



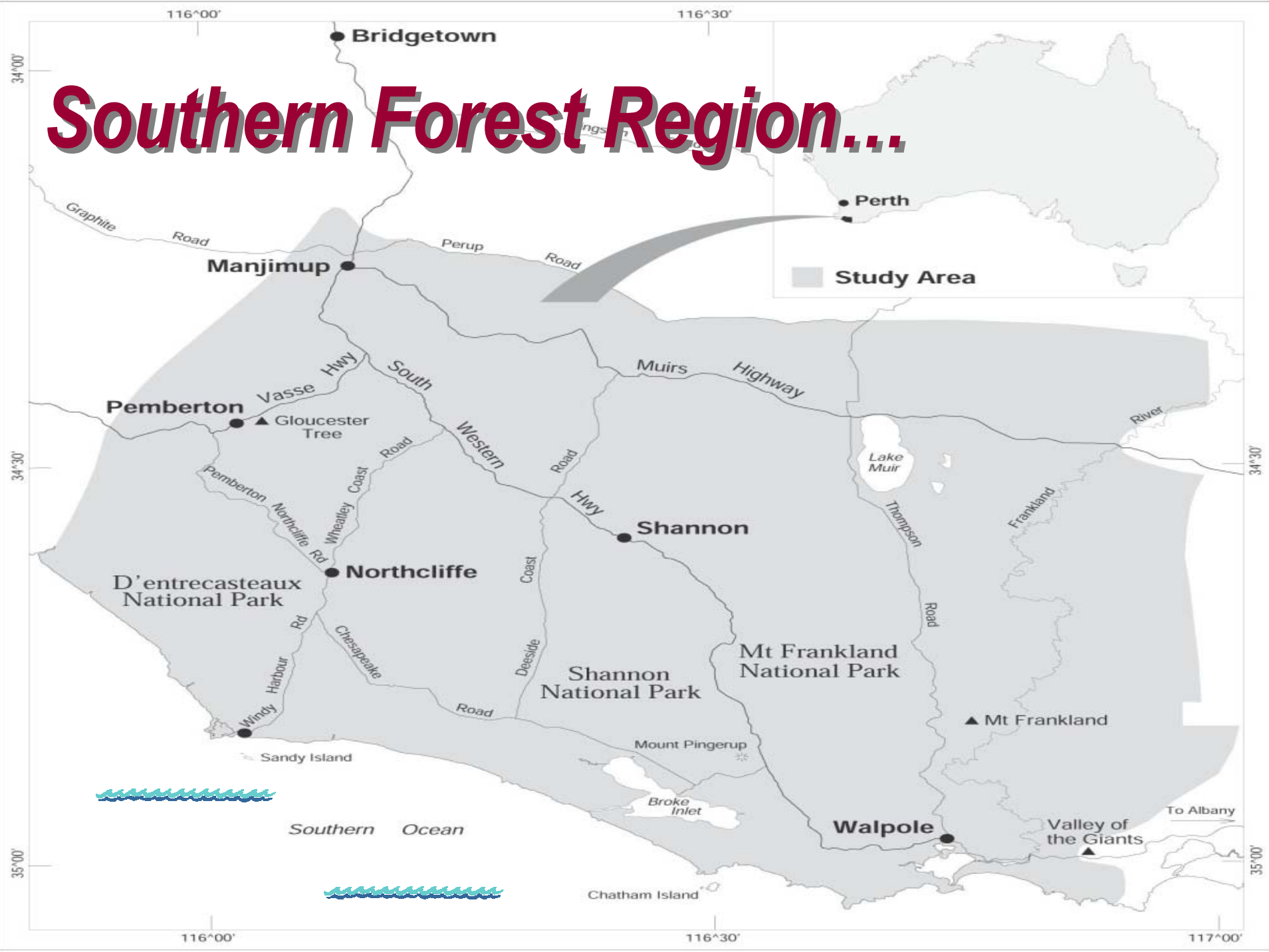
Assessment of the Economic Value of Recreation and Tourism in Western Australia's National Parks and Forests



Research Objectives

- To provide an estimate of the annual tourist expenditure in two regions known for their unique natural attractions.

Southern Forest Region...



Gascoyne Coast Region...

