

**SOCIOECONOMIC ASPECTS BREAK-OUT GROUP**

Participants (name, email, institution)

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**Overall Points Related to Completing the Table and the Socioeconomic Aspects WCR Assessment**

Most of the chapters assigned to the socio economic aspects of the report were deemed to be deficient in well known socio economic assessments. Much of the information cited seemed to be in grey literature. There seem to be few regional assessments. Most socioeconomic assessments are national or sub-national. The Gulf of Mexico LME documents were considered an overall important source for many of the topics. A Dropbox folder was set-up and has numerous reports and other documents as noted. Co-chair Lorna Inniss' colleague, Kareem Sabir ([KSabir@coastal.gov.bb](mailto:KSabir@coastal.gov.bb)), is responsible for the Dropbox and can be reached for details and access.

Topics (e.g. Scientific understanding of ecosystem services) and Sub-Topics (e.g. Shoreline protection...) to Include in the WCR Assessment	Relevant Studies, Documents, Reports and Other Sources of Information (refer to the Inventory list)	Priority Individuals & Institutions to Engage (email; who suggested)	Information Gaps	Comments
Scientific understanding of ecosystem services (Chapter 3)				
<ul style="list-style-type: none"> <li>Shoreline protection</li> </ul>	<p>IDB reference reports (<a href="http://www.iadb.org">www.iadb.org</a>); DELCAN; HALCROW References (1990s – 2000s); Baird and Ass. Barbados long history of work. (Barbados focused; in Dropbox)</p> <p>CZMU Website and Hardcopies; Dr. Lorna Inniss (contact)</p> <p>Laretta B, WRI: UNEP 2008, In the Frontline: shoreline protection and other ecosystem services. (global study; in Dropbox) <a href="http://www.unep.org/pdf/infrontline_06.pdf">http://www.unep.org/pdf/infrontline_06.pdf</a></p> <p>Laretta B, WRI: All of WRI's shoreline protection assessments are found under the Coastal Capital project - <a href="http://www.wri.org/project/valuation-caribbean-reefs">http://www.wri.org/project/valuation-caribbean-reefs</a> I attach the results for Belize and Tobago and St. Lucia. (in Dropbox)</p> <p>Laretta B, WRI: Also from the Coastal Capital project - <a href="http://www.wri.org/project/valuation-caribbean-reefs">http://www.wri.org/project/valuation-caribbean-reefs</a> (Jamaica focused; in Dropbox)</p> <p>John Bothwell, Cayman Islands: <a href="http://www.doe.ky/about/boards-committees/brac/">http://www.doe.ky/about/boards-committees/brac/</a> - Cayman Islands shoreline management, including consultant</p>	<p>Minu Parahoe, Suriname: <a href="mailto:glenn.redjopawiro@secretariaat@rgb.gov.sr">glenn.redjopawiro - secretariaat@rgb.gov.sr</a></p>	<p>Paucity of socio-economic data eg. Impact on Insurance premiums etc with respect to Barbados</p> <p>Insufficient info on shoreline protection services provided by reefs under varying levels of health</p> <p>Not for the entire coastal zone</p>	<p>Much of the info is hardcopy and not publicly available (need permission)</p>

	<p>resource</p> <p>Maxine Monsanto, Belize:  <a href="http://www.un.org/esa/dsd/resources/res_pdfs/ga-66/inputs/belize.pdf">http://www.un.org/esa/dsd/resources/res_pdfs/ga-66/inputs/belize.pdf</a></p>			
<ul style="list-style-type: none"> <li>Carbon storage</li> </ul>	<p>John Bothwell, Cayman Islands: 5Cs - climate change outreach programmes, especially case studies, consultants and how-to's - <a href="http://www.caribbeanclimate.bz/">http://www.caribbeanclimate.bz/</a> - communication/PR and any climate-change issues</p> <p>Turtles in the Caribbean Overseas Territories (TCOT), <a href="http://www.seaturtle.org/mtrg/projects/tcot/">http://www.seaturtle.org/mtrg/projects/tcot/</a> - social surveys and socio-biological technical to public reporting TCOT Publicity, <a href="http://www.seaturtle.org/mtrg/projects/tcot/finalreport/section12.pdf">http://www.seaturtle.org/mtrg/projects/tcot/finalreport/section12.pdf</a> - communicating information to the rest of society and getting them on board with the goals</p> <p>UK Joint Nature Conservation Committee (JNCC) - economic assessments - <a href="http://jncc.defra.gov.uk/default.aspx?page=4136">http://jncc.defra.gov.uk/default.aspx?page=4136</a> - Scientific Understanding of Ecosystem Services, i.e., how to communicate what is known in terms civil society will understand</p> <p>Gulf of Mexico Large Marine Ecosystems: resources at risk from CC (Chapter 8; in dropbox)</p> <p>Blue Carbon Report – socio economics re financing mechanisms Available from <a href="http://www.unep.org">www.unep.org</a></p>	<p>CCCCC Belize (<a href="http://www.caribbeanclimate.bz">www.caribbeanclimate.bz</a>)</p>		<p>Need for timely response to data requests</p>
<ul style="list-style-type: none"> <li>Natural products (i.e. ornamental fish, shells...)</li> </ul>	<p>Paula Sierra, INVEMAR, Colombia (ornamental fish and others in Spanish): <a href="http://www.invemar.org.co/noticias.jsp?id=4559&amp;idcat=106">http://www.invemar.org.co/noticias.jsp?id=4559&amp;idcat=106</a></p>	<p>Dr. Javier Gomez (<a href="mailto:javier.gomez@invemar.org.co">javier.gomez@invemar.org.co</a>) from COLOMBIA and he works at INVEMAR</p>		

