

APPENDIX B

THE EEGECOST MODEL

Form B.1	Analysis background form.....	B.3
Form B.2	Scope of analysis form.....	B.4
Form B.3	Discount rates form.....	B.5
Form B.4	Air and climate cost inventory form.....	B.6
Form B.5	Depreciation form.....	B.7
Form B.6	Single asset depreciation (straightline) form.....	B.8
Form B.7	Single asset depreciation (fixed percentage) form.....	B.9
Form B.8	Shared assets depreciation (straightline) form.....	B.10
Form B.9	Percentage allocation form.....	B.11
Form B.10	Monetary allocation form.....	B.12
Form B.11	Maintenance and operating materials form.....	B.13
Form B.12	External services form.....	B.14
Form B.13	Predevelopment and construction form.....	B.15
Form B.14	Decommissioning form.....	B.16
Form B.15	Personnel form.....	B.17
Form B.16	Employee payroll form.....	B.18
Form B.17	Fees, taxes and charges form.....	B.19
Form B.18	Fines and penalties form.....	B.20
Form B.19	Risk scenario form.....	B.21
Form B.20	Risk scenarios summary form.....	B.22
Form B.21	Insurance form.....	B.23
Form B.22	Provisions form.....	B.24
Form B.23	General activities form.....	B.25
Form B.24	Research and development form.....	B.26
Form B.25	Extra form.....	B.27
Form B.26	Debt interest form.....	B.28
Form B.27	Direct cost form.....	B.29
Form B.28	Volunteer and prison labour form.....	B.30
Form B.29	Transport reconciliation form.....	B.31
Form B.30	Type of load definition form.....	B.32
Form B.31	Indirect costs form.....	B.33
Form B.32	Internal intangible costs form.....	B.34
Form B.33	External costs form.....	B.35
Form B.34	Subsidies, rewards and earnings form.....	B.38
Form B.35	Costs incurred by type form.....	B.39

Form B.36	Cost types by year form.....	B.40
Form B.37	Cost report form.....	B.41
Figure B.1	Costs incurred by media.....	B.42
Figure B.2	Percentage cost contribution.....	B.42
Figure B.3	Interactive <i>Costs incurred by media</i> graph.....	B.43
Form B.38	Risk value form.....	B.44
Form B.39	Management priority table.....	B.45
Form B.40	Investment database form.....	B.46
Form B.41	Net present value calculations form.....	B.47

Form B.1 Analysis background form.

Project title:	
Company:	
Department:	
Prepared by:	
Date completed:	

Product description:

Process description:

Objective statement:

Go to Capital budgeting

SCOPE OF ANALYSIS

Go to Discount rates

Project phase (Insert the number [1] in the required block.)

Concept initiation	Concept analysis	Validation	Development	Implementation	Production

Type of analysis (Insert the number [2] in the required block.)

Existing process analysis	Existing vs existing process analysis	Existing vs new process analysis	New vs new process analysis	Capital budgeting analysis

Range of operations (Insert the number [3] in the required block.)

Import	Production	Export	Research	Development	Not applicable

Siting (Insert the number [4] in the required block.)

New	Existing site

Site location (s) (Insert the number [5] in the required block.)

Johannesburg	Pretoria	Durban	Cape Town	Port Elisabeth	Other

Site stage (Insert the number [6] in the required block.)

Predevelopment & development	Decommissioning	Not applicable

Life cycle stage (Insert the number [7] in the required block.)

Raw material extraction	Manufacturing	Filling & packaging	Distribution	Use, reuse & maintenance	End-of-life	All stages

Range of costs (Insert the number [8] in the required block.)

Types I & II	Type III	Type IV	Type V	Costs and revenues	All by media	Future costs

Type of assessment (Insert the number [9] in the required block.)

Life cycle	Period

Period

From	To

Functional unit

--

Form B.3 Discount rates form.

