Session 9: Multilateral Environment Agreements (MEAs) sign-up workshop

Chairing & facilitating team: Liz Charter (Isle of Man Government; UKOTCF), Clare Hamilton (Defra) and Jennifer Lee (Government of South Georgia & the South Sandwich Islands)

Attending

Tom Appleby	UK Overseas Territories Conservation Forum
Esther Bertram	Falklands Conservation
Arlene Brock	Former Bermuda Ombudsman
Natasha Bull	Gibraltar Natural History and Ornithological Society
Stephen Butler	Falkland Islands Government
Liz Charter	Isle of Man Government
Alison Copeland	Department of Conservation Services, Bermuda
Tim Earl	UK Overseas Territories Conservation Forum
Gina Ebanks-Petrie	Cayman Islands Government
Jonathan Hall	RSPB
Lyndon John	RSPB
Jennifer Lee	Government of South Georgia and South Sandwich Islands
Indrani Lutchman	Independent Consultant
Farah Mukhida	Anguilla National Trust
Bryan Naqqi Manco	Government of Turks and Caicos
Iain Orr	UK Overseas Territories Conservation Forum
Tara Pelemebe	Joint Nature Conservation Committee
Isabel Peters	St Helena Government
Mike Pienkowski	UK Overseas Territories Conservation Forum
Christina Pineda	National Trust for the Cayman Islands
Catherine Wensink	UK Overseas Territories Conservation Forum
Henry Wilson	Government of Turks and Caicos

Presentations

Clare Hamilton opened the clinic with an introduction on Extension of MEAs to UK Overseas Territories and Crown Dependencies – how does this work?

Liz Charter then gave a presentation on the Isle of Man's journey towards signing up to the Convention on Biological Diversity (CBD).

Jennifer Lee then gave an account of the most recent sign up to the CBD by the South Georgia and South Sandwich Island Government, which was done in March 2015.

Their presentations are outlined below, followed by a note of the subsequent discussion.

Extension of MEAs to UK Overseas Territories and Crown Dependencies – how does it work?

Clare Hamilton, Head of International Biodiversity Policy, Defra

Main MEAs dealing with biodiversity conservation

Convention on Biological Diversity (CBD): UK ratification June 1994

Includes: Jersey, BVI, Cayman Islands, Gibraltar and St Helena, Ascension & Tristan da Cunha. Extended to Isle of Man June 2012 and SGSSI March 2015.

Convention on International Trade in Endangered Species (CITES): UK ratification August 1976

Includes: Jersey, Guernsey, IoM, Bermuda, BIOT, BVI, Falkland Islands, Gibraltar, Montserrat, Pitcairn and St Helena, Ascension & Tristan da Cunha. Extended to Cayman Islands May 1979 and Anguilla February 2014

Convention on Migratory Species (CMS): UK ratification October 1985

Includes: IoM, Jersey, Guernsey, Bermuda, BIOT, BVI, Cayman Islands, Cyprus SBAs, Falkland Islands, Gibraltar, Montserrat, Pitcairn, St Helena, Ascension & Tristan da Cunha, SGSSI and TCI

Agreement on the Conservation of Albatrosses and Petrels (ACAP): UK ratification April 2004

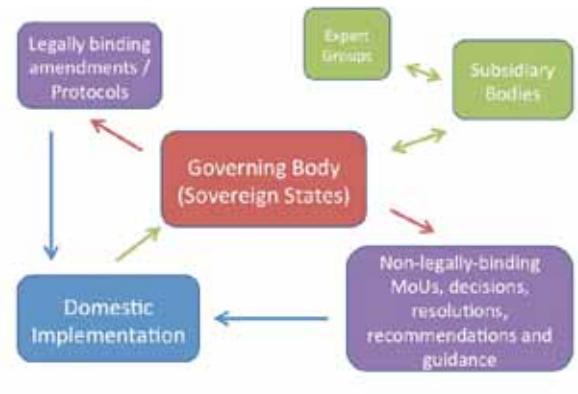
Includes: BAT, Falkland Islands, St Helena, Ascension & Tristan da Cunha and SGSSI

Ramsar Convention on Wetlands of International Importance: UK ratification May 1976

Includes: Jersey, Guernsey, IoM, Anguilla, Bermuda, BIOT, BVI, Cayman Islands, Falkland Islands, Gibraltar, Montserrat, St Helena, Ascension & Tristan da Cunha, TCI, Pitcairn, SGSSI and Cyprus SBAs

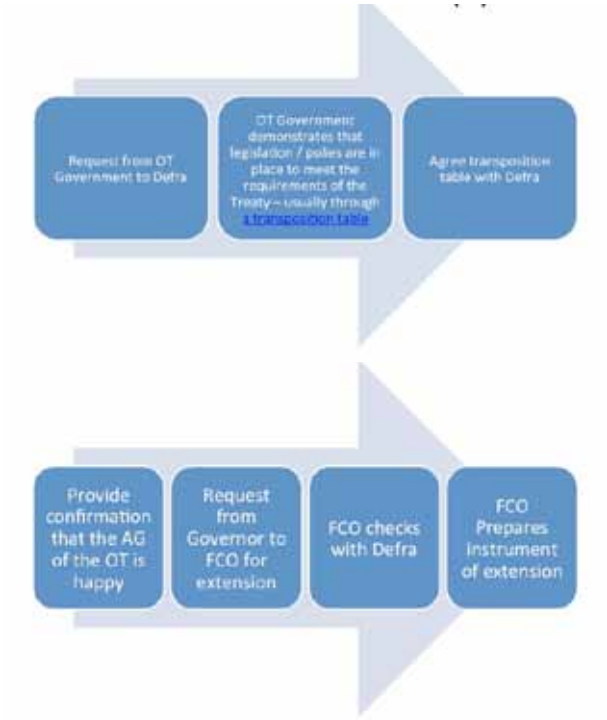
How do MEAs work?

Each Multilateral Environmental Agreement (MEA) has a governing body made up of sovereign states – often known as the 'Conference of the Parties' (CoP) or the 'Meeting of the Parties' (MoP) - which meets every 2 or 3 years and takes decisions about priorities and activities up to the next governing body meeting. The governing body is supported by 'subsidiary bodies', which provide policy, technical or scientific advice, and are supported by smaller expert groups. In the UK, we usually invite UKOT representatives to participate as members of the UK delegation (i.e. Bermuda for CBD in 2012; Anguilla for Ramsar in 2015). Decisions taken by the governing bodies then have to be implemented at domestic level. Reporting back on domestic implementation helps to inform future decisions.



Process for extension

The UK practice is for MEAs to be extended to UKOTs and CDs only where this is requested, rather than automatic extension when the UK ratifies. Before an MEA can be ratified, the UK must be able to demonstrate that it is able to



meet the obligations set out in that MEA, and we apply the same requirement to extension to the UKOTs. The first step is to contact Defra to indicate interest in extension. Defra will explain what the requirements of each MEA are and help the UKOT to identify whether it is already in a position to meet the requirements or whether additional activities or (in some cases) legislation are needed and, if so, what this is. This will include completion of a simple matrix that matches actions with obligations. Before the request comes to Defra, there will usually have been a period of consultation within the UKOT on whether to request extension of ratification.

Once Defra and the UKOT are satisfied that the obligations of the MEA can be met, the next step is for the UKOT to write to FCO formally to request extension, providing evidence that the obligations can be met and indicating that Defra is in agreement. FCO will then write to the MEA's depositary (often the UN) to notify it of the extension.

What next after extension?

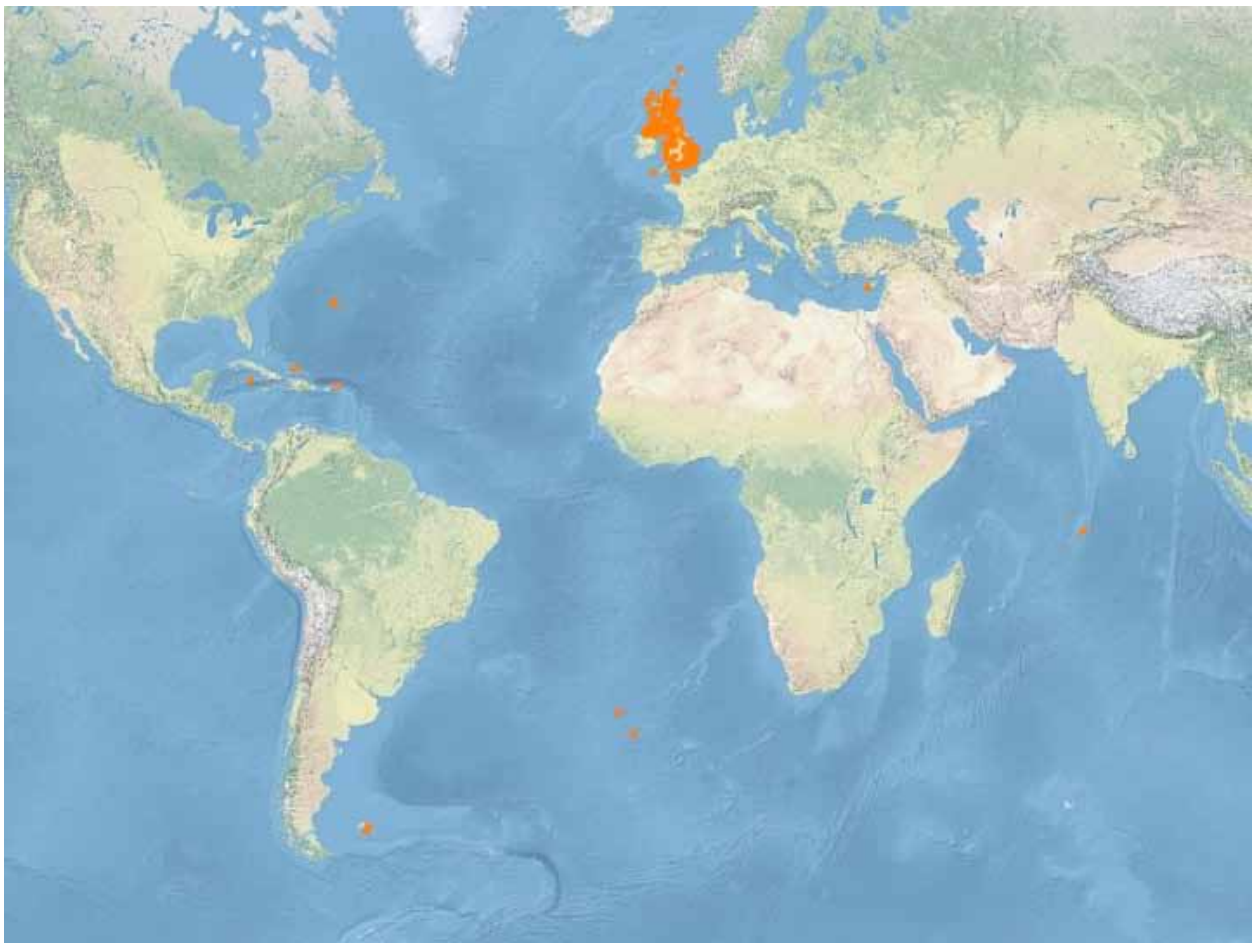
Extension of MEAs to UKOTs is only part of the story. Once an MEA has been extended, it then has to be implemented, and proof of implementation needs to be demonstrated regularly, for example through the UK national reports. By way of example:

Example 1: CITES National Legislation Project

CITES has four basic requirements:

- Appointment of Management & Scientific Authorities
- Regulation of Trade
- Penalisation of Illegal Trade
- Power to seize / confiscate

Some CITES species and products made from them.



At CITES COP12 in 2014, a decision was taken to apply trade sanctions to all Parties (countries) and dependent territories that do not have CITES compliant legislation in place by January 2016. A number of UKOTs and one of the CDs still do not have CITES compliant legislation in place.

Example 2: Ramsar site designation

The UK has 173 Ramsar sites (map above) – more than any other country. Once sites have been designated, there is a requirement to be kept informed if the ecological character of a site has changed, is changed or is likely to change. 8 UKOTs and all of the CDs have designated Ramsar sites:

- Bermuda (7) – Hungry Bay Mangrove Swamp; Somerset Long Bay Pond; Lover's Lake Nature Reserve; Spittal Pond; Warwick Pond; Paget Marsh; Pembroke Marsh
- BIOT (1) – Diego Garcia
- BVI (1) – Western Salt Ponds of Anegada
- Cayman Islands (1) – Booby Pond and Rookery
- Cyprus SBAs (1) – Akrotiri Marsh
- Falkland Islands (2) – Sea Lion Island and Bertha's Beach
- TCI (1) – North, Middle & East Caicos
- Tristan da Cunha (2) – Gough and Inaccessible Islands
- Jersey (4) – Les Ecrehous & Les Dirouilles; Les Minquiers; Les Pierres de Lecq; South East Coast
- Guernsey (incl. Alderney & Sark – 4) – Lihou Island & L'Eree Headland; Herm, Jethou & The Humps; Alderney West Coast & the Burhou Islands; Gouliot Caves, Sark
- Isle of Man (1) – Ballaugh Curragh

MEA Reporting

Each MEA requires regular reporting. This provides a 'healthcheck' on global implementation and helps to identify priority areas for action. The UK submits a single report, which includes information provided by UKOTs and CDs to which the MEA in question has been extended. The reporting format is decided by the MEA itself, not by Defra – so we do not have any control over the questions, but we can usually find a way to provide additional information where this would be helpful. Timescales can be tight and again are imposed by the MEA.

CBD - Isle of Man experience

Liz Charter, Principal Biodiversity Officer, Isle of Man Government

In the 1990s

Before my time in post, there had been only one person 1-2 days a week doing nature conservation (the role being combined with running the Wildlife Park) .

Extension of the CBD had been discussed, but identifying the financial implications had been difficult.

Defra meeting July 2002 and the IOM CBD review 2004

My talk in the main conference session (pages xxx-xxx) gives a little more on this story.

But in August 2002, at the Whitehall meeting I mention in that, Louise Vall of Defra suggested we use the CBD assessment forms and seek the help of the World Conservation Monitoring Centre. Alastair Taylor was duly contracted by WCMC and proved an excellent ally in this process. He spoke to many different organisations around the island, and gathered evidence objectively of our progress in biodiversity conservation (such as illustrated below). He wrote a report with 10 recommendations. This "article by article" assessment provided the basis of our submission to DEFRA for CBD extension. That document was produced in 2006.

2009 There was preparation for a Treasury bid in 2009, but in 2010 everything went pear-shaped, as they say!

Public consultation 2010

Following this, we held a public consultation in 2010 on the CBD, producing a document (next column) to explain what the Convention is about and what it would mean to the Island. This is a resource which anyone can borrow and improve on.

There were over 100 positive responses

This was well received and the Minister agreed in

NATIONAL CAPACITY SELF-ASSESSMENT REPORT

Convention/ Resolution text	Summary of current action	Summary of proposed action	Comments on the actions and proposals

Checklist for OTs / CDs regarding extension of the UK's ratification of the CBD

No	Requirement	Article no.	Evidence

early 2011 that we would make the first informal request to Defra to have our assessment evaluated.

Run-up to "signing"

November 2010: submission of assessment update (to cover the work done since the 2006 report) and implementation report to Defra, which passed this to JNCC.

February 2011: positive response from JNCC

February 2011: the UK Government was approached formally through the official channels (initially, for a Crown Dependency, through the Ministry of Justice [rather than FCO, the route for a UKOT]).

October 2011: Request for different submission format from Defra. Politely declined by IoM as pointless duplication.

May 2012: we heard that the CBD had been extended to us, effective from August 2012.

CBD- Lessons learnt

It doesn't need to be this thorough!

Or time-consuming!

CBD is about intention and moving in the right direction [not precisely specified items that need to be fulfilled, as in CITES – possible for the latter because it works through trade licensing arrangements, not conservation actions in the natural environment]

Use valuable Defra guidance (re Aichi etc)

There is potential to make use of other people's resources (*e.g.* public consultation document)

Key deliverable needed after extension is the Biodiversity Strategy and Action Plan (BSAP) (already done in some places).

BSAP process

Formation of steering group, summer 2010

Drafting of Strategy, 2010-2012

Internal agreement to consult, spring 2013

Public consultation on draft Strategy, July – September 2013

Consult JNCC

Change of Minister, June 2014

Further consultation with main stakeholders, February 2015

Consult DEFRA

To Tynwald, October 2015?

Delivery Plan: due to be written, consulted on and agreed in next 6 months.

Extension of the Convention on Biological Diversity to South Georgia & the South Sandwich Islands

Jennifer Lee (Government of South Georgia & the South Sandwich Islands)

What are the pros?

Demonstrates commitment to conservation of biodiversity, environmental protection, and environmental stewardship

Well recognized treaty

Eco-tourism

Opportunity to showcase SGSSI projects on a global stage

Most requirements already met

Ratification process highlighted areas where policy development would be useful

Links to international community

Share experience and best practice

Concerns and how they were addressed

Reporting

Small team, limited resources available

Solved by careful structuring of NBAP

DEFRA/JNCC may be able to assist with drafting if required

Ability to meet commitments

Best efforts bearing in mind in-territory capacity

Leverage for funding/ collaboration

Some commitments not relevant for uninhabited territory

Process

"Sufficient laws and policies in place to enable the Territory to implement and comply with its obligations under the CBD"

Map policy documents against Aichi targets

Map deliverables against Aichi targets

Supporting evidence (Table 1 below)

Evidence pack

Identify key policy documents (no NBAP in place at that time)

SG strategy, Environmental roadmap, Environment Charter, MPA management plan

Table 1. Overview of how the GSGSSI key strategy documents contribute to each of the Aichi Targets.

Target 1 – Awareness: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.		
South Georgia Strategy 2010-2015	**Fisheries** • Maintain the long-term sustainability of the toothfish fishery and the MSC Certification • Work with industry to address the MSC Conditions in icefish fishery	p8-9
	Tourism • Work with IAATO to maintain and enhance biosecurity arrangements • Continue to develop visitor management plans for key sites • Consider methods of gaining added value from tourism (e.g. donations, sponsorship) • Work with SGHT to ensure that the museum is run to a high standard	p10-11
	Outreach and publications • Update the GSGSSI visitor briefing DVD • Produce an environmental management plan that is available as a pdf through the GSGSSI website • Explore ways of further improving the web site	p13
Environmental Roadmap 2014	**Sustainable Fisheries** • Supporting sustainable fisheries management within the CCAMLR framework	N/A
Environmental Charter 2001	• Bring together local representatives of government of local user, of scientific communities and of environment and heritage organizations in a forum to formulate a detailed strategy for action • Commit to open and consultative decision-making on developments and plans that may affect the environment; ensure that the environmental impact assessments include consultation with stake-holders • Promote the value of our environment as part of the world's natural heritage of regional and global significance	N/A

Table 2. Overview of how the GSGSSI selected evidence documents demonstrate delivery on Aichi Targets.

Document title	Description	Aichi Targets
Wildlife and Protected Areas Ordinance 2011	The legal instrument that provides comprehensive protection for the flora and fauna of South Georgia & the South Sandwich Islands. Under the ordinance it is prohibited to undertake actions that may harm native birds, mammals, plants or invertebrates. It is also an offence to introduce non-native species or export any biological material without a permit. This legislation also makes provision for the establishment of specially protected areas and marine protected areas.	**1, 5, 7, 9, 11**
Reindeer on South Georgia, literature review and discussion of management options	Prior to embarking on an eradication project, all options for managing reindeer were considered, including taking no action, on going control, eradication of only one herd and complete eradication of all reindeer on South Georgia. In advance of making this decision, a meeting of experts was held at Kew in 2010 and a stakeholder consultation was undertaken.	**5, 9, 18**
Reindeer eradication project – phase I. Summary report	Outline of the 2013 operation to remove invasive reindeer from the Busen area. In total over 1,900 reindeer were removed using a combination of techniques in a eight week period. The majority of animals were gathered using traditional herding techniques and then gathered into corrals where they were slaughtered	**5, 9, 15**

Extract commitments and map against Aichi targets

Identify key projects that have delivered under policy framework (Table 2 above)

ACAP action plan, Wildlife and Protected Areas Ordinance, site visitor management plans, MSC certification reports etc

Time-table

Identified as something to work towards in 2010-2015 strategy

Decision to proceed taken in September 2014

DEFRA/JNCC start Aichi target mapping process – December 2014

GSGSSI completed Aichi target mapping and assempling evidence pack in January/February 2015

Instrument of extension deposited in March 2015

Support

DEFRA on hand to provide guidance

Agree time table for collating documentation and submission

Media coverage/publicity

Ongoing support ensuring new policy documents such as the NBAP are easy to transpose on to CBD Aichi targets

Final thoughts

Hardest part is to make the decision to have CBD extended

Extension process itself can be relatively straight forward and fast

Reporting does not have to be onerous if planning documentation is structured with CBD in mind

Identifying Aichi targets which are not well supported is useful when thinking about future policy development needs.

Discussion

Following these presentations, participants were invited to ask questions which are summarised below:

How do you ensure that the public is consulted?

It can be difficult to get all the information across. Some ways in which this can be done are by having shorter documents in colour, and items on radio and TV. On the Isle of Man, 105 answers to the public consultation were received out of a population of 84,000. All the Minister wants to know is if key people *e.g.* fisherman, business leaders etc, are happy. Another way is to hold meetings and work with NGOs. The Nature Conservation Forum in Isle of Man was proactive and continued its dialogue with various groups throughout the process. The MEAs, and in particular the CBD, are like a moving bus and it is a question of getting on it. There are CBD targets with an end date 2020 … which is rapidly approaching, and thought is needed as to how new territories address this challenge. Isle of Man has been addressing this.

On South Georgia although no population, there are stakeholders, *e.g.* tourism and NGOs and they used the annual stakeholder meeting in London.

It was remarked that the CBD is an entry level to the human race. The commitments agreed by hundred of nations. Tom Bingham in the House of Lords looked at international law and interpreted it in domestic law.

How do you impel the UKOT government to ask Defra in the first place? A ground swell of public support is needed. This is stated in the Environment Charter commitment 4. Someone goes to CBD from Bermuda as Government represent. How does it get to people of Bermuda on board the process?

This is one of the roles of civil society. The bureaucracy involved in the detailed reporting under CBD was thought to be important. However, one way in which to overcome this was in good project design and tying applications to the Aichi targets under the CBD.

Explaining the benefits of sign-up to CBD and Ramsar for civil society and Ministers might be a worthwhile exercise to do.

An example from Cayman was cited. The Government was approached by a cosmeceutical company to explore the properties of a protected coral species in Cayman. They were interested in looking at extraction of prostaglandin from gorgonia *Plexaura homomalla* for "producing affordable, high quality prostaglandins to the research community". They signed an agreement whereby they would pay for harvesting a limited amount. As part of this agreement, they were obligated to tests on regrowth. [See https://www.caymanchem.com] This has been ongoing since the 1980s. Under the CBD, a sustainable approach to the use of natural resources was required, but also the company realised that it was in their best interests to be involved with protecting and preserving this species so that they could have a "renewable, economically viable source of prostaglandins". The company wanted to use the fact that their product came from a sustainable resource and the fact the Cayman Marine Protected Area is famous for its careful management. This takes in to account the Access and Benefit Sharing approach to Cayman's natural resources.

UK is signed up to the Nagoya Protocol but has not ratified it. This will take a lot of work domestically before it is ready to discuss with the UKOTs. Once the UK Government officials have a better understanding of it, they will pursue its ratification.

Sign-up to Conventions often gives an opportunity to showcase unique environments. For example, World Heritage Site status is important for some UKOTs. It may assist fundraising, particularly Gough and Henderson and perhaps St Helena.

It was mentioned that the Ramsar Information Sheet (RIS) template has changed. For one territory, which has 7 Ramsar sites would all this information have to be put in to the new format?

Every 6 years those signed up are supposed to go back and update the RIS, but this hasn't been done [by most countries, in fact]. There is an agreed updated template, which can be circulated to those involved. It is a slightly more difficult system with limits on what can be updated. UKOTs were encouraged to send information to UK Government and they will transpose information on to the electronic system as only one login has been given.

Do you have to do Nagoya to be signed up to the CBD?

If signed up to the CBD, Territories would not have to be signed up to all the protocols. However they would have to do an IS.

The CBD has a National Biodiversity and Species Action Plan (NBSAP) Forum. It is an interactive website. It is being updated but is a useful resource. The details of this can be circulated.

The RSPB press machinery can be used to celebrate sign-ups. The more notice is given the better.

UKOTCF has particular experience in Ramsar designation, so those wishing to join or start the process can ask for advice any time. JNCC echoed this. [see, for example, http://www.ukotcf.org/pubs/ramsarReview.htm]

Liz Charter welcomed Territories to contact her with specific questions.

An additional comment made the point that UKOTs cannot working in isolation in the Caribbean region and so must reach out and work together, particularly on issues such as climate change and sea-level rise. Many countries work under different frameworks; for example, in Montserrat, they have the St Georges Declaration as well as the Environment Charter. The CBD enables regional cooperation as well as global on issues relating to sustainability of natural resources.

Action Points

Paper explaining the benefits of sign-up to CBD and other MEAs for civil society and Ministers with some good examples (possibly a development of the generic guide for small islands on the implications of signing up to the Convention on Biological Diversity, initiated by Rebecca Kinnesley, with the checklist initiated by Liz Charter; this would be valuable to small islands in relation to making progress on CBD targets and goals; UKOTCF and Defra indicated their interest in pursuing this).

Circulation of new Ramsar Information Sheets and NBSAP Forum website.

Contact details

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For other enquiries, please email Catherine Wensink, UKOTCF. cwensink@ukotcf.org

Discussion: a case-study from the Cayman Islands

As a contribution to the discussion, Gina Ebanks-Petrie supplied some information relevant to the Access and Benefit Sharing elements of CBD and the Aichi Targets. A summary is provided below. There is more information in the source of this, the Chamber of Commerce website: https://www.caymanchem.com/app/template/History.vm

CaymanChem, a pharmaceutical company, approached the Cayman Government in the early 1980s to take a small amount of coral, from which they could extract prostaglandin.

Cayman Chemical Company had been incorporated 6 June 1980 in Denver, Colorado, USA. The goal of the new business was to demonstrate the value of naturally growing gorgonian corals as a renewable, economically viable source of prostaglandins. Careful environmental studies and negotiations with the Cayman Islands Government culminated in August 1981, when an eight-pound sample of the gorgonian *Plexaura homomalla* was collected near Fisherman's Cay in the North Sound of Grand Cayman Island. The coral was frozen and transported to a small lab in Denver where 30 grams of relatively pure Prostaglandin A2 was extracted. Inspired by this success and the vision of producing affordable, high-quality prostaglandins to the research community, the new laboratory printed and mailed a flier offering five prostaglandin standards. In November 1981, Cayman Chemical closed its first sale.

Session 10: Renewable Energy

Chairing & facilitating team: Maya Doolub (Elms Consulting), Bruce Dinwiddy (UKOTCF), Daniella Tilbury (University of Gibraltar) & Liesl Torres (HM Government of Gibraltar)

Introduction – Renewable Energy in UK Overseas Territories and Crown Dependencies – Maya Doolub (Elms Consulting)
Wind-turbines: environmental benefits and challenges – Stephen Butler (Falkland Islands Government)
Tidal power: the environmental benefits and challenges of emerging renewable energy development within the Crown Dependencies – Roland Gauvain (Alderney Wildlife Trust)
Geothermal energy: environmental benefits and challenges – Sarita Francis (Montserrat National Trust)
Renewable Energy Deployment and Waste Treatment – Liesl Torres (Department of Environment, Government of Gibraltar)
Environmental Impact Assessment and Tidal Power Filling the Legislative Gap: A case study from Alderney (Bailiwick of Guernsey) – Dr Melanie Broadhurst (Living Seas Officer, Alderney Wildlife Trust, with the kind support of Alderney Commission for Renewable Energy (ACRE) and the States of Alderney (SoA))
Discussion

From left: Maya Doolub, Daniella Tilbury, Bruce Dinwiddy and Liesl Torres

Introduction – Renewable Energy in UK Overseas Territories and Crown Dependencies

Maya Doolub (Elms Consulting)

Doolub, M. 2015. Introduction – Renewable Energy in UK Overseas Territories and Crown Dependencies. pp 250-255 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

Paying some of the highest electricity prices in the world, islands continue to spend a large portion of their GDP on imported fossil fuels. Despite an abundance of natural resources and technologies that are economically viable today, very little use of renewable energy has been implemented in UK Overseas Territories or other islands. Although islands emit less than 1% of all global emissions, they do bear the brunt of climate change. Now is the time to highlight that islands can be at the frontline of demonstrating solutions to climate change.

Given the size of islands, there is the opportunity to present a model to the rest of the world for commercially viable renewable penetration – demonstrating that entire economies can transition to low-carbon solutions while achieving economic growth. The will is there and technologies are ready – they are a commercially viable solution to energy needs now. Impacts include: reduced cost of electricity for households and businesses, increased private investment on islands, growth and diversity in the job market with higher paying jobs, stopping the 'brain drain', improved energy efficiency and increased resilience.

Although the 'will' is there, commitment is needed to drive the development of frameworks that enable renewable projects.

It is important that there is capacity to understand the technologies and the financing and contracting issues. One mistake can prove costly, and islands should not be guinea pigs for unproven technologies. Reform of regulatory frameworks is still a key barrier, particularly in Overseas Territories. Some policy changes still need to be made to reflect the desire for change.

The private sector believes that the capital is there; billions are not currently being tapped into. Projects need to be de-risked, making them more attractive to developers, and there is a need to show proof of concept that the model is both replicable and scalable – investors like big. We can play our part in creating an open playing-field for the private sector, increasing competition and opportunities for collaboration. However, donor funding and support are still much needed by territories. Small Island Developing States receive far more help. That said, we need to identify and understand clearly what is needed to help territories define and realise their vision.

Islands can focus on and accelerate commercial opportunities for transitioning their economies off fossil fuels. They can create a shared blueprint for each other and for other isolated economies by: identifying tailored clean-energy solutions; developing a commercially viable renewable energy model for islands; access to the global market in order to catalyse the flow of private investment into renewables (in the process creating a platform of bankable renewable projects and a competitive renewable investment market) and the development of a roadmap or blueprint that enables islands to realise their low-carbon vision, and in turn supports the

development of larger-scale renewable energy models, setting an example for the rest of the world to follow. In order to achieve this a collaborative approach is needed. This will include: local governments, private sector, utilities, non-government organisations and the UK Government.

Local governments can lead the way setting their own vision for their territory. In some cases this has already been done. They can identify partners and focus on the sustainable growth of all sectors of their economy. UK Government and agencies could provide assistance in the following ways: capacity building, assistance with policy and development of regulatory framework, technical assistance, de-risking the market, business advisory services (such as developing the go-to market strategy for projects), communications and marketing. Non-government organisations can assist by: capacity-building, working with utilities as well as governments, sharing best practice, coordination of regional programmes, development of island specific templates to support the development of bankable projects, development of island specific guidelines for retro-fitting buildings, *e.g.* schools, hospitals. The private sector can provide: financing solutions to support project development and implementation, capacity building, sustainable solutions that support the development of on-island businesses, ensure investments support local infrastructure, engage with utilities and governments to define the clear value proposition for renewables beyond cost per kw/h. Utilities can work with governments to develop operational plans that set out a low-carbon pathway, develop the business model that reduces consumption and generation of energy from diesel, support governments to develop well informed projects and work inclusively with governments and partners so that all can understand the needs of your business model.

Potentially, there are some quick-win projects which could include: LED street lighting, improving energy efficiency in government buildings, hospital retrofits, schools- solar installations and hotel retrofits.

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Context

Island economies pay some of the highest electricity prices in the world, perpetuating poverty, contributing to national debt and obstructing any form of sustainable development and economic growth. Despite an abundance of sun and wind on many of our islands, very low amounts of renewables have been implemented to date, even though ***technologies are ready and economically viable now***. As a result, islands continue to spend a large portion of their GDP on imported fossil fuels, thereby constraining their socio-economic development. While small islands emit less than 1% of total global greenhouse gases, they do bear the brunt of climate change, facing near-term impacts from sea-level rise, increasing temperatures and extreme weather events. Now is the time to highlight instead that islands could be at the front line of ***demonstrating solutions to climate change***.

Waste Management and Waste to Energy

With scarcity of land on many islands, running out of landfill space is a critical issue. Technologies

which utilise municipal waste to produce electricity and/or heat appear to present an opportunity to "kill two birds with one stone" – offering the potential to extend landfill lifespans and reduce energy imports, while also decreasing greenhouse gas emissions. Despite this, development of Waste-to-Energy projects so far has suffered far more false starts than successes on islands.

Opportunity

From an environmental, economic and social standpoint, the vision needs to be one of economically robust territories, rich with renewable energy systems and committed to becoming completely fossil fuel free.

Because of their size and abundance of natural resources, islands are in a unique position to reduce their dependence on imported fossil fuels and benefit from the positive environmental, social and economic impacts of using sustainable energy sources. Islands can combine their abundant renewable resources with economically viable technologies to become more independent and resilient.

For many territories, in particular, the enhanced opportunity of achieving high levels of renewable penetration is an exciting one. Given their size, some small territories may be able to achieve 60-80% renewable penetration through hybrid solutions, presenting inspiring demonstration models to the rest of the world.

The opportunity for successful waste-to-energy solutions, however, seems less clear.

Although each case is unique, a number of basic criteria need to be met for a waste-to-energy project to be successful:

- Waste-stream inputs must have an assured price, quantity and quality – and guaranteed for around 15-20 years
- The power or heat outputs of WtE plants must have a guaranteed sale price for around 15-20 years
- A commercially proven technology suitable for the size and composition of the waste-stream must be available
- A site that is not only economically and environmentally appropriate, but also politically acceptable, needs to be identified.

The Carbon War Room is a non-profit organization that Richard Branson, the billionaire founder of the Virgin Group, established to fight climate change. In 2014, the Ten Island Challenge partnership (made up of Aruba, the Bahamas, the British Virgin Islands, the Colombian islands of San Andrés and Providencia, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and the Turks and Caicos Islands) gathered on Necker island, BVI to demonstrate their commitment to use of renewable energy. See carbonwarroom.com

Impact

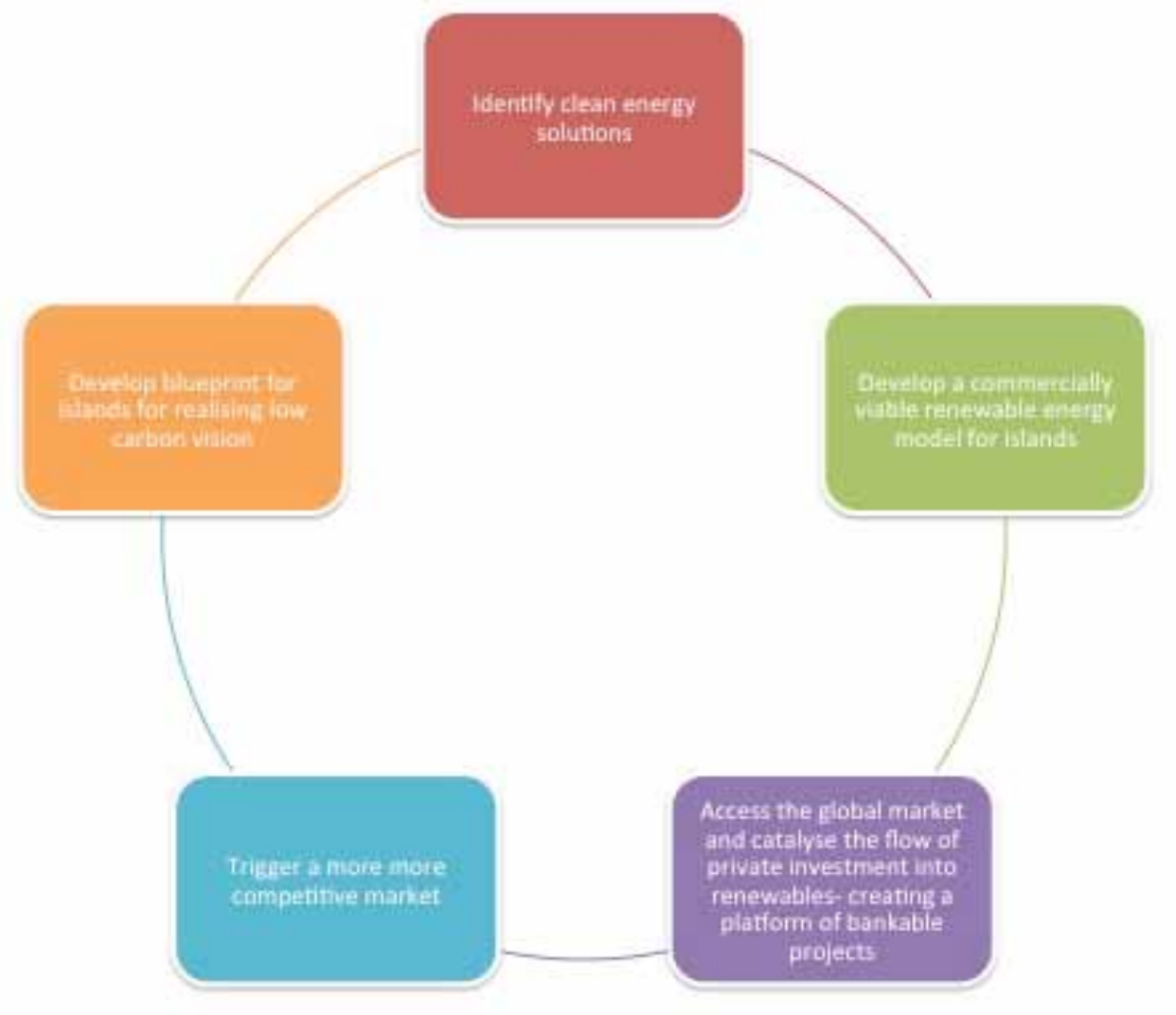
By accelerating the transition of the energy sector on islands, we can:

- Reduce the cost of electricity for households and businesses
- Increase private investment on islands
- Enhance and diversify the local markets with higher skills, better paying jobs – reducing the "brain drain" and loss of talent on islands
- Improve energy efficiency
- Reduce each island's emissions
- Reduce each island's dependency on fossil fuels.

In the process, we can demonstrate that entire economies can transition to low-carbon solutions while improving their long-term viability.

Understanding the Barriers

We know that technology is ready and commercially viable now; we are seeing that island governments have the will to move to low-carbon pathways. The barriers that remain largely indicate gaps or bottlenecks with ***commitment, policy*** and ***capacity***. Many islands are still "locked into" ***long-term supply contracts*** with utilities still using diesel generation and issues with ***local permitting***. Although the will is there, ***commitment*** needs to drive the development of frameworks to enable implementation of renewable projects. Engagement with the ***private sector*** tells us that the capital is there – billions of dollars that are not being tapped into. Work needs to focus on de-risking projects for the private sector and creating an open playing field for technology providers to deliver solutions, thereby ***catalysing the flow of capital*** into renewables and on islands. Whilst islands are perfect in size to deploy commercially viable renewable solutions, the scale of the opportunity remains too small for many private sector firms. The development of *ad hoc* small projects is not always exciting. A more robust approach to integrated resource planning that identifies a roadmap of opportunities for planning, design and implementation needs to be accompanied



by the development of an enabling environment for project financing – and where possible across a number of islands in the same region, *e.g.* the Caribbean. ***Capacity*** and ***skills*** remain an issue; many island governments are bombarded with technology providers pitching solutions for the production of energy from renewables and from waste – knowing what is a sound proposal and what is not can be a minefield. Whilst islands are well positioned to demonstrate innovative low carbon models for growth, they should not be guinea pigs for emerging or unproven technologies. Whilst many island nations remain the focus of numerous donor funding and programmes of work, support for most of the UK Overseas Territories by comparison is very little. Understanding the barriers identified already, and understanding also that a more positive/productive approach to solutions comes from the private sector rather than traditional donor community, ***focus should be on identifying support, which enables islands to define and realise their own vision for a clean economy***.

Accelerating Progress

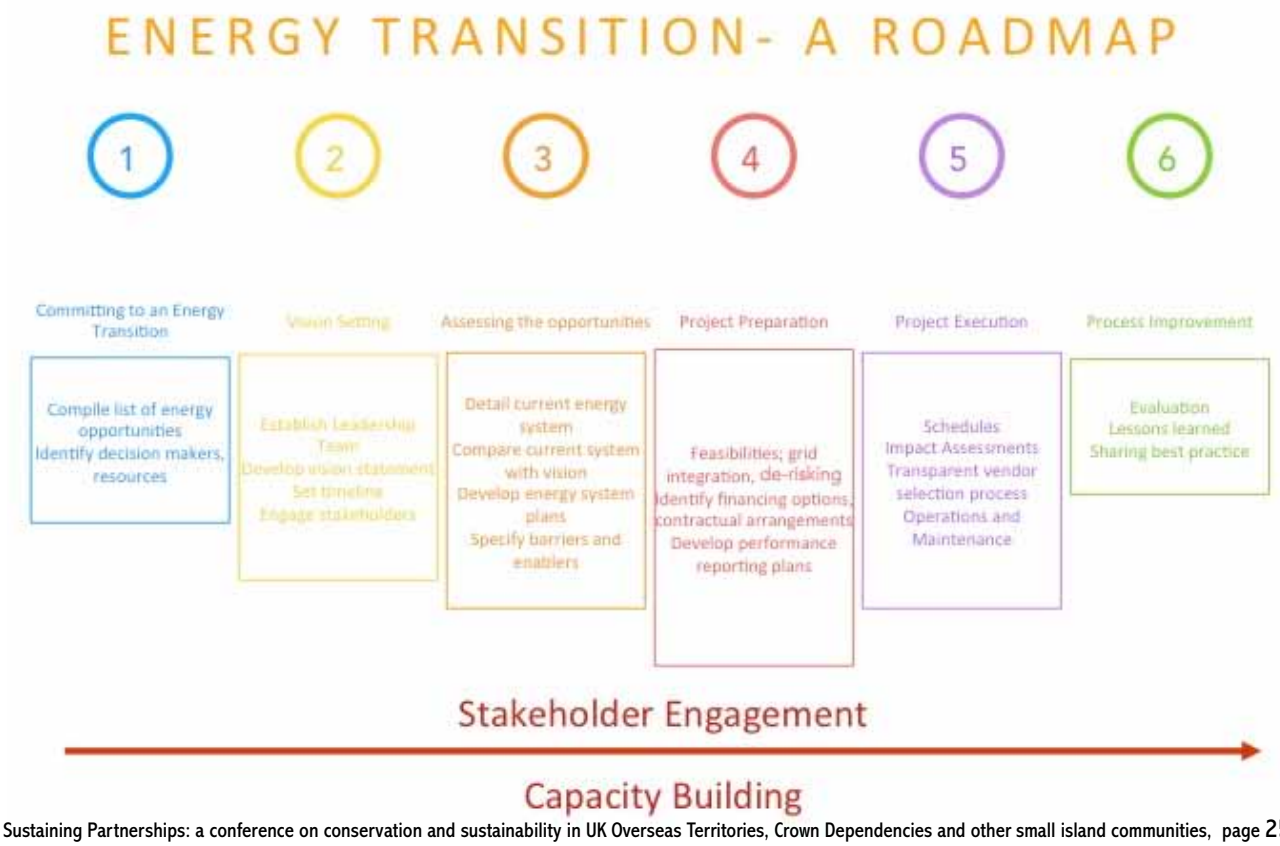
How can islands focus on and accelerate the commercial opportunities for transitioning their economies off ***fossil fuels and create a shared blueprint for each other and for other isolated economies?***

- We need to support islands to identify tailored clean-energy solutions
- We need to develop a commercially viable renewable energy model for islands
- We need to support islands to access the global market and catalyse the flow of private investment into renewables, and in the process create a platform of bankable renewable projects and a competitive renewable investment market
- We need to develop a roadmap or blueprint that enables islands to realise their low-carbon vision and supports the development of larger scale renewable energy models – ***setting an example for the rest of the world to follow***

A Collaborative Approach

Island Governments

- Providing a territory-led approach
- Vision setting – creating a vision that each person living on island can see clearly and define their role in
- Identifying the partners that can assist in both defining and realising this vision
- Will and commitment, demonstrated by focusing on policy change and incentives
- Engaging the private sector on island to drive a more sustainable framework for industry with



local operating costs reduced

- Focus on sustainable growth of all sectors – many islands have 5* star hotels, but far from 5* hospitals and schools

UK Government

- Capacity building
- Assistance with policy and development of an enabling regulatory framework
- Technical expertise and support – providing feasibility studies, grid integration studies, thereby de-risking projects for the market
- Business advisory services – developing the go-to market strategy for projects
- Communications and marketing
- What role can the UK Government play progressing the economic viability of other technologies such as Ocean Thermal Energy Conversion (OTEC)?