Ningaloo
Marine Park

Cape Range NP

Ningaloo

Malya Exmouth Rd

Cardabia

Warroora

West

Coral Bay

Indian Ocean

Quobba

North

Carnarvon

114°00'

113°30'

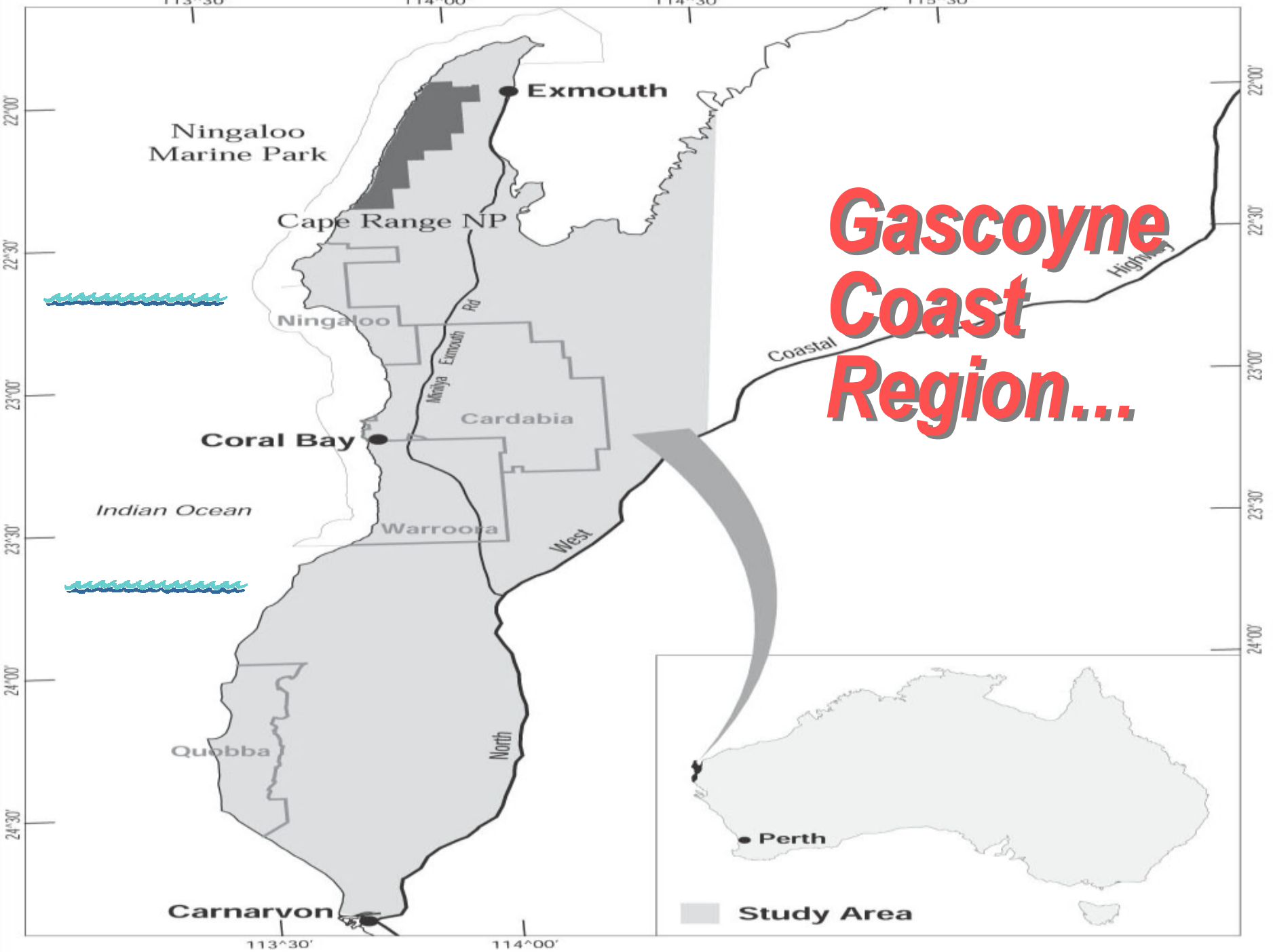
114°00'

Perth

Study Area

Coastal

Highway





Objectives (cont'd)

- To provide recommendations for the collection, compilation and analysis of visitation data to recreation sites that will facilitate more accurate, reliable and comparable information for agency decision making.

