REGIONAL ACTION PLAN FOR JAGUAR CONSERVATION

Adopted by the jaguar range States at the meeting held in Mexico City, Mexico, September 2025



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INTRODUCTION

The aim of this Regional Action Plan is to streamline Jaguar conservation, including its prey and habitats, under one common concept and to facilitate range-wide cooperation as well as to inform the further development or updating of relevant National Action Plans (NBSAPs, NAPs, RAPs) and strategies.

National strategies and plans are important instruments for the implementation of over-arching and range-wide Strategies (see list in Annex I).

This Regional Action Plan, however, addresses general and range-wide principles in Jaguar conservation, as well as cross-border aspects, as most of the extant and future Jaguar populations (Jaguar Conservation Units) are transboundary (see Annex II).

The Regional Action Plan comes from a clear Vision and Mission and is centered around Objectives, Results and Actions. The objectives are intended to address the specific threats or shortcomings identified in a threat analysis. Such threat analyses for the Jaguar have been performed for the development of several strategic documents considered for this Regional Action Plan and are summarized in Annex III.

A Regional Action Plan will also allow for coordinated efforts from the different multilateral agreements - like CITES, CMS and CBD- and organizations working with jaguar, giving clear guidance on how to support range-countries, within their mandates, to implement the conservation measures avoiding duplication and promoting an efficient use of available resources.

The Jaguar Range States are encouraged to use this Regional Action Plan as a blueprint for the development and implementation of National Action Plans (see Result 1.3), which will also allow to engage with national and local partners and interest groups. Further information on the conceptual and organisational background of this Regional Action Plan are summarised in Annex I.



GLOSSARY

CITES . . . Convention on International Trade in Endangered Species of Wild Fauna and Flora

CMS . . . . Convention on the Conservation of Migratory Species of Wild Animals

GBF . . . . Kunming-Montreal Global Biodiversity Framework; see Convention on Biological Diversity

IGO . . . . . Intergovernmental Organization

JCU . . . . Jaguar Conservation Unit. Areas with a stable prey community that contain a population of at least 50 breeding Jaguars OR Areas with fewer than 50 breeding Jaguars but with sufficient habitat and prey base such that Jaguar populations could increase under favourable conditions.

Jaguar Corridor . . . Least-cost path corridors connecting Jaguar Conservation Units.

NAP . . . . National Regional Action Plan

NBSAPs . . . National Biodiversity Strategies and Regional Action Plans; see Convention on Biological Diversity CBD

NGO . . . . Non-governmental Organization

OECM . . . Other Effective Area-Based Conservation Measures; see e.g. IUCN WCPA OECM Specialist Group

PA . . . . . Protected Area

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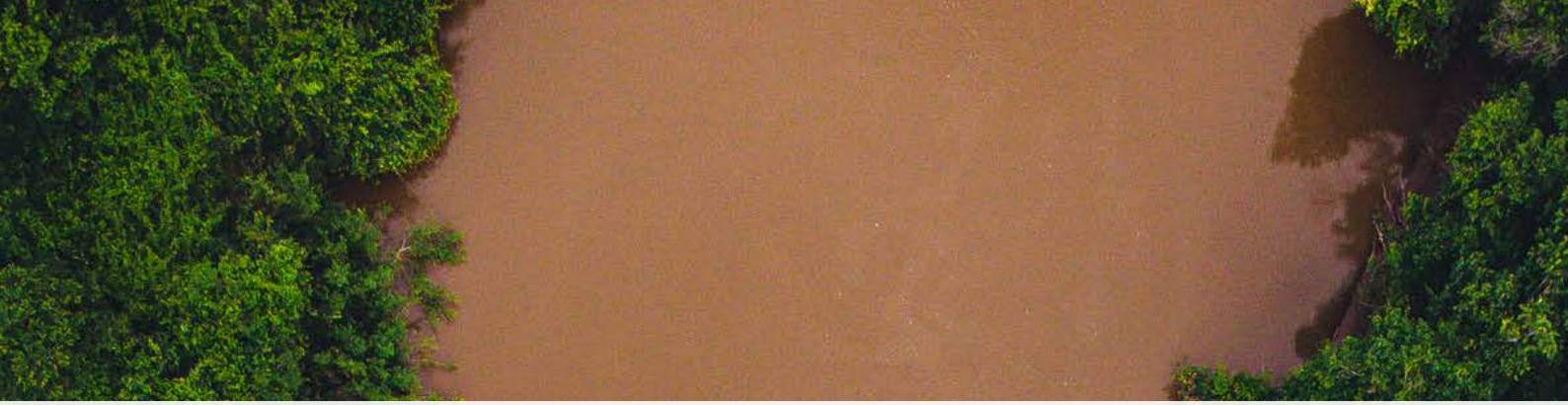

