

A guide to using the Management Effectiveness of Protected and Conserved Areas (MEPCA) Indicator



Summary

The MEPCA indicator assesses the management effectiveness of protected and conserved areas (including OECMs); with its focus on the achievement of conservation outcomes. It was listed as a complementary indicator in the monitoring framework for the Kunming-Montreal Global Biodiversity Framework (GBF) for Target 3¹ reporting, agreed at COP15. MEPCA is composed of a series of eight metrics. The first two metrics (a and b) are descriptive and provide context behind the governance and type of protected and conserved area (PCA). The other six metrics (c - h) are evaluative; these metrics are multiplied against the weightings to produce a MEPCA Indicator score for quantifying management effectiveness of PCAs. More information about the development of the MEPCA indicator can be found on the Joint Nature Conservation Committee's (JNCC) website².

The MEPCA Indicator Metrics

What is the governance type of the PCA?	How is the PCA categorised?
<ul style="list-style-type: none"> • Governance by Government • Shared Governance • Private Governance • Governance by Indigenous and local communities • Unknown • Other 	<ul style="list-style-type: none"> • Strict Nature Reserve • Wilderness Area • National Park • Natural Monument or Feature • Habitat/Species Management Area • Protected Landscape/Seascape • Protected Area with Sustainable Use of Natural Resources • OECM • Other

Is information on the PCA for management available?	Are management measures being implemented for the PCA to achieve its outcomes for conservation?	Does monitoring take place which helps to assess progress towards achieving conservation outcomes?	Is the PCA achieving its conservation outcomes?	What is the level of confidence in the data used to assess progress towards the achievement of conservation outcomes?	Confidence in achievement of conservation outcomes.
2 = Yes 1 = Partially 0 = No 0 = Unknown	2 = Yes 1 = Partially 0 = No 0 = Unknown	2 = Yes 1 = Partially 0 = No 0 = Unknown	2 = Fully 1 = Partially 0 = No 0 = Unknown	3 = High 2 = Moderate 1 = Low	(f) * (g)

**MEPCA
Indicator score**

Weightings of the evaluative metrics:
 $(c * 0.15) + (d * 0.25) + (e * 0.25) + (h * 0.35)$

Why use this indicator

The Management Effectiveness of Protected and Conserved Areas (MEPCA) indicator is a simple and flexible method to quantify the management effectiveness³ of protected and conserved areas (PCAs). The MEPCA indicator score can be used to support reporting on the “effectively conserved and managed” element of Target 3 for the GBF¹.

MEPCA DOES

- ✓ Put a focus on the achievement of conservation outcomes
- ✓ Produce its output by direct assessment, or
- ✓ Produce its output by drawing in data from existing PAME assessments
- ✓ Produce a quantitative output
- ✓ Provide a rapid assessment

MEPCA DOES NOT

- ✗ Stipulate how conservation outcomes should be measured

The MEPCA indicator was listed as a complementary indicator for Target 3 of the monitoring framework for the Kunming-Montreal Global Biodiversity Framework (GBF), agreed at COP15.

Using the indicator

This guideline is intended for PCA practitioners, including staff of government agencies, indigenous peoples and local community representatives, owners of private protected areas, and conservation professionals. The MEPCA indicator has two parts: descriptive and evaluative metrics.

How to score against each metric

Each section below provides justifications for the eight metrics and supporting definitions of the potential responses. The indicator uses a pre-populated spreadsheet which can support large datasets. For each metric, the responses available appear in a “drop-down” list. The total score is automatically presented once each of the metrics have been filled in. There is a comments section which can be used to provide supporting evidence and rationale behind each score. The best available evidence should be used to complete the assessment; examples include ecological monitoring data or using data from existing management effectiveness assessments.

A Metric a) what is the governance type of the PCA?

Response	Definition ⁴
Governance by Government	Governance by Government(s)
Shared Governance	Shared governance by diverse rights holders and stakeholders together (not necessarily Governments)
Private Governance	Governance by private entities
Governance by Indigenous peoples and/or local communities	Governance by Indigenous peoples and/or local communities
Unknown	Governance type is unknown
Other	Governance type not listed - please state what this is

1 <https://www.cbd.int/gbf/targets/3>

2 <https://jncc.gov.uk/our-work/mepca-indicator>

3 Defined as: “the assessment of how well protected [and conserved] areas are being managed – primarily the extent to which management is protecting values and achieving goals and objectives” Hockings, M., Stolton, S., Leverington, F., Dudley, N. and Courrau, J. (2006). *Evaluating Effectiveness: A framework for assessing management effectiveness of protected areas*. 2nd edition. IUCN, Gland, Switzerland and Cambridge, UK. xiv + 105 pp

4 Based on IUCN Categories: <https://portals.iucn.org/library/sites/library/files/documents/PAG-020.pdf>

B Metric b) how is the PCA categorised?

