IPBES VA Chapter 4 - Literature & case study review on outcomes in protected areas and indigenous and community conserved areas (ICCAs) / IPBES values assessment (4.6)

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Description

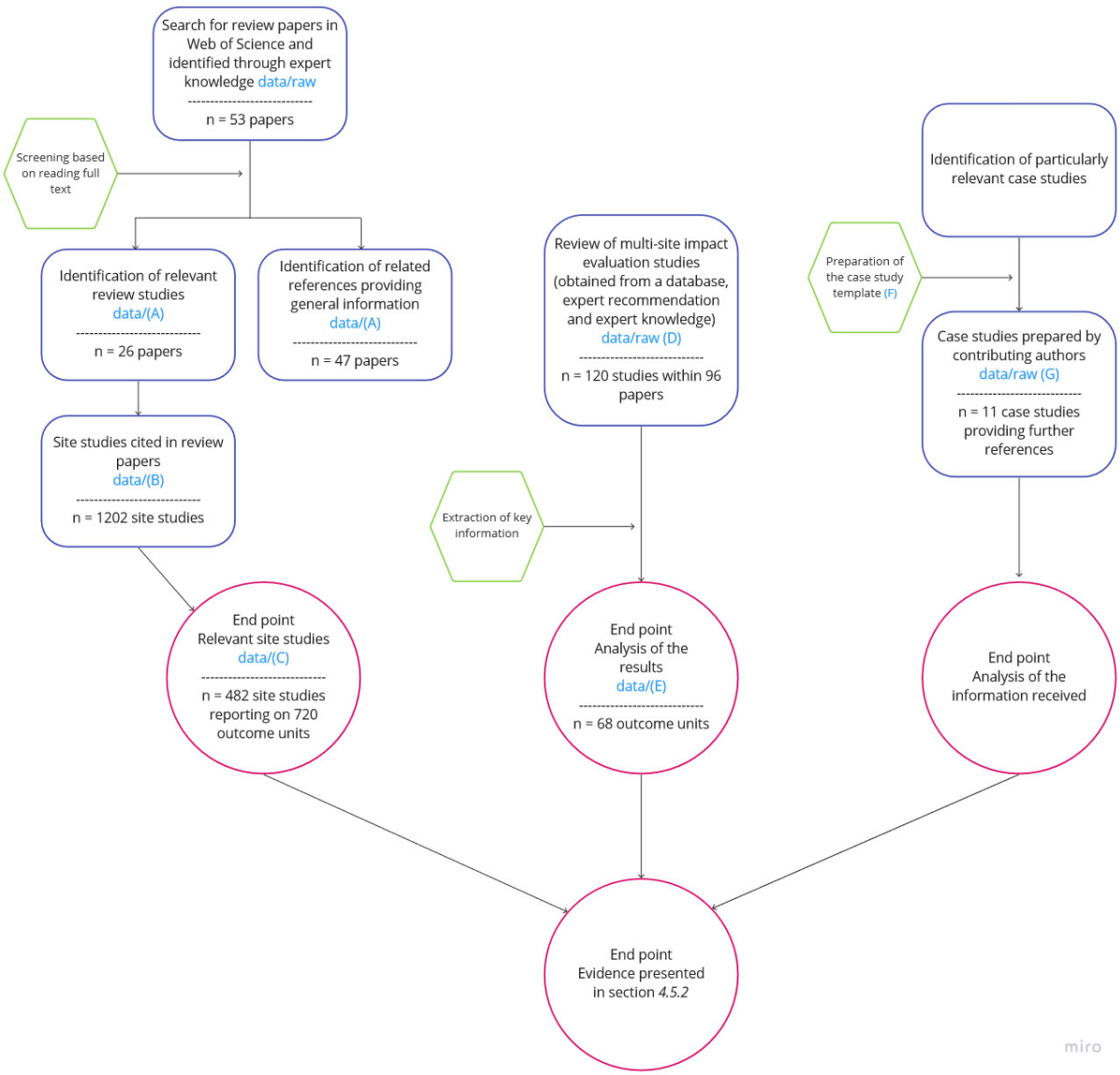
The IPBES Scoping document for the values assessment highlights the need to assess the types of values of nature that have (or have not) been incorporated into decision-making, the types of valuation approaches incorporated into decision-making, the challenges that have hindered the incorporation of diverse conceptualizations of values of nature in a range of decision and policymaking contexts and the implications for different stakeholders. In this context a literature & case-study review was conducted to examine how values are articulated by diverse stakeholders through protected area policies and other conservation schemes including indigenous community conserved areas (ICCAs), and how they come to influence outcomes. Through this review we address the following questions:

I. What types of protected area impacts are most frequently studied, what valuation methods are used to assess these impacts, and where are the gaps in the evidence on the impacts of protected areas?