DISCOUNT RATES

Discount rates	
	For type I to IV costs
	For type V costs

[Return to Scope of analysis](#)

[Go to Cost Inventory](#)

Return to Discount rates

COST INVENTORY

Go to Cost incurred by type

1	Air and climate	Total	Link	Comments
1.1	<i>Treatment, prevention and operation</i>			
1.1.1	Depreciation of related assets		Go to Depreciation	
1.1.2	Maintenance and operating materials		Go to Maintenance and operating materials	
1.1.3	External services		Go to External services	
1.1.4	Personnel		Go to Personnel	
1.1.5	Fees, taxes and charges		Go to Fees, taxes and charges	
1.1.6	Fines and penalties		Go to Fines and penalties	
1.1.7	Insurance for environmental liabilities		Go to Insurance	
1.1.8	Provisions for environmental management		Go to Provisions	
1.2	<i>General and beyond</i>			
1.2.1	General environmental management activities		Go to General activities	
1.2.2	Research and development		Go to Research and development	
1.2.3	Extra expenditure for cleaner technologies		Go to Extra	
1.2.4	General direct costs		Go to Direct costs	
1.2.5	General indirect costs		Go to Indirect costs	
1.2.6	Internal intangible cost		Go to Internal intangible cost	
1.2.7	External costs		Go to External costs	
1.3	<i>Environmental revenues</i>			
1.3.1	Subsidies, rewards and earnings		Go to Subsidies, rewards and earnings	
	Total			

Return to Depreciation

DEPRECIATION OF SINGLE ASSETS
STRAIGHTLINE CALCULATION

Go to Fixed percentage depreciation

Capital assets depreciated in years

No	Description	Asset No	Acquisition date	Total valuation	Depreciable life	Current period	Current period depreciation	Depreciation to date	Years to date	Depreciation years to date

Total current depreciation _____

Form B.13 Predevelopment and construction form.

Return to External services

PREDEVELOPMENT AND CONSTRUCTION COSTS

Go to Indirect costs
Go to Fees, taxes and charges

Site information

Location name:

Address:

Legal description:

Number of hectares:

Other descriptive information:

Facility predevelopment cost

	Account code	Cost
Public hearings		
Public outreach and education		
Land acquisition		
Legal fees		
Licensing and permit fees		
Engineering		
Design		
Environmental studies		
Testing		
Other		
Indirect costs		

Subtotal _____

Construction cost

	Account code	Cost
Scale system installation		
Monitoring or office facilities		
Equipment storage facilities		
Roads		
Landscaping		
Engineering		
Earthwork		
Other		
Indirect cost		

Subtotal _____

Total _____

Return to Personnel

EMPLOYEE PAYROLL

No	Name	ID number	Account code	Salary / Wage	Overtime wage	Media group								Total allocation %	
						1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %		
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
#															

Grand total wages _____

Form B.20 Risk scenarios summary form.

SCENARIO	DESCRIPTION	IMPLICATION	PROBABILITY	COST	COST TYPE

Return to Cost Inventory

RESEARCH and DEVELOPMENT

TYPE OF COST

Air and Climate						Air and Climate						
Cost driver	Description	Unit	No of units	Cost / unit	Total	%	Type I(a)	%	Type I(b)	%	Type II	Total
Emission prevention measures												
Prevention energy conversion loss												
Meteorological forecasting												
Dispersion modelling												
CFC studies and phaseout												
Global warming studies												
Other												
Feasibility studies												
Waste						Waste						
Cost driver	Description	Unit	No of units	Cost / unit	Total	%	Type I(a)	%	Type I(b)	%	Type II	Total
Waste prevention measures												
Advanced waste treatment												
Dust management												
Ash management												
Chemical, oil and toxic substance management												
Organic waste management												
Waste fuel management												
Reclamation optimization												
Other												
Feasibility studies												

