

# AMAZON BIOME-SCALE MANAGEMENT EFFECTIVENESS EVALUATION: SUMMARY OF THE CONSTRUCTION PROCESS, PROGRESS AND RECOMMENDATIONS



IAPA: Integration  
of Amazon  
Protected Areas

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## Acronyms

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- AEMAPPS: Protected Areas Management Effectiveness Analysis with Social Participation (in its Spanish acronym)
  - CU: Conservation Unit
  - EGEM: State of Management and Effectiveness (in its Spanish acronym)
  - MEE: Management Effectiveness Evaluation
  - METT: Management Effectiveness Tracking Tool
  - PA: Protected Area
  - RAPPAM: Rapid Assessment and Prioritization of Protected Areas Management
  - SAMGe: Management Analysis and Monitoring System (in its Portuguese acronym)
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# Summary



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## WHY THINK OF AN AMAZON BIOME- SCALE PROTOCOL?

According to Cifuentes, Izurieta and Faria (2000), managing a protected area requires synchrony between different aspects which should themselves be interconnected; long-term maintenance of the natural, social and cultural values which drives protection of certain area depends on this interrelation. Similarly, legal, administrative, social, planning and institutional aspects, among others, should not be overlooked, and these should be oriented towards preserving the area's values. Synchrony between these elements requires an adaptable planning strategy that provides guidance and direction for managing a protected area effectively.

The success of protected areas as a conservation tool is based on the assumption that they are managed in such a way that they protect the values they contain. Achieving effective management is not an easy task, since a number of management objectives and governance mechanisms in line with those objectives have to be defined, and it is also important to implement management strategies that will materialize governability. And there is

a need for sufficient resources to guarantee implementation and sustainability over time (Mayorquín, Valenzuela and Rangel-Ch, 2010).

Various methodological proposals currently set out how to approach monitoring of protected area management effectiveness, some of which focus on administrative, institutional, political and legal processes, and these basically identify whether management plans are being implemented correctly. Others concentrate on measuring whether an area is favorable for maintaining its ecological features and improving quality of life for human communities living near or within the area (Regional Environmental Program for Central America - PROARCA, 2004).

These tools have nevertheless been constructed with a view to providing a site-level response; in other words, for the protected area itself. It is important to also highlight the role that areas play in their own administrative and geographical context and how, if they are properly managed and administered, this will enable a number of greater conservation goals to be achieved, at country and region level.

In line with this, the Amazonian countries<sup>1</sup> devised the Ecosystem-based Conservation Vision of Biological and Cultural Diversity in the Amazon Biome (Amazon Vision), which aims to establish joint mechanisms that will allow the effective achievement of conservation goals



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established under the Convention on Biological Diversity, Program of Work on Protected Areas (CBD-PoWPA), based on the national and regional mandates which instrumentalize that Program (REDPARQUES, 2016).

Implementation of the Amazon Vision has revealed the need for a mechanism that can showcase the contribution made by Amazonian protected areas to effectively managing and conserving the amazon biome, as well as to identify weaknesses that need attention and strengthening through strategic alliances between the countries (REDPARQUES, 2016).

In order to establish this mechanism, the variables comprised in the different national management effectiveness evaluation tools need to be jointly identified and interpreted, by analyzing topics and indicators on a regional scale.

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<sup>1</sup> Brazil, Bolivia, Colombia, Ecuador, Peru, Venezuela, Guyana, Suriname and French Guiana.

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## BACKGROUND: CONSTRUCTING THE MECHANISM

REDPARQUES (2016) concluded that measuring the effectiveness of protected area management is nowadays one of the most important milestones in administering protected area systems worldwide. The eight Amazon countries and the territory of French Guiana have institutionalized tools for measuring success in managing and administering their protected areas, with emphasis placed in the amazon biome, as a result of administrations being willing to advance processes that take into account the weaknesses, strengths and needs of their respective areas, enabling adaptive management to a large extent in light of the results of each analysis.

According to REDPARQUES (2016), the amazon biome countries have made progress on developing standardized analysis methods, criteria and indicators that enable them to measure management effectiveness in their protected areas. It is also important to highlight the fact that the results the countries have obtained are used as input for the national reports to the Convention on Biological Diversity. Similarly, it is recognized that recommendations resulting from the analyses relating to effective administration, the updating of

planning systems, project administration and closing financial gaps, among other matters, have been adopted.

