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St Lucia Coastal Habitat Mapping Project

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Day 1 - References

Authors	Year	Title	Geographical Context			Summary of Report
			Within Study Area	St Lucia	Caribbean and Global	
ATRIA	1999	Coastal Environmental Quality Component Study		X		This report details the Environmental Quality Component Study which attempts to assess contaminant inputs and loadings to the northwest coastal area of St. Lucia to develop recommendations and an action plan for the northwest coastal zone and related watersheds.
ATRIA	2001	Rodney Bay Coastal Processes Investigation		X		Good background information and coastal processes study of Rodney Bay on the North West coast of St Lucia
ATRIA	2000	Nearshore Marine Habitat Mapping		X		Marine habitats and the key marine species dependant on them are significant attributes in the coastal zone of St Lucia. Unfortunately many of these habitats are being severely affected by development and pollution. Given dependence of St Lucia on its coastal resources, they are the focus of an ongoing coastal conservation project. In 1994 the Northwest coastal conservation project phase I recommended that a marine habitat characterization program be undertaken to address data gaps and to provide a baseline for subsequent environmental effects monitoring and management plans. In 1998, phase II started, the mapping of coastal habitats in the Northwest of St Lucia. This report outlines the methodology of data collection, ground truthing, classification and recommendations following phase II of the coastal conservation project.
Anon		CASE STUDY ON BENEFIT SHARING ARRANGEMENTS – MANKOTE MANGROVE	X			Since the implementation of the project in 1980s overall trend of degradation of tree cover within Mankote mangrove has been reversed as a result of shift from open access policy to community-managed approach. It is widely agreed that the level of protection currently observed under collaborative arrangement that now exists is much higher than could be achieved by government action. Te security of tenure means the charcoal cutter cut with care, ensuring medium to long-term sustainability. Integrated conservation-development projects have good potential if they can lead to avoidance of open access conditions.
Areces-Mallea. A. E et al	1999	A Guide to Caribbean Vegetation Types			X	The complex geological and ecological history of the chain of over 1000 islands known as the West Indies has led to the presence of many unique vegetation types which provide habitat for an astonishing diversity of flora and fauna. An alarming proportion of this flora and fauna is highly threatened as a result of climate change and anthropogenic impacts such as developments, pollution and deforestation. In order to protect this vast array of species it is important to target and conserve representative species which in turn requires a method by which vegetation types can be accurately understood, described and mapped that is accepted by the countries, cultures and peoples that make up the Caribbean. This paper describes the development of a standard classification system for the Caribbean.
Banana Industry		ST. LUCIA - Country Strategy Paper for the Banana Industry, Agricultural Diversification & Social Recovery of Rural Communities		X		Provides the history and current status of the banana industry in St Lucia, Caribbean.
Barker. N. & Roberts. C.M.	2001	Preliminary results from Reef Valuation study, St. Lucia, West Indies 2000-2001		X		Visitor and dive operator interviews 12/2000 – 09/2001 on holiday choices and expenditure patterns. Based on willingness to pay, SMMA fees could be raised to the level that 75% were willing to pay to increase annual revenue by 62% without reducing numbers of visitor.
Browne. E.L	2005	Early Diagenesis of near shore tropical marine sediments, St Lucia, Lesser Antilles. (Dissertation)	X	X		The importance of short, steep coastal rivers in tropical settings to global sediment flux. Even moderate human impacts can increase sediment yield by 2-3 times. 2 study sites (Savannes bay and Praslin Bay), investigates origins of sediment within bay.
CANARI	2003	The Sea is our Garden: A report on a study of institutional and technical options for improving coastal livelihoods in Laborie, St Lucia.	X			Provides complete overview of the relationship between coastal resources and the local community including sea eggs, agar farming, fishing etc. Study was carried out in Laborie in the south of St Lucia.

