Identifying the Recreational Value of Reserves

NEFA BACKGROUND PAPER
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National parks and reserves provide a range of economic values to society including those associated with recreation and conservation. Visitation to, and management of protected areas, also provides stimulation to regional economies from the associated expenditures that occur within the region. Tourism is the most rapidly expanding sector of the regional economy. The long-term economic value of national parks for recreation will often outweigh any short-term economic return from logging, mining and/or grazing.

Public land is a highly valued resource, providing the only natural areas for recreation for many residents. The Centre for Coastal Management (1993) note *"as indicated by the recreationalist survey … the most significant source of recreational forest visitation comes from the residents of the local government area".*

Roy Morgan Research Ltd (2011) undertook a series of telephone surveys to identify visitation to NSW national parks and reserves, estimating 38,057,162 visitors in 2008 and 34,607,247 visitors in 2010 (with the drop considered to be due to extreme weather and overseas travel). Around 12% of people had visited a park in the last 4 weeks. Primary activities in 2010 were walking (50%), water-based activities (18%), picnicking and dining (16%) and touring and sightseeing (10%).

Buultjens et. al. (1998) considered that:

> *The natural environment is perceived to be the one of the most important tourist attractions for Australia, and in particular of the north east NSW region. Forested areas represent a significant proportion of tourism and recreational attractions in natural environments (Commonwealth Department of Tourism, 1994; Northern Rivers Regional Development Board, 1994). Furthermore, demand for nature-based experiences is increasing significantly, with a 48 percent increase in National Park visitation in NSW and a 66 percent*

increase in bushwalking between 1989 and 1994 (Blamey, 1995)
The majority of visitors to National Parks and State forests seek passive experiences, enjoying the scenic beauty, tranquillity, solitude, smells and sounds of nature in undisturbed natural areas with family groups (Worboys, 1997; Chapman, 1995). The trips are predominantly two - four hours in duration (Chapman, 1995). A majority of visitors (89 percent) engage in rest and relaxation, 82 percent in landscape appreciation, 76 percent in wildlife appreciation, 73 percent in swimming, 71 percent in short walks and 66 percent in barbeques (Chapman, 1995). Off-road driving and trail bike riding account for 11 percent and 4.8 percent of activities, respectively

...

A 1995-96 survey of Tourism Council Australia (TCA) members revealed that 43 percent of operators utilised National Parks. The survey respondents ranked scenic attractions, a clean environment, wildlife, outdoor activities and National Parks as the most important attributes of the Australian tourism product, along with service, price and climate (Huyers and Bennett, 1997).

These same operators rated natural resource management, wilderness protection, conservation/heritage and wildlife protection as the four main environmental issues facing the Australian tourism industry. ...

The act of converting a State Forest to a National Park can increase its recreational use because national parks are a international concept and this recognition attracts both domestic and international tourists. As noted by Buultjens and Luckie (2004):

National park visitation is a prominent part of both domestic and inbound travel within Australia. In a 1998 survey of international visitors to Australia it was found that 47 per cent of visitors aged 15 and over reported that they had visited at least one national park during their trip (BTR 1998). Visitation to national parks was even higher (57 per cent) among those international visitors travelling for holiday or pleasure purposes. For domestic travellers, visiting national parks is also popular. The National Visitor Survey revealed that a visit to a national park featured in 13 per cent of domestic overnight trips in 1999 (BTR 1999). This figure is significant when considering that domestic tourism in Australia represents a much larger market compared to inbound tourism.
In NSW during 1999, 11 per cent of domestic overnight travellers reported visiting national parks, bushwalking and rainforest walks as part of their trips (BTR 1999). Visiting national parks, bushwalking and rainforest walks in NSW were slightly more common among intrastate visitors (11 per cent) compared to interstate visitors (9 per cent).

There have been many attempts over the years to identify the economic benefit of national parks and reserves to regional economies. This has been an evolving process that has been developed and refined in a variety of studies in north-east NSW over the years. The economic stimulus provided to regional economies by National Parks and reserves arises from two sources:

- expenditure in the region by visitors to the protected areas; and.
- expenditure in the region that is associated with the management of reserves.

