Pacific Islands Whale Watch Tourism: 2005

A Region Wide Review of Activity

October 2006

Prepared by:

ecolarge

Economists @ Large and Associates
Consulting Economists

Secretariat of the Pacific Regional Environment Programme

South Pacific Tourism Organisation

IFAW International Fund for Animal Welfare

south pacific whale research consortium

Table of Contents

Report prepared by:

Simon O'Connor - *Senior Consultant*

Economists @ Large & Associates
Consulting Economists
"Adding value to society"

PO Box 256
Noble Park VIC 3147
Tel +61 3 9562 4472
Fax +61 3 9562 4118
info@ecolarge.com
www.ecolarge.com

Executive Summary

The Pacific Islands' whale and dolphin watching industry has demonstrated remarkable growth since 1998.

A worldwide assessment of the whale watching industry was presented in 2001 with global whale watching data for the 1998 season. The following report provides current data for the Pacific Islands region in 2005 and allows for analysis of trends in whale and dolphin watching tourism since 1998 to be assessed[1].

Data for this research was gathered from a survey of regional whale and dolphin watch operators. This commercially sensitive data was combined with other data sources including tourism industry bodies, government, universities, researchers, non-governmental organisations and inter-governmental agencies to create an overall snapshot of the size of the whale watch industry.

In 2005, tourists and Pacific Islanders made more than 110,700 visits to watch whales and dolphins - a ten-fold increase on the previous figure of 10,300 in 1998. As an average, this translates to 45% growth per annum since 1998.

This extraordinary rate of growth outshines the region's own above average inbound tourism growth of 7.3% on an average annual basis from 2000 to 2004[2]. This was in a period that witnessed a serious dent in global tourism due to the SARs outbreak in Asia and the Iraq War, leading to a period of overall stagnation in global tourism with a low annual average growth of world tourism of 2.9% (2000-2004)[3].

As a result of this strong growth in whale watching in the Pacific Islands region, the industry is experiencing a rapid increase in sales with a significant impact on tourism expenditure in the region. Direct expenditure on whale and dolphin tourism has had a fifteen-fold increase over the seven year period from USD 500,000 to over USD 7.5 million. Whale watch operators have therefore been able to charge relatively higher tickets prices for whale watch participation.

In 2005, estimated total expenditure (direct plus indirect expenditure) on whale watching tourism was over USD 21 million for the region, up from USD 1.2 million in 1998.

Of this strong growth in whale and dolphin watching tourism, Guam accounts for approximately 75% of whale and dolphin watchers in 2005, with 84,000 participants in the country's well-established dolphin watching industry. As a proportion of total expenditure, Guam accounts for over USD 16 million (or 76%).

Excluding Guam, regional whale watching growth rates achieved a high 23% average annual growth from 1998-2005 with 26,746 whale watchers in 2005.

For the period studied, the industry has also expanded its geographical presence across the region. In 1998, whale and dolphin operations were reported in nine countries in the region. This study found some form of whale and/or dolphin watching in fourteen of the twenty-two countries assessed for the 2005 year.

There is no indication that the industry does not have potential to continue this strong growth trajectory, although this is heavily dependent on the growth of international tourist arrivals to the region. For a majority of countries where whale watching was reported, it is predominantly international tourists participating as opposed to domestic tourists. The South Pacific Tourism

[1] In this report, 'whale watching' refers to observing all cetacean species including whales, dolphins and porpoises.

[2] Average annual growth in international tourist arrivals in the Asia Pacific Region between 2000-2004: World Tourism Organisation, *Tourism Market Trends 2005 Edition - Annex,* www.world-tourism.org, accessed August 2006

[3] ibid. – data relates to 'International Tourist Arrivals – World'.

Organisation has forecast continued inbound tourism growth (in the South Pacific Region)[4] and therefore it is likely that this growth trend in whale watching could continue.

Beyond inbound international tourists, key constraints to further development of whale watching are the abundance of cetaceans (both whales and dolphins) and therefore availability of viewing opportunities, tourist accessibility difficulties due to high travel costs to certain parts of the region and irregularity of travel options, and a lack of available marine-based tourism operators. In countries where there is a strong tourism market, but low whale watching numbers, this primarily relates to an inconsistency of cetacean sightings due to low cetacean abundance levels in local waters.

The project also sought to provide broad recommendations that would promote and support the continued sustainable growth of the industry across the region. These have been included in the 'Summary of Findings' section of this report.

[4] Forecast at 8% growth in 2005 - Hopkins, R., *South Pacific – Facts and Figures of Tourism*, SPTO presentation, www.spto.org, accessed July 2006

Acknowledgements

This research was commissioned by the project partners, International Fund for Animal Welfare, Secretariat of the Pacific Regional Environment Programme, South Pacific Tourism Organisation, and the South Pacific Whale Research Consortium. We would like to thank all the project partners for their support for this research, including SPREP (Lui Bell), SPWRC (Mike Donoghue), SPTO (Helen Po'uliva'ati and Lisiate Akolo), IFAW (Darren Kindleysides & Sue Taei) as well as the project advisory team, Claire Garrigue (Opération Cétacés – New Caledonia) and Mark Orams (Massey University – New Zealand).

The researchers would also like to thank all those parties who participated in this study. This covered a range of stakeholders in the tourism industry across the Pacific Islands region including government representatives, non-governmental organisations, universities, tourism authorities, inter-governmental agencies, independent research organisations and industry bodies.

Of critical importance to such a study is the contribution of the private operators themselves. We would like to thank the many operators we had discussions with and who responded to our survey. Without their data, this report would not have been possible. Many of you have been very generous with your time and responses and we appreciate your vision to see this research as an important part of the further establishment of this industry in the region.

Furthermore, regional insight was provided by researchers Nan Hauser (Cook Islands) and Michael Poole (French Polynesia). In Tonga, the Tonga Whale Watch Operators Association provided invaluable information, particularly through their President, Allan Bowe.

Introduction

The Pacific Islands region is home to a high diversity of cetaceans (whales, dolphins & porpoises). It contains critical breeding, calving and feeding grounds and migratory pathways for many species. Historically, the region was a focus for whaling from the late 1700s. Many species were hunted to the brink of extinction and are recognised internationally as still threatened today (IUCN Red List[5]). Nevertheless, the presence of populations of cetaceans has led to the development of whale and dolphin watching tourism industries over the last 10-15 years. Cetaceans are now increasingly an important element of the region's economy.

In 2001, a report by Eric Hoyt for the International Fund for Animal Welfare (the 'Hoyt Report'[6]) provided a global assessment of whale watching[7] tourism expenditures and participant numbers. The report assessed several countries and territories in the Pacific Islands region (Fiji, New Caledonia, Solomon Islands, Guam, Midway, Federated States of Micronesia, Tonga, French Polynesia & Niue). Whale watching industries have subsequently developed in other Pacific Island countries and territories not included in the Hoyt assessment.

Since the Hoyt Report, there has been increased interest in the conservation of the region's cetaceans through, for example, the Secretariat of the Pacific Regional Environment Programme's 2003-2007 Whale and Dolphin Action Plan, and increased membership of both the Convention on Migratory Species (CMS) as well as the International Whaling Commission (IWC) by Pacific Island countries.

In February 2006, the International Fund for Animal Welfare (IFAW), Secretariat of the Pacific Regional Environment Programme (SPREP), South Pacific Tourism Organisation (SPTO), and the South Pacific Whale Research Consortium (SPWRC) commissioned an assessment of the whale and dolphin watching industry in the Pacific Islands region (as defined by SPREP's member countries[8]).

Specifically, the purpose of the assessment was:

a) To review the status of marine mammal tourism activities in the Pacific Islands region.

b) To assess the economic value and growth of whale and dolphin watching tourism in specific Pacific Islands countries and territories.

c) To undertake a preliminary assessment of the potential for further whale and dolphin watching tourism in the Pacific Islands region, including identifying development needs.

d) To provide recommendations of work required to support the future development of a sustainable tourism industry based on the viewing of cetaceans.

A region-wide review of the status of whale watching activities was seen as a valuable tool to further support the development of responsible whale and dolphin watching tourism and to support regional initiatives promoting the conservation of these species.

Furthermore, the study aimed to assess the status of dugong and sea turtle based tourism activities across the region and report at a basic level on their existence in each country (data for each country

[5] The World Conservation Union, www.redlist.org.

[6] Hoyt, E. (2001), *Whale Watching 2001: Worldwide tourism numbers, expenditures and expanding socioeconomic benefits: a report for IFAW*.

[7] For the purposes of this report, 'whale watching' refers to viewing activities of any cetacean species from land, sea or air. Importantly, this refers also to dolphin and porpoise watching activities where they occur in a non-caged, 'wild' environments.

[8] For the purposes of this assessment, the Pacific Islands region follows SPREP member countries (plus Pitcairn Island) and encompasses 22 distinct countries, states and/or territories across the South and North Pacific Ocean, but excludes Australia, France, New Zealand and the US. French, New Zealand, UK and US territories are included in this assessment. The countries covered are American Samoa, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshal Islands, Nauru, New Caledonia, Niue, Northern Marianas, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis & Futuna and Pitcairn Islands.

are included in the 'Appendix of Detailed Findings' section). This report has predominantly focused on the whale and dolphin watching industry.

The following report compiles the findings of this assessment including the recent growth of whale watching in the Pacific Islands region, the economic value of whale watching in the region and a country-by-country assessment of the potential for the further development of whale watching tourism.

Research methods

The data in this report have been attained primarily through an extensive survey of operators involved in marine-based tourism activities in the 22 countries, states and territories covered by this assessment. In total, 139 operators were surveyed by questionnaire and telephone interviews with a response rate of 32%. Based on this sample size, this represents an appropriate response rate giving a cross section of all countries assessed and provides an adequate basis from which to form baseline estimates for the region. Further data have come from interviews and questionnaires sent to tourism authorities, government agencies, universities, researchers, non-governmental and inter-governmental organisations in all countries covered by the scope of this project. Thirty-one additional organisations participated in this study.

The findings in this report aim to provide estimates of growth patterns of the whale watch industry in the Pacific Islands region and form a preliminary overview of the potential for further tourism development. Growth patterns are assessed based on numbers of whale watch participants in 2005 compared to Hoyt's 1998 figures, and calculated as an annual average growth figure that assumes a constant rate of growth across the seven years from 1998 to 2005.

Growth is based on numbers of whale watching trips undertaken by whale watchers in the region in 2005. For the purposes of this report, 'whale watching' refers to viewing activities of any cetacean species from land, sea or air. Importantly, this refers also to dolphin and porpoise watching activities where they occur in a non-caged, 'wild' environment.

An economic estimate is also derived for this report that aims to calculate the value of the Pacific Islands' whale watching industry in 2005. This is calculated based on the direct economic expenditure on whale watching activities as well as a conservative estimate of indirect expenditure that can be attributed to the person undertaking the whale watch activity ('whale watcher').

In the calculation of the economic benefits of whale watching there are a range of issues that need to be clarified. The sale of tickets to travel on a whale watching vessel is a gross financial benefit resulting from whale watching. The purchase of food, accommodation and travel expenses (amongst others) to attend a whale watching event can also be attributed (subject to conditions) to whale watching on many occasions. These expenses can be called 'direct' expenditure. In the economic literature 'indirect' expenditure is undertaken when the businesses that earned the direct expenditure spend the revenue on goods and services as inputs to their activities. 'Induced' expenditure occurs when the employees of these business re-spend direct expenditure in the form of wages and salaries.

Estimation methodology for direct expenditure used in the Hoyt report is the same as that used in this report. The Hoyt Report, however, uses a different definition of indirect expenditure. That report, relying on conventions from previous assessments, defines indirect expenditure as expenditure that supports the whale watch trip such as accommodation, transport and food. Direct expenditure is expenditure on tickets and items directly related to the trip itself. We have adopted the same approach to allow direct comparison with that report and other analyses of the economic benefits of whale and dolphin tourism. Induced expenditure, therefore, is not calculated in this research.

Therefore:

Direct value of whale watching: Otherwise called direct expenditure, is the direct whale watch ticket purchase price by participants.

- For *dedicated whale watch participants*, 100% of the country's average whale watch ticket price is multiplied with the total number of dedicated whale watchers (ticket price information taken from operator responses).
- For *opportunistic whale watching*, 50% of the ticket price is multiplied by the number of opportunistic whale watchers, accounting for the fact that whale watching is not the primary reason for purchasing the ticket.

Total Value of whale watching: This is calculated from the sum of direct whale watch expenditure plus the indirect whale watch expenditure by whale watch participants. Indirect expenditure adds

expenditure into the local economy that can be attributed to the person participating in the whale watch activity. For example, a tourist may undertake a whale watching trip and one other activity on the same day of their holiday. The expenditure the tourist makes on that day can be in part attributed to the whale watch activity as the tourist may have returned home had that activity not been there to participate in and hence would have resulted in lost expenditure for the local economy.

