i. Background and Context

This paper presents the approach for carrying out a meta-evaluation of evaluations in natural resource management (NRM) with an exclusive focus on conservation of biodiversity. The meta-evaluation will be conducted in the context of the deliberations on the 2nd phase of the Climate-Eval Community of Practice.

**Climate-Eval and the Community of Practice (CoP):**

Climate-Eval is a direct follow-up initiative called for by the participants of the International Conference on Evaluating Climate Change and Development (May 10-13, 2008, Alexandria, Egypt), which gathered more than 250 evaluators around the world to discuss the challenges of climate change and development evaluation. Following the international conference, there was strong donor support from Sweden (Swedish International Development Agency-SIDA) and Switzerland (Swiss Federal Office of the Environment), for the establishment of the community of practice through the Special Initiatives Trust Fund of the Global Environment Facility’s Independent Evaluation Office (GEFIEO). The GEFIEO administers these funds and hosts the community of practice.

The Climate-Eval Community of Practice (CoP) has grown to a community of over 1000 members comprised of evaluators and other professionals. To date the CoP has hosted six webinars, maintained an electronic library of almost 500 reports, and regularly interacts with its members through online social media. Three studies have been completed: 1) Meta-evaluation of mitigation evaluations; 2) an M&E adaptation framework; 3) Guidelines to climate mitigation evaluations. Furthermore, the book ‘Evaluating Climate Change and Development’, edited by Robert D van den Berg and Oswaldo Feinstein was published in 2009.

Previously, the CoP has focused on evaluation of climate change and development, on mitigation as well as adaptation. In the second phase it aims to broaden this scope to include the interface between climate adaptation and natural resources management. Biodiversity and other natural resources are prone to impacts of climate change, and international development efforts have now begun to take measures to counter these impacts. Developing indicators for and isolating impacts of climate change on natural resources is an area where knowledge and evaluation capacities are lacking. This study aims to contribute to alleviating this gap.

**Natural Resource Management (NRM):**

NRM can broadly be defined as the management of land and water resources, including protected areas and fisheries (van den Berg & Feinstein, 2009). There are several definitions of and approaches to NRM. The World Bank’s Agriculture and Rural Development Department (ARD)
defines NRM as the management of forestry, biodiversity, land resources (drylands and desertification), and water resources (coastal and marine resources as well as irrigation and drainage). The Food and Agriculture Organisation (FAO) adds genetic resources to this list and the United Nations Environment Programme (UNEP) looks at a more holistic approach to NRM based on ecosystems management (http://www.fao.org/nr/aboutnr/en/)(http://www.unep.org/ecosystemmanagement/).

More recent perspectives include Integrated NRM and the Ecosystems approach. Integrated NRM is a process of taking into consideration the multiple uses of natural resources (biophysical, sociopolitical, and economic) into a system of sustainable management to satisfy the needs of producers and direct consumers, as well as the goals of the larger community (Douthwaite et al, 2004). Similarly ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way (Convention on Biodiversity, COP 5 Decision V/6). This approach deals with not just climate change but also poverty alleviation, disaster risk reduction, biodiversity loss and other environmental issues.

**Biodiversity Conservation:**

The Global Environment Facility’s ‘GEF-5’ programming directions with regards to NRM fall into four of its seven focal area strategies: Biodiversity, International Waters, Land Degradation, and Sustainable Forest Management. The biodiversity focal area objectives include improving sustainability of protected areas; building capacities of countries to meet their obligations under the Convention on Biodiversity (CBD) and the Cartagena Protocol on Biosafety; mainstreaming conservation and sustainable use of biodiversity into production landscapes/seascapes and sectors; and building capacity on access to genetic resources and benefit sharing. Biodiversity projects constitute about 36 per cent of the GEF’s portfolio, the largest within the institution (www.thegef.org/).

The rationale behind choosing biodiversity conservation as a focus for this study involves many factors. First off, reducing biodiversity loss is a part of the Millennium Development Goals, under ‘ensuring environmental sustainability’ (www.un.org). Secondly, of all the problems faced in managing “global goods”, only the loss of biodiversity is irreversible (www.thegef.org/). Thirdly, the economic aspects are astounding, with at least 40 per cent of the world’s economy and 80 per cent of the needs of the poor derived from biological resources (www.cbd.int/). Benefits drawn from plant-based drugs, fisheries and tourism total billions of dollars per year. Lastly, there is a strong relationship with impact from climate change, the latter contributing to habitat change which is becoming the dominant driver of biodiversity loss (Millennium Ecosystems Assessment: www.maweb.org/).

**ii. Purpose, Objectives, and Audience**

This section will begin by highlighting some of the conceptual issues surrounding evaluations in biodiversity and conservation which form the justification for a meta-evaluation. It will then define
meta-evaluations, and outline the objectives, expected outcomes and intended beneficiaries of this meta-evaluation.