The Kuring-gai Colledge of Advanced Education (1988) found that of visitors to the rainforest parks of New England and Dorrigo 37% were local visitors, 12% were 'day-trippers' from outside the region, and 51% 'overnight visitors' from outside the region. The average daily expenditure per visitor were estimated as $34, $59 and $89 respectively. Of this expenditure 39% has been estimated to flow directly into local wages (Kuring-gai Colledge of Advanced Education 1988), which has an employment flow on effect of 2.06 (employment multiplier).

For the Dorrigo National Park, Powell and Chambers (1995) found the average expenditure per person associated with visits was $175.03 and for the Gibraltar Range National Park it was $73.45, respectively with 35% and 23% spent on accomodation, 20% and 15% spent on meals, 14% and 27% spent on shopping, 20% and 25% spent on cars, 9% and 8% on fares, with the remaining 2%

classed as ‘other’(Powell and Chambers 1995). For the Dorrigo National Park, 11% of this, an average of $20.10 per person, was assessed as being expended in the township of Dorrigo and the surrounding area. With 160,000 visitors per annum Powell and Chambers undertook and input/output analysis to assess that;

“*the total impact associated with visits to the Dorrigo National Park generated $3.6m in regional output; $2.0m in regional value added activity; $1.3m in regional household income; and 59 jobs. This represented 7 per cent of output, 6.5 per cent of value added activity and household income and 7 per cent of employment in the Dorrigo region.”*

Using the same data, Bennett (1995) undertook an assessment using the Travel Cost Method (TCM) to identify the net economic benefit, or the consumer surplus, for the parks. The basic premise of the travel cost method is that the time and travel cost expenses that people incur to visit a site represent the “price” of access to the site. The consumer surplus generated reflects the satisfaction a consumer receives over and above the price paid. Bennett identified *“the amount the surveyed visitors would be willing to pay for their experience at the park, in excess of what they have to pay”* as $17.33 per visit to Dorrigo National Park and $15.83 per visit to Gibraltar Range National Park. Bennett identified the economic value of recreation use of Dorrigo as $2,772,800 per annum and Gibraltar Range as $633,200 per annum.

It is estimated that, in 1997, there were 3.8 million visitors to National Parks and other protected areas in north-east NSW and 1.4 million visitors to State Forests (Buultjens et. al. 1998). On a hectare basis, there were almost three times as many visitors to reserves as compared to State Forests.

Buultjens et. al. (1998) used the consumer surplus identified by Bennett (1995) for Gibraltar Range National Park, adjusted for inflation (taking the consumer surplus to $20.30 per visit), to identify a total consumer surplus of $77,100,131 for visits to national parks. Buultjens et. al. (1998) also used expenditures by visitors to the region for Dorrigo and Gibraltar Range National Parks (Powell and Chalmers 1995), adjusted for inflation, to identify a total expenditure of $80,290,481 to $100,420,071 per annum by visitors to national parks in the region.

Buultjens et. al. (1998) identify that studies by Powell and Chalmers (1995) and Gillespie (1997a) estimated that the total (direct and indirect) employment impact per 10,000 visitors ranged from four to seven jobs. Based on this, in 1997 National Parks and reserves in north-east NSW resulted in 1,480-2,590 local jobs (direct and indirect) generated from visitor expenditure.

Buultjens and Luckie (2004) examined the local economic impact of a suite of seven national parks in north-eastern New South Wales (Yuraygir, Nightcap, Border Ranges, Boonoo Boonoo, Bald Rock, Gibraltar Range and Washpool National Parks) finding from visitor surveys that:

> *Visitors to most parks travelled at least 300 kilometres to and from their home. The only exception was visitors to Nightcap who travelled on average 90 kilometres. Nearly 46 per cent of respondents stated their visit to the park was the sole purpose of their trip. A majority of visitors (55 per cent) were on a day trip while 45 per cent were holidaying in the park. The average length of the trip undertaken by the visitors was 6 days duration while the average time spent in the national park was 3 days.*

For the seven National Parks Buultjens and Luckie (2004) found:

