

REPORT TO
WA DEPARTMENT OF BIODIVERSITY CONSERVATION AND
ATTRACTIONS

AUGUST 2020

THE ECONOMIC IMPACT OF DEVELOPING SHARK BAY'S TOURISM INFRASTRUCTURE



DESTINATION SHARK BAY
FINAL REPORT





ACIL ALLEN CONSULTING PTY LTD
ABN 68 102 652 148

LEVEL NINE
60 COLLINS STREET
MELBOURNE VIC 3000
AUSTRALIA
T+61 3 8650 6000

LEVEL NINE
50 PITT STREET
SYDNEY NSW 2000
AUSTRALIA
T+61 2 8272 5100

LEVEL FIFTEEN
127 CREEK STREET
BRISBANE QLD 4000
AUSTRALIA
T+61 7 3009 8700

LEVEL SIX
54 MARCUS CLARKE STREET
CANBERRA ACT 2601
AUSTRALIA
T+61 2 6103 8200

LEVEL TWELVE
28 THE ESPLANADE
PERTH WA 6000
AUSTRALIA
T+61 8 9449 9600

167 FLINDERS STREET
ADELAIDE SA 5000
AUSTRALIA
T +61 8 8122 4965

ACILALLEN.COM.AU

ANTONIA HODBY

PRINCIPAL CONSULTANT

A.HODBY@ACILALLEN.COM.AU

08 9449 9610

MARSHALL ROBERTS

ANALYST

M.ROBERTS@ACILALLEN.COM.AU

08 9449 9600

RELIANCE AND DISCLAIMER THE PROFESSIONAL ANALYSIS AND ADVICE IN THIS REPORT HAS BEEN PREPARED BY ACIL ALLEN CONSULTING FOR THE EXCLUSIVE USE OF THE PARTY OR PARTIES TO WHOM IT IS ADDRESSED (THE ADDRESSEE) AND FOR THE PURPOSES SPECIFIED IN IT. THIS REPORT IS SUPPLIED IN GOOD FAITH AND REFLECTS THE KNOWLEDGE, EXPERTISE AND EXPERIENCE OF THE CONSULTANTS INVOLVED. THE REPORT MUST NOT BE PUBLISHED, QUOTED OR DISSEMINATED TO ANY OTHER PARTY WITHOUT ACIL ALLEN CONSULTING'S PRIOR WRITTEN CONSENT. ACIL ALLEN CONSULTING ACCEPTS NO RESPONSIBILITY WHATSOEVER FOR ANY LOSS OCCASIONED BY ANY PERSON ACTING OR REFRAINING FROM ACTION AS A RESULT OF RELIANCE ON THE REPORT, OTHER THAN THE ADDRESSEE.

IN CONDUCTING THE ANALYSIS IN THIS REPORT ACIL ALLEN CONSULTING HAS ENDEAVOURED TO USE WHAT IT CONSIDERS IS THE BEST INFORMATION AVAILABLE AT THE DATE OF PUBLICATION, INCLUDING INFORMATION SUPPLIED BY THE ADDRESSEE. ACIL ALLEN CONSULTING HAS RELIED UPON THE INFORMATION PROVIDED BY THE ADDRESSEE AND HAS NOT SOUGHT TO VERIFY THE ACCURACY OF THE INFORMATION SUPPLIED. UNLESS STATED OTHERWISE, ACIL ALLEN CONSULTING DOES NOT WARRANT THE ACCURACY OF ANY FORECAST OR PROJECTION IN THE REPORT. ALTHOUGH ACIL ALLEN CONSULTING EXERCISES REASONABLE CARE WHEN MAKING FORECASTS OR PROJECTIONS, FACTORS IN THE PROCESS, SUCH AS FUTURE MARKET BEHAVIOUR, ARE INHERENTLY UNCERTAIN AND CANNOT BE FORECAST OR PROJECTED RELIABLY.

ACIL ALLEN CONSULTING SHALL NOT BE LIABLE IN RESPECT OF ANY CLAIM ARISING OUT OF THE FAILURE OF A CLIENT INVESTMENT TO PERFORM TO THE ADVANTAGE OF THE CLIENT OR TO THE ADVANTAGE OF THE CLIENT TO THE DEGREE SUGGESTED OR ASSUMED IN ANY ADVICE OR FORECAST GIVEN BY ACIL ALLEN CONSULTING.

ACIL ALLEN CONSULTING 2020

C O N T E N T S

1

INTRODUCTION	1
1.1 Our Engagement	1
1.2 Report Structure	2
1.3 Key terms and abbreviations	2

2

VISITOR ASSUMPTIONS	4
2.1 Current visitation profile: Shark Bay	4
2.2 Assessing Shark Bay's accommodation utilisation	6
2.3 Destination Shark Bay scenarios	7
2.4 Additional expenditure: Destination Shark Bay	9
2.5 Summary of visitation by scenario	12
2.6 Unquantified benefits	12

3

ECONOMIC IMPACT OF DESTINATION SHARK BAY	13
3.1 Economic impact assessment	13
3.2 Benefit cost assessment	16
3.3 Breakeven	17

A

SHARK BAY'S ACCOMMODATION OPTIONS	A-1
Shark Bay Accommodation	A-1

B

ABOUT ACIL ALLEN CONSULTING	B-1
About ACIL Allen Consulting	B-1

C

INPUT-OUTPUT MODELLING	C-1
Input-Output Modelling	C-1

FIGURES

FIGURE 2.1	SEASONAL VISITATION TO SHARK BAY'S MONKEY MIA DOLPHIN RESORT	5
FIGURE 2.2	ACCOMMODATION UTILISATION AND CAPACITY (ADJUSTED): BED NIGHTS PER MONTH	6
FIGURE 2.3	SCENARIO 1 (LOW CASE): BED NIGHTS PER MONTH	7
FIGURE 2.4	SCENARIO 2 (MEDIUM CASE) BED NIGHTS PER MONTH	8
FIGURE 2.5	SCENARIO 3 (HIGH CASE) BED NIGHTS PER MONTH	9
FIGURE 2.6	DESTINATION SHARK BAY EXPENDITURE	9
FIGURE 2.7	OPERATIONAL EXPENDITURE	10
FIGURE 2.8	SCENARIO 1 (LOW): DIRECT VISITATION EXPENDITURE IMPACT	10
FIGURE 2.9	SCENARIO 2 (MEDIUM): DIRECT VISITATION EXPENDITURE IMPACT	11
FIGURE 2.10	SCENARIO 3 (HIGH): DIRECT VISITATION EXPENDITURE IMPACT	11
FIGURE 3.1	GROSS REGIONAL PRODUCT IMPACT: 2024-25	14
FIGURE 3.2	REAL INCOME IMPACT: 2024-25	15

C O N T E N T S

FIGURE 3.3	EMPLOYMENT IMPACT: 2024-25 (FTE JOBS)	16
FIGURE 3.4	BENEFIT COST ASSESSMENT RESULTS	18
FIGURE C.1	"TRACE THROUGH" OF TOURISM EXPENDITURE IN AN INPUT-OUTPUT MODEL	C-1

TABLES

TABLE 1.1	TERMS USED	2
TABLE 1.2	ACRONYMS USED	3
TABLE 2.1	VISITOR NUMBERS AND DURATION OF STAY: SHARK BAY	4
TABLE 2.2	VISITOR EXPENDITURE	5
TABLE 2.3	ACCOMMODATION CHOICE	5
TABLE 2.4	ACCOMMODATION CAPACITY OF THE SHARK BAY REGION	6
TABLE 2.5	SCENARIO 1 (LOW): ADDITIONAL ANNUAL VISITATION IMPACT	7
TABLE 2.6	SCENARIO 2 (MEDIUM): ADDITIONAL ANNUAL VISITATION IMPACT	8
TABLE 2.7	SCENARIO 3 (HIGH): ADDITIONAL ANNUAL VISITATION IMPACT	8
TABLE 2.8	SUMMARY OF VISITATION AND VISITOR SPENDING BY SCENARIO	12
TABLE 3.1	GROSS REGIONAL PRODUCT: ANNUAL AND CUMULATIVE IMPACT	14
TABLE 3.2	REAL INCOME: ANNUAL AND CUMULATIVE IMPACT	15
TABLE 3.3	EMPLOYMENT: ANNUAL AND CUMULATIVE IMPACT	16
TABLE 3.4	BENEFIT COST ASSESSMENT	17
TABLE A.1	ACCOMMODATION CAPACITY IN SHARK BAY	A-1



In 2019, the Gascoyne Development Commission (GDC) developed the Destination Shark Bay business case which focussed on rejuvenating visitor attractions in the Shark Bay area and introducing new visitor experiences by 2023-24. The completion of Destination Shark Bay will mark the 30th anniversary of the Shark Bay World Heritage Area listing which identified the area as one of 21 World Heritage places on earth that satisfied all four natural listing criteria. The criteria include natural beauty, Earth's history, ecological processes, and biological diversity and makes Shark Bay one of the most important wilderness regions on Earth.¹

The Business Case details several infrastructure developments for Shark Bay which include rejuvenating the Monkey Mia destination, renewing the Peron Homestead Precinct, creating a new subterranean experience at the Shell Beach Conservation Park, improving the Hamelin Pool Marine Nature Reserve, the World Heritage Area Trail Head and viewing opportunities from Eagle Bluff (GDC, 2019). These infrastructure projects as part of Destination Shark Bay aim to:

...encourage visitors to stay longer, visit World Heritage area during the shoulder and low seasons, and ultimately spend more money in Shark Bay, realising transformative economic growth as well as social and environmental outcomes.

The estimated capital cost of *Destination Shark Bay* is around \$34.95 million over the four years from 2020-21 and 2023-24 and is expected to deliver significant tourism benefits for the Shark Bay area and the wider region. The Business Case presents some of the potential impacts, including increasing visitor numbers, extending visitor stays, and increasing total visitor spending.

Destination Shark Bay is expected to reinvigorate visitor sites, realise transformational economic growth, promote Malgana aspirations for the World Heritage area, protect environmental and cultural values and bolster the regional economy. Destination Shark Bay forms part of the State Government's Two Year Action Plan for Nature Based Tourism (2019-20) and it also meets the State's Action Plan goal of attracting more people to regional areas by improving nature based experiences.

