SOCMON: A test of the Socioeconomic Monitoring Guidelines for Coastal Managers in the Caribbean, in La Parguera, southwest Puerto Rico

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COSTAS (NOAA / MSI)

Background:
- Sugar cane (large landholdings), small peasant landholdings, fishing and salt production
- Pastures and animal husbandry
- Mangrove forest and charcoal production
- In-shore and shelf drop-off habitats for snappers and groupers
- Coral reefs and sea grass beds
- Bioluminescent waters: local and international tourism
- Diving and water sports
- Hotels and guesthouses

Background:
- Parcelas: small plots of land and houses for the local rural workers provided by the government
- Casetas: stilt houses in the shoreline, second homes owned by middle and high class families
- Gentrification in the parcelas
- Sub-divisions and apartments
- Department of Marine Sciences UPR-Mayagüez, at Isla Magueyes
Coastal management:
- Department of Interior: Bioluminescent bays (1960)
- Department of Natural and Environmental Resources: Special Planning Area and Reserves (1986…)
- U.S. Army Corp of Engineers and DNER: houseboats and stilt houses (1980…)
- NOAA and DNER: La Parguera Marine Sanctuary (1982)

SOCMON steps:
- Advance preparation
- Data collection through secondary sources
- Data collection through key informants
- Data collection through observation

Data gathering activities:
- Aerial photographs
- Field visits and observation of activities and structures
- Interviews with key informants
- “Conceptual” maps
- Primary and secondary sources (including census data)

Products:
- Community level demographics
- Community infrastructure
- Time series of community development
- Conceptual maps
- Data base of stilt houses and structures
- Management issues

Demographics:
- Population: 2,044
- Males (47.2)
- Females (53.8)
- English (23%)
- High School or less (73%)

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>1990</th>
<th>1980</th>
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<tbody>
<tr>
<td>Population</td>
<td>2044</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>2000</td>
<td>5000</td>
<td>6000</td>
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<tr>
<td>Females</td>
<td>2000</td>
<td>5000</td>
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<tr>
<td>English</td>
<td>2000</td>
<td>5000</td>
<td>6000</td>
</tr>
<tr>
<td>High School or less</td>
<td>2000</td>
<td>5000</td>
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Porcentaje de familias bajo el nivel de pobreza
- Puerto Rico
- Lajas
- La Parguera

0.00% 20.00% 40.00% 60.00% 80.00%
Community infrastructure:
- Photographs of the community (houses, businesses and activities)
- Database (Access) of houses, services, businesses, subdivisions, apartments and structures

Time series of community development:
Conceptual maps:
- From an aerial photograph
- Draw lines and indicate geographical sectors
- Parcelas, Casetas, Colinas, and Poblado
- Few indicated the fishermen areas and the DMS
- Maps are correlated to the information in the interviews and the issues observed

Data base of stilt houses
- Inventory of stilt houses based on field observations from the water.
- Map and location of the structures (using GPS and GIS)
- Photo mosaic of houses
- Description of houses
- Data in Excel and SPSS
Tipos de Estructuras

<table>
<thead>
<tr>
<th>Tipo de Estructura</th>
<th>Porcentaje</th>
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<tbody>
<tr>
<td>Casa Bote</td>
<td>80%</td>
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<td>Casetas</td>
<td>60%</td>
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<tr>
<td>Casa</td>
<td>40%</td>
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<tr>
<td>Pilotes</td>
<td>20%</td>
</tr>
<tr>
<td>Muelle</td>
<td>0%</td>
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<tr>
<td>Garaje</td>
<td>0%</td>
</tr>
<tr>
<td>Rampa</td>
<td>0%</td>
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<tr>
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Usos de las Estructuras

<table>
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<tr>
<th>Tipo de Embarcaciones</th>
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<tr>
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<tr>
<td>Lancha</td>
<td>60%</td>
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<tr>
<td>Barco</td>
<td>50%</td>
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<tr>
<td>Yate</td>
<td>40%</td>
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<tr>
<td>Otros</td>
<td>30%</td>
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<tr>
<td>N/A</td>
<td>20%</td>
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<tr>
<td>Zero</td>
<td>10%</td>
</tr>
<tr>
<td>Sin Datos</td>
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Management issues:

- Coastal Zone Management and the illegal use of the shoreline
- Carrying capacity in the bioluminescent bays
- Development, deforestation and sedimentation of reefs
- Increase in the number of visitors and the lack of infrastructure

Spin-offs from SOCMON:

- Coral Reef Ecosystem Studies
- Culebra & Vieques
- Community Study of Papayo
- Atlas of Coastal Communities S.N.
Papayo

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Omar Bonilla

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