Response	Definition ⁴
Strict Nature Reserve	Category Ia: Protected areas that are strictly set aside to protect biodiversity and also possibly geological/geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.
Wilderness Area	Category Ib: Protected areas that are usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.
National Park	Category II: Large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.
Natural Monument or Feature	Category III: Protected areas set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove. They are generally quite small, protected areas and often have high visitor value.
Habitat/Species Management Area	Category IV: Protected areas aiming to protect particular species or habitats and management reflects this priority. Many category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.
Protected Landscape/Seascape	Category V: A protected area where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.
Protected Area with Sustainable Use of Natural Resources	Category VI: Protected areas that conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.
Other Effective area-based Conservation Measure (OECM)	A geographically defined area other than a protected area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio-economic, and other locally relevant values (CBD, 2018 ⁵ ; IUCN, 2019 ⁶).
Other	Protected and conserved area not listed, please state what this is ie. Indigenous Protected and Conserved Area (IPCA).

C Metric c) is information on the PCA for management available?

Response	Rationale
2 = Yes	The PCA has appropriate management information documented and in use.
1 = Partially	The PCA has appropriate management information, which is drafted but not yet in use.
0 = No	The PCA has no appropriate management information drafted or in use.
0 = Unknown	It is not known if management information is documented.

⁵ Convention on Biological Diversity (CBD) (2018). Protected areas and other effective area-based conservation measures (CBD/COP/DEC/14/8). Conference of the parties to the Convention on Biological Diversity, Fourteenth meeting, Sharm El-Sheikh, Egypt.

⁶ IUCN-WCPA Task Force on OECMs, (2019). Recognising and reporting other effective area-based conservation measures. Gland, Switzerland: IUCN.

D Metric d) are management measures being implemented for the PCA to achieve its outcomes for conservation?

Response	Rationale
2 = Yes	All appropriate measures are implemented.
1 = Partially	Some of the appropriate measures are implemented or are in the process of being implemented.
0 = No	None of the appropriate management measures are implemented.
0 = Unknown	It is not known if appropriate management measures are implemented.

E Metric e) does monitoring take place which helps to assess progress towards achieving conservation outcomes?

Response	Rationale
2 = Yes	Ecological, and/or environmental monitoring (e.g., by sample collection, imagery and/or remote sensing) takes place at frequencies considered appropriate to determine progress towards conservation outcomes.
1 = Partially	Irregular ecological and/or environmental monitoring, compliance and/or proxy monitoring is conducted only (e.g., human activity data, modelled data, or remote sensing) and is relevant to assessing progress towards achieving the conservation outcomes.
0 = No	No monitoring currently takes place which helps assess progress towards achieving conservation outcomes.
0 = Unknown	It is unclear if monitoring is in place.

F Metric f) is the PCA achieving its conservation outcomes?

Response	Rationale
2 = Fully	All of the PCA's intended conservation outcomes are being met; noting there may also be social and economic intended outcomes that should also be considered.
1 = Partially	Some but not all of the PCA's intended conservation outcomes are being met and/or it is moving towards achieving intended conservation outcomes; noting there may also be social and economic intended outcomes that should also be considered.
0 = No	The PCA's intended conservation outcomes are not being met; noting there may also be social and economic intended outcomes that should also be considered.
0 = Unknown	No evidence is available to show if the PCA is achieving its intended conservation outcomes.

G Metric g) what is the level of confidence in the data used to assess progress towards the achievement of conservation outcomes?

Response	Rationale
3 = High	There is appropriate and sufficient direct ecological and/or environmental monitoring data available to have a high confidence in the condition of the area to assess progress towards achievement of ecological conservation outcomes.
2 = Moderate	There is a combination of direct and proxy monitoring data (ecological, environmental, compliance data) available from the PCA to make an assessment of the moderate confidence in the condition of the PCA to assess progress towards achievement of conservation outcomes, but some expert judgement (or extrapolation of data) has been used to make the assessment.
1 = Low	There are no data from direct ecological and/or environmental, compliance and/or proxy monitoring available from the PCA. The assessment of whether the PCA is moving towards or achieving conservation outcomes is therefore based largely on expert judgement e.g., an understanding of how the condition of the PCA might be impacted by ongoing activities.
0 = Not applicable	No suitable information is available on which to base an assessment.



H Metric h) confidence in achievement of conservation outcomes

Please note that metric h is calculated within the indicator therefore there is no user input required.

Understanding the results

There is a pass threshold of 39% due to the weightings that underpin the metrics. A score of 39% or above can only be achieved if a PCA is at least partially meeting its conservation outcomes with a minimum of low confidence. For more information see our website⁷.

$$((c * 0.15) + (d * 0.25) + (e * 0.25) + (h * 0.35)) / 3.4 * 100 = \text{MEPCA Indicator score (\%)}$$

 MEPCA Indicator score <39% = inadequate  MEPCA Indicator score ≥ 39% = pass

Case Studies

The MEPCA indicator as a framework indicator is capable of using existing PAME assessments. Two case studies are provided which are based on two different types of initial assessment. It is important to understand how the outputs of different PAME methodologies may vary for the same PCA depending on the focus of the assessment.