1.1 Our Engagement

In January 2020, ACIL Allen Consulting (ACIL Allen) was engaged by the Gascoyne Development Commission (GDC) to undertake a detailed independent economic impact assessment (EIA) and benefit cost assessment (BCA) of Destination Shark Bay as described in the 2019 business case. The focus of the EIA is on the additional visitor spending and the additional spending required to maintain the Destination Shark Bay infrastructure on the economies of the Shire of Shark Bay area (Shark Bay) and the surrounding Gascoyne region. The BCA includes both the construction and operation phases of the project.

¹ <https://oceanside.com.au/shark-bay>

ACIL Allen was commissioned to provide an assessment of three scenarios developed by the Gascoyne Development Commission which relate to the possible visitor outcomes detailed in the Destination Shark Bay business case. These three scenarios include:

1. **Scenario 1 low case:** a ten per cent increase in visitation where new and existing visitors stay in Shark Bay for an extra night over a longer shoulder period including the months of February, March, September and October only;
2. **Scenario 2 medium case:** a ten per cent increase in domestic and international visitation where existing visitors stay in Shark Bay for an extra night over the entire year;
3. **Scenario 3 high case:** a ten per cent increase in domestic and international visitation where existing visitors stay in Shark Bay for an extra two nights over the entire year.

1.2 Report Structure

Chapter 1 introduces the project engagement, the Destination Shark Bay business case and some of the key terms and abbreviations used throughout the report.

Chapter 2 presents ACIL Allen's modelling framework and assumptions used to undertake the EIA and BCA. The capital expenditure, operational expenditure and visitation spend associated with Destination Shark Bay are also presented in this chapter plus some of the unquantifiable benefits.

Chapter 3 presents the EIA, and BCA results.

The **Appendices** provide a list of Shark Bay's accommodation options, further information about ACIL Allen Consulting and further information about ACIL Allen's Input-Output modelling.

1.3 Key terms and abbreviations

Where possible, ACIL Allen has avoided the use of technical jargon in the presentation of this report. However, there are a range of economic terms and acronyms used to discuss modelling inputs and outputs. These are presented below.

TABLE 1.1 TERMS USED

Term	Description
Employment	The number of full time equivalent job years created as a result of a project or expenditure in the economy, which includes direct and indirect (flow-on) employment.
Gross regional product (GRP) or real economic output	<i>A measure of the size of an economy</i> Gross product is a measure of the output generated by an economy over a period of time (typically a year). It represents the total dollar value of all finalised goods and services produced over a specific time period and is considered as a measure of the size of the economy. At a national level, it is referred to as Gross Domestic Product (GDP); at the state level, Gross State Product (GSP); while at a regional level, Gross Regional Product (GRP).
Input-Output Tables	Input-Output (I-O) tables capture the direct and indirect effects of expenditure by capturing, for each industry, the industries it purchases inputs from and also the industries it sells its outputs to. For example, the I-O model for Western Australia captures purchases from and sales to industries located in Western Australia, as well as imports from outside of Western Australia.
Net present value (NPV)	The value of a future stream of income (or expenses) converted into current terms by an assumed annual discount rate. The underlying premise is that receiving, say, \$100 in 10 years is not 'worth' the same (i.e. is less desirable) than receiving \$100 today. For the purposes of this study, NPV calculations have been made based on a discount rate of 2.4 per cent.

Term	Description
Real income	<p><i>A measure of the welfare of residents in an economy through their ability to purchase goods and services and to accumulate wealth</i></p> <p>Although changes in real economic output are useful measures for estimating how much the output of the economy may change due to a change in policy, changes in real income are also important as they provide an indication of the change in economic welfare of the residents of a region through their ability to purchase goods and services.</p> <p>Real income measures the income available for final consumption and saving after adjusting for inflation. An increase in real income means that there has been a rise in the capacity for consumption as well as a rise in the ability to accumulate wealth in the form of financial and other assets. The change in real income from a development is a measure of the change in the economic welfare of residents within an economy.</p>

SOURCE: ACIL ALLEN CONSULTING

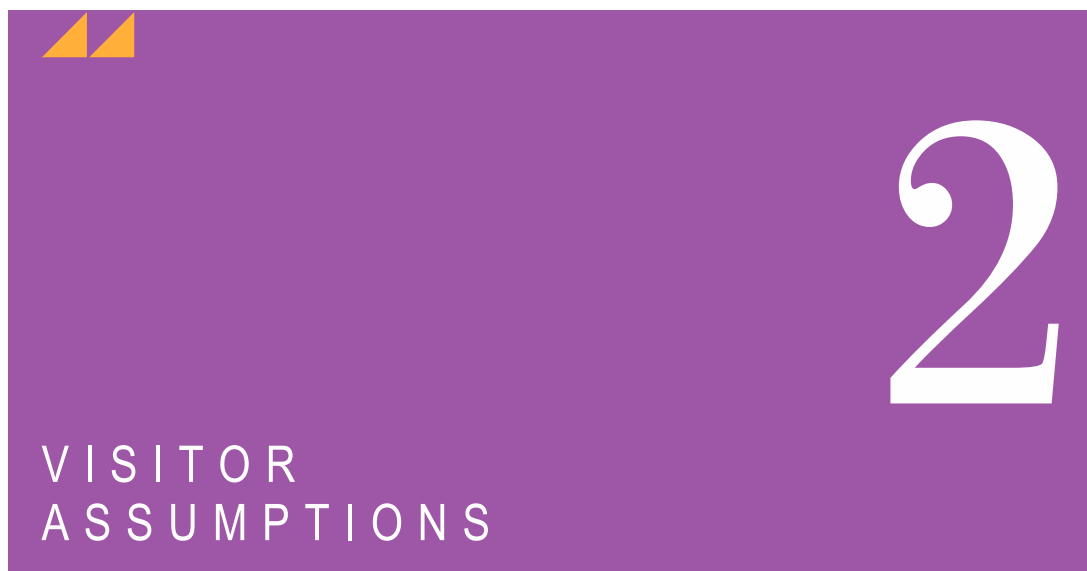
1.3.1 Acronyms used

The following acronyms have been used in this report.

TABLE 1.2 ACRONYMS USED

Acronym	Description
AUD/ A\$ or \$	Australian dollars (default unless otherwise specified)
FTE	Full Time Equivalent
FY	Financial year
GDC	Gascoyne Development Commission
GRP	Gross Regional Product
GST	Goods and Services Tax
GVA	Gross Value Added
NPV	Net Present Value

SOURCE: ACIL ALLEN CONSULTING



VISITOR ASSUMPTIONS

This chapter presents details of the current visitor market in Shark Bay and key assumptions that form the three scenarios analysed in this report.

2.1 Current visitation profile: Shark Bay

The following section presents the current profile of the visitors to Shark Bay. This profile will form the base case from which the increase in visitation that the Destination Shark Bay will create.

2.1.1 Visitation

The number of visitors to Shark Bay between 2017 and 2019 was around 103,000 visitors per annum as reported by Tourism WA (**Table 2.1**). Two thirds of visitors to Shark Bay are domestic overnight visitors whilst the remaining third are international visitors.

Domestic visitors tend to stay longer in Shark Bay at around 5.3 nights on average per person, compared to international visitors who stay for around 3.6 nights.

TABLE 2.1 VISITOR NUMBERS AND DURATION OF STAY: SHARK BAY

	Domestic	International	Total
Visitors (overnight) ²	68,667	34,667	103,334
Average stay (nights)	5.30	3.62	4.74
Visitor nights	363,935	125,495	489,430

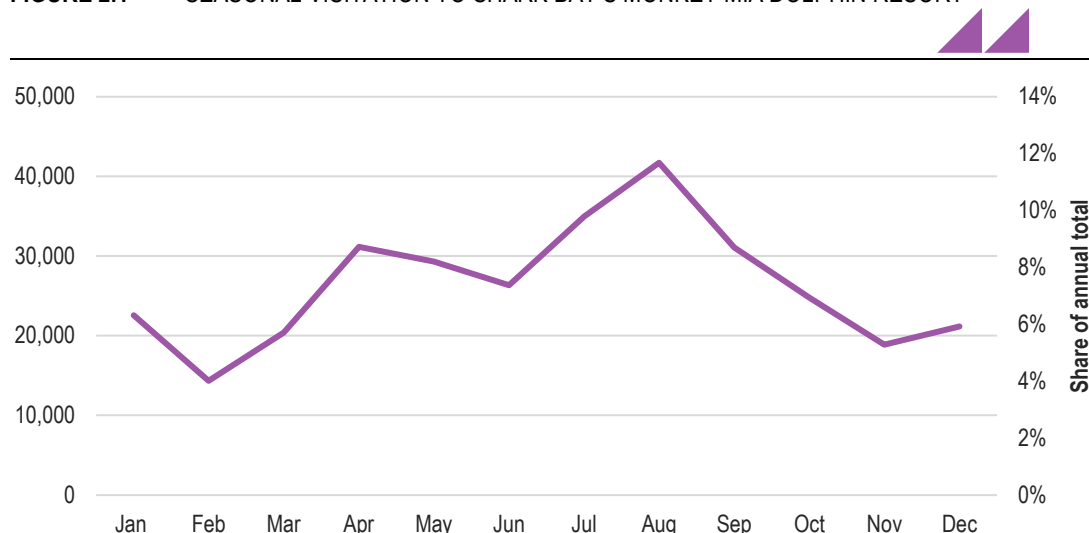
SOURCE: TOURISM WA

Most visitors to Shark Bay visit the Monkey Mia tourist area (around 95,000 people visitors per annum) and therefore the visitation to this area by month provides a good indication of the overall seasonality of visitors to the Shark Bay region (Monkey Mia, 2020). Typical of most tourist destinations, visitation to Shark Bay is subject to strong seasonal factors such as climate, school holidays, and public holidays such as Easter. For example and as illustrated in **Figure 2.1**, during December and January which are typically dry and windy, and February and March when it is hot, there is lower visitation to Shark Bay.³

Visitation to Shark Bay typically peaks in August and attracts around 13 per cent of all visitors in any given year. The months of July, September, May, and April attract around 10 per cent of annual visitation in each of these months.

