SocMon and Resource Management in Puerto Rico

U.S. Coral Reef Task Force Meeting
San Juan, Puerto Rico
October, 2009

Manuel Valdés Pizzini
Sea Grant & CIEL
SocMon History (Part I)


Tulum, Mexico, GCFI Meeting: SocMon, A process and methodology for the Caribbean (2002)


COSTAS Program (UPR-NOAA) Mentorship for Undergraduate Students (2003-2005)


NOAA-DNER SocMon Training Program for Protected Areas’ Managers (2007)
SocMon History (Part III)

SocMon for MPAs in Puerto Rico: DNER-NOAA-Sea Grant-CIEL in La Parguera Natural Reserve (Southwest Coast) 2007


A SocMon Project: Jobos Bay National Estuarine Research Reserve (South Coast); Boquerón Wildlife Refuge (West Coast); Tortuguero Lagoon Natural Reserve (North Coast) 2008
A “Prehistory” of Social Sciences and Resource Management (and MPAs)

- **DNER**
  - Creel Surveys
  - Fishers’ Census and Landings Data
  - Socioeconomic variables for plans
- **Religious, Labor and “Environmental” NGO’s**
  - Fishermen Cooperatives
  - Social conditions of fishing communities and their economic potential
  - Coastal communities, empowerment and participation in management
- **Caribbean Fishery Management Council**
  - Management Plans: Conch and the Coral and Reef Associated Plants and Invertebrates
  - Social Impact Assessments
A “Prehistory”

UPR Sea Grant College Program
- Profile of fishers, communities and organizations
- Social Impact Assessments
- History of the local fisheries

National Marine Fisheries Service (Saltonstall-Kennedy Funds and other opportunities)
- Management Plans
- Recreational and Sport fishing activities
- Recreational infrastructure
- Fishing gears: trammel nets and gillnets
- Description and prediction of user conflicts in local fisheries
A “Prehistory”

The Puerto Rico Conservation Trust
- Hacienda La Esperanza in Manatí (North Coast)
- Guánica Dry Forest (with DNER and CANARI)
- Visitor studies

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A “Prehistory”

The Caribbean Natural Resources Institute (CANARI)

- Capacity Building
- Co-management in the Caribbean
- Soufriere Marine Management Area in St. Lucia
- Training for Resources Managers and Communities in Socioeconomic Monitoring: Grenada and Dominica
- Collaboration with the CEBSE NGO (Dominican Republic) in Samaná
- Fishers and communities, Participatory Planning and Collaborative Management (Patrick McConney, partner & board member)
A “Prehistory”

National Marine Fisheries Service (Saltonstall-Kennedy Funds and other opportunities)
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United States Department of Agriculture, Forest Service
- El Portal Visitor Center
- Visitor Studies
- Historical Research
- Water and recreation
A “Prehistory”

An International Movement for the Incorporation of Social Analysis in Resource Management

- World Bank, IDB, USAID, GTZ (Zopp Method), United Nations
- Social Impact Assessment as a Preferred Methodology
- Global Environmental NGOs: WWF
- Regional NGOs as partners and brokers of the methodology
Balance Sheet:

- Caribbean and International Experience
- A Legal Need for Information (Magnuson Fishery Conservation and Management Act of 1976, and the MSFCA of 2007)
- Incorporation of users and communities in decision making
- Need for the understanding of social and cultural dimensions of stakeholders
- Ecosystems? Humans?
- Buzzwords and real processes: participation, democracy, partnerships, stewardship, co-management, collaboration
- Management of MPAs and the real need for socioeconomic monitoring
SocMon Caribbean

- A guide and a set of recommendations
- Tailored for each MPA
- A Caribbean Approach
- A regional perspective and effort
- Management and monitoring goals
- A team effort
La Parguera Natural Reserve

A SocMon Test

Figure 83. General coral cover in areas of southwest Puerto Rico
<table>
<thead>
<tr>
<th>Items</th>
<th>Results / Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives:</td>
<td>Understand the key issues, identify stakeholders and impacts to the resources and habitats</td>
</tr>
<tr>
<td>Stakeholders:</td>
<td>Fishers, locals, newcomers and owners of stilt houses, tourism and recreation business owners</td>
</tr>
<tr>
<td>Topics addressed:</td>
<td>Key resources and habitats, boating activities, fishing, fishers knowledge, perceptions of key informants, land-based threats and urban growth</td>
</tr>
<tr>
<td>Management questions:</td>
<td>Key issues for residents and users</td>
</tr>
<tr>
<td>Socioeconomic indicators:</td>
<td>Traditional Ecological Knowledge, Boating activities, demographic growth and the human footprint,</td>
</tr>
<tr>
<td>Methods</td>
<td>Field observations (ethnography), census of businesses, census of stilt houses and boating facilities, in-depth interviews, secondary and primary sources, US Census Data, US Agriculture Census</td>
</tr>
<tr>
<td>Team, time and costs:</td>
<td>4 students, a professor and a mentor; 6 months, $2,000 (NOAA)</td>
</tr>
<tr>
<td>Managers and stakeholders’ participation</td>
<td>Limited (managers), active (scientists and a small group of stakeholders)</td>
</tr>
<tr>
<td>Items</td>
<td>Results / Information</td>
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<tr>
<td><strong>Most important results and unexpected findings:</strong></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>A thriving business community benefitting from coral reefs and the mangrove forests thru boat rides to watch the bioluminescence</td>
</tr>
<tr>
<td>b.</td>
<td>Increase effort and pressure over fishery resources</td>
</tr>
<tr>
<td>c.</td>
<td>Stilt-houses: a de facto marina</td>
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<tr>
<td>d.</td>
<td>Urban growth and gentrification as important processes</td>
</tr>
<tr>
<td>e.</td>
<td>TEK as an important asset of the fishing community</td>
</tr>
<tr>
<td>f.</td>
<td>Stakeholders do not recognize fishers as an important “actor” in the regional landscape</td>
</tr>
<tr>
<td><strong>Problems and key management issues:</strong></td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td>User conflicts (boaters, diving, fishing)</td>
</tr>
<tr>
<td>ii.</td>
<td>Carrying capacity of cays and bioluminescent bays</td>
</tr>
<tr>
<td>iii.</td>
<td>Quality of life</td>
</tr>
<tr>
<td>iv.</td>
<td>Lack of enforcement (on development and boating)</td>
</tr>
<tr>
<td>v.</td>
<td>Development and sedimentation of reefs</td>
</tr>
<tr>
<td><strong>Use of Information to Improve Coastal Management:</strong></td>
<td></td>
</tr>
<tr>
<td>A.</td>
<td>Information for the Management Plan</td>
</tr>
<tr>
<td>B.</td>
<td>A SocMon Test for future activities</td>
</tr>
</tbody>
</table>
DNER Needs and Priorities

