Yellow group: Protected area indicator

Protected Areas of the world

protected planet

Source: IUCN and UNEP-WCMC (2016). The World Database on Protected Areas (WDPA) [On-line], April 2016, Cambridge, UK: UNEP-WCMC. Available at wwww.protectedplanet.net

UNEP WCMC

Terrestrial protected areas   Marine and coastal protected areas

IUCN   WCPA

13-14 February 2019

Rationale for looking at this indicator

- PAs remain a key response

- Expansion of PA network is likely to remain an important *target* in the post 2020 agenda
  - Current target: talks about "effectively and equitably managed, ecologically representative and well-connected systems of PAs and other effective area-based conservation measures"
  - A future target could include reference to "other special areas or features" based on either biodiversity or ecological characteristics and/or pressures

- Thus a protected area *indicator* is likely to be needed in post 2020 agenda

- Currently we have PA indicator 1.0
  - Focuses on extent of the PA network
  - *Relatively* straightforward to measure

- Can we develop this further?
  - e.g. to consider issues like connectivity and management effectiveness
  - → PA indicator 2.0

Proposed indicator name

Protected area indicator suite

4 indicators:

- Total extent of PAs

- Representivity index

- Connectivity index

- Management effectiveness index

In principle could aggregate these to a single mega-index, but it wouldn't necessarily tell you very much.

All four of these are feasible to measure globally

- Although management effectiveness would be based on partial data

Concepts

- What is a PA?
  - [Insert current IUCN definition]
  - In the post 2020 world should we use the same definition?
  - Does it need to be broader than the current IUCN definition?
    - Probably not – the current definition has a catch-all of "other effectives means" that can be applied broadly
  - Note: the definition becomes more complicated in the marine environment
- What do we mean by representivity?
- What do we mean by connectivity?
- What do we mean by well-managed?

IUCN PA categories

- Structured from highly restrictive in terms of activities allowed to more flexible

- Ramsar has done work to supplement them with additional info (?)

- National classifications don't necessarily cross-walk easily to the IUCN classes

- Some areas have multiple overlapping designations, which can lead to double-counting

Two broad aspects to look at

- Performance of the network as a whole
- Performance of individual protected areas
- Useful to distinguish between these

Key attributes of PAs and PA systems that we want to measure

For the PA system, we want to track trends in:

- Extent – how much?

- Representativeness (of ecosystem types) – are they in the right place?

- Connectedness – are they in the right place?

- Size of PAs (median, distribution) – are they big enough to accommodate biological and ecological processes? And to meet their goals?
    - [We note that connectedness and size are inter-related, but could be useful to measure separately]

- Management effectiveness

- [Pressures? No – this would make the indicator too complex, too many factors involved (e.g. number of visitors, water abstraction upstream)]

In addition for individual PAs

- Ecosystem services provided? (could be extracted from SEEA ES accounts, in cases where they exist and can be meaningfully clipped to PAs)

- Expenditure? (could be extracted from Environmental Protection Expenditure accounts? Although not necessarily for individual PAs)

Representivity

- Of ecosystem types
  - Based on SEEA classification of ecosystem types, in the process of being agreed as part of SEEA EEA revision
  - Global Ecological Land Units and Marine Ecological Units could be used as an alternative
- Could be weighted towards threatened ecosystems and threatened species

Connectivity

- Suggest using PARC: Protected Area Representativeness and Connectedness index
  - Developed by CSIRO
  - Generates 2 separate values - one for representativeness and one for connectivity
  - *We suggest using the index for connectivity*
  - (The approach we are suggesting for representation is different, as it is based on a classification of ecosystem types)
- Uses MODIS data to represent land use and then looks at what that means for connectedness of PAs
- Available for the terrestrial realm, so for now we are not sure if there is a method or index of MPA connectivity
- (See GEOBON brochure)

Management effectiveness

- At the most basic level: Is there a management plan?

- Next: Is it implemented?

- NB: Management effectiveness needs to be measured in relation to the objective of the protected area

- "Well managed" doesn't have to mean "intensively managed"

Management effectiveness

- IUCN definition of management effectiveness XXX …
  - IUCN notes that there's still a need for a global standard

- WDPA currently includes fields on management effectiveness, with methodology and guidance
  - **The proposed fields are good governance, sufficient management, and whether it meets its conservation objectives**
  - Each of these is scored, to get to an average score of 1 to 5
  - *We suggest that a fourth field would be useful: Is there a management plan? Y/N*
  - There are currently at least 90 different systems for measuring management effectiveness (the METT is one of them)
  - In practice has been difficult to collect this info – many missing values

Management effectiveness

Related initiatives

- PADDD – tracking legal changes to PAs
  - Downsizing, De-gazetting and Degradation
  - Housed in Conservation International
- IUCN is developing a Green List of PAs and Conservation Areas – programme for certifying effectively management and fairly governed PAs
  - Criteria: good governance, sound design and planning, effective management, successful conservation outcomes

Possible alternative approach to assessing management effectiveness

- Start with national PA coverage

- Link to purpose of PA

- Overlay with extent, condition and ecosystem services layers

- → Could give an assessment of effectiveness that is not simply subjective

Relationship of this indicator to the SEEA

- The SEEA accounts on eco types, condition and ES are all highly relevant to an expanded PA indicator
  - Want to make sure that the national ecosystem accounts are organizing the right information to contribute to tracking PA effectiveness
- The indicator also draws on other info/factors beyond the accounts
  - e.g. related to management effectiveness

- A protected area index could be an input into some accounts, e.g. a tourism account

Questions

- Whether to take into account future impacts
  - eg changes in ecosystem distribution, coastal areas linked to climate change
- Accounts are ex-post, so limited scope for this
  - Can use accounts to develop scenarios for future

Methodology

- Work from the starting point that we have:
  - An agreed spatial layer of ecosystem types (as per SEEA EEA revision)
  - A map of protected areas

- For representivity, 3 key elements needed to calculate the indicator:
  - Map of ecosystem types
  - Map of protected areas
  - Proportion of each ecosystem type that should be included in the PA network
    - RLS and RLE could help to inform these proportions, so could KBAs, or other reasonable justifications

- Threat status can be a useful prioritisation tool for PA expansion