² Tourism WA three year average visitation between 2017 and 2019.

³ <https://www.sharkbay.org/about/climate/>

FIGURE 2.1 SEASONAL VISITATION TO SHARK BAY'S MONKEY MIA DOLPHIN RESORT

SOURCE: GDC, MONKEY MIA

2.1.2 Visitor spending

Domestic visitors not only tend to spend longer in Shark Bay, they typically spend more with the average visitor spending around \$674 per trip which is 72 per cent more compared to international visitors. They also spend more on a per night basis with the average domestic visitor spending around \$182 per night (Table 2.2).

TABLE 2.2 VISITOR EXPENDITURE

	Domestic	International
Average spend per trip	\$674	\$393
Average spend per night	\$182	\$114

SOURCE: TOURISM RESEARCH AUSTRALIA LGA PROFILES 2018

Almost half of the domestic and international visitors to Shark Bay stay in a caravan park or a commercial camping ground. Around one third of other visitors stay in a hotel, resort, motel or motor inn, whilst the remaining 20 per cent opt for a non commercial, caravan or camping option (Table 2.3).

TABLE 2.3 ACCOMMODATION CHOICE

#	Option	Domestic		International	
1	Caravan park or commercial camping ground	31,700	47%	12,100	44%
2	Hotel/resort/motel or motor inn	23,200	35%	9,300	34%
3	Caravan or camping (non-commercial)	12,100	18%	6,100	22%
	Total	67,000	100%	27,500	100%

SOURCE: TOURISM RESEARCH AUSTRALIA LGA PROFILES 2018

2.1.3 Accommodation availability

Table 2.4 presents the availability of accommodation options in Shark Bay (see Appendix A for a complete list of accommodation facilities in the Shark Bay region). ACIL Allen has classified these according to Tourism WA's classifications of accommodation classification (as shown in Table 2.3). The availability of beds in Shark Bay will inform the capacity of Shark Bay to accommodate an increase in visitation considered in each scenario.

More than half of the accommodation options in Shark Bay are available in the form of 'caravan park or commercial camping ground', a further 30 per cent of beds are available as 'hotel/resort/motel or motor inn', whilst around 12 per cent of beds are non-commercial caravan or camping options.

TABLE 2.4 ACCOMMODATION CAPACITY OF THE SHARK BAY REGION

	Beds	Share of beds
Caravan park or commercial camping ground	3,521	58%
Hotel/resort/motel or motor inn	1,782	30%
Caravan or camping (non-commercial)	688	12%
Total	5,991	100%

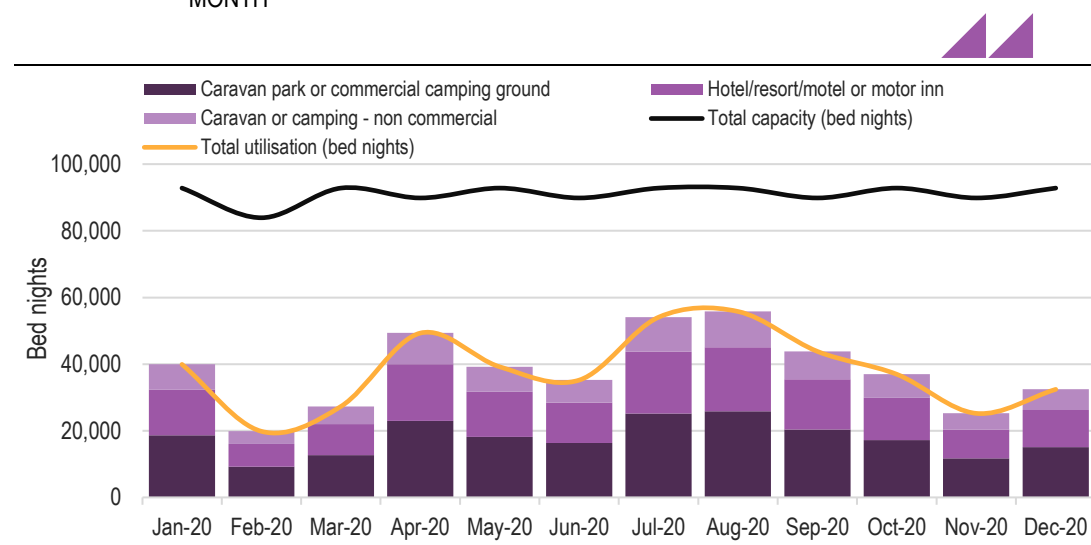
SOURCE: GASCOYNE DEVELOPMENT COMMISSION ACCOMMODATION LIST, CATEGORISED BY ACIL ALLEN

2.2 Assessing Shark Bay's accommodation utilisation

In order to assess the ability of Shark Bay to accommodate additional visitors, a series of assumptions have been made:

- Seasonality - has been based on visitation to the Monkey Mia tourist area (presented in **Figure 2.1**).
- Accommodation capacity - to assess the ability of Shark Bay to accommodate additional visitors, the bed capacity of Shark Bay has been converted into 'bed nights' on a monthly basis. Figure 2.2 presents an estimate of Shark Bay's bed night capacity in comparison to the current level visitation per month by accommodation choice.
- Utilisation - an 'inefficient accommodation uptake factor' of 50 per cent has been applied to addresses situations where accommodation sites are not fully utilised. This factor therefore assumes that on average, a room or campsite with a capacity of four beds will on average be booked by around two people (i.e. a travelling couple). The inefficiency factor also accounts for accommodation that is out of order such as for maintenance or cleaning purposes.

FIGURE 2.2 ACCOMMODATION UTILISATION AND CAPACITY (ADJUSTED): BED NIGHTS PER MONTH



Note: A 50 per cent inefficient accommodation utilisation factor has been applied to total bed capacity.

SOURCE: ACIL ALLEN CONSULTING

The scenario presented above in **Figure 2.2** represents Shark Bay's accommodation utilisation in line with the feedback received from consultation with accommodation providers in Shark Bay. These stakeholders advised that accommodation can reach full capacity in peak visitation months:

Accommodation can be fully booked during the Easter period. In previous years it has been fully booked during the July School Holidays also.....in the past 2 years the Shire has not opened up emergency camping during this time.

A comparison of the increase in visitor nights under each scenario found that **Shark Bay has the capacity to accommodate all scenarios including a 10 per cent increase in visitation in a four month shoulder period in combination with new and existing visitors spending up to an additional two nights in Shark Bay on average in all months of the year.**

2.3 Destination Shark Bay scenarios

The following section presents the three scenarios (low, medium, and high visitation cases) assessed in Section 3 of the report. These scenarios have been developed by the Gascoyne Development Commission.

2.3.1 Scenario 1 (low case)

Scenario 1 presents a 10 per cent increase in total visitation in February, March, September and October and also includes existing and new visitors spending an extra night in Shark Bay during these four months only (Table 2.5). The impact on total bed nights includes existing visitors staying an extra night in Shark Bay during this period.

This scenario results in an additional 2,957 visitors and an additional 46,533 visitor nights per annum.

TABLE 2.5 SCENARIO 1 (LOW): ADDITIONAL ANNUAL VISITATION IMPACT

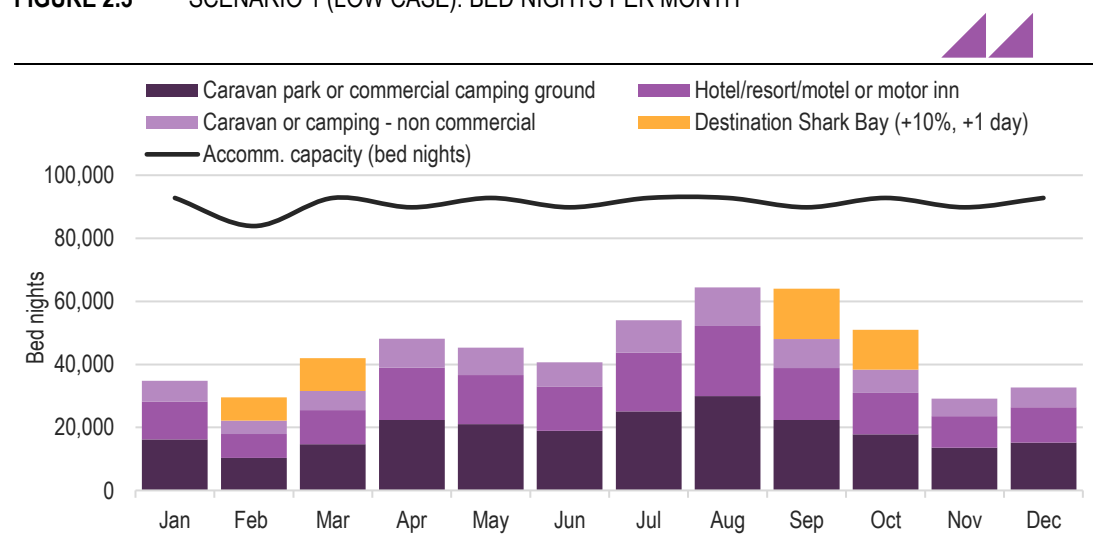
Impact	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
New domestic visitation (people)	-	311	443	-	-	-	-	-	674	537	-	-
New international visitation (people)	-	157	223	-	-	-	-	-	340	271	-	-
Impact on total bed nights [^]	-	7,367	10,481	-	-	-	-	-	15,961	12,724	-	-

[^] This includes existing visitors staying an extra night in Shark Bay.

SOURCE: ACIL ALLEN CONSULTING

Figure 2.3 presents the cumulative impact on annual visitation (in terms of bed nights) for Scenario 1.

FIGURE 2.3 SCENARIO 1 (LOW CASE): BED NIGHTS PER MONTH



SOURCE: ACIL ALLEN CONSULTING

2.3.2 Scenario 2 (medium case)

Scenario 2 presents a 10 per cent increase in visitation in February, March, September and October only and includes existing and new visitors spending an extra night in Shark Bay over the entire year (Table 2.5). This is equivalent to an additional 2,957 visitors and an additional 120,297 visitor nights per annum.