II. What enabling conditions related to protected area design and implementation processes are linked to more beneficial social and environmental impacts?

III. What aspects of the decision process and specifically the inclusion of marginalised values and the values of marginalised people in decision-making are associated with improvements in well-being, sustainability and justice?

Process overview



Protocol:

We conducted a review of review papers on protected areas to identify social and ecological outcomes reported by site and where outcomes were linked to the implementation of the conservation policy or decision. We then traced back to specific site studies to identify the outcomes, the indicators used to assess and the methodologies allowing to make such outcomes visible. Finally, we linked outcomes and indicators to values and elements of the IPBES conceptual framework that were being reflected through those outcomes.

- **Type of analysis/search/review:** Literature review of review papers
- **Search language:** English
- **Search engine:** Web of Science
- **Search terms:**

TS=("protected area*" AND
(outcome* OR impact* OR effect* OR conflict* OR poverty* OR social)
Refined by: "review"
Refined by: Indexes = SCI-EXPANDED, SSCI, BKCI-S, BKCI-SSH
Timespan = All years

- **Treatment applied:** Additional papers were identified through expert knowledge relating protected areas to outcomes and to values. These were added to the set of papers to review.
- **Sample size**: 53 papers (obtained both from the search in Web of Science and identified through expert knowledge)

Treatment applied: Review papers were screened based on full reads to identify studies that were based on review of outcomes of specific protected areas that allowed us to trace back to specific site studies. This allowed us to screen out 27 papers that were out of scope, and keep only the 26 that were relevant. Within this process, other related papers were identified as informative on the general topic, and within those papers other highly relevant papers were also identified. We retain these for helping interpret results and/or frame our findings.

- **Sample extracted:** 26 review studies; 47 related references
- **Fields extracted (A):**
    - Source
    - First author
    - Title
    - Link
    - Year
- **Location and format of the data (A):** IPBES_VA_4.6_2020_(A).csv

Treatment applied: Studies cited within reviews were examined to identify those which documented outcomes of specific protected areas. Based on this review specific 'case studies' were identified.

- **Sample extracted:** 1202 site studies
- **Fields extracted (B):**
    - Source
    - First author
    - Title
    - DOI/ISBN
    - Year
    - Name of protected area
    - Type of designation
    - Country
- **Location and format of the data (B):** IPBES_VA_4.6_2020_(B).csv

Treatment applied: Studies were reviewed to identify their outcomes, direction of the outcome, indicators, methods and beneficiaries. Through this process further papers were screened out at the site level when they did not refer to specific sites or did not report on outcomes.

- **Sample extracted:** 482 site studies reporting 720 outcome units
- **Location and format of the data (C):** IPBES_VA_4.6_2020_(C).csv

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We reviewed selected published studies that used counterfactual or other rigorous approaches to try to isolate the causal impacts of protected areas on environmental and/or socioeconomic outcomes. The focus of this review was on multi-site studies (for example, all protected areas globally, all protected areas within a country, or within a defined geographic region (e.g. the Brazilian Amazon)).

- **Type of analysis/search/review:** Review of multi-site impact evaluation studies
- **Search language:** English
- **Search engine:** The Evidence for Nature and People database[1],[2]
- **Details of the search:**
    - Published studies were identified via two processes:
    - We identified papers from the Evidence for Nature and People database that were focused on protected areas as their conservation intervention.
    - We reviewed a set of papers provided by experts in impact evaluation methods as applied to conservation. (Sebastian Costedoat at Conservation International, Alex Pfaff at Duke University, Rachel Neugarten at Cornell University).
- **Treatment applied:** Additional papers were identified through expert knowledge relating protected areas to outcomes and to values, as well as by reviewing citations from reviewed papers.
- **Sample extracted:** 120 studies (within 96 documents)
    - First author
    - Title
    - DOI / ISBN
    - Year
    - Name of Protected Area
    - Country/Region
- **Location and format of the data (D):** IPBES_VA_4.6_2020_(D).csv

Treatment applied: In order to refine the sample, selection criteria included the use of rigorous impact evaluation methods such as statistical matching or other counterfactual-based approaches which could be used to try to isolate a causal relationship between protected area establishment and subsequent environmental and socioeconomic outcomes. (For a formal definition of impact evaluation methods see Ferraro and Hanauer 2014)[3]. Keywords for the use of these formal impact evaluation methods include:

> covariate matching, propensity score, counterfactual, synthetic control, difference-in-differences, regression discontinuity analysis, control site, comparison site, randomised control trial, fixed effects model, causal inference, impact evaluation, matching & partial linear model, matching & regression, matching & IV (instrumental variable), matching & LOWESS / LOESS, quasi experiment, before after control impact, BACI, synthetic control.