	<p>The "socioeconomic and socioecological analysis of Ciénaga Grande de Santa Marta - COLOMBIA" is an important study in socioeconomic issues in the Caribbean coast of Colombia. Dr. Sandra Vilarity (sandra.vilarity@uam.es, Universidad del Magdalena en Colombia).</p> <p>Worldbank publication: Little green data book</p> <p>CITES – list of some products traded</p> <p>(John Bothwell, Cayman Islands: Gulf &amp; Caribbean Fisheries Institute - <a href="http://www.gcfi.org/index.php">http://www.gcfi.org/index.php</a> <a href="http://johnspace2011.wordpress.com/">http://johnspace2011.wordpress.com/</a>)</p>	<a href="mailto:Paula.sierra@invemar.org.co">Paula.sierra@invemar.org.co</a>		
<ul style="list-style-type: none"> <li>Jobs &amp; livelihoods</li> </ul>	<p>Worldbank publication: Little green data book</p> <p>"Gulf of Mexico at a Glance" (2011) (in dropbox)</p> <p>Paula Sierra, INVEMAR, Colombia – Coastal vulnerability to sea level rise; an integrated coastal zone study (In the table of contents the step 2,3,4 and 5 are very relevant for socioeconomic topics).</p> <p>OPAAL – OECS – livelihoods and protected areas</p> <p>Caribbean Tourism – CTO – a series of publications (see below)</p>	<p>Peter A Murray</p> <p>Paula Sierra, INVEMAR, COLOMBIA (<a href="mailto:paula.sierra@invemar.org.co">paula.sierra@invemar.org.co</a>)</p>		
<p>Aesthetic, cultural, religious and spiritual ecosystem services derived from the sea (Chapter 8)</p> <ul style="list-style-type: none"> <li>Human interactions</li> </ul>	<p>John Bothwell, Cayman: TCOT (below) also makes some address to 'cultural use of marine resources', i.e., turtles.</p>	<p>M. Witter</p> <p>UNESCO – world heritage sites</p> <p>Belize: Joseph Palacio</p>	<p>Unknown, needs more attention.</p>	

<p>with the oceans on aesthetic, cultural, religious and spiritual levels, including burials at sea, and ways in which these interactions may be affected by other changes.</p>				
<p>Shipping (Chapter 17)</p> <ul style="list-style-type: none"> <li>• Economic significance of shipping and trend over the next decade</li> <li>• Harmful impacts from pollution, acoustics, disasters, transport of invasive species and hazardous, noxious substances</li> <li>• Shipping-related industries and commerce</li> </ul>	<p>Maxine Monsanto, Belize: Gulf of Honduras Ports, Shipping, etc.: <a href="http://www.proyectogolfodehonduras.com">http://www.proyectogolfodehonduras.com</a> in Spanish (the Spanish version has more of the documents); <a href="http://www.gulfofhondurasproject.com">www.gulfofhondurasproject.com</a> in English</p> <p>Caribbean Shipping Association</p> <p>Journal: Caribbean Maritime</p> <p>Ballest water/Harmful algae blooms UNESCO/IOC</p> <p>John Bothwell, Cayman Islands: invasive species - Giant African Snail (no references, just mentioning in case the biodiversity group are totally marine focused)</p> <p>Caribbean Invasive Alien Species Network (<a href="http://www.ciasnet.org/">http://www.ciasnet.org/</a>)</p> <p>Alvarez Porfir (in dropdown):  CMSP in Mexico, invasive species:  Check Chapter in page 113 about Socioeconomic analysis  Transboundary Diagnostic Analysis Gulf of Mexico LME, CH 3  Impact of Fishing on Biodiversity GoM LME  Transboundary Diagnostic Analysis Gulf of Mexico LME, Ch 5  Impact of Invasive Species on Biodiversity GoM LME  Trnasboundary Diagnostic Analysis Gulf of Mexico LME, Ch, 4</p>			