TABLE 2.6 SCENARIO 2 (MEDIUM): ADDITIONAL ANNUAL VISITATION IMPACT

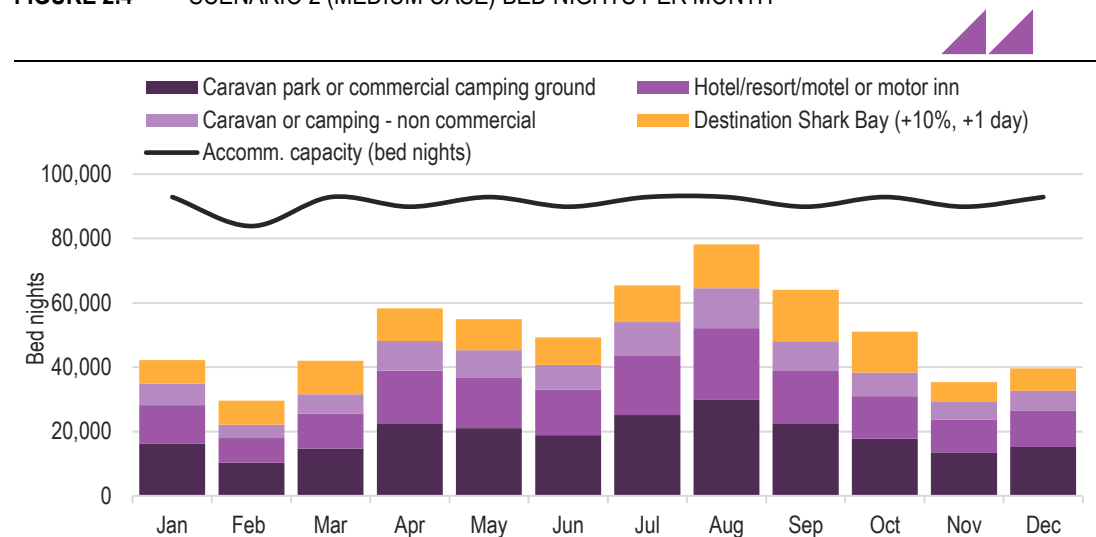
Impact	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
New domestic visitation (people)	-	311	443	-	-	-	-	-	674	537	-	-
New international visitation (people)	-	157	223	-	-	-	-	-	340	271	-	-
Impact on total bed nights ^a	7,359	7,367	10,481	10,166	9,566	8,591	11,405	13,614	15,961	12,724	6,158	6,904

^a This includes existing visitors staying one extra night in Shark Bay.

SOURCE: ACIL ALLEN CONSULTING

Figure 2.4 presents the cumulative impact on annual visitation (in terms of bed nights) for Scenario 2.

FIGURE 2.4 SCENARIO 2 (MEDIUM CASE) BED NIGHTS PER MONTH



SOURCE: ACIL ALLEN CONSULTING

2.3.3 Scenario 3 (high case)

Scenario 3 presents a 10 per cent increase in visitation in February, March, September and October and includes existing and new visitors spending an additional two extra nights in Shark Bay over the entire year (Table 2.7). This is equivalent to an additional 2,957 visitors and an additional 226,588 visitor nights per annum.

TABLE 2.7 SCENARIO 3 (HIGH): ADDITIONAL ANNUAL VISITATION IMPACT

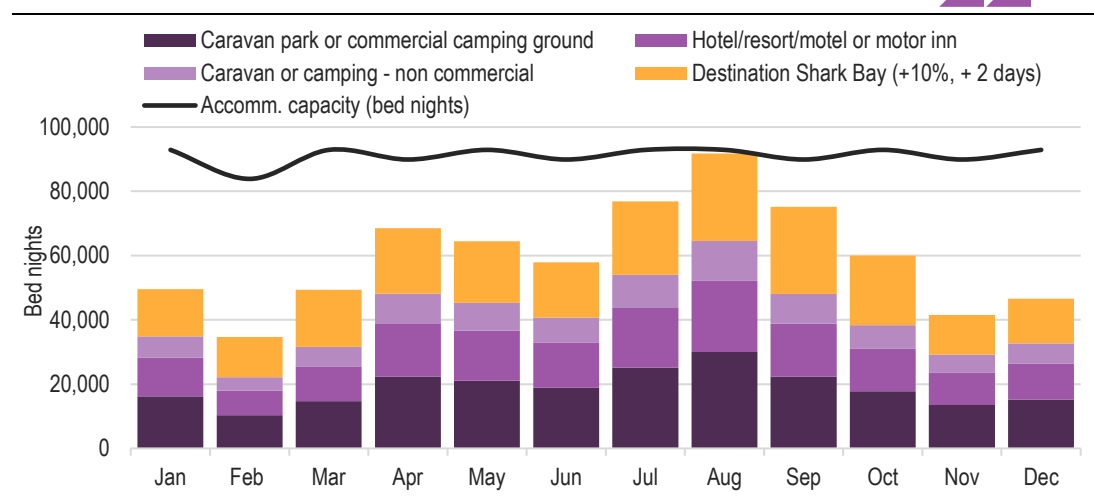
Impact	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
New domestic visitation (people)	-	311	443	-	-	-	-	-	674	537	-	-
New international visitation (people)	-	157	223	-	-	-	-	-	340	271	-	-
Impact on total bed nights ^a	14,717	12,517	17,808	20,333	19,132	17,182	22,810	27,228	27,119	21,619	12,315	13,809

^a This includes existing visitors staying an extra two nights in Shark Bay.

SOURCE: ACIL ALLEN CONSULTING

Figure 2.5 presents the cumulative impact on annual visitation (in terms of bed nights) for Scenario 3. It shows that the existing accommodation mix can accommodate the increase in visitation under Scenario 3 however accommodation will likely reach capacity in August.

FIGURE 2.5 SCENARIO 3 (HIGH CASE) BED NIGHTS PER MONTH



SOURCE: ACIL ALLEN CONSULTING

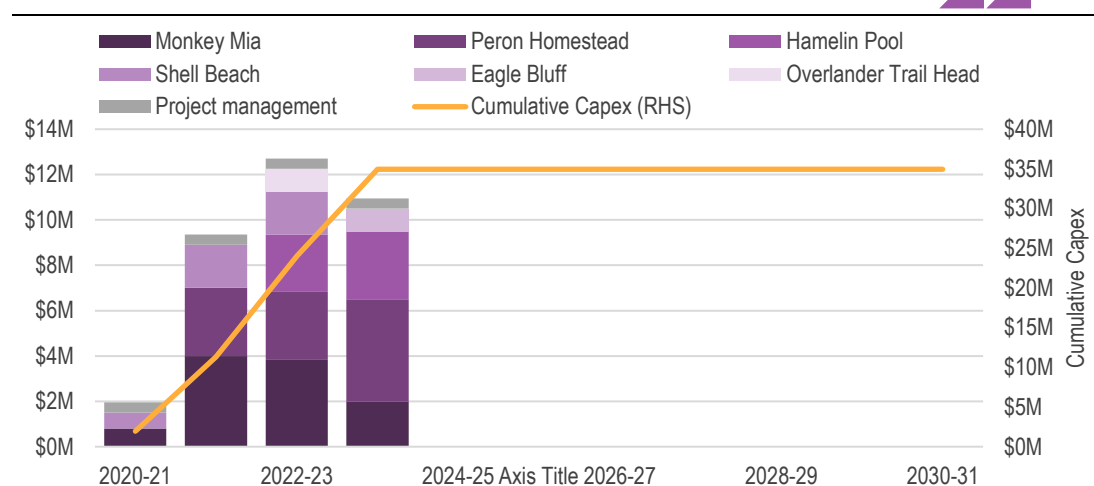
2.4 Additional expenditure: Destination Shark Bay

The following section presents the capital expenditure, operational expenditure and additional visitor spend (for each scenario) associated with Destination Shark Bay.

2.4.1 Capital expenditure

The capital expenditure associated with Destination Shark Bay is expected to occur over four years commencing in 2020-21 and concluding in 2023-24. Most of this expenditure is expected to occur between 2021-22 and 2023-24 when around \$11.0 million per annum will be spent (Figure 2.6).

FIGURE 2.6 DESTINATION SHARK BAY EXPENDITURE



SOURCE: (GDC, 2019)

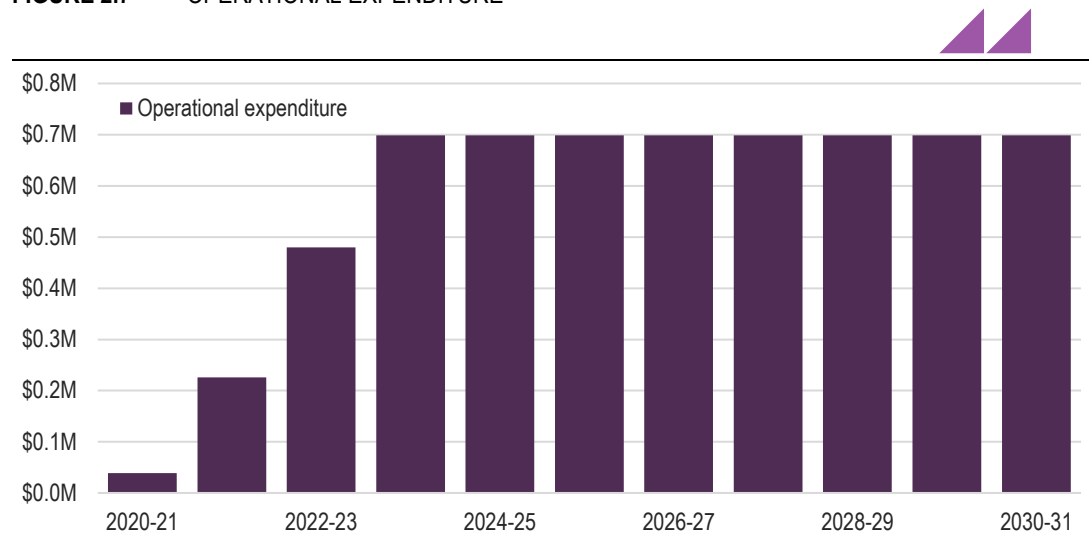
The development of the Monkey Mia tourist area and the Peron Homestead are the cornerstone projects for Destination Shark Bay. Together, they account for around 61 per cent (about \$10.5 million each) of total capital expenditure. The Shell Beach development (\$4.5 million) and Hamelin Pool

development (\$5.5 million) are the other significant developments, while the Overlander Trail Head and Eagle Bluff projects costing around \$1 million each.