According to reports about the Program of Work on Protected Areas (2011-2015), seven of the nine Amazonian countries have institutionalized management evaluation tools within the protected area systems, and these tools are used periodically (annual, tri-annual and five-yearly cycles), at site level. On a larger scale, progress is being made on implementing concrete, joint-administration experiences in cross-border territories, examples including the Tri-National La Paya (Colombia), Güeppí - Sekime (Peru) and Cuyabeno (Ecuador) Program and ecological corridors in Brazil. The establishment of joint administration parameters aimed at guaranteeing biodiversity sustainability and maintenance in the long term at regional level is recognized as a challenge that has to be faced; this means no longer considering protected areas as isolated zones and for Amazonian countries, to prevent from managing them separately (REDPARQUES, 2016).

The management effectiveness evaluation tools that the countries implement use such international benchmarks as the IUCN World Commission on Protected Areas Framework, which covers five key phases or elements (context, planning, inputs, processes, and products and results), the World Bank Management Effectiveness Tracking Tool (METT), and the WWF Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) methodology. Based on these benchmarks, the countries have adapted systematic evaluation methods which reflect



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the analysis interests and priorities of the national protected areas systems, and the results obtained from the analyses are critical instruments when it comes to planning and defining priorities for action at institutional, legal, personnel skill and resources levels.

According to REDEPARQUES (2016), weaknesses can still be found in methods for reading data and handling evidence, together with lack of perspective at region or landscape level, along with the heterogeneous nature of the tools and persons involved in measuring and interpreting results, all of which require attention if administration of the territory is to be improved.

In recent years, however, the implementation of management effectiveness evaluation and analysis tools has gradually become a regular exercise for staff who work in protected areas, and the importance and applicability of the analyses has become visible when it comes to making decisions regarding protected area system planning and administration. This has resulted in a culture of trust among technicians and managerial staff which at the same time, brings credibility to the assessment results, thereby improving in protected area administration (e.g. by investments raised from national levels that are allocated at protected area level).

Similarly, an important finding from the application of the tools related to the need of considering assessment variables that provide information about other topics as the larger territory, governance and climate vulnerabilities. Although it is true that the analyses have a scope that is still purely local, they can be carried out in a regional context which consider the role of protected areas in the wider landscape where they are placed (REDEPARQUES, 2016).

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## HOW WAS THE MECHANISM BUILT?

The process first began with a review and analysis of Management Effectiveness Evaluation (MEE) processes in Amazon-biome protected areas, followed by the drawing-up of a baseline presented to delegates of Amazonian countries in November 2015. The result was a first version of biome-scale themes. Subsequently, a process of reviewing each MEE tool used by the countries took place by analyzing the management effectiveness situation in the Amazonian countries' protected areas, and by identifying common variables and indicators that responded to the biome-scale topics<sup>2</sup>.

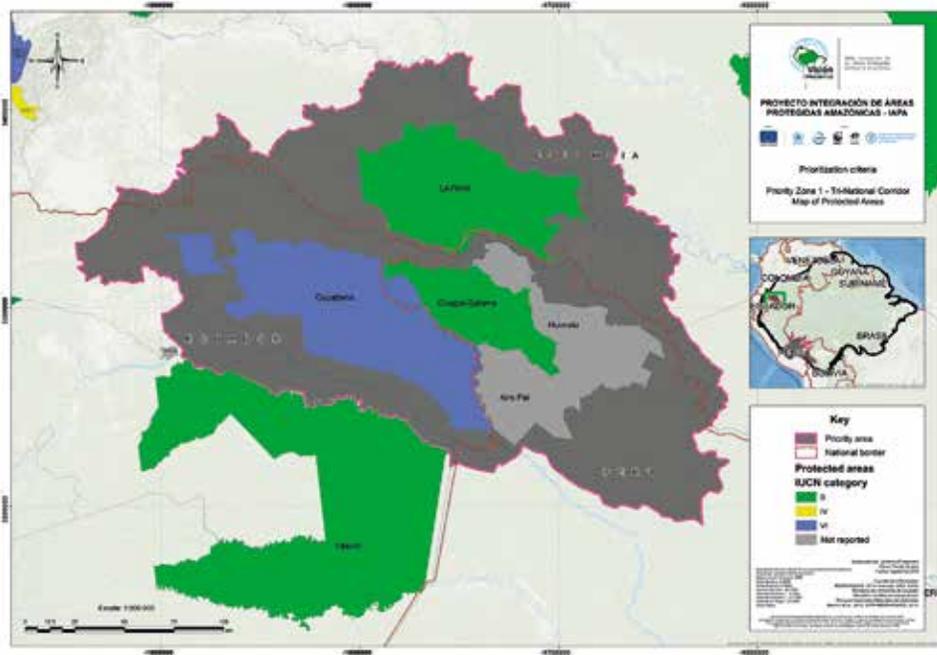
A document containing the draft Protocol was drawn up, which identified common variables, calculation options, evaluation scale standardization and reporting. This was validated at a meeting with the Thematic Group held in Leticia (Amazonas, Colombia) in May, 2017.