Return to Extra

DEBT INTEREST ACCUMULATION

No	Dept issue or capital lease description	Account code	Total interest expense	Environmental media group								Total allocation %	
				1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %		
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													

Grand total _____

TYPE OF LOAD DEFINITION

1	Type of load Product	Unit	Description		Cost / unit
1.1		#	-	-	
1.2		#	-	-	
1.3		#	-	-	
1.4		#	-	-	
1.5		#	-	-	
1.6		#	-	-	
1.7		#	-	-	
1.8		#	-	-	
1.9		#	-	-	
1.10		#	-	-	
1.11		#	-	-	
1.12		#	-	-	
1.13		#	-	-	
1.14		#	-	-	
1.15		#	-	-	
#	None				
2	Waste				
2.1		#	-	-	
2.2		#	-	-	
2.3		#	-	-	
2.4		#	-	-	
2.5		#	-	-	
2.6		#	-	-	
2.7		#	-	-	
		#	-	-	
		#	-	-	
3	Raw material				
3.1		#	-	-	
3.2		#	-	-	
3.3		#	-	-	
3.4		#	-	-	
3.5		#	-	-	
3.6		#	-	-	
3.7		#	-	-	
3.8		#	-	-	
3.9		#	-	-	

Unit		
1	Weight	ton
2	Volume	m ³
3	Distance	km.
#	-	-

INTERNAL INTANGIBLE COSTS

Return to Cost Inventory

Air and climate

Unit	Cost driver	Description	Implication of occurrence (1 - 5)	Probability of occurrence	Frequency of events / year	Cost / event	Weighted cost	Year 1	Year 2	Year 3	Year 4	Year 5	Present value	Risk Category	Risk Value	Risk no
Staff																
Market share																
Licence to operate																
Relationships																
Other	Habitat and wetland protection															
	Support to environmental groups															
	Environmental projects															
	Environmental report															
	Environmental hearings															
	Pollution prevention programs															

Return to Cost Inventory

EXTERNAL IMPACT COSTS

Air and climate

Cost driver	Description	Unit	Implication of occurrence (1 - 5)	Probability of occurrence	Frequency of events / year	Cost / event	Weighted cost	Year 1	Year 2	Year 3	Year 4	Year 5	Present value	Risk Category	Risk Value	Risk no
Pollutant discharges	Global warming	tons of CO ₂ eq.														
	Acidification	tons of SO ₂ eq.														
	Photochemical smog	tons of C ₂ H ₆ eq.														
	Groundlevel ozone	tons of O ₃ eq.														
	Stratospheric ozone depletion	tons of CFC-11 eq.														

Wastewater

Cost driver	Description	Unit	Implication of occurrence (1 - 5)	Probability of occurrence	Frequency of events / year	Cost / event	Weighted cost	Year 1	Year 2	Year 3	Year 4	Year 5	Present value	Risk Category	Risk Value	Risk no
Pollutant discharges	Eutrophication	tons of PO ₄ eq.														
	Aquatic toxicity	Eq. Tons														

Soil and Groundwater

Cost driver	Description	Unit	Implication of occurrence (1 - 5)	Probability of occurrence	Frequency of events / year	Cost / event	Weighted cost	Year 1	Year 2	Year 3	Year 4	Year 5	Present value	Risk Category	Risk Value	Risk no
Pollutant discharges	Land use	Eq. Tons														
	Resource depletion	Ratio														
	Terrestrial toxicity	Eq. Tons														

Form B.35 Costs incurred by type form.

[Return to Cost Inventory](#)[Go to Cost types by year](#)

COSTS INCURRED BY TYPE

Type	Description	Total
I (a)	Non-recurring site costs	
I (b)	Recurring site costs	
II	Corporate costs	
III	Impact costs	
IV	Internal intangible costs	
V	External costs	
	Total	

Form B.36 Cost types by year form.