	<p>Governance in the GoM LME</p> <p>Mexico's National Strategy for Invasive Species</p> <p>North America (Canada US Mexico) Commission for Environmental Cooperation (CEC) NAFTA, Trinational Guidelines Invasive Species</p>			
<p>Ports (Chapter 18)</p> <ul style="list-style-type: none"> <li>Economic significance of ports and trend over the next decade</li> <li>Ports development and maintenance and socioeconomic implications</li> </ul>	<p>American Association Ports</p> <p><a href="http://www.aapa-ports.org">www.aapa-ports.org</a></p> <p>Gulf of Mexico LME document (in dropbox)</p> <p>US NPS USVI small boat cruising...</p> <p>International Maritime Org. – global integrated shipping info.</p>	<p>Caribbean Cruise ship Association</p> <p>PLIPDECO Trinidad</p>	<p>Look at merchant seamen</p>	<p>Cruise ship association driving port construction</p>
<p>Submarine cables and pipelines (Chapter 19)</p> <ul style="list-style-type: none"> <li>Economic magnitude and location of cables and pipelines and socioeconomic implications</li> <li>Pollution</li> </ul>	<p>Worldbank – Caribbean regional electricity supply options (2011, sections on interconnectivity)</p> <p>Edgar Cabrera (WMO): International Telecommunications Union (ITU)</p> <p>EIAs may be a useful source</p>	<p>World Bank</p> <p>International telecommunication union (ITU)</p> <p>Study group on environment</p> <p>Cristina Sueti – <a href="mailto:cristina.bueti@itu.int">cristina.bueti@itu.int</a></p>		<p>There might be documents with different titles that have good information.</p>
<p>Coastal, riverine and atmospheric inputs from land (Chapter 20)</p> <ul style="list-style-type: none"> <li>Source of pollution, including municipal wastes, industrial wastes, and agricultural runoff</li> <li>Eutrophication</li> <li>Desalinization</li> </ul>	<p>Saharan dust - Barbados monitors this dust – human health and coral health impacts</p> <p>EPD Barbados beach water quality 2004</p> <p>Alvarez Porfir: Gulf of Mexico LME (Chapter 8) in Dropbox</p> <p>Paula Sierra, INVEMAR, Colombia: Global International Water Assessment for Caribbean in Dropbox</p> <p>GEF Ag pesticides REPCAR</p>	<p>Anthony Headley, Deputy Director, Environmental Protection Department (<a href="mailto:aheadley@epd.gov.bb">aheadley@epd.gov.bb</a>)</p> <p><a href="mailto:Paula.Sierra@invemar.org.co">Paula.Sierra@invemar.org.co</a></p> <p><a href="mailto:Luisa.espinosa@invemar.org.co">Luisa.espinosa@invemar.org.co</a> (Contact for REPCAR)</p>	<p>Gaps may exist with respect to socioeconomic details</p>	<p>NB.: WB Working on Water Quality issues through Global Partnership for Oceans Prg. More into to be sent from Josteinygare (World Bank)</p>

