMISSION DECISION — NATIONAL PARKS AND WILDLIFE USER CHARGES

Decision	Reason
To assess differentially National Parks and Wildlife Services user charges based on differences between States in the per capita number of visitors, discounted by 50 per cent.	To give States the capacity to raise an average level of user charges associated with National Parks and Wildlife Services.

195. *Method and results.* The revenue raising capacities, set out in Table 35, have been based on interstate differences in the per capita number of visitors to parks, discounted by 50 per cent. That is, the capacities are the equivalent of the economic environment factor assessed for the visitor impact component in the assessment of National Parks and Wildlife Services expenses, discounted by 50 per cent. The discount has been applied to account for policy influences on park entry fee settings and methods used to count visitors, as well as the economic infeasibility of charging all visitors to parks.

Table 35 NATIONAL PARKS AND WILDLIFE SERVICES USER CHARGES — REVENUE RAISING CAPACITIES

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1997-98	0.95982	0.92982	1.00141	1.11409	0.92302	1.26615	1.15823	2.62166
1998-99	0.96747	0.88166	1.17017	1.01561	0.81279	1.07470	1.43195	2.30004
1999-2000	0.95699	0.87082	1.14321	1.10010	0.81869	1.28716	1.36279	2.11650
2000-01	0.94322	0.89027	1.13816	1.13188	0.80531	1.27193	1.32773	2.06868
2001-02	0.89575	1.07147	1.06413	1.05186	0.77222	1.22684	1.23950	1.85902

196. **Reality check.** The estimated capacities meet expectations. They show that South Australia has the least capacity to raise National Parks and Wildlife Services user charges, and the Northern Territory the highest. Those States with lower per capita visitation have lower capacities to raise user charges. Those States which have higher per capita visitation have higher capacities to raise user charges.

197. **Updateability.** Data sourced from States' data returns are available on a yearly basis to update the capacities.

Summary of results

198. Table 36 compares the category factors derived for the 2004 Review draft assessment with the 2003 Update.

Table 36 NATIONAL PARKS AND WILDLIFE SERVICES USER CHARGES — CATEGORY FACTORS, 2004 REVIEW AND 2003 UPDATE

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2004 Review draft assessment	0.89575	1.07147	1.06413	1.05186	0.77222	1.22684	1.23950	1.85902
2003 Update	0.93059	0.95026	1.11196	1.09205	0.79864	1.25851	1.30455	2.00084

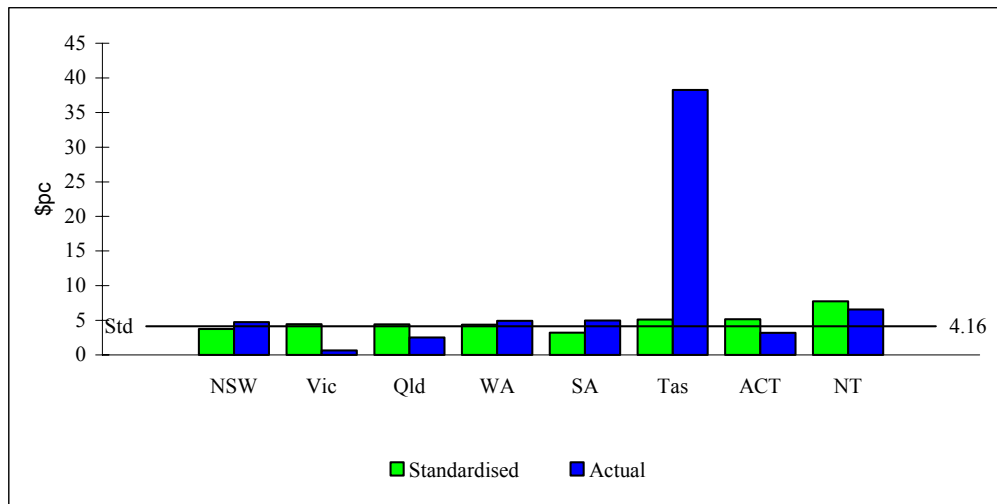
199. Table 37 shows the standardised revenue assessed for this category for 2003 Update in the draft assessment compared with that assessed in the 2004 Review.