2.4.2 Operational expenditure

Operational expenditure associated with Destination Shark Bay has been assumed to be two per cent of total capital expenditure per annum (Figure 2.7).

FIGURE 2.7 OPERATIONAL EXPENDITURE



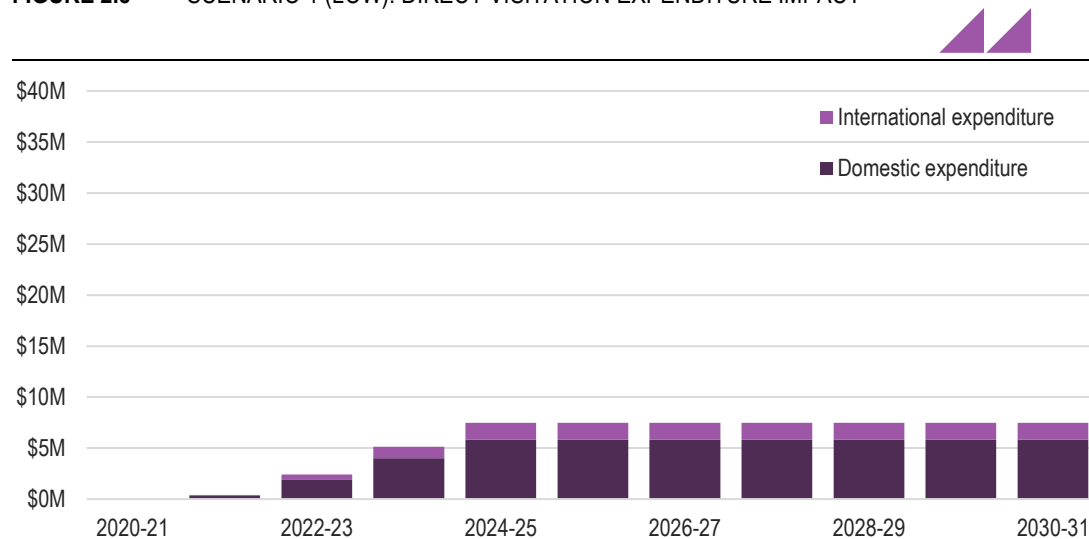
Note: Operational expenditure is assumed to be two per cent of capital expenditure per annum.

SOURCE: ACIL ALLEN CONSULTING

2.4.3 Visitor expenditure: Scenario 1 (low case)

Scenario 1 presents a ‘low case’ increase in the level of visitation expenditure in Shark Bay as a result of a 10 per cent increase in domestic and international visitation and new and existing visitors stay in Shark Bay for an additional night in the months of February, March, September and October only. The increase in expenditure is expected to be fully realised by 2024-25 (at the conclusion of the capital development) at around \$7.5 million per annum (Figure 2.8).

FIGURE 2.8 SCENARIO 1 (LOW): DIRECT VISITATION EXPENDITURE IMPACT

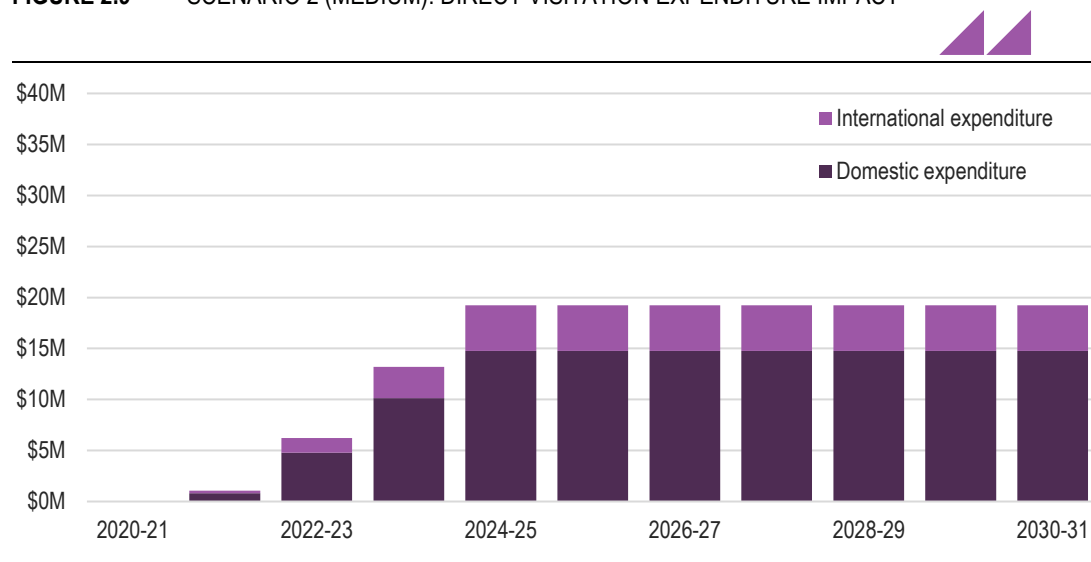


SOURCE: ACIL ALLEN CONSULTING

2.4.4 Visitor expenditure: Scenario 2 (medium case)

Scenario 2 presents a ‘medium case’ increase in the level of visitation expenditure in Shark Bay as a result of a 10 per cent increase in domestic and international visitation plus new and existing visitors staying in Shark Bay for an additional night over the entire year. The increase in expenditure is expected to be fully realised by 2024-25 (at the conclusion of the capital development) at around \$19.2 million per annum (Figure 2.9).

FIGURE 2.9 SCENARIO 2 (MEDIUM): DIRECT VISITATION EXPENDITURE IMPACT

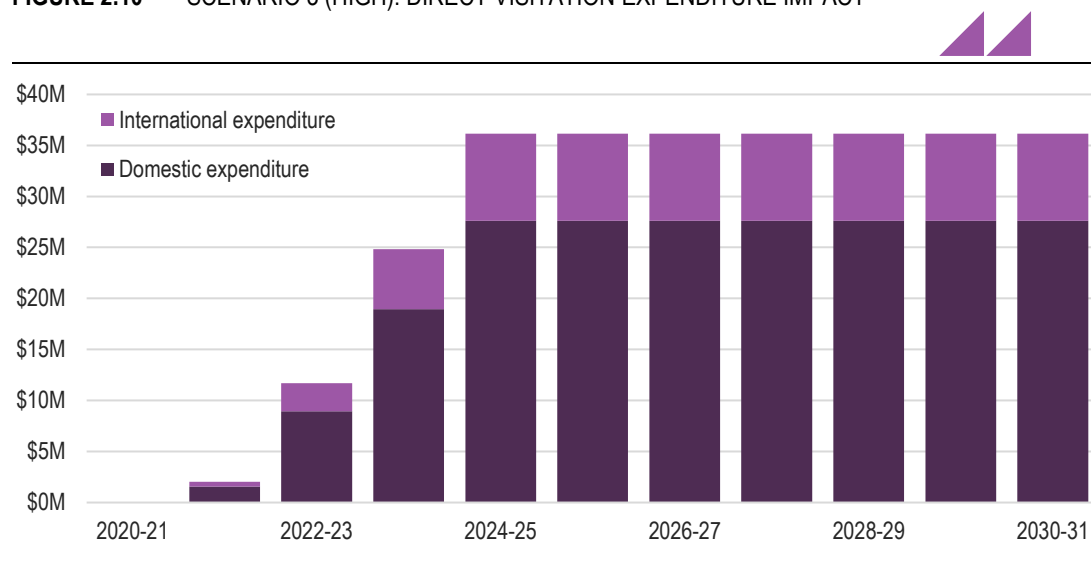


SOURCE: ACIL ALLEN CONSULTING

2.4.5 Visitor expenditure: Scenario 3 (high case)

Scenario 3 presents a ‘high case’ increase in the level of visitation expenditure in Shark Bay as a result of a 10 per cent increase in domestic and international visitation plus new and existing visitors staying in Shark Bay for an additional two nights over the entire year. The increase in expenditure is expected to be fully realised by 2024-25 (at the conclusion of the capital development) at around \$36.1 million per annum (Figure 2.9).

FIGURE 2.10 SCENARIO 3 (HIGH): DIRECT VISITATION EXPENDITURE IMPACT



SOURCE: ACIL ALLEN CONSULTING

2.5 Summary of visitation by scenario

Table 3.1 provides a summary of the current visitation to Shark Bay (the base case) to expected visitation under each scenario. The table shows that the number of visitors per annum will increase from current levels of 103,334 per annum to 106,291 under each scenario.

The scenarios used in this report are primarily driven by an increase in the average length of stay with the average length of stay rising from the current average of 4.45 nights to 5.04 nights under the low visitation scenario, 5.74 nights under the medium visitation scenario, and 6.74 nights under the high visitation scenario.

As a result, visitor spending rises from current levels of \$80.5 million per annum to \$88.0 million per annum under the low visitor scenario, and \$99.8 million per annum under the medium visitor scenario. Under the high visitor scenario, it is expected that visitor spending in Shark Bay will reach \$116.7 million per annum.

TABLE 2.8 SUMMARY OF VISITATION AND VISITOR SPENDING BY SCENARIO

Region	Base case (current)	Scenario 1 (low case)	Scenario 2 (medium case)	Scenario 3 (high case)
Visitors per annum	103,334	106,291	106,291	106,291
Visitor nights per annum	489,430	535,964	609,727	716,018
Average length of stay (nights)	4.74	5.04	5.74	6.74
Visitor spending (\$ per annum)	80.5 million	88.0 million	99.8 million	116.7 million

Note: Visitor spending represents spending in 2024-25 when the increased visitor spend is expected to be fully realised.