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Chase. V., Louisy. M. L., Satney. M.	2008	Watersheds in St. Lucia: Trends and Issues	X			General introduction to watersheds in St Lucia. Watershed assessment and preparation of watershed management plans for 2 watersheds, Soufriere and Cul de Sac. In small islands the challenge of managing environments in watersheds come from the intricacy of the linkages from ridge to reef and to the shelf beyond emphasis then is on ecosystems as the organizing framework. Integrated watershed management plans should also include an economic valuation of the resources in the watershed and must be a guide to the future rather than just a reflection of the past, it must incorporate a continuous cycle of assessment, action, evaluation and adaption.
Chase. V., Louisy. M. L., Satney. M.	2008	Profile of the Anse le Raye Watershed	X			Detailed description of Anse le Raye watershed on the western side of St Lucia, including, socioeconomics, soils, rainfall, vegetation. Etc. To facilitate analysis the watershed was split in to 4 zones based on elevation.
Chase. V., Louisy. M. L., Satney. M.	2008	Soufriere Watershed	X			Included mapping and profiling of key natural resources, land use assessment, developing a comprehensive list of forest resources including those with potential commercial benefit and socioeconomic profiling of local communities. Water shed split in to 4 zones based on elevation.
Clauzel. S. and Joyeux. G	2001	Tourism in Laborie, St Lucia: baseline study and identification of potential for development	X			Research case study in Laborie to identify policies, approaches and methods needed to develop sustainable and equitable social and economic benefits from tourism development with particular focus on needs and aspirations of the poor. Willingness to pay suggests high potential for tourism within area.
Daniel. C.		Developing a regional Caribbean coastal resource information system: The inside story.		X		Coastal resource information system (CRIS) has been developed for 12 Caribbean countries to provide a national database for coastal resources. The paper provides an overview to the approach used to develop the system, including the ability to display the data spatially using GIS within the CRIS interface.
GoSL - Ministry of Physical Development, Environment and Housing		GIS in St. Lucia		X		Available GIS layers and ongoing/forthcoming projects utilizing GIS.
Mumby. P. J., Harbourne. A.	1999	Development of a systematic classification scheme of marine habitats to facilitate regional management and mapping of Caribbean coral reefs			X	Most coastal habitat mapping is conducted on an ad hoc basis with little consistency in terminology and ambiguous documentation. These limitations obstruct interpretation and integration of maps, particularly at regional (international) scales preventing effective management of transboundary resources such as coral reefs. Habitat classification schemes should be determined objectively and have a systematic but intuitively understandable structure. Given the connectivity of coral reefs in the Caribbean, reef science and management must have a regional as well as national foci and a standardised approach to habitat mapping is essential.
Nelson. T.	2004	Turtle Activities Report.		X		Six species of sea turtles are known to nest on the beaches in the Caribbean region. Of these six species, four have been sighted in St. Lucian waters and there is evidence that at least three nest on the island's beaches. Turtle sightings were collated and analysed. This turtle activity report found that it is critical for the Department of Fisheries to improve its sensitization and awareness efforts to all sectors of the society.
NOAA		Methods used to map the benthic habitats of Puerto Rico and the U.S. Virgin Islands			X	This document describes the specific methods used to create a benthic habitat map from The National Oceanic and Atmospheric Administration (NOAA) aerial photographs for the nearshore waters of Puerto Rico and the U.S. Virgin Islands in 1999. These images were first used to create maps of the region's coral reefs, seagrass beds, mangrove forests, and other important habitats before being used to create the benthic habitat map. Twenty-six distinct benthic habitat types within nine zones were mapped directly into a geographic information system (GIS) using visual interpretation of orthorectified aerial photographs. To supplement the maps, digital scans of the original aerial photographs, georeferenced mosaics, a GIS mapping tool for use with ArcView, and supporting data sets were also created. An assessment of the classification accuracy is also reviewed in this document.

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Nugues. M.	2002	Impact of a coral disease outbreak on coral communities in St Lucia: What and how much has been lost?		X		In 1997 a coral disease called plague appeared on the coral reefs of St Lucia, West Indies and by march 1998 it was estimated that 6.6% of the living coral had been killed in the previous 8 months. The disease selectively impacted 2 major reef frame builders (90% of tissue loss was of <i>Montastrea faveolata</i> and <i>Colpophyllia natans</i>). Over the long term, if losses were sustained progressive depletion of two of the most important reef frame builders in St Lucia would be observed.
