The EEWOC Project:

Environmental Economics with the Overseas Territories in the Caribbean

Valuing the Environment in the UK Overseas Territories

Training Workshop Proceedings

10-12 October 2007
Grand Cayman, Cayman Islands

By Emily McKenzie and Tara Pelembe[1]

[1] Joint Nature Conservation Committee, Monkstone House, City Road, Peterborough, PE1 1JY

Contents

1. BACKGROUND 3

1.1. THE EEWOC PROJECT 3
1.1.1. Toolkit – Valuing the environment in small islands 4
1.1.2. Environmental valuation case studies in the UK Overseas Territories 4
1.1.3. Caribbean regional environmental valuation workshop 4

2. WORKSHOP PROCEEDINGS 6

2.1. WELCOME AND INTRODUCTIONS 6
2.2. VALUATION SUCCESS STORIES 6
2.3. HOW DO ECONOMISTS THINK? 7
2.4. DEBATING GAME 7
2.5. WHAT MAKES A GOOD VALUATION CASE STUDY? 8
2.6. VALUATION STUDIES IN MONTSERRAT, BERMUDA AND THE CAYMANS 8
2.6.1. Montserrat – Economic Value of the Centre Hills 8
2.6.2. Cayman Islands – Economic Value of the Central Mangrove Wetland 8
2.6.3. Bermuda – Economic Value of Coral Reefs 9
2.7. STAKEHOLDERS, IMPACT ASSESSMENT AND SCENARIO DEVELOPMENT 9
2.8. VALUES AND EXTERNALITIES 10
2.9. DATA COLLECTION 10
2.10. VALUATION TECHNIQUES 10
2.11. DECISION SUPPORT TOOLS 11
2.12. COST-BENEFIT ANALYSIS COMPUTER SIMULATION EXERCISE 11
2.13. USING VALUATION TO INFLUENCE POLICY AND DECISIONS 12
2.14. PRACTICAL STUFF – HOW TO DO A VALUATION STUDY? 12
2.15. TERRITORIES' CASE STUDY ASSIGNMENTS 12

3. ACKNOWLEDGEMENTS 13

4. ANNEX 1: PARTICIPANT LIST 14

5. ANNEX 2: WORKSHOP AGENDA 16

6. ANNEX 3: FEEDBACK FROM PARTICIPANTS 18

6.1. TOOLKIT 18
6.2. LENGTH OF WORKSHOP 18
6.3. CONTENT OF WORKSHOP 19
6.4. SUGGESTED IMPROVEMENTS FOR FUTURE TRAINING WORKSHOPS 22
6.5. PLANS FOR IMPLEMENTATION OF ACQUIRED KNOWLEDGE AND SKILLS 22
6.6. REQUESTS FOR FURTHER ASSISTANCE IN THE OVERSEAS TERRITORIES 23

7. ANNEX 4: LINKS FOR FURTHER INFORMATION 24

Valuing the Environment in the UK Overseas Territories: Training Workshop Proceedings

1. Background

1.1. The EEWOC project

One of the biggest constraints to sustainable development in the UK Overseas Territories is the lack of quality information and analysis relating to the environmental impacts, values, costs and benefits of alternative development activities and strategies. The *Environmental Economics with UK Overseas Territories in the Caribbean* Project (EEWOC) is an initiative to enable stakeholders to address these knowledge and research constraints. EEWOC is an initiative of the Joint Nature Conservation Committee (JNCC), in partnership with a number of UK Overseas Territories in the Caribbean and the Overseas Territories Environment Programme (OTEP). More information is available at http://www.jncc.gov.uk/page-4136.

EEWOC develops and provides tools, training and technical support to allow UK Overseas Territories to use environmental valuation to inform and improve decision-making. The objective of the project is to enable stakeholders in Overseas Territories to generate, understand and apply robust information on the value of ecosystem services in policy relevant contexts. In achieving this objective, the anticipated outcomes are a better understanding of the causes and costs of biodiversity loss, and identification of more effective, integrated and sustainable approaches to development in the UK Overseas Territories.

