

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

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

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