

Egyptian site-level assessment

Written with Dan Paleczny and Khaled Allam with information largely extracted from (Paleczny 2007)

Organisation

Nature Conservation Sector (NCS), Egyptian Environmental Affairs Agency, through support from the Egyptian-Italian Environmental Cooperation Programme, UNDP and IUCN.

Primary methodology reference

Paleczny, D. (2007) 'Management Effectiveness Evaluations of Egypt National Parks - summary report.' IUCN, Egyptian-Italian Environmental Cooperation Programme, Nature Conservation Sector Capacity Building Project; Nature Conservation Sector, Egyptian Environmental Affairs Agency; UNDP, Cairo.

Brief description of methodology

A national RAPPAM evaluation had examined the context, planning, inputs, processes and to some extent, outputs for the system of protected areas in Egypt in 2006.

To complement the system-level evaluation, this site level evaluation methodology focuses primarily on *context* (threats), *outputs* (implementation of work programmes or plans) and *outcomes* (state of the protected area's key values).

Through the site level evaluations, the protected area values are agreed upon first, and then the threats affecting the values are determined and examined to find underlying causes, actions and possible indicators. An evaluation of outputs and outcomes is a large task, which at first may discourage protected area managers and staff from initiating this work. The key is to start with the priorities and build upon the system through future work. Accordingly, the four site level assessments focus on priority values (focal targets), using available information and experience.

Purposes

- ✓ to assess status of protected area values
- ✓ to raise awareness and support
- ✓ to improve management (adaptive management) – at site level
- ✓ for prioritisation and resource allocation

Objectives and application

The stated objectives for the site level assessments (Paleczny 2007) are:

1. Assess the conservation status of Egyptian National Parks (ENP). Are the key values (ecosystems/resources, ecotourism/recreation, community well being) declining, remaining stable or improving?
2. Use available information and knowledge to substantiate assessments, as much as possible.
3. Identify gaps in knowledge that hinder an accurate assessment.
4. Identify more precisely the threats affecting protected area values, the underlying causes and possible solutions.
5. Examine the site level track record in implementing management plans (where they exist) and taking positive action toward achievement of conservation. Did the protected areas implement their programme? Were the actions effective in addressing conservation objectives?

6. Examine the underlying problems and possible solutions affecting the delivery of effective management.
7. Develop priorities and actions for implementation and integration into the protected area management plan or descriptive management plan.
8. Further advance a culture of transparency, learning and evaluation in Egyptian NCS. Aim to enhance continuous improvement and effectiveness (includes monitoring, research, reporting).
9. Establish the basis for site level monitoring plans.

Origins

In 2006, the Nature Conservation Sector Capacity Building Project of the Egyptian-Italian Environmental Cooperation Programme (with technical direction from IUCN), undertook a national, system level management effectiveness evaluation of Egypt National Parks (Fouda et al., 2006). A recommendation of this RAPPAM assessment was to implement a pilot project to establish and test an approach for carrying out more detailed site level management effectiveness evaluations. The site level evaluation objectives and process were developed and the approach was tested at four protected areas in Egypt: Wadi El-Rayan (WRPA), Qaroun (QPA), Ras Mohammed (RMNP) and Saint Katherine (SKP) (Palczy 2007).

The first phase was carried out in 2006 when the initial objectives for management effectiveness were set forth and the procedures were established. These were documented in two reports and an initial set of worksheets were designed as tools for protected area staff to use in the evaluation workshops.

The methods employed in the evaluations were informed by three key sources. Firstly, the procedure for examining the implementation of the past actions was adapted from the World Heritage Management Effectiveness Workbook (Hocking et al., 2004). Secondly, the evaluation of protected area values was adapted from The Nature Conservancy's Enhanced 5-S process for measuring conservation effectiveness (outcomes) and analyzing threats (TNC, 2000; Salzer et al., 2003). The E5-S approach was expanded from its focus on natural/biodiversity values to include cultural values, ecotourism-recreational values and community well-being (socio-economic) values. New worksheets and processes were developed for use in the workshops. Thirdly, the elements of the ecosystem approach (Shepherd, 2004; Smith and Maltby, 2003) were examined and built into the respective worksheets and processes.

Strengths

Technically sound and adaptable: Overall, the procedure for examining threats, indicators, progress and actions to arrive at a status assessment is sound and understood. The ideas can be reasonably communicated. At the same time, the approach can be adapted to suit the needs of the protected area staff so that the process and the results are relevant for their circumstance.