To date, EEWOC has three key elements:

- developing and disseminating an environmental economics toolkit: *Valuing the Environment in Small Islands*, available at http://www.jncc.gov.uk/page-4065.
- organising a regional capacity building workshop on environmental valuation for key stakeholders in UK Overseas Territories in the Caribbean, held 10-12 October 2007.
- providing technical assistance to a number of UK Overseas Territories that are conducting environmental valuation studies in 2007-2010. Currently, projects are underway in Montserrat and Bermuda, and planned in the Cayman Islands.

EEWOC is funded jointly by JNCC and OTEP. JNCC is the statutory adviser to Government on UK and international nature conservation, including in the UK Overseas Territories. OTEP is a UK Government fund, jointly managed by the Foreign and Commonwealth Office (FCO) and the Department for International Development (DFID).

1.1.1. Toolkit – Valuing the environment in small islands

Through EEWOC, an environmental economics toolkit was developed on valuing the environment in small islands, available at http://www.jncc.gov.uk/page-4065. The primary user-group for the toolkit is government officials and NGOs managing valuation studies in the UK Overseas Territories in the Caribbean, although the document is relevant to all small islands world-wide interested in estimating the value of ecosystems and ecosystem services. The toolkit formed the main teaching reference for the Caribbean regional environmental valuation training workshop.

The toolkit provides clear guidance on how the value of the environment in small islands can be estimated and incorporated into planning and development decisions. It explains why you would undertake a study, who should be involved, how to implement the study and how to use the results. It also contains guidance on how to hire external consultants if expertise is not available in-house.

1.1.2. Environmental valuation case studies in the UK Overseas Territories

Environmental valuation studies are currently being undertaken by two UK Overseas Territories – Montserrat and Bermuda, and being planned in the Cayman Islands. These projects are initiated, led and managed by the Overseas Territories. Further details are available in Section 2.6. or through the links in Section 7.

The purpose of the Montserrat study is to gather information about the economic values of the goods and services provided by the Centre Hills' ecosystem, in order to inform their sustainable use and management. The Centre Hills is the last remaining forested watershed in Montserrat. The study will be completed by April 2008. The project manager for the Montserrat valuation study is Stephen Mendes, Centre Hills Project (centrehills@candw.ms).

The Bermuda study aims to estimate the value of Bermuda's coral reef systems, to give a quantitative measure of how important the reefs are to Bermuda in monetary terms, and to provide a reference point with which to compare possible alternative development plans. An additional objective of the project is to build capacity by providing a strategy for the promotion of the integration of environmental economics in policy and decision-making and developing educational tools for young Bermudians. The project manager for the Bermuda valuation study is Samia Sarkis, Protected Species Coordinator at the Bermuda Department of Conservation (scsarkis@gov.bm).

1.1.3. Caribbean regional environmental valuation workshop

A training workshop on 'Valuing the Environment in UK Overseas Territories in the Caribbean' was held from 10-12 October 2007 at the Grand Cayman Marriot Beach Resort in the Cayman Islands. The workshop was attended by representatives from a range of government departments and the main NGOs in Anguilla, Bermuda, the British Virgin Islands, the Cayman Islands, Montserrat, and the Turks and Caicos Islands. A full participant list is provided in Annex 1. The workshop proceedings are provided in

Section 2. Further information on the presentations, activities and case studies developed for the workshop can be requested from Emily McKenzie, Environmental Economics Advisor at JNCC: emily.mckenzie@jncc.gov.uk.

2. Workshop Proceedings

2.1. Welcome and introductions

The workshop was opened at the Grand Cayman Marriott Beach resort by Samuel Rose, the Deputy Chief Officer at the Ministry of Tourism, Environment, Investment and Commerce, in the Cayman Islands Government.

Emily McKenzie, Environmental Economics Advisor at the Joint Nature Conservation Committee (JNCC), welcomed participants to the workshop, introduced the presenters and facilitators, and outlined the agenda. She explained that the workshop would cover the main steps and techniques for conducting environmental valuation in small islands, following the step-by-step framework of the toolkit. She noted that all the sessions would contain a wide range of examples to illustrate key concepts and methods, most of them from small island contexts.

She also emphasised the participative structure of the workshop: after each lecture participants would be given time to deliberate on how each stage of environmental valuation is relevant to a case study in their own Territory. Participants were provided with a 'matrix', outlining the key information required at each step in the valuation process, which they were asked to fill with the details of their own case study as the workshop progressed. At the end of the workshop, participants would be asked to present their case study in the form of a proposal for an environmental valuation study relevant to their own work.