	<p>Maxine Monsanto, Belize: National Action Plan for the Control of Land Based Sources of Land Based Sources of Marine Pollution in Belize (2008) - issue papers on Sediment Loading, Nutrients, Physical Alteration/Destruction of Habitats, and Solid Waste – sections related to the marine environment.</p> <p>Jostein, Worldbank (and/or Chris Cox): (limited estimations of socio-economic impact here, but that could be mentioned in the gap part; Chris Cox is the expert on the UNEP/CEP/CIMAB literature) (i) Original 1994 report (# 33): <a href="http://www.cep.unep.org/publications-and-resources/technical-reports/tr33en.pdf">http://www.cep.unep.org/publications-and-resources/technical-reports/tr33en.pdf</a></p> <p>(ii) Updated 2010 report (updated # 33): <a href="http://www.cep.unep.org/meetings-events/14th-igm/draft-of-updated-cep-technical-report-no-33-eng.pdf">http://www.cep.unep.org/meetings-events/14th-igm/draft-of-updated-cep-technical-report-no-33-eng.pdf</a></p> <p>(iii) Updated 2012 report (# 52) <a href="http://www.cep.unep.org/publications-and-resources/technical-reports/Update%20TR%2033%20-Ingles-%20VERSION%20FINAL.pdf">http://www.cep.unep.org/publications-and-resources/technical-reports/Update%20TR%2033%20-Ingles-%20VERSION%20FINAL.pdf</a></p> <p>Christopher Cox: Caribbean Sea Ecosystem Assessment (CARSEA). A contribution to the Millennium Ecosystem Assessment prepared by the Caribbean Sea Ecosystem Assessment Team</p> <p>Making Mainstreaming Work. An Analytical Framework, Guidelines and Checklist for the Mainstreaming of Marine and Coastal Issues into National. Planning and Budgetary Processes. John Soussan (SEI)</p>	<p>Christopher Cox:</p> <p>Co-ordinating Lead Authors JOHN B. R. AGARD AND ANGELA CROPPER</p> <p>UNEP CEP UNEP/GPA Coordination Office</p>		
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	<p>Wastewater Management at Hotels and Resorts in the Caribbean</p> <p>Guidelines on Municipal Wastewater Management</p> <p>Sick Water? The central role of wastewater management in sustainable development. A Rapid Response Assessment.</p> <p>Bathing Water Quality Monitoring Plan for Barbados</p> <p>Marine Pollution Act Proposed Discharge Standards</p> <p>Draft National Plan of Action for the Control of Land-Based Sources of Marine Pollution in Belize</p> <p>Sewage Effluent Standards. (Extracted from the Jamaican National Sewage Effluent Standards, 1996). A Strategic Approach to Marine Litter Reduction and Control in the Caribbean.</p> <p>Review of Policy, Laws &amp; Institutional Structures For the GEF "Integrating Watershed &amp; Coastal Areas Management in Caribbean Small Island Developing States (GEF-IWCAM)" Project</p> <p>The Netherlands Clearing House: <a href="http://www.gpa.unep.org">http://www.gpa.unep.org</a> Visiting address: Kortenaerkade 1, The Hague, The Netherlands, UNEP/IETC International Environmental Technology Centre of UNEP Osaka Office, 2-110 Ryokuchi Koen Tsurumi-ku, Osaka 538-0036 Japan</p>	<p>PO Box 16227 2500BE The Hague The Netherlands Tel: +31 70 31144 60 Fax: +31 70 345 66 48 Email: <a href="mailto:gpa@unep.nl">gpa@unep.nl</a> Web: <a href="http://www.gpa.unep.org">www.gpa.unep.org</a> Stockholm Environment Institute Kräftriket 2B 106 91 Stockholm Sweden Tel: +46 8 674 7070 Fax: +46 8 674 7020 Email: <a href="mailto:postmaster@sei.se">postmaster@sei.se</a> Web: <a href="http://www.sei.se">www.sei.se</a> Publications Manager: Erik Willis Web Manager: Howard Cambridge Layout: Richard Clay Cover Photo: John Soussan</p> <p>A.A. Vlugman Sanitary Engineer, PAHO/WHO</p> <p>REGIONAL CONFERENCE ON ENVIRONMENTAL HEALTH AND SUSTAINABLE TOURISM DEVELOPMENT Nassau, Bahamas 8-11 November 1993</p> <p>UNEP/GPA, The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, GPA Coordination Office, P.O. Box 16227 2500 BE The Hague</p>		
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	<p>Web: <a href="http://unesco.or.jp/ietc">http://unesco.or.jp/ietc</a>  UNESCO-IHE, Institute for Water Education  PO Box 3015, 2601 DA Delft  The Netherlands  Web: <a href="http://www.unesco-ihe.org">http://www.unesco-ihe.org</a></p> <p>Corcoran, E., C. Nellemann, E. Baker, R. Bos, D. Osborn, H. Savelli (eds). 2010 United Nations Environment Programme, UN-HABITAT, GRID-Arendal. <a href="http://www.grida.no">www.grida.no</a>  Produced for: Environmental Engineering Division and Coastal Zone Management Unit, Ministry of Housing, Lands and the Environment, Government of Barbados.  Prepared by: In association with: University of the West Indies  October 2004 February 2008 Department of Environment Ministry of Natural Resources and the Environment</p>	<p>Christopher Corbin1 and Seba Sheavly  E mail: <a href="mailto:cjc.@cep.unep.org">cjc.@cep.unep.org</a></p> <p>Environmental Advisors, Inc  <a href="http://www.iwcam.org">www.iwcam.org</a></p>		
<p>Offshore hydrocarbon industries (Chapter 21)</p> <ul style="list-style-type: none"> <li>• Scale and significance and socioeconomic implications</li> <li>• Impacts from exploration</li> <li>• Disasters</li> </ul>	<p>REMPEITC - Technical Node for Oil spills Protocol</p> <p><a href="http://www.isa.org.jm/">www.isa.org.jm/</a> - Info on hydrocarbon and mineral resources</p> <p>Oil Companies – BHP Billiton, BP, REPSOL</p>	<p>OLADE (<a href="http://www.olade.org">www.olade.org</a>)</p> <p><a href="mailto:jwilliams@caricom.org">jwilliams@caricom.org</a> - Joseph Williams, Manager Energy Desk CARICOM</p> <p>NIMOS- Yolanda Babb- <a href="mailto:ybabb@nimoss.org">ybabb@nimoss.org</a>  Green Heritage Fund Suriname- Monique <a href="mailto:Pool-info@greenfundsuriname.org">Pool-info@greenfundsuriname.org</a> (suggested by Minu Parahoe, Suriname)</p> <p>International association of oil and gas producers (OGP) / various committees  <a href="http://www.ogp.org.uk">www.ogp.org.uk</a> (suggested by Edgar Cabrera, WMO)</p>		<p>Complaints from fishermen re the impact of seismic activities on their livelihoods</p> <p>Conversely are there benefits to fishermen from increased catches around rigs?</p>
<p>Other marine-based energy industries (Chapter 22)</p> <ul style="list-style-type: none"> <li>• Scale of wind, wave, ocean thermal and tidal</li> </ul>	<p>CEIS – Caribbean Energy Information Systems</p>	<p>Mona White</p> <p>CCCCC Contact : Al Binger  <a href="mailto:yengar@hotmail.com">yengar@hotmail.com</a></p>		<p>Areas of opportunity not yet significantly exploited/explored in the Caribbean.</p>

