

North African Biosphere Reserves

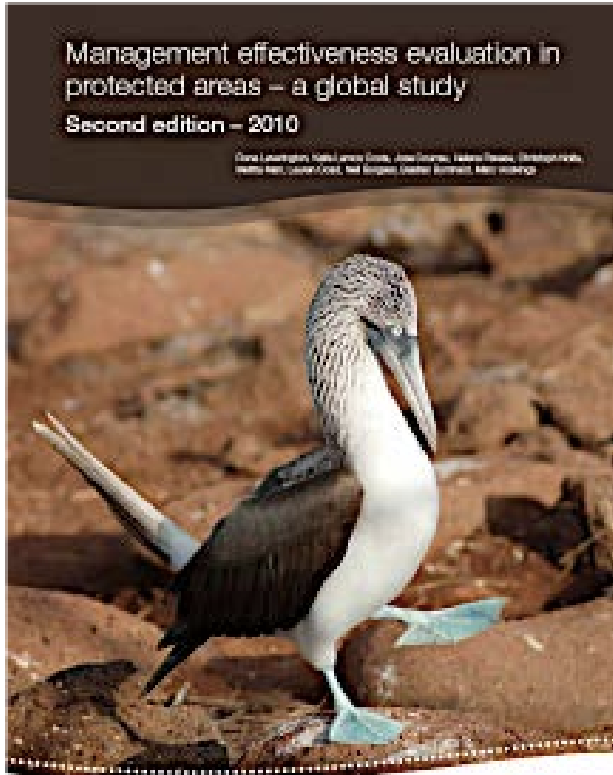


A first regional assessment of their management effectiveness

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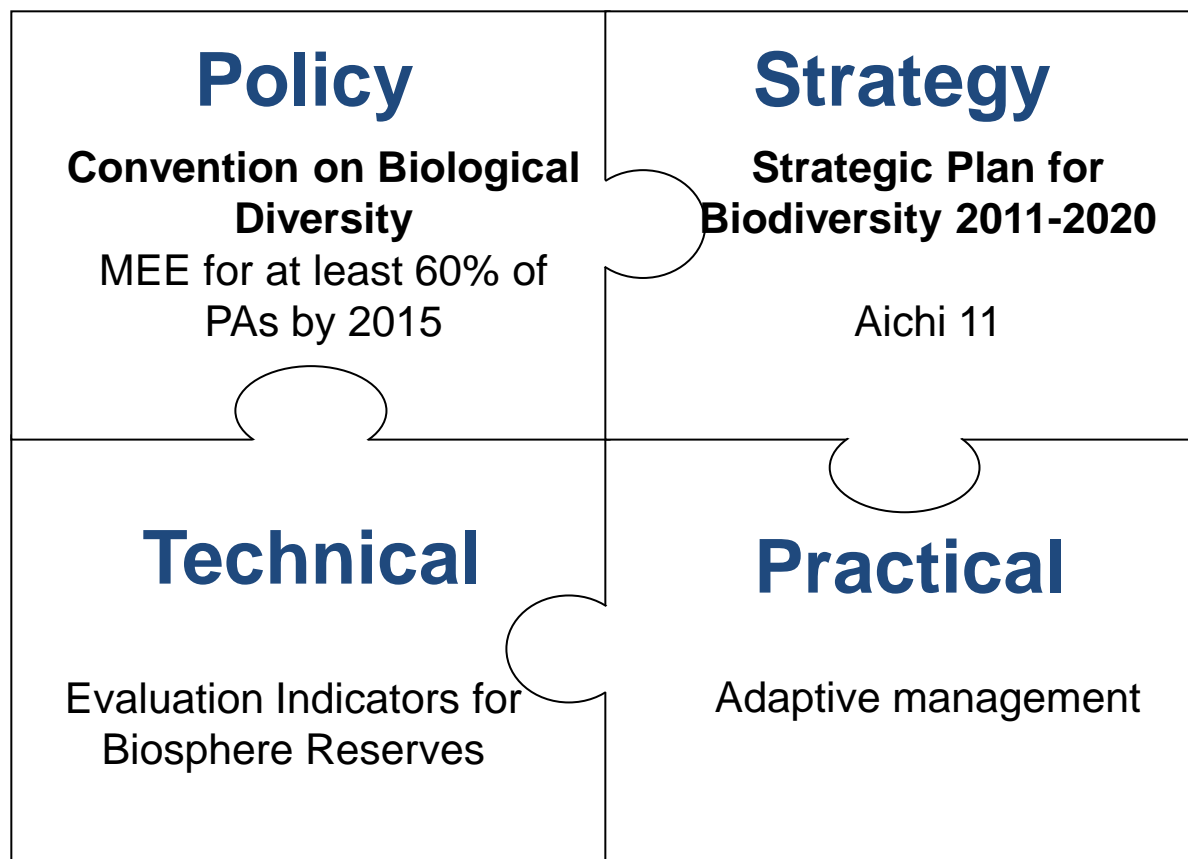
Biosphere reserve management evaluations are missing and infrequent in North Africa