2.2. Valuation success stories

Participants were introduced to the subject of environmental valuation with three success stories, presented by Pieter Van Beukering, economics consultant at the Institute for Environmental Studies (IVM), and Emily McKenzie. The three examples were selected from cases where environmental valuation was used to improve the sustainability of policy and decision-making in small island contexts. In the first example, valuation was used to develop sustainable financing systems for marine protected areas in the Netherlands Antilles. In the second, valuation was used in Hawaii and Florida to develop monetary estimates that were included in the legislation of penalties for coral reef damage. In the final case, estimates of the costs of coastal erosion caused by unsustainable aggregates extraction practices in the Republic of the Marshall Islands led to the gradual introduction of a moratorium on near-shore dredging. In conclusion, the presenters outlined typical reasons for valuing the environment.

Following these presentations, participants discussed:

- the typical time scale for valuation studies and the feasibility of undertaking them in response to immediate development issues;
- the value of fisheries and diving in the Hawaii case study;
- the ability of economic valuation methods to account for cultural and health values;

- typical survey response rates; and,
- variations in the conceptualisation of environmental value across different cultures, particularly in the Caribbean.

2.3. How do economists think?

Pieter Van Beukering gave a presentation on the framework for economic thinking. He explained some basic concepts in economics, such as externalities, scarcity and value. He also gave a brief introduction to some of the core tools that support economic thinking, such as evaluation tools, valuation methods and economic instruments for sustainable financing. He explained a range of ways in which environmental valuation can be useful, some of the limitations of existing environmental valuation methods, and emphasised the importance of robust science as a foundation for valuation.

In this session, participants discussed:

- the role of scarcity in economics, how scarcity affects values at different scales, and the concept of marginal value;
- how aspects of people's quality of life fit within the concept of economic value;
- differences between social and private costs and benefits;
- the finite nature of the planet's resources, and differing conceptualisations of economy-environment interactions in environmental and ecological economics;
- the need to influence and educate other sectors, such as Ministries of Finance;
- local examples where unsustainable development could have been prevented if valuation had been used beforehand to assess the likely impacts of resulting environmental degradation on human wellbeing in the community, and compare these social costs with the short-term financial benefits to developers;
- the practical and philosophical arguments for and against valuation;
- the potential for environmental economics to provide an entry point to change the mindset and behaviour of other sectors, and introduce new environmental concepts; and,
- the importance of cultural and traditional values.

2.4. Debating game

Participants took part in a debating game, in which they were divided up into groups representing common, and often polarised, views on environmental issues. Representatives from each group were asked to debate statements on environmental policy questions from their group's assigned perspective. Debated issues included the benefits of increasing user fees, limiting tourist numbers, introducing marine protected areas, and implementing payments for ecosystem services. The aims of the debating session were to break the ice, and prompt participants to start considering how environmental valuation might be used to support different arguments.

2.5. What makes a good valuation case study?

Emily McKenzie provided an overview of important aspects to consider when selecting a case for a valuation study, such as the goal of the study, and the required level of local support. She also outlined the ideal characteristics of a valuation case study with significant potential to influence policy. Participants were asked to consider these recommendations when choosing their own case studies to develop during the workshop.

2.6. Valuation studies in Montserrat, Bermuda and the Caymans

To bring the process of environmental valuation alive in relevant contexts, the leaders of valuation initiatives in Montserrat, Bermuda and the Cayman Islands provided brief overviews of their studies.

2.6.1. Montserrat – Economic Value of the Centre Hills

Stephen Mendes, Centre Hills Project Manager, gave an overview of the Centre Hills valuation study in Montserrat. He explained the context of how the valuation study had evolved to: support the protection of the Centre Hills; advocate new environmental legislation; and, as a foundation to develop a system of sustainable financing for conservation in Montserrat. He outlined the project objectives, expected results and outcomes, and the project management set-up. The ecosystem services provided by the Centre Hills were discussed, focusing on those that are going to be included in the valuation study. Stephen noted that research is already underway, and due to be completed by April 2008.

In the context of the uncertainty about the level of volcanic activity in Montserrat, the facilitators briefly explained the possibility of using sensitivity analysis to assess the importance of underlying assumptions in affecting the findings of an economic valuation study. The participants also discussed the potential for funding mechanisms resulting from a valuation study to be captured for expenditure in areas other than the environment.