Economics and Natural Area Tourism

- The annual growth in international participation in natural area tourism in Australia is 4.5% per annum.(Chua 2001)
- In the domestic market, nearly 6% of day trips and 13% of overnight trips included a visit to a NP and or bush walk.(Chua 2001)



Contribution of natural area tourism to WA's economy...

- Has had little recognition and is under-valued.
- Tourism & Recreation in these areas has not been assessed in an objective systematic way.



Thus...

- In a climate where public funds are finite, these measurements can be utilised to support decision-making in the area of resource commitment and budget allocation to promote the sustainable management of natural areas.



Measuring the value of Tourism & Recreation

- There are a variety of methodologies
- Each one has their advantages & disadvantages
- And each suit different types of projects

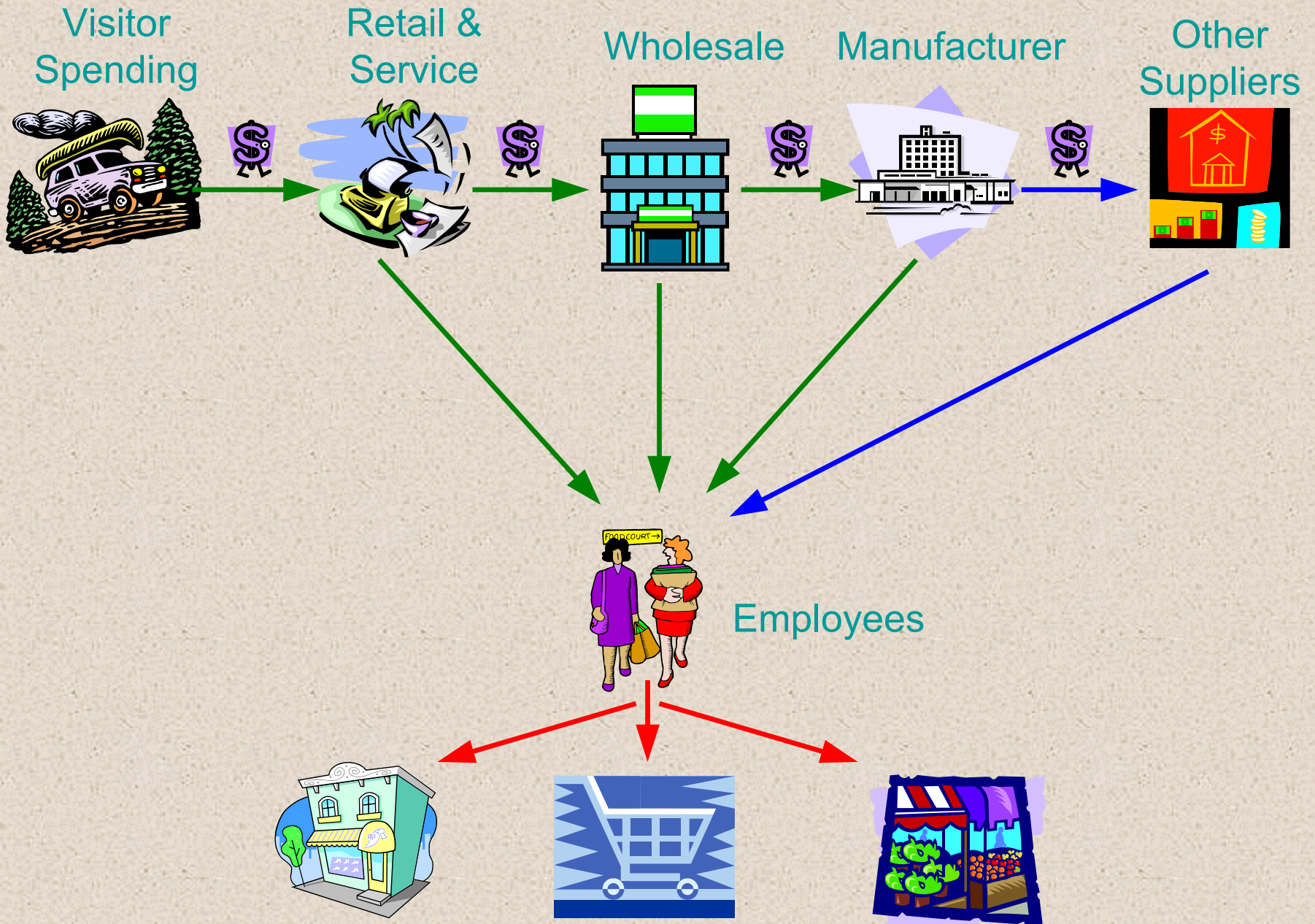


Why the DTF does not support the use of multipliers?

- “These multipliers have significant shortcomings, including a potential for double counting”
- “Multipliers can be considered as a method of inflating the output of an industry to more impressive levels”

Source: December 2000 Australian Economic
Summary by DTF







How we did it?

- A representative sample was obtained by distributing questionnaires to places of accommodation, visitor centres and NP checkpoints.
- Tourists were asked to record their amounts of expenditure on different items during their stay in the selected regions.

How much are you spending?



Expenditure Item (\$AUS)	Per day In the Region