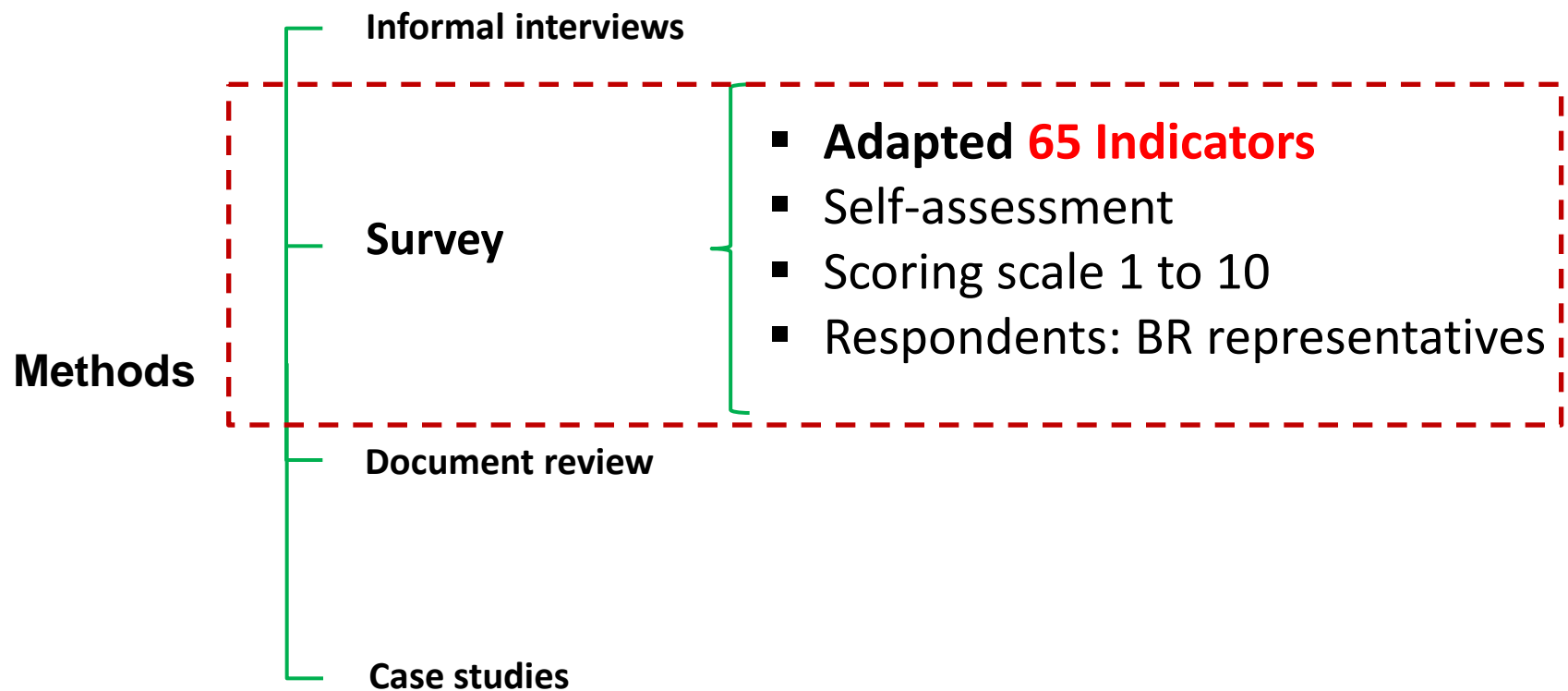
Out of 14 BRs in North Africa:

- 7 socio-economic assessments conducted only once (GoBi study)
- 9 Periodic reviews

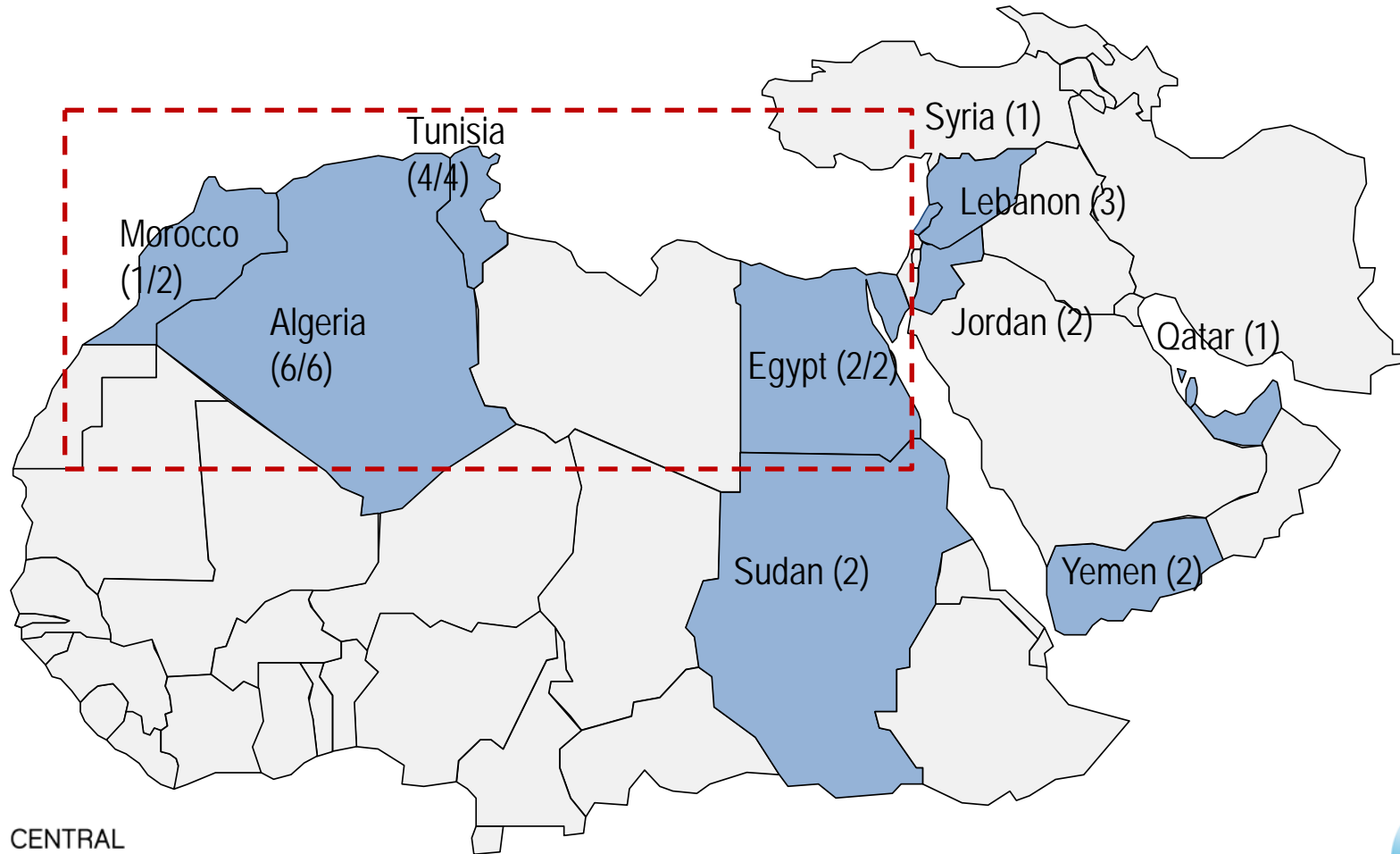
Research contributes to conservation in North Africa at four levels