After the Leticia meeting, adjustments were made to the protocol; later on, pilot tests were carried out in the Tri-National Corridor (Northern Landscape of the IAPA project in La Paya National Park in Colombia, Cuyabeno Fauna Production Reserve in Ecuador, and Güeppí-Sekime National Park in Peru) and the Southern Landscape area (Manuripi Amazon Wildlife Nature Reserve in Bolivia, Cazumbá-Iracema Extraction Reserve in Brazil, and Alto Purús National Park and Purús Communal Reserve in Peru).

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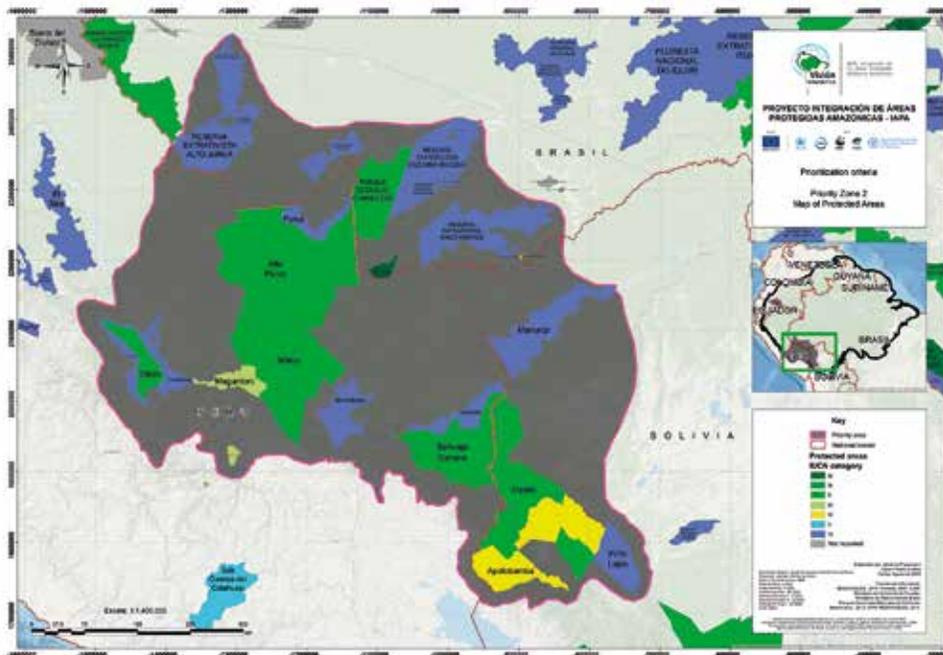
2 Amazon biome-scale themes: governance, climate change, socio-environmental impact evaluation, management programmes (management administration strategies), and compliance with protected area conservation goals.