NGO/Multilateral Community

- Capacity building
- Sharing best learning outcomes, *e.g.* work in the Eastern Caribbean on regulatory reform
- Coordination of regional programmes, *e.g.* in the Caribbean, South Atlantic and Pacific, to enhance the potential for scale across a number of islands
- Development of island-specific templates to support the development of bankable projects, *e.g.* Power Purchase Agreement (PPA) templates, bankable criteria
- Development of island-specific guidelines for retro-fitting buildings, *e.g.* schools, hospitals

The Private Sector

- Development of tailored financing solutions to support project implementation
- Capacity building, ensuring that training is included in the implementation of solutions on island
- Programmatic approach to building solutions that enable the development of on island businesses
- Ensure that investment supports/enhances local infrastructure
- Engage with utilities and governments to define the clear value proposition of renewables beyond cost per kw/h

Utilities

- Working with governments to develop operational plans in line with a low-carbon vision
- Developing a business model that focuses on reducing the level of diesel-generated energy and the amount of energy used on island
- Supporting governments to develop well informed projects that are ready to move now, with competent grid integration studies – ***doing what can be done now***
- Working inclusively with governments and others partners so that all can understand the needs of utility business models

Discussion Outcomes

Discussion in this session looks forward to highlighting successes to date on islands, whilst providing also an insight into challenges common across the territories. We look forward to exploring how the enhanced roles of stakeholders – governments, utilities, NGOS and the private sector – can drive progress, with a keen focus on how progressive energy and waste strategies can support sustainable economic growth, boosting local entrepreneurship and the job market.

Wind-turbines: environmental benefits and challenges

Stephen Butler (Falkland Islands Government)

Butler, S. 2015. Wind-turbines: environmental benefits and challenges. pp 256-260 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

The Falkland Islands' location necessarily means that imported fossil fuels are expensive to use, and transporting them long distances presents risks. In Camp (everywhere outside of the capital, Stanley) small isolated farms and settlements have, until relatively recently, often been reliant on diesel generators that would provide power for a limited time each day.

To respond to the challenge of developing cheaper, more secure and (for Camp) 24-hour power we have been taking advantage of one source of energy that is potentially cheap, green and in plentiful supply – wind power. There has been investment from Government in the development of wind farms to serve Stanley and the provision of a grant scheme to support individual farms investing in their own supply. More recently, Falkland Land Holdings has invested in four settlement-based wind turbine initiatives.

This has not been without challenges, and is an ongoing process. However, wind turbines now provide 30-40% of the electricity needs of Stanley. Within the remainder of the Islands, smaller-scale schemes at an individual farm level have been successful, and 85% of farms have 24-hour power from renewable sources.

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Introduction

Content

The presentation covers:

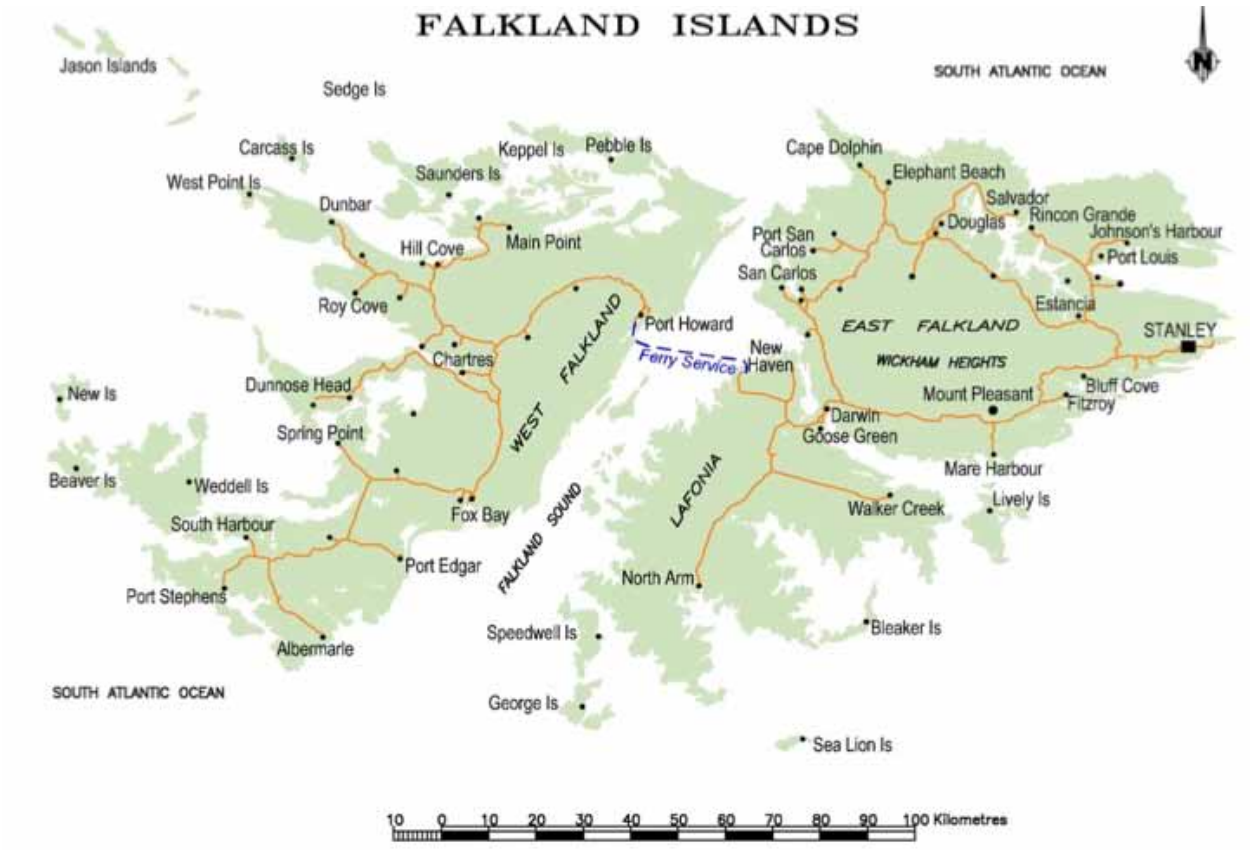
- a general overview of the Falklands;
- the policy context;
- why wind was identified as an area to look at;
- the three ways in which wind energy has been developed (individual farms, Falkland Land Holdings and Stanley); and
- ongoing and future work.

Overview

The Falkland Islands are comparable in size to Northern Ireland but with a population of 2,840 (excluding military personnel). There are two main islands (East Falkland and West Falkland) with over 700 smaller islands. The capital (Stanley) is located in the East of East Falkland. The 2012 census indicates that there are 1,237 households (82% in Stanley, 10% on East Falkland and 8% on West Falkland and the outer islands). The 2011-12 Falkland Islands National Accounts show that GDP was £198 million in 2012, 34.1% of this from fishing and aquaculture.

Before 1979, there were 36 farms in the Islands. However, as a result of Government policy to increase the number of locally owned and operated farms through sub-division of some of the larger 'corporate farms', there are now 84 farms. Most of these are run as family units with an average size of 10,000 hectares running 6,400 sheep.

In 1991, four large farms equating to about 25% of the total farm-land in the Islands, were purchased by the Falkland Islands Government from the Falkland Islands Company. Falkland Landholdings Corporation was established as a statutory organisation to run these farms,



which total 308,000 ha, with 150,000 sheep and approximately 1000 head of cattle.

The 2012 Census reveals the following about energy:

- 8 out of 10 households use kerosene for heating;
- use of diesel oil for heating is declining but still widespread in Camp;
- the main fuel for cooking in Stanley is electricity;
- the main fuel for cooking in Camp is gas;
- Stanley Power Station provides almost all of Stanley's electricity;
- local generators are used in Camp (mix of diesel and wind energy); and
- the total average cost of fuel per year is 7% of annual income (62% on fuel attributed to heating).

Policy Context

Policy options were considered by Executive Council in 2011, and a general approach was taken which seeks in particular to reduce consumer operating costs through energy conservation and good practice, and reduce reliance upon imported fossil fuels through continued development of the Sand Bay Wind farm (related to Stanley) or further wind power systems at larger farms (in Camp).

The 2014 – 2018 Islands Plan contains commitments to:

- secure and enhance power supplies within the Islands through investment in power generation and
- implement a responsible strategy to mitigate the effects of climate change, including:
  - exploring and supporting further take-up of renewable energy in both Stanley and Camp; and
  - implementing measures to improve the energy efficiency of existing buildings so as to reduce energy consumption.

Demonstration of the availability of wind in the Falkland Islands

Why wind was identified as an area to look at

There are a number of reasons that the use of wind energy for power is a good fit for the Falkland Islands. The use of diesel generators has necessitated transporting materials over long distances, at significant cost. Wind is plentiful, although winds can be very strong (perhaps too strong) with gusts (average windspeed is 29 km/h).

Having a large, sparsely populated country means that siting on-shore wind-turbines away from built up areas is easier than in more densely populated areas. The nature of the landscape is such that turbines can be very prominent. However, in consideration of the 2nd Phase of the Stanley Windfarm, it was concluded that, "Whilst some may regard them as undesirable man-made features in the semi-natural landscape, many others consider them to be attractive moving sculptures. The proposed wind turbines will be very prominent when viewed from the Stanley-MPA road although the whitish colour of the tower and blades will reduce their visual impact when viewed against the sky".

Bird strike was considered in the development of the Wind Farm at Stanley and the main issue was in relation to Upland Geese. (The farm is located a considerable distance from any flying seabird colonies or aggregations.) Incidents on the overhead parts of the high-voltage distribution system of the first phase were largely seasonal, peaking in spring and autumn, but occurred occasionally throughout the year. The overhead power-lines were reconfigured to respond to this.

The ways in which wind energy has been developed

There are three ways in which wind energy has been developed, which will be considered in turn: individual farms, Falkland Lands Holding and Stanley.

The three ways in which wind energy has been developed: Individual Farms

These are off-grid systems and range from small one-property systems to larger micro-grid systems for a settlement. Before 1996, people had diesel generators running 8 hours a day (so periods without electricity). The first installation of small-scale wind turbines in Camp was 1997 when a grant was made available by FIG, with money from the EU. Since 1997, there have been around 120 small-scale wind turbines installed in off-grid or micro-grid systems on around 85% of farms. The original intention was that, with the installation of a wind turbine and a 25% fuel saving on diesel a year, applicants would receive 24-hour electricity. However, many people have seen see a 70-80% fuel saving. Devices need to be adaptable to weather and variable windspeeds. With small-scale wind hybrid systems, people can live and work in any part of our islands without large-scale and expensive civil works to install power-lines.

Since 1996, there have been a number of challenges:

- remote locations and costly diesel generators means that they need to be reliable;
- an increase in the number of appliances in homes and business increases the demand;
- many of the systems were installed in 1996 and so are starting to reach the end of their

Individual farms are run off-grid. They range from small one-property to larger micro-grid systems. Pre-1996 diesel generators were widely used running for 8 hours per day. After the introduction of a rural energy grant, 24-hour electricity became a possibility, wind hybrid systems and other technologies have been used.

designed life; and

- an increase in the price of diesel, which is still used for heating.

The responses to these challenges have included:

- the installation of reliable technologies;
- building local capacity to maintain the systems;
- energy saving methods; and
- installation of different technologies (*e.g.* solar power).

There have been several challenges post 1996 but some of the solutions have included: installation of reliable technologies and the development of a local skills-base amongst others.

The three ways in which wind energy has been developed: Falkland Land Holdings

FLH has installed wind turbines in their four settlements to help supply electricity to around 40 homes. The key driver behind this is cost-saving, and it is hoped that payback will be in 5-6 years. Outside of the shearing season, surplus power is generated on windy days and options are being looked at as to how this could be used. Because this is driven by cost savings, a holistic approach is being taken as to where further investment will result in savings.

The three ways in which wind energy has been developed: Stanley

The demand is around 16,000 MWh per year. The power station is supplied by 8 diesel generators and 6 wind turbines (sited outside Stanley). Because the generators are within Stanley, the waste heat is used by the school, hospital and swimming pool. The Sand Bay Wind Farm supplies 30-40% of Stanley's electricity.

One of the key challenges is the equipment installed in the mid 1970's. In addition, not only has the population increased by over a third since 1991, but there has been an increase in the number of appliances in each home/business, leading to increased demand. This, along with increases in the price of imported diesel, created a need to look at alternative ways of generating electricity. However, because Stanley's electricity is based on a ring main with the switch gear based at the power station, any input to the grid has to go through the power station.

Stanley

The solution has been to use the wind turbines to provide the base-load and then using the diesel powered generators to create the electricity for the reaction load. This required technology that would enable a more consistent output from the turbines, which is achieved through altering the pitch of the blade and the strength of the magnetic coil. The wind power aims to provide 33% of the demand per year, saves 1,382,000 litres of fuel per year and 3,000 tonnes of carbon dioxide.

Ongoing and future work

Reducing Demand

In order to reduce demand, the draft revision of the Development Plan includes a policy which states, "To protect the general amenity of the future occupiers and surrounding area proposals must… show how they have considered opportunities for sustainable construction techniques (including micro-renewables) … Proposals may present opportunities to use sustainable construction techniques, which should be explored where appropriate, for example energy efficiency. Energy efficiencies in buildings may be achieved by having regard to issues of aspect, design and layout, construction, insulation and use of

renewable heat sources. Development proposals will be encouraged to minimise their requirements for energy".

An update of the Building Regulations has been approved and is ongoing. This includes proposals to:

- increasing thermal insulation;
- require room thermostats/zonal control;
- set out minimum temperatures for all buildings; and
- ensuring boilers are of an appropriate type and adequately set up.

Good Decision Making

To ensure good decision-making, work is ongoing to the wider legislative framework. For example, on-shore Environmental Impact Assessment Regulations have recently been adopted as part of the planning system. Information is also important, and the Falkland Island Development Corporation has a Rural Energy Advisor to provide advice and support to Camp residents. Work is ongoing to produce resource maps to identify suitable renewable technologies and enable comparisons.

Further investment

The Falkland Islands Government has installed 3 additional wind turbines from which to sell power to the military base (and subsidise remaining diesel costs). Work is ongoing to progress the National Infrastructure Plan to provide a clearer strategic context for future investment decisions.

Wide Opportunities

Energy is part of the terms of reference for the Environmental Mainstreaming Group (which provides a forum to facilitate better cross-sectoral communication and collaboration on environmental mainstreaming, and be responsible for identifying and implementing actions that are necessary to achieve the Falkland Islands' environmental objectives). Furthermore, the Waste Action Plan (2015 – 17) includes potential action to, "Support options appraisal work in relation to power generation and the potential to use waste incineration as part of this".

Tidal power: the environmental benefits and challenges of emerging renewable energy development within the Crown Dependencies – Alderney's case study

Roland Gauvain (Alderney Wildlife Trust)

Gauvain, R. 2015. Tidal power: the environmental benefits and challenges of emerging renewable energy development within the Crown Dependencies – Alderney's case study. pp 261-266 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

The increasing need for alternative and sustainable sources of energy production is well documented and has perhaps a special importance within the island communities of the Crown Dependencies (CDs). With the growth in larger-scale wind-farm proposals and the emergence of smaller trial tidal and wave installations, the potential for larger renewable energy projects having either a direct environmental effect, or a socio-economic impact, within the CDs is now becoming a reality. At this stage though no CD has as yet established a larger-scale renewable energy site, given the recent growth in interest, both within the jurisdiction of the CDs and in adjacent waters, renewable energy development is beginning to exert an influence on local governmental bodies and non-governmental organisations. It is also worth noting that the level of potential impact to be assessed within the CDs when responding to consents proposals is perhaps proportionately higher than that of the neighbouring states due to the CDs' geographical positions, ecological wealth and unique socio-economic environments when compared with the wider regional context.

At this stage, it can be argued that the potential impacts of larger-scale developments, both environmental and socio-economic, are relatively well scoped for within the national planning process of EU member states and within existing Strategic Environmental Assessments. However, experience within the Channel Islands, and specifically looking at the case-study of Alderney, suggests that, given the limited resources, the diverse nature of different jurisdictions' planning systems and the lack of local experience in responding to UK or European national planning and environmental assessment processes, CDs are often not able to consider pre-emptively the implications of these developments, let alone respond to them in detail when called to.

This presentation attempts to use Alderney's case-study, specifically its response to development proposals in adjacent UK and French waters as well as to local consents applications within its own waters, to investigate the diverse impacts on both the local NGO and government, and from this starting point, to consider the scope of positive and negative impacts which the wider CDs may experience in the future.

Roland Gauvain, Trust Manager, Alderney Wildlife Trust
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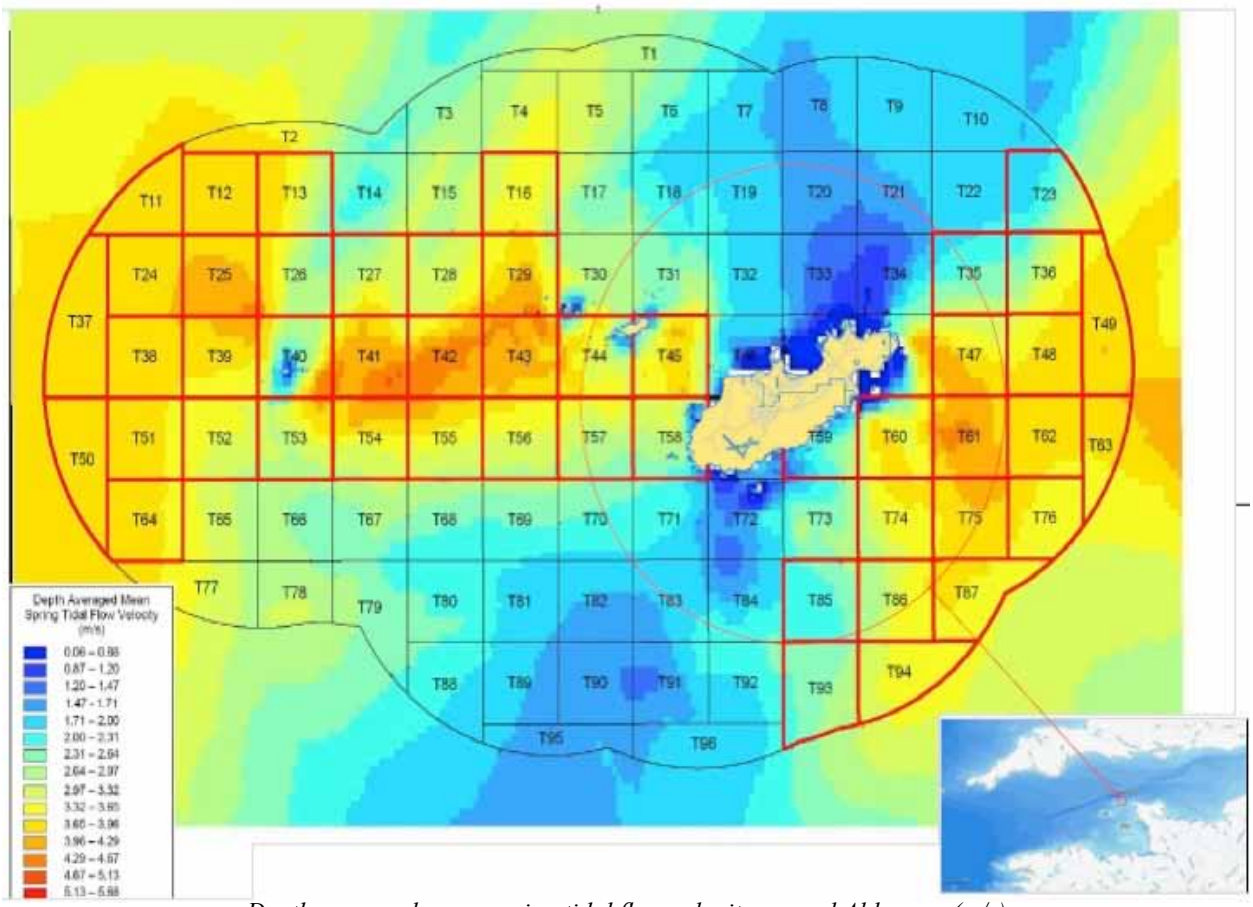
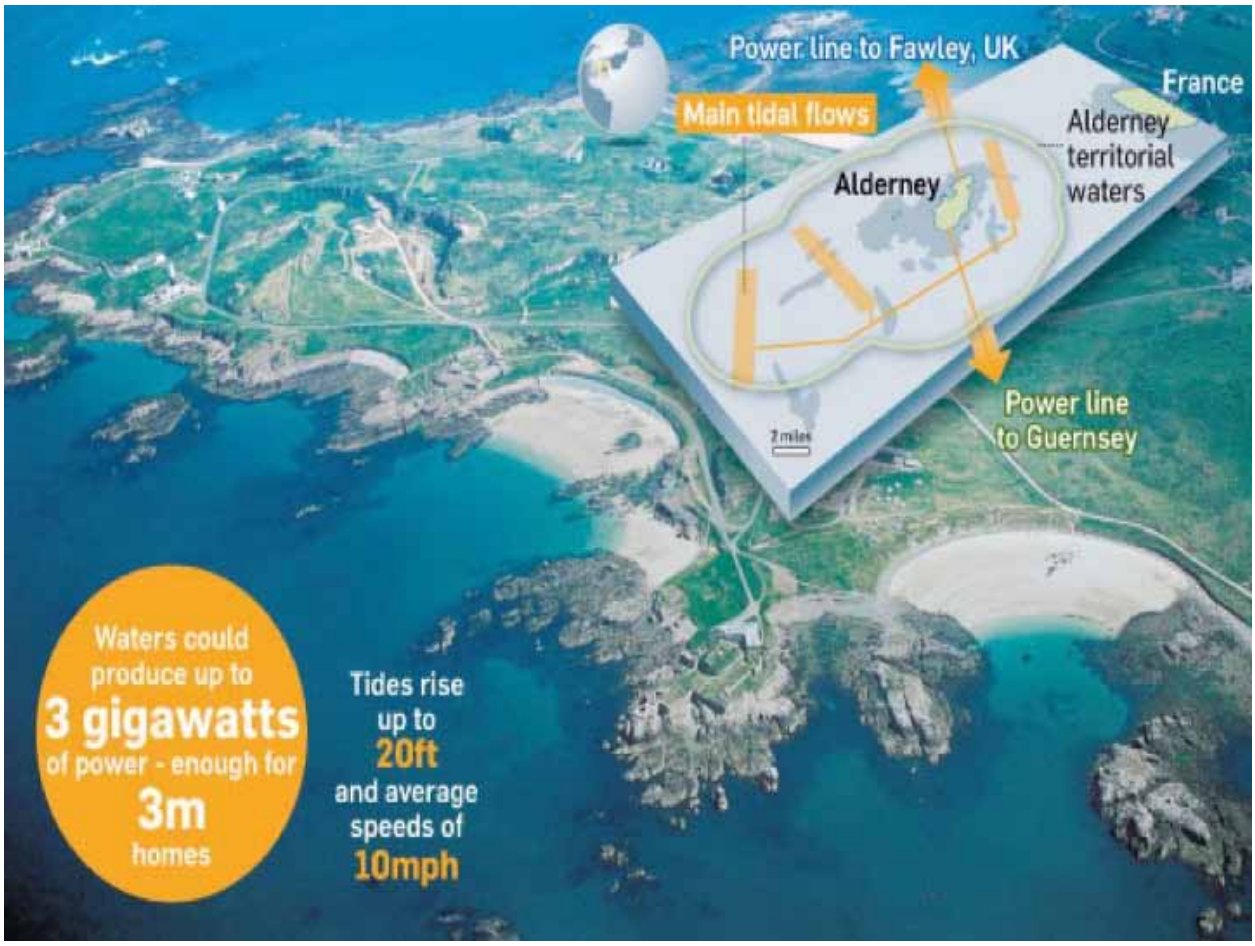
Alderney is small and its geo-political situation unique, being both part of the Bailiwick of Guernsey and independent in regards its natural environment. Its planning system is 'island centric' and is focused on localised development. The largest, most impactful, types of planning consideration are infrastructure projects such as its school, hospital and harbour. At a local planning



Depth averaged mean spring tidal flow velocity around Alderney (m/s)



Alderney Kanalinseln (Article appeared in the Sunday Times November 2010)

level, the island is only just beginning to consider environmental impacts in a systematic way.

Alderney has become increasingly interesting to those investigating the development of renewable energy, because of its ownership of its seabed (Alderney owns its 3 nautical miles (nm) territorial limit, an area of 100nm² of which over 90nm² is seabed), its tidal (estimated potential 3.2GW) and wind resource, and its position as a way-station within growing regional power infrastructure projects.

In 2003, an assessment of British tidal resource drew media attention to what was a poorly understood area of the renewable energy sector, and specifically attention to the island of Alderney and its unique political situation, direct control if its marine resource, the scale of the resource – perhaps the 2nd most energetic tidal resource, by area, within the British Isles.

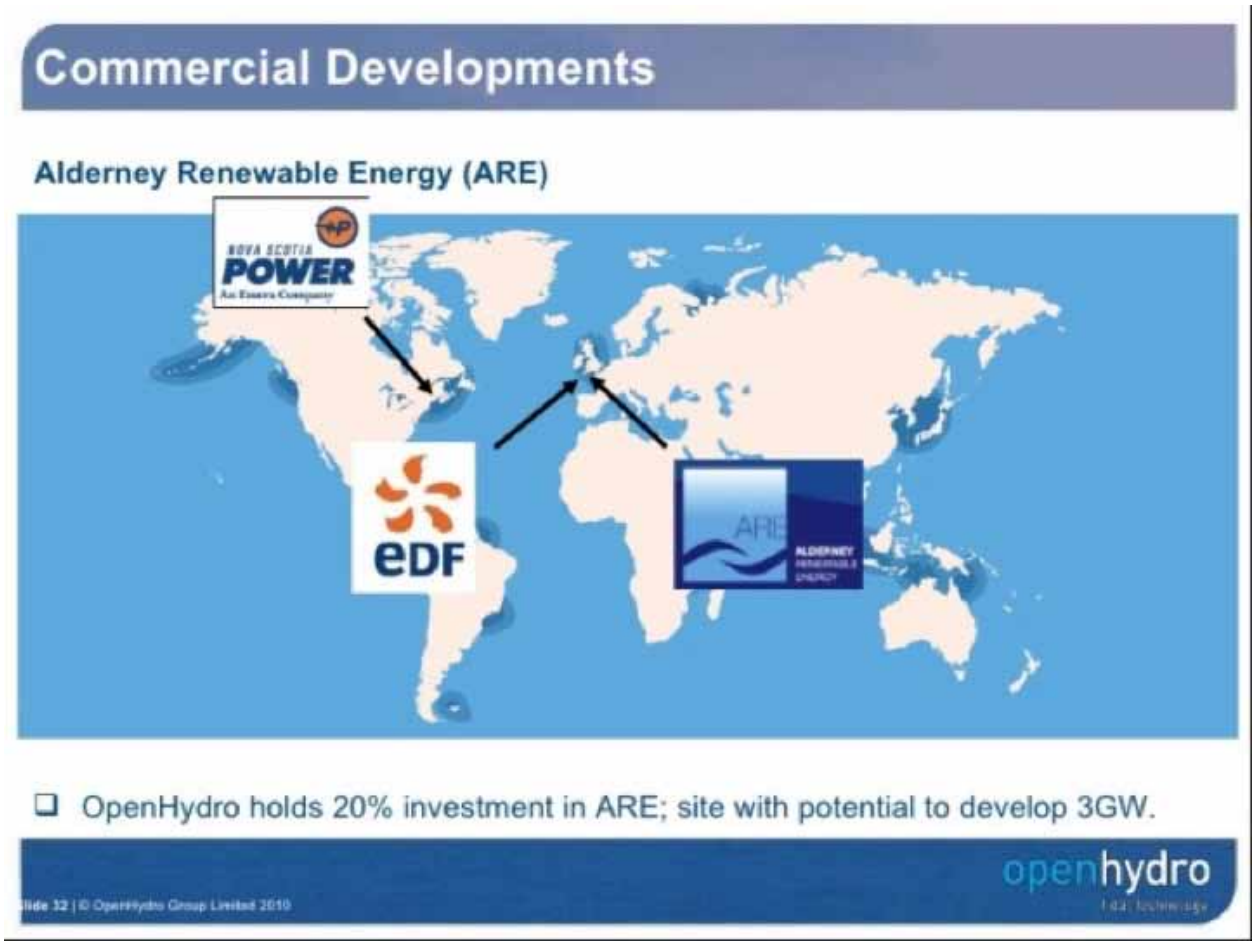
By 2004, an Alderney-formed company, Alderney Renewable Energy (ARE), had been established. ARE consisted of resident entrepreneurs and external interests, and it rapidly started a publicity campaign promoting the potential economic and social benefits for Alderney if it were to exploit its tidal resource.

By 2005, Alderney found itself having to adapt and respond to an increasing interest in its seabed. It did this by splitting its planning process. Local government planning continued for on-island projects and began to develop local mechanisms for assessing and mitigating impact, under control of the States of Alderney Building and Development Control Committee (B&DCC). The passing of the Renewable Energy (Alderney) Law 2008 led to the formation of an independent body, the Alderney Commission for Renewable Energy (ACRE), which was tasked with the marketing, licensing and protection of Alderney's renewable resource. Both elements of this new planning infrastructure worked independently of each other.

In 2008, ARE was issued a licence for 50% of Alderney's marine assets by ACRE. This enabled them to market 1km² blocks of Alderney's seabed for deployment of renewable devices (in the first case sub-surface tidal devices).

ACRE received its first licence application from a developer, OpenHydro, in 2008 and its second from ARE itself in 2009

During this time, it focused increasing efforts on developing the tools /policies to flesh out its extensive legislative powers. By 2014, these



OpenHydro.com

EDF Christel Sasso

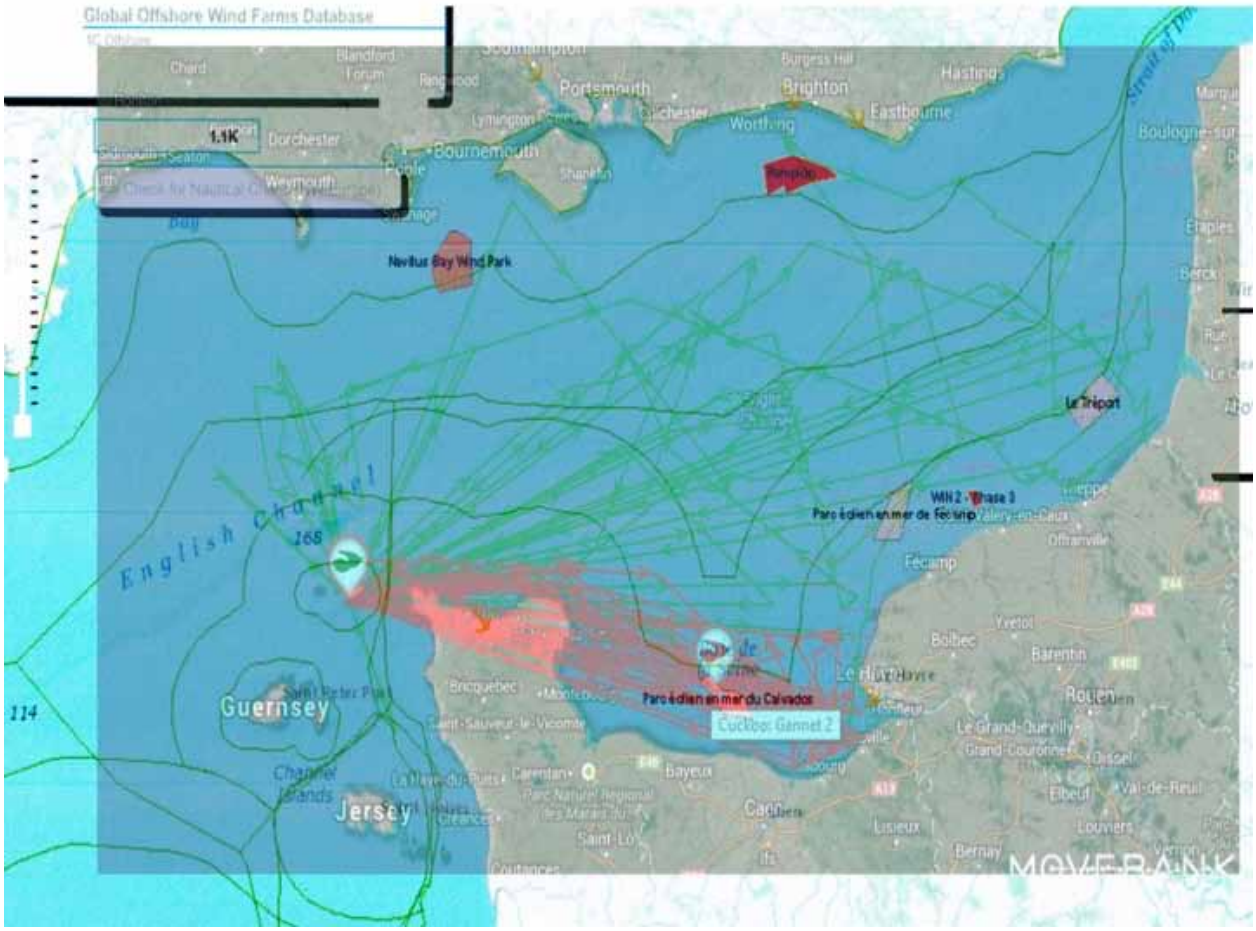
included: development of a developers' checklists for the marine and terrestrial environment, a framework Regional Environmental Assessment (REA) which set standards generally compliant with EU Directive 2001/42/EC, and a range of baseline assessments which could be used to support EIA for licence applications

Despite ACRE's strong mandate and its framework for the licensing of renewable developments, the organisation does not readily allow for cross-over in regards to any development which extends beyond the bounds of renewable energy extraction. Infrastructure projects such as the proposed France-Alderney-Britain (FAB) power interconnector, whilst being vital to allow renewable development, falls strictly within the remit of the B&DCC, and projects outside of Alderney's waters may affect the island's environment.

In 2014, Navitus Bay Development Ltd approached the States of Alderney (SoA) with a proposal for a large-scale wind farm (originally proposed as 192 120m devices) deployed to the south west of the Isle of Wight, possibly as early as 2019. This approach was triggered by the presence of an internationally designated site (Alderney West Coast and Burhou Islands Ramsar site) and the presence of an internationally important bird population whose established range intersected with the development site.

However, also in 2014, the Rampion Wind Farm, to the south of Brighton, received approval, without needing to contact or raise concerns with Alderney.

Navitus Bay went through the UK PINS process,



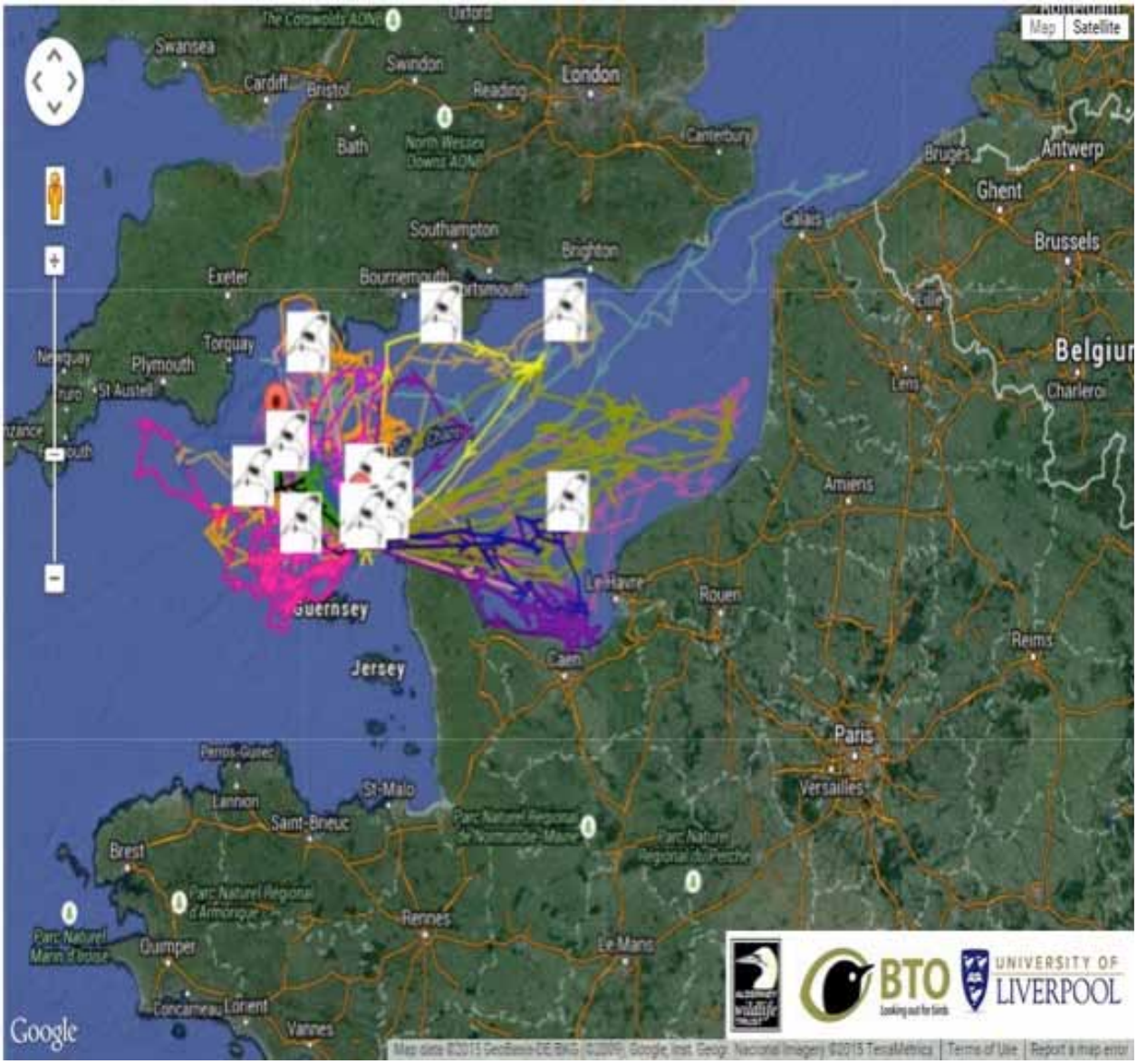
Gannet tracks for trial 3G tagging project Alderney 2014, overlaid on map of wind farms proposed for the English Channel area (at various stages of consideration). Source: University Liverpool, BTO, ACRE, AWT - http://www.4coffshore.com/offshorewind/

Breeding gannets, Alderney. Photo: Alderney Wildlife Trust http://www.alderneywildlife.org

during which time over 500 'Appropriate Responses' were registered, of which more than 100 referenced northern gannets in some way.

AWT's membership as part of the Federation of British Wildlife Trusts was the principal reason Alderney became aware of the seriousness of this application. Despite the site being over 90nm from Alderney, the AWT, acting on behalf of the SoA, found itself responding in detail on the ornithology chapter of the Environmental Statement.

Navitus highlighted a number of issues. Alderney's maritime resource and ecological diversity mean that developments as far as 250nm distant may need to consider Alderney during an EIA. Alderney's focus has been on managing the growth of local interest in renewable energy (specifically tidal). The Island has taken its islands' eyes off the international arena, where 2 UK and 4 French wind farms are all under varying degrees of consideration within English Channel Waters. Alderney's planning systems, which is struggling to respond to local and Island scale developments, struggles even more when trying to consider projects outside of its jurisdiction, which may have



Gannet tracks from the Alderney colony, Source Track-A-Gannet (TAG) project http://www.teachingthroughnature.co.uk/t-a-g/ TAG is a partnership between BTO, Liverpool University and AWT

'significant impacts' locally.

Despite developers in French and UK waters working to Directive 2011/92/eu, there are real and significant mismatches in EIA practice, which are especially concerning when considering transboundary effect on key local species. This can also seriously effect an individual government/ organisation's ability to respond to EIAs. In addition, cumulative impact assessment is still very poorly described within UK and French EIA practice. Alderney is dependant on external partners to bring the necessary skills into play when dealing with large scale EIA process.

Going forward, Alderney must develop a single unified standard for EIA practice across all parts of government. It needs to open its eyes to wider regional issues, if it is not to miss opportunities to respond to, or flag up, concerns about them. This requires the island to begin investigating knowledge gaps NOW in order that it can commence acquiring necessary baseline data, which can then be used to inform future EIAs. For example, comprehensive cabling projects affecting a range of significant habitats and species may not require EIA ,whilst the siting of 5 tidal turbines in a highly energetic environment may require the highest level of assessment.