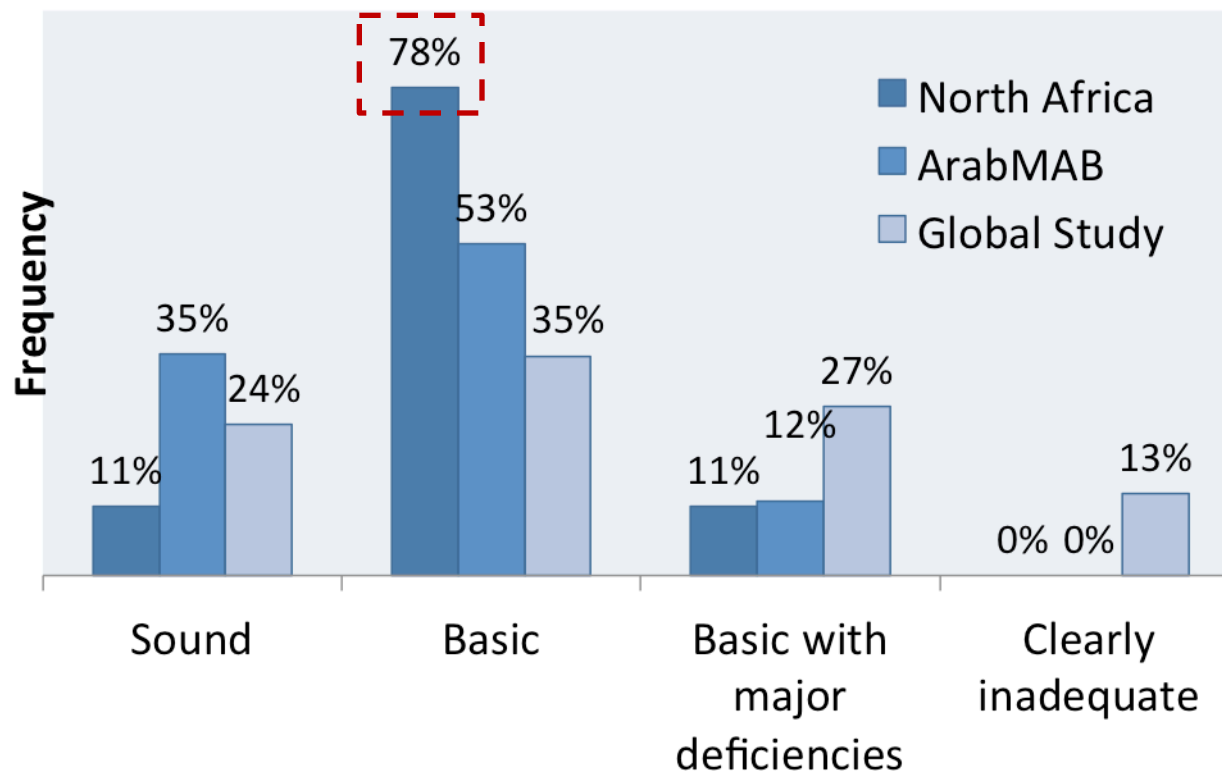
Method includes a survey using an innovative tool of 65 indicators