SOURCE: ACIL ALLEN CONSULTING AND TOURISM WA

2.6 Unquantified benefits

While the combination of both an EIA and a BCA are the most commonly accepted approaches to quantify the net benefits associated with a program or project, there are benefits that are not able to be quantified through economic or financial modelling.

The **increased business confidence** of local business owners in Shark Bay and wider region is one such benefit that is likely to arise from a more prosperous and sustainable tourism industry.

Complementing the increased business confidence in Shark Bay would be **more employment opportunities and greater job security for employees**. The increased visitation as a result of the improved visitor experience and improvements to infrastructure are likely to create more sustainable employment opportunities over an extended tourism season. This may be observed in a proportionate shift away from casual employment, towards part time or full time employment, or more permanent positions with extra hours.

The expanded tourism industry may also **drive investment and lead to new investment opportunities** in the region. The longer tourism season and upgrades to infrastructure may attract new businesses to enter the region or attract other forms of investment.

Another benefit that has not been quantified is the **additional time that visitors may spend along the Coral Coast** as a result of the improved facilities and attractions in Shark Bay. Because of the 'improved experience' visitors may decide to extend their holiday in the wider region including visiting towns such as Carnarvon. This potential for an extended stay (and therefore expenditure) has not been included under the expanded tourism scenario.



This chapter presents the results of the EIA and the BCA.

3.1 Economic impact assessment

This section presents the results of the EIA for the low, medium, and high visitor spending cases described in Chapter 2. The economic impacts are a function of:

- The increased visitor spending in the region
- The increased spending in the region to maintain the Destination Shark Bay infrastructure.

Note that the economic impact of the *construction* phase of Destination Shark Bay is included in the 2019 Destination Shark Bay Business Plan.

3.1.1 Input Output modelling

For the purposes of estimating the realised economic benefits of Destination Shark Bay, an Input Output (IO) modelling framework was used.

IO models capture the direct and indirect effects of expenditure by capturing, for each industry, the industries it purchases inputs from and also the industries it sells its outputs to. For example, the IO model for Western Australia captures purchases from and sales to industries located in Western Australia, as well as imports from outside of Western Australia.

The IO modelling produced results for each scenario in terms of:

- Economic output, in terms of the gross regional product for the Gascoyne and Shark Bay economies;
- Real income, in terms of the welfare of residents in an economy through their ability to purchase goods and services and to accumulate wealth; and
- Employment, in terms of the direct and indirect full time equivalent (FTE) jobs created.

Further information about ACIL Allen's IO modelling framework is provided in **Appendix C**.

3.1.2 Impact on Gross Regional Product

In all scenarios and for all economic impact results, the majority of the impact is realised in Shark Bay and the majority of the impact is a result of the increase in domestic visitor spending. Those industries in which the largest impacts are realised are those associated with the tourism industry including the accommodation and food industry, the retail industry, the administrative and support services industry, and the arts and recreation industry.

Table 3.1 presents the impact of Destination Shark Bay on the GRP of Shark Bay and the Gascoyne region in 2024-25 (at the completion of all capital expenditure projects) and the cumulative GRP impact over the modelling period. On average, over the modelling period, around 75 per cent of GRP

impact in the Gascoyne region occurs in Shark Bay. Over the modelling period, the impact on the GRP of Shark Bay ranges from \$42.1 million under the low visitor case to \$192.5 million under the high visitor scenario. The impact on the GRP of the Gascoyne region ranges from \$55.7 million to \$252.3 million over the modelled period.

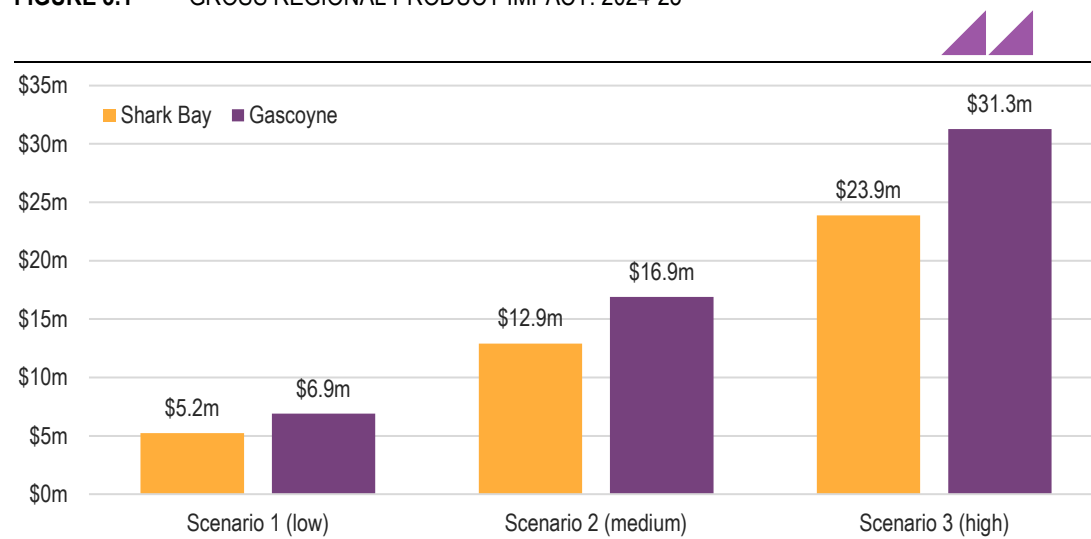
TABLE 3.1 GROSS REGIONAL PRODUCT: ANNUAL AND CUMULATIVE IMPACT

Region	Scenario 1 (low case)	Scenario 2 (medium case)	Scenario 3 (high case)
Shark Bay	\$m	\$m	\$m
2024-25*	5.2	12.9	23.9
2020-21 to 2030-31 [^]	42.1	104.1	192.5
Gascoyne	\$m	\$m	
2024-25*	6.9	16.9	31.3
2020-21 to 2030-31 [^]	55.7	136.3	252.3

* Peak annual GRP. [^] Cumulative GRP between 2020-21 and 2030-31.

SOURCE: ACIL ALLEN CONSULTING

FIGURE 3.1 GROSS REGIONAL PRODUCT IMPACT: 2024-25



Note: The benefits of Destination Shark Bay are expected to be fully realised in 2024-25 upon the completion of all capital works.

SOURCE: ACIL ALLEN CONSULTING

3.1.3 Contribution to incomes

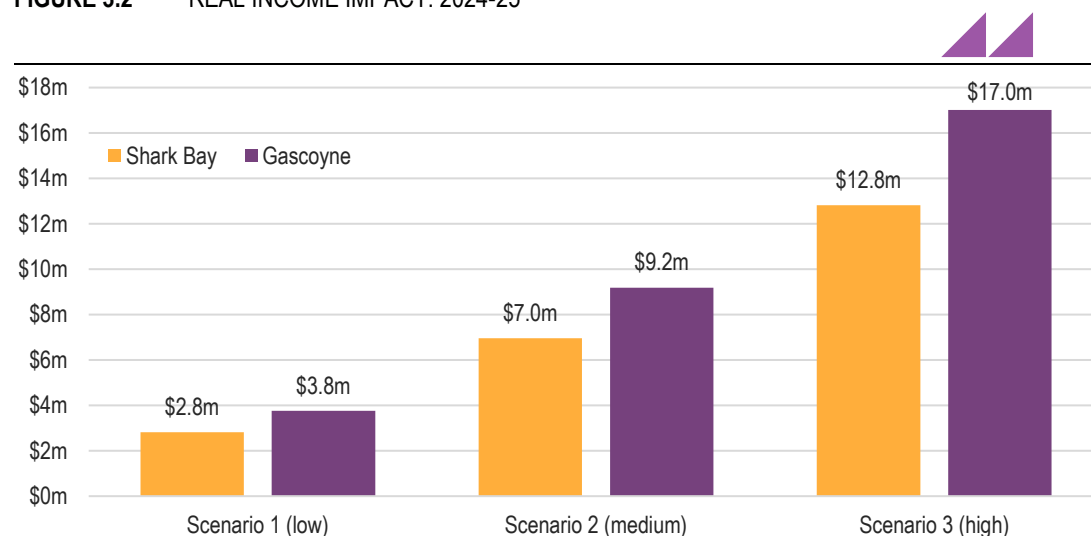
Table 3.2 presents the income impacts for Shark Bay and the Gascoyne region for 2024-25 (at the completion of all capital expenditure projects) and the cumulative impact on income over the modelling period. On average over the modelling period, around 76 per cent of income generated in the Gascoyne region arises within Shark Bay. Over the modelling period, the impact on the incomes of the residents of Shark Bay ranges from \$22.8 million under the low visitor scenario to \$103.4 million under the high visitor scenario.

TABLE 3.2 REAL INCOME: ANNUAL AND CUMULATIVE IMPACT

Region	Scenario 1 (low case)	Scenario 2 (medium case)	Scenario 3 (high case)
Shark Bay	\$m	\$m	
2024-25*	2.8	7.0	12.8
2020-21 to 2030-31^	22.8	56.1	103.4
Gascoyne	\$m	\$m	
2024-25*	3.8	9.2	17.0
2020-21 to 2030-31^	30.4	74.1	137.2

* Peak annual income. ^ Cumulative income between 2020-21 and 2030-31.

SOURCE: ACIL ALLEN CONSULTING

FIGURE 3.2 REAL INCOME IMPACT: 2024-25

Note: The benefits of Destination Shark Bay are expected to be fully realised in 2024-25 upon the completion of all capital works.