[1] https://www.natureandpeopleevidence.org

[2] Bottrill, M., Cheng, S., Garside, R., Wongbusarakum, S., Roe, D., Holland, M. B., Edmond, J., & Turner, W. R. (2014). What are the impacts of nature conservation interventions on human well-being: A systematic map protocol. Environmental Evidence, 3(1), 16. https://doi.org/10.1186/2047-2382-3-16

[3] Ferraro, P. J., & Hanauer, M. M. (2014). Advances in Measuring the Environmental and Social Impacts of Environmental Programs. Annual Review of Environment and Resources, 39(1), 495–517. https://doi.org/10.1146/annurev-environ-101813-013230

Four studies were identified at individual protected areas, and these were moved into the single-site reviews.

Key information was extracted from each study and compiled in a centralised database. Information collected from each study included: number of protected areas included, country(ies) and biome(s) where they were located, whether the focus was on environmental or socioeconomic outcomes, or both; methods used (e.g. statistical matching), outcomes measured, impact of protected areas on each measured outcome (positive, negative, neutral, or mixed), data source (e.g. remote sensing), and the mechanism(s) through which the protected area affected each measured outcome (if available).

- **Sample extracted:** 68 outcome units
- **Location and format of the data (E):** IPBES_VA_4.6_2020_(E).csv

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We conducted a case-study review (deep cases), based on case studies identified in the literature review as particularly relevant or based on expert recommendation to understand:

1) How do values incorporated in protected area planning or implementation influence values and outcomes?

2) In what contexts does the inclusion of more plural values lead to more just and sustainable outcomes?

3) How values change post PA implementation?

See document **(F)** for extended questions.

The value of this approach lies in a deep assessment of the literature on a diversity of protected areas and indigenous community conserved areas (ICCAs) that allows us to look from design, through implementation, to outcomes, to understand how values are articulated through protected areas and how this leads to different outcomes.

- **Type of analysis/search/review:** Review of case studies
- **Contribution language:** English
- **Selection criteria:** A set of case studies on protected areas were selected based on their capacity to document the following aspects, subject to the availability of the contributing-authors drafting these cases:
    - Links to literature assessing outcomes appearing more often in review papers
    - Design and implementation process of the instrument
    - Social impacts
    - Environmental impacts
    - Diversity of region, governance structure, and scale

  Case studies have been compiled by experts with long-term in-depth research experience in their focus program.
- **Sample extracted (G):** 11 case studies
    - Case 1 - Nanda Devi Biosphere Reserve, India
    - Case 2 - Chitwan National Park, Nepal
    - Case 3 - Masoala National Park, Madagascar
    - Case 4 - Tarangire National Park, Tanzania
    - Case 5 - Jozani-Chwaka Bay Conservation Area, Tanzania

    - Case 6 - Raja Ampat Marine Protected Area Network, Indonesia
    - Case 7 - Ulithi Atoll Marine Protected Area Network, Federated States of Micronesia
    - Case 8 - Hawaii ICCAs, USA
    - Case 9 - Kaya Kinondo ICCA, Kenya
    - Case 10 - Tatra Mountains ICCA, Poland
    - Case 11 - Tla-o-qui-aht ICCA, Canada
- **Location and format of the data (G):** IPBES_VA_4.6_2020_(G).pdf

Treatment applied: The case studies were scored "positive", "negative" or "mixed" (if both positive and negative) for the impacts documented in the different categories: nature, NCP, good quality of life, and institutions. Narrative text was excerpted to support each impact and qualitatively similar information was highlighted across case studies. Knowledge was classified into ILK, scientific, or both; values were classified into "instrumental", "relational" or "intrinsic" as well as "local" vs. "broader public"; and process/power relations were classified as "top down" or "community-engaged"; with excerpts of text from the case study to support each designation.

Definition of files

ID	Name	File Type	Size	Description
A	IPBES_VA_4.6_2020_(A)	csv	19 KB	List of 26 relevant review papers for the review plus 47 related references providing general information.
B	IPBES_VA_4.6_2020_(B)	csv	262 KB	List of 1202 site studies cited in the 26 relevant review papers from **(A)**
C	IPBES_VA_4.6_2020_(C)	csv	485 KB	Review of site studies in **(B)** that led to identify 482 relevant site studies and 720 impact units
D	IPBES_VA_4.6_2020_(D)	csv	42 KB	List of 120 multi-site impact evaluation studies
E	IPBES_VA_4.6_2020_(E)	csv	141 KB	Review of multi-site impact evaluation studies in **(D)** that led to identify 68 impact units
F	IPBES_VA_4.6_2020_(F)	pdf	108 KB	Template to guide the case studies preparation
G	IPBES_VA_4.6_2020_(G)	pdf	1.8 MB	Case studies on protected areas and indigenous community conserved areas (ICCAs) prepared by contributing authors