**Figure 1. Tri-National La Paya - Cuyabeno - Güeppí-Sekime Protected Area Corridor (IAPA Northern Landscape)**



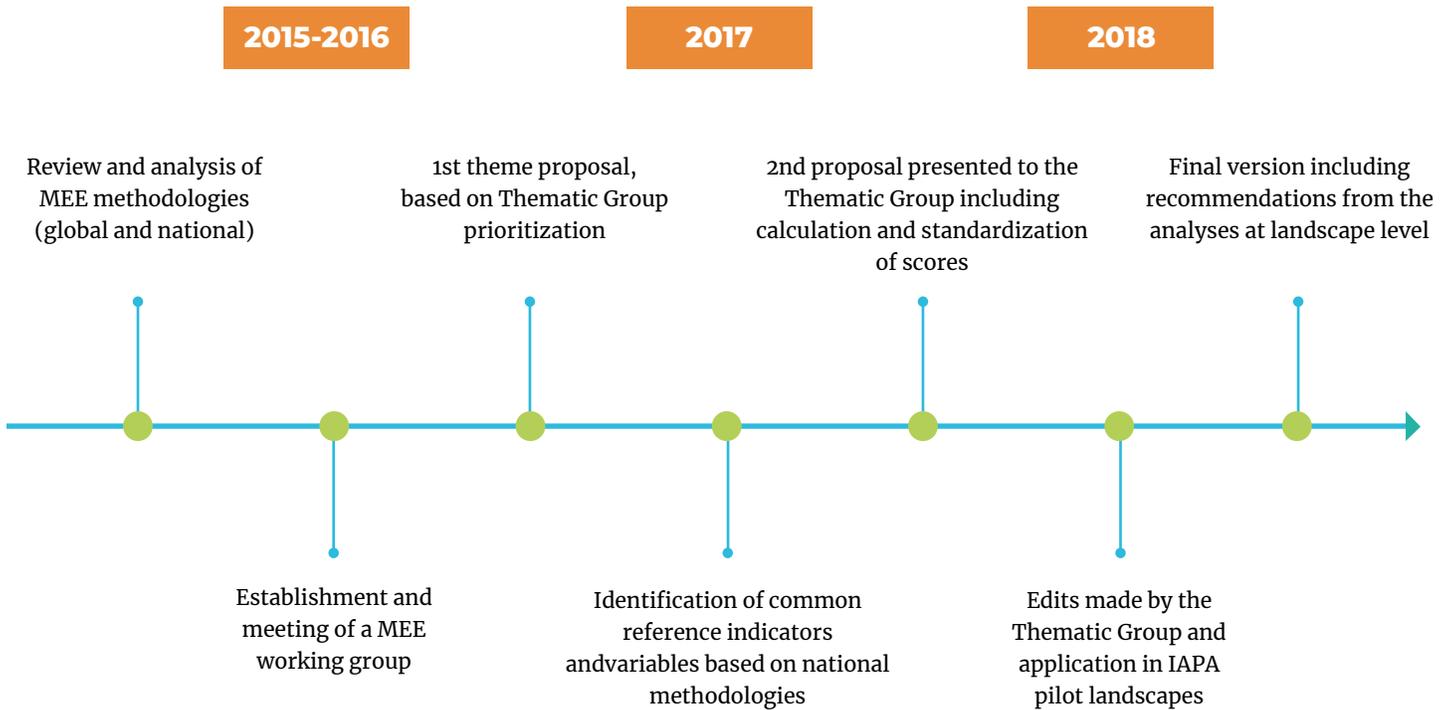
Source: Prüssmann & Suárez, 2015

**Figure 2. Southern Landscape**



Source: Prüssmann & Suárez, 2015

The pilot test report was validated at a meeting with the Thematic Group in May 2018 where the standardization scale was adjusted; then, the protocol was applied in 62 Amazon protected areas from Bolivia (one protected area), Brazil (Acre State, eight protected areas), Colombia (11 protected areas), Ecuador (eight protected areas) and Peru (34 protected areas).



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## WHAT IS EXPECTED OF THE PROTOCOL?



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© A. Gambarini/ WWF Bolivia. Monitoring and patrolling in the Manuripi Amazon Wildlife National Reserve, Bolivia.

### General objective:

To analyze contributions arising from management strategies implemented by Amazonian protected areas in terms of the effective administration and conservation of the amazon biome.

