

## **“Cultural heritage and transitions in coastal and maritime resource utilisation towards the 21<sup>st</sup> century experience economy – Galathea 3 in St. Croix“**

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The scientific value, methodologies and popular outreach of CMRS’ multidisciplinary research proposal for the Galathea 3 expedition in St. Croix of the U.S. Virgin Islands is outlined below.

### **1) Scientific objectives**

The coasts and seas of the world face a range of anthropogenic impacts from agriculture, fisheries, transport, aquaculture, recreation, tourism and industry. The negative effects of these factors are only too well known; loss of natural and cultural heritage, overexploitation and pollution. Moreover, in an ever-changing world, history and cultural heritage play an increasing role in the formation and reinvention of cultural, ethnic and national identities, in management and government, and indeed as a global battlefield for the advancement of political opinion, commercial interests and new agendas. The main theme uniting the research proposal of the Centre for Regional and Maritime Studies (CMRS) for the Galathea 3 expedition, entitled “Cultural heritage and transitions in coastal and maritime resource utilisation towards the 21<sup>st</sup> century experience economy– Galathea 3 in St. Croix“, is how these challenges have been faced in the past; how they are currently addressed, and how they may be faced in the future. Rooted in the realm of humanities, this entails an interdisciplinary approach aiming to understand the interaction of humans and the sea over time, and simultaneously striving to improve research concepts, methodologies, knowledge and qualify popular understandings through fruitful dialogue.

Motivated by rising consumer demands for unique experiences, the new experience economy with its fusion between two formerly distinct spheres of cultural creativity and traditional production, brings about new representational and managerial predicaments. How is a shared heritage selected, interpreted and consumed by locals and international tourists alike? What are the challenges for meaningful representation of a contested cultural heritage? And what are the opportunities for co-management strategies that will ensure the conservation and sustainable utilisation of cultural, marine and coastal resources? Our case study from the multi-ethnic, post-colonial island of St. Croix will explore and further qualify an understanding of how these complex challenges have been faced over time and how they may be faced in the 21<sup>st</sup> century experience economy.

### **Keywords**

Natural and cultural heritage, experience economy, resource management and sustainability.

### **2) Disciplinary approach**

We will adopt an interdisciplinary approach to this broad subject by co-ordinating the efforts of researchers in humanities in the disciplines of maritime environmental history, maritime history, geography, archaeology, marine archaeology and social anthropology.

As human interaction with the coast and sea assumes many forms, the following research questions will be addressed:

1. What were, are and will be the roles of the coasts and the sea in the development of human society in St. Croix of the U.S. Virgin Islands?
2. What were, are and will be the impacts of human society on marine, coastal and cultural resources in the Salt River Bay area?
3. What were, are and will be the challenges and possibilities for sustainable national park development of the *Salt River Bay National Historical Park and Ecological Preserve*?

### 3) Project description

CMRS's research proposal, "Cultural heritage and transitions in coastal and maritime resource utilisation towards the 21<sup>st</sup> century experience economy– Galathea 3 in St. Croix" is made up of three research columns that are based on five propositions:

1. Marine and coastal resources are constantly used, contested and reinvented through time.
2. Both material and immaterial marine and coastal resources are of crucial importance to past, present and future societies.
3. Dissemination of knowledge on past behaviour and transitions in land and sea use are an indispensable basis for sustainable management strategies for the future.
4. The design of institutional arrangements and capacity building among relevant stakeholders is fundamental to resource conservation and sustainability in national parks.
5. The experience economy holds potentials for innovation based on cultural content, which is motivated by consumer demands for unique experiences.

The context for the project is the *Salt River Bay National Historical Park and Ecological Preserve* in St. Croix, U.S. Virgin Islands (the former Danish West Indies). The *Salt River Bay National Historical Park and Ecological Preserve* (hereinafter Salt River) is a microcosm located on the north west coast of St. Croix. It was designated as a National Park under the American National Parks System in 1992 to commemorate Columbus' arrival to the new World. Within the National Park boundaries, archaeological evidence suggests that indigenous Carib Indian peoples inhabited the area before the first century AD. Also displaying an abundance of coastal, marine and submerged cultural resources, the area is still used for residential, commercial and recreational purposes by a multi-ethnic local population and international tourists alike. Striving for authenticity and historic verisimilitude, the Salt River National Park is legislated to be co-managed between the US National Parks Service and local territorial authorities. Still, the predicament of enforcing the dual mandate to protect and preserve the National Park for present and future generations remains to be overcome.