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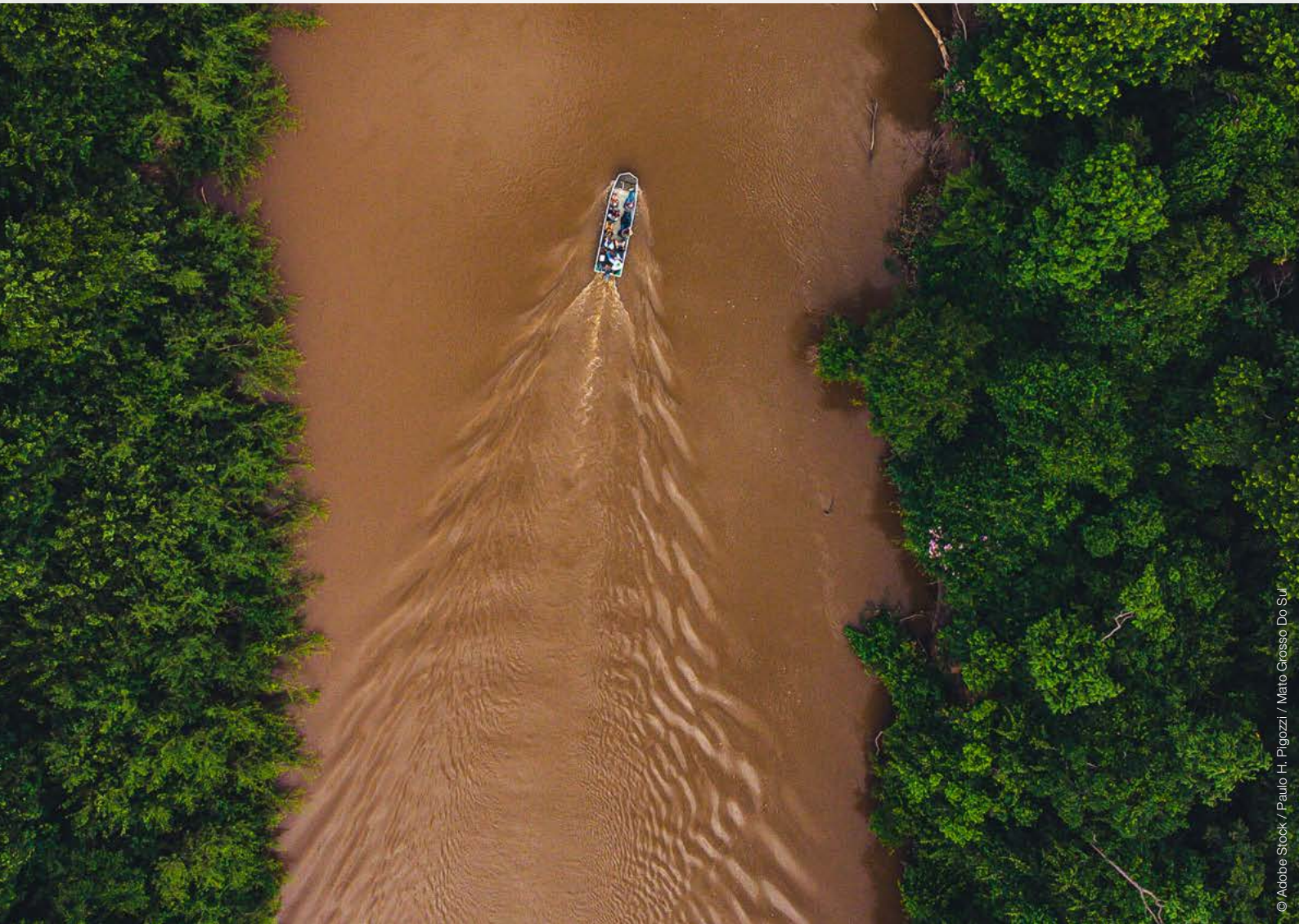

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VISION[1]

By 2050, a network of well-conserved and connected Jaguar populations coexisting sustainably with human communities across native natural Jaguar habitat throughout the species' historic range is maintained, thus contributing to the achievement of global goals on biodiversity, climate, health and sustainable development.

MISSION[2]

Establish the actions necessary for the conservation of the jaguar in its natural and historical range, as well as the timelines for implementing and monitoring them, with the full participation of indigenous peoples and local communities, women, and youth.