Accommodation	\$AUS
Travel (air fares, bus fees, car hire, fuel, etc)	\$AUS
Food & drinks	
■ In local hotels / restaurants	\$AUS
■ In local stores / supermarkets	\$AUS
Activities (National Parks fee, sightseeing trips, etc)	\$AUS
Equipment (purchased for your trip, including film, fishing gear, etc)	\$AUS
Other (clothing, merchandise, souvenirs, etc)	\$AUS

How many people do the figures cover?





Plus...

**How long are you
staying in the region?**



**What is your normal
place of residence?**




**Why you originally
decided to come to this
region on your holiday?**



**What activities have you
done or plan to do
during your holiday in
the region?**





**If the natural
environments did not
exist, would you have
chose to:**



- Travel to the region anyway
- Stay at home
- Travel elsewhere in WA
- Travel to another Australian state
- Travel to another country

Estimating direct tourist spend

- **Attribution factor**

% of visitor expenditure that could be attributed to the 'Natural Environments'



Cont'd

- **Substitution factor**

Occurs when the opportunity to visit 'Natural Environments' generates expenditure that would not otherwise have not occurred.





Case study regions...



Survey distribution...

Southern Forest Region

- A total of **446** visitor groups were surveyed during the April school holiday.

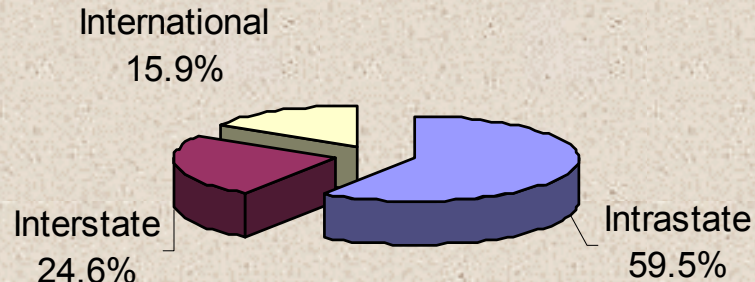
Gascoyne Coast Region

- A total of **373** visitor groups were surveyed during the Easter school holidays – arrival of whale sharks.

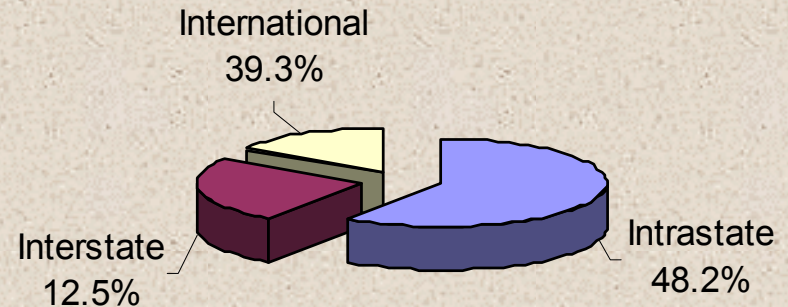
Visitor survey findings...

Where do visitors normally reside?