2.6.2. Cayman Islands – Economic Value of the Central Mangrove Wetland

Mat Cottam, Senior Research Officer at the Cayman Islands Department of Environment, gave a presentation outlining a study planned to assess the value of the Central Mangrove Wetland (CMW) in Grand Cayman. Mat outlined the historical context of developments and conservation initiatives in the CMW. He also gave an indication of the ecosystem services provided by the CMW to the citizens of the Cayman Islands.

In discussion of Mat's presentation, participants discussed a range of issues in the Cayman Islands relating to the planned valuation study, including:

- the goal of the valuation study – to raise awareness of the value of ecosystem services provided by the wetland – within the context of challenges in enacting legislation to enable the implementation of protected areas;
- the type of valuation undertaken by the Lands and Survey Department and how this differs from environmental valuation techniques;

- the relationship between private and social interests in the Caribbean context;
- the importance of stakeholder engagement in the CMW valuation case study;
- the use and users of the CMW in Grand Cayman;
- systems of ownership rights in the CMW;
- possible systems of financial compensation that could be implemented to reimburse private land owners for placing their land under protection; and,
- the potential role of co-management of the wetland.

2.6.3. Bermuda – Economic Value of Coral Reefs

Samia Sarkis, Protected Species Coordinator at the Department of Conservation Services in Bermuda, presented the Bermuda valuation study. She outlined the environmental, economic and social context in Bermuda, and discussed the main threats to the terrestrial, coastal and marine environments. Samia gave an overview of the first steps of the Bermuda valuation study, including the findings of an initial stakeholder workshop. She introduced the focus of the study, which will estimate the Total Economic Value of Bermuda's coral reefs, and explained the aims of the study to influence a number of reef-related policies and establish systems of sustainable financing. The relevant ecosystem services and stakeholders were described.

In response to the Bermuda presentation, participants noted that similar issues face many of the UK Overseas Territories. Sharing experiences and capacity in the Caribbean region is thus extremely useful. The importance of political, community and legal action (and the role of environmental valuation in influencing these areas) were also discussed. The role of secondary and primary stakeholders, and the timing of their engagement, was also briefly analysed in the context of the Bermuda study.

2.7. Stakeholders, impact assessment and scenario development

Emily McKenzie and Pieter Van Beukering provided an overview of the three first stages in the toolkit's valuation framework: stakeholder engagement, impact assessment and scenario development. It was emphasised that stakeholder engagement forms the backbone of the framework, and can feed into every element of the process. There was a discussion of which stakeholders (and how many) to involve, when to involve them, how to categorise them, and levels of participation in a valuation study. Typical scenarios used in valuation studies were described, and an explanation was given for why they are often required. Methods and criteria for developing scenarios were outlined, including the Development pressure – State – Impact – Response (DPSIR) and Critical Uncertainty approaches. A brief overview was provided of the impact assessment stage, which is required as a foundation for a valuation study. This included a description of the ecosystem service conceptual framework for linking environmental impacts to economic value. The concepts were illustrated using a case study from a valuation of the Leuser ecosystem in Indonesia.

The presentations were followed by a session for groups to work on their own case studies: identifying relevant stakeholders, defining the alternative scenarios to be

compared, and selecting the main impacts on ecosystem services. James Gumbs presented his case study of a potential development in Anguilla, the relevant primary, secondary and external stakeholders, and the likely physical, ecological, social and economic impacts. The importance of including both short-term and long-term impacts was discussed.

2.8. Values and externalities

Emily McKenzie and Pieter Van Beukering provided an overview of core economic concepts related to environmental valuation, including the economic definitions of 'value' and externalities. Definitions and explanations were provided to increase participants' familiarity with environmental economics terminology. Participants also had an opportunity to increase their understanding of the scope of the discipline's utilitarian conceptualisation of economic value. The various dimensions of economic value were described, including an introduction to the Total Economic Value framework. Different approaches to valuation were introduced, including an explanation of the difference between estimating total and marginal values. The concepts were illustrated using a number of case studies that involved environmental valuation at a range of scales for a variety of purposes.

Participants were asked to follow up the lecture by considering what economic values would be relevant in their own case study.