OBJECTIVES

Objective 1. Habitat conservation, restoration, and land use planning

To conserve and, where needed and possible, restore Jaguar habitats and corridors, and promote land-use practices and infrastructure development compatible with Jaguar conservation.

Objective 2. Recovery of Jaguar populations and their prey

Recover populations and reintroduce jaguars and wild prey species and jaguars in key/ priority areas within the historical range.

Objective 3. Coexistence

To understand, prevent and mitigate negative interactions between humans and jaguars and to promote coexistence.

Objective 4. Illegal killing and trade of Jaguars

Prevent, combat and reduce illegal killing of Jaguars and illegal domestic or international trade in live Jaguars, and jaguar specimens, parts and derivatives.

Objective 5. Capacity-building and awareness-raising

To develop and strengthen capacity of Jaguar Range States to protect, conserve, and monitor Jaguars, their prey populations and habitats, and increase local, national and global awareness on their conservation.

Objective 6. Knowledge and information

Generate knowledge and information about key aspects related to decision making for jaguar conservation.

1 IUCN's Guidelines for Species Conservation Planning: "An overarching Vision outlines, in an inspirational and relatively short statement, the desired future state for the species." The timeline for a large mammal may be 30-50 years.

2 IUCN's Guidelines for Species Conservation Planning: The Goal is a practical, concrete step that contributes directly to achieving the Vision. The timeline is 5-10 years.

CROSSCUTTING ENABLING MECHANISMS

A. Cooperation, coordination and effectiveness evaluation

Strengthen the cooperation and coordination between Jaguar Range States, indigenous people and local communities, women and youth, and the global conservation community (biodiversity-related and other Conventions, IGOs, international and national NGOs, scientific institutions, and the private sector) for the conservation of the Jaguar and evaluation of the effectiveness of the implemented measures.

B. Sustainable funding

To establish innovative, sustainable and long-lasting mechanisms for Jaguar conservation and research programmes including the preservation of associated ecosystems and securing sustainable livelihoods.

C. Policy and legislation

To strengthen and apply appropriate international and national policies and legal frameworks for the conservation and protection of Jaguars, their wild prey, habitats and corridors, while also generating incentives for enhanced political commitment and local community support.



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REGIONAL ACTION PLAN FOR JAGUAR CONSERVATION

Priority Landscapes for Jaguar Conservation (PLJC) – includes, amongst others, areas of importance for jaguar conservation and connectivity, like Jaguar Conservation Units (JCUs), Jaguar Corridor, other biological corridors, natural protected areas, buffer zones, important habitats, OECMs, including transboundary.[3]

Objective 1.	**Habitat conservation, restoration, and land use planning** To conserve and, where needed and possible, restore Jaguar habitats and corridors, and promote land-use practices and infrastructure development compatible with Jaguar conservation.
Result 1.1.	Important conservation and connectivity areas (including transboundary) are identified, conserved and, where needed, restored for the jaguar and their wild prey species.[4]
Action 1.1.1.	Identify and prioritize important conservation areas, habitats and ecological corridors for Jaguar and its wild prey species (including transboundary), and define respective conservation measures (see also Result C.2).
Action 1.1.2.	When feasible, design and implement restoration projects for important conservation areas, habitats and ecological corridors for the Jaguar and its wild prey species.
Action 1.1.3.	Develop and implement management plans for new and, when needed, existing protected areas and OECMs including related buffer zones as appropriate (see also Result C.2, and Result 1.2).
Result 1.2.	Best practices for land-use, in particular for agriculture and livestock husbandry (incl. sustainable development models), for the conservation of the Jaguar and its wild pray species within and outside protected areas and OECMs are developed and implemented.
Action 1.2.1.	Review existing land-use practices and guidelines or regulations at local, national and regional level with regard to their impact on the conservation of Jaguar, wild prey and their habitats and corridors.
Action 1.2.2.	Develop and support the implementation of best practice land-use guidelines or regulations regarding habitat maintenance/restoration.
Action 1.2.3.	Promote productive landscapes compatible with jaguar conservation.

3 Consider the Outcomes of the Meeting of Jaguar Ranges States in Cuiabá, Brazil, and the initiated work by the Jaguar 2030 Roadmap Coordination Committee.

4 E.g. working through the Conventions (Multilateral Environmental Agreements MEAs), through regional agreements (e.g. Amazon Cooperation Treaty), and data sharing agreements.