### Specific objectives:

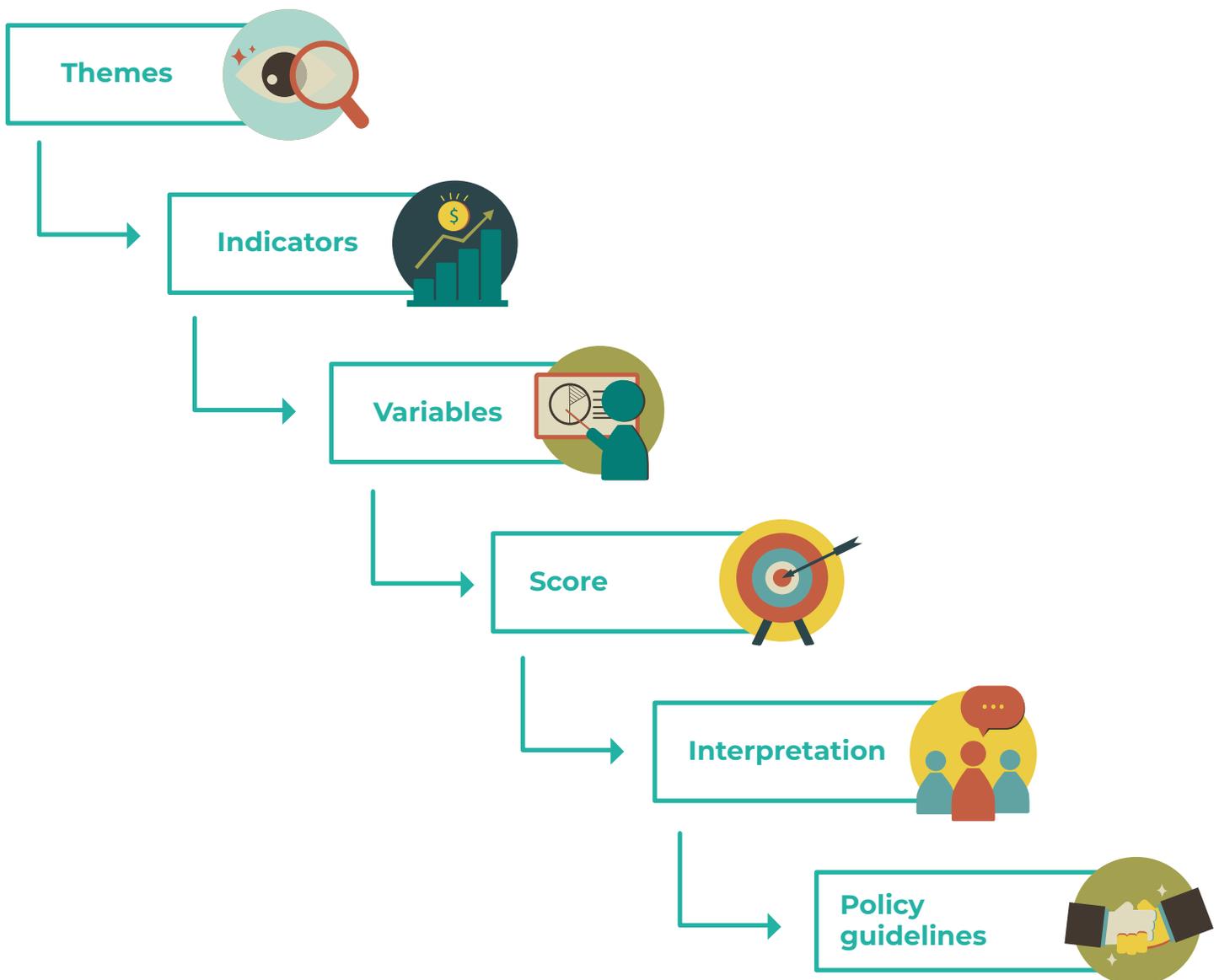
1. To provide information about themes prioritized for the biome analysis, based on data collected through the MEE methodologies in each country.
2. To have a standardized methodology, based on the agreement about common variables and indicators.
3. To strengthen amazon biome member countries in terms of capacity for applying the protocol and interpreting results.
4. To identify lessons learned from the pilot exercises about the process of applying and interpreting the protocol.

## HOW IS THE PROTOCOL DESIGNED?

The protocol is based on five themes, on an Amazon-biome scale, that were drawn up and validated jointly with Thematic Group delegates, from November 2015 to May 2017.