Case Study 1

Dogger Bank Special Area of Conservation (SAC)⁸ was designated for the protected feature: 1110 Sandbanks which are slightly covered by seawater all the time⁹. In 2022, JNCC published updated conservation advice¹⁰ for Dogger Bank SAC which stated the protected feature is in an inadequate condition and therefore the site was not meeting its conservation objective. At the North-East Atlantic level, OSPAR¹¹ reports the status of the network of MPAs bi-annually. The latest published assessment is from 2021 and the result from the management status questionnaire for the UK Dogger Bank SAC are shown in Table 1. The results highlight that in 2021, the site was not moving towards or reached its conservation objectives. It is possible to use the existing OSPAR management status data as source information for the MEPCA indicator. Table 1 shows the metric results for Dogger Bank SAC and the final MEPCA indicator score of 23.53% which is below the pass threshold.

Table 1: Example translation from OSPAR 2021 management status information for Dogger Bank SAC to the MEPCA indicator metrics.

OSPAR Management Status Questions	OSPAR Response	MEPCA Indicator metrics	MEPCA Indicator Response
		a) What is the governance type of the PCA?	Governance by Government
		b) How is the PCA categorised?	Habitat/Species Management Area
Question A - Is the MPA management documented?	Yes	c) Is information on the PCA for management available?	2
Question B - Are the measures to achieve the conservation objectives being implemented?	Partial	d) Are management measures being implemented for the PCA to achieve its outcomes for conservation?	1
Question C - Is monitoring in place to assess if measures are working?	Partial	e) Does monitoring take place which helps to assess progress towards achieving conservation outcomes?	1
Question D - Is the MPA moving towards or has it reached its conservation objectives?	No	f) Is the PCA achieving its conservation outcomes?	0
Confidence scores	Low	g) What is the level of confidence in the data used to assess progress towards the achievement of conservation outcomes?	1
		h) Confidence in achievement of conservation outcomes	0
		MEPCA Indicator score	23.53%

⁷ <https://jncc.gov.uk/our-work/mepca-indicator>

⁸ <https://jncc.gov.uk/our-work/dogger-bank-mpa>

⁹ <https://sac.jncc.gov.uk/habitat/H1110>

¹⁰ <https://hub.jncc.gov.uk/assets/26659f8d-271e-403d-8a6b-300defcabc1#dogger-bank-conservation-statements-v2.pdf>

¹¹ OSPAR = Oslo and Paris Convention for the Protection of the Marine Environment of the North-East Atlantic <https://www.ospar.org>

Case Study 2

Akpait National Wildlife Area (NWA)¹² was designated in 2010 for the protection of seabird colonies. It contains both terrestrial and marine areas and provides essential feeding grounds for nesting colonial seabirds, as well as migrating marine mammals. Akpait has a co-management agreement between the Canadian Wildlife Service (CWS) of Environment and Climate Change Canada (ECCC) and Inuit from Qikiqtarjuaq, Nunavut (NU). The 2020 METT¹³ methodology gives Akpait NWA a score of 54.04% which equates to a category of “Management is basic with significant deficiencies”. This is similar to the MEPCA indicator score of 66.7% which is above the pass threshold as shown in Table 2.

Table 2: Example translation from Canadian METT information Akpait NWA to the MEPCA indicator metrics.

Subset of Canadian METT Indicators	Canadian METT Responses	MEPCA Indicator metrics	MEPCA Indicator Response
		a) What is the governance type of the PCA?	Shared governance
		b) How is the PCA categorised?	Wilderness Area
Q7 Is there a management plan and is it being implemented?	1	c) Is information on the PCA for management available?	1
Q4 Is management undertaken according to agreed objectives?	2	d) Are management measures being implemented for the PCA to achieve its outcomes for conservation?	1
Q7c The results of (ecological) monitoring, research and evaluation are routinely incorporated into planning.	1	e) Does monitoring take place which helps to assess progress towards achieving conservation outcomes?	2
Q5 Is the PA the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	3	f) Is the PCA achieving its conservation outcomes?	2
Q9 Do you have enough information to manage the area?	2	g) What is the level of confidence in the data used to assess progress towards the achievement of conservation outcomes?	2
		h) Confidence in achievement of conservation outcomes	4
Canadian METT Score	54.04%	MEPCA Indicator score	66.7%

¹² <https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/locations/akpait.html>

¹³ Management Effectiveness Tracking Tool

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For contact details and further information, please visit our website at jncc.gov.uk/our-work/mepca-indicator

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