Objective 1.	Habitat conservation, restoration, and land use planning (continued)
Result 1.3.	The impact of existing and planned infrastructures within the Priority Landscapes for Jaguar Conservation (PLJC) is mitigated.
Action 1.3.1.	Evaluate the impact of infrastructures and develop best practice guidelines based on the review and on experience from other places.
Action 1.3.2.	Develop, in cooperation with the responsible national/subnational institutions, projects to mitigate the negative impact of existing infrastructures within the PLJC.
Action 1.3.3.	Promote the application of the best practice guidelines in the planning and realization of new infrastructures among responsible national/subnational institutions.

Objective 2.	Recovery of jaguar populations and their prey
	Recover populations and reintroduce jaguars and wild prey species and jaguars in key/priority areas within the historical range.
Result 2.1.	Populations of wild prey species for the jaguar are recovered, when needed, and sustainably managed across the jaguar's range (see also Result 1.1, 1.2).
Action 2.1.1.	Develop and implement strategies and/or action plans for the recovery of populations of wild prey recovery in PLCJ where improved prey conservation is a prerequisite for the conservation of the Jaguar.
Action 2.1.2.	Develop and apply best practice guidelines for the sustainable management of wild prey, including management and governance of wild meat and implement them in PLCJ.
Result 2.2.	Potential sites for the recovery / reintroduction of the jaguar across its range have been identified, general guidance for their recovery / reintroduction are available, potential source populations have been identified, and translocations are initiated.
Action 2.2.1.	Identify and map areas where habitat, connectivity, wild prey species and potential conflict level with human populations would (in the future) allow the recovery of Jaguar populations within its historical range (see also Result 1.1, 1.2).[5]
Action 2.2.2.	Develop, in cooperation with the Range States, general guidelines and protocols for the reinforcement and reintroduction of the jaguar based on international guidelines and considering available national protocols and legislation, including the identification of suitable *in situ* source populations.[6]

5 See e.g. ACT Green Jaguar habitat project.

6 See also Guidelines for reintroductions and other conservation translocations.

Objective 2.	Recovery of jaguar populations and their prey (continued)
Action 2.2.3.	Promote, when possible, the establishment of rescue and rehabilitation centers in each Range State, implementing husbandry and welfare conditions based on national and international guidance and best practices.
Action 2.2.4.	Promote, when possible, the establishment and maintenance, in cooperation with the zoo community and other *ex situ* conservation centers and Range States, a (genetically) healthy *ex situ* source population for Jaguars, aligned with CITES Conf. Res. 13.9.
Action 2.2.5.	Make efforts to successfully reintroduce or reinforce jaguar populations.

Objective 3.	Coexistence
To understand, prevent and mitigate human-Jaguar negative interactions and to promote coexistence.	
Result 3.1.	Coexistence of indigenous people and local communities with the Jaguar is enabled or facilitated.
Action 3.1.1.	Establish cooperation with the IUCN SSC Human-Wildlife Conflict & Coexistence Specialist Group (HWCCSG) and its Latin America HWC Working Group.
Action 3.1.2.	Compile, review, analyze and develop best practice guidelines, mainly in agriculture and livestock production and in addressing human–jaguar interactions, with a gender perspective, to mitigate the negative coexistence of Indigenous Peoples and local communities with the jaguar and its wild prey (including, for example, livestock husbandry practices, sustainable livelihood enterprises, community-based ecotourism, increasing tolerance towards the species, behavior change approaches, livestock insurance schemes, and the establishment of trained groups to address human–jaguar interactions).
Action 3.1.3.	Identify priority landscapes where human-Jaguar negative interactions are a threat to the species, and where there is a need and / or opportunity for action (see also Result 6.2).
Action 3.1.4.	Implement the best practice guidelines (see 3.1.2) for indigenous peoples and local communities in the priority areas identified under Action 3.1.3 and monitor their effect.
Action 3.1.5.	Identify and define synergies with other crosscutting topics, such as climate change that is included in the conflict between humans and felines, compiling best practices, like nature-based solutions, for humans and wildlife.