Geothermal energy: environmental benefits and challenges

Sarita Francis (Montserrat National Trust)

Francis, S. 2015. Geothermal energy: environmental benefits and challenges. pp 267-272 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

The Caribbean lies along a volcanic arc of islands stretching from Saba in the North to Grenada in the South. Guadeloupe, St Vincent, St Lucia, Dominica, Nevis and Montserrat all have large thermal reservoirs and have attempted to explore geothermal resources with the hope of realising alternative cheap energy resources for these developing nations. Guadeloupe is the only island in this region so far that is generating power using geothermal energy. The exploration started over 50 years ago and is now generationg approximately 15 MW of power. Since the onset of volcanic activity on Montserrat, scientific monitoring and investigations have been ongoing for the past twenty years, and this has stimulated speculation and research into the islands capacity for geothermal power generation.

Government of Montserrat, with the aid of DFID, embarked on the development of geothermal energy in 2013, with the drilling of two wells to a maximum depth of 2800m, at 250-270˚, each producing 3 MW of power. It is anticipated that the two geothermal wells will produce environmentally-friendly, long-lasting energy, sufficient to power the island in the near future. With forthcoming construction of a third well, it is anticipated a surplus of energy may be available. However, this third well is earmarked for reinjection for the first two wells.

Benefits:
Now, with geothermal coming on board, it is anticipated that energy prices will be significantly lower in the long run.
Building internal capacity for citizens in a number of disciplines and the creation of medium and high-quality local jobs
Ability to collaborate scientifically with other scientists across the region and the world to develop the product
Other industries demanding high power can be developed. (Cement Making, Glass Making, Fruit Drying)
More money stays in the country for development.

Challenges:
Cost of installation is high for the drilling and installation of electricity towers and power station.
The lack of local and regional technological familiarity to provide skilled man-power will have an impact in overall operating cost. Limited technical and legislative expertise means that these skills will need to be imported at a cost.
Other skills are required in the following:
- Geochemistry
- Geology
- Geophysics
- Geothermal Reservoir Engineering
- Specialized Plumbing
- Environmental Management

Financial risk is high so the area is not always attractive for investment. In the majority of cases, public and grant funds are used for exploration. Profits on investments will take a number of years to be realized.
Wells can run out of steam and stop producing, as in the case of one of the wells in Guadeloupe.
Geothermal plants may release highly acidic substances, as in the case of St Lucia,

where extreme corrosion caused the project to stall.
High concentrations of gases, which can affect both terrestrial and marine life.
Large water consumption
High cost of transporting the energy to neighbouring islands, which will eventually mean lower return on investment
Environmental Monitoring is costly but necessary.

Sarita Francis, Director, Montserrat National Trust
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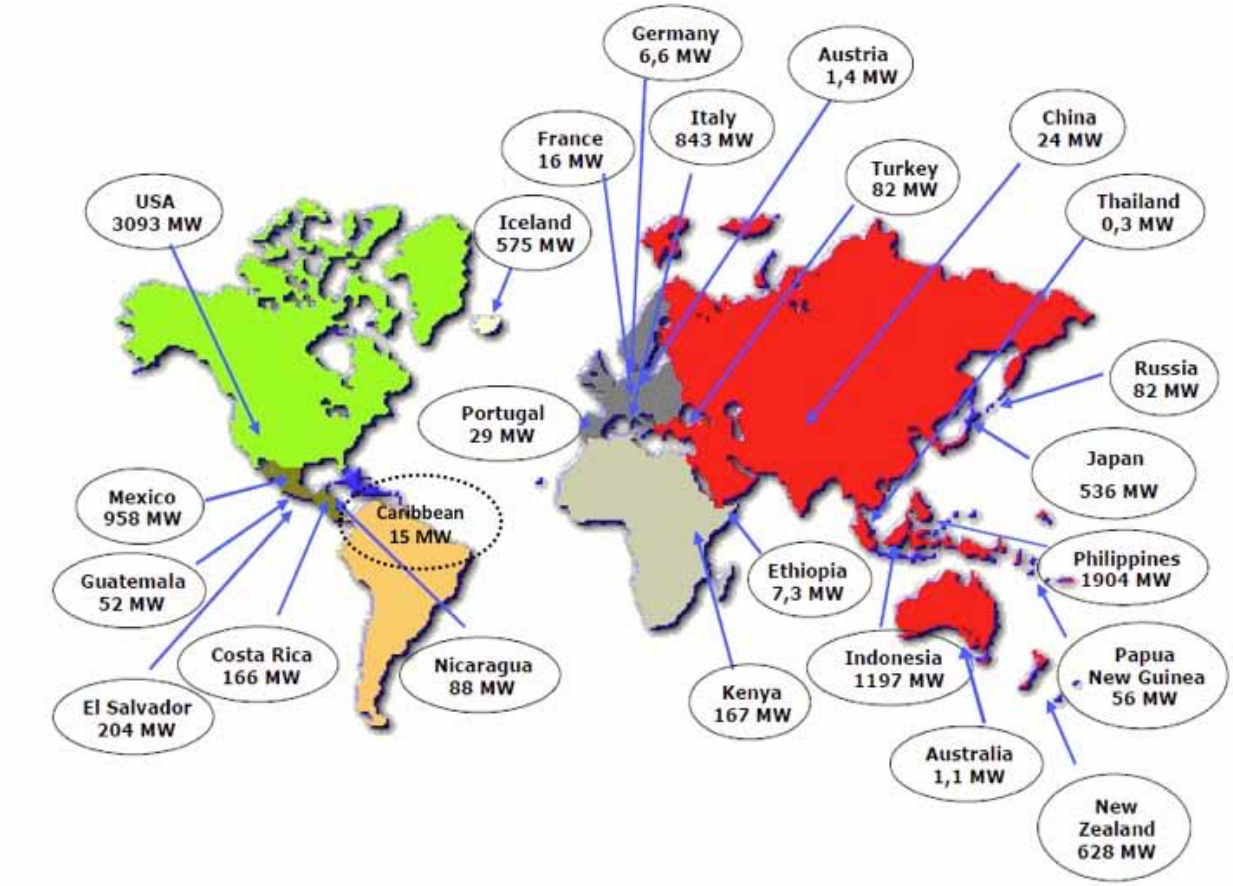
Geothermal Energy

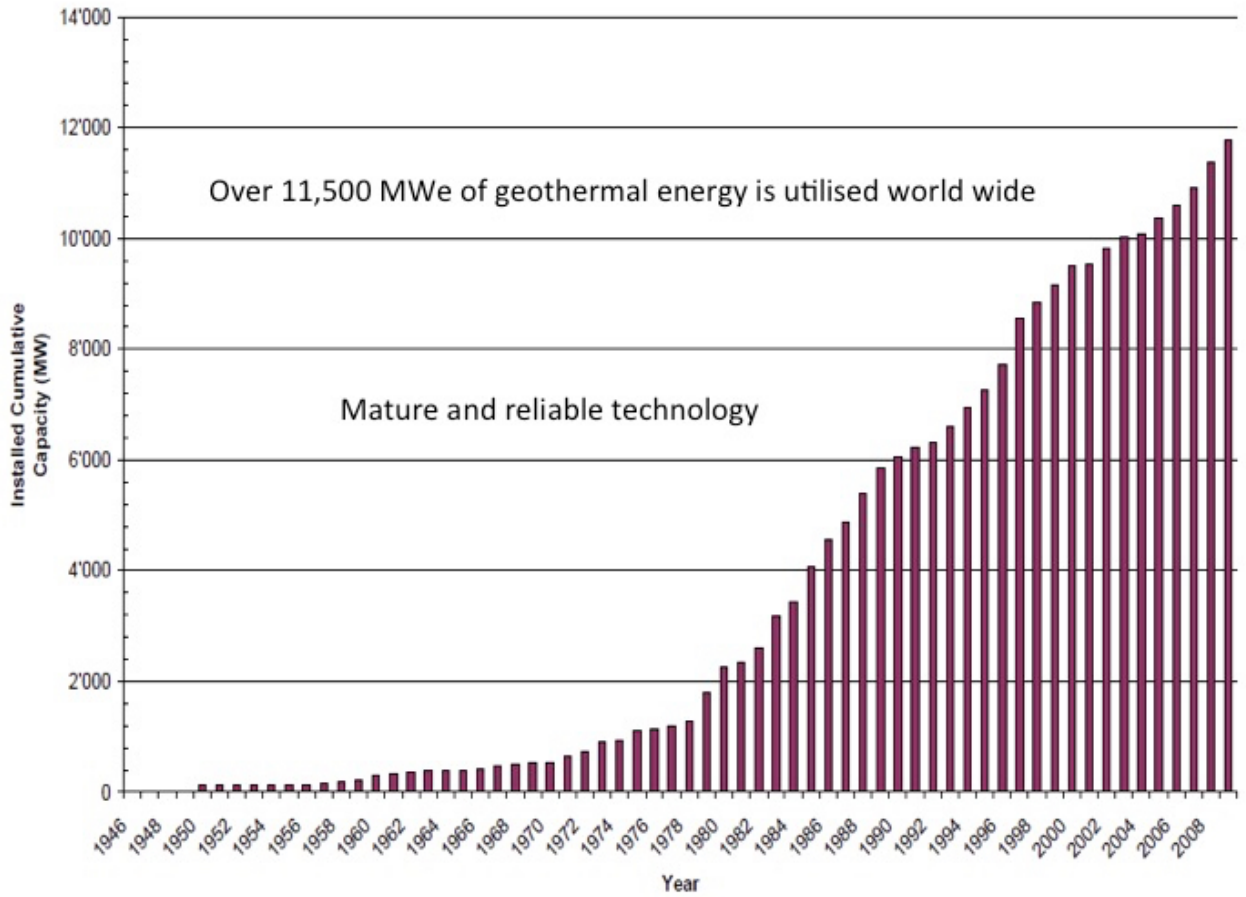
Although the science of geothermal energy development has been in existence for around 80 years, the last 40 years have shown a significant increase in development and power generation, as countries across the globe are seeking alternative sources of energy (see chart at top of next page). This started in the late 1970s, with the dramatic increase in the cost of oil and, more recently, the frantic attempts to address the issues of changes in climate brought about by the increase of gases in the atmosphere as a consequence of emissions from burning fossil fuels.

The map below shows that USA is lead producer of geothermal power in the world, producing 3,386 megawatts (MW) of installed capacity. This translates to 30% of the world geothermal energy and 0.5% of total US electricity. About 80% of this geothermal energy is produced in California near to the Geysers.

The Caribbean produces only a fraction of the world's geothermal power, but its location in a volcanic zone means that there huge potential for increased development and generation which can be a change-maker for these fledgling economies.

The Caribbean lies along a volcanic arc of islands (map on next page) stretching from Saba in the North to Grenada in the South. Guadeloupe, St Vincent, St Lucia, Dominica, Nevis and Montserrat have all large thermal reservoirs and attempted to explore geothermal resource with the hope of realising altenative cheap energy resources

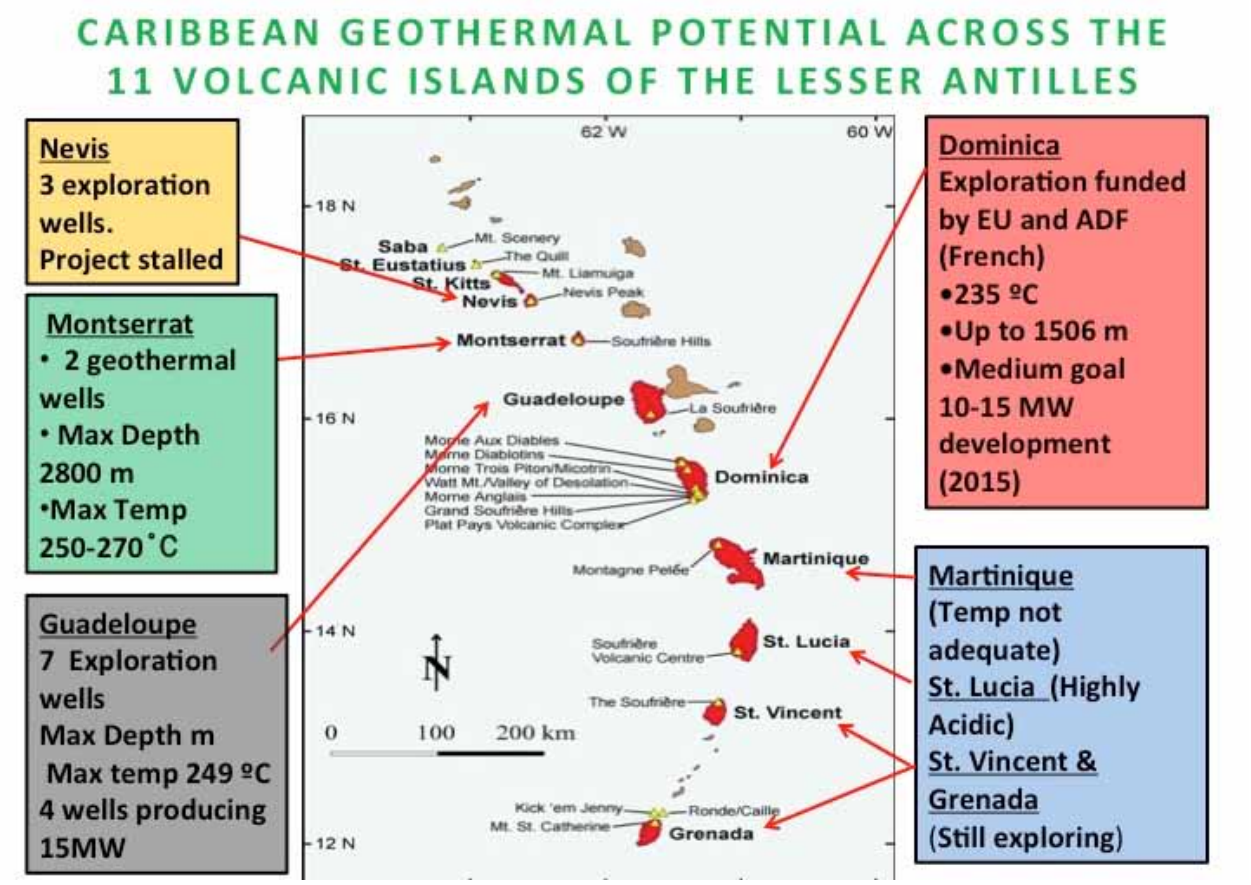


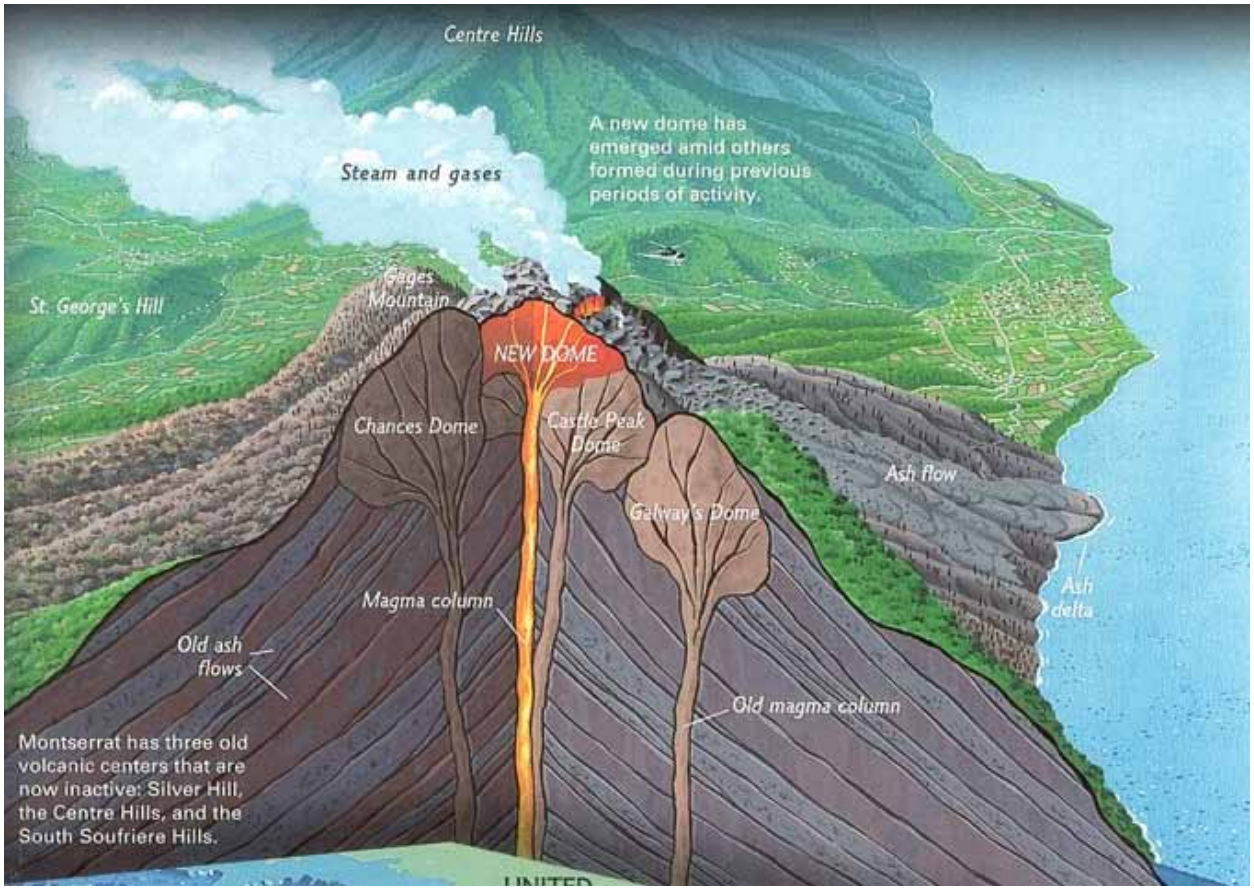


for these developing nations. Results from this exploration in the region have been varied.

Guadeloupe is the only island in the region that is generating power using geothermal energy.

The exploration there started over 50 years ago and is now generating approximately 15 MW of power. Other islands such as Dominica, St Lucia, Martnique, St Vincent and the Grenadines, Nevis and Montserrat are at various stages of exploration,





as can be seen on the map on the previous page.

Volcanic activity in Montserrat started in 1995. Since the onset of volcanic activity on Montserrat, scientific monitoring and investigations into geothermal potential have been ongoing. Tests have shown that the best potential site for geothermal energy development is about two miles from the Soufriere Hills Volcano, on a plain at the foot of St Georges Hill which provides a buffer.

About 65% of the electricity tariff goes to the importation of diesel for powering generators. Government of Montserrat (GOM), with the aid of DFID, embarked on the development of geothermal energy in 2013, with drilling of two wells to a maximum depth of 2800m and 250-270˚C, each producing 3 MW of power. According to GOM, it is anticipated that the two geothermal wells will produce environmentally-friendly, long-lasting energy, sufficient to power the island in the near future. With forthcoming construction of a third well, it is anticipated a surplus of energy may be available; however, this third well is earmarked for reinjection for the first two wells.

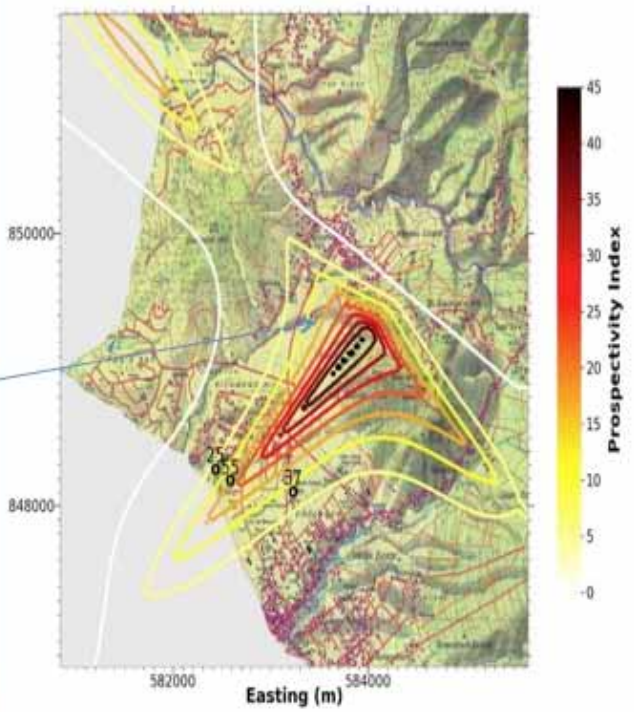
As with all huge projects which extract resources from the earth, there are benefits and challenges. A few of these are highlighted below.

Benefits

- Now, with geothermal coming on board in Montserrat, it is anticipated that energy prices will be significantly lower in the long run. There is expectation that cost to citizens will be lower, so air conditioning for residences and offices will be easily accessible
- Building internal capacity for citizens in a number of disciplines and the creation of medium and high-quality local jobs (geologists, plumbers, scientists, engineers, environmental managers etc)
- Ability to collaborate scientifically with other scientists across the region and the world to develop the product
- Other industries demanding high power can be developed (cement making, glass making, fruit drying, etc).
- Tourism Development with the development of leisure and health benefits such as spas
- More money stays in the country for development.

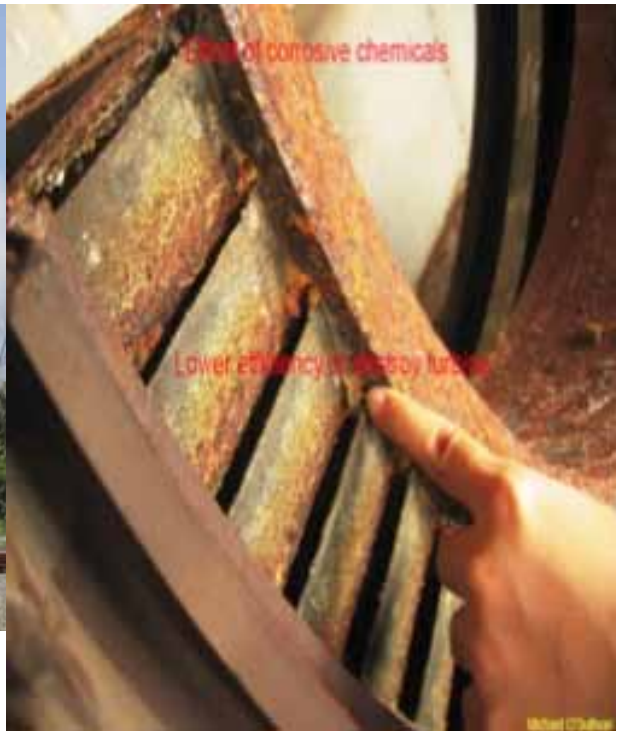
Challenges

- Cost of installation is high for the drilling and installation electricity towers and power station. To get geothermal energy requires exploration by drilling wells and the



installation of power plants, to get steam from deep within the earth and this require huge one time investment, as well as hiring a certified installer; skilled staff need to be recruited and relocated to plant location. Moreover, electricity towers and stations are need to set up to move the power from geothermal plant to consumer. Financial risk is high, so the area is not always attractive for public investment. In the majority of cases, public and grant funds are used for exploration. Profits on investments will take a number of years to be realised

- Technical Expertise. The lack of local and regional technological familiarity to provide skilled man-power will have an impact in overall operating cost. Limited technical and legislative expertise means that these skills will need to be imported at a cost. Since this type of energy is not widely used, the unavailability of equipment, staff, infrastructure and training pose hindrances to the installation of geothermal plants across the globe. Not enough skilled manpower or availability of suitable build location pose serious problem in adopting geothermal energy globally.
- Skills are required in the following:
  - Geochemistry
  - Geology
  - Geophysics
  - Geothermal Reservoir Engineering
  - Specialized Plumbing
  - Environmental Management
- Wells can run out of steam and stop producing, as in the case of one of the wells in Guadeloupe. The possibility exists that large investments may not yield results. Geothermal sites can run out of steam over a period of time, due to drop in temperature or if too much water is injected to cool the rocks, and this may result huge loss for the companies which have invested heavily in these plants. Due to this factor, companies have to do extensive initial research before setting up the plant.
- Transportation. High cost of transporting the energy to neighbouring islands which will eventually mean lower return on investment. Geothermal Energy cannot be easily transported. Once the tapped energy



is extracted, it can be used only in the surrounding areas. Some Caribbean Territories are thinking about selling to neighbouring islands, but the cost of undersea transport may outweigh the benefits. Other sources of energy like wood, coal or oil can be transported to residential areas, but this is not a case with geothermal energy.

Environmental effects

- Possible effects include scenery spoliation, drying out of hot springs, soil erosion, noise pollution, and chemical pollution of the atmosphere and of surface- and ground-water.
- The underground hot water and steam used to generate geothermal power may contain chemicals that could pollute the air and water if released at the surface, and high concentrations of gases which can affect both terrestrial and marine life. Geothermal sites may contain some poisonous gases, and they can escape deep within the earth through the holes drilled by the constructors. Also, there is a fear of toxic substances getting released into the atmosphere. The geothermal plant must therefore be capable enough to contain these harmful and toxic gases.
- Hydrogen sulphide, which is toxic in high concentrations, is sometimes found in geothermal system. Newer methods of generating geothermal power separate the hot steam collected underground from the steam used to power turbines, and substantially reduce the risk of releasing air-polluting contaminants.
- The water mixed with the steam contains dissolved salts that can damage pipes and harm aquatic ecosystems. Some subsurface water associated with geothermal sources contains high concentrations of toxic elements such as boron, lead, and arsenic. Geothermal plants may release highly acidic substances, as in the case of St Lucia where extreme corrosion caused the project to stall.
- Injection of water in enhanced geothermal systems can lead to large consumption of water, which can cause a drop in domestic water supply, and may cause induced seismicity. Earthquakes at the Geysers geothermal field in California, the largest being Richter magnitude 4.6, have been linked to injected water.

Environmental monitoring is costly but necessary to manage the negative environmental effects

Renewable Energy Deployment and Waste Treatment Decarbonising the Economy: the Gibraltar blueprint

Liesl Torres (Department of Environment, Government of Gibraltar)

Torres, L. 2015. Renewable Energy Deployment and Waste Treatment. pp 273-277 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

Her Majesty's Government of Gibraltar recognises that priority on the environmental agenda has multiple benefits. With this objective in mind, it is focusing its efforts in decarbonising the economy.

The Department of the Environment and Climate Change has developed a strategy to this effect which concentrates on the deployment of renewable energy in Gibraltar up to 2030. This strategy highlights how the energy sector is structured, current costs and concerns, key aspects such as network and system operation, and opportunities in the transition to renewables.

Other projects which form part of the strategy which would deliver energy efficiency gains include a major overhaul of the treatment of Gibraltar's waste-streams. The common objective of these highly inter-related infrastructure projects is to accelerate Gibraltar's move to a more sustainable, low-carbon and a high-efficiency economy, which will in turn help to open up local markets to green investment, and to promote sustainable business throughout the region.

Dr Liesl Mesilio Torres, Chief Executive Officer, Department of Environment, Government of Gibraltar liesl.torres@gibraltar.gov.gi

There are a number of activities occurring at present including: green procurement policy, public sector lighting policy, solar street lighting, solar thermal projects, MOUs and PPAs on renewables, move to gas, smart meters, change in billing format, energy efficiency campaign, removal import duty for renewables.

We can decarbonise an economy by reducing the 'carbon ratio', C/E by changing energy sources, reducing the 'energy ratio' by improving energy efficiency, thus:

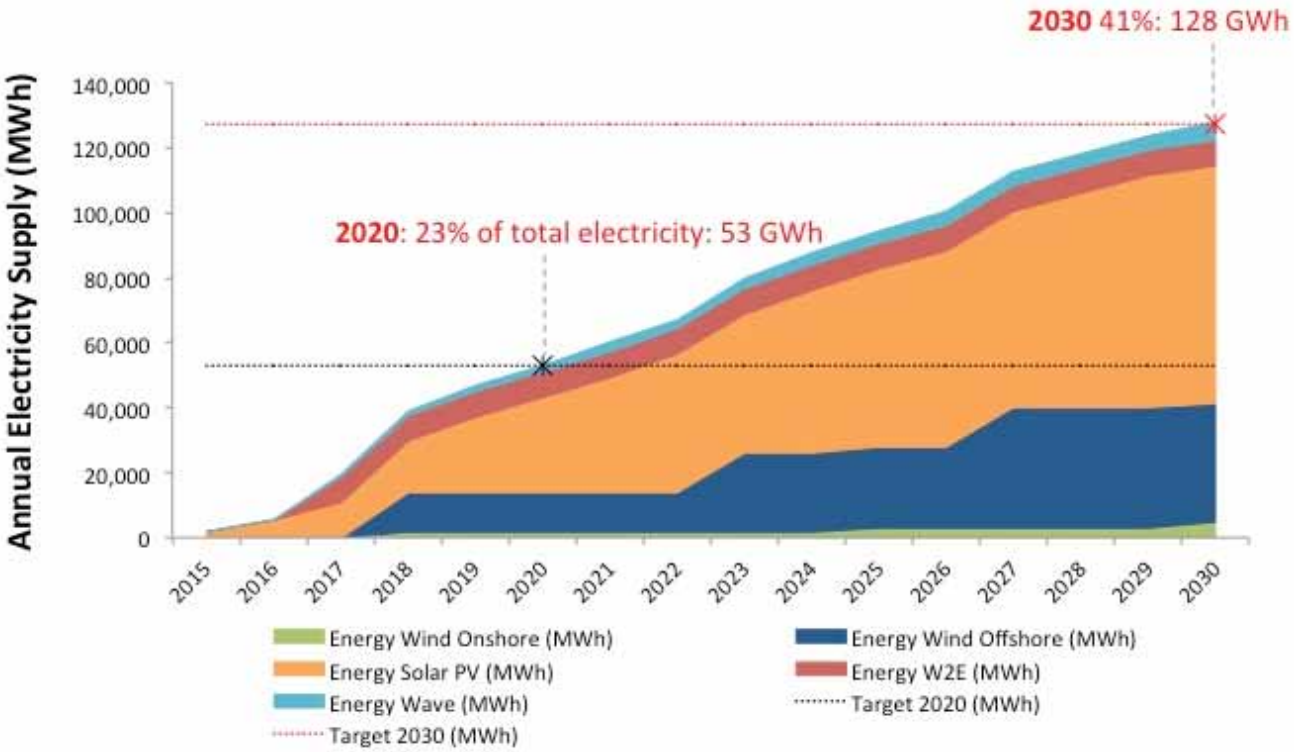
Decarbonisation = (RE+EE/ Research) x sustained £ planning

Electricity is expensive and the demand is ever growing. Fossil fuels bring other costs too, including: supply insecurity through reliance on imports; volatility of fuel price; local pollution of water, soil, air; noise; and green-house gas emissions (GHG).

We know what we need to do and we know how to get there.

Waste to Energy

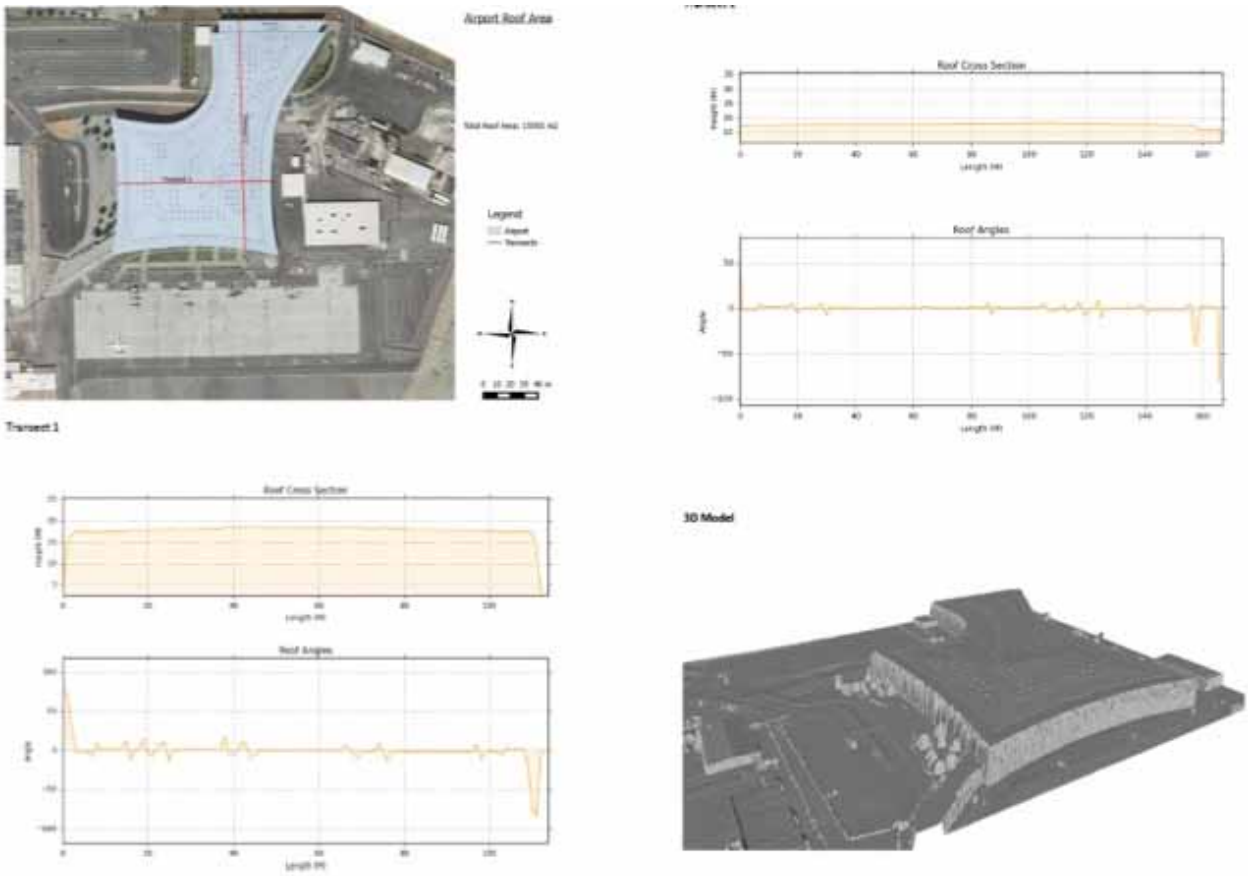
The management of waste has become an issue of utmost importance as the social, economic and



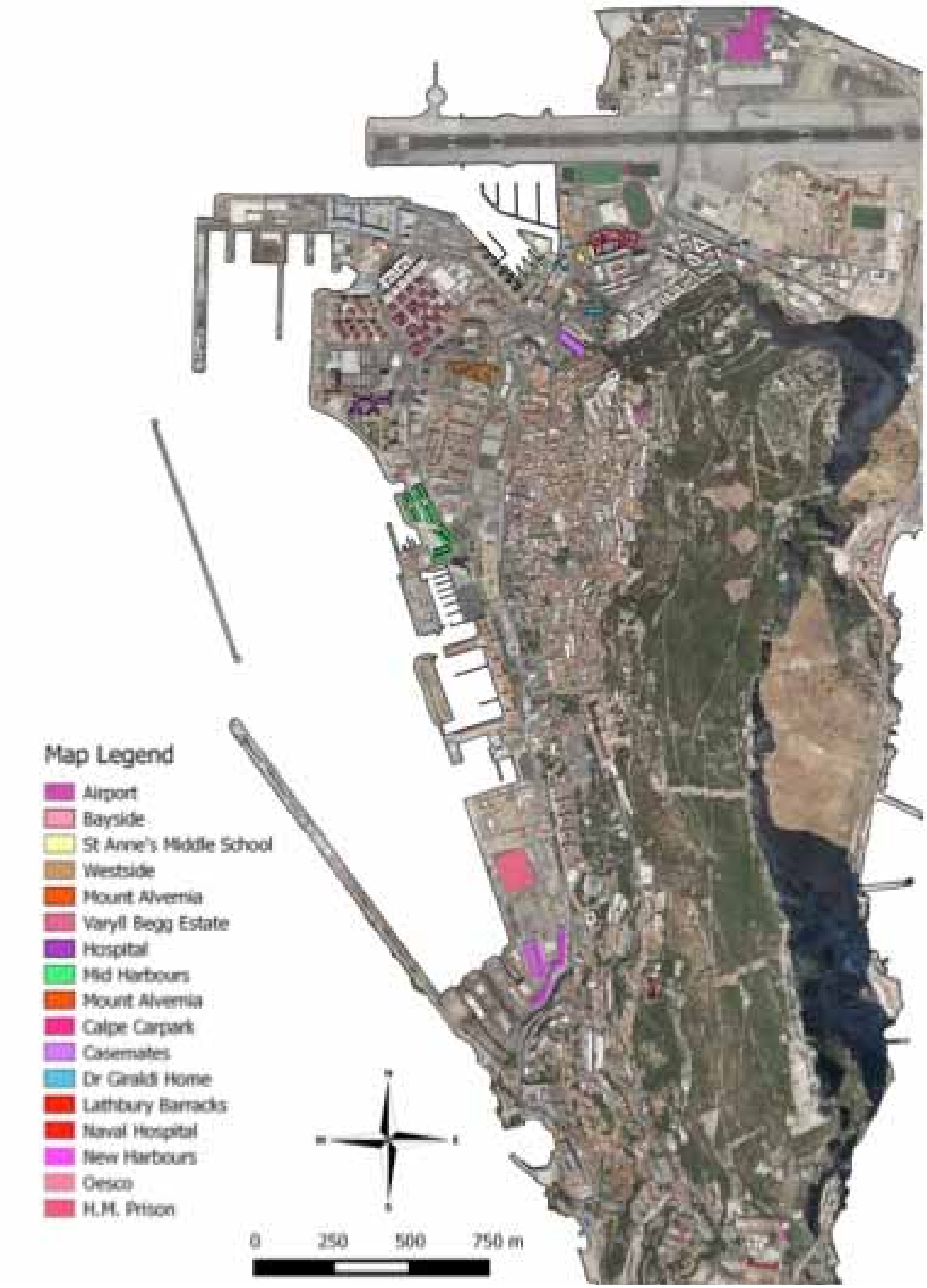
environmental costs of waste disposal rise. Since 2003, Gibraltar's waste has been sent to landfill in Spain.

An integrated waste management strategy has been drafted (PP and BPEO), recycling and education is being conducted, an EU Tender has been prepared, and a waste reception facility with pre-sorting capability for the removal of the recyclable element of the waste. It must include also process:

- the generation of electricity;
- the production of potable water;
- the production of biodiesel; or



Solar panelling for the roof of the new airport terminal



Map of solar panelling in Gibraltar

- the production of syngas; and
- disposing of ad-hoc waste (including saline sewage sludge).

Exploiting the renewable energy opportunity

The cost to HM Government of Gibraltar (HMGoG) differs with the business model.

Sector	Principal policies	Supporting policies
Power	- feed-in tariffs/power purchase agreements	- capital grants - preferential loans - demonstration projects
Transport	- fuel content standard - sales subsidies for lower-carbon vehicles	- fuel tax - tax concession - loans for electric vehicle purchase
Buildings	- mandatory building codes - minimum energy performance standards	- loans for energy - efficiency investment - smart meters

However, the choice of business model lies with HMGOG. The model may change with time and it is also dependent on experience, technology cost reduction, investor interest.

HMGoG has considered two generic approaches: 1) HMGOG buys electricity from privately owned assets, which is the present approach to RE, with a 20-year PPA at fixed price (typical), either with soft loans or independently financed.

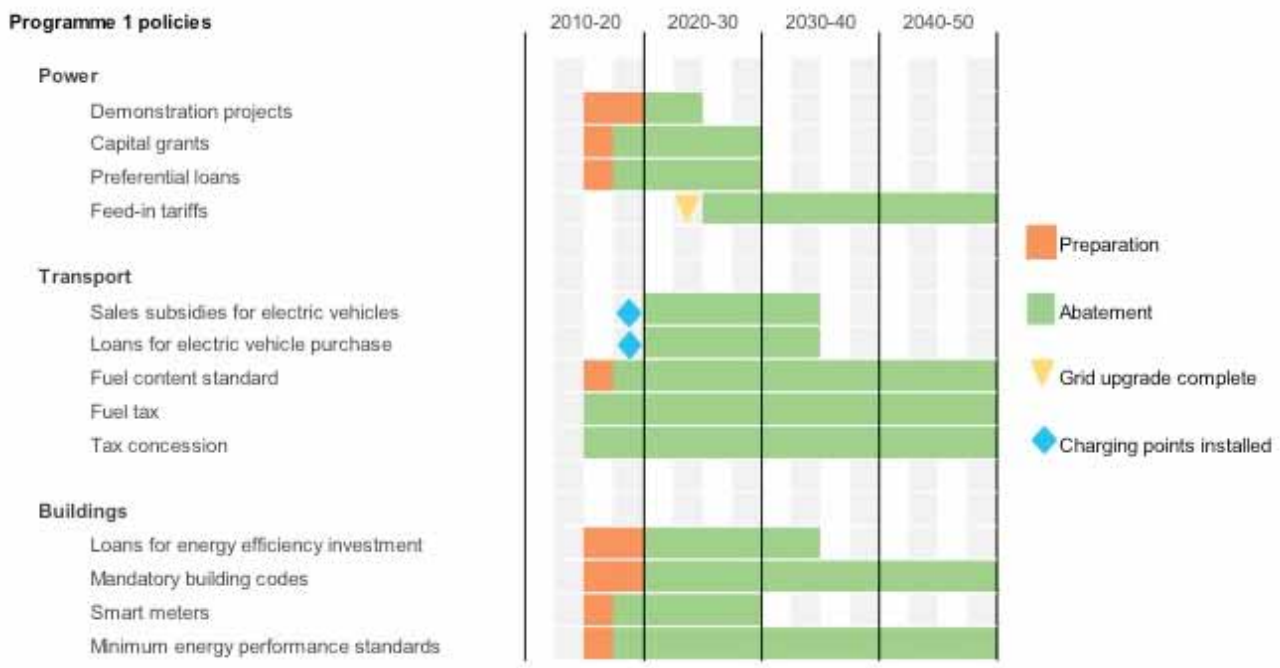
2) Alternatively, HMGOG owns RE power plants.

First mover advantage is the possible trade and growth benefits stemming from technological leadership in technologies required to implement transition to a low-carbon emitting economy. So can the local economy get First Mover Advantage from pioneering strong climate action?

Clean energy technologies (electric vehicles, wind, solar, biofuels and energy efficient equipment) have a large potential of cost reduction if developed at a large scale. What is the impact of the latter on the local grid and energy security with Gibraltar as a Research and Development centre?