SOURCE: ACIL ALLEN CONSULTING

3.1.4 Job creation

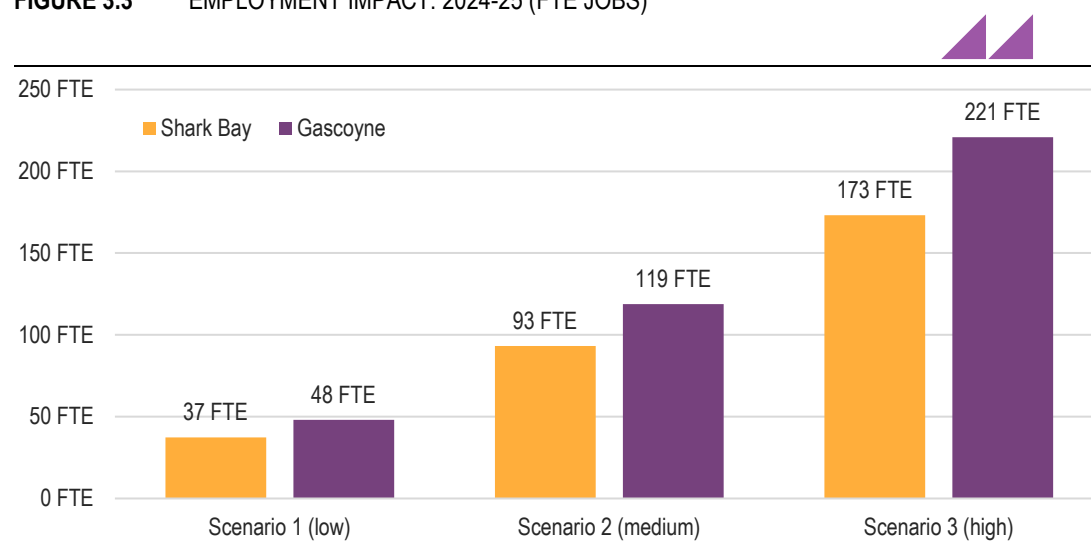
Table 3.3 presents the employment creation impacts (expressed as FTEs) for Shark Bay and the Gascoyne region for 2024-25 (at the completion of all capital expenditure projects) and the cumulative job creation over the modelling period. On average over the modelling period, around 78 per cent of all FTE jobs are created within the Shark Bay area whilst the remaining 24 per cent of FTE jobs are created in the Gascoyne region. Over the modelling period, the impact on job creation in Shark Bay ranges from 300 FTE jobs under the low visitor scenario, to 1,396 FTE jobs under the high visitor scenario. Note that these jobs represent a mix of new positions and additional working hours that are spread over a number of businesses and industries throughout the economy and have been summed to be expressed as FTE jobs.

TABLE 3.3 EMPLOYMENT: ANNUAL AND CUMULATIVE IMPACT

Region	Scenario 1 (low case)	Scenario 2 (medium case)	Scenario 3 (high case)
Shark Bay	FTE jobs	FTE jobs	FTE jobs
2024-25*	37.3	93.2	173.1
2020-21 to 2030-31 [^]	300.5	752.0	1,396.2
Gascoyne	FTE jobs	FTE jobs	
2024-25*	48.0	118.8	220.9
2020-21 to 2030-31 [^]	387.3	958.4	1,781.5

* Peak annual FTE jobs creation. ^ Cumulative FTE job creation between 2020-21 and 2030-31.

SOURCE: ACIL ALLEN CONSULTING

FIGURE 3.3 EMPLOYMENT IMPACT: 2024-25 (FTE JOBS)

Note: The benefits of Destination Shark Bay are expected to be fully realised in 2024-25 upon the completion of all capital works.

SOURCE: ACIL ALLEN CONSULTING

3.2 Benefit cost assessment

A separate BCA was completed for each of the three visitor scenarios. A BCA is a commonly used quantitative framework for logically analysing the social and economic costs and benefits of a particular policy, project, or investment. A BCA compares the total forecast costs (including opportunity cost) to the community and economy of the investment or policy with the total forecast benefits. This determines whether the benefits outweigh the costs, and by how much.

The output of a BCA is typically expressed as a Benefit-Cost Ratio (BCR) where total benefits are divided by total costs. A BCR of greater than one indicates that the net benefits of the policy, project or investment exceed the costs – this suggests economic value in investing in the option. The reverse applies for BCRs below one.

A BCA provides a framework for analysing information in a logical and consistent way by assisting policymakers to determine which investment option is the most economically effective and efficient in achieving the desired outcomes. A BCR of less than one does not automatically preclude the implementation of the policy, project or investment however the business case would typically require strong alternate reasoning such as a clear social policy mandate.

The costs modelled for each scenario includes the capital investment, and the opportunity cost of Government funds. An opportunity cost of 2.4 per cent has been used as the opportunity cost of

Government funds as per the WA Treasury, Costing and Pricing Government Services. They also include the maintenance costs of Destination Shark Bay over time.

The benefits modelled for each scenario include the result of the economic impact on GRP which includes the incomes earned by employees, and the retained incomes/profits from businesses as a result of Destination Shark Bay.

3.2.1 Benefit cost assessment results

Table 3.4 presents the BCA results for the Gascoyne region and Shark Bay under each scenario. The Gascoyne region has a higher BCR under each scenario due to the scale and diversity of its economy in comparison to Shark Bay which is able to capture some additional economic impacts compared to the Shark Bay region.

The Destination Shark Bay project returns a BCR of slightly less than one to Shark Bay under the low visitor scenario meaning that the project does not return a net benefit in Shark Bay under the visitor assumptions that form this scenario. Destination Shark Bay returns a BCR of 2.34 and 4.33 to Shark Bay under the medium and high scenarios respectively. This means that over twice the cost of Destination Shark Bay will be returned to Shark Bay in economic value under the medium scenario and over four times the cost will be returned under the high scenario.

The BCR for the Gascoyne region is more than one under all scenarios meaning that the economic impact of Destination Shark Bay will result in a net benefit for the Gascoyne region if the project results in at least a 10 per cent increase in visitation and one extra night in the shoulder period of March, September, October and December. Meanwhile, if outcomes associated with the 'high case' are realised, over five times the cost of Destination Shark Bay will be returned in economic value to the region.

3.3 Breakeven

The breakeven year (presented in **Table 3.4**) represents the year whereby cumulative GRP benefits exceed the cumulative net capital and operational expenditure associated with Destination Shark Bay (in net present value terms). This is the point where the benefits to the surrounding economy equal the costs of the project. The breakeven year of Destination Shark Bay to Shark Bay under a low scenario is not reached until after 2030-31. The medium and high visitor scenarios will result in breakeven being achieved in 2025-26 and 2024-25 respectively. This is because the benefits of the increase in visitor spending in each of these scenarios is higher.

The breakeven year for the Gascoyne region in all scenarios occurs far more quickly as more of the economic benefits are able to be captured by this economy. Breakeven occurs as soon as 2024-25 under a high visitor scenario, 2025-26 under a medium visitor scenario, and 2029-30 under the low visitor scenario.

TABLE 3.4 BENEFIT COST ASSESSMENT

Region	Scenario 1 (low case)	Scenario 2 (medium case)	Scenario 3 (high case)
Shark Bay			
BCR	0.95	2.34	4.33
Breakeven year [^]	After 2030-31	After 2025-26	2024-25
Gascoyne			
BCR	1.25	3.06	5.68
Breakeven year [^]	After 2029-30	2025-26	2024-25

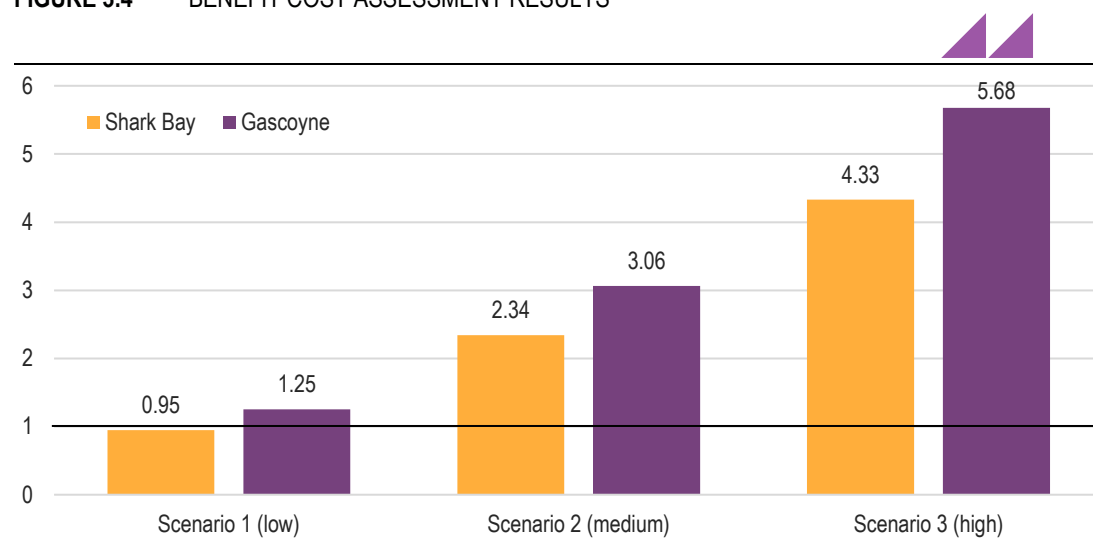
[^] The breakeven year represents the year when the net present value of cumulative GRP benefits equals the net present value of cumulative capital expenditure and operational expenditure associated with Destination Shark Bay.

SOURCE: ACIL ALLEN CONSULTING

Note that the low case scenario assumes a 10 per cent increase in total visitation in four months (February, March, September, and October) and also includes existing and new visitors spending an extra night in Shark Bay during these months only. This is equivalent to an additional 46,533 visitor nights over the year compared to current visitor nights of 489,430.⁴ Despite not quite returning a BCR of one for Shark Bay, it does return a BCR of over one for the Gascoyne region and results in important economic contributions to the local economy in terms of job creation and income in addition to value added amongst other quantifiable benefits discussed in **Section 2.6**.

Figure 3.4 presents the results of the BCA which modelled the project's total capital and operating costs against each scenario's gross value added over a ten year period. The low visitor scenario returns a BCR of greater than one for the Gascoyne region however, in order for Destination Shark Bay to return a net benefit to Shark Bay, an increase in visitors of slightly higher than the low visitor scenario would need to be realised.

