

**WORKSHOP ON DEFINING A METHODOLOGY TO VALUE THE CITY OF CAPE TOWN'S  
NATURAL ENVIRONMENT**

***WORKSHOP VENUE***

Centre for Biodiversity Conservation  
South African Biodiversity Institute  
Kirstenbosch  
Cape Town

***WORKSHOP DATE:***

12 March 2009  
TIME 09:30-15:00

***WORKSHOP PROGRAMME***

9:00 - 9:30 Welcome and introductions (Arne Purves)  
9:30 - 10:30 Presentation of conceptual methodology (Martin de Wit)  
10:30 - 10:45 TEA  
10:45 - 12:00 Application of methodology to existing valuation studies (Hugo van Zyl)  
12:00 - 12:30 Introduction to facilitation (Martin de Wit)  
12:30 -13:15 LUNCH  
13:30 - 15:00 Facilitative session (All)

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Attendance register (attached as appendix 1)

## **1. OPENING OF THE WORKSHOP**

The workshop was opened by Mr Arne Purves, the City of Cape Town project manager responsible for this project. Mr Purves thanked all those who were in attendance (see appendix 1) and the workshop organisers for their preparations. Martin De Wit was then introduced to the meeting as the project Leader.

Dr De Wit introduced the project team to the meeting and then allowed all attendees to introduce themselves. He thanked SANBI for making the venue available for the meeting. Dr De Wit explained that the purpose of the workshop was to solicit inputs from the City of Cape Town line function departments on how best to define a methodology for the economic valuation of the City's natural environment.

## **2. PRESENTATION: CONCEPTUAL FRAMEWORK (MARTIN DE WIT)**

Martin De Wit, the project leader gave a presentation titled 'Testing a Methodology to Value the City of Cape Town's Natural Environment' (see appendix 2). He noted that the Methodology is needed in order to enable the City to capture the true value of its natural environment. Once established, the value would be used together with other project findings to support a solid business case for the natural environment. The presentation sets out how such a business case for the natural environment can be developed in a credible and repeatable way.

The second part of the presentation focussed on the project implementation phases. These were given as:

- Phase One: International Review (finalised)
- Valuation techniques, pros and cons; data requirements
- Phase Two: Consultation (finalised)
- Workshops with line functions; participatory approach
- Phase Three: Methodology (in progress)
- Build a consolidated methodology.
- Phase Four: Pilot Valuation (in progress)
- Demonstrate & test valuation methodology

The third part of the presentation was an illustration of the Methodology for environmental goods and services evaluation. These following steps were given:

- First, estimate relative importance of natural assets for EGS
- Second, estimate importance of EGS to beneficiaries/users (matrix EGS/Users)
- Third, establish links closest to EGSs and development objectives
- Fourth, select EGS with mandate & ability to influence through managementFifth, looking into the future: assess ability of ecosystems to yield a sustainable flow of EGS and prioritise according to risk
- Sixth, apply valuation techniques to selected valuation case studies

The last parts of the presentation focussed on how to use the environmental evaluation in order have an impact on the budget. The following points were stressed,

- *Clear, long-term vision on development and natural assets?*
- *Make link between development objectives and natural resources explicit*
- *Approaching decision makers (UNDP/UNEP 2008):*

## **DISCUSSION**

The presentation was followed by a discussion. The following points were raised:

- The business case has to show the net effect of the goods and services on other sectors (e.g. if you produce compost, explain that it eventually ends up in agricultural production).
- It was suggested that national parks which are on City Land be considered during the evaluation
- It was suggested that the evaluation should be innovative and not only address those parts of the City Environment which have been studied for many years (an example of ecosystem which have been studied are wetlands)

### **3. PRESENTATION: APPLICATION OF METHODOLOGY TO EXISTING VALUATION STUDIES (HUGO VAN ZYL)**

Hugo van Zyl gave a presentation (appendix 3) which was intended to illustrate the Methodology through case studies. The case studies were:

- Site specific: Zandvlei based on previous study for CCT (Turpie et al., 2001)
- Area-wide / sectoral: Tourism

#### ZANDVLEI CASE STUDY:

The first part of the presentation sought to illustrate how the Zandvlei case study was carried out. Zandvlei was evaluated through the following steps:

- Estimate relative importance of natural assets for EGS
  - Estimate importance of EGS to beneficiaries/users
  - Establish links between EGSs and development objectives (IDP, etc.)
  - Select EGS that the City has ability to influence through management
  - Assess ability of ecosystems to yield a sustainable flow of EGS and prioritise according to risk
  - Choose appropriate valuation techniques and apply
- The second part of the presentation concerned the resource economics techniques and the results obtained for each technique used. Significant benefits were found for a wide variety of users. Property value, travel cost and contingent valuation techniques had areas of overlap, and links between management, water quality and security were relatively apparent. In summary the results given were:

<b>Valuation technique</b>	<b>Present value in 2000</b>	<b>Annual value</b>
Property value technique	R84 million	+/- R6 million
Travel cost	R10 million	R700,000
Contingent valuation	R9 million	R640,000
Replacement cost	R24 million – R180 million	R2 million – R15 million