Policies include financial instruments, fiscal instruments and direct regulation

Some of Gibraltar's policy milestones (see Table above) are: the launch of feed-in tariffs, preceded by brief behavioural study to maximise effectiveness, photo-voltaic (PV) opportunities in the government estate, environmental investigations for offshore wind, followed by possible tendering process for wind to be phased – with decision gate: go ahead if capital costs low enough and wind speeds high enough. An electricity system management study is needed to assess desirable balance between wind, marine, waste and PV, with network and generation systems enabling works; also buildings regulations review to start immediately borrowing from published research; cost and effect control levers: level of PV feed-in tariffs and placement of other RET contracts.



Most policies can be implemented immediately. However, some policies may require preliminary work. In addition, feed-in tariffs and electric vehicles require additional infrastructure to be built (see Table below).

Appropriate preparation will help these policies to be effective. Some preliminary thoughts might be:

- Are the necessary institutions in place?
- Will institutional change require long-term planning?
- Will legal frameworks need adjusting?
- Is the private sector ready to supply capital?
- Where will private investment be needed?
- What is the prevailing investor sentiment in this sector?
- Will demonstration projects be necessary?
- Do we have plans in place to adapt our infrastructure?
- Will there be large-scale investment projects?
- If so, will they require private financing arrangements?
- Will planning permission be difficult to agree?
- Is the finance of the policy programme feasible?
- Will there be constraints on public finance?
- Would the discipline of private investors be valuable for projects within the policy programme?
- What is the financial strategy to be adopted for each sector?
- Have you considered risk apportionment?

HMGoG is striving to improve its energy efficiency throughout all sectors and recognises that this is one of the most effective ways to reduce our carbon footprint. It is also fully committed to the ideology of generating an increasing proportion of electricity from renewable energy sources. For further information on our policies and practices see https://www.gibraltar.gov.gi/new/energy.

	Power	Transport	Buildings
Principal policies	- feed-in tariffs	- fuel content standard - sales subsidies for lower-carbon vehicles	- mandatory building codes - minimum energy efficiency performance standards
Supporting policies	- capital grants - preferential loans - demonstration projects	- fuel tax - tax concession - loans for electrical vehicle purchase	- loans for energy efficiency investment - smart meters
Total expenditure (£m)	-	-	-
Cumulative emissions saved over 2015–20 ($ktCO_2$)	-	-	-
Average abatement cost over 2015–20 (£/tCO_2)	-	-	-
Requirements	- institutional arrangements	- primary legislation	- ministry buy-in
Risks	- high technology costs	- impact on exports	- public opinion

Environmental Impact Assessment and Tidal Power Filling the Legislative Gap: A case study from Alderney (Bailiwick of Guernsey)

Dr Melanie Broadhurst (Living Seas Officer, Alderney Wildlife Trust, with the kind support of Alderney Commission for Renewable Energy (ACRE) and the States of Alderney (SoA))

Broadhurst, M. 2015. Environmental Impact Assessment and Tidal Power Filling the Legislative Gap: A case study from Alderney (Bailiwick of Guernsey) . p 278 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

Due to the isolation inherent with Alderney being not only a Crown Dependency, but also an island with complete ownership of its seabed, an area of approximately 150km², the Island faces unique challenges when considering the potential local and regional environmental impacts of developing tidal energy instillations.

This poster reviews the process by which Alderney has undertaken the origination of the legislative, policy and practical infrastructure required to respond to increased interest in marine renewable developments, specifically tidal energy. The main focus is Environmental Impact Assessment and the criteria by which Alderney aims to assess future applications, as well as the way in which Alderney's independent commission ACRE, its government and its environmental NGO are responding to this process.

Discussion

Much of the discussion addressed the conclusions and recommendations. If such items are adequately reported in the Conclusions and Recommendations section later in these proceedings, they are generally not repeated here. Instead, this section draws out some other aspects for which amplification may be useful, on of the discussions and ideas put forward for consideration.

Trans-territory issues

Some issues raised:

- What financing mechanisms are in place for renewable energy development?
- Sharing experiences of development of energy policies between jurisdictions would benefit small islands which have limited capacity to develop policies themselves.
- What is the role the UK should take, and in what capacity, in assisting funding or facilitating access to funding, for renewables?

Financing mechanisms need to take into account territory-specific or island-specific circumstances. It may be beneficial for Bermuda, TCI and Cayman to create a Working Group focusing on legislative framework, and include interests from the private sector who specialise in working in these areas.

Cayman has an energy policy which includes a renewable energy component. Discussions are already taking place to expand this and make renewable energy plans in the Territory more ambitious. The challenge in the Territory is how they respond to the renewable energy proposals that are coming in – the Government needs to be more prepared as to what is optimal and reliable in terms of these developments. There is a need for some sort of strategic environmental assessment to help with this, rather than new legislation.

The development of a common resource of technical expertise which Territories can draw on to help decide which kind of renewable technology is appropriate when transitioning from diesel would be very useful. There is a lot of technical information in the public domain; harnessing this for the benefit of the Territories and their unique requirements is key.

Developing a preliminary screening of what looks feasible in terms of renewables is a very important first step for Territories, as this forms a basis of what is appropriate when renewable projects are proposed. This could potentially be a project suitable for partnership with universities/academia.

JNCC renewable energy roadmap.

Outside interest in exploitation of resources is an issue in many Territories. Large-scale wind developments can affect island capacity, so it is important to interlink island requirements with large developments.

Stakeholder engagement

Some issues raised:

- Engagement is crucial to create political support and investment in bringing projects into existence and facilitating pathways going forward.
- Incentives.

Managing of expectations is important.

De-risking and scaling up – cumulative risks are increasingly being recognised. If we are going to de-risk from a business perspective, we also need to de-risk from a biodiversity and ecosystem services perspective.

The poorer sectors of society often have the most expensive electricity costs. It is important for governments to incentivise renewables in a way which includes these sectors.

Partnerships

Some issues raised:

- How can we use private investor interest to evaluate different proposals and identify strengths and weaknesses?
- What are the possibilities and pathways for collaboration and sharing expertise and good practice?

Using academia/universities to build expertise locally is potentially beneficial.

Scale is important when it comes to private sector investment.

Need to consider possible tension when bringing in external expertise, and consider local requirements.

A PREVIEW OF THE CLOSING EVENT: Above: are the redcoats arresting this man from the rebel colonies or providing Naqqi with a guard of honour?
Above right and right: gathering for drinks before the conference dinner.
Below: At the dinner with music from the Gibraltar Corps of Drums.
Photos: Bryan Naqqi Manco and Chris Tydeman

Session 11: Future funding and BEST

Introduction: some funding issues – Tom Appleby
Delivering conservation outcomes through a new funding strategy: the European Overseas BEST Initiative – Romain Renoux, (Regional Best Caribbean Hub Coordinator; Regional Activity Centre for Specially Protected Areas and Wildlife in the Caribbean region (SPAW-RAC)/Réserve Naturelle de Saint-Martin) and Maria Taylor, (Regional Best South Atlantic Hub Ecologist; South Atlantic Environmental Research Institute (SAERI))

Biodiversity and Ecosystem Services in the Overseas Territories (BEST III): general overview – Maria Taylor (South Atlantic Environmental Research Institute (SAERI))
Biodiversity and Ecosystem Services in the Overseas Territories (BEST III): specific focus on UKOTs – Maria Taylor (South Atlantic Environmental Research Institute (SAERI))
A dedicated funding scheme for Biodiversity and ecosystem services in European overseas territories: the BEST Initiative – Romain Renoux (Regional Best Caribbean Hub Coordinator, Regional Activity Centre for Specially Protected Areas and Wildlife in the Caribbean region (SPAW-RAC)/Réserve Naturelle de Saint-Martin)
Discussion: an example from Trinidad and Tobago Green Fund

Introduction – some funding issues

Tom Appleby

Appleby. T. 2015. Introduction – some funding issues. p 282 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

A brief introduction to the short session.

Dr Thomas Appleby, Council Member, UKOTCF
Thomas.appleby@uwe.ac.uk

Sources of funding

There are many ways in which an organization might seek funding. Some are:

1. Charitable Foundations

When making an application a very tight plan and concept is needed for example SG rat eradication. They often have their own funding criteria. Overheads should be included (say 20%)

2. Government

Funding criteria must be met

Current options for UKOTs include: UK Government's Darwin Plus, BEST 2.0

3. Consultancy

Need a business to run

Any application needs to be understood from the funder's point of view.

Mysteries of the European Union

This light-hearted, but extremely informative, look at the relationship between the UK, EU and the Overseas Territories was shown:

https://www.youtube.com/watch?v=O37yJBFRrfg

Where to from here?

- All charities need a healthy mix of funding sources.
- Core funding almost impossible to get – so incorporate it in project costs.
- Collaboration is probably the best way to access funds.
- All delegates should leave here with at least two good funding ideas / plans.

Delivering conservation outcomes through a new funding strategy: the European Overseas BEST Initiative

Romain Renoux, (Regional Best Caribbean Hub Coordinator; Regional Activity Centre for Specially Protected Areas and Wildlife in the Caribbean region (SPAW-RAC)/Réserve Naturelle de Saint-Martin) and Maria Taylor, (Regional Best South Atlantic Hub Ecologist; South Atlantic Environmental Research Institute (SAERI))

Renoux, R. & Taylor, M. 2015. Delivering conservation outcomes through a new funding strategy: the European Overseas BEST Initiative. pp 283-287 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

The European Union includes 9 Outermost Regions (ORs) and is associated with 25 Overseas Countries and Territories (OCTs) located across 3 oceans and divided into 7 regions: Caribbean, Indian Ocean, Pacific, Macaronesia, Polar and Sub-polar, Amazon and South Atlantic. These territories are politically attached to six EU countries (Denmark, France, The Netherlands, Portugal, Spain, UK), even though they are, in some cases, geographically very distant from continental Europe.

These regions are very rich in biodiversity and natural resources. They host a high number of endemic species and are home to several Key Biodiversity Areas (KBAs), globally important for biodiversity worldwide. This natural heritage is instrumental for the economic, social and cultural potential of the inhabitants of these regions. However, serious threats are being faced by biodiversity there, such as the destruction of habitats, spreading of invasive alien species, or pollution to the natural habitats. This, combined with their isolation and insular nature (except for French Guyana), makes most of them very vulnerable, especially to the effects of climate change.

For these reasons, it is vital for the European Union to ensure the conservation and a sustainable use of biodiversity and ecosystem services in these overseas regions. The BEST Preparatory Action (Biodiversity and Ecosystem Services in Territories of European overseas) adopted by the European Parliament in 2010, for a limited period, provided seed money which allowed funding of 16 on-the-ground projects. The outcome of the two open calls for proposals BEST 2011 and BEST 2012 showed a definite need for overseas funding, as the requests amounted to more than six times the available budget and several projects passing all evaluation criteria could not be funded.

There is definitely an obvious need to make this funding not a one-time effort, but to establish a financial support mechanism sustainable for years to come. Thus, BEST III aims to catalyze the transition to a sustainable BEST facility. This BEST III project is indeed a voluntary scheme involving 7 regional knowledge hubs across the world, coordinated by IUCN and staff involved in local projects, working for and with local stakeholders. The project is focusing on the EU ORs and OCTs biodiversity hotspots. Based on up-to-date scientific data and through local consultation, BEST III objectives are to identify and map KBAs in order to define conservation outcomes for each territory. Thus regional ecosystem profiles will be established for the different territories and a funding strategy will be proposed to support, in the most efficient way, conservation projects on the ground.

In the meantime, recognizing the urgency to keep support for projects while a long-term BEST financing mechanism is being elaborated, the European Commission has decided to allocate new resources for concrete projects in the OCTs through a 5-year programme called BEST 2.0, with calls for proposals organised in the two coming years for a budget of over € 6 million. This BEST 2.0 programme will - amongst others - support implementing actions for biodiversity conservation, sustainable use of ecosystems and ecosystem services in the KBAs identified through the participative Ecosystem profiles process led by the regional BEST knowledge hubs.

Romain Renoux, BEST Caribbean Hub Coordinator, Reserve Naturelle de St Martin /SPAWRAC romain.renoux@rnsm.org
Maria Taylor, Ecologist - BEST III project, South Atlantic Environmental Research Institute - SAERI mtaylor@env.institute.ac.fk

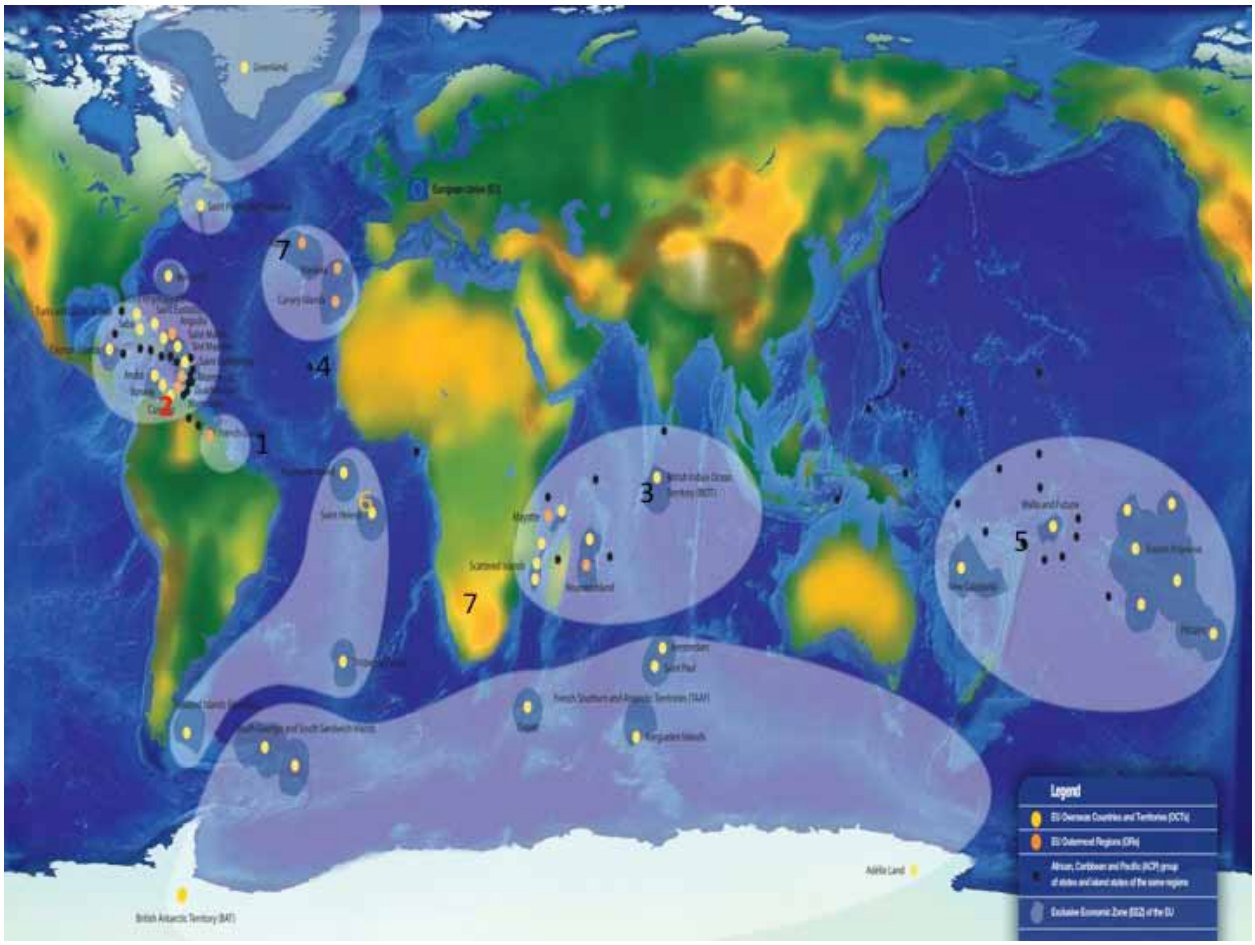
Context

The European Union includes 9 Outermost Regions (ORs) and is associated with 25 Overseas Countries and Territories (OCTs) located across 3 oceans and divided into 7 regions: Caribbean, Indian Ocean, Pacific, Macaronesia, Polar and Sub-polar, Amazon and South Atlantic.

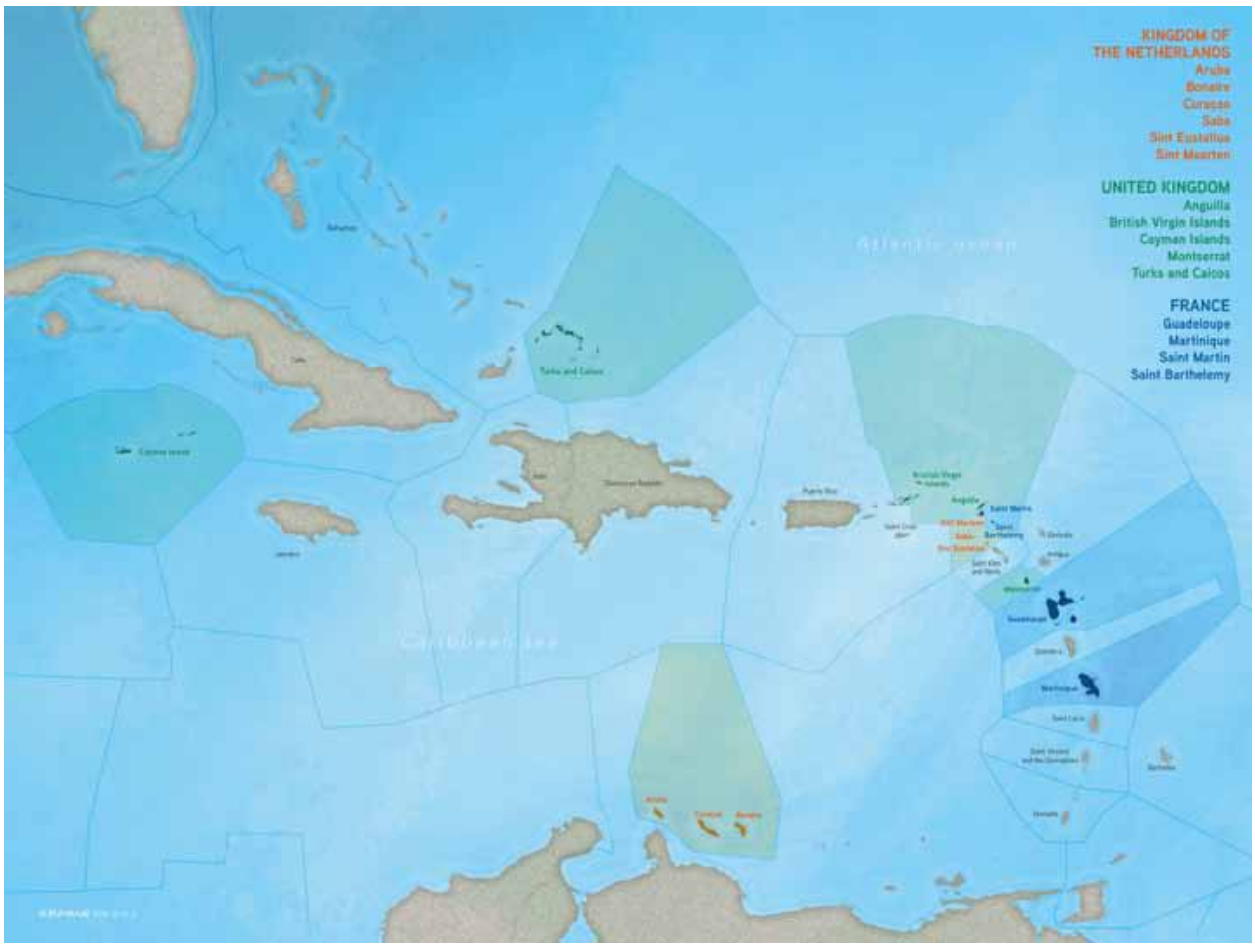
These territories are politically attached to six EU countries (Denmark, France, The Netherlands, Portugal, Spain, UK), even though they are, in some cases, geographically very distant from continental Europe.

The Caribbean region comprises of 15 Outermost Regions (ORs) and Overseas Countries and Territories (OCTs) politically attached to 3 EU member states (France, Kingdom of the Netherlands & United Kingdom)

- United Kingdom entities: Anguilla, British Virgin Islands, Cayman Islands, Turks and Caicos, Montserrat
- Dutch entities: Aruba, Bonaire, Curacao , Saba, Sint Eustatius, Sint Maarten
- French entities: Saint Martin, Martinique , Guadeloupe, Saint Barthelemy



Seven BEST regional knowledge hubs



Caribbean hub

The South Atlantic region consists of 4 OCTs which are all under the jurisdiction of the United Kingdom Government, but are to different degrees self-governing. They are:

- Ascension Island
- Falkland Islands
- St Helena
- Tristan da Cunha

South Georgia and the South Sandwich Islands are within the South Atlantic but for the BEST initiative these are included within the Polar and Sub-polar region.

Europe overseas host over 70% of the EU's biodiversity and contribute to the Caribbean Islands Biodiversity Hotspot

Those territories host a high number of endemic species and are home to several Key Biodiversity Areas (KBAs), globally important for the biodiversity worldwide.

Healthy ecosystems and ecosystem services are essentials to the economies of Europe overseas. Agriculture, fisheries and tourism rely on healthy ecosystems.

However, serious threats are being faced by biodiversity across all the EU ORs and OCTs, such as the destruction of habitats, introduction of exotic species and the spreading of invasive alien species or pollution to the natural habitats. This makes most of them very vulnerable, especially to the effects of climate change.

The BEST initiative – which stands for Voluntary scheme for Biodiversity and Ecosystem Services in Territories of EU Overseas – was launched in 2010 for a limited time by the European Parliament to promote conservation and sustainable use of biodiversity and ecosystem services in EU ORs and OCTs.

The BEST Preparatory Action provided seed money which allowed funding of 16 on-the-ground projects. The outcome of the two open calls for proposals BEST 2011 and BEST 2012 showed a clear need for overseas funding as the requests amounted more than six times the available budget and several projects passing all evaluation criteria could not be funded.

There is definitely an obvious need to make this funding not a one-time effort, but to establish a financial support mechanism sustainable for years

Consultation process: Workshop Anguilla March 2015

to come. Thus, BEST III aims to catalyze the transition to a sustainable BEST facility.

In order to guide future investments in biodiversity hotspots by the European Commission and other donors, Caribbean and South Atlantic ecosystem profiles are being implemented by regional hubs located in the overseas regions.

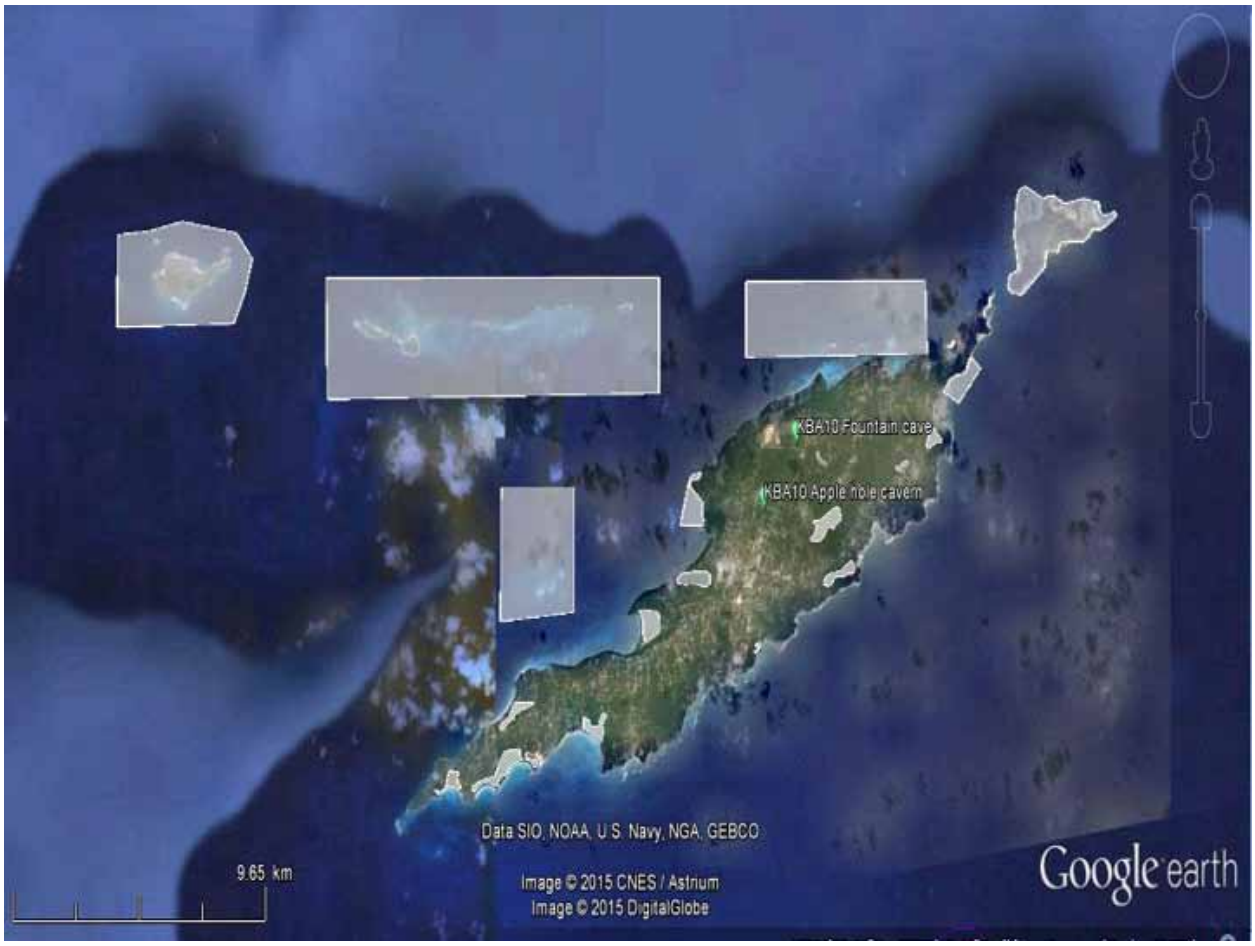
Ecosystem profiling is a 5 steps process involving a broad stakeholders consultation on the ground in order to :

1. Set up Conservation Outcomes at three ecological scales

- Species outcomes equate to globally threatened species (following IUCN categories: Critically Endangered (CR), Endangered (EN) and Vulnerable (VU)).
- Site outcomes equate to Key Biodiversity Areas (KBAs), that is to say:
  - sites contributing significantly to the global persistence of globally threatened species; geographically restricted species; centres of endemism
  - species at key stages of their life cycle
  - ecological integrity and naturalness.
- Corridor outcomes equate to conservation corridors: inter-connected landscapes of sites important for the conservation.

2. Provide an overview of the socio-economic context

- Analyze how the socio-economic context impacts on conservation outcomes
- Analysis of policies related to environment



KBA idenification: an example

- Provide an overview of the civil society organizations, scientific and research institutions, professional organisations and private sector engaged in natural resources management and conservation in the hotspot.

3. Identify and Prioritise Threats

Assessment of the threats and root causes of threats that directly impact the conservation outcomes and the ecosystem's integrity.

4. Identify Funding Gaps

Analyse the funding gaps and identify the priorities for investment.

5. Define a niche and strategy for future investments

Detail major efforts on biodiversity conservation, and where and why existing activities and investments are insufficient.

Outcomes

Ensure the sustainability of the BEST scheme: define niche for investment; fundraise and establish a 5-year action plan to submit to the European Commission

Timeframe

2014-2016: Development of the ecosystem profiles, with several series of exchanges, both bilaterally and collectively, with local stakeholders.

2016-2018: Define the general BEST investment strategy to identifying donors that can contribute to fund BEST in addition to European funds.

BEST Regional Hub in the Caribbean

In the Caribbean Region, under the leadership of IUCN, the SPAW RAC (Regional Activity Center for Specially Protected Areas and Wildlife) in partnership with the Natural Reserve of St Martin, will be in charge of the coordination of the Caribbean regional hub and of the development of the Caribbean ecosystem profiles for the 15 European overseas entities in close collaboration with the existing networks and stakeholders.

BEST Regional Hub in the South Atlantic

In the South Atlantic, SAERI – the South Atlantic Environmental Research Institute based within the Falkland Islands – is responsible for the implementation of the BEST III work and creation of the ecosystem profiles for the 4 OTs within the region. This work will be completed in partnership with the main environmental representatives on each of the islands. SAERI is also responsible for providing expert advice to the Polar and Sub-Polar hub team with regard to South Georgia and the South Sandwich Islands, whose government is based on the Falkland Islands.

New funding opportunities for environmental projects in the EU Overseas Countries and Territories (OCTs): BEST 2.0

In the meantime, recognising the urgency to keep support for projects while a long-term BEST financing mechanism is being elaborated, the European Commission has decided to allocate new resources for concrete projects in the OCTs through a 5-year programme called BEST 2.0, with calls for proposals organised in the two coming years for a budget of over € 6 million.

This BEST 2.0 programme will, amongst others, support implementing actions for biodiversity conservation, sustainable use of ecosystems and ecosystem services in the KBAs identified through the participative ecosystem profiles process led by the regional BEST knowledge hubs.

Web sites

http://ec.europa.eu/best/

http://www.car-spaw-rac.org

http://www.south-atlantic-research.org

Biodiversity and Ecosystem Services in the Overseas Territories (BEST III) - general overview

Maria Taylor (South Atlantic Environmental Research Institute (SAERI))

Taylor, M. 2015. Biodiversity and Ecosystem Services in the Overseas Territories (BEST III) - general overview. p 288 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

The European Union (EU) comprises 34 Outermost Regions (ORs) and Overseas Countries and Territories (OCTs) across the globe, located in 7 regions and 3 oceans: Caribbean, Indian Ocean, Pacific, Macaronesia, Polar and Sub-polar, Amazon and South Atlantic, which in turn form the 7 regional knowledge hubs implementing the BEST III initiative. EU Overseas biodiversity is very rich, home to the majority of endemic species in the EU, and acknowledged as being of international importance. It is, however, particularly at risk because island systems are highly vulnerable to invasive alien species, development, and the impacts of climate change. The EU BEST III initiative is a voluntary scheme being coordinated by staff involved in local projects, working for and with local stakeholders, focusing on the EU ORs and OCTs biodiversity hotspots. Its main aims are:

To create an Ecosystem Profile for each of the territories that will act as a tool to guide future long term conservation efforts and investments

To support the conservation of biodiversity and sustainable use of ecosystem services (including ecosystem based approaches to climate change adaptation and mitigation throughout the EU OR and OCTs)

To combine knowledge and input to foster regional cooperation between territories

To create sustainable funding support on a long term scale by sharing funding opportunities and connecting projects in need of support.

Maria Taylor, Ecologist - BEST III project, South Atlantic Environmental Research Institute - SAERI mtaylor@env.institute.ac.fk

Biodiversity and Ecosystem Services in the Overseas Territories (BEST III) – specific focus on UKOTs

Maria Taylor (South Atlantic Environmental Research Institute (SAERI))

Taylor, M. 2015. Biodiversity and Ecosystem Services in the Overseas Territories (BEST III) – specific focus on UKOTs. p 289 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

As one of the 7 regional knowledge hubs across the world part of the BEST III initiative, the South Atlantic hub encompasses Ascension Island, St Helena, Tristan da Cunha and the Falkland Islands. All these territories are part of the United Kingdom (UK) Overseas Territories (OTs). Coordinated from the South Atlantic Environmental Research Institute in the Falkland Islands, the BEST III South Atlantic Regional Hub is able to take advantage of the existing inter-territory research cooperation within the UK South Atlantic OTs to facilitate the work, whilst strengthening collaboration in environmental science. These South Atlantic UKOTs altogether contain over half of the UKs endemic species (St Helena alone contain a third of the total number). However, there are very little data for the majority of these species, even about their basic distribution, population size or threats they face. Their marine ecosystems are the most understudied and lack even basic lists of species present, although this is starting to be addressed in some areas through active research being conducted within the territories. New species are still being described in all these territories to this date, showing how much there is still to learn about these remote ecosystems and highlighting the very real need for continuing research. Without the fundamental knowledge of what species are present, their conservation status, or basic ecology, it is impossible to protect these globally significant areas of biodiversity. The BEST III initiative within the South Atlantic regional hub aims to create accurate ecosystem profiles for these territories and identify Key Biodiversity Areas (KBAs) that will support environmental management. This process will also differentiate between the prioritisation of conservation work and research. This work is of fundamental importance to the continued obligation of environmental stewardship and management of the natural resources of South Atlantic Territories and will underpin future research and funding opportunities for environmental stakeholders within the region.

Maria Taylor, Ecologist - BEST III project, South Atlantic Environmental Research Institute - SAERI mtaylor@env.institute.ac.fk

A dedicated funding scheme for Biodiversity and ecosystem services in European overseas territories : the BEST Initiative

Romain Renoux (Regional Best Caribbean Hub Coordinator, Regional Activity Centre for Specially Protected Areas and Wildlife in the Caribbean region (SPAW-RAC)/Réserve Naturelle de Saint-Martin)

Renoux, R. 2015. A dedicated funding scheme for Biodiversity and ecosystem services in European overseas territories : the BEST Initiative. p 290 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

In the Caribbean 15 territories are European Union overseas entities politically attached to United Kingdom, France and The Netherlands. Those entities are very rich in biodiversity and natural resources. They host a high number of endemic species and are home to several Key Biodiversity Areas (KBAs), globally important for the biodiversity worldwide. However, serious threats are being faced by biodiversity there, such as the destruction of habitats, spreading of invasive alien species or pollutions to the natural habitats.

For this reason, the BEST initiative – which stands for Voluntary scheme for Biodiversity and Ecosystem Services in Territories of EU Overseas – was launched in 2010 by the European Parliament to promote conservation and sustainable use of biodiversity and ecosystem services in EU overseas territories.

From 2014 to 2018, a study commissioned by the EU and carried out by IUCN, SPAW-RAC and Réserve Naturelle de Saint-Martin in close conjunction with key institutions and existing networks, will be conducted to ensure the sustainability of the BEST scheme and a better integration of the European territories in the Caribbean networks and activities.

Regional ecosystem profiles based on up-to-date scientific data and through consultation with local or regional stakeholders and experts will be developed in order to identify and map marine and terrestrial KBAs. This assessment relies on globally threatened species (IUCN RedList), restricted-range or congregatory species. Assessment of current investment in biodiversity will be identified in order to define niche for investment and establish a 5-year action plan to submit to the European Commission in order to support in the most efficient way conservation projects on the ground.

In the meantime, recognising the urgency to keep support for projects while a long-term BEST financing mechanism is being elaborated, the European Commission has decided to allocate new resources for concrete projects in the OCTs through a 5-year programme called BEST 2.0, with calls for proposals organized in the two coming years for a budget of over € 6 million. This BEST 2.0 programme will, amongst others, support implementing actions for biodiversity conservation, sustainable use of ecosystems and ecosystem services in the KBAs identified through the participative Ecosystem profiles process led by the regional BEST knowledge hubs.

Romain Renoux, BEST Caribbean Hub Coordinator, Reserve Naturelle de St Martin /SPAWRAC romain.renoux@rnsm.org

Discussion: a case-study from Trinidad and Tobago Green Fund

As a contribution to the discussion, Lyndon John looked up and provided information on the Trinidad and Tobago Green Fund, as a model for sustainable financing mechanisms for environmental management but for those who are interested in a cross-sectoral approach, as against the discussed levies on departure taxes, cruise-ship head-taxes etc., Trinidad and Tobago levies a 0.1% tax across all business transactions that is yielding great results. The disbursement was a challenge but this has apparently been resolved. A summary is provided below. There is more information in the source of this, the Chamber of Commerce website: Chamber.org.tt

A look at the Green Fund

What is the Green Fund?

The Green Fund is the national environmental fund of the Republic of Trinidad and Tobago. According to The Miscellaneous Taxes Act, Chapter 77:01 Part XIV, the purpose of the fund is to provide financial assistance to community groups and organisations for activities related to reforestation, remediation, environmental education and public awareness of environmental issues and conservation of the environment. Remediation is the remedying and restoring the functional capacity of an environmental resource damaged by natural or man-made causes.

Reforestation is the replanting a previously forested area mainly with seedlings of indigenous forest tree species. Conservation is wise use of natural resources for the benefit of present and future generations.

Since inception, the Fund has successfully financed a number of certified activities totalling some TT $117,011,878. These include the Fondes Amandes Community's "Sustainable Community Forestry (Reforestation) Initiative", Phases I & II; Greenlight Network's "Plastikeep Projects", Phases I & II; Environmental Management Authority's "Nariva Swamp Restoration, Carbon Sequestration and Livelihoods Project"; Toco Foundation's "Water Harvesting in the Northeastern Region of Trinidad"; Nature Seekers "Matura Development Initiative of Awareness, Management and Eco-tourism for Natural Resource Conservation"; and Realize Road Environmental Club's "Greening the Plastic planet recycling Project".

The Green Fund was first established under the Finance Act 2000 through the Miscellaneous Taxes Act, Chapter 77:01 Part XIV – Green Fund Levy – by the Government of the Republic of Trinidad and Tobago (GoRTT). This was amended by Act No. 5 of 2004 and was followed by the Green Fund Regulations 2007 and the Green Fund (Amendment) Regulations 2011. The Fund is capitalised by a tax of 0.1% on the gross sales or receipts of companies carrying on business in Trinidad and Tobago. The first contribution to the Green Fund Levy was made on 31 March 2001. The levy is payable quarterly in each year of income i.e. March 31st, June 30th, September 30th, and December 31st.

The implementation of the Green Fund became operational through the establishment of the Green Fund Executing Unit (GFEU) and the appointment of a Green Fund Advisory Committee (GFAC) in 2008 by the then Ministry of Planning, Housing and the Environment. The balance of the fund at 30 September 2011 was $2,581,557,613.94.

The Green Fund Advisory Committee

Members of the GFAC are appointed by the Minister with the responsibility for the Environment. The members represent a variety of expertise relevant to the Green Fund including law, finance, environmental management and forestry sectors. It is legislated that there will be no less than five (5) and no more than nine (9) members serving a two-year period. The Committee's primary role is to advise the Minister regarding applications for funding.

Having been installed a little over 12 months ago, the GFAC has already recommended six applications for certification, with a combined value of TT $44,868,521.

The Green Fund Advisory Committee's process is robust, detailed and intense, as it should be with respect to taxpayer's funds and grant funding. The process has also aided applicants in ensuring that the proposed projects provide community and environmental impact while being sustainable.

The Evaluation criterion relates to all the key policies, for example the Medium-Term Policy Framework 2011-2014, the National Environment Policy 2006, the Manifesto of the People's Partnership 2010 and other relevant National and

International environmental and development Conventions, Policies and Programmes. The UN Millennium Development Goals (MDGs) 2015, goal 7 – Ensure environmental sustainability, integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources.

Applicants will receive support from the Green Fund Executing Unit, ably led by Mr Richard Laydoo. The Unit will provide a range of resources, from supportive trained officers, to the Green Fund Application Form and Excel budget template.

The Green Fund Executing Unit

The Green Fund Executing Unit serves as the administrative and operational division of the Green Fund. The Unit is the point of contact for all applicants and its staff communicates with the Advisory Committee regarding referrals of applications to the Fund via its Project Coordinator.

Its Mission is "To enhance the quality of the natural environment of Trinidad and Tobago and achieve the goal of the National Environmental Policy of environmentally sustainable development by the provision of financial assistance from the Green Fund to organisations and community groups engaged in remediation, reforestation and conservation activities."

Its Vision is to be "An articulate, diligent, innovative unit facilitating the promotion and implementation of the Green Fund through partnerships, particularly with local organisations and community groups, towards environmentally sustainable development thereby improving the wellbeing of all citizens of Trinidad and Tobago."

The Mandate of the Green Fund Executing Unit (GFEU) is to manage the implementation and operations of the Green Fund. It executes this mandate through the following core functions:

- Promoting the Green Fund among key stakeholders, including public and private sector agencies and beneficiary organizations and community groups;
- Receiving and ensuring proposals submitted for funding from eligible organizstions and community groups meet the criteria of the Green Fund;
- Forwarding proposals received to the Green Fund Advisory Committee for review and recommendation for certification;
- Monitoring the implementation of projects approved for funding, including evaluation of performance, auditing and reporting;
- Coordination of all activities with respect to the administration of the Green Fund;
- Implementation of the financial system, including monitoring and reporting, in keeping with legal and institutional requirements;
- Provision of timely reports in conformity with requirements of the Green Fund (Amendment) Regulations 2011.

Organisations and Non-Governmental Organisations may access the Green Fund.

An Organization is defined as a body incorporated by statute other than the Companies Act; or a body incorporated as a Non-Profit Company under the Companies Act; which is engaged in activities related to the remediation, reforestation and conservation of the environment.

A Non-Governmental Organization (NGO) is defined as a non-profit, unincorporated body, which is registered as a Non-Governmental Organization with the Ministry with responsibility for Community Development or the THA; and engaged in activities related to the remediation, reforestation and conservation of the environment.

The application process

The Green Fund Executing Unit reviews all applications, which are then submitted to the Green Fund Advisory Committee. Satisfactory applications are then recommended to the Minister responsible for the Environment for approval. An application may require the following (among others): Application form through the GFEU; Project proposal; Technical and budget details; Organisation details including constitution; Legal requirements, *e.g.* permissions, approvals; Stakeholders; Sustainability. Upon approval, an agreement is signed and part of the project's approved funds is disbursed and project implementation initiated.

Chairman of the Green Fund Advisory Committee (GFAC), Inshan Meahjohn, stated that he feels humbled by the renewed interest in environmental projects by community groups and eligible organisations throughout Trinidad and Tobago. He encourages eligible groups throughout the entire nation to apply for funding for environmental projects that will improve and develop Trinidad and Tobago.