Table 37 ACTUAL AND STANDARDISED AND REVENUE, 2001-02

	Standard	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Actual Revenue									
\$ per capita	4.16	4.75	0.68	2.51	4.91	4.98	38.26	3.20	6.56
2003 Update - Standardised Revenue									
\$'000		34 629	25 851	22 870	11738	6 796	3 337	2 359	2 242
\$ per capita	5.60	5.21	5.32	6.23	6.12	4.48	7.05	7.31	11.21
2004 Review Draft Assessment - Standardised Revenue									
\$'000		24 748	21 642	16 250	8 394	4 879	2 415	1 664	1 546
\$ per capita	4.16	3.73	4.46	4.43	4.38	3.21	5.10	5.16	7.73

200. Figure 2 shows the gross expenses per capita for 2004 Review in terms of standardised, estimated and standard expenses.

Figure 2 NATIONAL PARKS AND WILDLIFE SERVICES USER CHARGES PER CAPITA — STANDARDISED, ESTIMATED AND STANDARD, 2004 REVIEW



Analysis

201. Table 38 shows the redistribution of grants resulting from the assessment of the user charges in the 2003 Update and the 2004 Review draft assessment. It also shows the sources of change.

202. Compared to an equal per capita assessment, the 2004 Review draft assessment redistributed \$1.7 million away Queensland, Western Australia, Tasmania, the ACT and the Northern Territory to the other States, \$1.7 million less than in the 2003 Update.

203. The main reason for the change in grants was the change in the visitor counts data used to calculate the user charges factor.

Table 38 NATIONAL PARKS AND WILDLIFE SERVICES USER CHARGES —
EFFECT OF ASSESSMENT ON GRANT DISTRIBUTION

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total ^(a)
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Contribution to 2003 Update relativities^(b)	2.7	1.5	-2.4	-1.1	1.8	-0.7	-0.6	-1.2	6.0
Composition effect	-0.6	-0.3	0.5	0.2	-0.4	0.2	0.1	0.3	1.3
Assessment effect	-0.5	0.6	0.2	0.1	-0.3	0.1	0.0	-0.2	1.0
Interactions	0.1	-0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Contribution to 2004 Review Draft Assessments relativities^(b)	1.7	1.6	-1.6	-0.8	1.2	-0.5	-0.4	-1.1	4.4
Total change	-1.0	0.1	0.9	0.3	-0.6	0.2	0.1	0.1	1.7

(a) Total redistribution.

(b) Assuming same pool and a constant population.

ATTACHMENT A

IUCN GUIDELINES FOR PROTECTED AREA MANAGEMENT CATEGORIES

This attachment sets out the definitions of each category of protected area under the IUCN guidelines.

Category Ia

Strict Nature Reserve: Protected Area managed mainly for science

Area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.

Category Ib

Wilderness Area: Protected Area managed mainly for wilderness protection

Large area of unmodified or slightly modified land and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.

Category II

National Park: Protected Area managed mainly for ecosystem conservation and recreation

Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for this and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.

Category III

Natural Monument: Protected Area managed for conservation of specific natural features

Area containing one or more specific natural or natural/cultural feature which is of outstanding value because of its inherent rarity, representative or aesthetic qualities or cultural significance.

Category IV

Habitat/Species Management Area: Protected Area managed mainly for conservation through management intervention

Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.

Category V

Protected Landscape/Seascape: Protected Areas managed mainly for landscape/seascape conservation and recreation

Area of land, with coast and seas as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, cultural and/or ecological value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.