In order to attribute some of this indirect expenditure to the whale watch industry, an average of attributable additional expenses was calculated for the region as a whole from responses by operators and tourism bureaus. This was estimated conservatively at USD 250 based on daily expenditure on food, accommodation (1 night) and souvenirs. No travel costs are included as it was shown from the research that in most cases, tourists travel to the Pacific Islands region for other reasons than whale watching, and participate in a whale watch tour as an unplanned activity. In order to maintain a conservative estimate of industry value, we therefore have not included these travel costs as a part of indirect expenses.

- For all *dedicated whale watchers*, 50% of the daily indirect expenditure is calculated within the indirect expenditure figure, and added to direct expenditure to attain the total value. This 50% figure therefore reflects a conservative allocation of a proportion of a tourist's daily expenditure to this whale watching activity, allowing for the fact that the whale watcher could participate in another activity on the same day to which the other 50% of expenditure could be allocated.
- For *opportunistic whale watchers,* no indirect expenditure has been included in the total value of the whale watch industry. This reflects the fact that these whale watchers did not intentionally seek out whale watching as an activity, rather that it formed part of another marine tourist activity to which the indirect expenditure would need to be attributed. Once again, this calculation is aimed at maintaining a conservative estimate of the value of the industry.

The total value of the whale watching industry is an attempt to show the total value of expenditure undertaken by the whale watch participants in the host country. This reflects the fact that there is more economic benefit gained by the host country from the whale watching activity than merely the ticket price.

All dollar values in this report are US dollars unless otherwise stated and are based on conversion rates from local currencies that were available at the time of undertaking this research.

Limitations

The data in this report are dependent on the accuracy of responses of operators and organisations contacted. The study was undertaken as a desktop review and without time spent in country. As such, there was little opportunity to give an on the ground reality check to the responses from the 22 countries covered. This room for error has been accounted for somewhat by the multiple data sources used where possible, and averaging responses against other operators in the same country and in other countries.

The scope of the project is intended to ascertain trends in the growth of whale watching in the region, as opposed to precise figures. The data in this report are intended to be read in this light.

Although efforts have been made to keep calculation methodologies consistent with the Hoyt Report, total expenditure figures in this report are based on a more comprehensive calculation methodology and as such, direct comparison between reports should be used for trend analysis rather than for exact expenditure growth. For this reason, the annual growth rate has been calculated using the numbers of whale watchers across the time period as opposed to expenditure levels.

In addition, the scope of this project aimed for initial economic valuations of the industry in the region. As such, some simplifications of methodology have been applied based on key assumptions. More detailed research would be able to give a more accurate estimate of the industry's value, however for the purposes of defining region wide trends, this simplified method is appropriate.

Summary of Findings:

Pacific Islands Region:

Pacific Region Findings:	Numbers of Whale Watchers:	Countries with whale watch operations:	Average annual growth in whale watchers (1998 – 2005):	Estimated Direct Value of whale watching industry:	Estimated Total Value of the industry[9]:
1998	10,309	9[10]		USD 500,000	USD 1,185,000[11]
2005	110,746	14	45%	USD 7,525,500	USD 21,012,000

Pacific Islands Region, excluding Guam:

Pacific Region Findings:	Numbers of Whale Watchers - Ex-Guam:	Average annual growth in whale watchers – Ex-Guam (1998 – 2005):	Estimated Total Value of the industry - Ex-Guam:
1998	6,309		
2005	26,746	23%	USD 4,800,000

The growth of whale watching in the Pacific Islands region:

This assessment has found that cetacean-based marine tourism in the Pacific Islands region has undergone a strong growth period since Hoyt's 1998 analysis[12]. Findings indicate that whale watching now occurs across a wider range of countries than Hoyt's 1998 survey indicated with more people participating. The main findings include:

- The average annual growth rate[13] of whale watching in the Pacific Islands region is estimated to be **45%** for the period 1998-2005[14].
- By comparison, over a similar period, Australian and New Zealand whale watch annual average growth rates were estimated at 15% and 11% respectively[15].

---

[9] Calculated for the purposes of this report through the addition of direct and indirect expenditure estimates.

[10] The Hoyt Report includes an assessment of Midway, a territory that is not covered in this report as it is not a SPREP member country.

[11] Op.Cit, Hoyt (2001) – consists of total expenditure for the countries of Tonga, New Caledonia, Niue, Guam and Federated States of Micronesia- the only countries covered by Hoyt's 1998 assessment and this current. Does not include Hoyt's estimate of economic value of Midway, which is not covered in this report.

[12] Whale watching growth is based on estimates of numbers of 'whale watchers' undertaking whale watch trips in 2005 compared to the numbers estimated by Hoyt's 2001 report. 'Whale watcher' refers to the number of whale watch trips undertaken as opposed to the number of separate individuals undertaking whale watching trips. It is assumed that this has very little effect on final whale watcher numbers due to only a very small proportion of people participating in whale watching greater than once in this time period.

[13] The average annual growth rate (AAGR) is calculated as the average of a series of growth rates that allows the data to grow steadily from the first survey period (1998) and achieve the result specified in the next survey period (2005) (the 'interpolated' period). This interpolation is based on the assumption that growth in whale watcher numbers is constant over all years between 1998 and 2005. The annual average growth figure is calculated on a country-by-country basis. The regional AAGR is calculated from the average of all 22 country AAGRs.

[14] This represents a regional growth rate of 45% *each year* over the seven year period assessed.

- Recent growth in inbound tourism in the South Pacific Region (SPTO member countries) has averaged 8% in 2003 and 2004, well surpassed by the rate of growth in whale watching.
- Total number of whale watchers in the Pacific Islands region in 2005 is estimated at **110,746.** This has grown from **10,309** whale watchers in 1998.
- Of this total number, **Guam** accounts for approximately **84,000** whale watchers.
- Excluding Guam, the average annual growth rate for whale watching in the Pacific Islands region is estimated to be **23%** for the period 1998-2005.
- Whale watch activities were undertaken in **fourteen (14)** countries in the 2005 calendar year. Hoyt found whale watching activities to be occurring in **nine (9)** countries in the Pacific islands region in 1998[16].
- The countries that have experienced the strongest annual average growth rates include **French Polynesia** and **Guam**.
- Countries with well established industries in 1998, such as **Guam, New Caledonia** and **Tonga**, have continued to experience sustained growth.
- Countries that have emerged since Hoyt's 1998 report to have a newly identified whale watching industries include **Papua New Guinea, Samoa** and **Solomon Islands**.

The economic value of the whale watching industry in the Pacific Islands region:

- This assessment estimates the total economic value of the whale watching industry in the Pacific Islands region to be approximately **USD 21,012,000,** having grown from a total industry value of USD 1,185,000 in 1998.
- Direct expenditure (as opposed to total expenditure) on whale watching in the region in 2005 is estimated at **USD 7,525,500**, having grown from USD 500,000 in 1998.
- The average ticket price for undertaking whale watching in the Pacific Islands region was **USD 76** in 2005.
- Excluding Guam, total expenditure in the region was **USD 4.8 million.**
- **Guam**, having the largest whale watching industry in the region, accounted for **USD 16.2 million** of total expenditure.

The total economic value of the whale watching industry in the Pacific Islands region in 2005 is based on the sum of direct expenditure and indirect expenditure (see Research Methods section for further detail).

These economic values represent a significant contribution to the economies of Pacific Island nations. The Pacific Islands region is particularly dependent on tourism as a proportion of GDP with tourism contributing up to 49% of GDP in the Cook Islands[17] (one of the largest contributions in the region) and averages around 17% of GDP for SPTO member countries[18]. The economic values presented above indicate that whale watching is making a strong contribution to the region's tourism income.

Dugongs and Sea Turtles:

This assessment aimed to also identify the locations of sea turtle and dugong based tourism activities in the region. The following was found:

[15] Economists @ Large & Associates (2005), *The Growth of the New Zealand Whale Watching Industry: An IFAW Report.* – Growth data relates to the period 1998 – 2004.

[16] The Hoyt report also included the Midway Islands that are not covered by this report as it is not a SPREP member country.

[17] Hopkins, R., *South Pacific – Facts and Figures of Tourism*, SPTO presentation, www.spto.org, accessed July 2006

[18] *The Pacific Plan: Regional Analysis: Economic Growth: Tourism Summary* (2005), www.pacificplan.org, accessed August 2006

- Dugong-based tourism is very limited in the Pacific Islands region and was only found on a very small scale, and based most frequently upon opportunistic viewing as part of dive trips. Such tourism was found to occur in **Papua New Guinea, Palau, Solomon Islands** and **Vanuatu**.
- In **Vanuatu**, there are tourism operators who advertise specifically the ability to swim with a dugong.
- In regards to sea turtles, there are approximately 15 countries where tourists regularly see sea turtles, most often as part of a dive tour.

The main segments of the whale watching industry in the Pacific Islands region:

This assessment of the whale watching industry in the Pacific Islands region has found an industry consisting of four key segments[19]:

Whale watch operator segment:	Description:	Proportion of total whale watchers in 2005:	Example:
Full-time, dedicated whale watching:	Operations running cetacean-based tourism activities year round.	This segment makes up a low number of total operators, however accounts for a large number of the region's whale watchers.	This segment includes a well-established, boat-based dolphin watching industry in Guam taking up to 500 tourists dolphin watching each day (84,000 whale watchers in 2005).
Seasonal, dedicated whale watching:	Operations running full-time whale watch tours in the months when a migratory species of whale is present in local waters. These operations tend to be focused on the humpback whale migration in the South Pacific.	This segment has a higher number of operators than full-time, dedicated whale watch operators, and is more geographically dispersed, occurring in a larger number of countries.	Includes the yacht charter companies of New Caledonia who commit to dedicated whale watching charters in the peak humpback season.
Opportunistic whale watching:	Operations running marine-based tours whose primary aim is not the viewing of cetaceans but will divert the intended course of the tour if cetaceans are sighted. Most commonly, these consist of dive operators and yacht or game fishing charters. Often dive operators will divert their course when cetaceans are sighted whilst travelling to or from dive sites and spend some unplanned time with the animals, either swimming with cetaceans or viewing cetaceans from a boat. This in many cases can form a partial attraction to tourists to participate in the activity.	This segment makes up the largest group of operators, however accounts for low numbers of total whale watchers as only a proportion of trips undertaken actually view and interact with cetaceans - in some regions this proportion is high (90% of trips), and in others, low (25%)	This group includes dive operators of Papua New Guinea and the Solomon Islands who operate near resident populations of dolphins and have occasional sightings of large cetaceans.
Land-based whale watching:	Those who watch whales from shore, which has little or no direct expenditure demands on the tourist through ticketing	This segment makes up a low proportion of total whale watchers.	Islands such as Niue and the Cook Islands have the capacity for land-based viewing as whales come

[19] 'Segment' refers to distinct groupings of actors making up a part of the wider whale watching industry and is used in this context to differentiate the key groupings of industry participants.

	costs.		close to shore in the deep waters. In the Cook Islands, land-based whale watching is encouraged through daily reports of best viewing locations and a whale viewing platform.

This information is provided to encourage a broader understanding of the dynamic of the industry in this region. Overall, this segmentation is typical of whale watching industries found in other regions.

Recent tourism growth in the Pacific Islands region:

Due to restrictions with data availability, data in this section refers to South Pacific members of the SPTO[20] as opposed to the broader Pacific Islands region addressed in this report (covers 12 of the 22 countries assessed in this report). Tourism data aggregated in the same group of countries assessed in this study were not available. As a proxy for the region, we have chosen to use the best available date as prepared by SPTO.

Tourism in the South Pacific has witnessed strong growth in recent years despite difficult times globally for the tourism industry. In 2004, there were approximately 1.18 million tourist arrivals (to the 12 SPTO member countries) and the industry in 2003 was valued at USD 1.23 billion. 2003 saw growth of 7.3% when world tourism contracted by -1.3%[21].

The SPTO predicts that tourism in the region will continue to grow at above global rates in coming years. Such forecasts indicate a strong climate for growth of niche market segments in the region such as whale watching. An emerging niche market is more likely to succeed in a climate of broader market growth as is predicted for the region. Further international inbound tourism forecasts for the region support this growth trajectory. The Pacific Asia Travel Association forecasts international arrivals growth in the Asia Pacific region in the years 2006 – 08 at just below 8%[22].