Southern Forest Region



Gascoyne Coast Region






How long do visitors stay?

Southern Forest Region

- 62% stayed 1-3 days
- The average length of stay was 3.9 days.

Gascoyne Coast Region

- 48% stayed 4-7 days
- The average length of stay was 12.8 days.



Why do they choose the region for a holiday?

Southern Forest Region

- The Natural Environment (26.7%)
- Tree Top Walk/Gloucester Tree (23.3%)
- Forests (21.4%)

Gascoyne Coast Region

- Snorkelling & diving (26.5%)
- Ningaloo Marine Park (22%)
- The Natural Environment (17.6%)
- Swimming with whale sharks (14.6%)




What activities do visitors undertake?

Southern Forest Region

- Sightseeing (31.9%)
- Tree Top Walk/Gloucester Tree (25.5%)
- Bushwalking (22.1%)

Gascoyne Coast Region

- Snorkelling from the shore (29.7%)
- Swimming with whale sharks (18.6%)
- Diving from a boat (10.2%)



Would visitors have chosen to travel elsewhere if the natural environments of the region did not exist?

Options	SFR	GCR
Travel elsewhere in WA	64.4%	68.5%
Travel to the region anyway	26.4%	13.0%
Travel to another Australian state	5.7%	9.5%
Travel to another country	1.4%	3.3%
Stay at home	2.1%	5.7%



Visitor expenditure in the region per person/ per day

Expenditure item	SFR	GCR
Accommodation	\$35.80	\$12.30
Travel	\$10.20	\$10.30
Activities	\$6.10	10.90
Food & drink restaurants/hotels	\$14.00	\$4.80
Food & drink supermarkets	\$8.00	\$8.20
Equipment	\$7.70	\$7.10
Other	\$7.90	\$3.30
Total	\$89.70	\$56.90



Southern Forest Region

$201.100 \times \$89.70 \times 12.8\text{days} = \mathbf{70.5 \text{ million}}$

- 80% Natural Environments No1 reason of visit
- 90% activities were nature-based
- 95% ranked forest as important in attracting them to the region

Attribution factor **88%**




70.5 million x 88% = **61.9 million**

Substitution factor 9.2%



\$5.7 million is the estimated annual expenditure
attracted to or retained due to the ‘Natural
environments’



\$61.9 – \$70.5 million



Gascoyne Coast Region

$232.600 \times \$56.90 \times 12.8\text{days} = \mathbf{169.4 \text{ million}}$

- 90% Natural Environments No1 reason of visit
- 94% activities were nature-based

Attribution factor 92%




169.4 million x 92% = **155.9 million**

Substitution factor 18.5%



\$28.8 million is the estimated annual expenditure attracted to or retained due to the 'Natural environments'



\$155.9 – \$169.4 million

Objective 2

- To provide recommendations for the collection, compilation and analysis of visitation data to recreation sites that will facilitate more accurate, reliable and comparable information for agency decision making.



Money Generation Model - Short Form

(Enter inputs in yellow/shaded cells)

Visitor segments					
	Local	NL-Day	Motel	Camp	Total
Step 1: Enter Recreation Visits and Segment Shares					
Recreation Visits	25,000	25,000	25,000	25,000	100,000
Shares	25%	25%	25%	25%	100%

Convert visits to party nights by segment					
Enter conversion parameters					
	Local	NL-Day	Motel	Camp	Total
Length of stay in area (days/nights)	1.0	1.0	2.7	3.5	
Average party size	2.0	2.1	2.3	2.6	
Park entries per trip	1.0	1.0	2.0	2.0	
Conversions computed below					
Party nights in area	12,500	11,905	14,674	16,827	55,906
Percent of activity to include	0%	100%	100%	100%	
Party nights included in impact analysis	-	11,905	14,674	16,827	43,406

Step 3: Choose spending averages: On a per party night basis

Select generics from dropdown list or enter manually

Park- Medium spending ▼

	Local	NL-Day	Motel	Camp
Average spending per party night	38.11	45.08	165.94	65.69

Total spending computed below					
	Local	NL-Day	Motel	Camp	Total
Total spending (\$000's)	-	537	2,435	1,105	4,077
Percent	0%	13%	60%	27%	100%