Themes	Indicators
1. Governance	1.1. Legally recognized governance types.
	1.2. Legal mechanisms enabling participation in decision-making.
	1.3. Shared / delegated / collaborative / other management agreements.
	1.4. Mechanisms of protected area cost and benefit sharing.
	1.5. Mechanisms for conflict resolution.
	1.6. Transboundary (cross-border) spatial figures.
2. Climate change	2.1. Climate condition studies (historic and future) in protected areas
	2.2. Adaptation strategies (adaptive management, climate risk reduction, increased climate resilience, etc.).
	2.3. Climate threats / risks in the protected areas.
	2.4. Mechanisms that include protected areas as climate-smart strategy.
3. Evaluation of socio-environmental impacts	3.1. Negative impact mitigation strategies.
	3.2. Beneficiaries (from services provided by the protected area).
	3.3. Economic impact (sustainable production alternatives).
	3.4. Communities living in the territory benefit from the protected area.
4. Management programs (strategies)	4.1. Biodiversity.
	4.2. Social / participative.
	4.3. Public use (e.g tourism)
	4.4. Education.
	4.5. Institutional management capacity (budget, personnel, training, other).
	4.6. Land-use planning strategies that integrate protected areas.
5. Achievement of protected area conservation objectives	5.1. Species or ecosystems conserved.
	5.2. Ecosystem goods and services provided.
	5.3. Cultural values.
	5.4. Sustainable uses.
	5.5. Change in pressure level.
	5.6. Health/integrity of target conservation values.

Based on these generic indicators, a first revision of national management effectiveness evaluation methodologies was undertaken in order to identify equivalent variables, indicators, rating scale and interpretation of results. Variables that corresponded to the proposed Amazon biome-scale indicators were extracted from each of the tools and mirrored in those in the protocol; the final result was verified by the Thematic Group delegates and was the basis being for the design of the protocol, summarized as follows.



## Example Table displaying standardization of variables

Subject: Governance	
Indicator: Transboundary (cross-border) spatial figures	
Bolivia (EGEM)	P2. Area conception and configuration.
	PR19. Ecosystem functions.
	E/16. Effects and impacts on ecosystem functions.
Brazil (SAMGe)	Selected list of processes being implemented (Annex 3)
Brazil (RAPPAM)	a) Government policies reflect the vision, goals and objectives of the CU System.
	c) There is a clear commitment to protecting a viable and representative CU network.
	n) There is an organizational structure that favors CU system administration.
	o) Administrative institutions prioritize the drawing-up of CU management and administration plans.
Colombia (AEMAPPS)	2.1.2.4. Cross-border coordination for achieving common conservation objectives of Protected Areas.
Ecuador (MEE)	PL6. Do planning processes incorporate external elements associated with the area's objectives (biological corridors, hydrographic basins, population groups, critical habitats or species distribution areas)? are they incorporated into regional development strategies (land-use planning)?
Peru (Adapted METT)	Not applicable
Suriname (METT)	21. Does land and water use planning recognize the protected area and its conservation objectives?
	21a. Basin and landscape planning and management, contained in the PA, incorporate the provision of environmental services under suitable conditions (e.g. water volume, quality and quantity, water pollution levels, etc.) for properly maintaining habitats.
	21b. Does management of the corridors that link the PA provide connectivity with habitats outside the area and favor the migration of species?

## Scoring scale:

Percentage	Scale Value	Interpretation
$>0,85 \leq 1$	4	High Level
$>0,60 \leq 0,85$	3	Mid-Progress
$>0,35 \leq 0,60$	2	Low Progress
$0 \leq 0,35$	1	Limited Progress

## WHAT PROGRESS HAS BEEN MADE?

**1.** Reports on application of the protocol in 62 Amazon protected areas in Bolivia, Brazil, Colombia, Ecuador and Peru. A handful of Amazon biome-scale policy recommendations were provided for each country in regards to the protocol themes analyzed.