Staff engagement: Thorough involvement of staff in the process, including defining values, threats, measures and actions was a key feature. Overall, this raised their level of awareness of management across the protected area and the complexities of conservation. It promotes integrative thinking.

Threat analysis: The national RAPPAM threat analysis provided useful national/system level information. However, the threats were identified in a general way for the protected area system as a whole. Through the site level evaluations, the protected area values were agreed upon first, and then the threats affecting the specific values were determined and examined to

find underlying causes, actions and possible indicators. This made the threat analysis immediately relevant, and importantly, enabled the identification of pertinent actions.

Ecosystem approach: Tourism and local communities are sometimes identified as threats to the conservation of biodiversity values. However, it can be argued that such treatment is philosophically at odds with the principles of the ecosystem approach. In this process, the social and economic values were identified and studied alongside natural values.

Plan or programme implementation: For the two cases with management plans (St Katherine's and Wadi El-Rayan) it was possible to evaluate implementation of the plan (outputs) and to the extent possible the outcomes of implementation. This enabled a better estimate of changing conditions over time, compared to the other two cases (Qaroun and Ras Mohamed) where no management plan or any work plan was available at the time of the evaluation. This underlined the importance of having a management plan. Clearly, an evaluation of outputs and outcomes is tenuous without a clear sense of direction. The absence of annual work plans is an indicator of ineffective management.

Surveys: The stakeholder, local community and visitor surveys were generally seen to be a helpful and worthwhile tool to obtain some external input in the process. Implementation of the surveys well in advance of the workshops would enable better use of the results at the workshop, and a larger sample would improve the value of the information. Overall, the level of external participation in the text cases was small and was a weakness needing improvement.

Constraints and weaknesses

Several barriers, challenges and weaknesses were also found, related to the process and the organizational context in which the evaluations occur. These included: maintaining practicality (simplicity) while ensuring a technically robust process; some aspects of the threat analysis and ranking system can be further developed; more external knowledge and participation is warranted; funding and time are insufficient to fully apply the system, including the level of current monitoring, and; ensuring integration of biodiversity, eco-tourism and community wellbeing values (ecosystem approach) can be challenging.

How the methodology is implemented

The first phase was design the methodology (see 'origins' above);

The second phase was trialling the methodology in four protected areas. The management effectiveness evaluation process comprised seven steps and was implemented primarily through staff workshops ranging from 3-5 days each (5 days was considered to be the minimum time required). In total, about 40 staff were trained and participated in the workshops. The workshops provide a useful means of engaging staff and others in thorough and timely discussions in support of management planning and business planning. It is an excellent opportunity for self-evaluation and collective team-evaluation of efforts.

The third phase involved carrying out the analysis of the information and writing individual evaluation reports. Often, the results of workshop working groups contain inconsistencies and these needed to be reviewed and corrected (e.g., terminology).

In addition, a survey of stakeholders, local communities and visitors was part of the evaluation. The purpose of the survey was to obtain additional information and perspectives that may be similar to, or different from, those of staff. Both are useful to have. Although a separate discussion with stakeholders and local community members to obtain their input is valuable, it requires time and commitment beyond the initial workshop evaluation.

Elements and indicators

The main steps in the evaluation included the following (these steps have been updated following the field testing to reflect lesson learned):

1. **Surveys:** Conduct stakeholder, local community and visitor surveys prior to the evaluation workshop so results can be presented at the beginning of the workshop and be available for use during the workshop. This initial presentation would provide a good venue for local community and stakeholder participants to attend and to engage in discussions. Where possible and appropriate, stakeholders, local community members, technical or academic colleagues could be invited to attend all or any part of the workshop.
2. **Management plan review:** Protected area staff complete a review of the status of management plan implementation (i.e., achievement of objectives and actions) prior to the workshop so that external facilitators and other participants have this information in advance. Where there is no management plan for the protected area, at least one completed annual work plan and evaluation of implementation should be completed and sent to evaluators. A general template (**Table 1**) was applied in an appropriate and practical manner. The status codes were summarized to reflect the degree of implementation. The evidence codes were intended to demonstrate credibility and transparency in the evaluation.