<p>power generation</p> <ul style="list-style-type: none"> <li>• Environmental benefits and impacts</li> <li>• Expected economic performance</li> <li>• Significant socioeconomic aspects</li> </ul>		<p>Cayman Institute,  <a href="http://caymaninstitute.org.ky/">http://caymaninstitute.org.ky/</a> (suggested by John Bothwell, Cayman Islands)</p>		
<p>Offshore mining industries (Chapter 23)</p> <ul style="list-style-type: none"> <li>• Sand and gravel mining and socioeconomic implications</li> <li>• Status of non sand/gravel mining activities</li> </ul>	<p><a href="http://www.isa.org.jm/">www.isa.org.jm/</a> - Info on hydrocarbon and mineral resources</p> <p><a href="http://www.irf.org">www.irf.org</a> (Island Resources Foundation)</p> <p>US Sea Grant Project, University of Puerto Rico (Mayaguez)</p> <p>Leonard Nurse: Lettsome, B, et al. "Sand mining in the British Virgin Islands" - <a href="http://www.nsgl.gso.uri.edu/pru/pruw96001_pt-b2.pdf">www.nsgl.gso.uri.edu/pru/pruw96001_pt-b2.pdf</a></p>	<p>Secretary General, International Seabed Authority</p> <p>Michelle Bond, Librarian</p> <p>Gillian Cambers</p>		
<p>Solid waste disposal (Chapter 24)</p> <ul style="list-style-type: none"> <li>• Types and amounts dumped into the sea and trend over the next decade</li> </ul>	<p>Planning of an integrated Solid Waste Management System in Suriname</p> <p>Lauretta Burke/WRI: The Ocean Conservancy annual beach cleanup - <a href="http://www.oceanconservancy.org/our-work/marine-debris/2012-data-release-behind-the-scenes.html">http://www.oceanconservancy.org/our-work/marine-debris/2012-data-release-behind-the-scenes.html</a></p> <p>Maxine Monsanto, Belize:  <a href="http://www.doe.gov.bz/documents/EIA/Solid%20Waste/C11%20SW%20Rev%20EIA%20Appendices%20K.pdf">http://www.doe.gov.bz/documents/EIA/Solid%20Waste/C11%20SW%20Rev%20EIA%20Appendices%20K.pdf</a></p>	<p>Dr. L. Zuilen, University of Suriname  <a href="mailto:l.zuilen@uvs.edu">l.zuilen@uvs.edu</a></p> <p>Maxine Monsanto:  sw.director@mnrei.gov.bz  for Mr. Gilroy Lewis, P. Engr. Director</p>		
<p>Marine Debris (Chapter 25)</p> <ul style="list-style-type: none"> <li>• Causes</li> <li>• Approaches to combating marine debris</li> </ul>	<p>MoBay Marine Park Studies</p> <p>Gulf and Caribbean Fisheries Institute (website: marine debris survey)</p> <p>Project Global (Duke University)</p>			