- To understand user conflicts
- Management Plans
- Needs: funding, human resources, planning and implementation
- Enforcement
- Support from stakeholders
- Engage stakeholders in stewardship
DNER-NOAA SocMon Development

- Short and sweet: an introduction to SocMon
- A debate on co-management
- Collaboration in management: Tres Palmas Marine Reserve
- Socioeconomic Monitoring and management plans
- A SocMon Workshop
Luring DNER Managers...
Taller de SOCMON
Oficiales de manejo del DRNA en Áreas Marinas Protegidas
Charla preparatoria
2 de marzo 2007
Manuel Valdés Pizzini

Preguntas esenciales
- ¿Por qué SOCMON?
- ¿Por qué hacerlo?
- ¿Qué implica?
- ¿Qué datos recolecto?
- ¿Qué hago con estos datos?

Manual Socioeconómico para el Manejo de Arrecifes Coralinos Bunce et al 2005

Lineamientos de Monitoreo Socioeconómico para Administradores Costeros en el Caribe Bunce y Pomeroy 2003

Plan
- Caso de La Parguera
- Tres días intensos 19-21 de abril 2007
- Recopilación de datos y simulacro
- Análisis de datos ya recopilados
- Discusión sobre la relevancia de los datos para el manejo

Valor añadido
- Manejo día a día
- Planes de manejo
- Manejo adaptativo
- Manejo colaborativo

Productos
- Plan de SOCMON para las AMP
- Evaluación del plan
- Aplicación del SOCMON a una o dos reservas

Herramientas
- Documentos históricos
- Datos del censo
- Fuentes secundarias
- Observación de campo
- Mapas de uso de los recursos
- Grupos focales
- Entrevistas / encuestas
DNER-NOAA SocMon Workshop

- Site: La Parguera Natural Reserve
- Participants: Protected Area Managers (DNER)
- Goal: To develop a culture of integration of socioeconomic monitoring
- Social Sciences worldview
- A practicum on research techniques
- The role of the resource manager and the future of the MPAs
- Workshop results: interest and commitment for SocMon

Marine Protected Areas Selected
- Tortuguero Lagoon Natural Reserve
- Boquerón, Iris Alameda Wildlife Refuge
- Jobos Bay National Estuarine Research Reserve
- Puerto Mosquito Natural Reserve (Vieques)
- Mona Island Natural Reserve
The Puerto Rico SocMon Process: An Outline

Team Building Process

- CIEL staff and students
- Researchers from universities
- Training
- DNER Managers and Management
- Initial meeting
- Incorporation of MPA supporters and graduate students
- Community groups

Research strategy

- Participant observation of resource use patterns
- Census Data
- Inventories
- Mapping
- In-depth interviews
- Historical research
- Focus groups
- Surveys with resource users
Socioeconomic Processes Impacting Most Reserves

- Agricultural decline
- Changes in land use: from agriculture to industries and urban growth
- Population growth
- Urban sprawl
- Coastal gentrification
- Changes in traditional resource use activities
- Protected areas curtail poor communities from using the resources
- Enforcement
- User conflicts and an increase in recreational uses
- Changes in the landscape
Cabo Rojo

![Graph showing the cultivated acres over the years from 1910 to 2007. The graph indicates a decrease in cultivated acres over time, with a significant drop around 1935 and a recovery in the 1970s.]
Outcomes of the SocMon Experience
Benefits

- Social, cultural and historical data
- Reports with similar format
- Exploration of data sources within the MPA
- Participation of the managers and support from DNER management
- Community involvement
- Management plans and the SocMon approach
- Data suitable for the TNC Conservation Action Planning strategy
- Other spin-offs: oral history in Rincón

Lessons learned

- Need for a greater participation of stakeholders and community groups (easier said than done)
- SocMon as the key for stakeholder participation and engagement in a dialogue with managers
- A learning process
- Need of constant contact between research team and manager
- Funding and the Puerto Rican context
- An important first step towards management plans
- One site at a time...
Acknowledgements:

- Robert Matos (DNER)
- Eileen Alicea (NOAA)
- Christy Loper (NOAA)
- DNER Managers: Eileen Ortiz, Idelfonso Ruíz-Valentín, Luis Encarnación
- Marielba Rivera (UPR-COSTAS)
- CIEL Team
- Patrick McConney (UWI)