Regional tourism growth in the South Pacific	2003	2004	2005 (predicted)
Inbound Tourism Growth	7.3%	8.9%	8%
Inbound Tourist Arrivals	1.08 mn	1.18 mn	1.28mn
Tourism Industry Value	USD 1.23 bn		

Source: Hopkins, R., *South Pacific – Facts and Figures of Tourism*, SPTO presentation, www.spto.org, accessed July 2006

[20] SPTO Data – refers to the SPTO member countries – Cook Islands, Fiji, Kiribati, New Caledonia, Niue, Samoa, Solomons French Polynesia, Tonga, Tuvalu, Vanuatu and Papua New Guinea

[21] Op.Cit. Hopkins, R.

[22] Pacific Asia Travel Association (2006), *Asia Pacific Tourism Forecasts 2006-08*, www.pata.org

Country-by-Country Results:

Estimated Growth Rates and the Value of Whale Watching in the Pacific Islands Region: 1998 – 2005

The table below sets out the findings of this on a country-by-country basis.

Country	Estimated numbers of whale watchers 1998[23,24]	Estimated numbers of whale watchers 2005	Annual average growth rate (1998-2005)	Average Ticket Price (USD)	Direct Economic Value (USD)	Total Economic Value (USD)
TOTAL:	**10,309**	**110,746**	**45%**	**$ 76**	**$7,525,500**	**$21,012,000**
American Samoa	None identified	Minimal	0%	-	Minimal	Minimal
Cook Islands	None identified[25]	3,715	64%	46	9,890	474,265
Federated States of Micronesia	230	Minimal	0%	-	Minimal	Minimal
Fiji	Minimal	Minimal	0%	80	Minimal	Minimal
French Polynesia	1,000[26]	6,000	30%	94	564,000	13,140,000
Guam	4,000	84,000	70%	68	5,712,000	16,212,000
Kiribati	None identified	None identified	0%	-	0	0
Marshal Islands	None identified	None identified	0%	-	0	0
Nauru	None identified	None identified	0%	-	0	0
New Caledonia	1,695	4,906	17%	85	417,010	1,030,260

[23] Op.Cit, Hoyt (2001)

[24] For definition of 'whale watchers', please see 'Research Methods' section.

[25] In order to take into account the potential existing low level of opportunistic whale watching in 1998, an estimate was made of 200 opportunistic whale watchers in 1998 from which to interpolate average growth figures. This also prevents an over estimate of growth rates for the region.

[26] Hoyt's1998 estimate of "minimal" numbers of whale watchers has been restated in this report to 1,000. This is based on feedback from local operators in the country who claim this 1998 figure to be an understatement of actual numbers. This revision gives a more conservative growth estimate for the period.

Niue	50	270	28%	32	7,360	41,110
Northern Mariana Islands	None identified	Minimal	0%	-	Minimal	Minimal
Palau	None identified	Minimal	0%	-	Minimal	Minimal
Papua New Guinea	None identified[27]	600	17%	75	22,500	22,500
Samoa	None identified[28]	725	8%	51	18,488	18,488
Solomon Islands	Minimal	500	14%	145	36,250	36,250
Tokelau	None identified	None identified	0%	-	0	0
Tonga	2,334	9,000	22%	82	738,000	1,863,000
Tuvalu	None identified	None identified	0%	-	0	0
Vanuatu	None identified	None identified	0%	-	0	0
Wallis & Futuna	None identified	None identified	0%	-	0	0
Pitcairn Islands	None identified	None identified	0%	-	0	0

NB: For the purposes of this report, where the country findings are 'Minimal', whale watchers are estimated at 200 but no economic value is attributed. However, as this small number is difficult to define precisely, no economic value has been assigned for those whale watchers.

[27] In order to gain a more accurate indication of growth, 1998 figures have been estimated at 200 rather than zero.

[28] ibid

Conclusions:

The potential of the whale watching industry in the Pacific Islands region:

Findings from this research indicate that the size of the whale watching industry in any part of the Pacific Islands region is proportional to the combined elements of:

- accessibility and reliability of cetacean sightings and;
- an adequate base of international inbound tourists within the country.

Key constraints to further development of whale watching in countries where cetaceans exist include low numbers of tourists (often due to accessibility difficulties, such as high travel costs and lack of connection to international markets, or an undeveloped tourism industry without sufficient infrastructure – e.g. Papua New Guinea) and/or lack of marine-based tourism operators (e.g. American Samoa).

In countries where there is a strong tourism market, but low whale watching numbers, operators report that this is primarily due to the inconsistency of cetacean sightings (e.g. Northern Marianas).

Due to the time and expense required to access many of the countries in this region, whale watching is an activity that complements, and at times forms an important part of, an existing tourism industry. It is only in rare cases where whale watching forms a dominant tourism draw card where tourists will travel with the primary purpose of seeing whales (i.e. Tonga's Vava'u Islands). It is likely that due to the geographic remoteness of the region, whale watching will continue to grow on the back of an existing tourism industry. Therefore, the growth of tourism (as well as cetacean abundance) is a precursor to a successful whale watching industry in the region.

Nevertheless, the presence of cetaceans in a country's territorial waters can and often does add significant indirect value to the Pacific Islands, particularly through marketing. Cetaceans are frequently seen in Pacific Island marketing materials used by both tourism authorities and private operators. The association of cetaceans with unspoiled nature is a major draw card to the region. These intangible values can hold significant additional attraction to the region and hence provide an additional economic benefit. There is no attempt to place a dollar value upon these intangibles within this report.

Key challenges to address:

It is likely that the whale watching industry in the Pacific Islands region will continue on its growth trend in the coming years on the condition that the forecast growth of tourism in the region is achieved. However, if the continued growth is to be realised, there are several key challenges that need to be addressed which could limit the continued expansion of the industry in the Pacific islands region:

- Regional tourism markets need to continue to grow and develop, particularly in countries where there is a known occurrence of cetaceans, but low levels of tourism infrastructure and inbound international arrivals.
- There is a need to improve knowledge about the presence of marine mammal species in countries where sufficient data does not yet exist. This would assist in providing tourist marketing boards an additional value-add in order to lure tourists to a particular region, allow governments to focus infrastructure and accessibility, and thus facilitate tourism development in appropriate areas. With an enhanced knowledge of cetacean populations, it could give greater certainty of accessing viewing opportunities for marine-based operators.
- There is a need for research to be undertaken to review the sustainability of whale watch operations in countries where marine mammal populations may be experiencing significant pressure from a high number of tourism operators. The tourism segment that travel for such nature experiences are highly sensitive to conservation and animal welfare related issues,

particularly those tourists who travel specifically for whale watching (e.g. visitors to Tonga's Vava'u Islands[29]). If the industry in the region is perceived to be harassing and/or harming cetaceans, the reputation damage could have a severely detrimental impact on the industry in the entire region or at least within the country itself.

- More detailed economic studies of the mature whale watching destinations would give a clearer idea of what is a sustainable level of growth of whale watching by clarifying if those mature whale watch industries have in fact reached saturation, stagnated or continue to grow at similar rates. Furthermore, such studies could extract relevant lessons that have been learnt for the successful development of whale watching in other countries. Such lessons could be compiled as a 'road map' of sorts for application within other countries.
- And finally, a key limitation of the whale watch industry is the presence or abundance of cetaceans, and hence it is clear for that for a healthy whale watching industry, cetaceans must be protected in the territorial waters of the region, and protection also extended to those migratory species (particularly humpbacks) that are so heavily relied upon as the basis of much of the industry in the region. Concerns were raised through the course of this research on the impacts that humans could be having on the region's cetacean populations, through issues including waste disposal at sea, long line fishing and Japan's JARPA II whaling program that aims to take humpback whales from the Southern Ocean.

Recommended further research:

A key goal of this research was to assess the potential for further whale and dolphin watching tourism in the Pacific Islands region, including identifying the specific needs to further the development of a sustainable whale and dolphin watching industry across the region.

Below is a list of recommendations relating to research that would assist in facilitating the continued growth of the industry. For all of these recommendations, improved knowledge of cetacean abundance levels across the region would play a significant part and assist to achieve the combined goals of cetacean conservation and the development of a sustainable marine tourism industry based around cetaceans:

Recommendations:	
Country Case Studies:	• In depth country case studies would be useful to review the evolution of the whale watching industry from the perspective of countries that have been most successful in its growth and development. Such a study could focus on two or more countries that have successfully established a whale watch industry (e.g. Tonga, New Caledonia, Guam and/or French Polynesia) and could aim to record the lessons learnt from those countries, both positive and negative, that are broadly applicable to other countries in the region. • These lessons could then be passed on to countries with newly emerging industries who wish to develop their own industries further, or who wish to assess whether or not such an industry would be viable within their own context. • Such lessons would refer to issues such as required regulations and legislation to support the industry, effective marketing strategies in order to attract the right tourist, appropriate whale populations for forming the basis of an industry, "carrying capacity" of a whale population in terms of operator and tourist numbers, and best practice for industry and operator management.

[29] For more details regarding tourist profiles in Tonga, see: Orams, M.B. (1999), *The Economic Benefits of Whale Watching in Vava'u, The Kingdom of Tonga,* Centre for Tourism Research, Massey University at Albany, North Shore, New Zealand.

Whale Watching 'Road Map':	• As an outcome of the above country case studies, it would be useful to compile a 'road map' for developing the whale watching industry. Such a document could contain the elements required from which to build such an industry (whale watching 'checklist'), as well as the lessons learnt from other countries that have successfully developed an industry. This would be presented as a guide for assisting countries to develop their emerging whale watching industry. Although each country is a different case, this could be useful to highlight some of the key universal lessons and to prevent mistakes. • Such a document would contain a checklist for governments, tourism bodies and operators useful to assess the potential of whale watching in their region. Although no level of regulation or subsidisation can force a successful industry to develop, the 'road map' could provide some detail of what is required as a minimum for an industry to grow with a focus on broadly applicable lessons. • The use of case studies would be the logical precursor to the development of such a 'road map'.
Applying the Road Map:	• To follow on from the previous recommendation, a further study could be undertaken looking in detail at a country with a small whale watching industry, assessing its current status in detail against the 'road map', and provide recommendations for how governments, tourism bodies and operators should best go forward to further develop the industry. Appropriate countries are listed in the country recommendations section below. Importantly, this recommendation would need the support of government, tourism bodies and operators who are committed to pursue the development of a local whale watching industry.
Region Wide Guidelines:	• As the industry is growing at such a fast rate across the region, it is critical that cetaceans are being protected from excessive human impacts across the region, particularly as some species are migratory across the region. Some of the countries with the largest whale and dolphin watching industries have already implemented guidelines for the conservation of cetaceans and management of whale watching within their territorial waters. It would be useful to implement a set of standardised whale and dolphin watch guidelines across the region so as to assist in building on the reputation of high natural values.
Impacts of cetacean watching study:	• Critical to any successful whale watching industry is the minimisation of impacts on the animals themselves. Concerns were identified during the course of this study that excessive harassment of cetaceans could have detrimental impacts. In conjunction with any other studies, research is required to assess whether any such impacts are occurring in countries with high numbers of whale watchers (e.g. New Caledonia, Guam and Tonga). In order to prevent potential damage to the recovery of cetacean populations, as well as future reputation damage to the industry, a comprehensive biological impact study should be undertaken.
Humpback Contribution to the Region's Whale Watching:	• Further research would be valuable to ascertain what proportion of the region's total value from whale watching is due to the existence of humpback whales and their annual migration. Quantifying the value of the

	humpbacks in the Pacific Islands region is of particular importance at this time when Japan's JARPA II whaling program is soon to commence with an expanded hunt that includes humpback's in the Southern Ocean and potentially the same populations that migrate to the Pacific Islands.

Country Recommendations:

From the research conducted for this report, we have compiled a list of countries where there appears a strong case for further research to be undertaken due to either:

- A country has an existing strong whale watching industry that could be more clearly defined and quantified through further research, including an assessment of current and predicted growth levels, detailed economic valuation of the local industry and industry management frameworks for its sustainable management going forward; or
- A country has an emerging whale watching industry that could have the potential to grow into a key tourism attraction with some assistance and shared knowledge from the examples of other countries. This is most often recommended based on a combination of existing, accessible cetacean populations.