13 of 14 Biosphere Reserves participated



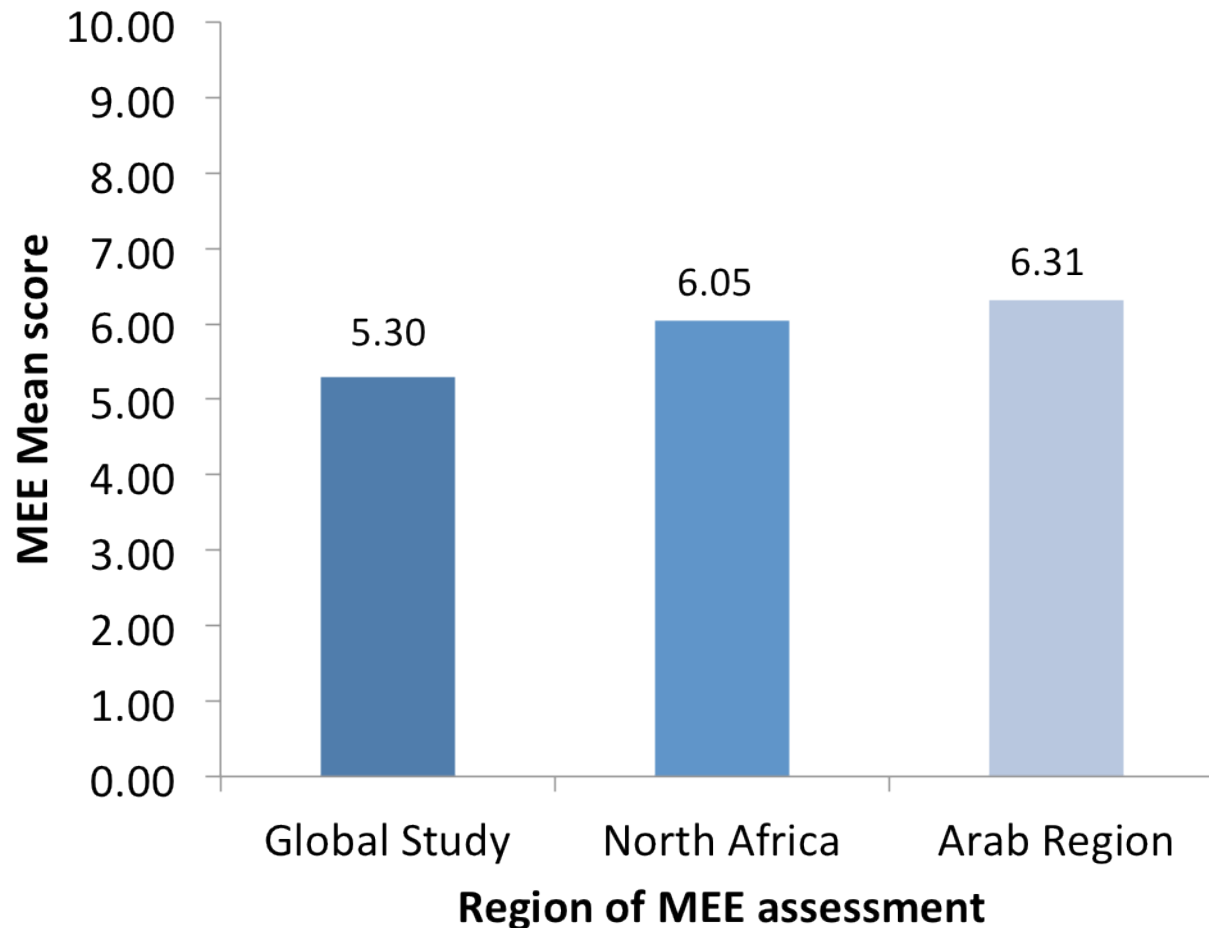
The large majority of BRs score in the **BASIC** management effectiveness category