Session 12: Using informed decision making to manage development sustainably (including physical planning, environmental impact assessments etc)

Chairing & facilitating team: Dace Ground (Bermuda; UKOTCF), Jo Treweek (Treweek Environmental Consultants), Isabel Peters (St Helena), Arlene Brock (Bermuda)

Introduction – Dace McCoy Ground (Bermuda National Trust & UKOTCF)
Cayman: some successes, by public pressure; and by negotiations, rather than by EIA process – Christina Pineda (National Trust for the Cayman Islands)
St Helena Airport: Environmental Lessons Learnt – Isabel Peters (St Helena Government)
A model for rapid assessment and mapping of ecological criteria for informed land use in small island developing states – Kathleen McNary Wood (Turks & Caicos Islands)
Managing Marine Protected Areas in the Isle of Man in partnership with fishermen – Fiona Gell[1], Peter Duncan[1], Karen McHarg[1], Isobel Bloor[2], Sam Dignan[2], Kev Kennington[3], Liz Charter[4] and Andy Read[1] ([1] Fisheries Directorate, Department of Environment, Food and Agriculture, Isle of Man Government; [2] School of Ocean Sciences, Bangor University, UK; [3] Government Laboratory, Department of Environment, Food and Agriculture, Isle of Man Government; [4] Environment Directorate, Department of Environment, Food and Agriculture, Isle of Man Government)
Community Voice Method - a contemporary approach to engaging stakeholders in development of marine resource conservation policy – Peter B. Richardson[1], Lisa M. Campbell[2], Gabriel B. Cumming[2], Quentin Phillips[3], Sue Ranger[1] & Amdeep Sanghera[1] ([1]Marine Conservation Society (MCS), Ross House, Ross Park, Ross-on-Wye, Herefordshire, HR9 7QQ; [2]Nicholas School of the Environment, Duke University, Durham, NC, USA; [3]Department of Environment and Maritime Affairs, South Caicos, Turks and Caicos Islands, BWI)
Cyprus SBAs: need for measures in view of recent change of British policy – Melpo Apostolidou (BirdLife Cyprus)
Legal requirements for EIAs – Arlene Brock (former Ombudsman for Bermuda)
Environmental Impact Assessments (EIAs): what they involve and what are the benefits – Jo Treweek (Treweek Environmental Consultants) (linking to the workshop for some participants on the day after the main conference)
Discussion

From left: Jo Treweek, Arlene Brock, Dace Ground and Isabel Peters

Introduction

Dace McCoy Ground (Bermuda National Trust & UKOTCF)

Ground, D.M. 2015. Introduction. pp 294-297 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

An introduction to the session on Using informed decision making to manage development sustainably (including physical planning, environmental impact assessments etc).

Lady (Dace) Ground, Bermuda National Trust; UKOTCF Council; Wider Caribbean Working Group dacemccoyground@gmail.com

Some UKOTs and CDs have good environmental legislation, but some do not. Some may have legislation but there are difficulties in implementing it. In this session, we cover situations both in which environmental impact assessment and other environmental safe-guarding measures are required and where they are not. We explore some ideas about what to do in the absence of effective legislation, or indeed where effective legislation can be complemented by additional approaches.

Lady Ground opted to give only a very short introduction, and said more in summarising the session. Some of that summary, relating particularly to the continuing relevance of the Environment Charters is given below.

We all hear all the time that the responsibilities for the environment has been devolved by UK Government to the UK Overseas Territories, but what we forget sometimes is the process through which this devolution was achieved. That arose from a recognition, back in the late 1990s, about the UK responsibilities under Multilateral Environmental Agreements, such as the Convention on Biological Diversity, for having responsible environmental management in its Overseas Territories. It was recognised too that a way was needed to devolve that responsibility to the Territories while the UK continued to take responsibility for its side of it. So what we got, through the offices of Iain Orr –

who has been with us throughout – and many other people, is a double set of Commitments. The Government of each UK Overseas Territories committed to fulfil various things required by the international conventions that UK Government had, with their agreement, signed them up to and other aspects of international law and expectations. UK Government, as the sovereign state actually making the international commitments, committed itself in its corresponding Commitments in the Charters to support the UKOTs in their Commitments. Below is an example from the British Virgin Islands, but the wordings of Environment Charters from all the UKOTs are substantially the same.

We hear (below) from Arlene Brock that the Charters have been validated by courts. They are valid, applicable and enforceable agreements between the UK and the UK Overseas Territories. So, if UK is not living up to its obligations or the Overseas Territories are not living up to theirs, there is a mutually enforceable treaty here.

So, in that context we urge the Overseas Territories Ministers to recognise the commitments of their own Governments under the Environment Charters agreed with the UK Government in 2001; and to continue to press the UK Government to fulfil its Commitments under the Charters. These include a strong element in relation to technical assistance, especially regarding technical and scientific issues

like renewable energy, fulfilling Commitments number 1, 5 and especially 7:

> UK Government Commitment 1. Help build capacity to support and implement integrated environmental management which is consistent with the British Virgin Islands' [or each other Territory's] own plans for sustainable development.
>
> UK Government Commitment 5. Help the [Territory] ensure it has the legislation, institutional and mechanisms it needs to meet international obligations.
>
> UK Government Commitment 7. Use the UK, regional and local expertise to give advice and improve knowledge of technical and scientific issues. This includes regular consultation with interested non-governmental organisations and networks.

So the UK is obligated by treaty to do these things.

A second element is assistance with updating environmental legislation, and that relates to:

> UK Government Commitment 2. Assist [the Territory] in reviewing and updating environmental legislation.
>
> UK Government Commitment 5: (see above)

A third element is a ring-fenced fund to support projects of lasting benefit to the territories environments:

> UK Government Commitment 8. Use the existing Environment Fund for the Overseas Territories, and promote access to other sources of public funding, for projects of lasting benefit to the [Territory's] environment.

This is worth a note. When it was written in 2001, there was something called the Environment Fund for the Overseas Territories in existence within FCO; so the treaty referred to that Fund. By the time we met in Bermuda in 2003, UK Government had sort of forgotten about that, and its Commitment of only two years earlier, and obliterated that Fund. So, as a result of the UKOTCF conference in 2003 in Bermuda, we negotiated the Overseas Territories Environment Programme (OTEP), which was funded by DFID and the FCO jointly. And that is something that came out of that conference. And so I think we feel that, if we say something in this conference something might happen, especially as OTEP itself was cancelled without consultation just a few years later.

Anyway, there is a Commitment by UK Government to a ring-fenced fund for projects of lasting benefit to the Territories' environments.

Another element is facilitating the Territories' inclusion and compliance with multilateral environmental agreements, and that comprises UK Government Commitments 3 and 4. Those, I think you can see, are just simply to facilitate the extension of MEAs and ensure that Territories are kept up to date with those.

The final element that I want to stress is:

> UK Government Commitment 6. Promote better cooperation and the sharing of experience and expertise between the Territory], other Overseas Territories and small island states and communities which face similar environmental problems.

This concerns political co-operation and the sharing of experience and expertise among the Territories, including by helping fund regular conferences, like this one hosted by the Gibraltar Government in July 2015.

We need to keep these extremely important Commitments in mind during our discussions, planning and activities.

Annex 1. Environment Charter guiding principles, commitments of the UK Government and the commitments of the Territory Government, example for the Virgin Islands

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Environment Charter

BRITISH VIRGIN ISLANDS

Guiding Principles

For the UK government, for the government of the British Virgin Islands and for the people of the British Virgin Islands.

1. To recognise that all people need a healthy environment for their well-being and livelihoods and that all can help to conserve and sustain it.
2. To use our natural resources wisely, being fair to present and future generations.
3. To identify environmental opportunities, costs and risks in all policies and strategies.
4. To seek expert advice and consult openly with interested parties on decisions affecting the environment.
5. To aim for solutions which benefit both the environment and development.
6. To contribute towards the protection and improvement of the global environment.
7. To safeguard and restore native species, habitats and landscape features, and control or eradicate invasive species.
8. To encourage activities and technologies that benefit the environment.
9. To control pollution, with the polluter paying for prevention or remedies.
10. To study and celebrate our environmental heritage as a treasure to share with our children.

Ralph T. O'Neal
BRITISH VIRGIN ISLANDS
26 September 2001

Valerie Amos
UNITED KINGDOM
26 September 2001

Commitments

The government of the UK will:

1 Help build capacity to support and implement integrated environmental management which is consistent with the British Virgin Islands' own plans for sustainable development.

2 Assist the British Virgin Islands in reviewing and updating environmental legislation.

3 Facilitate the extension of the UK's ratification of Multilateral Environmental Agreements of benefit to the British Virgin Islands and which the British Virgin Islands has the capacity to implement.

4 Keep the British Virgin Islands informed regarding new developments in relevant Multilateral Environmental Agreements and invite the British Virgin Islands to participate where appropriate in the UK's delegation to international environmental negotiations and conferences.

5 Help the British Virgin Islands to ensure it has the legislation, institutional capacity and mechanisms it needs to meet international obligations.

6 Promote better cooperation and the sharing of experience and expertise between the British Virgin Islands, other Overseas Territories and small island states and communities which face similar environmental problems.

7 Use UK, regional and local expertise to give advice and improve knowledge of technical and scientific issues. This includes regular consultation with interested non-governmental organisations and networks.

8 Use the existing Environment Fund for the Overseas Territories, and promote access to other sources of public funding, for projects of lasting benefit to the British Virgin Islands' environment.

9 Help the British Virgin Islands identify further funding partners for environmental projects, such as donors, the private sector or non-governmental organisations.

10 Recognise the diversity of the challenges facing Overseas Territories in very different socio-economic and geographical situations.

11 Abide by the principles set out in the Rio Declaration on Environment and Development (See Annex 2) and work towards meeting International Development Targets on the environment (See Annex 3).

The government of the British Virgin Islands will:

1 Bring together government departments, representatives of local industry and commerce, environment and heritage organisations, the Governor's office, individual environmental champions and other community representatives in a forum to formulate a detailed strategy for action. (See Annex 1).

2 Ensure the protection and restoration of key habitats, species and landscape features through legislation and appropriate management structures and mechanisms, including a protected areas policy, and attempt the control and eradication of invasive species.

3 Ensure that environmental considerations are integrated within social and economic planning processes; promote sustainable patterns of production and consumption within the territory.

4 Ensure that environmental impact assessments are undertaken before approving major projects and while developing our growth management strategy.

5 Commit to open and consultative decision-making on developments and plans which may affect the environment; ensure that environmental impact assessments include consultation with stakeholders.

6 Implement effectively obligations under the Multilateral Environmental Agreements already extended to the British Virgin Islands and work towards the extension of other relevant agreements.

7 Review the range, quality and availability of baseline data for natural resources and biodiversity.

8 Ensure that legislation and policies reflect the principle that the polluter should pay for prevention or remedies; establish effective monitoring and enforcement mechanisms.

9 Encourage teaching within schools to promote the value of our local environment (natural and built) and to explain its role within the regional and global environment.

10 Promote publications that spread awareness of the special features of the environment in the British Virgin Islands; promote within the British Virgin Islands the guiding principles set out above.

11 Abide by the principles set out in the Rio Declaration on Environment and Development (See Annex 2) and work towards meeting International Development Targets on the environment (See Annex 3).

Cayman: some successes, by public pressure; and by negotiations, rather than by EIA process

Christina Pineda (National Trust for the Cayman Islands)

Pineda, C. 2015. Cayman: some successes, by public pressure; and by negotiations, rather than by EIA process. pp 298-300 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

In the absence of environmental protection legislation and an outdated development plan, a highway was haphazardly plotted through the interior of Grand Cayman in 2005. This threatened to cut through the heart of the island's most pristine habitats, including mangrove wetlands, old growth forests and shrublands. The entire length of the highway was set to impact five Trust-owned properties including reserves where the endangered endemic Grand Cayman blue iguanas are released.

After years of no progress on the proposed highway, due to lack of Government funding, it was hoped that it would never become a reality. However, the Trust faced its biggest crisis in years when the issue of the gazetted East West Arterial road resurfaced in mid-2014, when a developer offered to construct the highway in connection with a large golf resort development on the eastern side of the Island.

The Trust mobilised quickly to develop a comprehensive advocacy strategy which included, amongst other things, seeking international and local support in relation to this crisis. As a result, in an unprecedented step the Government responded favourably to the Trust's invitation to discuss a mutually agreeable way forward.

This presentation will explore the Trust's approach, the importance of local support and necessary compromise, which ultimately avoided the destruction of hundreds of acres of the important interior forest in the Cayman Islands.

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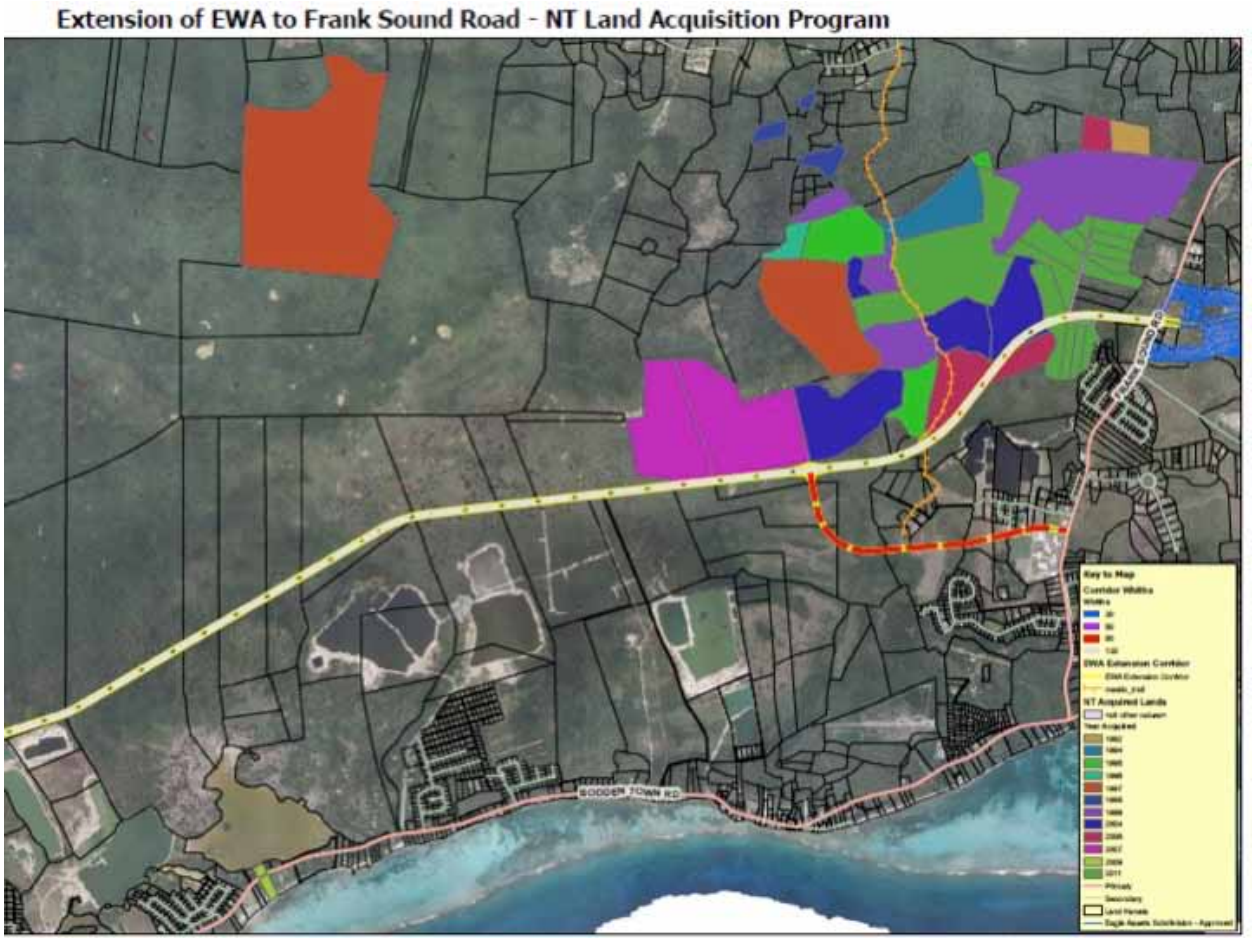
The problem was that there was no conservation legislation to protect environmentally sensitive areas and so no way to compel legally the Government to consider, and mitigate for, adverse environmental impacts.

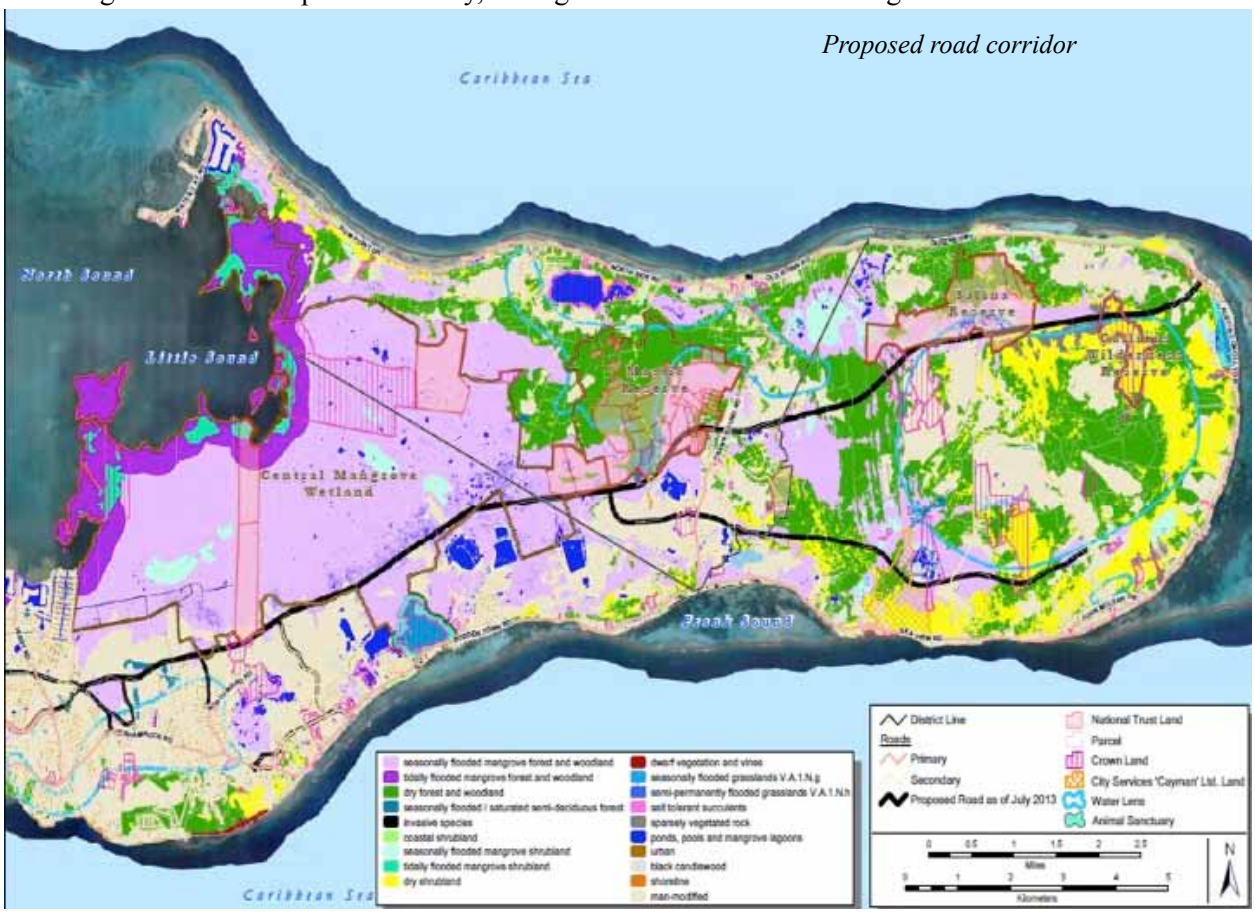
The potential effects were that the entire length of highway was set to impact five Trust-owned properties. In addition it threatened the Mastic Reserve (old growth forest), and would cut it off from wetlands that provide vital moisture to the dry forest. There would be habitat loss, fragmentation, change and edge-effects.

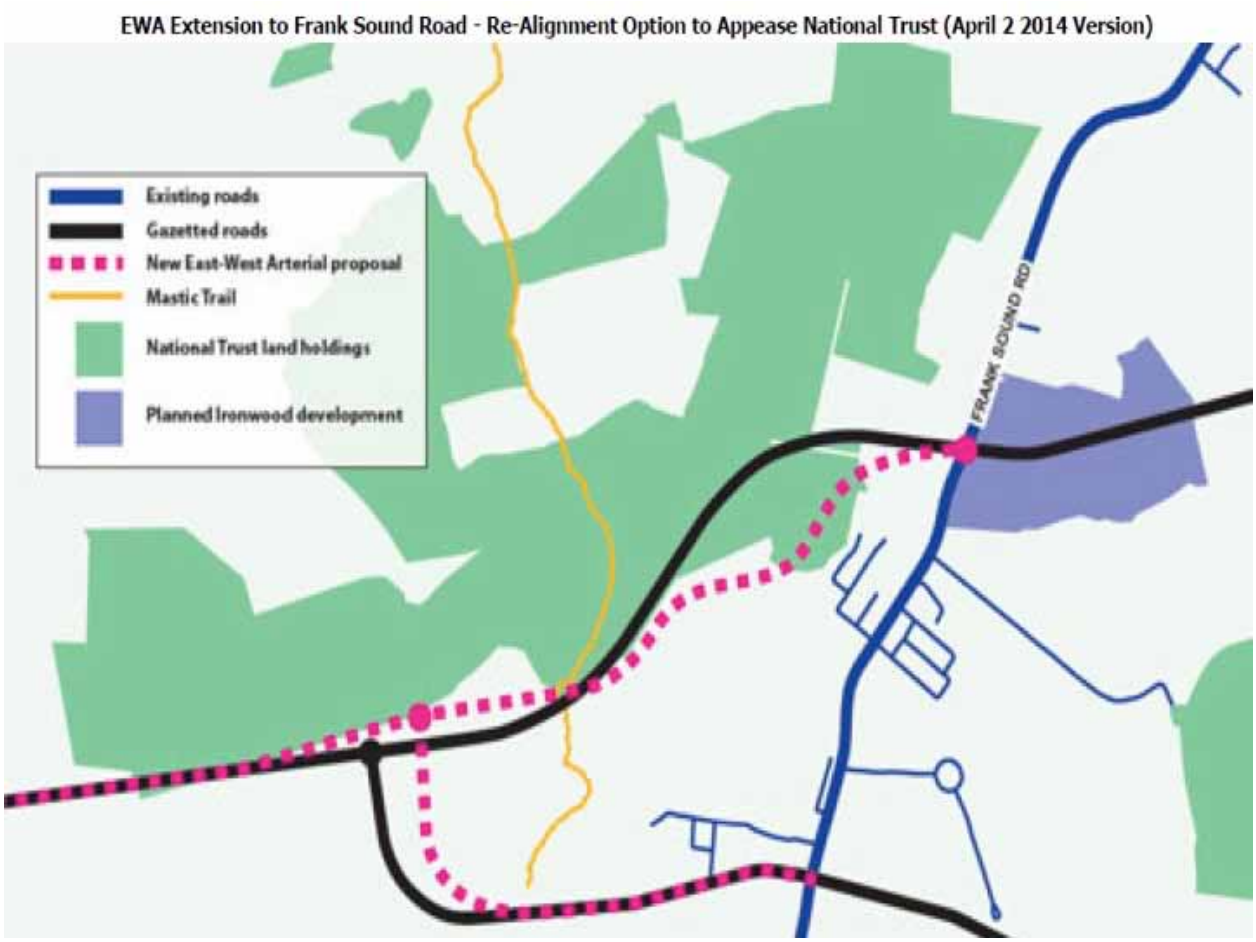
The Trust mobilised quickly to develop a comprehensive advocacy strategy, which



included, amongst other things: briefing outlining potential adverse effects and recommendations including a national transportation study, strategic environmental impact assessments, moving route south, and mitigation measures. The strategy involved also seeking international and local

Proposed road corridor





The outcome: EWA Extension to Frank Sound Road – Re-Alignment option to Appease National Trust (April 2 2014 version)

support in relation to the crisis.

The advocacy strategy included: stakeholders, important deadlines, target audiences, tools, an overall aim, a means objectives, and an action plan. Key components of the strategy included befriending top-level civil servants and guerrilla tactics when necessary.

As a result, in an unprecedented step, the Government responded favourably to the Trust's invitation to discuss a mutually agreeable way forward.

This included the existing route modified to avoid as much of reserve as possible, loss of a small portion of the southern trail head, saved approximately 30 acres from direct destruction and set precedent for future negotiations with Government.

This experience highlights also the importance of local support and the need to compromise, which ultimately avoided the destruction of hundreds of acres of the important interior forest in the Cayman Islands.

Local press reports

St Helena Airport: Environmental Lessons Learnt

Isabel Peters (St Helena Government)

Peters, I. 2015. St Helena Airport: Environmental Lessons Learnt. pp 301-309 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

The construction of the St Helena Airport, the largest project the island has seen, presented many environmental challenges and opportunities. The site for the airport on Prosperous Bay Plain, an area of immense ecological value, raised a number of significant environmental issues from the onset.

Loss of habitats and species was inevitable, but this provided a catalyst for raising the profile of habitats and species that had previously not been particularly well studied. Understanding more about what was actually present on the site and designing mitigation to counteract the direct and indirect impacts became a key part of the project, both prior to and throughout the construction. Many valuable lessons have been learnt and will continue to be learnt as the construction of the airport draws to a close and restoration works begin.

The airport project became a driver also for establishing positive environmental management practices and procedures, including the adoption of the Environmental Impact Assessment (EIA) process, now a legal requirement under the planning process. The EIA for the airport project was completed some six years before construction started; parts of it were already out of date and other parts needed to be modified to suit the real situation on the ground as the project evolved. All parties involved needed to work together to come up with realistic solutions.

One of the most important lessons learnt was that the environment was only one aspect that needed to be considered. Throughout the project, decisions were made by balancing the technical, logistical, social, financial and environmental needs.

(Supported by display material in poster room)

Miss Isabel Peters, Chief Environment Officer, St Helena Government
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Introduction

I have been involved in the St Helena airport project for over 15 years and what I have learnt could fill a book, but this presentation is only 13 minutes long so I will just share with you some of the highlights from the environmental lessons learnt from the St Helena Airport Project.

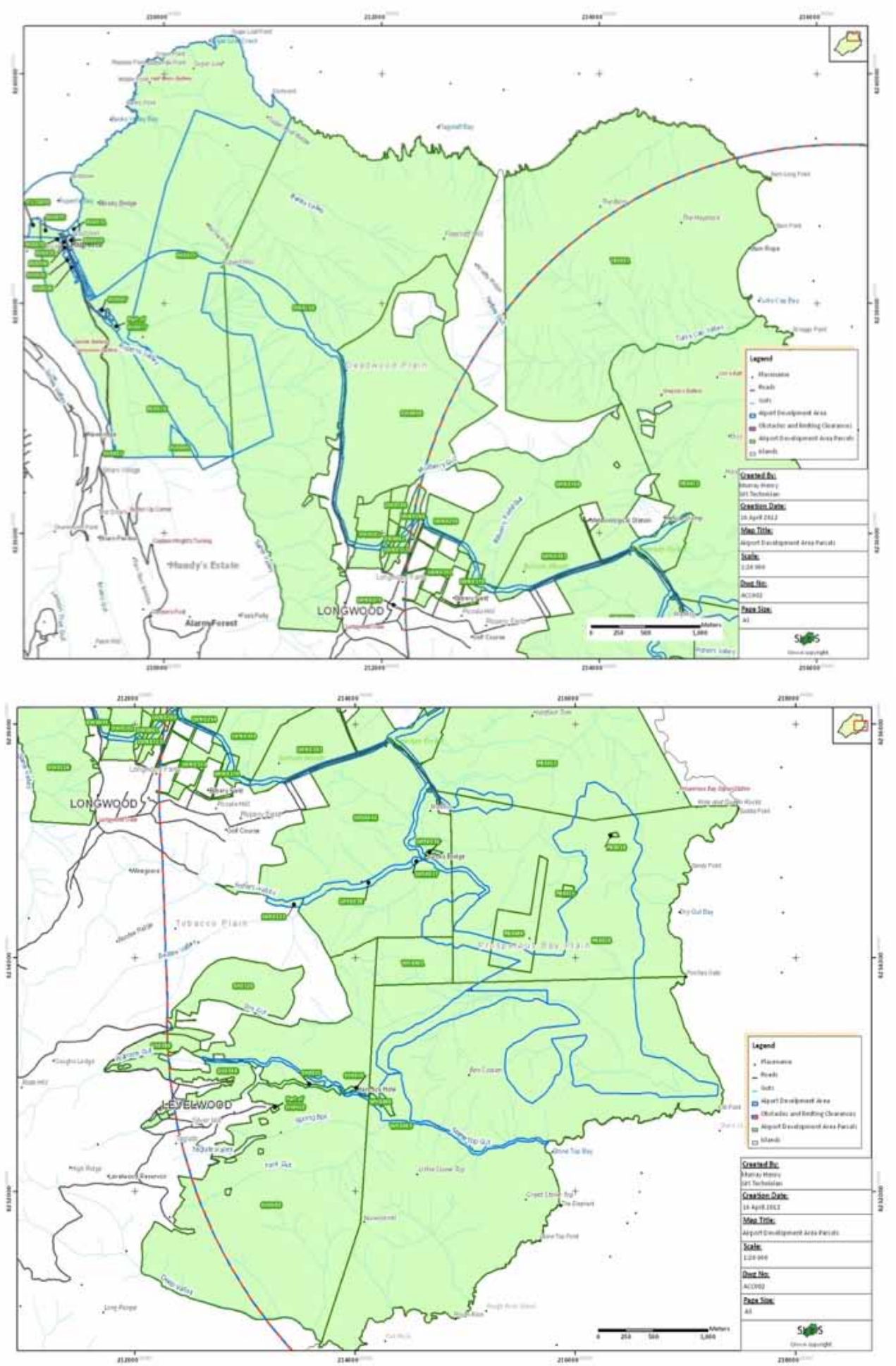
Planning for an airport on St Helena began many years ago. Indeed, there are references to studies having been done as far back as 1943. Over the years there were countless visits by consultants and specialists who produced many reports and feasibility studies and plans and designs. In recent years, the driver for an airport for St Helena was to reduce the Island's isolation and, through this, create the means for economic development and self-sustainability, and ultimately reduce the dependency on grant-in-aid from the United Kingdom.

Facts and Figures

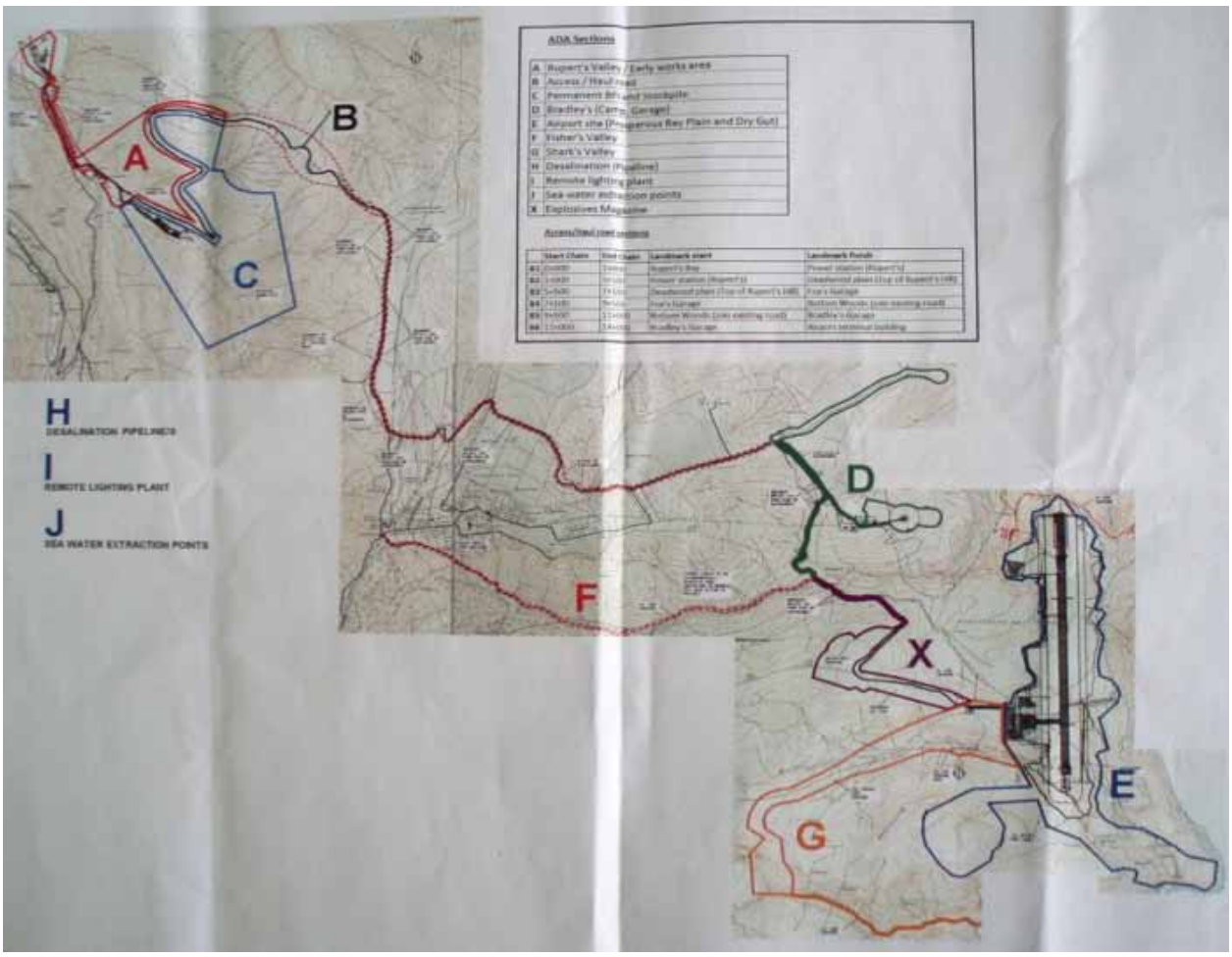
To put the scale of the project into perspective, here are some interesting facts and figures:

Total land area covered by the project: 200ha

Length of the airport road: 14km



St Helena Airport_Airport development area



St Helena Airport Scheme Components and project area

Runway length : 1,950m Width: 45m

Amount of earth moved: 9.5 million m^3

Total Number of people employed: 600, of which approximately 2/3 are Saints [St Helena islanders]

Cost of the project: £250 million

Environmental Impact Assessment (EIA) Process

The EIA for the airport project began in 2005 and was based on the reference designs. The Environmental Statement (ES) and Environmental Management Plan (EMP) were completed in December 2007. However, following the financial crisis, the UK Government "paused" the airport project in 2008, and this was not lifted until July 2010. Recognising that there had been some changes to the original reference design, an Addendum to the ES was produced, along with an updated EMP in 2011. The Design, Build, Operate (DBO) Contract with Basil Read, a South African construction firm, was signed on the 3rd November 2011.

St Helena Airport temporary jetty at Ruperts

St Helena Airport Sea Rescue facility under construction

St Helena Airport bulk fuel installation

St Helena Airport haul road: Rupert's Hill to pipe ridge – climbs 300m over 5km

The EMP translates the findings of the EIA into measures that need to be undertaken by the contractor to avoid, minimise or offset the adverse environmental impacts. The EMP was first issued in 2007 and formed part of the Employer's requirements of the Invitation to Negotiate. It then formed part of the Employer's requirements of the contractor, meaning that everything in the EMP became a contractual requirement that the contractor could be forced to comply with. This ensured that the EMP was a working document that needed to be consulted and acted upon throughout the project.

The contractor produced a Contractors Environmental Management Plan (CEMP) that is updated biannually and provides the detail of how they will implement the EMP. One of the key lessons learnt, however, was that future EMPs must be clear and unambiguous, with actions that are implementable, measurable and auditable, with key performance indicators, responsible persons identified and all mitigations properly costed.

Institutional Arrangements

In order to implement and monitor compliance to the EMP and CEMP, a resourced team of dedicated environmental staff was required. Initially there was an underestimate as to the scope and volume of work involved but, as this was realised, teams grew. The contractor, Basil Read, employs a Contractor's Environmental Control Officer (CECO), who is responsible for ensuring compliance with, and implementation of the CEMP on site. She is assisted by a team of up to 10 who are responsible for workplace audits, environmental monitoring, clearing invasive species, rehabilitation, pest and predator control, waste management and keeping archaeological watching briefs. An off-island Environmental Manager is responsible for inputs to design, overall environmental management and quality assurance, ongoing advice, internal audits and preparing the annual environmental report.

The airport project is overseen by the Project Management Unit (PMU), a small resident team from Halcrow. This includes an Environmental Monitor and Environmental Inspector responsible for checking CEMP compliance on site and reviewing designs to ensure they comply with environmental regulations and incorporate

Prosperous Bay Plain - before airport construction

Prosperous Bay Plain during construction

St Helena Airport DVOR under construction at Bradleys

St Helena Airport Dry Gut infilling: 7.6 million cubic metres of rock dumped and compacted to maximum height of 120m

environmental mitigation measures outlined in the ES. SHG has the Deputy Airport Project Director (Environment and Operations) in the Access Office responsible for facilitating the delivery of the Airport Project, with particular focus on the environmental aspects of the project, and myself from the Environmental Management Division in a supporting role. The Access Office also currently has a team of 9 that work in partnership with Basil Read to deliver the Landscape and Ecological Mitigation Plan (LEMP). We also have off-island technical support at DFID from Dick Beales. With dedicated environmental posts in each of the four key organisations directly involved in the airport project, we have been able to work together effectively to ensure environmental requirements have been met. We meet formally on a weekly basis to discuss current and up-coming issues. It has also been advantageous that the key environmental staff members from each organisation have been with the project since the start of works on site.

The lesson learnt here was that, once an EIA is done and an EMP produced, a dedicated environmental team has to be employed for the duration of the project to ensure implementation.

Catalyst for wider environmental management

The airport project also became a driver for establishing positive environmental management practices and procedures, including the formal adoption of the EIA process. Following the airport EIA, EIA legislation was drafted for inclusion in our local planning legislation. This was adopted in 2008, and it is now a legal requirement to consider whether or not an EIA is required for each development application. The EIA process is guided by the EIA regulation, 2013.

The processes put in place for the implementation of the EMP were all new to the Island, and we have learnt much from these that we can apply to all developments. Whilst we are not likely to see another project on Island of the scale of the airport project, the general approach to implementing an EIA and EMP can be applied to other developments: the need, for example, for CEMPs, site-walkovers, watching briefs and

St Helena Airport: view to Great Stone Top, August 2012

St Helena Airport: view to Great Stone Top, February 2015

St Helena Airport buildings, runway and Dry Gut area

St Helena Airport buildings, runway and Dry Gut area

stakeholder and public engagement. In many ways, the airport project has "set the bar" for what is required in terms of environmental assessment and management of development projects on the Island.

Ecological Issues

Finding a suitable site for the airport was a challenge, particularly as there is very little flat land on the Island. Prosperous Bay Plain, the site eventually chosen, had been one of the main contenders from the beginning. From an environmental point of view, it was not one we would have wished to develop under normal circumstances. It is the only desert-like habitat on the island and has immense ecological value, being home to a suite of invertebrates found nowhere else on the Island and nowhere else in the world. It is also a significant habitat for St Helena's only endemic bird, the wirebird.

Whilst there was early recognition that there was a significant endemic invertebrate fauna on Prosperous Bay Plain, there was very little detail on what species were present and where they were found. In 2003-4, the SHG commissioned Dr Philip and Dr Myrtle Ashmole to undertake studies on the invertebrate fauna on Prosperous Bay Plain, a project that was funded by the Environment Fund for Overseas Territories (EFOT). The project provided a baseline study of invertebrates present with locations. The Ashmoles provided also recommendations for actions to minimise adverse impacts and mitigate for loss of sensitive habitats. Their work highlighted the particular importance of the Central Basin as a unique habitat, with a number of species found only here. As this was discovered early on in the EIA process, this information was relayed to the designers as an area to be avoided. This was largely met, with the reference designs showing that approximately 20% of the Central Basin would be affected; however, during the detailed designs, this was reduced to approximately 11%. This is evidence that, if ecological studies are done early on and findings are fed into the design process, sensitive areas can be avoided.

The airport construction footprint included a

Rehabilitation Plot for asteiid fly (from construction footprint)

Mole Spider

St Helena Airport buildings

number of wirebird territories; as part of the EIA process, advance mitigation works included restoration of three compensatory wirebird habitat areas outside of the airport construction footprint. Whilst a large area of wirebird habitat was destroyed and/or modified during construction works, far from being frightened away by the activity, the wirebirds seemed hardly bothered at all and maintained a constant presence throughout. This did, however, cause problems for the contractors as it is an offence to disturb nesting wirebirds, and there were a few incidences of wirebirds nesting in active construction areas; works there had to cease until the eggs hatched and the chicks fledged. A valuable lesson learnt here was to work around the wirebird nesting season, monitor wirebird activity and employ active site-management including the use of tactics to try to prevent nesting in areas where construction was or was due to take place.

As the design of the project evolved, it became necessary to commission further baseline ecological studies of areas that had not been included in the original EIA. We learnt here that

Wirebirds: (top) on nest; (middle) young chick; (bottom) adult in distraction display, trying to draw potential predators (including human) away from chicks.

Lichen Dimelaena triseptata *removed from construction footprint to safe stockpile location (above) and translocation work (right)*

Relocation of babies toes from construction footprint into newly created habitat

Rehabilitation - planting

further work should have been done on the ES prior to finalisation of the DBO contract, due to the number of significant changes to the reference design and the amount of time that had elapsed since the original surveys had been done.

The additional surveys provided additional valuable data on species and habitats. In some cases, this information was used to inform planning applications. In cases where losses were inevitable, appropriate mitigation had to be designed. As this involved unique species, there were few if any references to use and most of the methods were new and untested. But we have had successes; as an example, the open channel was adapted to reduce the impacts on rare lichens and invertebrate species including the successful translocation of lichens.

Stakeholder engagement, communication and working together

Communicating and engaging with stakeholders has been very important throughout the project. The project area (including wharf, airport road, bulk fuel farm, the runway and airport buildings) spreads across the island from north-west to north-east, passing through a number of small settlements and sensitive habitats. Residents have been impacted by general construction impacts such as noise, dust, vibration and disruptions to access to their properties.

The airport project has in place a number of processes to ensure that the different groups of stakeholders are fully aware of the issues that affect them. The public can raise issues of concern and input into decision making as and when appropriate. A number of methods are used including: regular airport updates published in the local newspapers and online; radio talks as and when appropriate; Stakeholder Engagement Forums which are open to the general public and held in various locations around the Island; and door-to-doors and letter drops. The contractor employs a Community Liaison Officer (CLO) as the focal point of contact for the public and has a dedicated complaints line manned by their staff. The CLO offers frequent guided tours of the airport site for tourists, local Saints and school children.

St Helena Airport rehabilitation planting

St Helena Airport: aerial views, May 2015

Putting the environment into context

For an environmentalist (or conservationist) one of the most frustrating aspects of the airport project was the need to compromise. Despite the airport being constructed in an ecologically significant area, it was not always possible to put the environment first – we could not save it all or we would not be able to have an airport. In all decision-making, the environmental issues needed to be carefully weighed up against the technical issues, economic and financial issues (including the repercussions of delays to the project) and social issues.