In general terms, biodiversity evaluation is the process of measuring the status (ideally quantitatively) of biodiversity components, such as the number of species present, the population of a species, a habitat or the sum of all such components within a given area or site (Hill et al 2005).

Frequently cited problems in biodiversity evaluations include identifying criteria for site selection, scoring/weighting of criteria, ineffective spatial targeting, lack of data, non-representative samples (sampling bias), empirical design and methodologies, political and economic constraints, and spillover effects (Joseph et al, 2009; Hill et al 2005; Miteva et al, 2012).

Miteva et al (2012) argue for a new emphasis on improved evaluations that focuses on the need for better theory, methods and data. Better theory involves internal and external validity, improving counterfactuals, and accounting for the two-way relationship between humans and ecosystems. Better methods involve ruling out alternative explanations and removing bias, analyzing spillover effects, and treating variables as continuous by measuring them over a longer period.

Better data includes gathering more and better socioeconomic and institutional data from biodiversity relevant locations when setting baselines, and collaborations between environmental scientists and economists during analyses of ecological data. Such collaboration can form the basis of ‘economic valuation’, which allows the valuation of natural resources for purposes of cost-benefit analyses (Brauer, 2003).

Similarly, Stem et al argue for greater collaboration in the conservation community to remove confusion about competing approaches and agree on common guidelines and performance measures for M&E in biodiversity conservation (Stem et al, 2009).

Purpose: What are meta-evaluations and why do we need them?

Meta-evaluations are the systematic reviews of evaluations to determine the quality of their processes and findings. The term was coined by Michael Scriven in 1969, and it basically means an evaluation of evaluations (Scriven, 2009). Stufflebeam (2000) describes the meta-evaluation as “the process of delineating, obtaining, and applying descriptive information and judgmental information - about the utility, feasibility, propriety, and accuracy of an evaluation and its systematic nature, competent conduct, integrity/honesty, respectfulness, and social responsibility - to guide the evaluation and/or report its strengths and weaknesses”.

A meta-evaluation can look for either a) quality of evaluations or b) a synthesis of findings from evaluations such as systematic reviews and meta-analyses. A systematic review is the process of identifying and selecting (high quality) evidence relevant to a specific research question and synthesizing the results (Olsen & O’Reilly, 2011). For the purposes of this study, we will focus on the definition of meta-evaluation that more closely resembles that of a systematic review, as it will be...
looking primarily at the findings and persistent challenges in evaluations of biodiversity and conservation interventions.

Meta-evaluations are needed to support decision-making, accountability, transparency, improvement of the subject evaluated, and for the sake of the knowledge gained (Scriven, 2012). They help assure the soundness of evaluations, assess their efficiency and effectiveness, provide direction for improving evaluation services, and contribute to professionalizing the evaluation field.

Meta-evaluations are carried out by many development agencies, to identify successful projects and analyze what worked, i.e. best practices. The objective can also be to develop impact measurement methodologies and inform M&E frameworks and approaches of future evaluations.

The expected benefit of this study is to provide evaluators with updated tools and methods to evaluate sustainable NRM interventions in biodiversity conservation, improve capacity in undertaking evaluations especially in the South, and increase usefulness of evaluations for policy makers, decision-makers in government agencies, stakeholders and local communities. The longer term impact envisaged is that actors in the field will be better informed on the basis of solid evidence gathered through the meta-evaluation.

Objectives:

In light of all of the above, the objectives of this meta-evaluation are to:

a) Carry out a rigorous assessment of the design and methodology used and results obtained in existing evaluations in order to draw practical conclusions that may be useful for future practitioners and decision-makers.

b)Aggregate and synthesize the knowledge gaps, lessons learned, and recommendations from existing evaluations in order to inform the design of future evaluations.

c) Build an evidence-base for conservation and natural resource management evaluation.

Audience: The target audience includes the Climate-Eval community of practice, evaluators, environmental scientists, economists, and policymakers involved in biodiversity conservation and sustainable natural resource management.

iii. Design and Methodology

a) Literature Review: The study will begin with a review of literature on trends in monitoring and evaluation of biodiversity conservation. The review will include existing global and national M&E frameworks, policies, programs andprojects aimed at conservation of biodiversity. It will look at recognized methods as well as recent innovations in data collection, performance measures, criteria selection, project prioritization, and theoretical aspects. The Climate-Eval library as well as repositories of other evaluation offices may be useful in collecting evaluation reports and studies on biodiversity conservation for these purposes.
Brooks et al (2013) suggest a number of criteria for inclusion of studies in their systematic review of community-based conservation projects including:

- **Type of study** – primary literature.
- **Subjects Studied** – Any conservation and development project associated with a protected area, or community-based conservation project in which conservation is the primary aim.
- **Outcomes** – Ecological, attitudinal, behavioral, and economic outcomes. At least two of these outcomes have to be measured to be included in the review (Brooks et al, 2013).