#### 3.1. Changes of the marine habitat of St. Croix c. 1733-2005

The marine ecosystem of St. Croix represents a nature resource, which for centuries has been exploited by inhabitants and colonial powers. In previous times, fish stocks and marine mammals were exploited. Today, marine life and coral reefs are consumed in the new experience economy. However, the recreational value of the reefs and marine life links with the historical development, as the present deteriorating state of the marine ecosystem is the result of a long-term development.

Recent studies of the Caribbean marine ecosystem suggest that major structural and functional changes have occurred since the 15<sup>th</sup> century. Overfishing has been identified as the main single factor causing alteration and impoverishment of the coastal marine ecosystem, and heavy fishery and extinction of key species in the marine ecosystem took place already in the early colonial period. These are the conclusions of several studies by J. C. B. Jackson et al. 1997 and later publications of the History of Marine Animal Populations project for the Caribbean. They have caused historians and biologists to reconsider the Shifting Baselines syndrome (see further FKK Humanistisk naturforskning: omverden, individ og samfund, Poul Holm, Anne Løkke, Dorthe Gert Simonsen, Jytte Ringtved, Inge Schjellerup, Finn Arler, Bo Fritzboeger & Bo Poulsen (København: Statens Humanistiske Forskningsråd, 2004). Jackson's analysis is primarily based on materials in French and English archives, while Danish material has yet to be included. Bringing such new materials on to the scene will add to the existing research by comparing the presumed different resource perceptions and approaches among colonist powers, by answering the question of where and when the changes occurred and revealing whether the contemporaries took notice of the changes and foresaw their ramifications.

The disciplinary approach is firmly rooted in comparative marine environmental history, which aims to assess and explain the changing diversity, distribution and abundance of marine species from the past to the present. The analytical framework embraces two basic premises. First, much of what we can know about the history of the oceans will be in the “human edges” of the ocean, those in the near shore and coastal zone. This is where humans most directly interacted with the sea and therefore most historical records relate to these activities. Second, moving from the unknown to the known maritime history, historical analysis must be combined with ecological analysis in a truly interdisciplinary way. Applying this framework involves appraisal and analysis of records of the human activity that has had the greatest impact on marine ecosystems over historic time, the commercial fisheries conducted primarily on the human edges of the ocean.

Prior to March 2007, the research project will collect evidence on the exploitation of the marine resources in the Danish colonial period, and contribute to the understanding of the present day marine habitat of St. Croix, and notably the Salt River Bay. Historical data on the exploitation of the marine resources of St. Croix will be triangulated with a plethora of different sources. The main material will draw on the Danish National Archive in Copenhagen and the national archives in Washington D.C. Preliminary studies have shown that a rich material is available, especially from the late 19th-century, when Danish scientists started to take a professional interest in the fauna of St. Croix and - particularly interesting in this context - with special attention to marine life. During fieldwork in 2007, historical data will be compared to field interviews with local historians and relevant experts and archival records at the St. Croix Landmarks Society Library and Archives.

### **3.2. Landscapes of Sugar and Slaves. The History and Heritage of the Landscape of a former Danish Slave-Colony**

The research project will provide a detailed understanding of current land use and land cover distribution based on archive data, historical maps and the physical landscape. The objective is to facilitate knowledge of potential best practices in land use, and provision of information on historical, geographical and archaeological sites for planning and sustainable development in St. Croix of the U.S. Virgin Islands (see Appendix 1).

The archaeology of the coasts and seas embodies both land-based field archaeology and underwater archaeology. The empirical focus of archaeology will be on mapping the traces of human activities and use of resources in coasts and seas. Archaeology will contribute to the overall research by establishing very long time series that can demonstrate challenges to and problems in the use of coastal resources, and the strategies that humans applied when facing these challenges in prehistory and early modern times. For the medieval and early modern time, archaeology will have a great potential for improving the knowledge of past societies through establishing a dialogue with other disciplines, especially maritime history. The theoretical impact will be on improved understanding on how marine resources influence the social, economic and cultural habits of past human life.