FIGURE 3.4 BENEFIT COST ASSESSMENT RESULTS



SOURCE: ACIL ALLEN CONSULTING

⁴ Based on 68,667 domestic visitors staying for 5.30 nights and 34,667 international visitors staying for an average of 3.62 nights.



Shark Bay Accommodation

TABLE A.1 ACCOMMODATION CAPACITY IN SHARK BAY

Operator	Beds	Campsite beds	Total beds	Classification type
Bay Lodge	63	-	63	2
Billabong Hotel Motel	48	138	186	Excluded
Billabong Roadhouse	38	-	38	Excluded
Blue Dolphin Caravan Park	44	396	440	1
Blue Water Views	4	-	4	2
Denham Seaside Caravan Park	90	1176	1266	1,2
Dirk Hartog Island	48	32	80	1,2
Hamelin Pool Caravan Park	22	302	324	1,2
Hamelin Station Stay	20	60	80	1,2
Hartog Cottages	15	-	15	2
Heritage Resort	75	-	75	2
Nanga Bay Resort	78	105	183	1,2
Oceanside Village	96	-	96	2
On the Deck @ Shark Bay	6	-	6	2
Overlander Roadhouse	21	12	33	Excluded
RAC Monkey Mia Dolphin Resort	-	1200	1200	2
Shark Bay B&B	4	-	4	2
Shark Bay Caravan Park	42	570	612	1,2
Shark Bay Holiday Cottages	53	-	53	2
Shark Bay Hotel	25	-	25	2
Shark Bay Seafront Apartments	57	-	57	2
Shark Bay Views	14	-	14	2
Tamala Station	-	-	330	2
Wildsights Beach Units	7	-	7	2

Operator	Beds	Campsite beds	Total beds	Classification type
Wildsights Villas	56	-	56	2
Ray White Realestate Rentals	-	-	313	2
Francois Peron				
Big Lagoon	-	72	72	3
Gregories	-	24	24	3
South Gregories	-	24	24	3
Bottle Bay	-	48	48	3
Herald Bight	-	160	160	3
Dirk Hartog Island				
Dirk Hartog Island	-	80	80	3
Edel Land				
Shelter Bay	-	136	136	3
The Oven/Faultline	-	40	40	3
False Entrance	-	40	40	3
Shark Bay Shire Campsites				
Eagle Buff, Fowlers Camp, Whalebone Bay, Fowlers Camp	-	64	64	3
Total			5,991	

SOURCE: GDC, ACIL ALLEN CONSULTING



About ACIL Allen Consulting

ACIL Allen Consulting is Australia's largest independent economics, public policy and strategy advisory firm. As a firm, we specialise in economic analysis, and in understanding how policy decisions can translate into socio-economic outcomes. ACIL Allen has significant resources upon which it can draw. We employ around 80 consultants located in Canberra, Sydney, Brisbane, Melbourne, Adelaide and Perth.

The firm has built a reputation for quality research, credible analysis, and innovative advice on economic, policy and strategic matters over a period of more than twenty years. ACIL Allen operates across a select range of industries including energy, mineable resources, water and other infrastructure, education, tourism, health and human services policy and provides specialist advice to companies, governments, regulators and industry associations. ACIL Allen has been at the forefront of analysis of changes and policy issues in these sectors. We have helped governments to develop a number of policy mechanisms applied in response to these changes and policy issues. We have also helped many private corporations to develop responsive business strategies in this dynamic environment.

Our analytical and modelling skills enable us to provide robust quantitative estimates of the impacts of market and regulatory risk. We often use risk-based decision tools such as real options frameworks to advise clients on risk management strategies and opportunities. In part, our experience in these roles relates to major infrastructure assets, supporting feasibility assessments, equity raisings, sale and acquisition processes and funding of infrastructure assets, including natural gas and electricity transmission and distribution systems, power stations, roads, railways, airports and ports.

Our consultants are drawn from a wide variety of disciplines including economics, finance, statistics, geology, physics, environmental science, engineering and mathematics. We also offer a diverse range of professional backgrounds in state and federal government, academia and business.

Our suite of services include:

- developing or evaluating programs and projects for a range of clients;
- stakeholder consultation, which includes undertaking surveys, interviews and focus groups;
- policy analysis and formulation for government agencies and private sector organisations;
- strategy development for government, private sector organisations and sectors;
- economic impact analysis of specific markets and sectors;
- economic and financial analyses for companies and government agencies, including benefit-cost analysis;
- feasibility studies and project evaluation;

- regional/spatial modelling and mapping;
- projections of demand with respect to particular assets or supply systems;
- risk and investment analysis; and
- analysis of regulatory processes governing industries, assets and other infrastructure including the establishment of third-party access arrangements and reference tariffs.

Further information can be found on ACIL Allen's website at www.acilallen.com.au

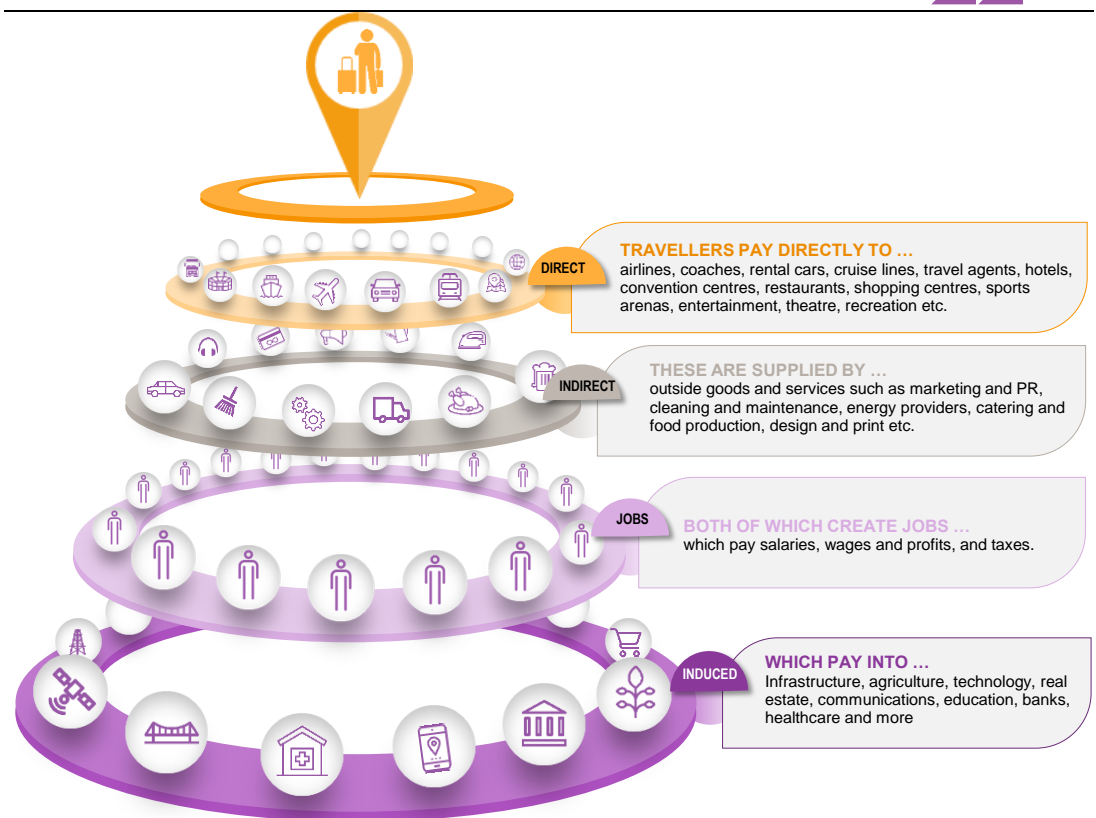
C

INPUT-OUTPUT MODELLING

Input-Output Modelling

I-O models capture the direct and indirect effects of expenditure by capturing, for each industry, the industries it purchases inputs from and also the industries it sells its outputs to. For example, the I-O model for Western Australia captures purchases from and sales to industries located in Western Australia, as well as imports from outside of Western Australia.

FIGURE C.1 "TRACE THROUGH" OF TOURISM EXPENDITURE IN AN INPUT-OUTPUT MODEL



SOURCE: ACIL ALLEN CONSULTING

The figure above depicts how expenditure from a visitor traced through a (very simple) economy:

1. A visitor **directly** spends money on tourism related products, such as airlines, cruise ships, food, beverages and accommodation.
2. These tourism products are then **indirectly** supplied in part by other companies, these companies provide goods and services that go into final product that visitors purchase. For example, a food manufacturing business as well as a catering business could provide inputs into food and beverages that a visitor purchases.
3. This direct and indirect demand for goods and services requires labour, and the flow of money from visitor to business and business to business allows for wages and salaries to be paid to employees, profits to be earned and taxes to be paid to government.
4. In turn, results in **flow-on** or induced economic activity.

Results of I-O Modelling

I-O tables are able to produce results for a range of key economic indicators. For example:

- real economic output;
- industry Gross Value Added;
- real exports;
- real incomes;
- real taxation; and
- employment.

ACIL Allen's I-O modelling framework also allows for results to be produced at a national, state, regional, Statistical Area Level 2 and Local Government Area level.

ACIL ALLEN CONSULTING PTY LTD
ABN 68 102 652 148
ACILALLEN.COM.AU

ABOUT ACIL ALLEN CONSULTING

ACIL ALLEN CONSULTING IS THE
LARGEST INDEPENDENT,
AUSTRALIAN OWNED ECONOMIC
AND PUBLIC POLICY CONSULTANCY.

WE SPECIALISE IN THE USE OF
APPLIED ECONOMICS AND
ECONOMETRICS WITH EMPHASIS ON
THE ANALYSIS, DEVELOPMENT AND
EVALUATION OF POLICY, STRATEGY
AND PROGRAMS.

OUR REPUTATION FOR QUALITY
RESEARCH, CREDIBLE ANALYSIS
AND INNOVATIVE ADVICE HAS BEEN
DEVELOPED OVER A PERIOD OF
MORE THAN THIRTY YEARS.