Step 4: Choose Regional economic multipliers

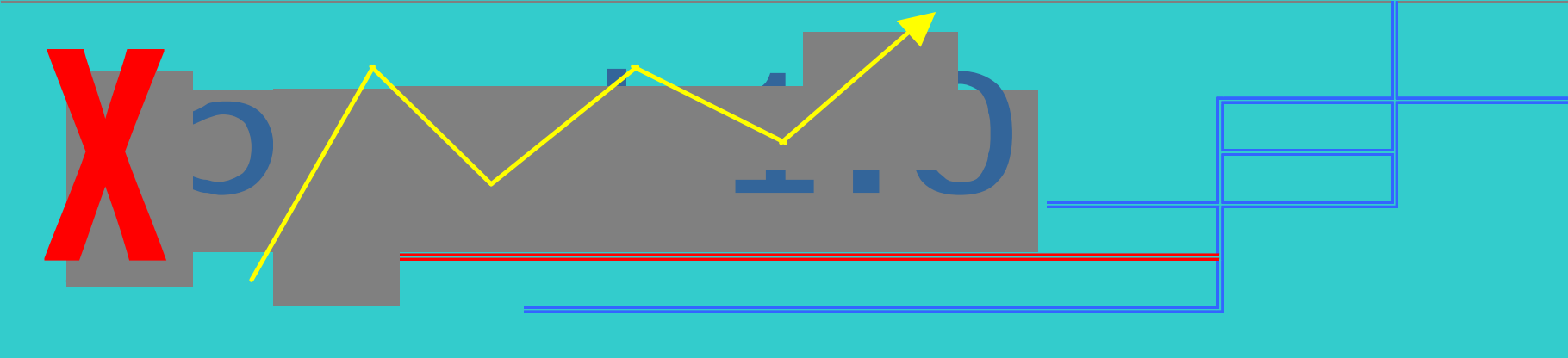
Select from dropdown list by type of region

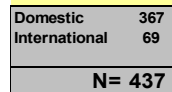
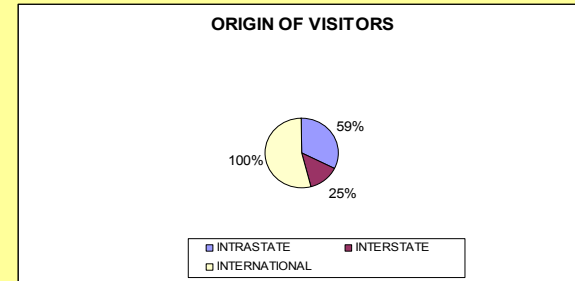
Rural ▼

Direct effect ratios		Total effect multipliers	
Capture rate	74%	Sales Type SAM	1.32
Income/sales	0.34	Total Income/direct sales	0.45
Jobs/ MMsales	31.46	Total jobs/direct sales	36.76
Value added/sales	0.51	Total Value added/direct sales	0.71