Table 1: Generalized template for evaluating management plans or work plans.

| Management Plan or Work Plan Directions | Status Code (see below) | Description For status code 1+2: Describe Effectiveness, Needed Changes, Follow-up; For status code 3+4: Note problems and/or reasons for status; For status code 5: State rationale | Evidence of Effectiveness (see below) |
|---|----------------------------|--|--|
|---|----------------------------|--|--|

| Status codes: | Evidence of Effectiveness codes: |
|--|--|
| 1 = Completed or part of an ongoing programme 2 = Implementation underway but not yet completed 3 = Planning is in progress 4 = Not commenced, but action is still worthy of implementation 5 = Circumstances have changed; action is no longer appropriate or necessary | 1. Estimation 2. Expert opinion 3. Results of patrolling and monitoring 4. Results of technical or research study or other reports/products |

3. **Evaluation workshop:** Carry out a five-day evaluation workshop to identify and study the primary values of the protected area, analyse and map threats, develop status indicators for the respective values, and plan actions.
 - a. Identify the key values of the protected area, in the following three groups. Then select the one or two priorities from each of these groups to examine in detail.
 - Biodiversity/Natural Resource/Cultural Resource
 - Ecotourism/Recreational Resources
 - Community Well-being (socio-economic)

b. Assess threats:

- Revisit and confirm pressures and threats from the national RAPPAM, management plan, systems plan and participants' experience.
- Rate the threats for each key value (Table 2) and summarize these in one chart (see example at the end).
- Draw a map (chart) to show the relationship of the threats for each of the key values (biodiversity, recreational resources, community well-being) to the underlying causes, and identify possible solutions (Figure 6).

Table 2: Example of threat rating for one key value (Wadi El Hitan World Heritage Site)

| # | Threat | Extent (L, M, H, VH) | Severity (L, M, H, VH) | Threat Magnitude |
|----|--------------------------------|----------------------|------------------------|------------------|
| 1. | Vehicles driving off track | Very high | Very high | Very high |
| 2. | Too many visitors (core area) | Medium | Medium | Medium |
| 3. | Fossil collecting | High | Very high | High |
| 4. | Natural degradation of fossils | Low | Low | Low |

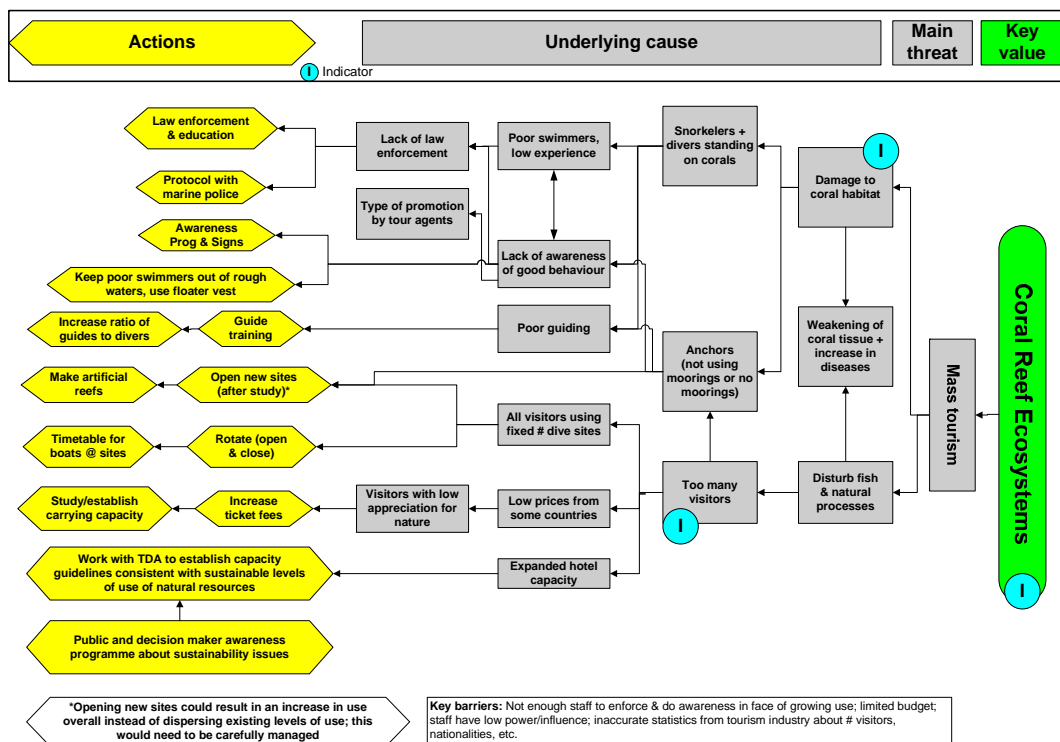


Figure 1: Example of a threat assessment/action map for one threat related to the coral reef key value (Ras Mohamed National Park)

c. Develop indicators: For each key value being examined, make an initial list of possible indicators for the key attributes (size, condition, context), threats and actions (Table 3). Choose at least one key attribute and one attribute indicator and develop rating criteria, noting the current status, as follows (per Salzer et al., 2003):