Category VI

Managed Resource Protected Areas: Protected Area managed mainly for the sustainable use of natural ecosystems

Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

ATTACHMENT B

METHODS USED TO COUNT VISITOR NUMBERS

1. This attachment describes the methods States use to count the numbers of visitors to their parks.

Victoria

2. ***New Methodology.*** The new broad-based community survey uses a sample of 12 000 people from Victoria (7 200), interstate (4 000) and overseas (800) to impute the total number of visits. Surveys are conducted continuously throughout the year with Australian residents interviewed by telephone and international visitors interviewed face-to-face at Melbourne Airport, prior to exiting Australia.

3. The overall visitation estimates can be categorised in two ways.

- (i) Firstly by population strata - that is Melbourne, Regional Victoria, Interstate (NSW and South Australia) and International (exiting Melbourne Airport).
- (ii) Secondly by the number of visits to venue types - that is Metropolitan Parks (National Parks Act) and Piers on the Bays (Marine Act).

4. The new method is considered to be a conservative visitation measure due to several exclusions:

- (i) Visits by children are not included.
- (ii) Unidentified parks in the city or suburbs of Melbourne are not included in order to avoid including visits made to Greater Melbourne Parks managed by agencies other than Parks Victoria.
- (iii) Visits from the States of Western Australia, Tasmania, Queensland, Northern Territory and other Australian Territories are excluded (assessed as approx. 13 per cent of Interstate visitation).
- (iv) Visits made by overseas residents exiting Australia through an airport other than Melbourne are excluded (assessed as approx. 40 per cent of International visitation).

5. The new visitor monitoring methodology differs substantially from the previous system. Due to these changes reliable individual park data is no longer available and direct comparisons cannot be made between the 2001/2002 figures and historic visitor number data.

Queensland

6. ***Basis of the Visitation Estimates.*** Estimates for the land tenures managed under the *Queensland Nature Conservation Act 1992* are based on:

- (i) Camping permits granted under the *Nature Conservation Act 1992*;
- (ii) Commercial Activity Permits granted under the *Nature Conservation Act 1992*;
- (iii) Group Activity Permits granted under the *Nature Conservation Act 1992*;
- (iv) Visitor surveys;
- (v) Vehicle and pedestrian counters;
- (vi) Incidental records (e.g. visitor books); and Estimates by field staff.

7. Estimates for the land tenures managed under the *Queensland Forestry Act 1959* (State forests; timber reserves and forestry reserves) are based on:

- (i) Camping permits granted under the *Forestry Act 1959*;
- (ii) Permits-To-Traverse for motorised vehicles, horse and bicycles granted under the *Forestry Act 1959*;
- (iii) Commercial Activity Permits granted under the *Forestry Act 1959*;
- (iv) Group Activity Permits granted under the *Forestry Act 1959*;
- (v) Visitor surveys; and
- (vi) Vehicle and pedestrian counters.

Tasmania

8. The estimated visitor numbers for 37 of Tasmania's 490 Terrestrial protected areas listed on CAPAD (the Collaborative Australian Protected Areas Database). It excludes marine protected areas. It also excludes visitor numbers for all recently proclaimed terrestrial protected areas that are currently in the process of being updated with details of new areas.

9. Unless otherwise stated, visitor numbers refer to the number of person entries. A person entry occurs whenever a person enters a protected area. This is consistent

with the Best Practice guidelines adopted by the Australian and New Zealand environment Minister's Council (known as ANZECC at that point in time).

10. The 37 protected areas for which estimates of visitor numbers are available include all 18 National Parks listed on CAPAD 2000, two prominent State Reserves, two prominent Historic Sites and 15 Forest Reserves. The basis for these estimates is described below.