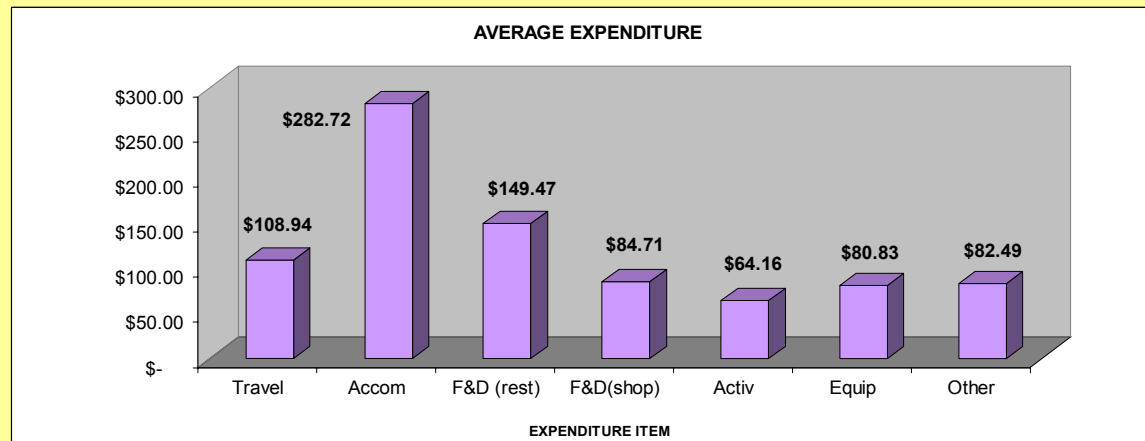
Step 5: Economic Impacts Computed below

Visitor segments					
	Local	NL-Day	Motel	Camp	Total
Spending captured	\$ -	\$ 400	\$ 1,813	\$ 823	\$ 3,036
Direct Economic effects					
Sales (\$000's)	-	399.58	1,812.95	823.00	\$ 3,036
Personal Income (\$000's)	-	135.89	616.56	279.89	\$ 1,032
Jobs	-	13	57	26	96
Value added (\$000's)	-	205.16	930.84	422.56	\$ 1,559
Total Economic Effects					
Sales (\$000's)	-	528.25	2,396.74	1,088.01	\$ 4,013
Personal Income (\$000's)	-	178.75	811.02	368.17	\$ 1,358
Jobs	-	14.69	66.64	30.25	112
Value added (\$000's)	-	284.45	1,290.60	585.87	\$ 2,161



[illegible]

Expenditure



Average No of people

2.71

N	334	327	261	269	312	78	141	
Max	1000	2000	1000	1000	700	1000	1000	
Min	10	17	4	3	1	2	1	
St.dev	141.44	266.35	141.28	103.31	74.58	173.78	129.92	Total
Mean	\$ 108.94	\$ 282.72	\$ 149.47	\$ 84.71	\$ 64.16	\$ 80.83	\$ 82.49	\$ 853.32
Σ	\$ 36,385.00	\$ 92,448.00	\$ 39,012.50	\$ 22,787.50	\$ 20,019.00	\$ 6,304.50	\$ 11,631.75	\$ 228,588.25

DOMESTIC									365
ID		Travel	Accom.	Food&Drinks	Food&Drinks	Activities	Equipment	Other	No.Peopl.
1	DOMESTIC		500	150	200		60	30	4
2	DOMESTIC	100	165	100	100	75	50	50	6
3	DOMESTIC		300	100	100		50	50	2
4	DOMESTIC	150		300	300	60	50		2
5	DOMESTIC	20	44	20	20	20		10	2
6	DOMESTIC		60						1
7	DOMESTIC	720	720						2
8	DOMESTIC	300	75	75				20	2
9	DOMESTIC	150	300	400		50		300	2
10	DOMESTIC	100	200	100	100	30	50		3
11	DOMESTIC	250	595			40		500	2
12	#####								
13	DOMESTIC	40	360		30	20	10		4
14	DOMESTIC	120	20	20	25	50			2
15	DOMESTIC	50	240			40	60		3
16	DOMESTIC	140	400	150	50	100		100	4
17	DOMESTIC	25	480	100	150	9			3
18	DOMESTIC		75		15	60		10	2
19	DOMESTIC	60	1500	700	200		330	200	3
20	DOMESTIC	11	120	100	10			36	1
21	DOMESTIC	100	400	200	100	50			4
22	DOMESTIC	50	200	100	100	10	50	10	2
23	DOMESTIC	350	189	280		49		5	1
24	DOMESTIC	140	210	245	70				1

Summary Report

Study area: Southern Forest Region

Period: Apr 2003

Overnight visitors: 201,000

Expenditure attributable to Natural Environments: 88%

Average days
3.91

Average group size
2.71

Average Nights
2.91

Expenditure on:

1- Travel in the region	\$ 10.28
2- Accommodation in the region	\$ 35.85
3- Food&Drink in local hotels/restaurants	\$ 14.11
4- Food&Drink in local stores	\$ 7.99
5- Activities in the region	\$ 6.06
6- Equipment in the region	\$ 7.63
7- Others	\$ 7.79

Total expenditure per person per day **\$ 89.70**

Average expenditure per person/ per day	89.7
Overnight visitors	201,000
Average length of stay (days)	3.9
Total Direct Expenditure (\$million)	70.5
Attribution factor (%)	88%
Attribution of visitor expenditure (\$million)	61.9





Thanks...

German Ugarte

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November 2003