Conclusion

In conclusion, there were many valuable environmental lessons learnt from the St Helena Airport Project:

- Ensure the EIA process is embedded in legislation and/or forms part of a contractual agreement with developers.
- Then ensure that there are adequate resources (particularly human) to implement and monitor compliance.
- Always try to plan to maximise the benefits and minimise the negative impacts identified in the EIA process.
- Develop an ecological baseline early on, and ensure key species are protected by legislation.
- Ensure that the EIA and EMP provide a robust, scientific framework for implementing the required environmental management measures.
- And, most importantly, learn to work together – environmentalists, developers, stakeholders and the local community, so that the most sustainable decisions can be taken.

Thank you.

A Model for Rapid Assessment and Mapping of Ecological Criteria for Informed Land Use in Small Island Developing States: East Caicos, Turks and Caicos Islands, as a Case Study

Kathleen McNary Wood (Turks & Caicos Islands)

Wood, K.M. 2015. A model for rapid assessment and mapping of ecological criteria for informed land use in small island developing states: East Caicos, Turks and Caicos Islands, as a Case Study. pp 310-319 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

Small-island developing states (SIDS) contain some of the most biodiverse ecosystems on earth, yet these countries suffer from pandemic sustainable policy failure, leading to significant losses in ecological assets and ecosystem services. This phenomenon is of critical importance in UK Overseas Territories (UKOTs), which are said to contain as much as 94 percent of the unique or endemic British species. Many of the above sustainability issues in SIDS arise from poor development practices, due to a lack of economic and human resources to inform sustainable land use planning. This is the case in the Turks and Caicos Islands (TCI), where tourism development pressures have resulted in large-scale, unplanned development, with significant consequent ecological losses. A recent Green Economy project in TCI identified the country's lack of a national physical development plan as a major impediment to sustainable development. In response to this need, a model has been developed that addresses the sustainability problems experienced by SIDS by implementing a case study on the island of East Caicos, an uninhabited island in (TCI) that is currently slated for the development of a transhipping and cruise-ship terminal. East Caicos is characterised by the presence of endemic and endangered species populations and critical habitats, such as mangrove forests, seagrass beds and coral reefs, yet no comprehensive environmental evaluation has ever been conducted and no sustainable land-use plan exists for the island. To address these limitations, a multi-criteria evaluation model, that combines remote sensing, rapid ecological assessment and GIS mapping and data analysis, has been developed. Procedures for rapid assessment, classification and determination of evaluation criteria are based on Nature Conservancy and European Union methods and are standardised for ease of implementation and suitability for SIDS. Presence/absence of evaluation criteria, recorded during field studies, provide objective data for a GIS dataset and map of ecological characteristics. Resultant graphic imagery of ecological "hot spots" will be readily understandable to disparate interest groups and decision-makers.

The developed evaluation model can be applied to any land-area and is designed to employ readily available open-access software and imagery, thus being particularly relevant to the needs and resource limitations of SIDS. A final analysis will examine results to make recommendations for sustainable land-use planning and development policy, to identify priority areas for conservation and to delineate areas for further analysis.

Kathleen Wood, Director of Environment, SWA Ltd, Turks & Caicos Islands; kw@swa.tc

Critically Endangered elkhorn coral

"There are some things that sometimes we may have to sacrifice. It [East Caicos] is an area we can use to boost our economy, to boost our development" - Premier of the Turks and Caicos Islands, Dr Honorable Rufus Ewing, as quoted in the BBC Radio 4 Series *Costing the Earth* (Cross 2014).

Introduction

In a 1971 assessment, visiting scientists to the Turks and Caicos Islands (TCI) described the natural environment *"...as close to the natural state as is likely to be the case for any similar islands within the American tropics due to relatively light utilization by man"* (Ray & Sprunt 1971, p. 6). Ray and Sprunt also forewarned:

"Their [the islands'] value lies in their still retained beauty and relative remoteness. Their ecology and small size makes mandatory that development not violate ecological integrity or natural beauty. Their remoteness makes mandatory that they not imitate or compete with the massive developmental schemes in the more accessible Western Hemisphere tropics. In short, these islands are a special case. They deserve to be treated in a very special way" (Ray & Sprunt 1971, p. 20).

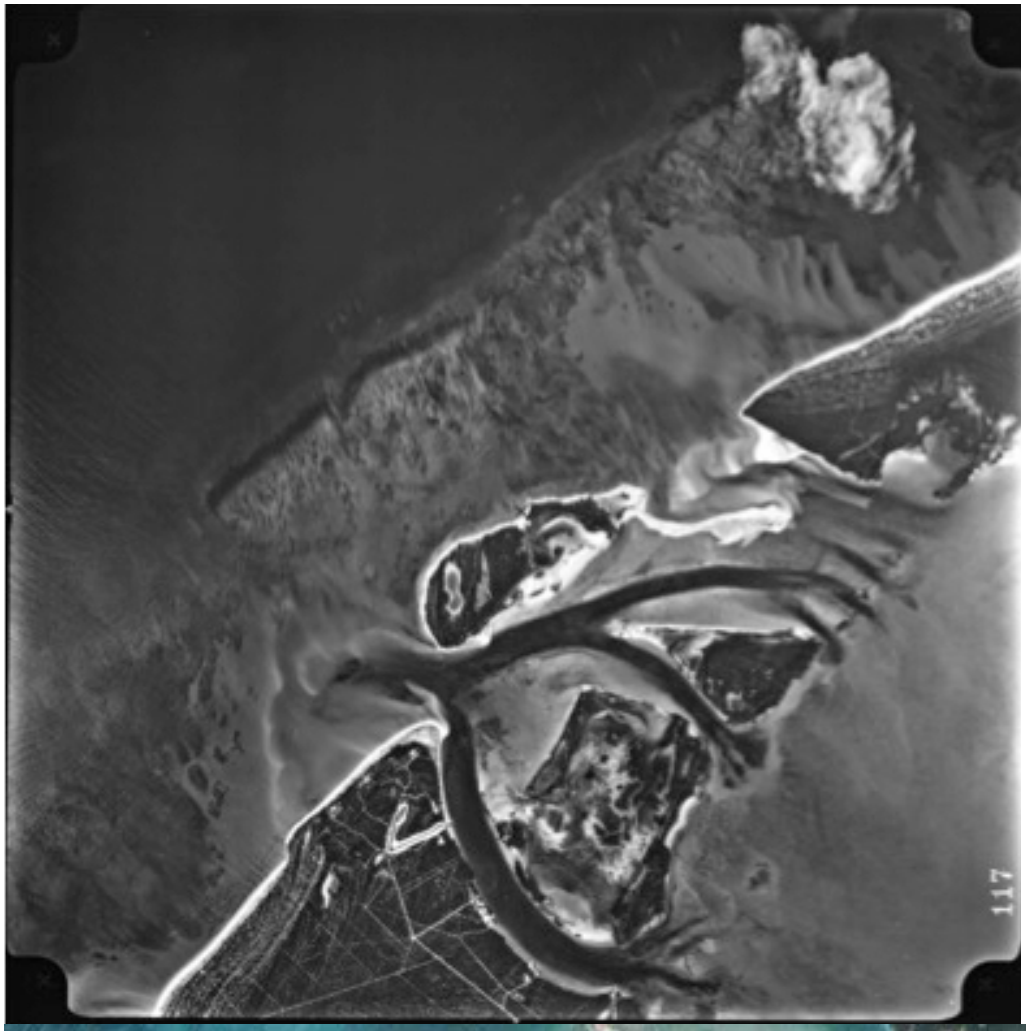
Unfortunately, development in TCI has not taken place in a special way. Development interests began flocking in large numbers to TCI shortly after Ray and Sprunt's assessment. Pristine dwarf forests and coastal habitats have been clear-cut for hotel development and infrastructure, and living and diverse coral reefs, mangrove estuaries and seagrass meadows have been dredged to create marinas, a cruise-ship terminal and other developments (Goreau *et al.* 2007; Johnson 2002). Uncontrolled development, coupled with a rapid increase in population, drives squatting and urban

Least tern chicks hide from predators (or humans)

sprawl into undeveloped lands. No sustainable development plan for the country currently exists; therefore, development has largely been driven by investment interests, rather than by informed planning (see next page for one example).

TCI is not alone in its struggle for sustainable development. Small-island developing states (SIDS) in general struggle to foster economic development, while simultaneously sustainably managing ecological assets. Commonalities include vulnerability to natural disasters, small economic and natural resource bases, limited land areas and scarce access to resources and expertise to inform sustainable development decisions (Albuquerque, McElroy & McElroy 1992; Anonymous 1994; Beukering, Brander, Tomkins & McKenzie 2007; Kaffashi & Yavari 2011). SIDS are also typically areas of high biodiversity. For example, a recent Royal Society for the Protection of Birds (RSPB) study revealed that the United Kingdom's Overseas Territories (UKOTs), contain an estimated 94 percent of the unique or endemic British species (Churchyard *et al.* 2014).

The combination of high conservation values and limited resources for effective sustainable development planning is a recipe for environmental disaster. In 1994, the Convention on Sustainable Development in Small Island Developing States recognized the needs of SIDS for sustainable planning initiatives, with a focus on the development of human resources and sustainable land-use management (Anonymous1994); however, in the past 20 years, little progress has been made in this regard. In 2006, an analysis of tourism development in the Caribbean concluded that the region suffers from pandemic "sustainable tourism policy failure" (Mycoo 2006, p. 506). In particular, the study cited failures of public planning policy and, where appropriate policy exists, inadequate implementation. A 2003 study reviewed the impact of tourism development on 51 islands and found that the vast majority of tourism



Aerial views of Leeward Channel area 1969 (left) and 2015 (below): The basically natural flow patterns and vegetation (albeit with subdivision marks) have been replaced by a deepened channel dredged through coral, a mega-yacht marina filling most of the channel, and intensively built-up land on the Providenciales (south-west) bank.

development was unplanned and intrusive, and had resulted in deforestation, erosion, pollution and reef damage. In 2003, at least 30 percent of Caribbean coral reefs were at high risk from impacts due to cruise ship development and pollutants (McElroy 2003).

Ideally, land-use management should be based on a model of sustainable use and conservation of important ecological and cultural assets. Traditionally, however, data to identify and quantify the above variables have been costly to accumulate and when they exists, difficult to access and use by decision-makers.

Global information system (GIS) technology has also revolutionized environmental survey and evaluation processes (Almeida *et al*. 2014; Joerin, Thériault & Musy 2001). However, historically, the use of GIS modeling in environmental applications has been restricted. The level of expertise required for use, software, equipment and imagery are cost-prohibitive. Furthermore, recent projects are often targeted towards valuation of environmental services only and may not take into account intrinsic criteria, such as aesthetic and cultural values, endangered species populations, endemic species, critical habitats or other conservation values.

The Model for Rapid Assessment and Mapping of Ecological Criteria for Informed Land Use in Small Island Developing States seeks to address these limitations. The model incorporates desktop studies and a standardised method for rapid field assessment of terrestrial, wetland and marine habitats, adapted from Nature Conservancy and NOAA methods. Data from desktop and field studies are then used to develop a GIS digital database that records, maps and highlights ecological assets in relation to the subject landscape. Open-access GIS software (QGIS) and imagery (Google Earth and Landsat) enhance accessibility by resource-limited users. The end-product is a GIS dataset that can be incorporated into national databases. Such a dataset has myriad applications and can be used to:

- Identify priority areas of high ecological value for conservation purposes,
- Inform national sustainable development plans,
- Identify critical areas and populations that merit further scientific research, and
- Inform other conservation and development priorities.

In order to test the model, a case study that focuses on the island of East Caicos in TCI is currently being undertaken. East Caicos is an uninhabited island of approximately 47 square kilometres. As such, it is the largest uninhabited island in the Caribbean. This application of the model demonstrates its practicality and ease of implementation in scenarios where resources are limited and physical planning lacks informed environmental input.

Research Methods

In addition to prohibitive cost considerations, evaluation of ecosystem values is often fraught with subjectivity (Smith & Theberge 1987). In order to be accepted by broad interest groups, a credible model must incorporate methods that will be viewed across different interests as objective. A simple, empirical method involves presence/absence measurement. Presence/absence criteria are, by their nature, objective. Either a variable exists or it does not. Presence/absence is also easy to determine in the field. By incorporating rapid assessment for the presence/absence of pre-determined ecological criteria, a simple and objective map of ecological significance can be developed using GIS mapping technology.

The method incorporates the following procedures:

1. A desktop review of all existing literature for a site, combined with collection of data available from online databases, such as GBIF, IUCN, CITES, etc.;
2. Preliminary remote assessment of the survey site using open-access satellite imagery to determine locations for stratified samples, based on discernable characteristics of the study area;
3. Rapid field assessment, incorporating predetermined terrestrial, wetland and marine transects (where applicable) to record species compositions, substrate, hydrological and other site characteristics and presence/absence of ecological criteria; and
4. Mapping of all habitats and recorded ecological assets with QGIS or other open-access GIS software to create a map of ecological “hot spots”.

The Criteria

In order to ensure scientific validity and broad acceptance, the set of ecological criteria is based

on a composite of recognised standards throughout environmental fields (Boyd & Banzhaf,2007; Fisher & Kerry Turner 2008; Koschke, Fürst, Frank & Makeschin 2012; Moberg & Folke 1999; Root, Akçakaya & Ginzburg 2003). Evaluation criteria are divided into three main categories, including species, habitats and ecosystem services.

On a species level, criteria include endemism, extinction risk, rarity and other conservation considerations, such as biome-restriction and/or other ecological variables that may become evident during field studies.

Habitat criteria include rarity, biodiversity, critical habitats for migration, spawning and nesting, juvenile areas and other variables that may become apparent during field studies. Parameters for selection for biodiversity criteria are based on relative values derived from quantitative plot samples.

Criteria for ecosystem services are based on the European Environment Agency's Common International Classification of Ecosystem Services (CICES), which includes a total of six "sections" of ecosystem services (Agency 2013). Most criteria are also sub-divided. The comprehensive evaluation criteria are outlined in Table 1 below.

The Case of East Caicos and Conclusions

In the case study of East Caicos, an inventory of known ecologically important assets was first developed. An additional list of possible ecological assets was developed also, and based on data from other areas in TCI for use in the field. Based on these collated data, a base map with basic GIS layers from existing topographical and geological surveys, habitat maps and previous studies was

Table 1. Categories for Multi-criteria Evaluation (East Caicos Case Study)

Category	Category Description	Sub-category	Sub-category Description
I	Endemic Species	a	Local Endemics
		b	Archipelago Endemics
		c	Regional Endemics
II	Internationally Listed Species	a	IUCN Red List
		b	CITES
		c	SPAW Protocol
		d	Other Conservation Status (e.g. USFWS)
III	Rare Species		
IV	Other Species Conservation Considerations	a	Biome-restricted species
		b	Migratory Species
		c	Range-restricted Species
		d	Other Species of Interest
V	Critical habitats	a	Migratory Pathway or Stopover
		b	Spawning Habitat
		c	Juvenile Habitat
		d	Nesting Habitat
		e	Other Critical Habitats
VI	Rare Habitats		
VII	Biodiversity	a	Biodiversity on a species level
		b	Biodiversity on a community level
		c	Biodiversity on a genetic level
VIII	Provisioning	a	Nutrition
		b	Materials
		c	Energy
IX	Regulation and Maintenance	a	Waste
		b	Flow
		c	Physical environment
		d	Biotic environment
X	Cultural	a	Symbolic
		b	Experiential and intellectual
XI	Other Variables of Interest		

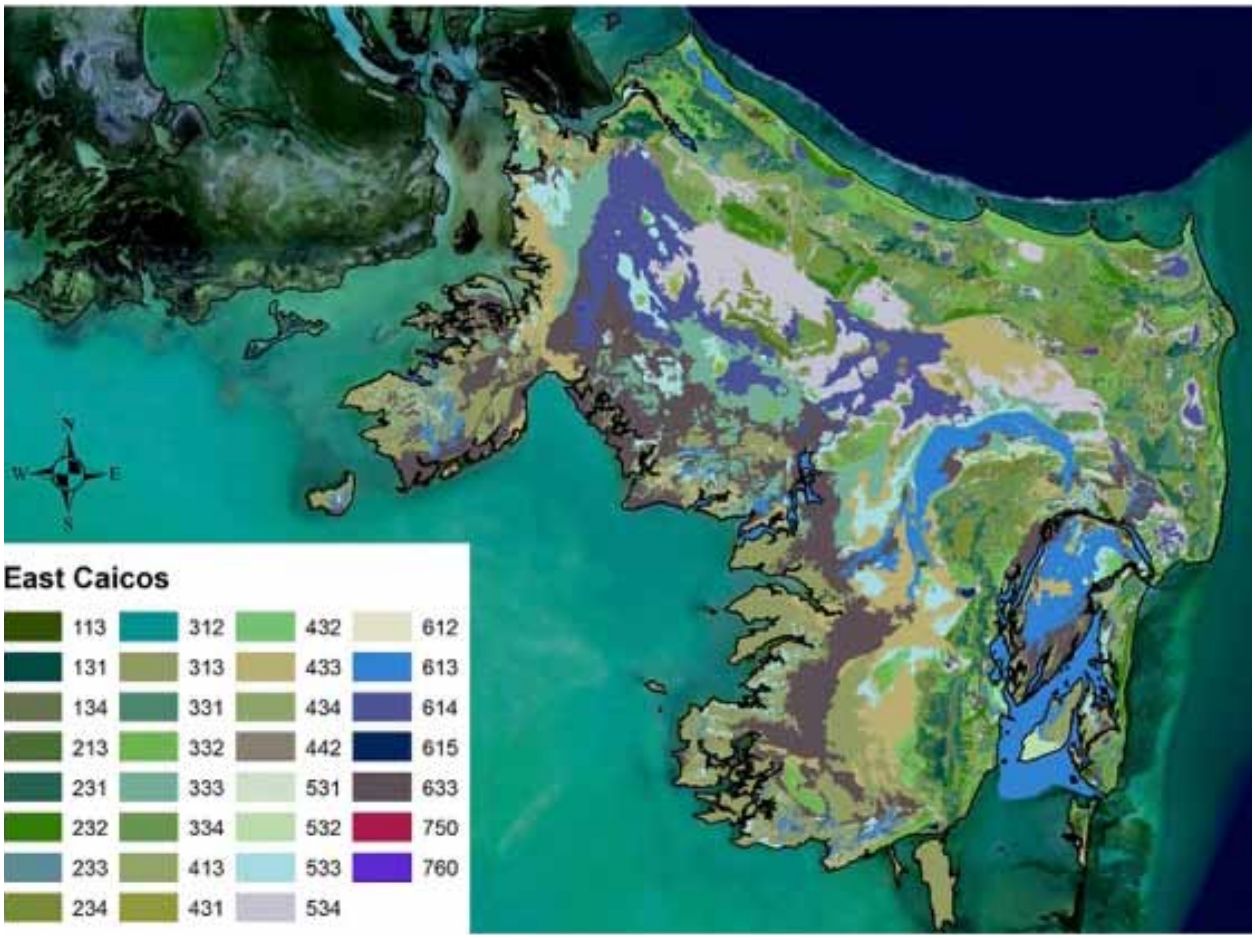
Turks and Caicos endemic orchid Encyclia caicensis

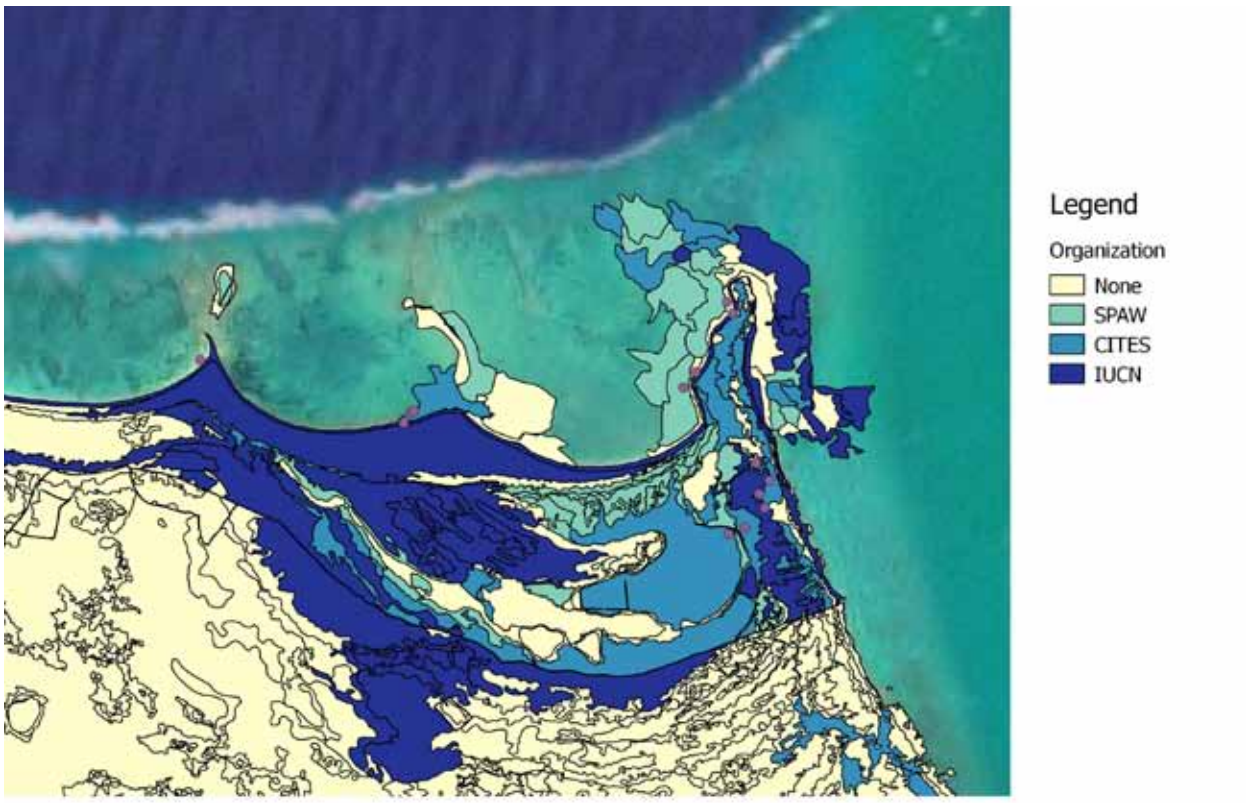
developed and used to inform sampling locations. The GIS map is currently being refined by ground-truthing.

Preliminary results indicate significant conservation values on East Caicos. These data, in addition to an introduction to the method, were presented at a workshop to stakeholders on 29 May 2015. Workshop participants from the TCI Department of Environment and Maritime Affairs (DEMA), National Trust and local watersports business operators were able to use the method in practice exercises, in addition to interpreting outputs from the study. The application of the method and training of individuals from disparate academic disciplines demonstrates the practical application of the method and confirms its ease of use and accessibility. A training session on using QGIS to map ecological criteria is slated for the end of August; however, the ease of application has already been demonstrated, as this author has limited GIS software expertise and been able to use QGIS effectively for mapping the collated data collected to date.

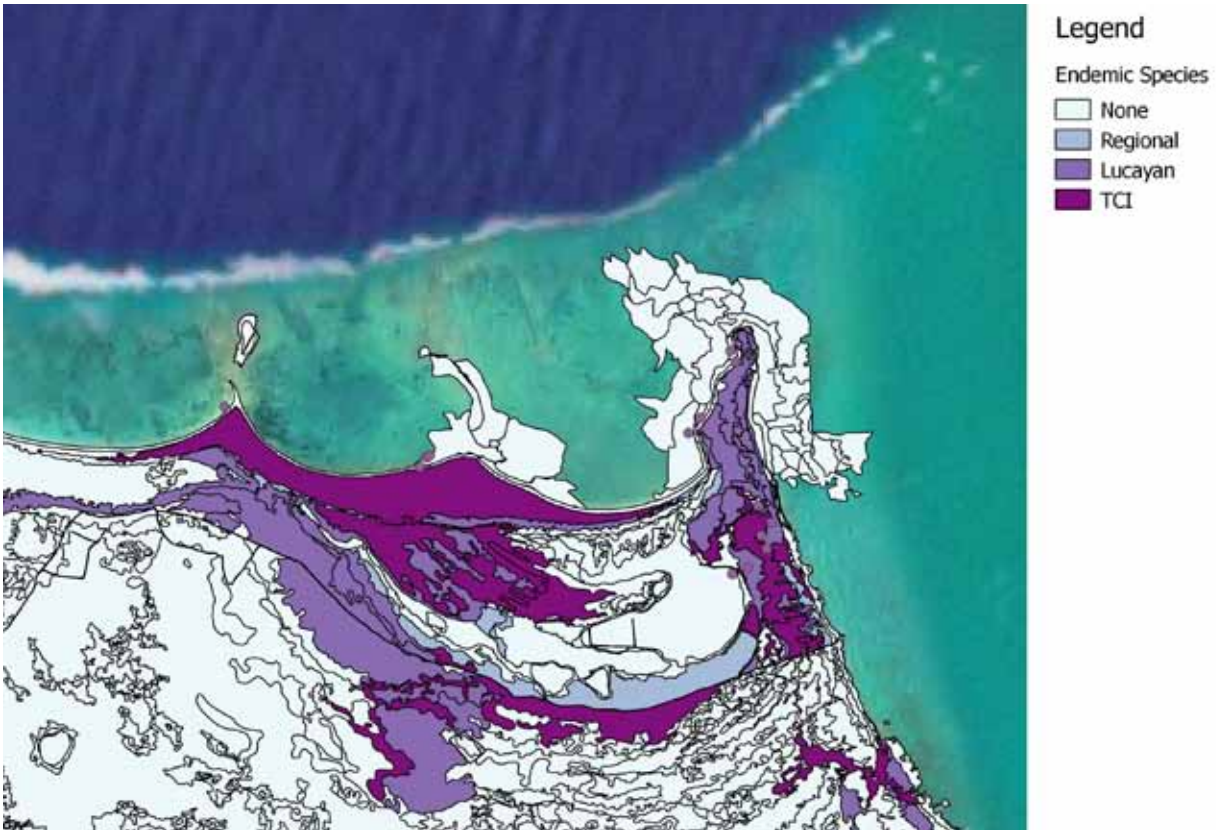
One challenge to the method has been the characterisation of biodiversity, as biodiversity is a calculated metric that does not lend itself to presence/absence measurement. Currently, biodiversity is being calculated using the Shannon Weaver Index, with resultant figures being mapped on a gradient; however, alternative approaches are being sought. A finalized version of the method will be developed upon completion of the case study, incorporating lessons learned.

Project completion is slated for March 2016. The final map will be analysed for appropriate land use management strategies, based on identified evaluation criteria. Areas for further research will be identified, and recommendations for conservation approaches will be made. The results will be presented also to TCI policy makers as a written report and through a seminar to present





Internationally Listed Species



Endemic Species

results and provide a forum for discussion and feedback. In addition, the report and method will be disseminated widely to local, regional and international authorities and other interested parties. It is hoped that this method will prove to be a valuable tool to local governments and NGOs wishing to facilitate the sustainable development process in SIDS.

Critical Habitats

Total Ecosystem Services

Acknowledgements

The East Caicos case study and implementation of the Model for Rapid Assessment and Mapping of Ecological Criteria for Informed Land Use in Small-Island Developing States has been a collaborative effort that would not have been possible without the unselfish support of various

individuals and institutions that have assisted throughout the project process.

The method has been developed in association with the Harvard University Extension School's Graduate Sustainability and Environmental Management Program. Dr Mark Leighton advised extensively during the development of the preliminary model, and Rafe Boulton has offered technical support and practical wisdom throughout the entire project.

Although the method is designed to be cost-effective, the logistics of undertaking field work on a remote and difficult-to-access island can be costly. To alleviate this impediment, the RSPB has generously sponsored all logistical support for the project. Furthermore, RSPB's interest in conserving the ecological assets of East Caicos was instrumental in choosing this location for the case study. Its personnel have also tirelessly provided moral and technical support throughout the entire process.

The government of TCI has also offered invaluable support to the project. The Department of Environment and Maritime Affairs (DEMA) has provided research permits and regular technical feedback on the project, in addition to providing existing baseline data, Dr Eric Salamanca has been stalwart in his support of the project, and B. Naqqi Manco has provided existing data from his previous field studies on the island. The entire DEMA staff, in addition to the staff of the Turks and Caicos National Trust, has also provided the vital service of serving as test subjects for the method. The Governor of TCI, Peter Beckingham, visited the island for a first-hand view of the island's ecological assets. He has supported the research and has taken an active role in promoting the island's conservation values.

Accessing and navigating the treacherous waters surrounding East Caicos is a logistical nightmare, but this impediment was eliminated due to the incomparable expertise of boat captains Timothy Hamilton and Dolphus Arthur. These local men of the sea have been navigating the waters off East Caicos for decades and were able gracefully to avoid the coral heads, reefs and shoals that would otherwise impede access to the island. Their intimate knowledge regarding local use of the island and its surrounding waters was also invaluable to the project.

Big Blue Unlimited, guided by co-owner Mark Parrish, has supported the project since its inception. Mark, who has probably visited East Caicos more than any other living person, has provided important insight and logistical assistance, in addition to pointing me in the right direction for several possible ecological hotspots.

A special thank-you is offered to Dr Mike Pienkowski of the UK Overseas Territory Conservation Forum (UKOTCF), who took time from his busy schedule to offer insight and proof-reading of preliminary drafts of this presentation and who has been steadfast in his support for the project. The value of the UKOTCF's on-going and continuous support of TCI's conservation efforts cannot be overstated.

The project would not have been technically possible without the generous support of JNCC, who sponsored a QGIS mapping workshop in TCI, providing me with the technical foundation to be able to map the ecosystem services being measured. Dr Katie Medcalf of Environment Systems was perpetually available to answer questions about QGIS applications. Barbara Brunnick of Taras Oceanographic Foundation provided beautifully crafted existing shape files from a previous JNCC-sponsored TCI habitat mapping project, which saved endless hours of creating polygons.

Finally, tireless field assistants Laura Brander, John Brander and Simon Wood have endured heat, exposure, mosquitoes, thorn-bushes and other torments for the sake of the project, providing field support and ensuring safety while undertaking the necessary field studies for the project. For them, for the others listed above, and for those I have failed to mention due to unintentional oversight, I am truly grateful.

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Managing Marine Protected Areas in the Isle of Man in partnership with fishermen

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Gell, F., Duncan, P., McHarg, K., Bloor, I., Dignan, S., Kennington, K., Charter, E. & Read, A. 2015. Managing Marine Protected Areas in the Isle of Man in partnership with fishermen. pp 320-325 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

This presentation provides case studies of two different fisheries co-management approaches for Marine Protected Areas which have proved effective for marine conservation and sustainable fisheries in a small island context.

Ramsey Marine Nature Reserve (RMNR) was developed in a partnership between the Isle of Man Government and the Manx Fish Producers' Organisation. After an initial area and concept were agreed between the two parties, comprehensive stakeholder consultation led to the development of management zones and regulations. The zones within RMNR provide a full range of protection, from no-take through to managed use, appropriate to the features being protected. Conservation features protected include horse mussel reefs, seagrass beds and maerl (rhodolith) beds. One of the zones is a Fisheries Management Zone which is managed by the Manx Fish Producers' Organisation (MFPO). The fishermen opted to keep the zone closed to all mobile gear fishing for 4 years. In 2013 and 2014, limited fishing was permitted by MFPO members. Strict quotas were set by the fishermen based on scientific surveys carried out by the IOM Government and fishing industry surveys carried out by the fishermen. Fishing activities were timed to coincide with premium prices for scallops on the Christmas market, and fishermen co-operated to pool their individual quotas, reducing fuel costs and maximising profits. Fishermen have limited their fishing to a small proportion of the total area available to them, effectively extending the conservation zones of the RMNR. RMNR took 3 years to establish, from the start of the project to designation of the Isle of Man's first Marine Nature Reserve to statutory designation. RMNR demonstrates the benefit of investing time and resources to work in close partnership with the fishing industry and other stakeholders for conservation and fisheries sustainability outcomes.

Baie ny Carrickey Closed Area (BNCCA) grew out of a gear conflict situation and public concerns about the marine environment. The location of the closed area was decided by a community committee of stakeholders representing fisheries, recreational and environmental interests. As a result of the consensus reached by the community committee, the Isle of Man Government was able to implement rapidly the BNCCA as a trial designation with relatively little further consultation. The designation began as an area closed to trawling and dredging. The next stage was led by a group of fishermen who formed an association to manage pot-fishing within the

area. Working with the Isle of Man Government and Bangor University scientists, the pot-fishermen now carry out regular monitoring and fisheries surveys within the Bay, and have implemented stricter management controls such as increased Minimum Landing Sizes for lobster and reductions in fishing effort. New initiatives include the development of a protected zone for seagrass, a habitat survey and other proactive measures initiated by the fishermen's management association. BNCCA is an example of a community-led initiative that resulted in the rapid designation of a Marine Protected Area with fisheries and conservation benefits.

The presentation compares these two approaches and looks at how local participation and good science are both essential for well-informed management decisions to promote sustainable fisheries. The presentation looks also at the influence our status as a small island jurisdiction had on both processes.

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Introduction

The Isle of Man is a self-governing Crown Dependency of the UK in the Irish Sea with a population of over 84,000. Whilst fisheries now make a relatively small contribution to the Manx economy, historically herring and white fish fisheries were very important, and the social and cultural value of the fishing industry remains very high. Invertebrates now dominate Manx landings, primarily the king scallop *Pecten maximum*, queen scallop *Aequipecten opercularis*, European lobster *Homarus gammarus*, brown crab *Cancer pagurus*, whelk *Buccinum undatum* and langoustine *Nephrops nephrops*. A more detailed overview of the Manx fishing industry can be found in Hanley *et al.* (2013).

The Isle of Man has been using Closed Areas for fisheries management since 1989, when the Port Erin Closed Area was first established as an area closed to scallop dredging for scientific experiments. Initially, the fishing industry did not support this closed area but, after around 15 years of closure and its evolution into a fisheries management zone, fishermen began to see tangible benefits of the area to adjacent scallop fisheries. The benefits were documented through scientific surveys (*e.g.* Beukers-Stewart *et al.* 2005). Since then, a network of Marine Protected Areas for fisheries management have been established (see Figure 1).

In 2008 the Manx Fish Producers' Organisation approached the Fisheries Directorate of the Isle of Man Government to discuss the establishment of new Fisheries Closed Areas to support the fishing industry. These discussions resulted in the establishment of the Douglas Bay Closed Area in 2008. This was followed by the establishment of two Fisheries Restricted Areas at Fleshwick and Niarbyl in 2009.

The Process for Selecting a Marine Nature Reserve for Conservation

A more detailed account of this process can be found in *Gell et al.* (2013). In 2008, the Manx Marine Nature Reserve Project started. It was a three-year project aiming to collect information and engage the community in the identification of the best place for the Isle of Man's first Marine Nature Reserve. The one previous attempt to designate a Marine Nature Reserve in Manx waters, in 1992, had ended in acrimonious failure, attributed to a lack of capacity to carry out proper community engagement and consultation. Learning from this experience and from insights into approaches used successfully around the world, the new project placed great emphasis on a high level of community engagement. The project was launched with a presentation to fishermen, to ensure they were aware of the intentions and process before the details became more widely known. Assistance was sought from a team of independent facilitators to hold an initial meeting

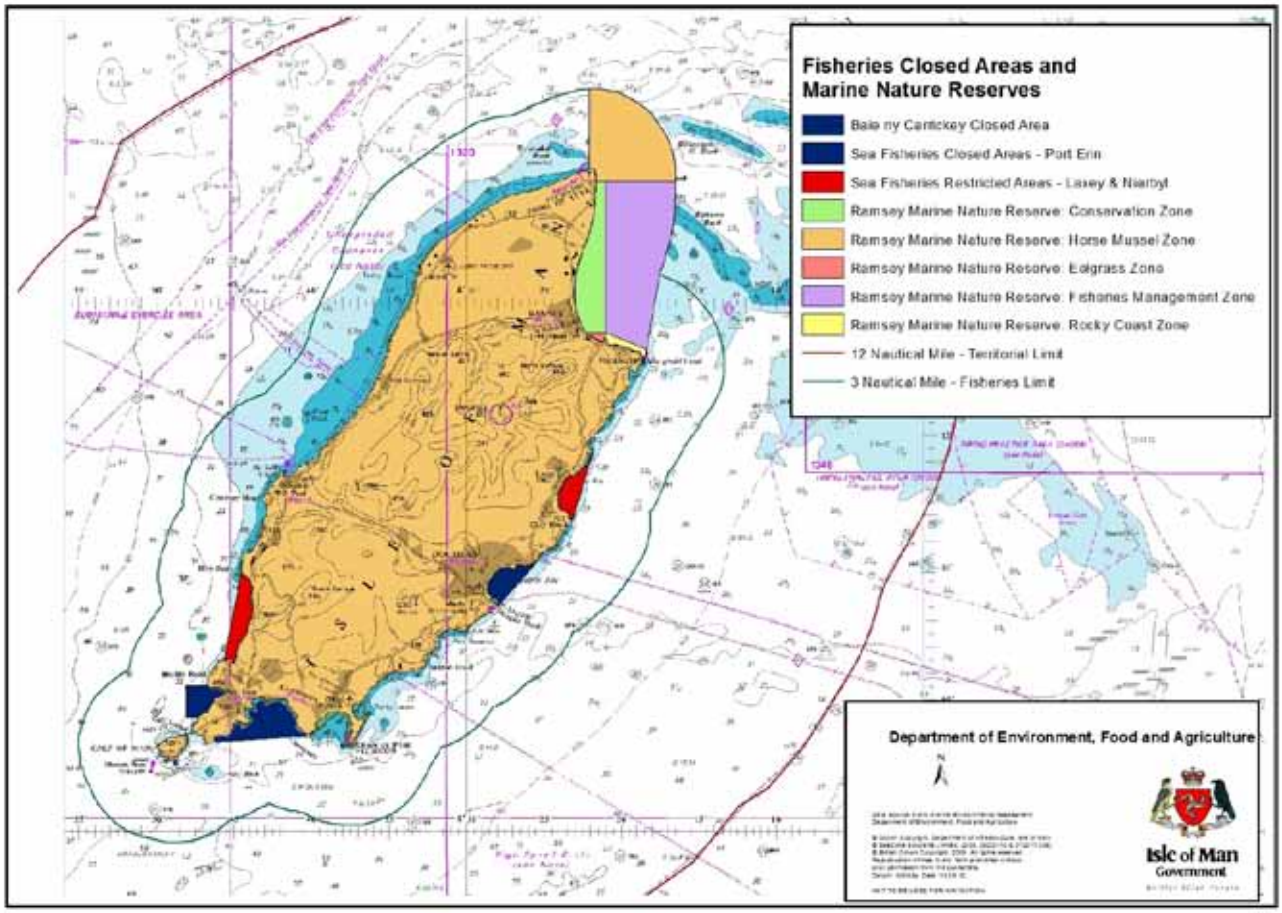

Figure 1. Marine Protected Areas in Isle of Man waters, showing Fisheries Closed Areas and Ramsey Marine Nature Reserve. Map: Isle of Man Government

and train a team of facilitators. Community meetings were held at towns and villages across the Island to make people aware of the project and to get their input. In addition to this, a range of opportunities were made available for people to learn about Marine Protected Areas and fisheries management, including community evening classes, fisheries science workshops for fishermen, visiting speakers from MPA projects elsewhere in the British Isles and internationally, and other initiatives. Figure 2 shows a stakeholder meeting and Figure 3 shows one of the outputs of a small community meeting, using sticky notes and written responses to complement verbal contributions.

Fishermen were generally unwilling to engage via the general community meetings and required separate meetings and negotiations with representatives and individuals. There was some support for the concept from the fishing industry, but the overriding concern was about the uncertainty of the outcome of the project and how

Figure 2, Manx Marine Nature Reserve Project stakeholder consultation meeting in Douglas, Isle of Man. Photo: Laura Hanley

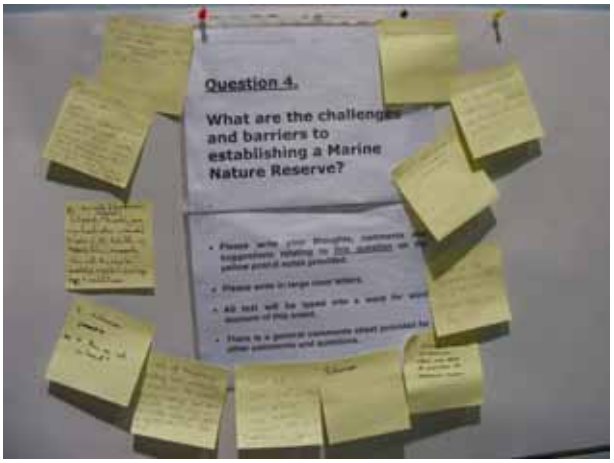

Figure 3. Responses to discussion questions at a village Manx Marine Nature Reserve consultation meeting, Isle of Man. Photo: Laura Hanley

it might impact on the fishing industry.

The first stage of the process was to identify candidate Marine Nature Reserves and collect information on their suitability from an ecological and socio-economic perspective. In 2008, Bangor University in conjunction with the Isle of Man Government carried out a survey of benthic habitats around the Isle of Man. Also, a wide range of other ecological and social research projects were carried out to gather more information about the Manx marine environment and how it is used.

In 2010, the information had been used to identify over 20 candidate Marine Nature Reserve Sites which met the OSPAR Convention guidance on the selection of Marine Protected Areas. These were a diverse range of sites, important for species including basking sharks and seals and for habitats ranging from horse mussel reefs to rocky reefs. At the same time, the Manx Fish Producers' Organisation came forward with a proposal for a site that they would support as a Marine Nature Reserve. It was the inner part of Ramsey Bay, an area previously important for scallop fishing which had been overexploited and since 2009 had been subject to an emergency closure order at the request of the fishing industry. Ramsey Bay (see Figures 4 & 5) was already on the list of candidate MNRs because of the presence of maerl (rhodolith) beds and seagrass meadows. In negotiations with the fishermen, the location of their proposed Marine Nature Reserve was extended to include a second adjacent site, the Ballacash Channel horse mussel reef. With this outline protected area agreed as closed to scallop fishing by the scallop fishermen, we were then able to take this proposal forward in consultation with the full range of stakeholders. Such was the support of the fishing industry that we (Department of Environment, Food and Agriculture) were able to issue a joint press release with the fishermen's organisation to launch the next stage of the project.

After a lot of discussion with fishermen, other users of the area and the wider community, a zoning plan was agreed for the area (see Figure 4). More information about the zoning of the MNR can be found in Gell *et al.* (2013).