- **Poor:** Requires immediate intervention
- **Fair:** Outside range: requires intervention
- **Good:** Within acceptable range; little intervention, monitor and maintain
- **Very good:** Desirable; monitor

d. Plan actions:

- Review, confirm, refine or establish specific objectives for key values, taking into consideration the problems and needs to manage key values and threats.
- Develop actions for each objective, keeping in mind the threats previously discussed. Evaluate and prioritise the actions based on estimated cost, practicality, and likelihood of achieving a desired impact.

Table 3: Example indicator table and rating for the key value, communities inside protected area (Wadi El Rayan Protected Area).

| Category | Key Attributes | Indicator | Indicator Ratings (current rating in bold) | | | | Information Source |
|--------------------|--------------------|--|--|------------------|--------------------|-----------|-------------------------|
| | | | Poor | Fair | Good | Very Good | |
| Size/number | Size of the area | Area cultivated (fedan) | > 4000 | 3000-4000 | 2000-3000 | <2000 | LR manager |
| | Demographic | Total no. individuals in the community | > 6000 | 5000 - 6000 | 4000 - 5000 | < 4000 | Periodic survey |
| Condition | Economic benefits | Direct employment by PA (% of total no. of PA staff) | < 5 | 5 – 7.5 | 7.5 – 10 | >10 | WR records |
| | Productive systems | Amount of water pumped to area (m3 / second) | > 4 | 3 - 4 | 2 - 3 | < 2 | Pumping station records |
| Management Context | Impacts | No. of new invasive species found/year | > 1 | 1 | 0 | 0 | Monitoring records |
| Management Context | Impacts | Area of spread of invasive species (% of Oasis Area) | > 25 | 11-25 | 0-10 | 0 | Monitoring records |

4. **Evaluation report:** Facilitators, with the participation of a local staff member, should write up the report (draft) and send it back to PA staff for review and comment.
5. **Second workshop:** Conduct a second workshop (two days) with select staff and external groups (stakeholders, local community, academic, technical) to review the draft report and recommended actions.
6. **Report:** Then, update the report and share the results with NCS/EEAA staff and senior managers for a final round of discussion.
7. **Communication of results:**
 - Send a two-page summary of results to stakeholders, advocates, partners, participants, etc.
 - Post the report and summary on the internet.
 - Send copies and a complete file to the protected area for their records and use.
8. **Follow up:** Following the formal evaluation period, and on an ongoing basis, the protected area should continue to have meetings/discussions with stakeholders and communities on specific topics (discuss their problems and possible solutions, ways to cooperate, threats, proposed actions that are relevant to the stakeholder). For specific topics, invite scientific/technical review, either through email or meetings. The report should include a summary of data gaps and invite information and comments for improving indicators.

9. Implementation, Ongoing Monitoring, Assessment, Reporting:

- Continue work on preparing a detailed monitoring plan and indicators. Proper rationalization and development of the indicators is a large and important task.
- Implement monitoring programme and approved indicators, and evaluate ratings every year.
- Integrate actions from the management effectiveness evaluation into the Annual Work Plan and Business Plan. Update the Management Plan (or develop one).
- Report on results of monitoring, using indicators, and schedule the next evaluation. Share information with stakeholders and communities.
- Adapt and change programmes and actions, as required, to improve effectiveness.

Scoring and analysis

Threat magnitude was assessed for each key value in terms of severity and extent, and then compiled into an overall threat summary table (per TNC CAP methods and rules). Threat maps (conceptual models) were prepared to examine underlying causes and possible actions (Morgan, 2005; Salzer et al., 2003).

Protected area values were described in terms of size, condition and landscape context (TNC, 2000). Following this, potential indicators were identified and a threat ratings determined (low to very high), noting the current situation (TNC, 2000).

The overall threat rank was established (Table 4) as a means to identify and communicate the degree and nature of threats affecting key values, and the protected area overall. In addition, the overall threats and status were presented in a chart to assist in communicating results of the evaluation (Table 5).