2.9. Data collection

Pieter Van Beukering gave an introduction to data sources and collection methods relevant to environmental valuation studies. The presentation covered both secondary and primary data collection, with a particular focus on how to design robust surveys and survey materials. An example from Hawaii was used as an illustration.

Participants were asked to consider data sources and methods required to estimate relevant economic values in their own case studies.

2.10. Valuation techniques

Pieter Van Beukering and Emily McKenzie presented an overview of the main environmental valuation techniques, including market price, cost-based, revealed preference and stated preference techniques. Most techniques were illustrated with examples in which they had been used around the world, where possible in small island contexts. Guidance was given on best practice, the pros and cons of each technique, and the likely relevance to small island contexts.

During this session, participants discussed:

- situations where proxies of value (such as replacement costs) might be appropriate to use, rather than willingness-to-pay methods;
- the fact that the true value of an ecosystem is greater than its extractive use value;

- the need for nuanced scenarios in a valuation study, which represent realistic and sustainable options, such as co-management, rather than over-simplified extreme scenarios of total protection versus total exploitation;
- the importance of assumptions in valuation analyses;
- the role of benefits transfer, particularly when estimating the values of ecosystems where much work has already been done worldwide, such as mangroves;
- the role of focus groups in determining locally appropriate attributes within a choice experiment;
- the potential to use various forms of media (e.g. pictures, film, virtual reality) to present choice attributes in choice models; and,
- the importance of choosing a realistic payment vehicle when using stated preference methods, and how to select appropriate levels for payment.

Participants were asked to consider which valuation methods would be appropriate to employ in their own case studies. The group of participants from the Cayman Islands presented their case study, in which they planned to value an area of mangrove that is the last area with a particular endemic species, and that may be affected by a road development. The group presented their proposed scenarios, the range of relevant values and ecosystem services, and the valuation and decision support methods they had selected. Participants discussed in plenary how valuation could assist with this particular problem, and the pros and cons of using contingent valuation or choice experiment methods.

2.11. Decision support tools

Emily McKenzie and Pieter Van Beukering gave a presentation on tools that aim to support sustainable and equitable decision-making by incorporating estimates of environmental values, and comparing them with social and economic impacts. Brief overviews were provided of graphic analysis, multi-criteria analysis, and cost-effectiveness analysis, with a more detailed introduction to cost-benefit analysis. Participants were introduced to the main ranking criteria used in cost-benefit analysis: net present value, cost-benefit ratio, and internal rate of return. An explanation of discounting was provided within the context of undertaking a cost-benefit analysis.

In their groups, participants considered which (if any) decision-support tools would be relevant to their own case studies.

2.12. Cost-benefit analysis computer simulation exercise

Workshop participants were given a computer simulation exercise to undertake. The exercise involved working through an example of an environmental issue in a small island to be tackled within the framework of a cost-benefit analysis. The aims of the computer simulation exercise were to allow participants to experience how cost-benefit analysis works in practice, get hands on experience interpreting cost-benefit analysis indicators, understand how the discount rate affects the findings of a cost-benefit

analysis, and appreciate the importance of incorporating environmental values in a full cost-benefit analysis. Participants divided up into small groups to undertake the exercise, and some chose to follow this up by inputting their own case study information into the software package.

2.13. Using valuation to influence policy and decisions

Emily McKenzie and Pieter Van Beukering introduced some of the main ways in which the findings from valuation studies can be used, focusing on applications in four areas: advocacy; policy and decision-making; damage assessment; and, extracting finances. The group discussed ways to maximise a valuation study's impact on policy, such as developing a communication strategy. The presentation was illustrated with examples where environmental valuation has been used in small islands around the world.

Groups were asked to consider the most important reasons for conducting their own valuation case studies, addressing who the target audience should be, what kind of valuation and other indicators would be most appropriate, and what kind of communication tools would be most effective.

2.14. Practical stuff – how to do a valuation study?

Emily McKenzie presented some areas that are useful to consider when implementing a valuation study, such as capacity building, cross-departmental Steering Group participation, stakeholder engagement, and communication. Participants were referred to the toolkit for further information on practical aspects of undertaking a study.

2.15. Territories' case study assignments

Participants had gradually prepared their own case studies throughout the workshop, by filling out a structured matrix to assist planning of each stage of a valuation study. The culmination of the workshop involved presentations of the case studies developed by the groups from each Territory.

