

## Supplementary Material 6: Perceptions of MPA managers at the end of the PAMPA project (from verbatim records in Pelletier et al. 2011).

<b>1. Importance and relevance of the collaboration and approach</b>
<ul style="list-style-type: none"><li>• Grounding the construction of indicators on a consensus formulation of goals and objectives</li><li>• Experience and expertise sharing across MPAs and between scientists and MPA managers</li><li>• Implementing the same approach in MPAs with distinct characteristics and settings</li><li>• Differences between the MPAs and between manager profiles were not problematic due to the initial workshops for setting the scene and the methodology</li><li>• Reconciling expert-based assessments and data-based assessments</li><li>• Using the same approach with many different data sets and utilizing existing data sets</li></ul>
<b>2. Relevance to MPA activities</b>
<ul style="list-style-type: none"><li>• Contributed to several actions of the management plan and to the document needed for the Natura 2000 directive</li><li>• Produced indicators and elements for MPA ME monitoring, for the MPA dashboard, and for the future management plan document</li><li>• Indicators were subsequently used to assess the management plan</li></ul>
<b>3. About the tools developed</b>
<ul style="list-style-type: none"><li>• The database was needed for inputting use data and avoided input errors</li><li>• The R-based interface enabled easy and quick computing and testing of many indicators</li><li>• Some tests were not coded</li><li>• Use-related indicators cannot be changed through the user interface</li><li>• The user interfaces should produce a report automatically</li><li>• Formatting the data should also be automated</li></ul>

<b>4. Dashboards of indicators</b>
<ul style="list-style-type: none"><li>• Integrating ecological, use-related and governance indicators in a given dashboard provides a complete view on MPA ME assessment</li><li>• There were too many indicators: for the dashboards, a trade-off was needed between exhaustivity and simplicity</li><li>• Too few indicators was not desirable because: i) it may be simplistic; and ii) joint interpretation of several indicators is easier; and iii) indicators were needed for several reporting purposes</li><li>• Dashboards must be tested in the long run</li><li>• They require routine monitoring beyond the project; funding must be secured</li></ul>
<b>5. Biodiversity and fished resources</b>
<ul style="list-style-type: none"><li>• Many existing data sets were evaluated and utilized</li><li>• The numerous indicators documented goals 1 and 2 well</li><li>• Indicator interpretation (in particular the definition of threshold values) was difficult with short time-series and when protection was recent</li></ul>
<b>6. Uses</b>
<ul style="list-style-type: none"><li>• Data collected over a year cycle provided an indispensable baseline assessment of uses</li><li>• Data were useful for the needs of the Natura 2000 European directive</li><li>• Recreational fishing practices were described and characterized in term of both effort and catches</li><li>• Existing data from user counts were evaluated and analyzed</li><li>• Aerial surveys provide a holistic view, but need complementary data</li><li>• Spearfishing requires additional data because on site interviews are not easy</li></ul>
<b>7. MPA Governance</b>
<ul style="list-style-type: none"><li>• Discussions on MPA governance were highly appreciated as this was a new and relevant subject for managers</li><li>• Governance indicators are useful for assessing management plans</li><li>• However, their interpretation is highly context dependent</li></ul>