Objective 4. Illegal killing and trade of Jaguars	
Prevent, combat and reduce illegal killing of Jaguars and illegal domestic or international trade in live Jaguars, and jaguar specimens, parts and derivatives.	
Result 4.1.	Recommendations to prevent and combat illegal trade and illegal killing are implemented including those of the CITES Big Cat Task Force, World Customs Organization, INTERPOL, UNODC and the outcomes of the study on The Illegal Trade in Jaguars, commissioned by CITES.[7]
Action 4.1.1.	Implement recommendations to reduce illegal offtake and trafficking including those mentioned in the study on The Illegal Trade in Jaguars, commissioned by CITES, and other relevant bodies (e.g. CITES Big Cat Task Force), to the extent that they are relevant to Jaguar Range States.
Action 4.1.2.	Exchange information and conclusions on the illegal trade in Jaguars through the Intergovernmental Platform9/Monitoring System for the Illegal Killing of jaguars, when available, between the Jaguar Range States and other relevant bodies and stakeholders (see also Result 6.2 and 6.4) using the Annual Illegal Trade Reports from CITES as a guideline.
Action 4.1.3.	Integrate the relevant recommendations into all conservation strategies and action plans relevant for the Jaguar, and into national policies and legislation (see also Result A.3 and C.1).
Result 4.2.	Jaguar Range States are empowered to detect and combat illegal killing and trade in live Jaguars, their parts and derivatives, in cooperation with other Range States.
Action 4.2.1.	Develop and promote, in consultation with relevant experts (e.g. the CITES Directory of Laboratories that Conduct Wildlife Forensic Testing), the use of appropriate forensic-type techniques to identify and trace specimens of Jaguars in illegal killing and trade.
Action 4.2.2.	Promote the development and deployment of new technologies and tools to support the investigation and monitoring (e.g. financial investigations, online research) of illegal activities that threaten Jaguars (see also Action 4.3.3).
Action 4.2.3.	Strengthen capacity to enable effective law enforcement and prosecution (e.g. by establishing quick response teams, multi-agency units, training provided by INTERPOL, World Customs Organization, Financial investigation units, UNODC, EUROPOL, and Jaguar Network) for customs and enforcement officers, and improving international inter-agency cooperation), including with transit countries and destination countries (see also Objective 5).
Action 4.2.4.	Include the Jaguar as a priority species to be targeted as part of enforcement operations, measures and controls deployed to respond to and address wildlife crime (see also Result A.1).

7 See CITES SC74 Doc. 75, Annex 2.

Objective 4.	Illegal killing and trade of Jaguars (continued)
Action 4.2.5.	Train competent authorities in the Monitoring System for the illegal killing and trade of jaguars, when available (see also Result 6.4).
Action 4.2.6.	Promote close coordination with law enforcement authorities for the timely handling of reports and complaints related to direct and indirect impacts on jaguars, their wild prey, and their habitat, as well as strengthen the legal framework for Jaguar protection.
Action 4.2.7.	Undertaking regular inspections, monitoring and audits of jaguar breeding facilities as well as conducting unannounced spot checks by authorized personnel, based on established procedures/protocols.
Action 4.2.8.	Conduct financial investigations, to quantify the value of illegal trade in jaguars, and to identify international financial flows related to the illegal trade in jaguars.
Action 4.2.9.	Where relevant, make use of the International Consortium on Combating Wildlife Crime (ICCWC) Indicator Framework for Combating Wildlife and Forest Crime (a self-assessment framework for national use) to measure and monitor the effectiveness of law enforcement responses to illegal killing and trade of jaguars.
Action 4.2.10.	Strength regulations on transportation and delivery companies to improve controls against jaguar illegal trade.
Action 4.2.11.	Improve the security features on the documentation and permits, both national and international (CITES) positively impacting traceability monitoring.
Action 4.2.12.	Establish protocols for the disposal of jaguar specimens (live and dead), consistent with Res. Conf. 17.8 (Rev. CoP 19) on Disposal of illegally traded and confiscated specimens of CITES-listed species.
Action 4.2.13.	Strengthen community surveillance in key jaguar habitat areas by training and equipping them for local monitoring.
Result 4.3.	A strategy for the reduction in demand for illegally traded Jaguar products through behaviour change has been developed and implemented.
Action 4.3.1.	Develop a strategy for the reduction in demand for illegally traded Jaguar products, addressing the underlying drivers of domestic and international demand with a focus on consumer behavioural change, taking into account, among other things, CITES Resolution Conf. 17.4 on *Demand Reduction Strategies to combat illegal trade in CITES-listed species* and the *CITES guidance on demand-reduction strategies to combat illegal trade in CITES-listed species*.[8]

8 See the Guidance for CITES Parties to Develop and Implement Demand Reduction Strategies to Combat Illegal Trade in CITES listed Species.

Objective 4.	Illegal killing and trade of Jaguars (continued)
Action 4.3.2.	Implement awareness raising campaigns on the threat of illegal jaguar trade at local, national and international levels, seeking the support from Parties and international organizations at the highest possible level.
Action 4.3.3	Monitor online platforms (e.g. social media) and develop intervention and prevention strategies (see also Action 4.2.2).