## AREA WIDE CASE STUDY:

For this case study, the following points were stressed:

- From a wider policy perspective, it is relatively clear that the tourism sector is a cornerstone of economic development in the City and that natural areas play a key role.
- Growth of eco-tourism shows that nature based activities are an increasingly prominent part of global tourism and that accessible and attractive natural areas are increasing in scarcity
- Focus of valuation would thus be on contribution of natural areas to the entire tourism sector.
- Key information required:
  - What is the relative importance of natural areas within the Cape Town tourist package?
  - What proportion of tourist spending can be attributed to natural areas?
  - How can City management affect this number – i.e. what are the management scenarios from total neglect will result in a loss of X to ideal management will result in a gain of Y?

## **DISCUSSION**

*Following the presentation by Hugo van Zyl, the following points were raised:*

- If an open space is not managed, other things happen that require the city to act. The costs of not managing open space increase when an open area is neglected.
- The zandvlei case study showed that if you do not manage the vlei, you will destruct the value that the vlei brings (houses value). A good Zadvlei showed increases in property value. A dirty Zandvlei will bring house prices down.
- We need to focus broadly on other areas we do not know about. The project must focus on other ecosystems and be careful not to focus too much about rivers and wetlands.
- You can ask tourist the questions that do not involve Kirstenbosch and Table Mountain.
- There are some cases where proper environment management has increased tourism
- Tough choices will have to be made in future regarding environmental management. If you want to preserve, you have to get tough.

## **4. INTRODUCTION TO FACILITATION**

Martin De Wit introduced the workshop facilitation format. He referred to the format as 'Participatory Rapid Appraisal (PRA), a qualitative survey methodology tool utilised by many organisations to formulate solutions to identified problems. Based on this description, the workshop participants were divided into four groups. Each group was requested to discuss and provide insights into the relative importance of Environmental Goods and Services:

- To beneficiaries;
- To development objectives;
- Within environmental mandate and the City's ability to influence; and
- In terms of ecological and socio-ecological risks

## **5. FACILITATIVE SESSION**

Following the guidelines provided by the facilitator, all the groups were allocated time to discuss and report back to the workshop.

## GROUP 1 REPORT:

### **The relative importance of Environmental Goods and Services to beneficiaries:**

*(a) POS & Nature reserves (including proclaimed water bodies) are important to:*

- school groups; All Communities
- Recreational users
- residents
- sporting groups
- dog walkers
- international tourists (limited – except; Boulders, TMNP, Kirstenbosh, and Robin Island)
- Local visitors
- Criminals
- Braai and picnicking
- Birding
- Illegal harvesters and poachers (gambling)
- Limited legal Harvesting

*(b) Other Water bodies and rivers:*

- sporting bodies
- recreational activities
- City (storm water)
- Waste water

*(c) Coastal processes*

- Infrastructure / properties Storm mitigation
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*(d) Biodiversity processes*

- Farmers Pollination
- Ecosystem stability
- Specialist Tourists

*(e) land & soil*

- Farming
- Biodiversity

The group further noted that different user groups may use the same environmental goods and services because of different choice reasons and, those different areas are socially recognised for different functions even though they may provide the same NGS.

### **Relative importance of Environmental Goods and Services to the City's development objectives:**

*(a) Shared economic growth and development*

Enhanced: Tourism, Recreation- birding, fishing, (Multiplier effect), Biodiversity

*(b) Sustainable urban infrastructure and services*

Coastal processes, storm water and flood attenuation. Public open space and Biodiversity processes network, Air Quality

(c) *Energy efficiency for a sustainable future*

(d) *Public transport systems*

(e) *Integrated human settlements*

POS, Nature Reserves, Water Bodies, Coast Line – well managed and accessible, diversity of living environments, amenity value.

(f) *Safety and security*

POS, Nature Reserves, Water Bodies, Coast Line – well managed space leading to a higher quality environment and well being! Healthy activities – outlet for youth.

(g) *Health Social and human capital development*

POS, Nature Reserves, Water Bodies, Coast Line – psychological, and physiological benefit –well being

(h) *Good governance and regulatory reform*

### **The relative importance of Environmental Goods and Services to the ability to influence environmental mandate:**

Don't have a constitutional mandate for Nature Conservation/ Environment

NEMA – obligation to manage environment

Local Authority Mandates:

- Planning (LUPO)
- Land use management
- Tourism
- Healthy and clean living environment
- Water provision and Waste
- Disaster management / protection of residents: fire flooding storm surge
- Environmental health
- Catchment Management

### **The relative importance of Environmental Goods and Services in terms of Ecological and Socio-Economic risks:**

- a) **POS**, Nature Reserves –viability : Fragmentation and edge effects,
- b) **Water**; eutrophication, loss of system integrity; pollution
- c) **Air**; pollution
- d) **Coastal processes**; climate change, pollution
- e) POS, Nature Reserves – lack of management causes POS to be a liability to communities.