Below is a list of key recommendations set out in alphabetical order by country name, which are supported by further detail in the following Appendix of Detailed Findings section of this report:

Country:	Recommendation:
American Samoa	• Further study is needed in order to determine if there is potential to capitalise on the existing Humpback populations in territorial waters and if there is an appropriate market to support the development of whale watching activities. Small-scale, eco-tourism ventures such as Solomon Island's Tetepare Island[30] may provide a good example for launching a locally driven, eco-tourism venture that utilises the natural assets of Fagatele Bay Marine Sanctuary (including both turtles and whales) and American Samoa at large to promote economic. The large numbers of short stay, cruise ship arrivals could provide a customer base to such an industry.
Fiji	• With the uncertainty of the size of existence of Fiji's previous and current whale watching industry, it would be useful to undertake a more substantial baseline study of any existing whale watching industry and/or the existence of cetaceans to ascertain if there is room for growth of a cetacean-based industry. Such a study would be of interest to inquire if there has actually been negative growth in recent years due to reduced populations of small cetaceans as is anecdotally reported.
French Polynesia	• A more detailed study should be undertaken to determine whether whale watching growth can be maintained in French Polynesia or whether it has reached a plateau. Further research could assist in determining at what point the industry has reached in terms of saturation of both supply of whale watching services and ability to gain access to cetaceans as well as a more detailed assessment of the industry's

[30] www.tetepare.org - See Solomon Islands, Appendix of Detailed Findings, Section 16

	economic contribution to the country.
Guam	• Further research is recommended to ascertain whether the current levels of growth can be maintained based on the small population of cetaceans available in Guam.
New Caledonia	• Further research is recommended to ascertain whether the current levels of growth can be maintained based on the small population of cetaceans and large amount of whale watching boat traffic. A more detailed study could better estimate the economic contribution of whale watching to the local economy and provide management suggestions based on experience from other whale watch locations.
Papua New Guinea	• A more detailed study would be useful to ascertain whether there are growth opportunities for cetacean tourism that can be leveraged off existing dive tourism based on the findings of high level opportunistic cetacean interaction.
Samoa	• Further research is recommended to ascertain where there are growth opportunities for cetacean tourism in Samoa based on the resident dolphin pods and high level of opportunistic interaction.
Solomon Islands	• Further research would be useful to ascertain the regions with the greatest cetacean populations and accessibility, and determine the potential for further cetacean-based tourism development in the Solomons.
Tonga	• Further research is recommended to ascertain the county's potential for further growth and a more detailed assessment of the current status of the industry and its economic contribution to the local economy.
Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Northern Mariana Islands, Tuvalu, Vanuatu and Wallis & Futuna	• We recommend that a baseline study be conducted to ascertain the level of cetacean abundance and species type in these countries' territorial waters in order to establish whether there may be potential from which to develop a whale watch industry in the future.

Appendix of Detailed Findings:

Current Status of Whale Watching in the Pacific Islands Region and the Potential for Further Growth

1 American Samoa

1.1 Whale Watching Summary:

American Samoa currently has a small tourism industry and no formal whale watching was evident in 2005. The country has in the range of 6,000 visitors arriving each year by plane, and estimates of up to 10,000 on cruise ships[31]. Some occasional land-based viewing of humpback whales and dolphins is reported to occur from Tutuila Island. A marine sanctuary has been established at Fagatele Bay where humpbacks are believed to visit and breed between August and October. Occasional cruises reportedly visit this area and view cetaceans, however there was no regular whale watching activity evident.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	0	Minimal	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	Dedicated: 0 Opportunistic: minimal		
Target species:	Humpback		
Seasons of operation:	August to October		
Main locations of the industry (if relevant):	Fagatele Bay National Marine Sanctuary		
Brief history of the industry:	NA[32]		
Sea turtle-based tourism?	No – sea turtles occasionally seen in American Samoan waters (Hawksbill and Green Turtles)		
Dugong-based tourism?	No		

[31] American Samoan Office of Tourism, pers. comm., & National Park of American Samoa, pers. comm. (March 2006)

[32] No information available, or not known.

1.2 Tourism Potential Summary:

The country receives low levels of overnight visitors, however a number of US cruise ships visit the port of Pago Pago for short stays. The current accommodation options on the island are small-scale and large-scale tourism beyond the visiting cruise ships. An accessible whale population gives the country a good basis from which to further investigate the potential to develop a whale watching industry on the back of a small scale, eco-tourism market. Local tourism sources state that there are no commercial operators currently able to take advantage of this potential industry, including no appropriate dive operators. With its close proximity to (Western) Samoa, where there is a more developed tourism industry, future growth may come from tourists visiting on short stays from American Samoa's neighbour, as is already beginning to occur.

Tourism Potential Summary:	**Findings:**
Country tourism organisation:	American Samoan Office of Tourism
Suitable cetacean populations:[33]	Humpback, spinner dolphins
Location of cetaceans:	Around Tutuila Island and Fagatele Bay National Marine Sanctuary
Season of cetaceans:	Humpback - August to October Spinner dolphins – all year
Cetacean accessibility:	Cruise potential to Fagatele Bay
Tourism infrastructure:	Only low scale tourism development has so far occurred in American Samoa
Country accessibility:	Regular flights servicing the US and (Western) Samoa. Pago Pago is regularly visited by cruise ships and is one of the largest natural ports in the South Pacific. Easily accessible from Samoa, being serviced by daily flights.
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths:	An accessible, yet small, humpback whale population in an established national marine sanctuary, combined with spinner dolphins.
Weaknesses:	Low number of humpback sightings and slow development of a local tourism industry[34] with low annual visitor arrivals.
Opportunities:	A strong cruise ship industry bringing regular visitors supported by a large natural harbour.
Threats:	Lower level of tourism infrastructure compared with its neighbour, Samoa, who is better geared to receive and

[33] Suitable cetacean populations and location of cetaceans is based on best available data and responses to the survey, so may not be comprehensive. In some countries and territories there may be other suitable populations and/or other suitable locations that have not been identified.

[34] American Samoan Office of Tourism, pers.comm. (March 2006)

cater for marine-based tourists.

1.3 Recommendations:

This research has indicated some potential for a future tourism industry based around cetaceans in American Samoa. It is recommended that:

- Further study is needed in order to determine if there is potential to capitalise on the existing humpback populations and if there is an appropriate market to support the development of whale watching activities. Small-scale, eco-tourism ventures such as the Solomon Island's Tetepare Island provide a good example for launching a locally driven, eco-tourism venture that utilises the natural assets of Fagatele Bay and American Samoa at large to promote economic development for the island nation (see Solomon Islands, Section 16). The large numbers of short stay, cruise ship arrivals could provide the customer base to such an industry.

2 Cook Islands

2.1 Whale Watching Summary:

The Cook Islands has a strong tourism market and are one of the tourism industry leaders in the Pacific Islands region. It is estimated that the Cook Islands received 78,000 visitors in 2003[35], a large proportion of them arriving from New Zealand (40%). Humpback whales migrate past the Cook Islands on their northern migration and later in the season on their return journey south. As the Cook Islands are fringed by only a thin reef, the ocean drops quickly to substantial depth bringing the migrating whales close to shore. As such, the whales can be seen easily from land-based locations. A national whale sanctuary has been established to protect the migrating whales.

There is little in the way of a formalised, boat-based whale watch industry (some informal viewing reportedly takes place from local fishing boats or by dive operators), however there are some initiatives on the island to promote land-based viewing. A whale education centre has been established on Rarotonga providing information to tourists and locals alike, including daily sighting locations. Furthermore, a recent viewing platform has been built to facilitate land-based viewing of whales.

Although the country attracts very little direct economic benefit from the land-based whale watch activities (around USD 10,000), there is nevertheless still an indirect benefit equally large as those countries who conduct formal boat-based whale watching. This is calculated based on the fact that land-based whale watching still provides tourists with an attraction to an area, and by 'participating',

[35] SPTO, *Tourism Sector Study – Cook Islands*, www.spto.org, accessed June 2006.

one can attribute a portion of their daily expenses to this activity (i.e. accommodation, food etc). therefore, the figure reported below reflects the same calculation methodology as other countries where whale watching is undertaken by boat.

Due to the more formal approach to land-based whale watching, the Cook Islands is the only Pacific country in this study to have whale watcher numbers counted for land-based viewing (estimated at 3,500 land-based whale watchers in 2005[36]).

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	Minimal	3,715	64%
Estimate of economic value of whale watching (2005):	Direct: $ 9,890 Total: $ 474,265		
Number of whale watch operators:	Dedicated: 0 Opportunistic: 1		
Target species:	Humpback		
Seasons of operation:	July to October		
Main locations of the industry (if relevant):	Rarotonga		
Brief history of the industry:	There is no boat-based whale watch industry on the islands beyond some very small scale opportunistic viewing. The land-based viewing opportunities are being promoted more vigorously since the establishment of the whale education centre (8 years ago) and the recent building of a whale viewing platform (2006).		
Sea turtle-based tourism?	Sea turtles occasionally seen by dive operators. Green turtles nest on Palmerston Atoll.		
Dugong-based tourism?	No		

2.2 Tourism Potential Summary:

The country receives a high number of visitors each year for the region. However, anecdotally, most tourists are unaware of the presence of whales in local waters. There is potential to further promote whale viewing from land due to the accessibility and low cost barriers for tourist participation. With the high numbers of tourists, there is room to further capitalise from land-based whale watching activities that have indirect economic benefits to local businesses. Further development of viewing

[36] This figure is estimated as a proportion of numbers of visitors to the whale education centre (many of whom then visit a location advised for good sighting opportunities) with allowance for additional land-based viewers using the viewing platform. Centre for Cetacean Research and Conservation, pers.comm. (May 2005)

platforms in key locations and signage to direct tourists will complement existing island tourism attractions.

Tourism Potential Summary:	Findings:
Country tourism organisation:	Cook Islands Tourism
Suitable cetacean populations:	Humpback
Location of cetaceans:	Rarotonga, Atiu, Aitutaki and Palmerston Atoll
Season of cetaceans:	Humpback – July to October
Cetacean accessibility:	Easily visible from land
Tourism infrastructure:	Good provision of tourism infrastructure including options for most levels of lodgement.
Country accessibility:	The country is well connected by flights servicing New Zealand, Australia and the US as well as Pacific Islands.
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths:	Easily accessible cetacean population with high visibility from land during humpback migration.
Weaknesses:	Low numbers of humpback's and as the country is on a migration route, whales do not stop for long periods of time as is the case with some other Pacific Countries.
Opportunities:	Good base of tourists and supportive government.
Threats:	Lack of knowledge of the whales by most tourists and large assortment of other tourism activities within the country. The sustainability of boat-based whale watching is unknown.

2.3 Recommendations:

Further economic analysis would indicate the additional economic value of land-based whale watching to the Cook Islands. The results of this research do not lead us to recommend any further research on the potential development of whale watching in the Cook Islands as it is currently developing with strong guidance, taking advantage of its local competitive advantage of shore based viewing for a low number of animals.

3 Federated States of Micronesia

3.1 Whale Watching Summary:

Federate States of Micronesia (FSM) has a relatively small tourism industry within the region attracting around 18,000 visitors each year[37]. Operator feedback indicates that there are occasional sightings of pilot whales and spinner dolphins. However, no dedicated whale watching industry exists. There is a small diving industry in the regions of Chuuk, Yap, and Kosrae and responses from dive operators indicate a low number of opportunistic whale watching activities occurring in 2005.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	230	Minimal (~200)	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	Dedicated: 0 Opportunistic: minimal		
Target species:	Spinner dolphins		
Seasons of operation:	NA		
Main locations of the industry (if relevant):	Chuuk & Yap regions		
Brief history of the industry:	NA		
Sea turtle-based tourism?	Sea turtles are often seen on dive trips		
Dugong-based tourism?	No		

3.2 Tourism Potential Summary:

The country receives very low numbers of tourists and growth is restricted by access costs and low levels of both basic infrastructure and tourism infrastructure. There is a low rate of cetacean sightings by marine-based operators in FSM that indicates there is currently little basis from which to further develop a tourism industry around cetaceans. There is little formal scientific data about the presence and abundance of cetaceans in FSM's waters and without this data it is not possible to conclude whether whale watching tourism will be viable.

[37] 2003 figures: SPTO, *Tourism Sector Study – Micronesia*, www.spto.org, accessed June 2006.

Tourism Potential Summary:	Findings:
Country tourism organisation:	FSM Tourism Board
Suitable cetacean populations:	Unknown
Location of cetaceans:	Very occasional sightings in various locations
Season of cetaceans:	Unknown
Cetacean accessibility:	Reported to be low, but unknown
Tourism infrastructure:	Small-scale tourism industry with low numbers of hotel rooms.
Country accessibility:	Flights connect the four states of FSM to Guam and Hawaii through the Marshal Islands approximately three times weekly.
Other factors (e.g. political, cultural, environmental):	Reports indicate improvements of infrastructure are required including water, sewage disposal, electricity supply, telecommunications and roads. Sewage problems are said to be a potential limitation to tourism development.[38]
Whale Watch Tourism Analysis:	
Strengths:	Recent establishment of country tourism board. High quality marine environment and diving potential.
Weaknesses:	Lack of information on local resident populations. Distances from major markets and difficult accessibility make travel to the country expensive.
Opportunities:	Increasing number of dive tourists to Chuuk.
Threats:	Environmental pollution caused by inadequate sewage treatment prior to disposal in lagoons.

3.3 Recommendations:

There is little formal scientific data about the presence and abundance of cetaceans in FSM's waters and without this data it is not possible to conclude whether whale watching tourism will be viable. The results of this research do not lead us to recommend any further research on the potential development of whale watching in the FSM at this time until data about cetacean presence indicates an industry could be viable.