Objective 5.	Capacity-building and awareness-raising
	To develop and strengthen capacity of Jaguar Range States to protect, conserve, and monitor Jaguars, their wild prey populations, and habitats, and increase local, national and global awareness on their conservation.
Result 5.1.	Capacity (human resources and technical means) of Jaguar Range States to protect and monitor Jaguar populations, promote coexistence, and sustainably manage and monitor the wild prey populations, is strengthened.
Action 5.1.1.	Review and evaluate capacities (incl. infrastructure and equipment) and training opportunities, identify the gaps and the needs for national and regional training in the Jaguar Range States for the conservation and monitoring of Jaguar populations, its wild prey and its habitat.
Action 5.1.2.	Support capacity-building and transfer of skills relevant for conservation (see Action 5.1.1, sustainable management and monitoring of the Jaguar), especially to the local wildlife and enforcement authorities (incl. management of protected areas) in and among the Jaguar Range States, including the cooperation with other Parties and international organizations.
Action 5.1.3.	Provide to the trained personnel, the necessary infrastructure, equipment and rescue centers for the implementation of their tasks.
Action 5.1.4.	Promote capacity building to local authorities and other stakeholders for the implementation of jaguar coexistence strategies.
Result 5.2.	The relevant information on Jaguars (reports and publications) is exchanged among all Ranges States, and relevant bodies of the Conventions.
Action 5.2.1.	Use all appropriate available mechanisms for the exchange of information among Range States, relevant bodies of the Conventions, and other stakeholders.
Action 5.2.2.	Take the necessary measures to ensure the preparation and submission of the CITES annual illegal trade reports, in accordance with Res. Conf. 11.17 (Rev. CoP19), including information related to illegal trade in jaguar and its parts (see 4.1.2).

Objective 5.	Capacity-building and awareness-raising (continued)
Result 5.3.	Landscape-level, national and global awareness for the conservation of the Jaguar across its range is increased, and the conservation of Jaguar and wildlife conservation is integrated into educational curricula at national and subnational levels.
Action 5.3.1.	Establish cooperation with appropriate international, national and local media outlets to increase outreach for conservation messages and awareness campaigns (see also Action 4.3.2).
Action 5.3.2.	Review and improve available propagation materials and educational tools on conservation of the Jaguar and identify opportunities at national and subnational levels for further integration and intercultural focus adapted to the indigenous and rural context into educational curricula in schools, universities and professional training colleges and other public outreach efforts.
Action 5.3.3.	Design and implement multilingual outreach and (public) awareness campaigns (e.g. “All4Jaguars”) targeting people and communities living with Jaguars, and other relevant stakeholders.
Action 5.3.4.	Recognize the Jaguar as the flagship species and a positive symbol in all Range States to improve awareness of the need of protection and conservation of the species and its habitat.

Objective 6.	Knowledge and information
	Generate knowledge and information about key aspects related to decision making for jaguar conservation.
Result 6.1.	Standardized surveys (demography, genetics, health) for the study of Jaguar and wild prey species are established in the PLJC.
Action 6.1.1.	Integrate standardized protocols and monitoring and evaluation methods for the Jaguar (demography, genetics, health) and its wild prey species, and promote trainings for their implementation.
Action 6.1.2.	Promote the creation of appropriate partnerships with relevant institutions for performing *in situ* monitoring, genetic analysis, and health screening within and between Range States.
Action 6.1.3.	Develop and apply a spatial implementation scheme at a regional distribution scale for the protocols (Action 6.1.1), in PLJC (see also Result 4.1) and areas with information gaps.