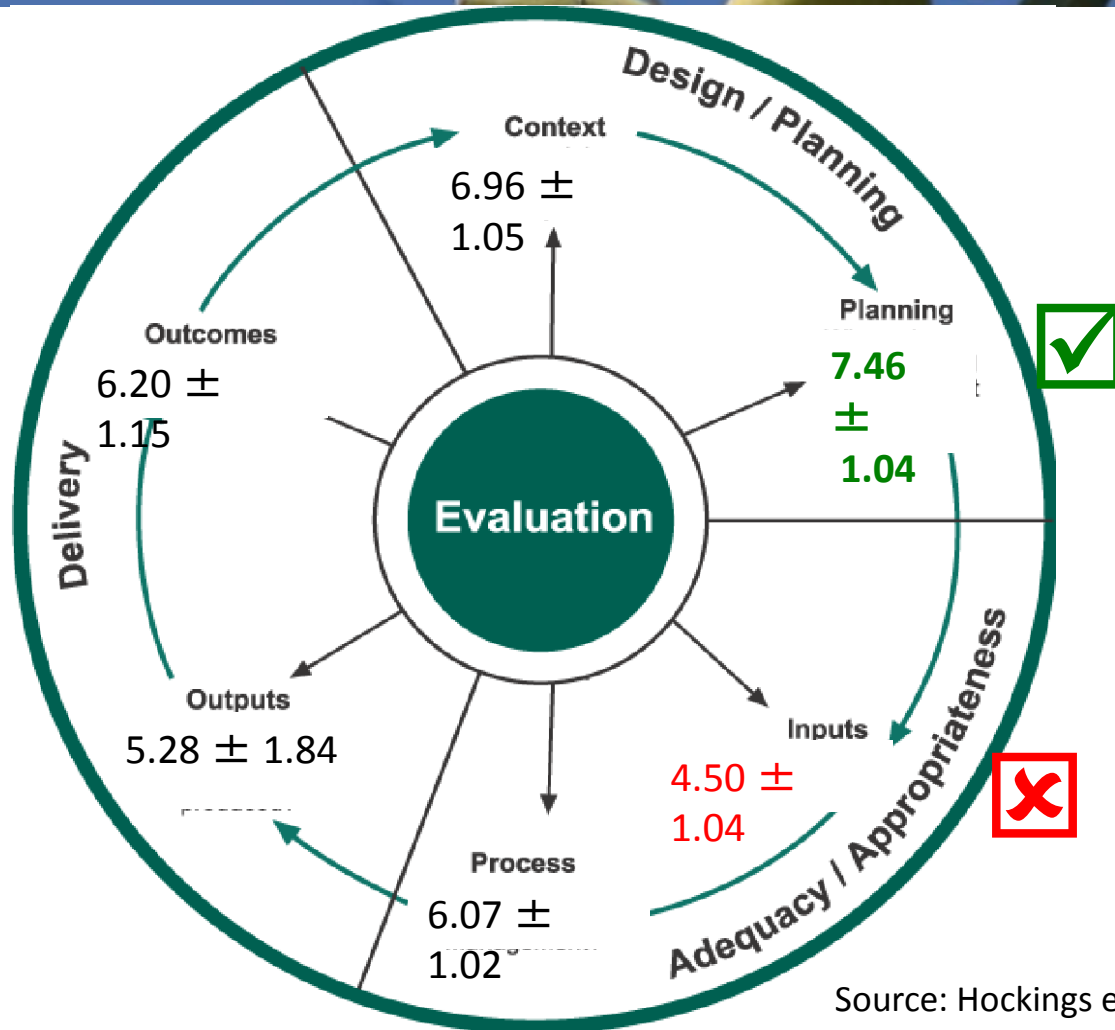
MEE mean score standard

Source: Leverington et al. 2010

“North Africa scored higher than Global Study PAs and lower than Arab Biosphere Reserves”



Planning is the strongest of the management aspects, and Inputs the weakest



Output indicators were most closely linked to the outcome “conservation of values”

“Achievement of set work program” ($R= 0.914, p<0.01$)

“Results and outputs produced” ($R=0.723, p<0.05$)



What's next?