The results obtained for each them can be summarized as follows:

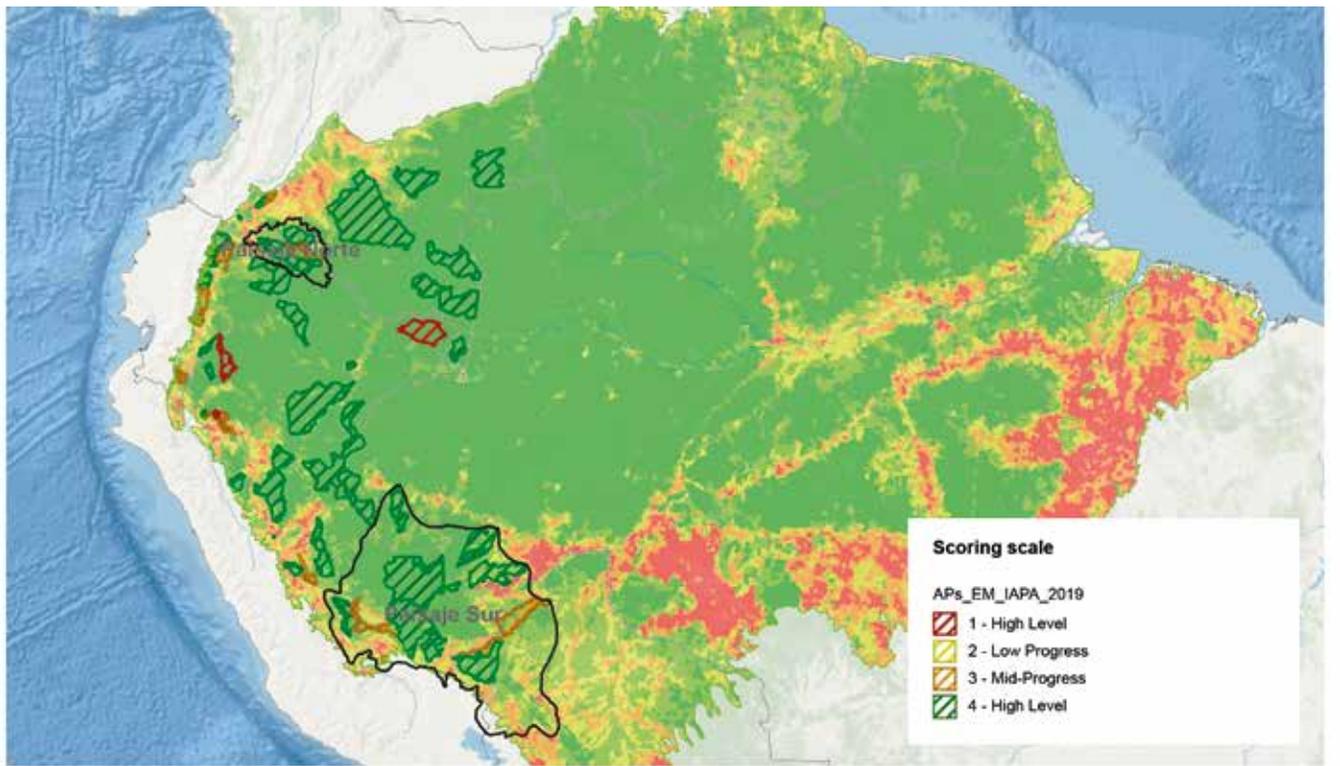
- In terms of Governance, 52% of Amazon protected areas are rated 'High Level' for Amazon biome-scale management effectiveness, 32% of the protected areas are rated 'Mid-Progress', 8% 'Low Progress' and 5% 'Limited Progress'. The remaining 3% have no information that allows for further analysis.
- In terms of Climate Change, 37% of Amazon protected areas are rated 'High Level' for Amazon biome-scale management effectiveness and 6% of the protected areas are rated 'Mid-Progress'. For the remaining 57%, information around this theme should be regarded on the basis of the Management Plans and Master Plans.
- For the Evaluation of Socio-environmental Impacts thematic, 45% of Amazonian protected areas assessed are rated 'High Level' for Amazon biome-scale management effectiveness, 48% are rated 'Mid-Progress', 2% 'Low Progress' and 5% 'Limited Progress'.
- In terms of Management Programs, 26% of the sample areas are rated 'High Level' for Amazon biome-scale management effectiveness, 55% are rated 'Mid-Progress', 13% 'Low Progress' and 2% 'Limited Progress'.
- In relation to the Achievement of Conservation Objectives theme, 89% of Amazon protected areas are rated

‘High Level’ for Amazon biome-scale management effectiveness, 3% are rated ‘Mid-Progress’, and 2% ‘Low Progress’. The remaining 6% have no information that allows this subject to be analyzed.