Table 4: An example of a threat assessment matrix for key values (Wadi El Rayan Protected Area)

| Threat | Fossils WHS | Springs | Rayan Lakes | Desert | Visitor Area | Visitor Centre | Safari Camp | Camping | Tracks, Roads | Land Rec | Local Comm Inside | Local Comm Outside | Overall Threat Rank |
|-------------------------------------|-------------|---------|-------------|--------|--------------|----------------|-------------|---------|---------------|----------|-------------------|--------------------|---------------------|
| Cooperation with PA | - | - | - | - | - | - | H | - | - | - | - | - | M |
| Facilities | - | - | - | - | H | - | M | H | - | - | - | - | H |
| Fish farming activities | - | - | M | - | - | - | - | - | H | - | H | - | H |
| Fishing-over fishing & illegal | - | - | - | - | - | - | - | - | - | - | M | M | M |
| Habitat change | - | L | H | - | - | - | - | - | - | - | - | - | M |
| Human disturbance or damage | VH | M | L | L | - | - | - | L | - | L | L | L | M |
| Visitor use-under use, security | - | - | - | - | - | - | VH | - | - | - | - | - | H |
| Water-declining levels (input) | - | - | VH | - | H | - | H | VH | - | H | M | - | VH |
| Water-deteriorating quality | - | - | - | - | M | - | - | - | - | - | - | - | L |
| Water-over use | - | L | - | - | - | - | - | - | - | H | M | - | M |
| <i>Threat status for each value</i> | H | M | H | M | H | L | H | H | H | H | H | VH | H |

(Codes: VH=very high; H=high; M=medium; L=low; - not applicable)

Table 5: Overall threat and status chart to communicate the state of Wadi El Rayan Protected Area

Key:

| | Threat Today | | Status Today vs 5 Years Ago |
|-----------|--------------|----------|-----------------------------|
| Very high | VH | Improved | I |
| High | H | Stable | S |
| Medium | M | Worsened | W |
| Low | L | | |

| Value | Threats | Status |
|---|---------|--------|
| 1. Biodiversity/Natural Resources/Cultural Resources | | |
| Fossils/World Heritage Site | H | I |
| Springs oasis (Gazelle) | M | I |
| Lakes (wetlands, shoreline, aquatic) | H | W |
| Desert | M | S |
| 2. Ecotourism/Recreational Resources | | |
| Main visitor area (waterfalls, beach) | H | W |
| Visitor centre | M | W |
| Safari camp | H | W |
| Campsites and bird hides | H | W |
| Tracks | H | W |
| 3. Community Well-being (socio-economic) | | |
| Land reclamation villages (Lower Lake) | H | S |
| Other communities <u>within</u> WRPA | H | S |
| Local communities outside WRPA | VH | S |

Conclusion

This process enables a participatory approach to site level evaluation and action planning. Through a facilitated workshop using a variety of worksheet tools (Table 6), staff and others are engaged in the process, and as a result, the benefits of evaluation are enhanced. Furthermore, organizations can reap greater benefits by integrating management planning and effectiveness evaluation (Paleczny, 2008). In this manner, the essential planning and evaluation tools for effective management can be put in place in efficiently and effectively.

Table 6: Tool kit for site level evaluations (available in Arabic and English).

| No. | Worksheet Name |
|------|--|
| 1.1a | Evaluating management plan implementation and effectiveness |
| 1.1b | Evaluating work plan implementation and effectiveness (no management plan) |
| 2 | Guidelines for ranking threats |

| No. | Worksheet Name |
|--------|--|
| 2.1.1a | Ecosystem/natural resource description |
| 2.1.1b | Geological/fossil resource description |
| 2.1.1c | Cultural resource description (including spiritual and religious values) |
| 2.1.2 | Ecotourism/recreational resource description |
| 2.1.3 | Community/socio-economic activity description |
| 2.2.2 | Charting values, threats and actions (example) |
| 3.1 | Indicators and ratings |
| 3.3 | Summary of threats in the protected area |
| 3.4 | Evaluation criteria and database structure for designing indicators |
| 3.5 | Guidelines for implementing questionnaire surveys |

Further reading and reports

Paleczny, D., Allam Harhash, K. and Talaat, M. (2007b). 'The State of Qaroun Protected Area, An Evaluation of Management Effectiveness.' Egyptian-Italian Environmental Cooperation Programme, IUCN, Nature Conservation Sector Capacity Building Project, Cairo.

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