The course case studies developed by participants covered a range of potential approaches to valuation, and included:

- full cost-benefit analyses (including an assessment of the monetary value of environmental impacts) of proposed development projects;
- full cost-benefit analyses (including an assessment of the monetary value of environmental impacts) of alternative cruise ship routes;
- stated preference surveys to assess the willingness-to-pay for more environmentally sustainable locations for new road infrastructure; and,
- studies estimating the value, including global non-use value, of a specific endangered endemic species.

These presentations demonstrated that participants had learnt significantly from the workshop. Everyone was able to prepare a proposal for a policy-relevant, focused and robust environmental valuation study.

The workshop concluded with an evaluation, and an overview of future opportunities for participants to apply their newly acquired knowledge and skills to environmental valuation studies in their own Territories.

3. Acknowledgements

The workshop was jointly funded by the Overseas Territories Environment Programme (OTEP) and the Joint Nature Conservation Committee (JNCC). The workshop was hosted by the Cayman Islands Department of Environment. The workshop organisers are particularly grateful to Mat Cottam at the Cayman Islands Department of Environment for his assistance.

4. Annex 1: Participant List

Presenters and Facilitators

- Emily McKenzie, Environmental Economics Advisor, JNCC
- Tara Pelembe, Overseas Territories Officer, JNCC
- Pieter Van Beukering, Institute for Environmental Studies, Netherlands

Cayman Islands

- Timothy Austin, Assistant Director, Research and Assessment, Department of Environment
- Linda Bishop, Research Officer, Assessment and Compliance, Department of Environment
- Mat Cottam, Senior Research Officer, Department of Environment
- Gina Ebanks-Petrie, Director, Department of Environment
- Lisa-Ann Hurlston, Sustainable Development Coordinator, Department of Environment
- Joni Solomon, Research Officer, Department of Environment
- John Bothwell, Research Officer, Department of Environment
- Uche Obi, Senior Valuation Officer, Lands and Survey Department, Cayman Islands
- Paul Watler, Cayman Islands National Trust

Bermuda

- Dorcas McLean Roberts, Bermuda National Trust
- Samia Sarkis, Protected Species Coordinator, Department of Conservation
- Jack Ward, Director of Conservation Services, Department of Conservation

Montserrat

- Lady Eudora Fergus, Montserrat National Trust
- Gerard Gray, Director of Environment, Department of Environment
- Stephen Mendes, Project Manager, Centre Hills Project

British Virgin Islands

- Tessa Smith, Environmental Officer, Conservation and Fisheries Department
- Esther Georges, Deputy Director, BVI National Parks Trust
- Adriana Herbert, Professional Cadet, Development Planning Unit
- Bertrand Lettsome, Chief Conservation and Fisheries Officer

Anguilla

- James Gumbs, Director of Department of Fisheries and Marine Resources
- Karim Hodge, Director of Department of Environment
- Damien Hughes, Executive Director, Anguilla National Trust

Turks and Caicos Islands

- Judith Campbell, Permanent Secretary, Ministry of Natural Resources
- Marlon Hibbert, Coastal Officer, Department of Environment and Coastal Resources
- Kathleen Johnson, Economist, Department of Economic Planning and Statistics
- Wesley Clerveaux, Acting Director, Department of Environment and Coastal Resources
- Ethlyn Gibbs-Williams, Director, Turks and Caicos Islands National Trust, *(unable to attend)*

5. Annex 2: Workshop Agenda

Wednesday, 10 October 2007

09.00 – 09.30	Welcome and introductions
09.30 – 09.45	Valuation success stories
09.45 – 10.00	How do economists think?
10.00 – 11.30	Debating game
	Coffee break
11.45 – 12.15	What makes a good valuation case study?
12.15 – 12.45	Valuations in Montserrat, Bermuda & the Cayman Islands
	Lunch
13.45 – 15.15	Stakeholders, impact assessment and scenario development*
	Coffee break
15.30 – 16.30	Values and externalities*
16.30 – 17.30	Valuation techniques (Part 1)*
19.00 – 21.00	***Dinner***