Ramsey Marine Nature Reserve: The Fisheries Management Zone Approach

In negotiations with the fishermen, it was agreed that a zone outside the highly protected areas could be handed over to the fishermen's organisation for them to manage. This was initially thought of as a separate zone, outside the MNR, but soon evolved into a statutory zone of the MNR. The zone is

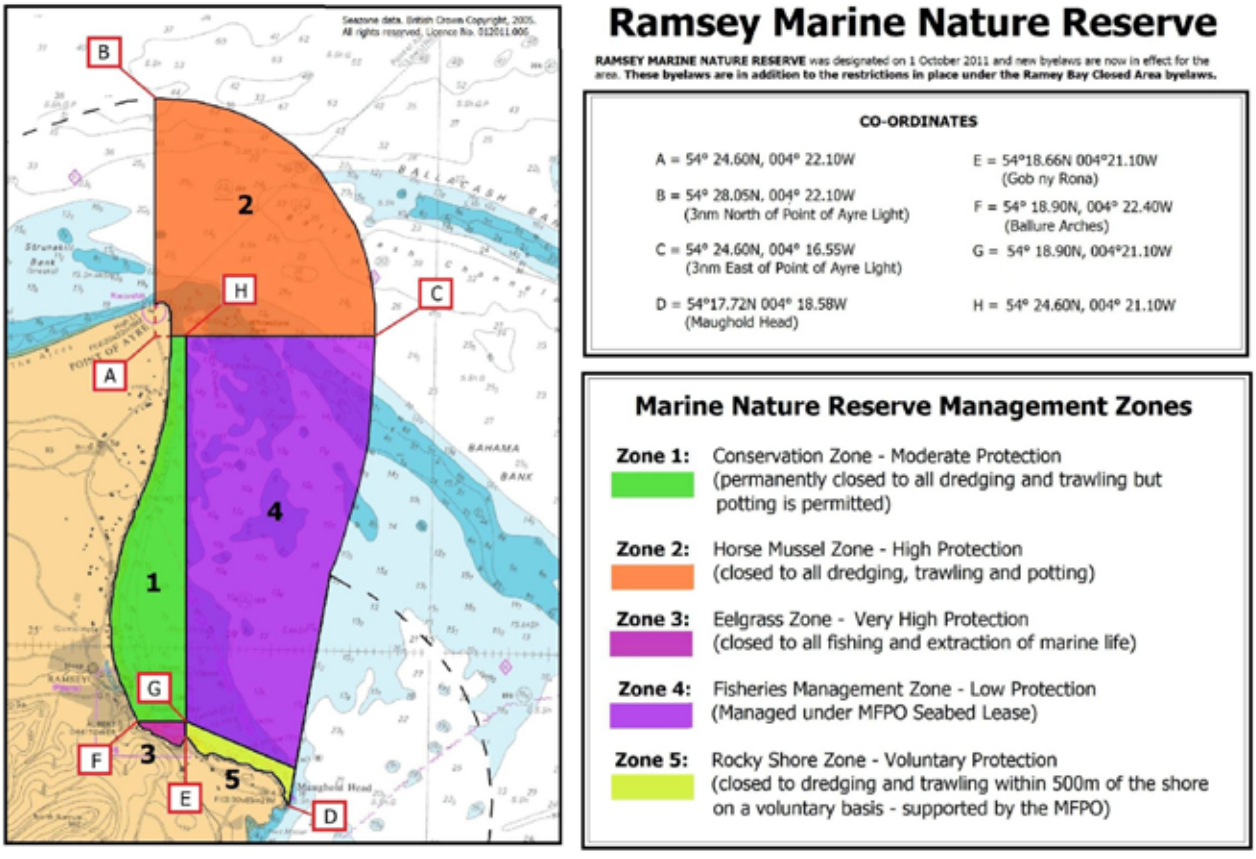

Figure 4. Zoning map for Ramsey Marine Nature Reserve. Map: Isle of Man Government

Figure 5. Ramsey Marine Nature Reserve from the top of North Barrule, Isle of Man. Photo: Fiona Gell

called the Fisheries Management Zone, and the Manx Fish Producers' Organisation have a licence agreement with the Isle of Man Government to allow them to manage it, with the condition that they "maintain the ecological integrity" of the area. After the area was designated in 2011, the fishermen chose not to fish with the FMZ for a further 2 years. In 2013, surveys were carried in the FMZ by government scientists and also by fishermen. Based on the results of these surveys, a total allowable catch was agreed for a small pre-Christmas scallop fishery. The fishermen carried out this fishery in a very efficient and co-operative way (Dignan *et al.* in prep) and the fishery impacted less than 5% of the area of the FMZ. A similar approach was taken in 2014, although this time more fishing vessels carried out the fishery, so it was less efficient and there was more impact on the seabed. However, overall the fishery within the FMZ has been very well managed and has provided a financial gain for the fishermen, whilst at the same time providing a safeguard to their wider scallop fishery as a source of larvae. As well as supporting sustainable fisheries management, the FMZ provides a buffer zone, protecting the sensitive habitats within the highly protected zones of the MNR. Including a fisheries zone within the MNR itself helped secure agreement for a significant conservation outcome, integrated fisheries management into the MNR and emphasised the fisheries management role of the wider area. It is an approach that has been used in various guises in other zoned MPAs but the level of management responsibility handed to the fishermen is thought to be quite unusual.

Overall, the Ramsey MNR case study demonstrates how investment in a long consultation and engagement phase and flexibility to change the approach to respond to development were key to establishing a successful Marine Protected Area.

The Baie ny Carrickey Approach

The Baie ny Carrickey Closed Area was established in 2012 using a completely different approach. Pot-fishermen, anglers and conservationists had all been concerned for many years about the impact of scallop dredging on the habitats of Baie ny Carrickey. A public meeting was called to discuss the problem, and the Minister of Environment asked a community committee

to be formed to come up with a solution. The committee had access to technical input from government officers if required but there were no government officers on the committee. The committee included representatives of scallop fishing, anglers, pot-fishermen, divers and other community members. In a matter of weeks the committee came back to the Government with a proposed closed area which had been agreed by the scallop fishermen. Statutory protection of the area was put in place within months of the public meeting, protecting pot-fishing and the marine environment and providing another source of scallop larvae for the fishery.

Building on this success, the pot-fishermen who had campaigned for protection developed a management association and negotiated exclusive access to the pot-fishing within the closed area for on a trial basis. The management association is supported by the Fisheries Directorate but takes responsibility for management of the lobster resource within the bay. After a slow start, the organisation is now taking proactive measures to study and protect lobsters within the bay. The fishermen have increased the Minimum Landing Size for lobsters within the area, introduced a maximum landing size and introduced effort restrictions through limits on the total number of pots fished within the area. The fishermen in the area engaged also in a wide range of research activities, including trailing onboard cameras to assist in studying catches, video surveys of the seabed from their vessels, baited underwater cameras and deployment of prawn pots to study juvenile lobsters.

This approach demonstrated how effective a bottom-up approach to local marine management can be. The success of the project depended on the dedication and commitment of the fishermen and other stakeholders involved and, as with many of these projects, relied on a small number of individuals persevering and overcoming difficulties.

Conclusions

These case studies present two very different approaches to stakeholder engagement for marine conservation and fisheries co-management. In a small island context, it seems important to be able to adapt approaches to suit individual circumstances and also to be able to be flexible and able to respond to new developments. In larger jurisdictions it is often more difficult to deviate from an agreed process, and this can mean that opportunities for agreement and success are lost.

General lessons learned include:

- Working closely with fishermen to establish Marine Protected Areas can lead to beneficial conservation and fisheries outcomes;
- Giving fishermen responsibility and co-management opportunities can build trust and ensure the success of conservation initiatives;
- International conventions, and associated guidance, play a really important role in providing a framework for conservation initiatives that can be adapted to the local situation, *e.g.* OSPAR in Europe.

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Community Voice Method - a contemporary approach to engaging stakeholders in development of marine resource conservation policy

Peter B Richardson[1], Lisa M. Campbell[2], Gabriel B. Cumming[2], Quentin Phillips[3], Sue Ranger[1] & Amdeep Sanghera[1] ([1]Marine Conservation Society; [2]Nicholas School of the Environment, Duke University; [3]Department of Environment and Maritime Affairs, Turks and Caicos Islands)

Richardson, P.B., Campbell, L.M., Cumming, G.B., Phillips, Q., Ranger, S. & Sanghera, A. 2015. Community Voice Method - a contemporary approach to engaging stakeholders in development of marine resource conservation policy. pp 326-331 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

The political ecology of endangered species conservation traditionally favours 'experts', who have more influence over international agreements and national legislation formulation, than the stakeholders dependent on the use of these species and their habitats. Consequently, the implementation of species conservation policies can lead to confusion, conflict, distrust and ultimately non-compliance amongst local stakeholder groups if they have not been included in the decision-making process. The Turks and Caicos Islands (TCI) Turtle Project is a multidisciplinary initiative that used biological and social research, as well as extensive stakeholder engagement, to inform the development of a contemporary management policy for the islands' traditional marine turtle fishery. In 2010, the project employed the 'Community Voice Method (CVM)', a novel research methodology that seeks to overcome barriers to meaningful stakeholder engagement in resource management decision-making and policy development. Thirty-three detailed interviews were conducted with community members representing a broad demographic in South Caicos, the 'fishing capital' of the TCI. All interviews were filmed and responses were coded and analysed. A documentary film, with a narrative entirely led by this analysis, was the primary research output from these interviews. The film was then screened to public audiences throughout the TCI (n=22) and followed by semi-structured group discussions that captured over 270 participants' views about future turtle fishery legislation options. These discussions were recorded, analysed and considered with the biological research data in the development of draft policy recommendations, which were subjected to further consultation with TCI turtle fishers (n=75) in 2011. The final recommendations were approved by the TCI government in February 2014 and came into force in July that year. CVM thus provided an engaging opportunity for hundreds of stakeholders to influence local turtle fishery policy development. This paper assesses the challenges and benefits of the CVM approach and suggests ways in which it could be adapted to contribute to biodiversity conservation in other UK Overseas Territories.

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A long-standing obstacle to the management of marine resources is often the disconnect between conservation managers and the resource users. Resources, such as marine turtles, are often protected through national legislation after scant or no consultation with the coastal communities that may be using them. Consequently, and especially within poor enforcement regimes, use continues, albeit illegally, after the resource is 'protected'. This is problematic for a number of reasons. For example, the illegal use of the resource becomes unmanageable; resource users become criminalized and subsequently disenfranchised from management processes; and the ongoing, unmanaged use may threaten the future of resource.

As a way to facilitate better communication between networks of resource users and conservation managers, Dr Gabriel Cumming and Dr Carla Norwood, of Community Voice Consulting, have designed a novel method of engaging stakeholders in discussions about natural resource use (Cumming and Norwood 2012). The Community Voice Method (CVM) was first employed in 2001 to explore land conservation issues in North Carolina USA, and was further developed with Professor Lisa Campbell of Duke University to tackle various rural and coastal land-use conflicts.

CVM uses the media of film in a three-stage process. Stakeholders representing various user-groups and interested parties are filmed while being interviewed with a structured questionnaire that explores the issue in question. CVM interview content is designed to move from the general (*e.g.* sense of place, existence value, general views on the nature and value of the marine environment) to the more specific (*e.g.* specific aspects of their activities, stakeholder relationships, specific personal experiences), finally focusing on key areas of decision-making. The footage from these filmed interviews is then manually themed and coded using NVIVO software, so that threads are identified, and the most representative expression of opinions within those threads is included in a documentary-style film.

In previous projects, the films have been approximately 30 minutes long and have included at least one contribution from every interviewee. Thus the film's narrative is guided entirely by stakeholder opinions and perceptions gathered during the interviews, with opposing opinions and views juxtaposed and contrasted. The film is then screened at stakeholder discussion workshops where the interviewees and other key players are brought together to watch the film; this stimulates structured discussions about future management scenarios. Conservation managers can then use these discussions, along with any biological data, to inform decision-making about resource management.

In 2010, the Marine Conservation Society (MCS) worked with Lisa Campbell and Gabriel Cumming to adapt CVM further, to help address reform of the management of the traditional turtle fishery in the Turks and Caicos Islands (TCI) in the Caribbean. The TCI is a UK Overseas Territory (UKOT) that lies at south-eastern end of the Bahamian Archipelago.

As with other UKOTs in the Caribbean, TCI regulates a turtle fishery that lands several hundred green and hawksbill turtles each year (Richardson *et al.* 2009, Stringell *et al.* 2013). Prior to 2014, the Fisheries Protection Ordinance (1998) included regulations originally drafted in 1976 that protected nesting females and their eggs on the beach, but protected in the water only turtles

Juvenile green and hawksbill turtles are abundant in TCI waters. Photo: Peter Richardson/MCS

A hawksbill landed for consumption in Providenciales Photo: Peter Richardson/MCS

Amdeep engaged fishers at the dockside while sampling landed turtles. Photo: Tommy Philips/MCS

Interviewees filmed on location in South Caicos by Dr Gabe Cumming. Photos: Amdeep Sanghera/MCS

with shell length of 20 inches or less. There was no closed season, so turtles larger than 20 inches shell length could be legitimately targeted at any time of year. Clearly, this legislation was not fit to protect large turtles in TCI waters, including the remnant populations still breeding in TCI waters (Richardson *et al.* 2006). This was recognised in a 2004 assessment of turtles and their use in the Caribbean UKOTs, carried out by project partners MCS, the University of Exeter, Duke University and the TCI Department of Environment and Maritime Affairs (DEMA) (Godley *et al.* 2004).

In 2007, DEMA invited the project partners back to follow-up on the recommendations included in the assessment. This led to the establishment in 2008 of the collaborative and multi-disciplinary TCI Turtle Project, coordinated by MCS and including the original partner organisations. While the University of Exeter led a comprehensive assessment of turtle fishery landings, foraging turtle aggregations and nesting populations, MCS and Duke developed an extensive programme of social science and stakeholder engagement within

TCI fishing communities to evaluate the socio-economic value of the turtle fishery. Gabriel was invited to lead the adaptation of Community Voice Method to suit the TCI Turtle Project objectives, and so CVM came to TCI in early 2010.

The CVM film was made in South Caicos, the 'fishing capital' of TCI, where 33 interviewees were filmed as they responded to the carefully designed questionnaire. The interviewee sample

Project Officer Amdeep Sanghera worked closely with fishers. Photo: Peter Richardson/MCS

Prof. Lisa Campbell and Amdeep Sanghera interview a former turtle fishermen in South Caicos during the production of the CVM film. Photo: Gabe Cumming

The CVM film was screened in varied locations. Photos: Peter Richardson/MCS

was made up largely of active and former fishermen, but also included representatives from other stakeholder groups, and included some women and minors.

The footage was coded and analysed in NVIVO, and the resultant film was edited in time for a series of 22 screenings held throughout the islands in summer 2010, some of which were followed by workshops involving 270 stakeholders. The structured discussions encouraged at the workshops focused on a series of turtle fishery management measures discussed in the film. These discussions were lively, requiring robust facilitation, but yielded highly informative conversations about what the stakeholders believed to be appropriate, practical and realistic. Marrying this information with the turtle conservation needs determined from the biological research, the project partners developed a comprehensive suite of draft proposed turtle fishery management measures.

South Caicos pupils learn about the project research. Photo: Amdeep Sanghera/MCS

Semi-structured workshops were held after some of the CVM film screenings. Photo: Peter Richardson/MCS

The draft measures were then taken back to TCI in 2011 for a second round of consultation, involving one-to-one structured interviews with 75 active

Amdeep interviews a turtle fishermen about the draft recommendations in 2011. Photo: Amdeep Sanghera/MCS

The TCI Turtle Project recommendations are presented to the Minister. Photo: Eric Salamanca

turtle fishers.

The recommended measures were finalised, taking the fisher's views into account, and finally presented to the newly appointed Minister of Environment in March 2013. By February 2014, the Minister's office had approved the measures, which came into force in July 2014 (Stringell *et al.* 2015).

CVM is not without its challenges. Many stakeholders can, at first, be wary of giving their opinion in front of a camera, and, depending on who is included in the stakeholder sample, arranging the interviews can be problematic. For example, scheduling interviews with fishermen is not easy as they are dependent on good weather for their livelihoods. In TCI, we had to be extremely flexible and reactive to the fishers' working lives to ensure we engaged our full interviewee sample. Some fishers were also wary of discussing their views in the public environment of the workshop, meaning that they preferred home-visits and private screenings. These were relatively costly in terms of time and travel, but in most cases did yield in-depth expert opinion about the TCI turtle fishery.

There is potential to adapt CVM to address other conservation issues in the UK Overseas Territories, but there may be constraints, aside from the obvious need for electricity and a level of technology required by the method. In order for CVM to inform policy, relevant authorities must commit to taking into account the information that the process delivers – there is no point in soliciting stakeholder opinion if the decision-makers do not intend to listen. Participants must also be comfortable being filmed, so the method will not work in cultures with social concerns around photography and film. Finally, the method requires a level of training in order to develop appropriate questionnaires, interview techniques, film analysis and editing, and workshop design. Fortunately, MCS can help with this, as can Dr Cumming at Community Voice Consulting.

Personally, I found CVM to be extremely useful in the TCI and a key factor behind the success of the TCI Turtle Project. It allowed us to engage stakeholders in discussions about a relatively low priority issue using television, a familiar, accessible and enjoyable format. The discussion workshops were challenging, but manageable, and provided extremely useful and insightful conversations about the use of turtles and how this use should be managed. This level of stakeholder involvement in the development of the management measures was one of the key reasons why they were approved by the TCI Government. Since this work, MCS has successfully trialled CVM in the UK for the first time, working with local regulators in Sussex to involve stakeholders in developing management measures for recently designated marine conservation zones. The methodology has proved to be a very useful tool, and MCS is more than willing to facilitate the adaptation and development of CVM, and associated capacity-building, in other UK Overseas Territories to help address other key

conservation issues.

The CVM film we produced for the TCI Turtle Project is available to download at https://vimeo.com/80982426

More information about the CVM process can be found at http://communityvoiceconsulting.com/

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Cyprus SBAs: need for measures in view of recent change of British policy

Melpo Apostolidou (BirdLife Cyprus)

Apostolidou, M. 2015. Cyprus SBAs: need for measures in view of recent change of British policy. pp 332-336 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

The British Overseas Territory on the island of Cyprus comprises Sovereign Base Areas (SBAs) at Akrotiri and Dhekelia. The SBAs include military bases and other land, including Cypriot villages and communities, and were created in 1960 by the Treaty of Establishment, when Cyprus achieved independence from the British Empire.

One of the Treaty's provisions foresaw that the British government would not allow development within the SBAs for other than military purposes. This has kept development within the two SBAs since 1960 to a minimum, in stark contrast to many other parts of Cyprus. This provision was lifted after the signature of a landmark arrangement on relaxing controls on non-military development in the SBAs between the United Kingdom and Republic of Cyprus, on 15 January 2014. The agreement lifts the strict planning restrictions, potentially paving the way to development in pristine areas. Conservationists are concerned about how these changes in planning development could affect the Akrotiri peninsula & Episkopi Cliffs Important Bird Area (IBA) (and Special Protection Area - SPA) and candidate Special Areas of Conservation (SACs) in the Western and Eastern Bases.

BirdLife partners in Cyprus and the UK (namely BirdLife Cyprus and the RSPB) as well as the UK Overseas Territories Conservation Forum (UKOTCF) support that planning changes should take full account of the need to safeguard the unique biodiversity in the Cyprus SBAs. It is important that the SPA status of the Akrotiri peninsula and Episkopi Cliffs be taken fully into account and that the two SAC designations are concluded before defining Planning Zones and relevant Planning Policies. Moreover, the required Strategic Environmental Assessment (SEA) should be timed in a way that the Planning Zones and Policy are subjected to a SEA at an early stage of the procedure, and also the SEA should avert future conflicts with Appropriate Assessment (AA). Large developments (*e.g.* golf course developments, marinas and large renewable energy infrastructures) have been favoured in the Republic in recent years and can have significant effects on protected areas. A cautious approach regarding such developments should be taken in the SBAs, the RSPB and BirdLife Cyprus say. In addition, planning provisions permitting isolated housing development in areas zoned for agriculture are an important threat to natural habitats across the Republic, contributing to habitat fragmentation. This provision should be excluded from the Cyprus SBAs. It is important also that BirdLife Cyprus and the RSPB are consulted during the process of formulating the SBAA Policy Statement. Finally, it is vital for some areas adjacent to protected areas and sensitive areas, to manage land planning through detailed local plans and not the more general zoning. A local plan can also help achieve land consolidation so that regulations are felt to be fair.

The preparation of the SBAA Policy Statement is still at a very early stage. However, the need for measures at such a crucial stage for safeguarding the Akrotiri IBA and the biodiversity in the Cyprus SBAs in general, is unquestionable.

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Cyprus is a large island at the eastern end of the Mediterranean covering an area of 9,251 square kilometres and with a total population of about 790,000. The British Overseas Territory on the island of Cyprus comprises two Sovereign Base Areas (SBAs) at Akrotiri and Dhekelia.

The Sovereign Base Areas (SBAs) of Akrotiri and Dhekelia, usually referred to as Western Sovereign Base Area (WSBA) and Eastern Sovereign Base Area (ESBA), are those parts of the island which remained under British jurisdiction on the creation of an independent Republic of Cyprus in 1960. Under the 1960 Treaty of Establishment, Her Majesty's Government (HMG) retained sovereignty over the SBAs, which cover 3% of the land area of Cyprus, a total of 98 square miles (47.5 at Akrotiri and 50.5 at Dhekelia). However, HMG does not own most of the land. About 60% is privately owned; some 20% is UK Ministry of Defence (MOD)-owned or leased land; with the remaining 20% being Crown land held by the Administration (including forests, roads, rivers and Akrotiri Salt Lake). (Source: http://www.sbaadministration.org/index.php/background])

About 10,000 Cypriots now live in the SBAs. In addition, approximately 3,800 military and UK-based civilian personnel and their dependants work or live on the Bases. The SBAs are retained as military bases, not "colonial" territories. This is the basic philosophy of their administration, as set out by HMG in its 1960 Declaration on the Administration of the Areas.

The Treaty of Establishment foresaw that the British Government would not allow development within the SBAs for other than military purposes. This has kept development within the two SBAs since 1960 to a minimum, in stark contrast to many other parts of Cyprus. This provision was lifted after the signature (below) of a landmark arrangement on relaxing controls on non-military development (NMD) in the SBAs between the United Kingdom and Republic of Cyprus, on 15 January 2014. The agreement lifts the strict

planning restrictions, potentially paving the way to development in pristine areas.

Cyprus is a special place for birds and biodiversity in general (above), at both a European and a global scale. Justifying its status as an Endemic Bird Area, the island is host to two endemic species: Cyprus warbler *Sylvia melanothorax* (below) and

Cyprus warbler Photo: Albert Stoecker

Cyprus wheatear *Oenanthe cypriaca* (below). Cyprus has also four endemic bird subspecies.

Cyprus wheatear Photo: Albert Stoecker

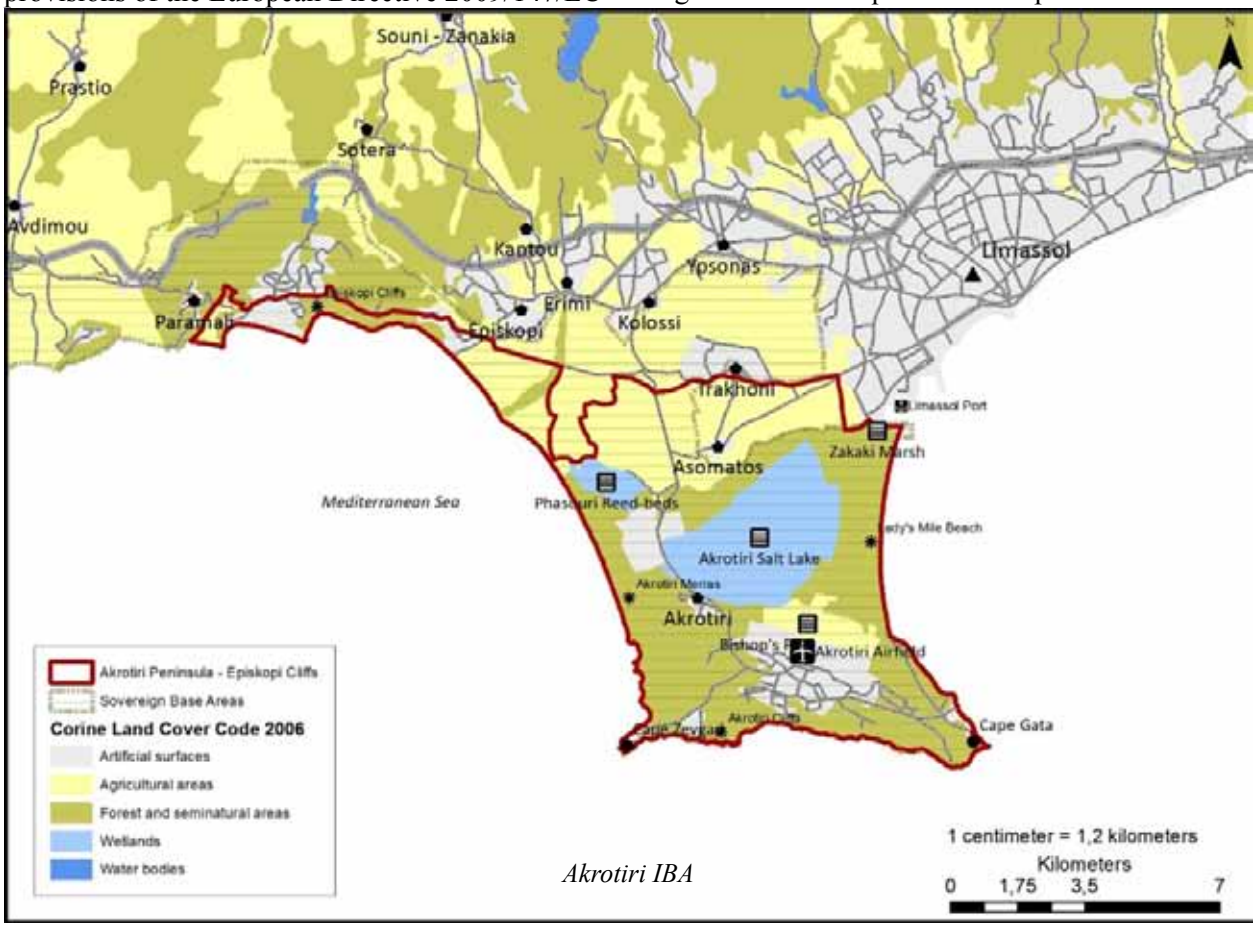
Akrotiri Peninsula is one of the most species-rich and important areas of the island for birds and other wildlife. This extensive site comprises the largest complex of wetlands on the island, as well as a mosaic of coastal scrub, dunes, agricultural areas and impressive coastal cliffs. Covering more than 7,800 ha, the 'Akrotiri Peninsula–Episkopi Cliffs' IBA is, for the most part, situated within the West Sovereign Base Area (WSBA). The site is important for holding Globally Threatened species, for holding more than 1% of global populations of species of waterbirds (more than 20,000 waterbirds) and for holding a flyway population of congregatory waterbird species. Akrotiri Peninsula is also a raptor bottleneck where more than 3,000 raptors pass during migration. Akrotiri Salt Lake is also a Wetland of International Importance designated by UK (with the support of the Republic) under the Ramsar Convention.

In 2010, parts of the Akrotiri IBA (some 60% of the 2012 IBA) were designated as a Special Protection Area (SPA)-equivalent for the protection of wild birds, under the Sovereign Base Areas' Game and Wild Birds Ordinance 2008 (21/08), which broadly replicates the Republic of Cyprus' Law on the protection and management of wild birds and game (152(I)/2003), implementing the provisions of the European Directive 2009/147/EC (Conservation of wild birds).

Flamingoes, Akrotiri Photo: A. Stoecker

Both Akrotiri and Dekheleia merit designation also as SACs under the Sovereign Base Areas' Protection and Management of Nature and Wildlife Ordinance (26/2007), which mirrors the Republic of Cyprus' Nature and wildlife protection and management Law 153 (I) 2003, implementing the provisions of the Habitats Directive 92/43/EEC. The SBAs have proposed three sites for SAC designation on 28 May 2015 and the period for objections ends on 3 August 2015 (one month extension is granted). The three sites are two in ESBA and one in WSBAS.

The ESBA, Dhekeleia, is important for its vegetation and unique limestone pavement scrub.



Akrotiri IBA

White Storks, Akrotiri Photo: M. Apostolidou

Turtles Photo: M. Apostolidou

Red-footed Falcon Photo: A. Stoecker

Stone curlew Photo: S.Christodoulides

A significant number of turtle nests (loggerhead turtle *Caretta caretta* and green turtle *Chelonia mydas*) exist on a small stretch of beach that lies within the ESBA. Though it is not an IBA, the area is also important for species like the Stone curlew *Burhinus oedicnemus* and is an important migration stopover for passerines, especially in autumn. Unfortunately, this passage of small birds attracts a large and persistent illegal bird trapping problem (see pages xxx-xxx). Related to trapping is the extensive network of acacia trees, an invasive alien species for the island that has invaded to a large extent the ESBA to a large extent.

Dhekeleia scrub Photo: BirdLife Cyprus

The recent changes in planning development have alarmed conservationists, who are concerned about how these changes could affect the Akrotiri Peninsula and Episkopi Cliffs Important Bird Area (IBA) (and Special Protection Area - SPA) and candidate Special Areas of Conservation (SACs) in the Western and Eastern Bases.

Acacia plantation, Cape Pyla Photo: BirdLife Cyprus

BirdLife partners in Cyprus and the UK (namely BirdLife Cyprus and the RSPB), as well as the UK Overseas Territories Conservation Forum (UKOTCF), support that planning changes should take full account of the need to safeguard

Blackcap Photo: Dave Nye

the unique biodiversity in the Cyprus SBAs. It is important that the SPA and SAC status of the WSBA and ESBA be taken fully into account.

BirdLife Cyprus applauds the SBAs for proposing the SAC designation before progressing with the planning zones. However, in addition we urge the SBAA to carry out the required Strategic Environmental Assessment (SEA) so that the Planning Zones and Policy are subjected to a SEA at an early stage of the procedure, and that also the SEA should avert future conflicts with Appropriate Assessment (AA). SPAs and SACs are subject to the Appropriate Assessment process, for any plans or projects not directly related to the management of the site that may negatively affect the site or the species for which it was designated.

Large developments (*e.g.* golf course developments, intense coastal developments like marinas and large renewable energy infrastructures) have been favoured in the Republic in recent years and can have significant effects on protected areas. Similar developments been proposed in the past for the WSBA. RSPB and BirdLife Cyprus strongly support that a cautious approach regarding such developments should be taken in the SBAs.,

Windfarm Oreites Photo: C.Papazoglou

Limassol port, Akrotiri Photo: Melpo Apostolidou

In addition, planning provisions permitting isolated housing development in areas zoned for agriculture is an important threat to natural habitats across the Republic, contributing to habitat fragmentation. This provision should be excluded from the Cyprus SBAs NMD agreement. It is also important that BirdLife Cyprus and the RSPB are consulted during the process of formulating the SBAA Policy Statement. Finally, it is vital for some areas adjacent to protected areas and sensitive areas, to manage land planning through detailed local plans and not the more general zoning. A local plan can also help achieve land consolidation so that regulations are felt to be fair.

The preparation of the SBAA Policy Statement is still at a very early stage; however the need for measures at such crucial stage for safeguarding the Akrotiri IBA, SPAs and SACs and the biodiversity in the Cyprus SBAs in general, is unquestionable.

Isolated house Photo: C.Papazoglou

Legal requirements for EIAs

Arlene Brock (former Ombudsman for Bermuda)

Brock, A. 2015. Legal requirements for EIAs. pp 337-345 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

This paper sets out: the genesis of the 2001 UK Environment Charters signed with each of the Overseas Territories[1] (except Gibraltar which issued its own similar Charter in 2006); the Bermuda controversy about whether or not the Charter imposes legal obligations to require EIA before approving major developments or proposals likely to have significant impact on the environment; and, jurisprudence regarding the Charter and EIA requirements.

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The 2001 UK Environment Charter Commitments

Charter Rationale

The UK is a signatory to the 1972 UN Convention on Biological Diversity (CBD) and other multilateral instruments that establish obligations to protect and sustain the natural and other environments.[2] Article 4 (re Jurisdictional Scope) of the CBD imposes accountability on each signatory for processes and activities "*carried out under its jurisdiction or control, within the area of its national jurisdiction or beyond the limits of national jurisdiction*". By 2012, the CBD Secretariat had considered this Article only with respect to waters / oceans within jurisdiction or control but had not considered land[3]. Given ultimate jurisdiction under the constitutional relationship of the UK with the Overseas Territories (UKOT) it is more likely than not that the provisions of Article 4 can be construed as applying to them as well[4].

The responsibility for environmental management in the UKOTs has been devolved to each UKOT government. The UK cannot unilaterally impose its own international environmental obligations on them, yet bears some responsibility for processes and activities carried out on these lands. The UKOTs must request to be included in the UK's ratification of the CBD[5]. By 1999, the British Virgin Islands, Cayman Islands and St Helena (including Ascension and Tristan da Cunha) had done so and other UKOTs were preparing to join. The UK Environment Charters serve as a bridge between Britain's international environment commitments and UKOT internal self-governance, especially for those UKOTs that have not asked to be included in the multilateral instruments.

The 1999 White Paper on *Partnership for Progress and Prosperity* set out recommendations of a review by the Foreign and Commonwealth Office of the relationship between Britain and the Overseas Territories with the aim of creating a "renewed contract" for this relationship[6]. The White Paper stipulates that this new partnership

1 Except Gibraltar which issued its own similar Charter in 2006; in any event, Gibraltar is subject to most European Union environmental legislation

2 The UK is bound also by European Directive 85/337/EEC regarding EIA and public consultation; and has also endorsed the 1992 Rio Declaration on Environment and Development.

3 Per personal telephone call with CBD Secretariat in Montreal, January 2012

4 This would be consistent with Article 29 of the Vienna Convention on Treaties: "Unless a different intention appears from the treaty or is otherwise established, a treaty is binding upon each party in respect of its entire territory".

5 The 1997 UN Convention on the Law of the Sea was extended to all of the UKOTs; most have joined the Ramsar Convention on Wetlands of International Importance; UKOTs that joined the Convention on International Trade in Endangered Species were required to set up a national management authority to enforce it. In 1998 the UK announced that it would ratify the Protocol concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region of the Cartagena Convention and would extend its ratification, in the first instance, to the Cayman Islands.

6 The 2012 White Paper – *Security, Success and Sustainability* – states that it endorses and builds on the work of the new relationship set out in 1999 White Paper.

"creates responsibilities on both sides. Britain is pledged to defend the Overseas Territories, to encourage their sustainable development and to look after their interests internationally. In return, Britain has a right to expect the highest standards of probity, law and order, good government and observance of Britain's international commitments." (emphasis added)

The 1999 White Paper set out that – as priority actions – the UK must (and the UKOTs were encouraged to) undertake certain responsibilities to conserve, manage and protect the rich natural environment of the territories: *"These responsibilities already exist but the UK and its Overseas Territories have not always addressed these issues sufficiently consistently or systematically."* The 1999 White Paper noted, for example: *"Some OTs develop independent Environmental Impact Assessments (EIAs), ensuring that the public are fully consulted, before making decisions on new developments."*

However, in order to achieve an agreed systematic approach for all of the UKOTs, the FCO declared: *"We intend bringing together the responsibilities, common objectives and cooperative approaches of the UK Government, Overseas Territory governments, the private sector, NGOs and local communities by drafting and agreeing an Environment Charter with the Overseas Territories. The Charter will clarify the roles and responsibilities of these stakeholders, set out in a shared vision which also takes account of the wide variety of circumstances and local resources in each territory. The exact form of the Charter and variations between territories will be determined in consultation with them."*

Charter Commitments

Each UKOT negotiated and signed its own Charter. While the Guiding Principles and UK Commitments are essentially identical for all the UKOTs, each UKOT could vary its commitments depending on its particular circumstances. In June 2001, the Bermuda Government announced that the FCO sent a two-person team (one was a legal expert) to *"give tips on how Bermuda can keep in line with the CBD, talk with local officials to identify changes needed in programmes and legislation for Bermuda to comply with the fine print of the CBD, and discuss with the Environment Minister a joint charter on the environment."* Bermuda's Charter was signed on 26 September 2001 by the then Premier Jennifer Smith on behalf of Bermuda and Baroness Valerie Amos on behalf of the UK.

With respect to Environmental Impact Assessment, the Charter Commitments state:

"The Government of Bermuda will:

4. Ensure that environmental impact assessments are undertaken before approving major projects and while developing our growth management strategy.

5. Commit to open and consultative decision-making on developments and plans which may affect the environment; ensure that environmental impact assessments include consultation with stakeholders.

11. Abide by the principles set out in the Rio Declaration on Environment and Development and work towards meeting International Development Targets."

Commitment 11 was duplicated on the UK side of the Commitments equation.

Generally, Bermuda and the UK committed to the globally recognized Precautionary Principle 15 of the Rio Declaration that should underlie basic decision-making:

"in order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation".

Specifically, Bermuda and the UK committed to undertake EIA certain developments in accordance with for Principle 17 of the Rio Declaration:

"Environmental Impact Assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have significant adverse impact on the environment and are subject to a decision of a competent national authority."

Thus, Bermuda committed to EIA for two kinds of development proposals[7]:

- major projects, and
- activities likely to have significant adverse impact on the environment.

7 EIA is the appropriate tool to manage and conserve the environment as it is a *"process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken"*. International Association for Impact Assessment.

Bermuda did, in fact, meet some of its obligations under the Charter – in particular Commitment 1:

"Bring together Government departments, representatives of local industry and commerce, environment and heritage organizations, the Governor's office, individual environment champions and other community representatives to formulate a detailed strategy for action" (resulting in the 2003 Biodiversity Strategy and Action Plan and the 2008 Sustainable Development Strategy and Implementation Plan).

Bermuda: Is EIA discretionary rather than a legal obligation?

Land zoned for development

Bermuda's 1974 Development and Planning Act (DPA) established the Development Applications Board (DAB) to review and determine applications to subdivide and develop land that is zoned for development. The DPA provides that periodic (every decade or so) Development Plans, created after public consultation, should set out the policies and regulations that guide the decisions of the DAB.

The 2008 Bermuda Development Plan stated:

"the environmental objectives and policies of this Plan reflect and complement the goals and recommendations of other Government environmental initiatives including the Environment Charter, Sustainable Development Strategy and Implementation Plan, Biodiversity Strategy and Action Plan…It is important that the DAB has all the pertinent information relating to a proposed development in order to determine a planning application and to ensure that a development does not have an adverse impact on the natural, human or build environments…

A view over part of Bermuda

An environmental impact assessment of a project helps to determine any potential problems or risks associated with a development at the design stage. It also enables informed decisions to be made about whether a development should be permitted and what planning conditions are necessary in order to control the design, enhance the benefits of the scheme, and avoid or mitigate any adverse effects."

Notwithstanding this general principle, and contrary to the mandatory language of the Charter and the Rio Declaration, the 2008 Development Plan conferred on the DAB a discretion to require EIA for: major development proposals; developments proposed in sensitive locations; and developments which involve complex and potentially adverse environmental effects. There is no evidence to determine if the inclusion of discretionary language was: merely an oversight; a misinterpretation of the legal effect of the Charter; or a considered contravention of the Charter.

Special Development Orders

The 1983 Development Plan established conservation zoning that set aside (after a robust objection and Tribunal appeal process) approximately 1,500 acres to be protected from development as they were arable, environmentally sensitive or otherwise warranted conservation for all of time[8]. The Plan did not contemplate that such protection could be removed or whether some restrictions ought to be imposed even if development on these protected areas was ever later permitted.

As stipulated by the DPA, it is the Minister responsible for the environment, not the DAB, who determines applications to develop land that is not zoned for development. The Minister approves such development by issuing Special Development Orders (SDO). Neither the DPA nor the Development Plans provided guidance to the Minister for criteria to determine SDO applications. Most of the 50 SDO applications that had been approved by 2011 were for developments on land that had been layered with conservation zoning in 1983[9].

8 The Bermuda Court of Appeal [Min. of Environment v. Bda. National Trust (2003) L.R. 41] set aside a private covenant to protect land from development, thus leaving Development Plans as the only reliable avenue for permanent protection of land.

9 Although there were some public objections to the locations, early SDOs were for national projects such as the Incineration Plant and the Bermuda College.

On 1 March 2011 the DPA was amended to require the Legislature (rather than the Minister) to approve SDOs by the affirmative resolution procedure. This amendment changes who approves SDOs and does have the effect of bringing such applications squarely into the public eye. However, the amendment does not establish what information, criteria and standards should inform consideration of SDO applications. However, if EIA may be required for land that was zoned for development, it would be logical and consistent with the principles of both the Charter and the Rio Declaration to expect that EIA should be required before approving development on land with conservation zoning.

On 2 March 2011, the House of Assembly approved a SDO application for a purported tourism development at Tucker's Point that would remove conservation protection from arguably one of the more biologically diverse, environmentally sensitive and scientifically significant corners of Bermuda that had been protected since 1983[10]. The original 2011 application was to develop 23 acres of land and included a donation of 26 acres of conservation area to Bermuda (of which 18 acres are a lake). After two controversial Senate debates, the SDO was approved on 25 March for development of a reduced area of 12.4 acres (and an increase of the donation to Bermuda of 10 acres of land).

This development was trumpeted, not only to be major for purposes of potential construction and employment, but indeed of national priority for the purpose of revitalising our tourism industry. By removing the conservation protection from the 12.4 acres, this SDO development would – by definition – have significant adverse impact on the environment. Complex cave systems as well as endemic and native species, habitats and ecosystems are at risk. Yet, no EIA process had been conducted before approval as required by the Charter and the Rio Declaration.

The SDO permitted certain reserved matters to be determined in later applications by the DAB. These matters are subject to 13 conditions and further studies, including a geotechnical assessment to determine cave features for locations of building sites and access driveways, identification of critical habitat and limits on wells, excavation depths and a specified sewage system.

10 In 1995 and 2001, Tucker's Point received SDOs that had removed protection from approximately 25 – 35 acres of conserved land.

Part of the unique cave system potentially affected by the proposed development

Ombudsman's Own Motion Investigation in the Public Interest

In accordance with section 5(2) of the Ombudsman Act, I launched an investigation on my own motion in the public interest into – not the Legislature's decision to approve the SDO – the process and scope of analysis by the civil servants.