The detailed local mapping of vegetation (land cover) and land use around Salt River Bay can be coupled to global studies of Land Use/Land Cover change, where special attention is being paid to coastal zones. These areas should however also be seen as parts of a region, since for instance the situation in a drainage basin affects sediment load in water courses, and there are streams of energy, food and materials in and out of the area – and the magnitude of these streams changes over time. With a consistent classification of land use across time (three to five centuries back) and standardised data types and mapping scales, it will be possible to compare the patterns of change taking place in different parts of the area and to compare with other areas where similar research is conducted. To this end, landscape ecological approaches and quantification of spatial structure play an important role, while GIS makes it possible to combine with socio economic and biological data.

Prior to March 2007, a collection of archive and map data will include digitising and geo-referencing maps from Royal Library: Cronenberg-Jægersborg, Beck, and Oxholm. A digital terrain-model will be prepared and GIS data from US agencies will be collected to start building a database. During field work in March 2007, data and information sources will be compared. Delineating geo-morphological zones in the area (GPS assisted) will include assessment of parent material (geology), soil type and quality. Several field inspections for land use and land cover mapping will be conducted. Points of particular interest (cultural elements) will be visited, based on a prioritised list drawn from the database. Equally important are meetings with local stakeholders and experts.

Following the fieldwork, preliminary mappings with field information will be corrected, and deliverables prepared, which include making data available on web-site with map interface(s).

Data will also be generated on marine archaeological records of submerged cultural resources. In 1989, the National Parks Service's Submerged Cultural Resource Unit (SCRU) surveyed Salt River Bay to determine the presence or absence of cultural material, its extent and potential significance. The team's underwater and shore-side archaeological work determined that the area was indeed rich in cultural material. Some had been adversely affected by development, while sizeable non-impacted areas still held easily discernible archaeological remains. They concluded that a plan was needed for a reactive strategy against threats from development. Our research proposal includes the mapping of sites within and without the bay and selective test pit excavations of those in proximity to areas under specific threat of development. Such actions would be highly informative and directly beneficial to a sustainable development strategy and serve to enhance local appreciation and stewardship of shared submerged cultural resources.

### **3.3. Contested cultural heritage and national park development in the experience economy**

The research project draws on anthropological fieldwork and interviews conducted by Janne J. Liburd in the U.S. Virgin Islands (1995-1998, 2000). Research will focus on current representations of a colonial cultural heritage and the constructions of place and identity in the process of National Park development in Salt River. The complex relations between heritage and tourism, and the ways in which attitudes towards natural and historical environments are contested for a variety of present day purposes will be explored using the time-honoured method of participant-observation.

National parks continue to play a significant role in areas of protection, conservation, economic potential for regional development, recreation and tourism. Current literature on the relationship between tourism and national parks make little attempt to distinguish between touristic, recreational and traditional resource use in/of national parks despite the potentially conflicting needs, individual expectations, past and lived experiences (Wahab and Pigram 1997; Hall and Lew 1998; Mowforth and Munt 1998; Butler and Boyd 2000; Liburd 2004). However, to identify with and belong to a place is informed not only by particular modes of localised cultural knowledge, but shared through ongoing process of associating symbols, appropriating meanings and imaginations that inform social practice. In St. Croix, and the U.S. Virgin Islands at large, popular imaginations about a shared colonial heritage appear to remain of interest only as a source of opposition that is more oriented towards a categorisation of 'them' rather than a unifying force identifying 'us'.

Evidently, place construction and national park designation is a cultural and political project that calls for studies on cultural rights, commoditisation, authenticity, heritage ownership, power relations, interpretation, utilisation and added value of past heritage for present needs in the new experience economy. The research project will also include an analysis of the conceptualisation of sustainable tourism development and implementation of co-management strategies, as the Salt River National Park is legislated with a mandate of co-management. It

will be probed whether cultural practices are not only a useful mechanism for participatory development and co-management in national parks, but as an integral part of sustainable tourism they may hold opportunities for content production in the new experience economy.

#### **4) Relevance for and ties to national and international research**

All three research fields will contribute to a better understanding of sustainable management strategies for coastal and marine environments, with particular relevance to national park development.

In 1987 the *World Commission on the Environment and Development* defined the concept of sustainable development as “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Four interdependent issues were found to lie at the heart of sustainable development, namely the environment, the economy, social and cultural aspects. Neither of these issues are static entities. Accordingly, CMRS understands sustainable development not as a goal or an equilibrium that can be reached over time. Incorporating elements of continuity, equity, and acceptable levels of change, the research agenda for a sustainable development of the coasts and seas means to identify possibilities for long-term development that are economically and socially viable without detracting from the environment or local cultural heritage (Jurowski and Liburd 2002).