<p>Land/sea physical interaction (Chapter 26)</p> <ul style="list-style-type: none"> <li>• Magnitude and location of land reclamations and habitat modifications</li> <li>• Erosion of land by the sea and socioeconomic implications</li> <li>• Sedimentation changes and trend over the next decade</li> </ul>	<p>Fisheries SOCMON Project (CERMES) in Dominica - available from CERMES website (At Cavehill)</p> <p>CANARI – <a href="http://www.canari.org">www.canari.org</a></p> <p>IWCAM Project – <a href="http://www.iwcam.org">www.iwcam.org</a></p> <p>Information on Haiti available from <a href="http://www.foprobim.org">www.foprobim.org</a></p> <p>Reclamation studies on the Bridgetown ports</p> <p>Invemar reports 2009-2011 on Erosion (<i>documents in Dropbox</i>)</p> <p>Marine Geology Department, UWI Mona – data on erosion in Negril</p> <p>CARIBSAVE Documents</p> <p>UNEP CEP Website (Contact person Chris Corbin)</p> <p>John Bothwell, Cayman Islands: US State Department, White Water 2 Blue Water Initiative, now defunct but information collected may still be available, <a href="http://2001-2009.state.gov/g/oes/rls/fs/2003/18969.htm">http://2001-2009.state.gov/g/oes/rls/fs/2003/18969.htm</a></p> <p>Alvarez Porfir (in dropbox): LMEs and climate change, chapter 8, Gulf of Mexico LME resources at risk from climate change</p> <p>Lauretta Burke, WRI: Beach erosion in Negril; and the cost of beach erosion in the DR and Jamaica.</p>	<p>Maria Pena <a href="mailto:maria.pena@cavehill.uwi.edu">maria.pena@cavehill.uwi.edu</a></p> <p>Nicole Leotaud (<a href="mailto:Nicole@canari.org">Nicole@canari.org</a>), Exec Director</p> <p>Christopher Cox (<a href="mailto:ccox@cehi.org.lc">ccox@cehi.org.lc</a>) – contact for IWCAM Project</p> <p><a href="mailto:Paula.Sierra@invemar.org.co">Paula.Sierra@invemar.org.co</a></p> <p>Chris Corbin (<a href="mailto:cjc@cep.unep.org">cjc@cep.unep.org</a>)</p> <p>Contact for Coastal Capital: <a href="mailto:lauretta@wri.org">lauretta@wri.org</a></p> <p>For erosion in Negril: Ted Robinson of UWI-Mona is the contact.</p>		
<p>Tourism and recreation (Chapter 27)</p>	<p>Caribbean Tourism Organisation Travel and Tourism Economic Impact</p>	<p>Maxine Monsanto, Belize: Institution for contact on tourism and</p>		