I also concluded that the sewage condition of the 2012 SDO was inferior to the conditions required in the 1995 SDO for the same property.

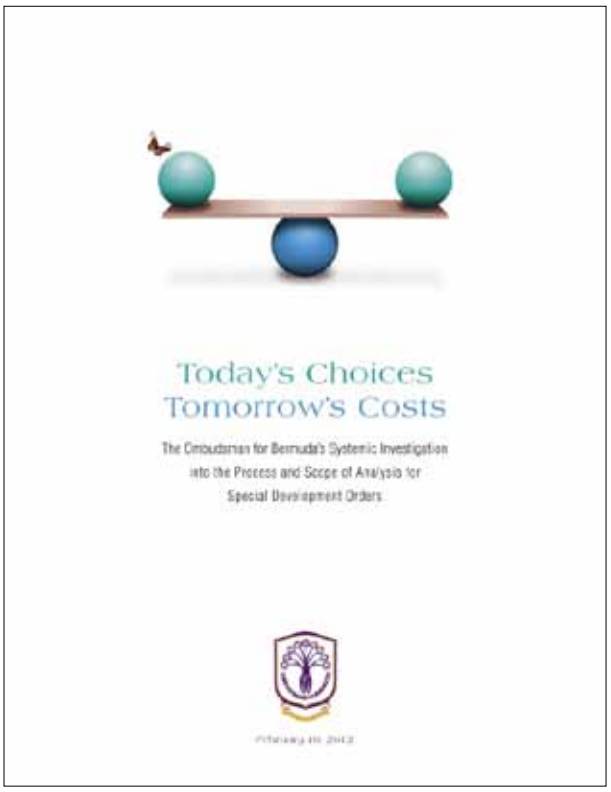
My report – *"Todays Choices: Tomorrow's Costs"* [11] – and later updates – concluded:

- as an agreement between two governments, the plain language of the Charter Commitments established legal obligations
- it was therefore a mistake of law for the competent authorities not to have required a comprehensive EIA prior to approval of the 2011 SDO
- the International Court of Justice explicitly recognized EIA as a practice that has attained customary / general international law status[12]
- the conditions for additional studies attached to the Tucker's Point SDO did not amount to an EIA; indeed, some were inadequate for their purpose[13]
- jurisprudence of the UK Supreme Court (House of Lords and Privy Council) provide that proper, comprehensive EIAs may still be conducted even after approval in principle of developments.

11 Tabled 10 February 2012; see also Diligent Development June 2012 (www.ombudsman.bm)

12 Pulp Mills n the River Uruguay (Argentina v. Uruguay), ICJ 2010

13 *E.g.* the sewage condition of the 2011 SDO was even less stringent than that of the 1995 SDO



In a press release dated 2 May 2012, the then Minister asserted: *"We have taken advice from both the Attorney General's office and the FCO via Government House, and conclude that the UK Environment Charter* ***does not constitute law****. It is unenforceable. Rather, the UK itself considers the Charter to be "aspirational".*

The key principles in the FCO's initial consultation were apparently described by its Environment Policy Department as "aspirational statements". The final, negotiated Charters are comprised of two sections: "Guiding Principles" and "Commitments". There is no evidence that either the UK or the UKOTs considered the Commitments or the final Charters as a whole to be merely aspirational[14].

Quite to the contrary:

- Among the UK's Charter Commitments are early funding mechanisms to enable the UKOTs to implement their Charter Commitments (to compensate for the fact that the UKOTs are not eligible for funding from the Global Environmental Facility and other international funds).
- In announcing the Charters in 2001 Baroness Amos, then the UK's Overseas Territories Minister, stated: the Charter sets out guiding principles and contains *"some real long-term commitments"*.
- At the 3rd UKOT Conservation Conference held in Bermuda, the then Permanent Secretary responsible for the environment in Bermuda declared: *"We all (the OTs) signed on to the Environmental Charter and that means we've signed on to a variety of commitments"*.
- A 2006-7 review by the Environmental Audit Committee of the UK House of Commons noted that to ensure adequate funding of the UKOTs, it is *"necessary to assess whether both the [UK] Government and the governments of the UKOTs have met their respective obligations under the Environment Charters and Multilateral Environment Agreements"*.
- The FCO's evidence for this 2006-7 review was that *"responsibility for the OTs is a cross-governmental responsibility so the FCO has a role in this as well as DEFRA and DFID, and the Environmental Charters provide the basis on which government departments here, individually and collectively, can work in co-operation with the governments of the OTs on implementation"*. Note: DFID requires full EIAs for major projects that it funds.
- In its January 2012 policy document – *The Environment in the UK OTs: UK Government and Civil Society Support* – DEFRA defined the Charter as *"a formal, individual agreement, listing commitments to develop and implement sound environmental management practices in the OTs and clarifying the roles and responsibilities of the UK Government, Overseas Territory Governments, the private sector, NGOs and local communities."*
- The December 2012 Communique of the Overseas Territories Joint Ministerial Council stated that as a priority action the UK and UKOT Governments agreed to *"continue to implement Environment Charters"*.

Legal requirments for EIAs

To date, the legal effect of the UK Environment Charters has been considered by just two Courts.

14 In determining what constitutes a binding agreement between governments, the International Court of Justice stated that even if a document is described as merely a "Joint Communique", it may be binding if commitments therein are (a) intended to be implemented and (b) specific (Qatar v. Bahrain, 1 July 1994). The 1999 White Paper set out the intent that the responsibilities in the Charters would be carried out. The EIA Charter Commitments 4, 5 and 11 are certainly specific.

Eastern Caribbean Supreme Court (Appellate Jurisdiction)[15]

In considering an appeal from Anguilla, the Eastern Caribbean Supreme Court reviewed the adequacy of the Charter's UKOT Commitment 5 regarding public consultation within the EIA process. The Court held that the Charter established a policy (singly or taken together with the government's environmental strategy and action plan). Therefore there was a legitimate expectation that the public would be consulted in accordance with this policy:

"Public consultation, particularly in relation to developments and projects that will impact the environment, is now practically routine in all jurisdictions. Sometimes the duty to consult is made a statutory requirement, but even where it is not it has become a policy in most quarters to observe this feature of procedural fairness".

Note: the doctrine of legitimate expectation – that is, a government is expected to do what it says it will do unless it expressly backtracks from its promises – was set out by at least two relevant Privy Council decisions:

- in an appeal from the Bahamas that public consultation for an environmentally sensitive development application was insufficient, the Privy Council affirmed: "The public had a legitimate expectation of consultation arising out of official statements recognizing the need to take account of the residents' concerns and wishes". [Save Guana Cay Reef Association v. R (2009) UK PC 44]
- if media and other public statements can give rise to legal obligations on the doctrine of legitimate expectation, then this is even more so for formal written agreements and policies such as the Charter: "The existence of a treaty may give rise to a legitimate expectation of the part of citizens that the government, in its acts affecting them, will observe the terms of the treaty." (Higgs and Mitchell v. the Minister of National Security (Bahamas) [1999] UKPC 55 at 12)

Bermuda Supreme Court (Appellate Jurisdiction)[16]

On 6 August 2014, the Supreme Court of Bermuda issued a comprehensive decision on the legal effect of the Charter, in particular the EIA commitment. This was an appeal of a decision of the Minister to approve a subdivision application made in April 2013 pursuant to the Tucker's Point SDO. As a reserved matter under the SDO, this application was determined in the first instance by the DAB. This application included access roads notwithstanding that no geotechnical study had been conducted in accordance with a condition set out in the SDO itself.

The Bermuda Environmental Sustainable Taskforce (BEST), one of the island's most active NGO watchdogs had advocated that a full and proper EIA be conducted prior to approval of the subdivision application. The DAB approved the application but, after some debate, did not require an EIA (apparently based on advice that the Charter did not impose a legal obligation to do so).

BEST appealed the DAB decision to the Minister. Quite often, when a Minister considers an appeal of DAB decisions, s/he has the benefit of advice from an Independent Inspector – an overseas, neutral planning expert. As noted by the Supreme Court, the Independent Inspector had advised that the Charter set out actual commitments by Bermuda and was not merely "aspirational". Further, he stated that the "shopping list" of studies and conditions in the Tucker's Point SDO was insufficient and that a "holistic EIA" was required.[17]

Nevertheless, the Minister did not follow the advice of the Independent Inspector and upheld the DAB's approval of the subdivision application. BEST then sought judicial review of the Minister's decision partly on the ground that an EIA should have been required and also that the financial feasibility of the development should have been considered, given the receivership subsequent to the SDO being granted.

The Chief Justice remitted the appeal back to the Minister for a rehearing. The judgment has three elements: the decision on BEST's claims (*ratio decidendi*); guidance for the rehearing as requested by the Minister (*judicial dicta*); and general, considered observations (*obiter dicta*).

The *judicial* and *obiter dicta* set out the default principles in the absence of express statutory language that disavows these principles. The *ratio*

15 Webster et al v. Attorney General (Anguilla) and Dolphin Discovery (Civ) A.D. 2010 (ECSC), paras. 45-48

16 BEST v. Minister of Home Affairs, SC 2014: No. 135.

17 As I was not privy to the BEST appeal evidence, it was not until the August 2014 decision of the Supreme Court that I learned that the Independent Inspector essentially confirmed my conclusions the Charter set out legal obligations and that the SDO conditions did not constitute an EIA.

decidendi shows that the principles had been effectively disavowed in the 2008 Development Plan (which has legislative effect)[18] :

- the Charter is a treaty obligation and cannot be construed as aspirational
- EIA has become general international law for major development projects and for those that are likely to have a significant impact on the environment
- Domestic law and policy should be consistent with both treaty obligations and general international law unless there is express statutory language signaling a departure
- Bermuda's Development Plan, which is derived from the Development and Planning Act and therefore has legislative effect, had signaled an intent to depart from the international obligations by making EIA discretionary rather than mandatory
- Nevertheless, the DAB is required by the Development Plan to obtain the best quality information to inform its decision. An EIA would normally provide the best possible information. The DAB ought to have a rational reason for not requiring an EIA.
- The Tucker's Point SDO was an "in principle" approval of the development. The SDO and conditions therein do not preclude the possibility of (a) a full EIA[19] (b) conducted at a later stage[20]
- As long as there is public consultation, other technical elements of what constitutes a full EIA should be determined by the Ministry
- The SDO does not exclude consideration of financial factors such as the subsequent receivership.

Ratio Decidendi

- Para 41: *"There is a mandatory obligation for the DAB to obtain the best quality information to enable a sound development decision to be made in relation to major proposed developments. Depending on the facts, this will usually require an EIA to be carried out (in relation to applications such as the Tuckers Point development), unless there is some rational basis for deciding that an EIA/EIS is not required*
- Para 29: *Bermudian law requires planning authorities as a general rule to conduct an EIA when asked to grant planning permission in relation to major projects such as the Tuckers Point development which forms the subject of the present appeals*
- Para. 67: *Construing the SDO as excluding the need to even consider the desirability of an EIA would be inconsistent with international obligations assumed by Bermuda which emphasise the importance of conducting an EIA in relation to major commercial projects likely to impact significantly on the environment. Clear legislative words would be required to justify the conclusion that the Minister intended to abrogate such an important international legal obligation*
- Para. 68: *The requirement to conduct an EIA <u>of some sort</u> in relation to major environmentally impactful development projects is now probably a general principle of international law…However, as Bermuda legislation has expressly dealt with the same topic of EIAs in non-mandatory terms, this finding becomes academic in the sense that it cannot be contended that a common law rule can override primary or subsidiary legislation*
- Para 116: *Under the Development and Planning Act 1974 as read with the Development Plan, there is a discretionary rather than mandatory requirement for conducting an EIA before planning approval is granted for major projects. In respect of major projects likely to have a significant environmental impact, EIA is assessment technique that should be deployed as a general rule*
- Para 87: *The Minister effectively communicated his intention of departing from the international commitments…The way in which the EIA concept is defined in the Development Plan, and the terms in which the SDO is expressed, any positive commitment to conduct a "full" EIA at the approval in*

18 This was an important finding as Planning staff had often contended to the Ombudsman for other investigations that even provisions described as not discretionary in the Plan are merely "guidance".

19 Note: EIA must be comprehensive, accessible, non-technical and involve public consultation (Berkeley v. Sec. of State for the Environment [2000] UKHL 36)

20 Note: EIA should be conducted at earliest possible stage of the planning permission process but may be conducted after permission in principle, especially if environmental impact was not known at in principle approval stage (R v. London Borough of Bromley ex parte Barker [2006] UKHL 52)

principle phase has effectively been departed from [21]

- Para 43: *The SDO did not exclude the need for the DAB to consider the desirability of an EIA/EIS at the final subdivision application stage and/or prior to the final application stage*
- Para 74: *Bermuda has committed itself in various international agreements to use EIAs (fluidly defined) before approving major commercial projects with significant environmental implications. To the extent that the SDO is ambiguous as to whether it ought to be read as either excluding EIAs altogether or retaining the regulatory power to conduct an EIA, I would resolve such ambiguity in favour of construction which is most consistent with Bermuda's international treaty obligations*
- Para 56: *The SDO did not exclude the ability of the DAB, at the final planning permission stage, to take into account any material change in circumstances of an economic or financial nature*
- Para 117: *The Minister erred in law by construing the SDO as excluding the option of requiring information in support of the applications to be presented in a manner which was not spelt out in the SDO."*

Judicial dicta

- Para. 112: *"Due consideration must be given to a full "EIA" (either before or after final subdivision approval), and the issue ought to be decided by way of a rehearing of the appeals before the Minister, because both he and the DAB erred in law by concluding that the SDO eliminated this as an option. The Development Plan creates a general policy rule in favour of an EIA for major projects, Bermuda has assumed various international commitments to positively conduct EIAs for major projects and no convincing reason for not conducting a fuller EIA was ever advanced in the course of the present appeals. Save for the fact that any EIA must provide some global overview of the impact of the Development as a whole, and that at a minimum public consultation must afford specialist interest groups such as BEST an opportunity to provide input (in addition to the Applicants), what form the EIA/EIS should take is quintessentially a technical policy matter which ought properly to be decided upon by the Minister, or his appointee*
- Para 114: *It must be remembered that approval in principle has already been granted and this may legitimately impact upon the scope of any EIA which might be formulated. An important consequence of approval in principle is that permission once validly granted cannot be revoked without triggering statutory compensation rights for the applicants in respect of any wasted costs. On the other hand, section 25(1) of the Act does empower the Minister to revoke any permission which has been granted, in fairly broad terms*
- Para. 115: *The complaint that the economic viability of the Development required some reassessment in light of the post-SDO receivership seemed to me to have considerable force… BEST is right to raise concerns about the risk of any significant physical development actually commencing in an environmentally sensitive area without any proper assessment of the prospects that the development will likely be a financial success and be likely to achieve the economic objectives which form the basis for the rezoning the SDO controversially effected."*

Obiter dicta

- Para. 64: *"The 2001 UK-Bermuda Environmental Charter was a bilateral agreement creating an international legal obligation on Bermuda's part, albeit one only enforceable by the United Kingdom Government. The Government is subject to a positive international legal obligation to carry out an EIA "before approving major projects". The precise form and content of the requisite EIA is not spelt out, save that it must include public consultation*
- Para. 65: *The Bermuda government's commitments under the Environmental Charter are very general commitments, although I tend to agree with the Ombudsman that it is diluting their legal status unduly to describe these obligations as being merely aspirational in character*
- Para. 117: B*ecause at the international treaty level Bermuda has committed to use EIAs, and their use is so widely accepted as to form a*

21 The Supreme Court did not consider whether the 2008 Development Plan had mistakenly or inappropriately not incorporated the 2001 Charter obligations to require EIA and to abide by the Rio Declaration.

general principle of international law, clear statutory language would have been required to justify construing the SDO as excluding the need for an EIA at any stage of the development project".

Todays Choices: Tomorrow's Costs and subsequent update reports provided evidence that almost every country in the world mandates EIA – either by statute, policy or practice – to assess applications for environmentally sensitive developments. In accordance with: the Charter Commitments, including the Rio Principles; general international law; and, global best practices, EIA should be mandatory for major developments and for those developments likely to have significant adverse impact on the environment.

As indicated by the Supreme Court of Bermuda, domestic legislation and policies should be consistent with treaty obligations and general international law.[22] Accordingly, future Development Plans should jettison the notion of discretionary rather than mandatory EIA. No cogent or compelling reasons have been advanced to depart from general international law, Charter obligations and global best practice.

22 Note, the Chief Justice ruled (at paras. 70 – 73) that the Aarhus Convention does not extend to Bermuda as the UK did not expressly declare in writing that it would apply: *"This practice is a longstanding one, and is a reflection of the autonomous nature of the domestic legal systems of British Territories like Bermuda".*

Environmental Impact Assessments (EIAs): what they involve and what are the benefits

Jo Treweek (Treweek Environmental Consultants)

Treweek, J. 2015. Environmental Impact Assessments (EIAs): what they involve and what are the benefits. pp 346-351 in *Sustaining Partnerships: a conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island communities, Gibraltar 11th to 16th July 2015* (ed. by M. Pienkowski & C. Wensink). UK Overseas Territories Conservation Forum, www.ukotcf.org

Good Environmental Impact Assessment should inform decision-making and improve the sustainability of development. Biodiversity is now a mainstream topic in EIA, but does EIA improve outcomes for biodiversity in practice and what are the key factors that need to be considered to make sure that it does? This talk provides an overview of recent developments in international standards and makes the case for rigorous approaches based on well-known best-practice principles. The talk is illustrated with international examples of EIAs that have addressed impacts on biodiversity and ecosystem services with different degrees of rigour and success.

Dr Jo Treweek, Partner, Treweek Environmental Consultants
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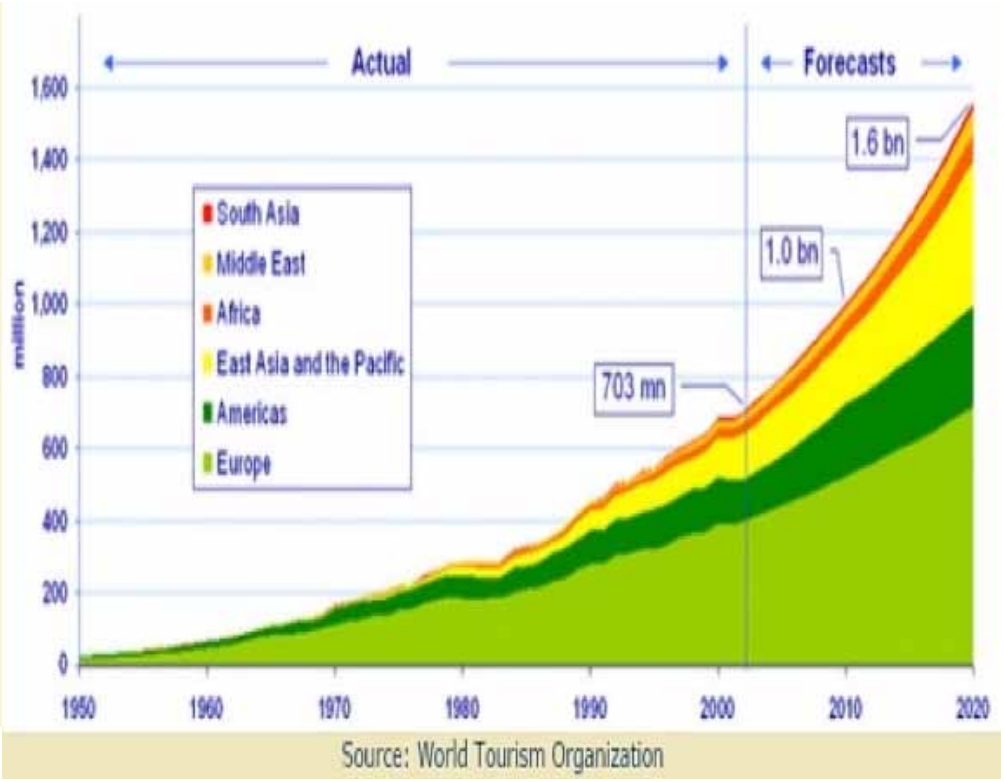
Environmental Impact Assessment (EIA) is "The process of identifying, predicting, evaluating and mitigating the biophysical, social and other relevant effects of development proposals prior to major decisions being taken and commitments made"

It is a tool to enable planning and decision-making authorities to weigh potential economic benefits (such as employment) against likely environmental impacts, to make an informed planning decision.

It was originally intended as a means of adding environmental considerations into predominantly financial, technical and political decision-making processes (US National Environmental Policy Act 1978).

The purpose and objective of impact assessment was to anticipate and avoid, minimize or offset significant adverse biophysical, social and other relevant effects, to promote development that is sustainable and optimizes resource use, to protect the productivity and capacity of ecosystems, the processes, which maintain them and the benefits they provide.



These objectives are from the International Association for Impact Assessment (IAIA) Principles for Best Practice in Impact Assessment. They were a means of encouraging some adjustments to the usual objectives in the interests of avoiding serious environmental harm. This can be for reasons of enlightened self-interest, as poor management of environmental and social impacts can affect operating costs, long-term liabilities, social license to operate.

Why is EIA important for biodiversity and ecosystems?

EIA underpins approvals processes in >200 countries and is therefore a means of mainstreaming biodiversity. In Article 14 of the Convention on Biological Diversity, Strategic Environmental Assessment and EIA are recognised as key tools for mainstreaming biodiversity in development planning decisions. Commitment 4 & 5 of the Environment Charter commitments signed in 2001 state that UKOTs would ensure that EIA were undertaken for major development projects and they would include consultation with stakeholders.

EIA is legally mandated/ governed by international norms or "general international law". The Bermuda Supreme Court held also that (independently of the Charters) the obligation to require EIA derives from general international law (see previous article).

The EU Directive now requires explicit consideration of impacts on biodiversity in EIA and strongly implies the need to consider ecosystem services.

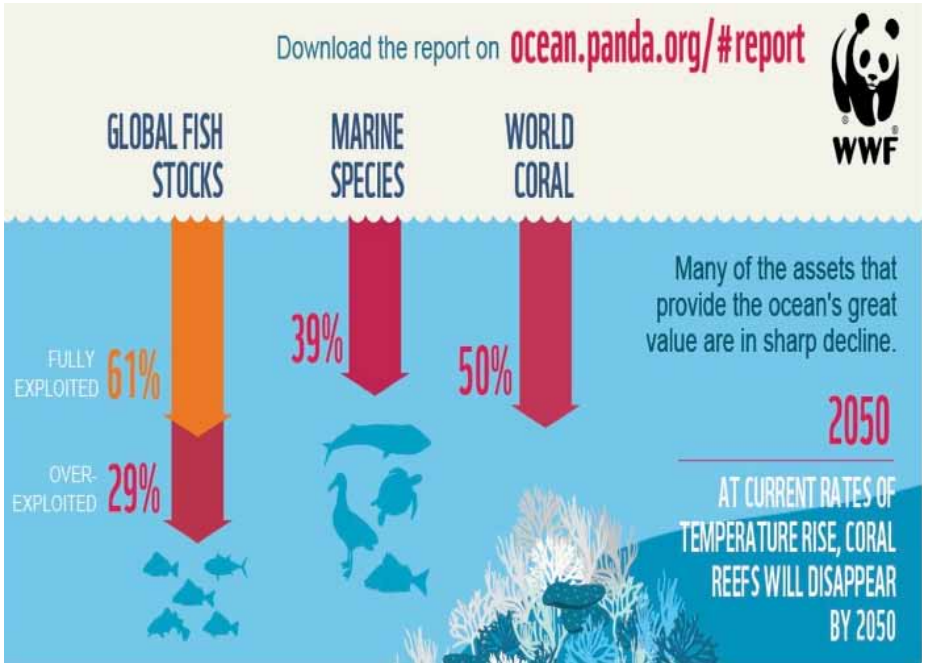
It underpins international social and environmental safeguards (new standards in 2012).

It supports evidence-based decision-making and regulation and provides a framework for commitments.

Humanity - worse than a nuclear bomb for coral reefs?

Quote: "The most publicized of the Bikini tests, 'Bravo', was a 15-megaton hydrogen bomb detonated on a shallow fringing reef in 1954. It destroyed three islands, causing millions of tonnes of sand, coral, plant and sea life from Bikini's reef to become airborne. The sediment regime in Bikini was fundamentally altered by the nuclear events because millions of tonnes of sediment were pulverized, suspended, transported and then deposited throughout the lagoon by wind-driven lagoonal current patterns (Van Arx, 1946)."

Now these are amongst the most diverse and healthy corals in the Pacific! "Richards and colleagues report a thriving ecosystem of 183 species of coral, some 8 metres high. They estimate that the diversity of species represents about 65% of what was present before the atomic tests. The ecologists think the nearby Rongelap Atoll is seeding the Bikini Atoll, and the lack of human disturbance is helping its recovery. Although the ambient radiation is low, people have remained at bay."



See: http://www.newscientist.com/article/dn13668-nuked-coral-reef-bounces-back.html, and

Richards, Z. T., Beger, M., Pinca, S., & Wallace, C. C. (2008). Bikini Atoll coral biodiversity resilience five decades after nuclear testing. Marine Pollution Bulletin, 56(3), 503–515. http://doi.org/10.1016/j.marpolbul.2007.11.018 or http://www.bikiniatoll.com/BIKINICORALS.pdf

After 20-30 years is EIA fit for purpose?

Biodiversity features in the majority of impact assessments, which is a major change in the last 15 years, but "biodiversity is not adequately considered when people take planning decisions" (Defra, 2014) and pressures and losses continue to grow.

As we are interested primarily in ecological aspects, including social/ economic uses and benefits derived from biodiversity, we need to consider the procedural effectiveness: does EIA conform to established requirements, standards and principles; and the substantive effectiveness: is the purpose of EIA achieved?

Some key procedural aspects have been addressed in recent changes to the EU Directive. Substantive effectiveness depends on several actors, including businesses and corporations. There are considerable sectoral differences in terms of corporate positions on biodiversity. Cruise companies are not global leaders in this area, despite their acknowledged dependence on marine ecosystems.

Typical steps in an IA process are listed in the Table below.

Screening	•Is EIA needed? •Identify projects with potentially significant adverse effects.
Scoping	•Key issues that should be included in the ToR. •Proposed approaches, methods and timing. •Who should be involved.
Assessment	•How proposed project activities will affect environmental components against baseline/ do nothing alternative.
Evaluation	• Consequences of the impacts identified… • The "So What?" factor…
Mitigation	•What should be done to avoid, reduce or offset significant adverse impacts for acceptable outcomes.
Reporting	•Present the findings in a clear and transparent manner.

Biodiversity is generally considered in the screening stage if highly protected areas, habitats or species are affected.

Restricted spatial and temporal scope means significant impacts on biodiversity may be overlooked

Evaluation criteria are poorly framed

Most importantly, links to management are poor and there is insufficient follow-up.

Typical EIA shortcomings are listed in the Table below.

Screening	•EIA not considered necessary for some very damaging projects and activities •"Salami Slicing"
Scoping	•Key issues are scoped out for reasons of cost or expediency •Site and "end of pipe"
Assessment	• No alternatives considered/ alternatives considered are unrealistic •Impacts assessed on the basis of old or partial information.
Evaluation	•Aversion to subjective techniques •Arbitrary significance thresholds..
Mitigation	•Unrealistic promises, no monitoring.
Reporting	•EISs impenetrable, long, expensive, unavailable, in the wrong language….who reads them?

Is EIA required for the full range of developments it should be used for?

Application of EIA is often considered un-necessary for land-use changes that are quite significant. Often, no EIA is required for the exploration phase. The argument given is that nobody has decided for sure if they want the project to proceed yet. This can mean that the interests of the developer over-ride those of local communities and the environment. Who should bear the cost of this

damage? (See above for the impact in carving up a hill just by the eploration phase.)

Road schemes may be "salami sliced" into sections that fall below screening thresholds. (See photo below for the only part of the road built!)

Importance of Baseline

There are many high profile cases of baseline assessments (and even the entire EIA process) being started subsequent to development start. Doing a good baseline takes time and needs to cover a big enough area to understand the context of a project. Typically they are too restricted in space and time. This means that important values and sensitivities can be completely missed. Sometimes they are very costly to fix.

Mitigation

Mitigation recommendations are often partial and poorly designed. This is largely because there has been no requirement to demonstrate an effective or acceptable outcome, combined with lack of follow-up. This means that commitments made in EISs often do not match what happens in reality. Introducing offsets to the mitigation hierarchy should improve this by encouraging a more outcome-oriented approach.

Issues include: partial, unrealistic or ineffective mitigation, failure to consider beneficiaries, mitigation solutions that are divorced from beneficiary requirements.

This "Biosphere in a bottle" is 40 years old. Generally, however, it is very difficult indeed to re-engineer ecosystems once they have become degraded. Restored habitats and ecosystems are often poor copies. Mitigation suggestions are often completely unrealistic.

Follow up and failure

Is EIA done as well as it should be? If not, does anyone check?

The 'procedural and stepwise nature' of most EIA systems means that there is a tendency for the final granting or refusal of a development consent to be perceived as the end-point in the EIA process.

Too often, the emphasis in EIA is on the pre-decision stages and the preparation of the Environmental Impact Statement (EIS). The EIS is used purely as a means of achieving development consent rather than as tool for achieving sound environmental management (*Dipper et al.* 1998).

EU Directive Amendments

Over the last decade, environmental issues, such as resource efficiency and sustainability, biodiversity protection, climate change, and risks of accidents and disasters, have become more important in policy making. They should therefore also constitute important elements in assessment and decision-making processes

Effects of a project on the environment should be assessed in order to take account of concerns to protect human health, to contribute by means of a better environment to the quality of life, to ensure maintenance of the diversity of species and to maintain the reproductive capacity of the ecosystem as a basic resource for life.

The amended Directive has New Requirements for monitoring and a wider requirement for a compensation step as part of the mitigation hierarchy. It states that:

"Member States should ensure that mitigation and compensation measures are implemented, and that significant adverse effects on the environment resulting from the construction and operation of a project are monitored, to identify unforeseen significant adverse effects, and to be able to undertake appropriate remedial action".

Text of Directive 2014/52/EU - http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.124.01.0001.01.ENG

Environmental sensitivity of areas likely to be affected by projects must be considered with particular regard to the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground; the absorption capacity of the natural environment, paying particular attention to the following areas: (i) wetlands, riparian areas, river mouths (ii) coastal zones and the marine environment.

International Performance Standards

The International Finance Corporation Performance Standards were updated in 2012, with other IFIs following suit. Environmental and social impact assessment (ESIA) is the cornerstone of the IFC Performance Standards and the focus of Performance Standard 1 (see illustrated list below).

If used correctly, the ESIA helps clients to identify a project's environmental and social risks, and to develop a plan to manage or avoid those risks.

It leads to the ESMS, the basis for adaptive management throughout the lifetime of a Project ("cradle to grave")

Performance Standard 1: Social and Envrionmental Assessment and Management Systems

Performance Standard 2: Labor and Working Conditions

Performance Standard 3: Pollution Prevention and Abatement

Performance Standard 4: Community Health, Safety and Security

Performance Standard 5: Land Acquisition and Involuntary Resettlement

Performance Standard 6: Biodiversity Conservation and Sustainable Natural Resource Management

Performance Standard 7: Indigenous Peoples

Performance Standard 8: Cultural Heritage

PS1 essentially requires clients of the IFC to use ESIA to assess and manage their environmental and social risks and then to carry this through to their operations, using their Environmental Management Systems.

Requirements of other PS need to be incorporated into ESIA/ESMS and mainstreamed throughout operations. This includes PS6 on biodiversity conservation and sustainable natural resource management.

IFC "Hooks" for biodiversity and ecosystem services:

- ESIA process leading to commitments register and ESMP
- Requirements in Natural Habitat including NNL outcome
- Requirements in Critical Habitat including net gain outcome though offsets if appropriate
- Maintain supply and benefits for Priority Ecosystem Services.

Note that IFC Performance Standards apply to a small sub-set of projects.

IAIA is planning to revise and update its principles to provide greater clarity around what constitutes international best practice for other projects: more focus on outcomes, not processes, *e.g.* no net loss or a net gain of biodiversity where development might affect "critical" biodiversity; biodiversity offsets; genuine engagement with affected communities as part of a transparent approach; expanding scope, *e.g.* human rights and access to ecosystem services, cumulative affects, health impact assessment and stronger links between planning, EIA and other tools; consideration of real alternatives.

Emerging trends in practice

Some emerging trends in practice include:

- Better links between planning and IA, with EIA being one constituent step in mainstreaming biodiversity
- Stronger expectations and expanding scope, *e.g.* climate change and disaster risk management
- Stronger expectation of transparency and participation
- More emphasis on outcome (not process), *e.g.* through addition of offsets to mitigation hierarchy to achieve a NNL or a Net Gain outcome
- Stronger emphasis on post-EIA monitoring and management, liability, performance and compensation (offsets, environmental bonds…).

Discussion

Much of the discussion addressed the conclusions and recommendations. If such items are adequately reported in the Conclusions and Recommendations section later in these proceedings, they are generally not repeated here. Instead, this section draws out some other aspects for which amplification may be useful, on of the discussions and ideas put forward for consideration.

First Question Session

BVI had a lot of problems with the consultants unit that was supposed to watch the contractors. On St Helena, the team consisted of 4 engineers and 1 environmentalist. A good working relationship was developed and everyone worked well together as the environment team. There were not any problems with the unit not being interested.

With GIS software, you can have a non-profit licence; it does not have to be an expensive method. In terms of TCI, the method used was for anybody to use, including by people within Government. A non-profit licence may therefore not be available to all users.

Tendering could impact on the way in which EIA is done in terms of timing. In terms of the St Helena airport project, it was tended for the consultant to do EIA in order to get it done. The EIA was done in advance of the contractor doing the detailed designs. The results were then used to inform and influence what the contractor used.

For a proposed cruise-liner berth project in Cayman, there was also a tender for the EIA process to be done. The contractor that did the EIA was also the contractor that was hired to do the preliminary design specifications that go into the tender bid for the actual construction. It is a good recommendation for a major project, therefore, that, if there are design components that have to go out with the bid, to not have the same contractor that is doing the engineering aspect.

In TCI, EIA is not mandated under law for any projects big or small. One problem is that EIAs can end up being quite biased, *e.g.* the EIA for one project was done by the engineer who had also done the project. An example of a recommendation from the EIA process was that no mitigation for the removal of coral reefs was needed. Whilst usually the Government would make a recommendation based on EIA outcomes, following this substandard EIA, the recommendations were overridden and the project was allowed to go ahead. This is a situation to be very careful of.

A key recommendation is to find the countries that need the most serious revision of their EIA guidelines, so that this can act as an effective tool in terms of environmental impacts.

There was a similar problem in the Alderney context. Rather than defining who the developer had to use, the Government outsourced a review of all EIAs, including a review by national consultees outside of Government. A high-level environmental consultancy also reviewed the document.

It is worth carefully checking the company being used to carry out EIA to guarantee that they will carry out a good EIA in the first place.

A key recommendation would be to write into the terms of reference for EIA, that anyone can call for a review of EIA. If the contractors know that their work could be open to being looked at by other consultants, this could have an important impact.

Second Question Session

Community voice method

Peter Richardson's recommendations of priority issues include addressing fishermen's attitudes and perspectives of protected area networks, and how to diversify fisheries away from the traditional lobster and conch fisheries. You just have to ask the fishermen themselves.

As the person carrying out the interviews was embedded in the field with the community being interviewed, he became a part of that community and people respected and trusted him. He was actually in the community for 2 years prior to the start of the project. As a result, it is believed that the answers were the same on and off camera. This set the precedent so that the community now expect the consultation. In that sense it can be a double-edged sword.

Running a consultation was very important for turtle legislation. There are some fisheries that involve very few people so that consultation is not warranted.

Fishermen seen with small turtles which were definitely not in the regulations. Not following regulations that they helped to set up. This comes back to a lack of enforcement.

In terms of the preparation of the film, there was a strong male bias. Whilst there were some women, technical information related to the fishing procedures themselves (largely undertaken by males) was needed. In the workshops themselves, women did take part but they were also male biased.

A technique used in the east coast of America is to give fishermen a chance to put their points across to conservationists; that's where we had to keep working.

Cyprus SBAs

There was a reaction from the Cyprus Green Party saying that the trappers should be compensated.

Isle of Man

With a small island community, a situation/issue that people are concerned about is quite easy to solve with the right people around the table. You do have to tailor approaches to what works in different situations.

In the Isle of Man, it was difficult to get fishermen in the room when other stakeholders were involved.

Discussion

Environment Charter- Recommending people to do EIA

Different people are at all at different stages and doing different things. You therefore need a balance between the strength of the recommendations and how difficult it is for a diverse group of people to sign up to them. This is probably related to drafting issues, but is important to keep in mind.

Darwin Plus funding not forthcoming; it is the only source available for many of us.

There are several aspects of UK Government Commitments. Article 6 is there to 'Promote better cooperation and the sharing of experience between and among the Overseas Territories and with other states and communities which face similar environmental problems.' This is why UK Government should continue to fund conferences of this sort.

Other funding, such as BEST, should only complement Government funding and not be the main source. These are things that should have been honoured under the Charters.

The conference is mostly in agreement that there is a need to recommend to Ministers to look to Charters for some of the support that they need.

Stakeholder Issues/Aspects

Stakeholder participation should be done in all cases. However, there is a need to be careful with how we define all cases. Where stakeholders are negatively affected they should be consulted.

Must be careful when saying that, as the EIA process should address both negative and positive effects.

UK Government Commitment no. 5 of the Environment Charters is to 'Help each Territory to ensure it has the legislation, institutional capacity (technology, equipment, procedures) and mechanisms it needs to meet international obligations.' There is an International Association for Impact Principles as well as EIC-Biodiversity specific consultation.

On a small island state, everyone should be considered to be a stakeholder.

Opinions of stakeholders from outside a territory may also want to be considered, *e.g.* people that regularly come to Cayman Islands to dive. A suggestion in this case is that they are stakeholders as they pay for the use of a particular resource. What constitutes EIA has to be left up to relevant authority. You can decide to have two layers, *e.g.* a resident layer; there may be a different levels of commitment to a site, but this does not mean that you should not listen to this other community of divers.

The whole point of a public consultation is to make the project better and so you want anybody's view.

One recommendation is that Interested and Affected Parties (IAP), could be a good alternative term to use instead of 'stakeholder'. This is often used in St Helena.

People who can pay lobbyists are often the ones that get the first say; we need to overcome this somehow.

It is important for territories to have a process that is going to work for them. You need a logical, coherent and consistent process and to decide what works locally. For example, in the Falkands, everyone is on Facebook, so that is a useful communication tool. However, this might not work everywhere.

One recommendation is that if you want to consult people, they need to know that they can contribute to a consultation.

Material related to a lot of EIAs can be very long and terms can be very technical. This information should be understandable for different audiences. It is also useful for local people to know very early on what the issue is.

There is a House of Lords case which says that these documents should be written in a fashion understandable to different audiences. These are not 100% binding.

Planning processes ought to be fairly standard and people ought to have access to them. In the UK, you do have other more complex procedures.

There are emerging standards on human rights and how these have to be respected when EIAs are done. EIA emerging human rights considerations include FPIC Free Prior and Informed Consent.

The last thing we want to do is discourage consultation with disappointments. We need the scope of the consultation to be understood by all participants. There needs to be a structure in place so that participants understand what their role is and that their contributions are considered.

Are there any grievance mechanisms in place in territories? Transparent grievance mechanism? Montserrat Physical Planning Act have an appeals tribunal and complaints tribunal. This is one thing to consider.

You need to distinguish between the complaints process and "please unmake decision and completely remake it and you can appeal to council" processes. The public sometimes get confused between the two things.

Environmental Review, EIA

BVI has a requirement for EIA in the Physical Planning Act 2004 but no regulations. There are some issues with the scale of development for which EIAs are done. Technical Officers look at every single development application and decide which ones requires EIA. Where they stumble is when numerous EIAs come in but they do not have a huge number of scientists and technicians to review all of these. The Physical Planning Act is supposed to require a register of people who can review EIAs, but not sure whether they have a register or not. There is a need for more people who are qualified and who can watch what the developers are doing. Some of the capacity issues need to be addressed: *e.g.* more people trained to deal with the large volume of development that are coming in.

People look at the impact as the development is happening but the long-term effects also need to be considered.

All data should be gathered into a digital format to enter into GIS, including all the species lists. It would be helpful to be given in a format whereby it can be updated. There are many small organisations that are gathering data and information.

Valuable experience in Cayman regarding reference and coping. Process in Cayman will go into EIA regulations. Cabinet have approved this to be drafted into regulations.

Planning process is politically charged in most of the territories. In Cayman, they took a conscious decision to move the EIA process out of the planning law and put it into conservation law. It is the Conservation Council that require EIAs.

You can define scope of EIA quite easily using scoping opinion.

The Environmental Assessment Board in the Cayman Islands has to review applications by the developer. They review and say whether people can meet terms of reference and have ability to carry out EIA or not, and then developers can choose. At least then there has been some kind of vetting process. This is a process that could be used in other territories as well.

It is a problem during development and having Environmental Management Plan to decide who is going to report to Government.

We have to be wary of paper processes which are not actually implemented.

Environmental bond in BVI did not work that well, as developers did not give it to the Government; it was insurance and when it came to claiming it, it was not very easy to do. A recommendation is that the bond would need to be in the right hands and independently dispersed.

With the airport in St Helena, one of the huge responsibilities after the airport construction is the Environmental Management System for operation stage. Will have to work to International Environmental Standard. Biosecurity Policy has been developed and now establishing regulations as well.

Workshop on Ascension Island looking at

biosecurity issues for South Atlantic Territories later this month (July 2015).

EIA needs an Environmental Management Plan or system for independent audit against procedures.

One recommendation for EIA is for a group to put together a list of all the regulations and derive a set of best practices that we could all ultimately aspire to. This should be done with at least one representative for each Territory.

It would be good to have statements from across the territories and see what issues come up in common.

RSPB carried out governance review in 2013 and now working towards doing an update of that. This is a resource that they are very happy to share with whoever is interested.

It is important not just to assume that control over something is not being exercised; it may be that it is something that cannot be controlled under current legislation.

CITY SCENES: Top: views from the Rock, (left) northward over airport from the north end, and (right) northwestward from west side over town centre and dock.
Middle: typical main street scene, with background montage of swifts over the conference hotel. These birds sweeping low and high over the buildings, streets and courtyards as they hunt insects are one of the characteristic birds of Gibraltar in summer. They land only to nest.
Bottom: Europa Point: Sikorski Memorial, Mosque, and World War 2 gun.
Photos: Dr Mike Pienkowski