Objective 6.	Knowledge and information (continued)
Result 6.2.	Monitoring protocols of the threats to Jaguars incl. e.g. conflict levels, illegal killing and trade, and health hazards, are available.
Action 6.2.1.	Develop and implement a protocol for the monitoring of human-Jaguar conflicts.
Action 6.2.2.	Develop and implement a protocol for the monitoring of illegal killing and trade in Jaguar parts and derivatives (see also result 4.2).
Action 6.2.3.	Develop and implement, in cooperation with veterinarian institutions, screening protocols for jaguar health hazards (live captures and necropsy of dead individuals).
Action 6.2.4.	Develop and implement other protocols as needed.
Result 6.3.	The impact and effectiveness of conservation projects is evaluated.
Action 6.3.1.	Develop a template for a standardized impact monitoring protocols (Monitoring & Evaluation Framework) for *in situ* projects.
Action 6.3.2.	Ensure that each conservation project applies a similar Monitoring & Evaluation Framework.
Result 6.4.	A long-term system for the collection and exchange of data from the monitoring of Jaguar populations and data on mortalities (e.g. road mortality, illegal killing) is available and said data is shared on a web portal.
Action 6.4.1.	Support the development and establishment of the system, integrating datasets.
Action 6.4.2.	Develop, in cooperation with all Range States and other key stakeholders, Terms of Use for the system.
Action 6.4.3.	Secure the management, maintenance, and update of the system.
Action 6.4.4.	Develop a web portal for the dissemination of relevant information and documents for the conservation of the Jaguar.
Action 6.4.5.	Synchronize and harmonize data and information shared in the system with existing national and other repositories.
Result 6.5.	Knowledge gaps in human-dimension aspects associated with Jaguar conservation are identified and addressed.
Action 6.5.1.	Identify knowledge gaps and open questions relevant to the human-dimension for conservation of the Jaguar.
Action 6.5.2.	Support the implementation of projects in cooperation with academia and/or other key stakeholders to address the identified knowledge gaps under Action 6.5.1.

CROSSCUTTING ENABLING MECHANISMS

Mechanism A.	**Cooperation, coordination and effectiveness evaluation**
	Strengthen the cooperation and coordination between Jaguar Range States, indigenous people and local communities, women and youth, and the global conservation community (biodiversity-related and other Conventions, IGOs, international and local NGOs, scientific institutions, and the private sector) for the conservation of the Jaguar and evaluation of the effectiveness of the implemented measures.
Result A.1.	Broad international partnerships and synergistic cooperation between Jaguar Range States and other relevant institutions and stakeholders engaged in the conservation of Jaguars, are established and maintained.
Action A.1.1.	Encourage collaboration between governments, multilateral environmental agreements, intergovernmental organizations, financial institutions, non-governmental organizations and other stakeholders in the conservation of jaguars and to combat poaching and illegal trade in the species.
Action A.1.2.	Coordinate existing initiatives and proposed activities, their linkages and complementarities, to promote integration, leverage cooperation and avoid duplication of efforts and information.
Result A.2.	The impact and effectiveness of the Regional Action Plan are optimized based on adaptive monitoring and evaluation management.
Action A.2.1.	Establishment of a long-term mechanism to ensure regular coordination meetings and to monitor the effectiveness of the Regional Action Plan.
Action A.2.2.	Define impact indicators that allow for measuring if Objectives of the Regional Action Plan are achieved.
Action A.2.3.	Define operation indicators that allow for measuring if Actions and Results of the Regional Action Plan are being effectively implemented.
Action A.2.4.	Periodic measurement of indicators and development of reports on the implementation and results of the Regional Action Plan.
Action A 2.5.	Regularly review and adapt the Regional Plan of Action as needed.

Mechanism B. Sustainable Funding	
To establish innovative, sustainable and long-lasting mechanisms for Jaguar conservation and research programmes including the preservation of associated ecosystems and securing sustainable livelihoods.	
Result B.1.	Financial needs for the implementation of the Regional Action Plan are evaluated.
Action B.1.1.	Identify existing and initiated financial mechanisms and funding efforts for range-wide Jaguar conservation and related research.
Action B.1.2.	Estimate the financial needs for the implementation of the Regional Action Plan and prepare diversified financial sustainability plans.
Action B.1.3.	Evaluate potential sources for the generation of shared funds (e.g. GEF funding, business-based incentives) for the implementation of the Regional Action Plan.
Result B.2.	Possibilities for the management of shared funds are evaluated and a suitable structure is established.
Action B.2.1.	Identify existing funding mechanisms and financial sustainability efforts to generate and manage funds for Jaguar conservation, to inform the discussion under Action B.2.2.
Action B.2.2.	Suggest new possible financial structures for the management of shared funds for the implementation of the Jaguar Regional Action Plan between the Range States, the Conventions, other partners, and with potential donors.
Result B.3.	Sustainable funding for the implementation of the Jaguar Regional Action Plan and priority activities is secured.
Action B.3.1.	Secure funding for the coordination and management of the Regional Action Plan as defined under Result B.1, including regular Range State Meetings with participation from the finance sector, the private sector and civil society.
Action B.3.2.	Secure funding for projects contained in the Jaguar Regional Action Plan commissioned directly through the Jaguar Regional Action Plan governance structures with participation from Range States, the finance sector, the private sector and civil society.
Action B.3.3.	Develop partnerships and adequate tendering procedures to implement projects / actions under the Regional Action Plan through public calls.