<ul style="list-style-type: none"> <li>• Magnitude and location, including cruise ships, of tourism and ecosystems and socioeconomic implications</li> <li>• Pollution</li> <li>• Habitat disturbance</li> </ul>	<p>Colombia – valuation of tourism sites vs mangrove areas (INVEMAR Studies)</p> <p>World Bank Reports on use of natural resources for Tourism</p> <p>Green Globe and Blue Flag Programmes</p> <p><a href="http://www.iwcam.org">www.iwcam.org</a> (Bahamas study)</p> <p>UNEP Study (2011)</p> <p>Recreational Value of Coral Reefs</p> <p>Maxine Monsanto, Belize:  <a href="http://www.academia.edu/776291/Cruise_ship_tourism_in_Belize_The_implications_of_developing_cruise_ship_tourism_in_an_ecotourism_destination">http://www.academia.edu/776291/Cruise_ship_tourism_in_Belize_The_implications_of_developing_cruise_ship_tourism_in_an_ecotourism_destination</a>  <a href="https://www.centralbank.org.bz/docs/rsh_4.5_conferences-working-papers/direct-economic-impact-of-cruise-tourism.pdf?sfvrsn=6">https://www.centralbank.org.bz/docs/rsh_4.5_conferences-working-papers/direct-economic-impact-of-cruise-tourism.pdf?sfvrsn=6</a></p> <p>Maxine Monsanto, Belize (Social Viability of Cruise Ships in South Belize):  <a href="http://www.placencia.com/BELIZE%20CRUISE%20VIABILITY%20REPORT_2011.pdf">http://www.placencia.com/BELIZE%20CRUISE%20VIABILITY%20REPORT_2011.pdf</a></p> <p>Lauretta Burke, WRI (documents in the Dropbox):  Coastal capital studies value coral-reef associated tourism.  Contact: <a href="mailto:Lauretta@wri.org">Lauretta@wri.org</a>  WRI has GIS data set on cruise ship ports and a rough indicator of frequency and size of visitation (port of calls).  These data are from 2009 – 2010.</p>	<p>recreation is the Ministry of Tourism/Belize Tourism Board</p> <p>Gail Henry (CTO) – <a href="mailto:gnhenry@gmail.com">gnhenry@gmail.com</a></p> <p><a href="mailto:Paula.Sierra@invemar.org.co">Paula.Sierra@invemar.org.co</a></p> <p>Loretto Duffy-Mayers (CHTA – Caribbean Hotel and Tourism Association) re- blue flag and green globe</p> <p><a href="mailto:Marelviz.londono@invemar.org.co">Marelviz.londono@invemar.org.co</a></p> <p><a href="mailto:kreytar@wri.org">kreytar@wri.org</a> or <a href="mailto:Lauretta@wri.org">Lauretta@wri.org</a></p>		
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	<p>John Bothwell, Cayman Islands: Tourism - 5Cs, website below, tourism vulnerability assessments on various countries, e.g., (for Cayman) <a href="http://www.doe.ky/sustainability/">http://www.doe.ky/sustainability/</a> (bottom of the page, in 4 parts).</p> <p>Tourism - Cayman Islands Tourism Management Plan(s); email <a href="mailto:foi@caymanislands.ky">foi@caymanislands.ky</a>; also EIA, etc., Port Scoping Documents. Note: This is a 'Freedom of Information' email so engage in a conversation otherwise the request will fall in to an FOI Process which could take longer than simply asking, if they are amenable to providing the information. Obviously very country specific so may not be worth pursuing if there are broader based information sources available.</p>			
<p>Desalinization (Chapter 28)</p> <ul style="list-style-type: none"> <li>• Magnitude and location of desalinization activities and socioeconomic implications</li> </ul>	<p><a href="http://www.caribda.com">www.caribda.com</a> (Caribbean Desalinisation Organisation)</p> <p>Caribbean Water and Wastewater Assn (<a href="http://www.cwwa.net">www.cwwa.net</a>)</p> <p>National Studies for Aruba, Antigua, Bahamas, Cayman Islands and Barbados</p> <p>Socio econ impacts of desal plants based on discharge into the marine zone – check for references</p> <p>John Bothwell, Cayman Islands: <a href="http://www.doe.ky/wp-content/uploads/2010/03/Cayman-Islands-Climate-Change-Policy-Final-Draft-30-Sep-2011.pdf">http://www.doe.ky/wp-content/uploads/2010/03/Cayman-Islands-Climate-Change-Policy-Final-Draft-30-Sep-2011.pdf</a> - Cayman Islands Climate Change Policy refers to potential desalination impacts from Climate Change. Also lots of other Climate Change impacts (potential).</p> <p>Leonard Nurse: Gunzbourg, Jde and T. Froment, 1987. Construction of a solar desalination plant (40 cum/day) for a French Caribbean island. Desalination, 67, 53-58.</p>	<p>Manuel Pereira (<a href="mailto:mpereira@aqualectra.com">mpereira@aqualectra.com</a>)</p> <p>Cyprian Gibson (<a href="mailto:wccgibson@wsc.com.bs">wccgibson@wsc.com.bs</a>) - Contact for desal in the Bahamas</p>		

	Bruno-Vega and K.S. Thomas, 1994. The Virgin Islands desalination experience. <i>Desalination</i> (1-3), 443-450.			
<p>Use of marine genetic resources (Chapter 29)</p> <ul style="list-style-type: none"> <li>Magnitude and location of marine scientific research and exploitation and socioeconomic aspects</li> </ul>	<p>Convention on Biodiversity may have information ???</p> <p><a href="http://www.Stateofthecoast.Noaa.gov">www.Stateofthecoast.Noaa.gov</a> – summary of the medical applications one may derive from coral reef materials</p> <p>UNEP CEP under SPAW Protocol</p>	Contact re SPAW Protocol: Alessandra Vanzella-khouri <a href="mailto:AVK@cep.unep.org">AVK@cep.unep.org</a>		New area of research – bioprospecting taking place in the Caribbean but not clear on availability of data
<p>Marine scientific research (Chapter 30)</p> <ul style="list-style-type: none"> <li>Topic and location of marine scientific research and socioeconomic implications</li> </ul>	<p>SOCMON (Socioeconomic Monitoring for Coastal Management) English and Spanish speaking Caribbean. Information available from <a href="http://www.socmon.org">www.socmon.org</a></p> <p>Valuation of the Montego Bay Marine Park</p> <p>UNEP CEP under SPAW Protocol</p> <p>CLME website</p> <p><a href="http://www.eclac.org">www.eclac.org</a></p> <p>GEF Project – Marine Protected Areas Subsystem which looks at financial sustainability of MPAs and also Valuation of new MPAs</p> <p>Caribbean Regional Fisheries Mechanism and OSPESCA</p> <p>Caribbean Fisheries Management Council</p> <p>Gulfbase – data portal</p> <p>Hart Research Institute</p> <p>IOCaraiibe</p>	<p><a href="mailto:Maria.pena@cavehill.uwi.edu">Maria.pena@cavehill.uwi.edu</a></p> <p>Contact re SPAW Protocol: Alessandra Vanzella-khouri <a href="mailto:AVK@cep.unep.org">AVK@cep.unep.org</a></p> <p><a href="mailto:Pilar.Lozano@invemar.org.co">Pilar.Lozano@invemar.org.co</a> (Project Coordinator)</p> <p>Robert Leeworthy, NOAA</p> <p>Megan Jungwiwattanaporn <a href="mailto:mvj3@duke.edu">mvj3@duke.edu</a></p>		