- (i) Visitor numbers (just under 600 000 in 2001-02) for two National Parks (IUCN II), the two State Reserves (IUCN III), the two Historic Sites (IUCN V), and one prominent Forest Reserve (IUCN VI) are based on ticket sales/admissions.
- (ii) Visitor numbers (about 1.3 million) for the majority of national Parks (IUCN II/1b and II) and Forest Reserves (IUCN III, IV and VI) are based on estimates of car numbers adjusted to the number of visitors using the results of survey programs. These surveys programs are specifically designed to calibrate the estimate of car numbers to generate an estimate of the number of persons visiting that site.
- (iii) Visitor numbers (about one thousand) for one of the more prominent National Parks (IUCN II/1b) includes only interstate and international visitors as estimated by the Tasmanian Visitor Survey - that is, It does not include visits by Tasmanian residents.
- (iv) Visitor numbers (about 50 thousand) for two of the smallest National parks (IUCN II) are estimated directly from informal monitoring by Parks and Wildlife Service staff.

11. As noted above, only 37 of Tasmania's 490 terrestrial protected area sites are monitored for visitors. These 37 sites cover 1.432 million hectares, which is 65.02 per cent of the total land area covered by all 490 Tasmanian terrestrial protected areas. Accordingly, visitor numbers are scaled up by the inverse of this factor, 153.8 per cent, to reach an approximation of "Total Visitor Numbers" to Tasmania's terrestrial protected areas. Whilst this scaling may not be ideal, the only feasible alternative is to ignore the remaining 453 protected areas.

12. Please note, the estimates supplied to the Commonwealth Grant's Commission in 2001 only included information on 15 National Parks. This information is broadly comparable with the sum of the "II/1b National Park/Wilderness Area" and the "II National Park" rows in the table provided during the 2003 Update. As noted above, the inclusion of an additional 22 Tasmanian terrestrial protected areas listed on CAPAD is consistent with the Commission's advice.

The Northern Territory

13. The Northern Territory Parks and Wildlife Commission monitor visitor numbers in line with the Australia New Zealand Environment Conservation Council (ANZECC) Best Practice Model. Two categories have been adopted for this purpose.

- (i) Type 1 Parks – high visitation parks that cater for high volumes of visitor traffic and account for a large proportion of visits to Parks and Wildlife managed estates (approximately 80-90 per cent). This equates to a minimum annual visitation of approximately 60 000 persons.
- (ii) Type 2 Parks – low visitation parks that cater for high volumes of visitor traffic and account for a small proportion of visits to Parks and Wildlife managed estates (approximately 10-20 per cent). This equates to a maximum annual visitation of approximately 60 000 persons.

14. Parks and Wildlife uses four measures to count visitor numbers:

- (i) counters (traffic and pedestrian);
- (ii) visitor surveys;
- (iii) fee collection; and
- (iv) ranger observation.

15. The specific requirements for monitoring of parks are based on the two categories of park types. All Type 1 and Type 2 parks are required to have a park specific Visitor Monitoring Strategy and an Annual Action Plan. As a general rule, measurement of visitor use by calibrated counter and survey is the minimum requirement for Type 1 parks, and measurement of visitor use by calibrated counter is the minimum requirement for staffed Type 2 parks, and the preferred method for all parks and destinations within parks. If, however, there are other methods in place that accurately determine visits, such as permits or fees, a counter may not be required. District staff and the Regional Coordinator will determine which staffed Type 2 requires visitor satisfaction surveys. This will be determined during development of the Park Visitor Monitoring Strategy.

16. Because calibrating counters can be difficult in un-staffed Type 2 parks and/or parks with extremely low visitation District staff and the Regional Coordinator will determine what methods for counting visits are appropriate in these Parks. Ranger observation is a means of assessing visitor use and/or behaviour in relation to a specific management and/or development issue and may be required at times for both Type 1 and Type 2 parks.

17. Visitor use of parks and activities can also be determined using information obtained by concessions operations and park staff from fee collection or other permit systems. In both Type 1 and Type 2 Parks where camping fee envelopes are collected by rangers, concessions operate or a permit system is in place, park staff are required to collect this information.