Thursday, 11 October 2007

09.00 – 10.00	Valuation techniques (Part 2)*
10.00 – 11.00	Data collection*
	Coffee break
11.15 – 12.00	Decision support tools*
12.00 – 13.00	Cost-benefit analysis computer simulation exercise
13.00 – 13.15	Introduction to field assignment
	Lunch
14.15 – 17.15	Field assignment
19.00	***Dinner***

Friday, 12 October 2007

09.00 – 09.30	Using valuation for sustainable financing – DVD
09.30 – 10.30	Using valuation to influence policy and decisions*
	Coffee break
10.45 – 11.45	Group feedback on field assignments
11.45 – 12.15	Practical stuff – how to do a valuation study?
	Lunch
12.45 – 13.45	Brainstorm and prepare group presentations on case studies
13.45 – 14.45	Group presentations
14.45 – 15.00	Feedback
	Coffee break
15.15 – 15.45	Workshop evaluation
15.45 – 16.15	Wrap up & “what’s next”?
19.00	***Dinner***

Sessions marked with an asterisk involved four stages:

1. Lecture
2. Exercise to apply concepts to participants' own case studies
3. Presentations and feedback to the group

6. Annex 3: Feedback from participants

6.1. Toolkit

Question	Yes, very	Yes, quite	No
Did you find the toolkit useful?	47.6 %	52.4 %	0 %

Comments
Toolkit can be applied to local situations
Book is well written
It requires additional digestion after the first read
Toolkit is useful reference when needed
First introduction, so found it very useful background
Pitched at the right level for me
Excellent
The value of this toolkit will increase with repeated use
Very impressed with increase in value from initial draft to final product
Provides useful links to other data sources
Offers very good baseline information that can guide you through the process
Workshop assisted in bringing clarity to the toolkit
Good to have toolkit prior to workshop
Excellent reference for post-course
Very thoughtful to provide toolkit

Suggestions for improvements
A couple of full case studies would be useful to complement the toolkit
Need something that shows how rapid assessment can be done easily
Second edition of toolkit could incorporate comments/recommendations coming out of workshop and OTEP case study results

6.2. Length of workshop

28.6 % of participants thought that the duration of the workshop (three days) was appropriate, 71.4 % of participants stated that the workshop should have been longer. Participants justified the request for a longer workshop on the basis that it would allow time for further digestion of material, a slower pace, a field assignment and some free-time to explore the island.

Suggested length of workshop	% of participants*
7 days	28 %
5 days	36 %
4 days	36 %

*Of those who stated that the workshop should have been longer.

Comments relating to length and pace of workshop
Some aspects were a little rushed and could have done with a review and more time
It was a bit ambitious to cover everything in just three days
Too confined, need to have more outside/outdoor activities
A little more social time and visits to areas in the host country would have been nice

6.3. Content of workshop

General positive comments
Thank you!
Generally one of the most valuable courses I have been engaged in
Very useful tools - takes much of the mystery out of economic calculations
Workshop went well
Thanks!
Emily, Pieter and Tara did an excellent job. Well done!
It was enlightening
Great job!
Great first attempt
Workshop was well organised and participation was good

Question	Yes	No
Was there any subject matter missing from the workshop?	61.9 %	38.1 %
Do you have any questions that were not addressed in the workshop?	5 %	95 %

Subject matter missing from the workshop
Introduction to economics e.g. supply and demand
Consumer/producer surplus
More in-depth coverage of certain valuation techniques and decision support tools
More examples of completed valuation studies and applications in Caribbean OTs
More practical examples of data collection
More training on cost-benefit analysis software
Worst case scenarios and easy mistakes ecologists tend to make
Field assignment
Methods for rapid economic assessment
Rapid short assessment for common problems e.g. oil spill, coral reef damage
How to cost the economic valuation process
Funding sources for valuation process

Out of the participants who responded to the question about what was most valuable in the workshop, 61 % stated that they found one or a number of the participative activities the most valuable e.g. undertaking the computer simulation exercise, developing Territory case studies, or role playing.