[Return to Cost incurred by type](#)

[Go to Cost Report](#)

COST TYPE ASSESSMENT BY YEAR

Year	Year 1
------	--------

Cost type	Total
I (a)	
I (b)	
II	
IV	
V	
Grand Total	

[Return to Cost Types by year](#)

[Go to Risk Value](#)

REPORT FORM

			Description	
1	Project phase			
2	Type of analysis			
3	Range of operations			
4	Siting			
5	Site location			
6	Site stage			
7	Life cycle stage			
8	Range of costs	for year/s		to
9	Type of assessment			
10	Functional unit			

Expenditure	General activities
--------------------	--------------------

Environmental media	Total
Air and climate	
Biodiversity and landscape	
Noise and vibration	
Other	
Radiation	
Soil and groundwater	
Wastewater	
Grand Total	

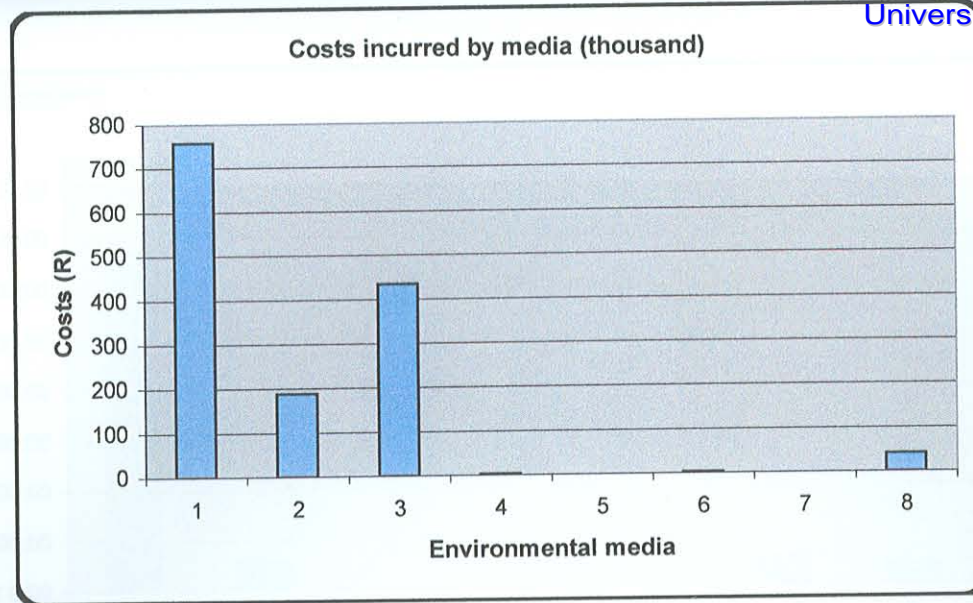


Figure B.1 Costs incurred by media.

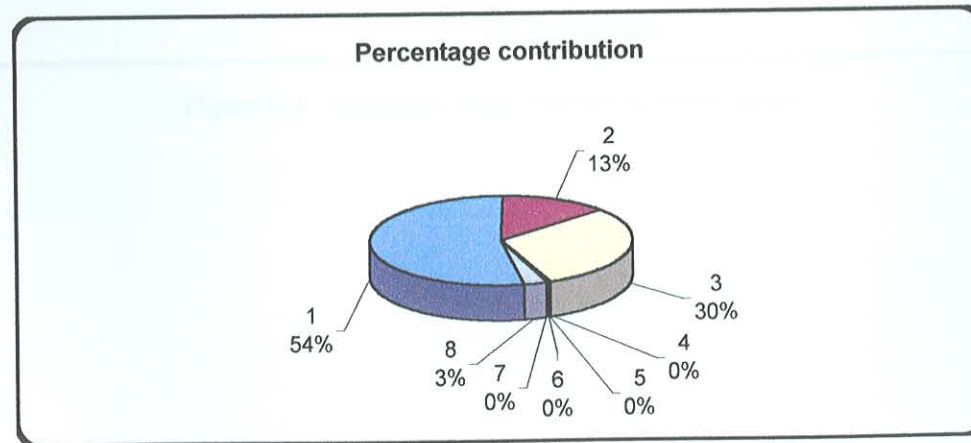


Figure B.2 Percentage cost contribution.