## GROUP 2 REPORT:

### **The relative importance of Environmental Goods and Services to beneficiaries:**

- Tourist/Visitors
- Recreational users
- Local residents
- Religious and cultural beneficiaries
- Fishing Industry
- Sporting events
- Film industry

### **Relative importance of Environmental Goods and Services to the City's development objectives:**

- Shared economic growth and development
- Sustainable urban infrastructure services
- Protect environmental services in order to ensure sustainable growth

### **The relative importance of Environmental Goods and Services in terms of the ability to influence environmental mandate:**

Spatial planning

Development policies

Building regulations

Water and electricity tariffs

### **The relative importance of Environmental Goods and Services in terms of Ecological and Socio-Economic risks:**

No information provided

## GROUP 3 REPORT:

### **The relative importance of Environmental Goods and Services to beneficiaries:**

#### *REGULATORY:*

- storm water management = general public, people below 1:100 year flood line
- water purification = downstream users, beaches recreational activities,
- coastal dunes = low lying areas of the Cape Flats & coastal areas
- Natural vegetation (air quality, carbon sequestration, temperature regulation) = general public
- Ground water recharge = people dependant on the ground water
- Mountains (topography influences climate) = general public

#### *PROVISIONAL SERVICES*

- agriculture = farmers and general public
- fisheries = fisheries (formal & informal) & general public
- plant harvesting = smaller select group
- sand mining = small formal commercial groups & general public

#### *CULTURAL & RECREATIONAL*

- local recreational users, formal tourist/hospitality companies, domestic & international tourists

- recreational groups
- educational groups
- cultural & religious groups
- aesthetic user

**Relative importance of Environmental Goods and Services to the City's development objectives:**

*Shared economic growth & development*

- regulatory (ecosystem functions that reduce risk & costs of development)
- provisional services (water provision, agriculture = food, local economic development)
- cultural & religious (tourism and green destinations, quality of life)

*Sustainable urban infrastructure & Services*

- regulatory (all of the above)
- provision services (e.g. sand mining = subsidence of sewer systems)
- cultural & religious (built environment heritage)

*Energy Efficiency for a sustainable future*

- regulatory (green areas = temperature amelioration in the city)
- provision services (local agriculture = less food miles, energy efficiency, biofuels, local fish stocks = less food miles, landfill gas, sewage biogas = waste to energy)

*Public transport services*

- Regulatory ( positioning of services not to conflict with services such as flood attenuation)

*Integrated human settlements*

- Regulatory (all functions related to disaster risk management)
- Provision services (recreational areas, agricultural areas, green recreational areas)

*Safety & security*

- Regulatory (all functions related to disaster risk management)
- Provision services (correct management of basic resourced provision is linked to safety & security; fire management – management of fuel loads)

*Health, social and human capital development*

- regulatory (air & water quality, all functions related to risk management)
- provision services (

**The relative importance of Environmental Goods and Services in terms of the ability to influence environmental mandate:**

- spatial planning
- developers, EIA's & development partnerships
- town planning
- City services (storm water management, solid waste, roads & transport, City Parks, Bulk water, Biodiversity Management, health)
- Ex Director score cards

- Energy demand linked to staff performance management
- Regulatory framework with private sector
- Statutory government organisations; DEAT, DEADP, MCM, SANParks, CNature
- NGO's – WWF, WESSA, etc

**The relative importance of Environmental Goods and Services in terms of Ecological and Socio-Economic risks:**

No answer was provided.

GROUP 4 REPORT:

**The relative importance of Environmental Goods and Services to beneficiaries:**

We should not choose beneficiaries from a single asset as this might have unintended consequences. Wetlands and rivers have many studies concluded already. Thus the Focus on two potential strands for the business case

- Using a hypothetical (say catchment) as case study example
- Capturing the value of fynbos fragments especially in the low -lands

Then show the beneficiaries and what they benefit.

**Relative importance of Environmental Goods and Services to the City's development objectives:**

- Sustainable urban infrastructure and services
- Safety and security
- Health, social and human capital development
- The asset (goods and services) that are managed contribute to the following IDP's (2, 7, 3)

**The relative importance of Environmental Goods and Services in terms of the ability to influence environmental mandate:**

- Influence town planning
- Make conservation case within the city areas.

**The relative importance of Environmental Goods and Services in terms of Ecological and Socio-Economic risks :**

- Climate change
- Water quality
- Losses due to urban sprawl

**6. SUMMARY**

Based on the workshop feedback, the following key issues were identified for further prioritised attention when preparing valuation studies and eventually the business case:

- i) water quality
- ii) recreation
- iii) conservation

## 7. CLOSURE

The meeting was closed at 15:30 by the Facilitator.

### APPENDIX 1: ATTENDANCE REGISTER.

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**APPENDIX 2: PRESENTATION BY MARTIN DE WIT**

**APPENDIX 3: PRESENTATION BY HUGO VAN ZYL**