CASE-STUDIES

“Ground-truth” quantitative results
Provide context-specific understanding and analysis

REGIONAL RECOMMENDATIONS

North African Biosphere Reserves How can their management be improved?

VALUE

WHY IS THE RESEARCH IMPORTANT?

- There is a lack of a comprehensive evaluation of UNESCO biosphere reserves management effectiveness in North Africa

WHAT WILL THE RESEARCH CONTRIBUTE TO?

- **Locally:** Improve management and outcomes of existing and future biosphere reserves
- **Regionally:** contribute to the development of the North Africa Biosphere Reserve Action Plan by IUCN North Africa programme!
- **Internationally:** support reaching goals set by the Strategic Plan for Biodiversity³ 2011-2020 Aichi target 11, and Convention on Biological Diversity⁴ 2015

RESEARCH APPROACH



METHODS

- Online survey collecting quantitative and qualitative data
- WCPA Framework⁵ and Common Reporting Format⁶: 33 + 1 Headline indicators, 24⁷ Headline indicator was added in outcomes for "Education, Research and Monitoring"
- Statistical analysis using SPSS software

COUNTRIES SURVEYED

- Total response rate: 13/14 Biosphere Reserves and 12 are also nationally designated Protected Areas



SUMMARY OF RESULTS

- No significant difference between perception and implementation of biosphere reserves priorities for all 5 functions (N=9, Wilcoxon signed rank test, p=0.06)
- Large majority (89%) of biosphere reserves have a **Basic** management effectiveness standard, compared to 53% for all Arab Biosphere reserves and 35% for global protected areas
- Only 11% of North African biosphere reserves have a **Sound** management, lower than the Arab region 35% and global 24% rates
- **Output indicators** are most closely linked to the "conservation of values" outcome, indicated by the strongest positive Pearson's Correlations: Indicator 1: "Achievement of set work program" (R=0.614, p<0.01) Indicator 2: "Results and outputs produced" (R=0.723, p<0.02)
- **Planning** is the strongest of the management aspects and **Inputs** is the weakest
- 70% of respondents rate their communication with national UNESCO Man and Biosphere Committees as weak to average

CONCLUSIONS

- Survey identified priority needs for improving biosphere reserves management in North Africa:
 - adequate resources: staff, infrastructure, equipment
 - staff empowerment to enforce policies and laws
 - community and stakeholder involvement in decision-making
 - sustainable financing mechanisms
 - realistic outputs in work programs
 - result-oriented management
 - effective collaboration with UNESCO-MAB governance institutions
- Further field research is needed to validate and better understand survey results, and support the development of specific recommendations

RESULTS

MANAGEMENT EVALUATION RESULTS BY STANDARD CATEGORIES

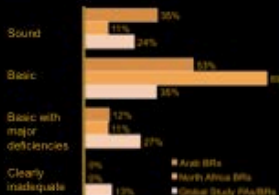


Figure: Distribution of management effectiveness evaluation results for Arab Biosphere Reserves (N=17), North Africa Biosphere Reserves (N=9) and Global Study Protected Areas (N=4151) within standard categories⁸

- **Sound** [4.66] = managed relatively well
- **Basic** [5.01-5.66] = basic management in place, but can still be significantly improved
- **Basic with major deficiencies** [3.33-5.00] = basic management with serious problems
- **Clearly inadequate** [<3.33] = seriously constrained management

BIOSPHERE RESERVES FUNCTIONS (PRIORITY RANKING SCORES)



Figure: average ranking scores on a scale of 1.00 (low) to 5.00 (high) of perceived importance (N=13) and implementation (N=9) of biosphere reserve functions⁸

MANAGEMENT INDICATORS (MEAN SCORES)



Figure: Mean scores for the 5 highest and 5 lowest scoring indicators on a scale of 0 to 10 (highest score)

Join me at the poster booth for more information and for sharing your ideas!

THANK YOU!

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METHODS

RESULTS