> *Using visitor and NPWS expenditure it was estimated that the annual total expenditure in the north-eastern NSW economy by visitors to the seven national parks was $24.3m, consisting of NPWS expenditure of $3.3m and $21mvisitor expenditure. In addition to these direct benefits, there were also flow-on or multiplier effects estimated to be in the range from $17.1m to $22.4m. The total economic effect (direct benefits plus flow-ons) of the seven national parks was estimated to be in the range of $41.4m to $46.6m. These figures are an underestimate of the total expenditure undertaken in north-east NSW because only a limited number of towns were listed for each park as ‘local’ and it is very likely there would have been substantial expenditure undertaken in other towns within the region.*

The annual total expenditure adjusted for type of visitation, leakages and the proportion of the trip related to the national park visit was $6.2m, consisting of NPWS expenditure of $3.3m and $2.9m visitor expenditure. The flowons ranged from $5.2m to $5.9m and total effect was estimated to be between $11.5m to $12.2m. The employment effects for NPWS expenditure was estimated to be between 40 and 97 jobs, while visitor expenditure effects, adjusted for type of visitation, leakages and the proportion of the trip related to the national park visit, were between 38 and 68 jobs. The flow-on effects accounted for between 55 and 99 jobs and total effects accounted for 151 to 263 jobs. The figures for expenditure adjusted for type of visitation, leakages and the proportion of trip, while an underestimate, are the most accurate reflections of the economic impact of NPWS and visitor expenditure.

Gillespie Economics (2006) expanded on the work of Buultjens and Luckie (2004) to study the impacts of 167 National Parks and Reserves in the Upper North East region, Based on previous studies and new information they found that the reported 5,891,684 visitors per year to protected areas in the north-east of NSW and park management expenditure were estimated to make the following total contribution to the regional economy.

Table – 2005 Regional Economic Impact of Protected Areas in Upper North East NSW From Gillespie Economics (2006)

	Visitor Expenditure	**Park Management Expenditure**	**TOTAL**
Total output	$225M	$29M	$254M
Total value-added	$107M	$17M	$124M
Total income	$59M	$13M	$72M
Total jobs	1,651	265	1916

Gillespie Economics (2006) found that in 2005 the total annual regional economic impact on the economy of north-east NSW from the expenditure of 5,891,684 visits to National Parks and reserves to be:

- $225M in direct and indirect output or business turnover;
- $107M in direct and indirect value-added;
- $59M in direct and indirect income; and
- 1,651 direct and indirect jobs.

Using the Travel Cost Method Gillespie Economics (2006) found that the economic value (consumer surplus) of visits to the seven national parks assessed by Buultjens and Luckie (2004) was estimated at between $25 and $50 per person, which equates to an annual value of $188M when extrapolated to the 5,891,684 visitors per year to protected areas in the north-east of NSW.

As at 2010 the visitation to National Parks and reserves in north east NSW was estimated on the ground from a variety of sources as 9.4 million visitors (OEH pers. comm.), which represents a 250% increase since 1997 (Buultjens et. al. 1998). Roy Morgan Research Ltd (2011) assessed visitation to north-east NSW in 2010 as 10.8 million from telephone surveys, with this having declined compared to 2008, likely due to extreme weather and increased overseas travel (Roy Morgan Research Ltd 2011). The Roy Morgan estimates are likely to be more accurate, though don't include international visitors. The range of estimates are used below.

Extrapolation of the results of Gillespie Economics (2006), adjusted for inflation to 2010, gives the total annual regional economic impact on the economy of north-east NSW from the expenditure of 9.4-10.8 million visits to National Parks and reserves to be:

- $416-476 million in direct and indirect output or business turnover;

- $199-228 million in direct and indirect value-added;
- $110-126 million in direct and indirect income; and
- 2,642–3,026 direct and indirect jobs.

Using the Travel Cost Method calculations of Gillespie Economics (2006), the economic value (consumer surplus) of visits, adjusted for inflation, equates to an annual value of $348-399 million when extrapolated to the 9.4-10.8 million visits per year to protected areas in 2010 in the north-east of NSW.**Reserves**

A Short History of Reserves in North East NSW

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