SPATIAL ANALYSIS OF MOLLUSK CULTURE AT SANTA CATARINA ISLAND USING LAW AND GIS

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Study area
Located in South Island at Santa Catarina Island (Florianópolis) - Brazil

Mollusk culture System
Long line system

Fixed suspended cultivation system

Current planning
Spatial Planning
Farms (individual areas)
Mollusk culture needs the mapping individualized by producers.
Input Data
- Orthophoto (2002) - Florianópolis Urban Planning Institute - IPUF
- Stereoplotter (IPUF)
- Nautical chart (1976) Directory of Hidrography and Navigation-Brazil
- GNSS mensurations (2007) - L1/L2 GNSS receiver adjusted by official Brazilian Geodetic Network.
- Law parameters - low tide (200 meters), rocks (50 meters) and bathymetry

Processing Data
- Geodatabase ARCGIS 9.2
- Stereoplotter edition and interpretation orthophoto
- Spatial analysis - crossing culture area position Vs law parameters
- Maps production
Results

<table>
<thead>
<tr>
<th>Code</th>
<th>Producer name</th>
<th>Illegal Area</th>
<th>System</th>
<th>%</th>
<th>Total area</th>
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</thead>
<tbody>
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<td>Long</td>
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<tr>
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</tbody>
</table>

There are no illegal areas near the rocky coasts.

Conclusion

- The mollusk culture areas need updated legal maps.
- The accuracy should be better than 20 meters (law parameters). The research proposes 1 meter.
- Each mollusk culture area should be done in a unique geodatabase, considering the geographic limits in a map.
- Monitoring and inspection of each farm is necessary, considering laws and integration between public institutions.

Thank you!