As noted above, they have used a multi-level design approach based on four outcomes – attitudinal, behavioral, ecological, and economic. This is merely a suggestion of an approach that can be taken in deciding on which evaluations to include in the study.

*It is important to note that this meta-evaluation does not aim to analyze quality of evaluations studied.

b) **Main evaluation method**: Develop a comprehensive evaluation framework, including objectives, scope and coverage, sampling strategy, and data sources, etc. of the meta-evaluation. Outline limitations and risks (e.g. narrow focus, conflicts of interest, bias, unreliable data, and invalid conclusions). Describe criteria used for including evaluations in the study including assessing outcomes and scoring evidence.


The Climate-Eval community of practice will be consulted during the key steps of the preparation of this study. The draft final product will be presented to interested evaluation professionals via a Climate-Eval webinar. The interactions with the Climate-Eval community of practice aim to validate the meta-evaluations’ practical application.

iv. **Scope and Coverage**

As biodiversity conservation efforts are conducted on many scales, a significant challenge will be to set an appropriate scope, so that findings are specific and meaningful, yet representative enough to have relevance for the climate change evaluation community (Woerlen, 2013). After reviewing the relevant evaluations collected from the literature review, the consultant would have the option of choosing the parameters of analysis. Therefore, the scope can be based on any of the following (the list is not exhaustive):

- **Level of analysis**
  - Project
  - Programme/Portfolio
  - Policy
- **Geographic scale**
  - Country/national
  - Regional
  - Global
  - Local/village/community-based

- **Time scale**
  - Include all evaluations conducted between \( xxxx \) and \( xxxx \)? E.g. since Rio conference 1992 or in the past 5 years.
  - Project duration.

- **Type of intervention/approach**
  - Protected Areas and Protected Area Systems
  - Payments for Ecosystems Services
  - Community-based Conservation
  - Sustainable Forestry
  - Indigenous Reserves
  - Integrated conservation and development programs
  - Multi-use zoning, etc. (Agrawal & Redford, 2006)

- **Method of evaluation**
  - Ex-ante (before intervention); Mid-term; Terminal (close of intervention); and Impact (whether intervention is sustained over time).
  - Formative (on-going) vs. summative (periodic) evaluations (Hill, 2005).

v. **Key Questions**

Regardless of the above scope of the analysis, the meta-evaluation will attempt to gather data on certain key questions in biodiversity conservation evaluations. Some of these are mentioned below:

- How did the evaluations measure relevance, effectiveness, impacts, sustainability, and efficiency (OECD DAC criteria)? Were the performance measures (baselines, indicators, etc.) used appropriate and consistent with the objectives of the evaluation and with agreed standards?
- What are the problems faced by evaluators and experts in identifying the appropriate criteria for site selection and targeting?
- How are projects prioritized within a biodiversity conservation programme/portfolio?
- What are the key constraints in collecting, collating, analyzing and using data from biodiversity conservation sites?
- What sort of indicators/proxies are used to measure species richness and ecosystem function?
- How do projects account for sampling bias?
- What theories of change/counterfactuals were utilized in the evaluations? A theory of change that forms the context of a project is the necessary basis for assessing its results. An example is the biodiversity-specific frameworks for the GEF Theory of Change.
• What was the duration of the intervention and did this affect the overall impact?
• What were the trends in spillover effects, if any?

vi. Roles and Responsibilities

A senior consultant will lead the preparation of the Meta-Evaluation of Evaluations in NRM Study, hired by the GEF Independent Evaluation Office on behalf of the Climate-Eval community of practice. The Climate-Eval moderator, Mr. David Akana, will facilitate the communication and discussion between the consultant and the community members, via focus group discussions, postings on the Climate-Eval forum, and email. The community members will also be consulted during the key steps of the study, such as in the design of the approach paper, review of the methodology, identification of key documents and stakeholders, among others.

Self-selected members of the Climate-Eval community of practice and experts will be consulted in key steps of the meta-evaluation preparation, such as in the identification of scope, target audience, validation of results, and addressing the main issues that will be encountered in conducting the study, among others. The consultant will present the preliminary results of the meta-evaluation to the community of practice, and other forums to solicit additional comments.

vii. Schedule

The preparation of the meta-evaluation study will be conducted between ---- and ----. The consultant is required to propose a detailed schedule of activities outlining the key steps of the study.

viii. References


ix. Other comments and issues to be addressed in the study