	<p>Carter, David (NOAA coral reef valuation database): <a href="http://coastalsocioeconomics.noaa.gov/core/reefs/reeflit1.html">http://coastalsocioeconomics.noaa.gov/core/reefs/reeflit1.html</a></p> <p>Lauretta Burke, WRI: The Marine Ecosystem Services Partnership (MESP) has a database of economic valuation studies (@Duke Uni). <a href="http://nicholasinstitute.duke.edu/oceans/mesp">http://nicholasinstitute.duke.edu/oceans/mesp</a></p> <p>John Bothwell, Cayman Islands: CampPAM (Caribbean Protected Areas Managers forum) <a href="http://campam.gcfi.org/campam.php">http://campam.gcfi.org/campam.php</a>. Also a good source of experts, if they haven't already been approached. Also, GCFI (below) is another good source for this sort of thing.</p> <p>CITES significant trade review for conchs, e.g., <a href="http://www.cites.org/eng/com/ac/19/E19-08-3.pdf">http://www.cites.org/eng/com/ac/19/E19-08-3.pdf</a>. Also, <a href="http://procs.gcfi.org/pdf/gcfi_57-54.pdf">http://procs.gcfi.org/pdf/gcfi_57-54.pdf</a> and possibly, <a href="ftp://ftp.fao.org/docrep/fao/010/a1121e/a1121e.pdf">ftp://ftp.fao.org/docrep/fao/010/a1121e/a1121e.pdf</a>.</p>			
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## **Overall Assessment Capacity Needs Related to Socioeconomic Aspects and How to Address Them**

The groups discussed several key issues with regards to capacity building in the region:

- Both human and institutional capacity are weak in the region. In that context the group suggested that in seeking to strengthen the human and institutional capacity there is usually a trade-off and therefore a need to have informed decision making in that prioritisation process.
- Networks – national and regional - offer solutions to build capacity. Another way to strengthen capacity is to network regional projects and programmes.
- There is a lack of political capacity e.g. translating interdisciplinary research into policy. There is a need to improve the link between societally driven research, evidence from science and other sources, into producing actions that improve well being.
- The social sciences could help articulate research questions based on what the political priorities may be (which could help close the gap between the policy making and implementation).
- Careful attention needs to be paid to communication strategies that are appropriate to the knowledge demands of varying publics which range from the political to civil society organisations and communities.

### **Issues for WOA to Address**

The group had an engaging discussion regarding the WOA, which raised the following recommendations and questions:

- What might be an appropriate node for sharing information on the Caribbean in the context of the WOA? Perhaps the Cartagena Convention/CEP ?
- Socio economic assessments are often site-specific. Therefore, there is a need to build a regional picture based on scaling up (where possible).
- What is the strategy going forward with respect to communication, information dissemination etc. ? There should be an opportunity for public engagement as early in the process as feasible with connections to the political processes so that the output answers specific societal questions. The analyzes need to be upstream, demand-driven (country driven) to ensure there is ownership/buy-in of outputs and follow-up (the Sustainability dimension)
- What is the value added to be derived from the WOA process vs other meta assessments and processes past and present (and future). From a socio-economic perspective there needs to be a sense of the total Economic value e.g. the cost of degradation from pollution but also capturing use and non-use values from the ocean. In addition, the WOA should capture cross cutting issues, including: climate change issues (ocean acidification, SST, flooding etc.); gender; poor and vulnerable communities; and, governance specifically as an integrating factor across the chapters.