Nugues.M. & Roberts. C	2003	Partial mortality in massive reef corals as an indicator of sediment stress on coral reefs			X	Partial mortality in corals is a natural phenomenon. It can be caused by a wide variety of disturbances, such as hurricanes, predation, competition, diseases or human impacts to which species respond differently. Babcock (1991) also noted that partial mortality could be part of a natural process of senescence in corals. Therefore, much remains to be learned about the significance and causes of partial mortality. Results from this study suggest that partial mortality in some species of massive reef corals could be used as a rapid and effective means of detecting sediment stress on coral reefs. Where the reef habitat is affected by riverine sediment inputs, this should translate into an increase in partial mortality in species having a poor ability to reject fine sediments.
Parsram. K.	2007	Protected areas training needs assessment: St Lucia Country report.		X		Determine the specific training needs of the national agencies involved in protected areas management to inform the design and implementation of training programs for building their capacity in protected area planning and management and sustainable livelihoods. Findings of the assessment revealed that although most of the protected areas professionals in St. Lucia have extensive experience in the jobs currently held and are qualified in the disciplines of marine biology, fisheries management, environmental management, education and economics, they need to enhance and, in some cases, acquire new skills and knowledge to effectively manage protected areas and protected area systems.
Smith. A. H., Gustave. J.	2001	A description of the harvest of wild sea moss in Laborie, St. Lucia	X			Account of the history of seaweed harvesting in Laborie, St Lucia, including the subsequent decline in natural yield, impacts on the harvester and attempts, since 1990s to cultivate seaweed.
Smith. A. H., Koester. S.	2001	A description of the sea urchin fishery in Laborie, St. Lucia	X			Part of a project, called People and the Sea: a Study of Coastal Livelihoods in Laborie, St. Lucia, is implemented by the Caribbean Natural Resources Institute (CANARI). An assessment of the past and present uses of reef resources in Laborie Bay, being undertaken as part of the project, has indicated that the white-spined sea urchin has supported a seasonal fishery of importance to the community for many years. The fishery has been suspended in recent years, either voluntarily by the community, or through closure by Government, due to severe declines in the urchin stocks, particularly in the early 1980s and mid 1990s. Similar declines were observed in many Eastern Caribbean islands in the same period. In 2000, a strong recruitment of juvenile sea urchins was observed around the southeast of St. Lucia, resulting in an increase in abundance to potentially harvestable levels and a renewed interest in possible access to the resource.
SMMA		Soufriere Marine Management Area - Case Study	X			The report describes Soufriere, including details on traditional employment (fishing and agriculture), marine setting ("bordered by a narrow submarine shelf which supports the island's most diverse and productive reefs") and terrain. A list of stakeholders involved in the management of the SMMA is given. Management zone definitions
UNESCO	2005	Applications of Satellite and Airborne Image Data to Coastal Management. Third Edition.			X	Computer based learning module introducing and training the reader in the use of remotely sensed data to support coastal management. This version is specially designed for coastal regions and small island platforms.
UNESCO	2007	Workshop on the development of the Caribbean Marine Atlas (CMA)			X	Small Island Developing States (SIDS) possess a number of characteristics that make them highly vulnerable to external shocks, and which have important implications for their sustainable development. Due to the high ratio of coastline, the whole island is considered the coastal zone and coastal zones are particularly vulnerable to external perturbations. All representatives from Caribbean countries present at the workshop stated that a major impediment to their Integrated Coastal Area Management (ICAM) ability was limited access to data and information regarding the coastal zone and its resources and that a central reference point giving access to data sets and time series etc on a national and regional scale would be of great benefit. Report goes on to detail the method in which the marine atlas was compiled for Africa and the approach that will be taken for the production of the Caribbean atlas.