[38] Ibid., SPTO Micronesia Report

4 Fiji

4.1 Whale Watching Summary:

According to the SPTO, Fiji is the most developed tourism market in the South Pacific. In 2004, the country attracted around 40% of the 1.1 million visitors to the South Pacific region[39] - in 2004, visitor arrivals were around 506,000[40]. There has in the past been an informal dolphin watching industry active in Fiji through the 70+ dive operators, however reports indicate that this occurs only in low numbers with occasional sightings of small cetaceans on dive trips. Dolphin sightings do not appear frequent enough to currently base anything other than a low-scale, opportunistic industry upon and as a result there is currently no formal cetacean watching industry[41].

Large cetaceans are seen infrequently in waters around Fiji, with anecdotal reports indicating that humpbacks were previously prevalent in local waters. Anecdotally, operators have suggested cetacean numbers have been low since the introduction of long line fishing in Fijian waters around a decade ago. This correlates with SPREP's Whale and Dolphin Action Plan that identifies dolphins taking bait from long line hooks as a serious problem for cetaceans in the region[42].

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	Minimal	Minimal	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	Dedicated: 0 Opportunistic: low numbers		
Target species:	Spinner, bottlenose & spotted dolphins		
Seasons of operation:	NA		
Main locations of the industry (if relevant):	Nadi region		
Brief history of the industry:	Through dive operations, there has been a consistent yet small dolphin watching industry for over a decade. However, sightings remain infrequent and as such, it appears the industry has not grown above this informal level.		
Sea turtle-based tourism?	Sea turtles occasionally seen on dive trips (Green Turtles)		
Dugong-based tourism?	No		

[39] Op.cit., Hopkins, R (2006)

[40] ibid.

[41] University of the South Pacific, pers.comm. (April 2006) & operator feedback.

[42] SPREP, *Whale and Dolphin Action Plan 2003-2007,* accessed via SPREP May 2006.

4.2 Tourism Potential Summary:

Due to the low level of cetacean sightings reported in Fiji's waters by operators, there seems little potential to further develop a dedicated whale watching industry. If cetacean populations were to increase, a strong marine-based tourism industry exists based around diving that would be well positioned to take up the opportunity offered by cetacean sightings. Relevant tourism infrastructure exists along with high numbers of tourists that would provide an appropriate market for such activities. There is some surprise with these results as earlier reports indicated some low-level whale watch tourism. However, the findings conducted for this report did not support this.

Tourism Potential Summary:	**Findings:**
Country tourism organisation:	Fiji Visitor's Bureau
Suitable cetacean populations:	Low numbers of small cetacean species
Location of cetaceans:	West – near Nadi
Season of cetaceans:	NA
Cetacean accessibility:	Lack of reliable frequency of sightings
Tourism infrastructure:	High level of existing infrastructure servicing a mature tourism market
Country accessibility:	Well serviced by flights connecting to key world markets
Other factors (e.g. political, cultural, environmental):	Currently politically stable. In 2000, a political coup overthrew the government of the time that lead to a significant, short term decrease in tourism. However, numbers quickly recovered attaining above pre-coup levels in 2003.
Whale Watch Tourism Analysis:	
Strengths:	Mature tourism industry with very high levels of tourists actively participating in marine-based activities
Weaknesses:	Lack of cetacean populations in local waters or lack of appropriate research data to identify best locations.
Opportunities:	Opportunities for whale watch tourism remains wholly dependent on cetacean populations that reports currently indicate are too infrequent on which to base a dedicated industry.
Threats:	Slow or non-existent recovery of cetacean populations

4.3 Recommendations:

The results of this research lead us to recommend a further baseline study to ascertain whether there was or is any possibility of establishing a whale watch industry in the country. Further research could be useful to identify to what extent dive operators use cetaceans as an attraction to tourists, and thus gaining economic benefit from their existence in local waters. Further research into the opportunistic

nature of dive operators in Fiji may also reveal a high number of incidental viewings of cetaceans than have been found in this limited study.

- With the uncertainty of the size of existence of Fiji's previous and current whale watching industry, it would be useful to undertake a more substantial baseline study to ascertain if there is room for growth in a cetacean based industry.

5 French Polynesia

5.1 Whale Watching Summary:

French Polynesia (FP) has a thriving dedicated whale watch industry that has seen a period of strong growth since 1998 of approximately 30% (annual average growth). This is on the back of a large and mature tourism industry, with approximately 210,000 visitors in 2004[43]. The country has an annual migration of humpback whales that are said to breed in local waters, residing between the months of July to November. Furthermore, resident spinner and bottlenose dolphins as well as melon headed whales provide the basis for a small dolphin watch industry year round. Reliable sightings of cetaceans combined with a mature tourism industry in the country has lead to this successful growth over the recent seven years.

Further to this whale watching industry is a caged swim-with-dolphins operation that operates within a major resort on Moorea attracting several thousand tourists in 2005[44]. Dolphin watchers participating in this operation were not included in this report as this research aims to estimate whale watching of local, 'wild' cetacean species.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	1,000[45]	6,000	30%
Estimate of economic value of whale watching (2005):	Direct: $ 564,000 Total: $1,314,000		
Number of whale watch operators:	Dedicated: approx 12 (9 licenced) Opportunistic: undefined		
Target species:	Humpback, spinner, bottlenose, melon headed		
Seasons of operation:	Whale Watching – July to Nov		

[43] Op.cit., Hopkins, R (2006)

[44] Dolphin Encounter, pers.comm. (May 2006)

[45] This figure has been revised upward from the Hoyt report original finding of 'minimal' whale watchers due to feedback from operators who believe the 1998 figures to be understated. This revision more conservatively estimates the growth over this seven year period.

Main locations of the industry (if relevant):	Dolphin watching – year round Whale Watching – Rurutu & Moorea Dolphin Watching – as above (some operations also occur at Tahiti, Rangiroa, & Nuka Hiva)
Brief history of the industry:	The first boat-based operator commenced operation in 1992 and was the only operator until 1995. From that time, more operations have opened up on various islands. In 2002, the government passed legislation declaring a Marine Mammal Sanctuary. All Whale Watching operators are required by law to obtain a licence to operate.
Sea turtle-based tourism?	A turtle care centre has been established by a major hotel in FP. Its main goal is to rehabilitate injured or sick sea turtles, however it may also attract some tourists.
Dugong-based tourism?	No

5.2 Tourism Potential Summary:

Within the scope of this research, it is difficult to estimate whether there is room for the industry to continue to grow at such levels in future years. However, at 30% growth, it is reasonable to assume, given the experience of whale watching industry development in other countries, that a continuing growth would soon show signs of slowing before reaching a plateau. This will be largely determined by cetacean population accessibility combined with the local licensing regime and enforcement. Operators have reported that currently up to four operators are running WW tours without licence. Using the experience of Tonga, it is likely that the government will at some point enforce a cap on issuing new licences. Further research could assist in determining at what point the industry has reached in terms of saturation, whether indeed growth is already slowing, and how strong is the current demand for whale watch access.

Tourism Potential Summary:	**Findings:**
Country tourism organisation:	Tahiti Tourisme; Moorea Visitors Bureau
Suitable cetacean populations:	humpback, spinner, bottlenose, melon-headed whales
Location of cetaceans:	Most islands of FP, with particular regularity around Moorea, Rurutu and Tahiti
Season of cetaceans:	Humpback: July – Nov Dolphins: all year
Cetacean accessibility:	Highly accessible
Tourism infrastructure:	High level of tourism infrastructure
Country accessibility:	Good flight connections to key markets including Australia, New Zealand, US and Japan
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	

Strengths:	Mature tourism industry with large flow of tourists to the country. Accessible populations of cetaceans both seasonal and year round.
Weaknesses:	Apart from humpback whales, other smaller cetaceans can be at times difficult to access reliably.
Opportunities:	Some growth potential is possible on islands with fewer operators such as Tahiti, Rangiroa and Nuka Hiva
Threats:	No significant threats at this time

5.3 Recommendations:

This research has indicated some potential for continued growth of the whale watch industry in French Polynesia. It is recommended that:

- A more detailed study be undertaken to determine whether whale watching growth can be maintained in French Polynesia or whether in fact it is already slowing or reaching a plateau. Further research could assist in determining at what point the industry has reached in terms of saturation of both supply of whale watching services and ability to gain access to cetaceans as well as a more detailed assessment of the industry's economic contribution to the country.

6 Guam

6.1 Whale Watching Summary:

Guam has experienced particularly strong growth of a cetacean-based watching industry over the seven years since the Hoyt Report. The industry is based around dolphin watching activities, most being conducted from the Agat Marina and focusing on two resident pods of spinner dolphins. Guam, in the North Pacific, attracted over 1.2 million international inbound visitors in 2005 mainly arriving from the Asian countries of Japan and Korea[46]. The dolphin watching industry is year round which suits the strong year round tourism arrivals that maintain reasonably consistent numbers around 100,000 arrivals each month. Reports from operators indicate up to 400 tourists participate in dolphin watching activities each day year round. From a combination of operator, tourism bureau and local government feedback, our estimate for total whale watchers in 2005 is 84,000. The annual average growth rate of 70% over the last seven years compares favourably with recent tourism growth of 5.8% between 2004 and 2005.

According to local sources, large cetaceans are seen infrequently in Guam by boat-based tour operators.

[46] Guam Visitors Bureau, pers.comm. (March 2006)

Current Marine Tourism Summary:	Findings:		
	1998	2005	AAGR:
Estimated whale watch numbers (2005):	4,000	84,000	70%
Estimate of economic value of whale watching (2005):	Direct: $5,712,000 Total: $16,212,000		
Number of whale watch operators:	Dedicated: approx. 5 main operators Opportunistic: undefined		
Target species:	Spinner dolphins		
Seasons of operation:	Year round		
Main locations of the industry (if relevant):	From the Agat Marina		
Brief history of the industry:	No information		
Sea turtle-based tourism?	Some sightings of turtles in the Cocos Lagoon – Green and Hawksbill		
Dugong-based tourism?	No		

6.2 Tourism Potential Summary:

As per French Polynesia, within the limits of the scope of this research, it is difficult to estimate whether there is room for the industry to continue to grow at such levels in future years. However, at 70% average annual growth over 7 years, it is reasonable to assume a continuing pattern of growth that will show signs of slowing before reaching a plateau. This will be largely determined by cetacean population accessibility combined with the local regulatory enforcement. Currently, there are no licensing requirements in place. Further research could assist in determining at what point the industry has reached in terms of saturation, whether indeed growth is already slowing, or whether growth can continue at such high rates. Such high rates of tourism relying on only two main pods of dolphins poses some concern as to possible impacts on the populations and, therefore the long term sustainability of the industry itself.

Tourism Potential Summary:	Findings:
Country tourism organisation:	Guam Visitors Bureau
Suitable cetacean populations:	Spinner dolphins
Location of cetaceans:	Accessible from Agat Marina
Season of cetaceans:	Year round
Cetacean accessibility:	Highly accessible
Tourism infrastructure:	High level of tourism infrastructure, having been a popular tourist destination for the Asian market for a number of years.

Country accessibility:	Well serviced by flights to key markets
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths:	Good access to dolphins for reliable sightings
Weaknesses:	No diversity of cetacean species.
Opportunities:	Undefined as to whether the market can continue to grow at such a high rate
Threats:	High reliance on low resource base: Pressure by operators to gain reliable access to only two pods of dolphins year round could harm the dolphins through stress.

6.3 Recommendations:

This research has leaves some questions regarding the ability of the industry to continue to grow at such high rates in coming years based on a relatively small population of dolphins. It is recommended that:

- Further research be undertaken to ascertain whether the current levels of growth can be maintained based on the small population of cetaceans available in Guam.

7 Kiribati

7.1 Whale Watching Summary:

Kiribati currently has a low level of tourist arrivals with few hotels and marine tourism operators. In 2004 there were around 3,000 visitor arrivals to the country, most coming from Australia, New Zealand or the US. Very little research has been undertaken on cetacean populations in Kiribati's expansive territorial waters. This research concluded that there were neither dedicated nor opportunistic whale watching activities in Kiribati in 2005.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	0	0	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	0		
Target species:	NA		

Seasons of operation:	NA
Main locations of the industry (if relevant):	NA
Brief history of the industry:	NA
Sea turtle-based tourism?	Unknown
Dugong-based tourism?	NA

7.2 Tourism Potential Summary:

Due to difficulty and expense of accessing the country, combined with low levels tourism infrastructure (including low numbers of hotel rooms and basic standard of infrastructure), tourism is currently slow to emerge in Kiribati. However, initiatives such as the recently launched Kiribati Visitors Bureau website[47] should add to growth in this sector. Comprehensive research determining the local abundance levels of cetaceans and accessibility could assist in the government's program to attract increasing numbers of tourists to Kiribati.