Most valuable aspects of the workshop (% of participants in brackets)
Group work applying concepts to prepare case studies addressing issues in our Territories (31 %)
Valuation techniques and explanations of how to use them in different situations (22 %)
Learning from and sharing experience with colleagues from other Territories (22 %)
Cost-benefit analysis computer simulation exercise (22 %)
Decision support tools (12.5 %)
The whole process was good / all! (6 %)
Interaction with knowledgeable presenters (6 %)
The practical step-by-step approach (3 %)
Approaching toolkit from different angles helped to clarify information (3 %)
Local examples increased relevance and indicated range of potential applications (3 %)

Ranking of workshop sessions

Session	Average score*
Group presentations on case studies	8.8
DVD	8.7
CBA exercise	8.5
OT case study presentations by Bermuda, Montserrat and Caymans	8.3
Debating game	8.1
Feedback on workshop	8.1
Using valuation for policy and decision-making	8.0
Group case study assignments	8.0
Valuation techniques	7.9
What makes a good case study?	7.6
Stakeholders, impact assessment and scenario development.	7.6
Practical stuff – how to undertake a study	7.6
How do economists think?	7.6
Values and externalities	7.6
Decision support tools	7.6
Evaluation of workshop	7.6
Valuation success stories	7.4
Welcome	7.3
Data collection	7.3
Wrap up	7.2

* Out of 10; 10 = excellent, 0 = inadequate

6.4. Suggested improvements for future training workshops

Suggestions for improvements (% of participants in brackets)
Longer time span for workshop (43 %)
Conduct field assignment (17 %)
A break to see the host island (10 %)
Fewer paper hand-outs (would be better to have pre-prepared CDs)
Better introduction to core economic concepts such as supply and demand curves
More use of Caribbean examples
Include more non-environment government officials as participants
More organisation between presenters
Have groups swap to give critiques of each others' case studies to check they are able to understand why certain economic valuation techniques were chosen
More content on valuation techniques and decision support tools
Develop a questionnaire for contingent valuation
Provide a session on the first day on 'economics for dummies'
Early on in the workshop ease people in by addressing initial misconceptions
Provide opportunities to do group work with people from other Territories

6.5. Plans for implementation of acquired knowledge and skills

All participants (100 %) stated that they intend to use environmental economics in their Territory.

Comments on plans for implementation
Value Centre Hills in Montserrat to advocate creation of a national park
Value Bermuda's coral reefs, to be used in CBA of alternative shipping channels
Valuation of the Central Mangrove Wetland, Grand Cayman
Valuations to assist implementation of user fees and licence fees
Valuation of existing and future developments
Use valuation to justify funding from Ministry of Finance and to influence policy makers
As an additional tool to back up Environmental Impact Assessments
To assess impacts of Ironwood Forest roadway in Grand Cayman
Approach each project looking at total benefits, including value of environmental benefits
Use the tools gained to do extended CBA which would include environmental component
Would only actively implement to address a major issue and will hire consultants to assist
Will definitely use internally to justify projects/ decisions
Exciting to learn about new tool to use, hopefully will find application.

Other comments about implementing the tools and concepts
We will now be able to use the tools to make our case more plausible
I would now be aware of the elements to look for if a consultant is doing an economic valuation for my organisation

6.6. Requests for further assistance in the Overseas Territories

Areas of environmental economics for further assistance
More help with CBA software and computer programme
Environmental impact assessment/valuation study of CARRs Bay, Little Bay area
Study of Silver Hills to determine if it would be wise to introduce a reforestation project
Survey design basics
Discount rates
Decision support tools
In-country training for resource managers and economists within the islands
Cost-benefit analysis and contingent valuation method
Carrying capacity as it relates to economic sustainability
Data collection
Relevant literature reviews / meta-analyses
Help-line for questions
Practical application of the techniques

Comments on the need for interaction among UK Overseas Territories
We need a more integrated, collaborative approach for the OTs that have similar problems, to address them in a unified manner
OTs need more opportunities like this to get together and share our experiences
The opportunity to interact and share ideas was invaluable

7. Annex 4: Links for further information

- Further information on the presentations, activities and case studies developed for the workshop can be requested from Emily McKenzie, Environmental Economics Advisor at JNCC: emily.mckenzie@jncc.gov.uk.

- The EEWOC project: http://www.jncc.gov.uk/page-4136

- Valuing the environment in small islands – An environmental economics toolkit: http://www.jncc.gov.uk/page-4065

- OTEP economic valuation projects awards for 2007: http://www.ukotcf.org/OTEP/docs/OTEP2007PROJECTS.pdf

- The Montserrat Centre Hills project and valuation study: http://www.malhe.gov.ms/centrehills/default.htm