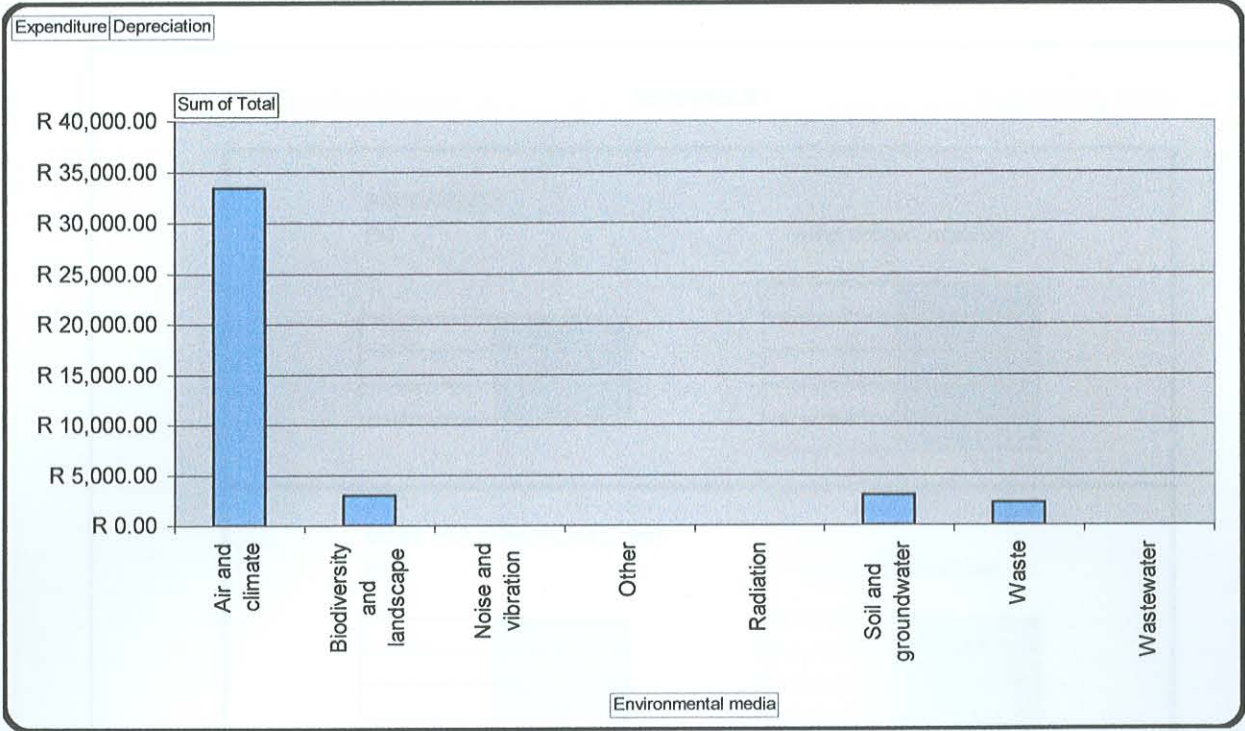


Figure B.3 Interactive Costs incurred by media graph.

[Return to Cost Report](#)

RISK VALUE

[Go to Priority Table](#)

PROBABILITY
[%]

User defined valuation

	L
	M
	H

	2
	4
	6
	8
	10

COST PER FUNCTIONAL UNIT
[R]

User defined valuation

	L
	M
	H

	5
	10
	15
	20

IMPLICATION
[1-5]

User defined valuation

2	L
3	M
4	H

1	0
2	5
3	10
4	15
5	20