A consolidation of these analyses reveals that the Management Programs theme is the

one with the lowest percentage of progress at the Amazon biome-scale, followed by Climate Change and Impact Evaluation. The two themes with the highest Amazon biome-scale effectiveness ratings are Achievement of Conservation Objectives and Governance.

2. Geo viewer (<http://arcg.is/1KPCzC>) report reflecting the value at the Amazon biome-scale by protected area, based on the protocol application results.



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 Amazon Biome

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 GADM database of Global Administrative Areas, Online source: Web AppBuilder for ArcGIS

**3.** Standardization process for measuring management effectiveness based on the IUCN Green List of Protected and Conserved Areas Program, which aim is to increase and recognize the number of protected and conserved areas worldwide that are governed fairly and managed effectively. The global standard is structured around four components (Good Governance, Sound Design and Planning, Effective Management, and Successful Conservation Outcomes), 17 criteria and 48 indicators. Jointly with the Thematic Group, the Amazon biome-scale themes were co-related with the components of the Green List, as follows:

<b>Green List Component</b>	<b>Amazon Biome Topic</b>
Good Governance	Governance
Sound Design and Planning	Climate Change
Effective Management	Evaluation of Socio- Environmental Impacts
	Management Programs (Strategies)
Successful Conservation Outcome	Achievement of Protected Area Conservation Objectives



© A. Gambarini/ WWF Bolivia. Park ranger in the Manuripi Amazon Wildlife National Reserve, Bolivia.

## RECOMMENDATIONS AND GUIDELINES

### for the successful management of Amazon-biome protected areas

The following recommendations at the biome-scale could be identified from the results of applying the protocol in 62 protected areas.

1. Strengthen shared management agreements (established and signed) between protected area administrations and local communities / traditional authorities, by defining scopes and commitments related to PA management and decision-making, that favor the implementation of conflict-resolution mechanisms.
2. It is important to continue reinforcing the perception that protected areas are a source of benefits for both local communities and direct users, and also to strengthen agreed mechanisms for benefit sharing resulting from the conservation of protected areas.
3. Enhance impact mitigation strategies, which will result in a reduction in the number of socio-environmental conflicts that affect protected areas conservation, and continue to implement sustainable production activities that have an economic impact, as a strategy for mitigating negative threats and impacts within protected areas and in their buffer zone, thus improving quality of life for the local population (direct beneficiaries)

- and helping to improve, through these inhabitants, the existing perception of these areas and the services they provide.
4. As a complement to the above, implement management programs that focus on generating social, participative and public use spaces around protected areas, bearing in mind their function as providers of services for local inhabitants and direct and indirect users (researchers, visitors, general community).
  5. Reinforce programs that focus on generating information applicable to management, which enable the state of conservation of biodiversity and cultural values in protected areas to be validated. This information should be addressed in terms of biodiversity, representativeness and singularity.
  6. Improve institutional and management capacities, taking into account the conditions in each protected area and in headquarters for responding to the real situation in the territories to act thereon, and also the implications for governance in the protected areas in the particular territorial context.
  7. Implement spatial planning strategies, with administration focusing on protected areas and integrating these into their regional context, thus favoring such things as connectivity processes, biological corridors and landscape-scale conservation.
  8. Keep meeting -and adherence to- conservation objectives in in terms of species, ecosystems, ecosystem goods and services, cultural values, sustainable uses, mitigation of threats, etc.
  9. It is important to view the protected areas as adaptation and conservation strategies in the face of climate change events and, above all, to aim at generating inclusion mechanisms at regional level that will reinforce activities relating to climate change and the impacts of this. Similarly, taking into consideration climate information in protected areas, adaptation strategies should be implemented recognizing (historic) trends and (future) scenarios that could endanger the preservation of the existing natural and cultural resources in the areas.

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