Tourism Potential Summary:	**Findings:**
Country tourism organisation:	Kiribati Visitors Bureau
Suitable cetacean populations:	Unknown
Location of cetaceans:	Unknown
Season of cetaceans:	Unknown
Cetacean accessibility:	Unknown
Tourism infrastructure:	Low levels of infrastructure including low numbers of hotel rooms.
Country accessibility:	Difficult access, particularly to Christmas Island (where most tourism occurs). Flights to Tarawa (capital) from Marshall Islands and Australia (via Nauru), but no regular service to Christmas Island (distance from Tarawa to Christmas Island is same as New York to LA).
Other factors (e.g. political, cultural, environmental):	Some threat to the marine environment exists due to a lack of sewage treatment. Low level of most islands makes them susceptible to sea level rises caused by climate change.
Whale Watch Tourism Analysis:	
Strengths:	Remoteness of islands is a strong attraction to adventure tourists.
Weaknesses:	Difficulty of access & lack of knowledge regarding cetacean species
Opportunities:	Further cetacean population research would assist in identifying opportunities.
Threats:	Competition from other Pacific countries with better

[47] www.visit-kiribati.com, launched in conjunction with the SPTO in April 2006.

	established tourism industries.

7.3 Recommendations:

The results of this research do not lead us to recommend any further research on the potential development of whale watching in Kiribati until further data is available regarding cetacean populations that confirms or otherwise whale or dolphin populations are present that can support a whale watching industry.

8 Marshall Islands

8.1 Whale Watching Summary:

The Marshall Islands have a low level of annual visitors, with most recent data indicating around 6,000-7,000 in 2003[48]. The islands have no discernable whale watch tourism activities despite having around five dive operators. Reports from operators indicate low levels of cetacean sightings in the territorial waters of the Marshall Islands, however there is very little data on the cetacean abundance of the territorial waters.

Current Marine Tourism Summary:	Findings:		
	1998	2005	AAGR:
Estimated whale watch numbers (2005):	0	0	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	0		
Target species:	NA		
Seasons of operation:	NA		
Main locations of the industry (if relevant):	NA		
Brief history of the industry:	NA		
Sea turtle-based tourism?	Turtles are seen at some of the diving sites		
Dugong-based tourism?	No		

8.2 Tourism Potential Summary:

Due to the low level of tourism to the islands and the lack of detailed knowledge of cetacean species resident in the local waters, there is currently low potential for whale watch tourism development.

Tourism Potential Summary:	Findings:
Country tourism organisation:	Marshall Islands Visitor Authority
Suitable cetacean populations:	Unknown
Location of cetaceans:	Unknown
Season of cetaceans:	Unknown
Cetacean accessibility:	Unknown
Tourism infrastructure:	Infrastructure levels sufficient to support a small diving industry.
Country accessibility:	Flights connect the country to Australia (via Nauru), Guam and Honolulu. Flights to outer atolls are around once weekly
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths: **Weaknesses:** **Opportunities:** **Threats:**	No known accessible cetacean populations

8.3 Recommendations:

The results of this research do not lead us to recommend any further research on the potential development of whale watching in Marshall Islands until further data is available regarding cetacean populations that confirms or otherwise whale or dolphin populations are present that can support a whale watching industry.

9 Nauru

9.1 Whale Watching Summary:

Nauru has an unknown level of tourism arrivals at the current time with no contactable tourism board. Research has indicated that very little is known about cetaceans in the territorial waters of Nauru.

Current Marine Tourism Summary:	Findings:		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	0	0	0%

[48] Marshall Islands Visitors Authority, pers.comm. (April 2006)

Estimate of economic value of whale watching (2005):	USD 0
Number of whale watch operators:	0
Target species:	NA
Seasons of operation:	NA
Main locations of the industry (if relevant):	NA
Brief history of the industry:	NA
Sea turtle-based tourism?	NA
Dugong-based tourism?	No

9.2 Tourism Potential Summary:

Due to the low level of tourism to the island and the lack of detailed knowledge of cetacean species resident in the local waters, there is currently low potential for whale watch tourism development.

Tourism Potential Summary:	**Findings:**
Country tourism organisation:	Unknown
Suitable cetacean populations:	Unknown
Location of cetaceans:	Unknown
Season of cetaceans:	Unknown
Cetacean accessibility:	Unknown
Tourism infrastructure:	Unknown
Country accessibility:	Serviced by flights to Australia and Marshall Islands
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths: **Weaknesses:** **Opportunities:** **Threats:**	No known accessible cetacean populations; Low current tourism industry

9.3 Recommendations:

The results of this research do not lead us to recommend any further research on the potential development of whale watching in Nauru until further data is available regarding cetacean populations that confirms or otherwise whale or dolphin populations are present that can support a whale watching industry.

10 New Caledonia

10.1 Whale Watching Summary:

New Caledonia has grown in recent years to be one of the region's leading whale watching countries. The industry is based around seasonal visits of humpback whales in the July to September period. During these months, many of the local sailing boat charters dedicate themselves full time to whale watching, with up to 18 operators viewing cetaceans in the Baie de la Somme (Southern Lagoon) on peak weekends. There is also some small-scale dolphin watching in New Caledonia.

The country has a long established, mature tourism industry attracting around 100,000 visitor arrivals annually[49]. However, responses from operators and local researchers indicates that a large proportion of participants of whale watching are local residents[50]. The growth of whale watching in New Caledonia has averaged 17% per annum over the last seven years.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	1,695	4,906	17%
Estimate of economic value of whale watching (2005):	Direct: $417,000 Total: $1,030,260		
Number of whale watch operators:	approx. 18		
Target species:	humpback, spinner, bottlenose		
Seasons of operation:	Whale Watching – July – September Dolphin Watching – year round		
Main locations of the industry (if relevant):	Baie de la Somme (Southern Lagoon)		
Brief history of the industry:	The industry in the Southern Lagoon began in around 1995 and has grown steadily since. A national whale sanctuary was declared in the country's EEZ in 1994.		
Sea turtle-based tourism?	Unknown		
Dugong-based tourism?	No – however dugongs do occur in local waters		

10.2 Tourism Potential Summary:

Our research in New Caledonia indicates that the industry may be reaching maximum carrying capacity in the Southern Lagoon in terms of numbers of boats seeking to take tourists to the small pods of whales. Although growth rates are continuing strongly, there is concern about the potential harassment of whales that could lead to increased regulation of the local industry. Experience from other countries in the region suggests that at such a point, government's may begin to require

[49] New Caledonia Tourism (South), pers. comm. (March 2006)

[50] Opération Cétacés, Garrigue, C., pers.comm. (June 2006)

operators to obtain licences. Our conversations with operators and researchers in country indicates that a large part of the excessive boat traffic close to whales is due to private yachts who often do not follow the voluntary whale watch guidelines. Such reports would indicate that growth may have reached a point of slow down possibly peaking in recent years. Further research could ascertain the potential for future growth of the industry in New Caledonia.

Tourism Potential Summary:	**Findings:**
Country tourism organisation:	New Caledonia Tourism
Suitable cetacean populations:	humpback, spinner, bottlenose
Location of cetaceans:	Southern Lagoon
Season of cetaceans:	July to September
Cetacean accessibility:	Good accessibility in a protected lagoon environment.
Tourism infrastructure:	High level of tourism infrastructure
Country accessibility:	Flights service all key markets regularly, including Australia and Europe.
Other factors (e.g. political, cultural, environmental):	there is a project of submission of part of the coral reef area of NC (and part of the southern lagoon where the industry is working) as a UNESCO worldwide heritage, there is also a huge nickel project in the same area that could probably lead to an important increase of traffic in the area.
Whale Watch Tourism Analysis:	
Strengths:	Easy access to reliable viewing of cetaceans
Weaknesses:	Threat of excessive number of boats creating a negative image for the local industry or negatively impacting on the cetaceans
Opportunities:	Institute a well managed industry allowing good reliable cetacean access and viewing opportunities to the large tourism base visiting New Caledonia
Threats:	Potential harassment by boat traffic on a limited number of whales could lead to strict regulation or whales leaving the lagoon – estimated that on average there is one pod per day in the lagoon that is surrounded by boats for up to eight hours.

10.3 Recommendations:

This research leaves some questions regarding the ability of the industry to continue to grow when indicators show that it may be stressed at current levels of boat interaction. It is recommended that:

- Further research be undertaken to ascertain whether the current levels of growth can be maintained based on the small population of cetaceans available to a large amount of boat traffic. A more detailed study could better estimate the economic contribution of whale watching to the

local economy and provide management suggestions based on experience from other whale watch locations.

11 Niue

11.1 Whale Watching Summary:

Although a small country with relatively low levels of tourism (approximately 2558 visitor arrivals in 2004[51]), the country of Niue has a consistent cetacean population of humpback whales and spinner dolphins that form the basis of a small but growing industry. The number of operators has decreased in recent years from three to one main operator who runs both dolphin and whale watching and swim-with tours in response to tourist demand, although its core business is dive tourism. In addition to this operator, the whales often pass close enough to shore that people can swim out to the whales or private yachts follow them. Numbers of whale watchers has grown by an average of 28% per annum between 1998 and 2005 to approximately 270 whale watchers in 2005.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	50	270	28%
Estimate of economic value of whale watching (2005):	Direct: $ 7,360 Total: $ 41,110		
Number of whale watch operators:	1		
Target species:	humpback, spinner		
Seasons of operation:	Whale Watching – July – Oct Dolphin Watching – year round		
Main locations of the industry (if relevant):	Western side of the island		
Brief history of the industry:	Interest in whale watching began in 1996 when Tonga became known for its industry. Niue Tourism commissioned a study to be undertaken to assess the potential for a whale watching industry in 1998. A national whale sanctuary was designated in 2003 and WW guidelines and licensing system are in the process of being passed into law.		
Sea turtle-based tourism?	Opportunistically seen on dive trips		
Dugong-based tourism?	No		

[51] Op.cit., Hopkins, R (2006)

11.2 Tourism Potential Summary:

Whale watch tourism in Niue is heavily dependent on growth in the numbers of visitors to the country. In season, whales are readily viewed from both sea and land and a dive operator is able to take tourists out to swim with the whales. If tourism grows on Niue and the cetacean population also strengthens, there is a good chance for the country's revenues from whale watch tourism to continue to grow strongly.

Tourism Potential Summary:	Findings:
Country tourism organisation:	Niue Tourism
Suitable cetacean populations:	humpback, spinner
Location of cetaceans:	Western side of the island
Season of cetaceans:	Whale Watching - July to Oct Dolphin Watching - year round
Cetacean accessibility:	Good accessibility as the cetaceans are close to shore and visible from land and sea. However, a lack of safe harbour on Niue and the often rough seas due to the lack of protective fringing reef means that weather can seriously inhibit access. Furthermore, there are only very few small boats permanently located at Niue due to the lack of safe harbour. No large ocean going vessels can permanently moor at Niue.
Tourism infrastructure:	Good level of tourism infrastructure
Country accessibility:	Flight regularity has reportedly improved with connections to Australia and New Zealand weekly.
Other factors (e.g. political, cultural, environmental):	The country suffers from cyclone risk, having been substantially damaged by Cyclone Heta in early 2004
Whale Watch Tourism Analysis:	
Strengths:	Easy access to reliable viewing of cetaceans all year round, including ability to swim with humpback whales in season
Weaknesses:	Potential unreliability of flights to the island. Difficulty of accessing the waters around Niue due to rough seas and small vessel size.
Opportunities:	Unique tourism destination without an overcrowded whale watch industry as is found in some other Pacific countries.
Threats:	Cyclones pose threats to the small fleet of vessels that the industry relies upon.

11.3 Recommendations:

This research indicates that the whale watch industry in Niue is heavily dependent on the broader tourism industry. As such, we do not recommend further research into whale watch potential at this time.

12 Northern Mariana Islands

12.1 Whale Watching Summary:

Although a popular destination to Asian tourists, the Mariana Islands have very little in the way of whale watching activities. The Islands attracted over 500,000 visitors in 2005[52] and despite the prevalence of dive operators (over 30 such operators), there is very little in the way of cetacean sightings apart from the very occasional opportunistic sighting. As a result, whale watching in this country continues to be estimated at zero.