The philosophy and practice of sustainable development unite the management of cultural heritage, coastal ecosystems and environment, touristic and recreational practices, industrial activities and policy making. Each of these managerial domains lies in the cross-field between ecology, commercial interests and socio-cultural value systems at the core of which the predicament between preservation and utilisation remains unresolved. Consequently, in order to improve present and future living conditions sustainable development is contingent upon managers, consumers and educators who adopt the principles of sustainable development as part of their management philosophy and daily practice.

Moreover, embracing new consumer demands for quality experiences that are based on cultural content and contextual values, the project strategically aims to raise popular awareness on sustainable consumption of material and immaterial resources, products and services. Consumers making informed choices on what products they buy, who gets their money and which companies deserve their loyalty can be seen as an important means through which the sustainability principles can be internalised by individual consumers. This clearly is a long-term process, whereas the challenges generated by the volume of tourists and current unsustainable practices are of the past and immediate present.

The gap between scientists, who provide knowledge, and policymakers, who use this knowledge, is at times wide and must be narrowed in order to secure a sufficient background for the decision-making of tomorrow, particularly in regards to sustainable development and integrated co-management.

In order to successfully disseminate this knowledge, CMRS’ research project is established with a national and international partnership of academic, government and management agencies that is expected to engage in a fruitful dialogue between researchers, educators, pupils and practitioners in St. Croix.

CMRS has a strong track record for bridging between fundamental research and applied approaches. CMRS is a partnership of research staffs of the University of Southern Denmark and the Fisheries and Maritime Museum, Esbjerg and thus combines competencies in both academe and outreach. CMRS has played a major role in the last ten years in the global development of the field of maritime history. Now the largest single maritime history unit in

the world, it is a recognised international leader in the field of marine environmental history, which is reflected in the high visibility of centre staff as contributors to international conferences and peer-reviewed journals.

CMRS has gathered fruitful experiences, knowledge and contacts through co-directing the socioeconomic theme EU Network of Excellence MARBEF, which relies on the development of a matrix database for marine impacts and pressure. CMRS is also the lead international partner of the global research project History of Marine Animal Populations (HMAP), involving more than 70 researchers in ten countries from disciplines such as biology, anthropology, archaeology and history. A considerable synergy effect with the research program is expected. The publication of an online database will be carried out in close co-operation with the HMAP project. In the same manner earlier research within the HMAP framework will be drawn upon in order to fit the findings in to a broader context.

CMRS expertise in tourism and cultural heritage research includes recreational fisheries, the use of coastal immaterial resources, cruise tourism, sustainable tourism and national park development.

The national and international reach and project relevance also draws on MAST - the Research School for Studies in Marine and Coastal Environment, Heritage and Sustainable Tourism. MAST builds on the successful completion of the Maritime History and Marine Environmental Research School, MARINERS, which was supported by the Danish Council for Research Training in 2001-2004. The name change reflects the fact that studies in sustainable tourism and leisure management has developed as a strong new agenda for the research school.

Moreover, the Business Enterprises for Sustainable Travel Education Network (BEST EN), which is an international consortium of educators committed to furthering the development and dissemination of knowledge in the field of sustainable tourism is among the list of international research partners. BEST EN is chaired by Janne J. Liburd (2005-2008) and hosted by the University of Southern Denmark.

Partnerships between CMRS and U.S. Federal agencies such as the Environmental Protection Agency (EPA) and the National Parks Service have the potential to create long term working relationships between Danish and American researchers in coastal management and sustainable development. An existing relation between CMRS and the U.S. EPA's Coastal Management Branch will help ensure a successful long term strategy for the continued application of all lessons learned in the Salt River Bay project. This existing relationship will also open possibilities for receiving U.S. Federal funding. In addition, this relationship will assist Galathea 3 staff to align research products directly with long term objectives developed within the U.S EPA and National Parks Service, thus assisting our international colleagues and furthering efforts for local capacity building and international sustainable development programs.