Current Marine Tourism Summary:	Findings:		
	1998	2005	AAGR:
Estimated whale watch numbers (2005):	0	0	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	0		
Target species:	NA		
Seasons of operation:	NA		
Main locations of the industry (if relevant):	NA		
Brief history of the industry:	NA		
Sea turtle-based tourism?	Occasional sighting on dive trips		
Dugong-based tourism?	No		

12.2 Tourism Potential Summary:

Due to the very low occurrence of cetacean sightings, there appears to be little potential for the further development of this industry in the Northern Marianas, although only cetacean surveys would confirm this. As the country has a mature tourism industry, with large-scale, marine-based tourism operations, it is assumed that were suitable cetacean populations present adjacent to tourism hubs, operators would be able to seize any opportunity that arose in relation to cetacean viewing.

Tourism Potential Summary:	Findings:
Country tourism organisation:	Marianas Visitors Authority

[52] Marianas Visitor Authority, pers.comm. (March 2006)

Suitable cetacean populations:	Unknown
Location of cetaceans:	Unknown
Season of cetaceans:	Unknown
Cetacean accessibility:	Unknown
Tourism infrastructure:	High level of tourism infrastructure
Country accessibility:	Good accessibility with flights servicing key Asian markets of Japan, Korea, China and the US.
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths: **Weaknesses:** **Opportunities:** **Threats:**	No known accessible cetacean populations

12.3 Recommendations:

The results of this research do not lead us to recommend any further research on the potential development of whale watching in the Northern Mariana Islands until further data is available regarding cetacean populations that confirms or otherwise whale or dolphin populations are present that can support a whale watching industry.

13 Palau

13.1 Whale Watching Summary:

Although a popular tourist destination, Palau has very little in the way of whale watching operations. There is one caged, swim-with-dolphin operation on the island, however this is a "wild" experience and is therefore not included within the scope of this research. Despite a mature tourism industry, there is very little in the way of cetacean sightings apart from the very occasional opportunistic sighting. As a result, whale watching in this country continues to be estimated at zero.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	0	0	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	0		
Target species:	NA		

Seasons of operation:	NA
Main locations of the industry (if relevant):	NA
Brief history of the industry:	NA
Sea turtle-based tourism?	Occasional sighting on dive trips
Dugong-based tourism?	Reportedly dugongs are able to be seen on one operator's marine tours.

13.2 Tourism Potential Summary:

Due to the very low occurrence of cetacean sightings, there is very little potential for the further development of this industry in the Palau. As the country has a mature tourism industry, with large-scale, marine-based tourism operations, operators would quickly seize any opportunity that arose in relation to cetacean viewing.

Tourism Potential Summary:	**Findings:**
Country tourism organisation:	Palau Visitors Authority
Suitable cetacean populations:	Unknown
Location of cetaceans:	Unknown
Season of cetaceans:	Unknown
Cetacean accessibility:	Unknown
Tourism infrastructure:	High level of tourism infrastructure
Country accessibility:	Good accessibility with flights servicing key markets
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths: **Weaknesses:** **Opportunities:** **Threats:**	No known accessible cetacean populations

13.3 Recommendations:

The results of this research do not lead us to recommend any further research on the potential development of whale watching in Palau.

14 Papua New Guinea

14.1 Whale Watching Summary:

Papua New Guinea (PNG) has a small niche tourism market for the eco-tourist type adventure traveller with some very high quality dive and snorkelling opportunities. In conjunction with this is a diverse cetacean population including pilot whales, orcas, minkes, spinner dolphins and bottlenose dolphins. Although there is no dedicated whale watching industry in PNG, advantage is taken by many operators of these abundant cetacean species in an opportunistic manner.

Visitor arrivals in 2005 were around 69,000[53]. Our research estimates a conservative figure of 600 opportunistic whale watchers in 2005 from approximately 15 operators. Most of these are dive operators across the many regions of PNG and this indicates an approximate growth rate of 17% per annum since 1998.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	Minimal (~200)	600	17%
Estimate of economic value of whale watching (2005):	Direct: $22,500 Total: $22,500		
Number of whale watch operators:	approx 15 opportunistic		
Target species:	Spinner, bottlenose, minke, orca, pilot		
Seasons of operation:	Variable		
Main locations of the industry (if relevant):	Across the regions of Madang, Milne Bay, Kavaira, Kavieng, Port Moresby, West New Britain and Manus Province		
Brief history of the industry:	Based on opportunistic viewing from dive operators who have been operating for between 5 – 30 years in the country		
Sea turtle-based tourism?	Occasional sighting on dive trips – including leatherback and hawksbill		
Dugong-based tourism?	Opportunistic viewing in Milne Bay region		

14.2 Tourism Potential Summary:

The high marine species biodiversity in PNG is a significant draw card to eco-tourists. With such a rich and unique array of cetacea, the country has some potential to further attract tourists based on these. However, cetacean sightings still tend to be low and based more on opportunistic sightings. In some areas there are resident pods of dolphins reliably seen, but often the biggest barrier to attracting

[53] PNG Tourism Promotion Authority (2005), *PNG – Short Term Visitors 2005*, www.png.aqualagoon.com, accessed March 2006

tourists is the difficulty and expense of accessing PNG regions. Further study could better delineate those regions with a greater potential to leverage its cetacean resource to attract more tourists.

Tourism Potential Summary:	Findings:
Country tourism organisation:	PNG Tourism Promotion Authority
Suitable cetacean populations:	Yes – although mainly opportunistic viewing potential only
Location of cetaceans:	Various regions including Madang, Milne Bay, Kavaira, Kavieng, Port Moresby, West New Britain and Manus Province
Season of cetaceans:	Various depending on species
Cetacean accessibility:	Many are easily accessible as part of existing dive trips
Tourism infrastructure:	Good level of tourism infrastructure with most tourist facilities in specially designed resort type accommodation
Country accessibility:	Good accessibility with flights servicing key markets. However, some provinces are more difficult due to lack of flights or cost of flights.
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths:	Unique biodiversity for the region including large array of cetacean species
Weaknesses:	Unreliable sightings of most cetaceans, lack of good knowledge of seasons and locations of main cetaceans, difficulty and expense of accessing many regions.
Opportunities:	An existing niche tourist segment seeking quality dive locations could be further developed to provide for cetacean viewing tourists; high interaction with cetaceans overall.
Threats:	Easier and more reliable locations for cetacean viewing in other Pacific countries.

14.3 Recommendations:

The results of this research indicate that further research could be useful to determine those locations in PNG that have the potential for cetacean based tourism development.

- Further research is recommended to ascertain where there are growth opportunities for cetacean tourism that can be leveraged off existing dive tourism based on the findings of high level opportunistic cetacean interaction.

15 Samoa

15.1 Whale Watching Summary:

Samoa attracted in the vicinity of 99,000 tourists in 2004[54]. With a well established tourism industry, the marine-based operators, such as dive and surf tours, take advantage of opportunities to view cetaceans when they are encountered on trips. The country has seasonal visits by HUMPBACK whales and resident spinner dolphin populations and around nine opportunistic operators took around 350 tourists to see cetaceans in 2005, mainly focusing on small cetaceans. This is an average growth of around 20% per annum since 1998.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	Minimal	725	8%
Estimate of economic value of whale watching (2005):	Direct: $18,488 Total: $18,488		
Number of whale watch operators:	approx 9 opportunistic		
Target species:	Spinner, bottlenose, humpback		
Seasons of operation:	Year round, humpback - July to Oct		
Main locations of the industry (if relevant):	Unknown		
Brief history of the industry:	Unknown		
Sea turtle-based tourism?	Some sea turtle viewing on dive trips (Green & Hawksbill)		
Dugong-based tourism?	No		

15.2 Tourism Potential Summary:

Currently, the marine-based tourism operators are in a position to take further advantage of cetacean viewing opportunities when they arise. It appears that these are only limited by accessibility to such occasions as a result of the low numbers of humpback whales in Samoan waters.

Tourism Potential Summary:	**Findings:**
Country tourism organisation:	Samoan Visitors Bureau
Suitable cetacean populations:	Yes – although mainly opportunistic viewing potential only

[54] Op.cit., Hopkins, R (2006)

Location of cetaceans:	Various
Season of cetaceans:	humpback - July to Oct
Cetacean accessibility:	Good accessibility to those that come close to shore, however these are few in total
Tourism infrastructure:	Good level of tourism infrastructure
Country accessibility:	Good accessibility with flights servicing key markets.
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths:	Large numbers of turtles around the island and good accessibility to dolphin pods.
Weaknesses:	Unreliable sightings of humpbacks
Opportunities:	Some opportunity to further tap into the dolphin watching if demand is there
Threats:	

15.3 Recommendations:

The results of this research indicate that further research could be useful to determine the potential for further cetacean-based tourism development in Samoa.

- Further research is recommended to ascertain where there are growth opportunities for cetacean tourism in Samoa based on the resident dolphin pods and high level of opportunistic interaction.

16 Solomon Islands

16.1 Whale Watching Summary:

In a similar manner to PNG, the Solomon Islands is a region rich in cetacean diversity and an important migratory corridor for small and large cetaceans. Although there are no dedicated whale watching operators in the country, a number of dive operators opportunistically view cetaceans on their trips with reasonably high sighting rates (up to 75% of trips). It is estimated that in 2005, there were 500 opportunistic whale watchers. Certain small cetacean species are abundant in population and traditional dolphin hunts still occur in certain parts of the Solomons, with dolphin teeth traded as a substitute currency. The country has had low visitation rates in recent years (around 6,000 in 2004, showing little recovery to the pre-1999 levels of up to 16,000[55]) largely as a result of civil unrest and political instability.

[55] SPTO, *Tourism Sector Study – Solomons*, www.spto.org, accessed June 2006.

Current Marine Tourism Summary:	Findings:		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	Minimal	500	14%
Estimate of economic value of whale watching (2005):	Direct: $36,250 Total: $36,250		
Number of whale watch operators:	approx 6 opportunistic		
Target species:	Spinner, common, Rissos, Orca, Melon-headed, False Killer and many other species occasionally seen		
Seasons of operation:	Year round for dolphins, sporadic for whales		
Main locations of the industry (if relevant):	Various regions – very little information on key cetacean viewing regions		
Brief history of the industry:	Marine tourism is very young in the country		
Sea turtle-based tourism?	Some sea turtle viewing on dive trips and one eco-tourism venture, Tetepare Island[56], where turtles nest (Leatherback & Hawksbill)		
Dugong-based tourism?	Dugongs sometimes seen by dive operators		

16.2 Tourism Potential Summary:

Currently, marine-based tourism operators are constrained by the low levels of tourism to the country due largely to the political instability over recent years. However, if tourism returns to Solomons, there is significant potential to grow a whale watch industry based particularly on small cetaceans with additional attraction provided by the relatively high sighting levels of a variety of large cetaceans. Further research is needed to ascertain the regions with most reliable cetacean sightings and key seasons for such activities.

Tourism Potential Summary:	Findings:
Country tourism organisation:	Solomon Islands Visitors Bureau
Suitable cetacean populations:	Yes – particularly small cetaceans with dolphin populations estimated at around 1 million animals. A variety of large cetaceans are also seen in local waters.
Location of cetaceans:	Various regions
Season of cetaceans:	Year round
Cetacean accessibility:	Generally good accessibility, although some of the best viewing opportunities may occur in remote regions – insufficient information
Tourism infrastructure:	Reasonable level of tourism infrastructure with small scale hotels or dive resorts. Low general standard of infrastructure such as telecommunications, roads, power and water in outer regions

[56] www.tetepare.org

Country accessibility:	Reasonable accessibility with flights servicing Australia, PNG and Fiji to the one international airport at Guadalcanal. However domestic flights and ferry travel are unreliable making it difficult to access outer regions
Other factors (e.g. political, cultural, environmental):	Recent and ongoing political instability has lead to a situation of civil unrest.
Whale Watch Tourism Analysis:	
Strengths:	Large cetacean population in local waters, highly diverse species including sea turtles and dugongs. High cetacean sighting potential with little tourism competition for access to cetaceans
Weaknesses:	Low levels of general infrastructure although small scale hotels exists. Difficult to obtain reliable domestic travel around regions
Opportunities:	Definite opportunity for tourism development including cetacean viewing if stability can be demonstrated in the country. Unique natural values and biodiversity in the country and strong access to a range of cetacean species. Well connected to Australia.
Threats:	Political and civil instability continues to hold back tourism recovery. Potential that local small cetacean hunting could conflict with any future cetacean watching tourism activities.

16.3 Recommendations:

Without a recovery in the levels of tourist visitation to the country, there is little potential for strong growth in the whale watch industry. Nevertheless, during the seven year period assessed, the industry continued to grow despite stagnation in the general tourism market in the Solomons, albeit at very low levels. Therefore,

- Further research would be useful to ascertain the regions of greatest cetacean population and accessibility and to determine the potential for further cetacean-based tourism development in the Solomons.

17 Tokelau

17.1 Whale Watching Summary:

Tokelau is a small Pacific Island nation with no established tourism industry. There is very little information known regarding cetacean populations and no known marine-based tourism operators located in the country. As a result, there is no current whale watching activity.

Current Marine Tourism Summary:	Findings:		
	1998	2005	AAGR:
Estimated whale watch numbers (2005):	0	0	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	0		
Target species:	NA		
Seasons of operation:	NA		
Main locations of the industry (if relevant):	NA		
Brief history of the industry:	NA		
Sea turtle-based tourism?	Unknown		
Dugong-based tourism?	No		

17.2 Tourism Potential Summary:

With no formal tourism industry, and access currently very difficult, there is little potential for the development of an industry focused on cetaceans in the foreseeable future.

Tourism Potential Summary:	Findings:
Country tourism organisation:	None
Suitable cetacean populations:	Unknown
Location of cetaceans:	Unknown
Season of cetaceans:	Unknown
Cetacean accessibility:	Unknown
Tourism infrastructure:	Very low
Country accessibility:	Very difficult with the country being accessible by supply vessel from Samoa twice per month
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths: Weaknesses: Opportunities: Threats:	Very inaccessible country with no tourism industry

17.3 Recommendations:

The results of this research do not lead us to recommend any further research on the potential development of whale watching in Tokelau.

18 Tonga

18.1 Whale Watching Summary:

Tonga has long been the leading whale watching country in the region. In 1998, Hoyt assessed that the country received 2,300 whale watchers, well above any other country at the time. The country has a unique industry that relies on the migrating humpback whales that visit annually and stay around the Vava'u islands to breed. The country also allows tourists to swim with the whales. Tonga has recently set a cap on whale watch licences at thirteen, the current number that have been issued. Anecdotal reports have increasingly stated that the boat traffic around whales is getting to very high levels, but despite this, new entrants are planning to conduct whale watch tours this current season (2006).

Also uniquely to Tonga, the main centre for whale watching, Vava'u, is able to attract visitors specifically for whale watching and swim with whale activities. A proportion of visitors travel to Vava'u and undertake multiple whale watching trips over the course of their stay. There is no other location in the Pacific Islands region that attracts tourists specifically for whale watching, with most whale watchers at other locations in the region undertaking whale watching activities incidentally as part of their trip.

This research has concluded that in 2005, there were approximately 9,000 whale watchers in Tonga. We have based this number on distinct whale watch trips undertaken, as opposed to numbers of whale watch participants, and therefore included repeat whale watchers for all of their trips. Uniquely in Tonga, many whale watchers undertake multiple trips in the course of their stay. As the aim of this research is to estimate the economic value of whale watching, it is more relevant to count the number of trips made rather than the numbers of participants as each trip incurs an expenditure on the activity. It was brought to our attention by operators that although numbers of whale watchers may have decreased in 2005, the actual days on the water were up, due to longer charters and repeat whale watchers. We have endeavoured to accurately portray this in our figures.

However, this may cause an effect on the annual average growth rate figure based on a comparison with the Hoyt report findings of 1998. Within the Hoyt report, it is indicated that total whale watchers are based on numbers of people undertaking whale watch trips, and therefore multiple trips are not counted repeatedly. Hence, the 1998 estimate of 2,300 may be slightly understated when compared to the assessment methodology of our current review. We have taken this into consideration when calculating growth figures.

In conclusion, the Tongan whale watch industry continues to grow strongly at around 22% over the last 7 years.

Current Marine Tourism Summary:	Findings:		
	1998	2005	AAGR:
Estimated whale watch numbers (2005):	2,334	9000	22%
Estimate of economic value of whale watching (2005):	Direct: $738,000 Total: $1,863,000		
Number of whale watch operators:	13 licensed. However 6 main operators (in ten vessels) are said to account for up to 90% of total WW trips		
Target species:	humpback		
Seasons of operation:	July – Nov		
Main locations of the industry (if relevant):	Vava'u Islands		
Brief history of the industry:	Commercial WW began in 1994 with 4 licences issued and has grown strongly from there.		
Sea turtle-based tourism?	Sightings common around the islands		
Dugong-based tourism?	No		

18.2 Tourism Potential Summary:

With a limited scope of research, it is difficult to ascertain the level of future tourism potential for Tonga. It seems clear that the industry has established itself strongly attracting tourists worldwide specifically to swim with whales. The industry is reaching maturity with a whale watch operators association now established and voluntary codes of practice in place. A cap on licences is now in place, although not all new licence holders have begun operating, so it is assumed that this will lead to further growth in whale watch numbers. However, with a limited resource base, whale watching cannot grow exponentially, and will reach capacity at some point where growth will flatten out. This may in fact have already occurred, and further research would help to ascertain this. Growth is now occurring more slowly than many of the emerging whale watch locations in the region.

Tourism Potential Summary:	Findings:
Country tourism organisation:	Tonga Visitors Bureau
Suitable cetacean populations:	humpback
Location of cetaceans:	Mainly around Vava'u Islands
Season of cetaceans:	July to Nov
Cetacean accessibility:	Readily accessible

Tourism infrastructure:	Good
Country accessibility:	Well serviced to Nuku'Alofa from NZ and Australia. Domestic airlines flying to Vava'u are less reliable
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths:	Access to humpback whales that remain resident over a number of months
Weaknesses:	Potentially difficult access to Vava'u
Opportunities:	A unique position in the Pacific in terms of whale accessibility and a chance to lead the region in terms of best managed whale watch industry if there is a strong promotion of codes and good management.
Threats:	Excessive harassment of the whales by high numbers of boats and swim with whale operations could lead to a negative impact on the whales and negative image on the country's whale watching industry – eco-tourists of the kind travelling to see whales are sensitive to such issues[57].

18.3 Recommendations:

Further study would assist in determining the status of the industry in Tonga and its potential for future continued sustainable growth.

- Further research is recommended to ascertain the county's potential for further growth and a more detailed assessment of the current status of the industry and its economic contribution to the local economy.

19 Tuvalu

19.1 Whale Watching Summary:

The small Pacific Island nation of Tuvalu has a very low level of tourism visitation at around 1496 in 2003[58]. The country has very little in the way of established tourism industry. There is little information known regarding cetacean populations and no known marine-based tourism operators located in the country. As a result, the current level of whale watching is zero.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	0	0	0%

[57] Op.Cit. Orams, M.B. (1999)

[58] SPTO, *Tourism Sector Study – Tuvalu*, www.spto.org, accessed June 2006.

Estimate of economic value of whale watching (2005):	USD 0
Number of whale watch operators:	0
Target species:	NA
Seasons of operation:	NA
Main locations of the industry (if relevant):	NA
Brief history of the industry:	NA
Sea turtle-based tourism?	Some sea turtle nesting in Funafuti Conservation Area (Green)
Dugong-based tourism?	No

19.2 Tourism Potential Summary:

With no current tourism industry, and no solid data regarding cetacean populations in the country, there is little potential for the development of an industry focused on cetaceans in the foreseeable future.

Tourism Potential Summary:	**Findings:**
Country tourism organisation:	Ministry of Finance, Economic Planning and Industries
Suitable cetacean populations:	Unknown
Location of cetaceans:	Unknown
Season of cetaceans:	Unknown
Cetacean accessibility:	Unknown
Tourism infrastructure:	Very low
Country accessibility:	Low accessibility with flights from Fiji only
Other factors (e.g. political, cultural, environmental):	Tuvalu is the lowest lying country in the world and is likely to be swamped as a result of climate change. The population of 9000 is negotiating migration to other islands. High tides already swamp much of the capital, Funafuti, with the highest seen in Feb 2006.
Whale Watch Tourism Analysis:	
Strengths: **Weaknesses:** **Opportunities:** **Threats:**	No tourism industry and no known cetacean population

19.3 Recommendations:

The results of this research do not lead us to recommend any further research on the potential development of whale watching in Tuvalu until baseline research is undertaken that confirms or otherwise whale or dolphin populations are present that can support a whale watching industry.

20 Vanuatu

20.1 Whale Watching Summary:

The country of Vanuatu attracted over 50,400 visitors in 2003[59]. There are currently no cetacean watch activities occurring in the country, with only very rare sightings of any cetaceans. It has been reported that there was once abundant humpback whales in the local waters, however there is no apparent recovery of this population.

In one location of Vanuatu, a dugong is able to be swum with as it is resident in a local bay.

Current Marine Tourism Summary:	Findings:		
	1998	2005	AAGR:
Estimated whale watch numbers (2005):	0	0	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	0		
Target species:	NA		
Seasons of operation:	NA		
Main locations of the industry (if relevant):	NA		
Brief history of the industry:	NA		
Sea turtle-based tourism?	NA		
Dugong-based tourism?	Yes- Lamen Bay- swim with a resident dugong		

20.2 Tourism Potential Summary:

With very little in the way of cetacean populations in Vanuatu, there is little potential for the development of an industry focused on cetaceans in the foreseeable future.

Tourism Potential Summary:	Findings:
Country tourism organisation:	Vanuatu Tourism Office
Suitable cetacean populations:	Unknown
Location of cetaceans:	Unknown
Season of cetaceans:	Unknown

[59] SPTO, *Tourism Sector Study – Vanuatu*, www.spto.org, accessed June 2006.

Cetacean accessibility:	Unknown
Tourism infrastructure:	Good level of infrastructure
Country accessibility:	Regularly serviced with flights to Australia, Noumea, Fiji and NZ.
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths: **Weaknesses:** **Opportunities:** **Threats:**	Very rare sightings of cetaceans apart from dolphin sightings on the west coast of Efate.

20.3 Recommendations:

The results of this research do not lead us to recommend any further research on the potential development of whale watching in Vanuatu until baseline research is undertaken that confirms or otherwise whale or dolphin populations are present that can support a whale watching industry.

21 Wallis & Futuna

21.1 Whale Watching Summary:

Wallis & Futuna has very little tourism and only one dive club that operates locally. There is no known cetacean watching industry and very little in the way of research on local cetacean species.

Current Marine Tourism Summary:	**Findings:**		
	1998	**2005**	**AAGR:**
Estimated whale watch numbers (2005):	0	0	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	0		
Target species:	NA		
Seasons of operation:	NA		
Main locations of the industry (if relevant):	NA		
Brief history of the industry:	NA		
Sea turtle-based tourism?	Unknown		
Dugong-based tourism?	No		

21.2 Tourism Potential Summary:

With no tourism industry in place, and no solid data regarding cetacean populations in the country, there is little potential for the development of an industry focused on cetaceans in the foreseeable future.

Tourism Potential Summary:	Findings:
Country tourism organisation:	Unknown
Suitable cetacean populations:	Unknown
Location of cetaceans:	Unknown
Season of cetaceans:	Unknown
Cetacean accessibility:	Unknown
Tourism infrastructure:	Very low
Country accessibility:	Low accessibility with flights only to Noumea twice weekly.
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths: **Weaknesses:** **Opportunities:** **Threats:**	No tourism industry and no known cetacean population

21.3 Recommendations:

The results of this research do not lead us to recommend any further research on the potential development of whale watching in Wallis & Futuna until baseline research is undertaken that confirms or otherwise whale or dolphin populations are present that can support a whale watching industry.

22 Pitcairn Island

22.1 Whale Watching Summary:

Pitcairn has very little tourism with vessels stopping infrequently on their cross Pacific journeys. There is no known cetacean watching industry and very little in the way of research on local cetacean species. Some turtles are known to nest on Henderson Island.

Current Marine Tourism Summary:	Findings:		
	1998	2005	AAGR:
Estimated whale watch numbers (2005):	0	0	0%
Estimate of economic value of whale watching (2005):	USD 0		
Number of whale watch operators:	0		
Target species:	NA		
Seasons of operation:	NA		
Main locations of the industry (if relevant):	NA		
Brief history of the industry:	NA		
Sea turtle-based tourism?	No		
Dugong-based tourism?	No		

22.2 Tourism Potential Summary:

With no real tourism industry to speak of, and no solid data regarding cetacean populations in the country, there is little potential for the development of an industry focused on cetaceans in the foreseeable future.

Tourism Potential Summary:	Findings:
Country tourism organisation:	Pitcairn Island Office
Suitable cetacean populations:	Unknown
Location of cetaceans:	Unknown
Season of cetaceans:	Unknown
Cetacean accessibility:	Unknown
Tourism infrastructure:	Very low – one cottage maintained by the local council
Country accessibility:	Very low accessibility via cargo ship. Need permit to stay on the island.
Other factors (e.g. political, cultural, environmental):	NA
Whale Watch Tourism Analysis:	
Strengths: Weaknesses: Opportunities: Threats:	No tourism industry and no known cetacean population

22.3 Recommendations:

The results of this research do not lead us to recommend any further research on the potential development of whale watching in Pitcairn until baseline research is undertaken that confirms or otherwise whale or dolphin populations are present that can support a whale watching industry.

ecolarge

Economists @ Large and Associates
Consulting Economists

www.ecolarge.com