Partners include:

- History of Marine Animal Populations [www.hmapcoml.org](http://www.hmapcoml.org)
- MAST Research School for Studies in Marine and Coastal Environment, Heritage and Sustainable Tourism (<http://www.mast.cmrs.dk>)
- The Fisheries- and Maritime Museum (<http://www.fimus.dk>)
- US Environmental Protection Agency (<http://www.epa.gov>)
- US National Park Service (<http://www.nps.gov>)
- B.E.S.T. Education Network (<http://www.besteducationnetwork.org>)
- The Historical Geography of St. Croix project (University of Missouri, Kansas City (<http://iml.umkc.edu/StCroix/>))

- The St. Croix Heritage Trail - a joint project of the St. Croix Landmark Society and the Virgin Islands Department of Tourism (<http://www.usvitourism.vi>)

### **5) Expected outcome, dissemination of results**

The dissemination of knowledge and scientific results is of outmost importance and will be secured through publications in international, peer-reviewed journals, conference papers, museum exhibitions, online publications and educational material.

#### Planned Papers/scientific articles:

Ejstrud, B. and Nielsen, N.C. (2008) Contested landscapes – from slave-based sugar farming to leisure and nature preservation *Landscape and Urban Planning*

Karnøe, M. and Bager, M. (2007) Historical sources for the marine environmental history of St. Croix – a new approach to the Danish colonial archive. Publisher: *Scandinavian Economic History Review*.

Karnøe, M. and Bager, M. (2008) Exploitation of the marine resources of St. Croix - interpretation of research results. Publisher: (*to be determined*).

Liburd, J.J. (2008) Culture, Contested heritage and National Park development in the 21<sup>st</sup> century experience economy. Publisher: (*to be determined*).

#### Planned Web publications:

Online publication (2007) of the St. Croix fisheries data within the History of Marine Animal Populations Online Database: <http://www.hull.ac.uk/history/MHSC/hmap4.htm>.

Maps of the Salt River Bay area at different times and with different legends, possibly extended to larger parts of St. Croix

GIS data made publicly available (Internet based “cultural environment atlas” in collaboration with the St. Croix Heritage Trail)

#### Popular outreach:

Karnøe, M. and Bager, M. (2007) Wall sheet exhibition. Produced and exhibited at the Fisheries and Maritime Museum. To be exhibited at all the museums within the Association of North Sea Cities.

Ejstrud, B. and Nielsen, N.C. (2008) Development of a BA-level History course in GIS methodology and maps. University of Southern Denmark, campus Esbjerg.

Liburd, Karnøe and Ejstrud (eds) (2007) *Natural and Cultural Heritage developments in/of St. Croix of the U.S: Virgin Islands*. Online publication of educational material for use at 8<sup>th</sup> grade level

The educational material is specifically aimed at pupils at the 8th grade level in the U.S. Virgin Islands, and possibly in Denmark as well, to improve popular understandings of how the roles of the coasts and the sea in the development of human societies is fundamental for future resource management strategies and our quality of life. As coastal communities, both the U.S. Virgin Islands and Denmark depend to varying degrees on the sea and have defined and defended rights of utilisation through time in response to pressures as diverse as resource

dynamics, societal competition and rights of ownership, including present-day problems of tourism development and unimpeded resource-sharing.

To illustrate but one aspect of the online knowledge base, the marine life aspect offers insights to the changes of the marine habitat by using present day traces of former rich marine resources. An example hereof is the different species of whelks used as decoration in old burial plots and even to demarcate car parks in Gallows Bay, Christiansted, – species, which today are threatened by extinction. This approach towards natural heritage education is directly aimed at local capacity building that will facilitate the youth with a more complex understanding of ecosystem dynamics over time.

We will develop two user interfaces over the database. One for use with a normal computer, and one that is available over any standard mobile phone. With such a double front-end to the database, it will be possible to access the information both off- and on-site: A user in Denmark have access to place-specific information, while the user who is standing at a particular heritage site on St. Croix can access further information based on Danish archives. This website, a prototype of which has already been developed will finally form the basis for the development of educational material.

([http://www.humaniora.sdu.dk/kulturmiljoe/data\\_index.html](http://www.humaniora.sdu.dk/kulturmiljoe/data_index.html). See futher Per Grau Møller & Morten Stenak 2004: Mapping Historical Landscapes and Environments - Morphology or Function? (pdf-format, 341 kb). Paper fra konferencen Multiple Landscapes. Merging past and present in landscape planning. Wageningen, 6.-9. juni 2004.)

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