Mechanism C. Policy and Legislation	
To strengthen, harmonize, operationalize, and implement appropriate international and national policies and legal frameworks for the conservation and protection of Jaguars, their wild prey, habitats and corridors, while also generating incentives for enhanced political commitment and local community support.	
Result C.1.	Effective national and international policies and legislations for the conservation of the Jaguar, their wild prey, and their habitats in the Jaguar Range States, are revised, harmonized, integrated and implemented (e.g. through NBSAPs).
Action C.1.1.	Review and update, when possible, and develop, when necessary, national/ regional Conservation Strategies, National Biodiversity Strategies and Action Plans (NBSAPs) or Jaguar-specific National Action Plans (NAPs), and landscape-level action plans (e.g. for transboundary Jaguar Conservation Units[9]) and other guidelines and protocols for the conservation of the Jaguar and harmonize them with the Regional Action Plan, if necessary, identifying progress, information gaps and priority needs.
Action C.1.2.	Compile and assess, in a review report for the Jaguar Range States and relevant bodies of the Conventions, the effectiveness of relevant existing policies and legislation, and identify appropriate policy reform targets, including intersectoral as well as major barriers that need to be removed for the effective conservation of the Jaguar and the management of their wild prey, and conservation of PLJC and (transboundary) corridors.[10]
Action C.1.3.	Review and adapt, when necessary, policy and legislation related to jaguars at national level according to support the implementation of the Regional Action Plan, including: (i) establishment of clear administrative and criminal sanctions for hunting, trafficking, and noncompliance with coexistence practices; (i) modify the language of existing laws to strengthen their adoption, implementation, and enforcement; (iii) improvement of policy and administrative sanction harmonization among range States.

9 See Jaguar 2030 Roadmap Chapter 4: Transboundary profiles.

10 See also Kretser, H. E., Nuñez-Salas, M., Polisar, J., & Maffei, L. (2022). A Range-Wide Analysis of Legal Instruments Applicable to Jaguar Conservation. Journal of International Wildlife Law & Policy, 25(1), 1–61. https://doi.org/10.1080/13880292.2022.2077406.

Mechanism C.	Policy and Legislatio (continued)
Result C.2	PLJC are identified, preserved and managed under regulatory frameworks.
Action C.2.1.	Review and update Jaguar Conservation Units and the Jaguar Corridor (see definitions in Annex III; see also Result 6.1 and Action 1.1.1).
Action C.2.2.	Perform analyses of gaps and needs of protected areas (including the management of already gazetted PAs) or OECMs for Jaguars throughout the distribution range and at national and transboundary level, and a baseline assessment of Jaguar Corridor functionality (see also Objective 6), considering existing spatial units, such as Jaguar Conservation Units and the Jaguar Corridor (see also Result 1.1, 1.2).
Action C.2.3.	Utilizing the shared gaps and needs analysis to promote the creation of new protected areas or OECMs and improvement of protected area management, and strengthening. National and transboundary corridors (see also Action 1.1.4).



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ANNEXES



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ANNEX 0 – BACKGROUND

The jaguar (*Panthera onca*) is the largest cat species and the only representative of the genus *Panthera* that occurs in the Americas. It has been included in CITES Appendix I since 1975 and is classified as Near Threatened (NT) in the IUCN Red List of Threatened Species. It was listed in CMS Appendices I and II at COP13 in Gandhinagar in 2020, formally recognizing it as a species requiring coordinated, cross-border conservation action. Building on this recognition, the CMS Jaguar Initiative was established at the 14th Conference of the Parties (CMS COP14) in Samarkand in 2024, aiming to eventually create a Joint CITES-CMS Jaguar Initiative.[11] This Regional Action Plan has been developed based on Jaguar-related Resolutions, Decisions and Recommendations of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and other regional or range-wide plans, in collaboration with experts from the Cat Specialist Group of the International Union for Conservation of Nature (IUCN).

The following documents provide the foundation and mandates for the development of this Regional Action Plan:

- CITES Decisions 19.110 to 19.114 Jaguar (*Panthera onca*);
- CITES SC77 Doc.43 Jaguars (*Panthera onca*), which presents the results and recommendations of the 1st meeting of jaguar range States (Cuiabá, 2023);CMS Res 14.14 CMS Jaguar Initiative (*Panthera onca*);
- CMS Decision 14.173-14.178 CMS Jaguar Initiative (*Panthera onca*);
- the Report of the Joint CITES-CMS Virtual Meeting of the Jaguar Range States, 2 June 2025;

and integrates existing Conservation Strategies and related strategic document on the conservation of Jaguars, their prey and habitats, such as:

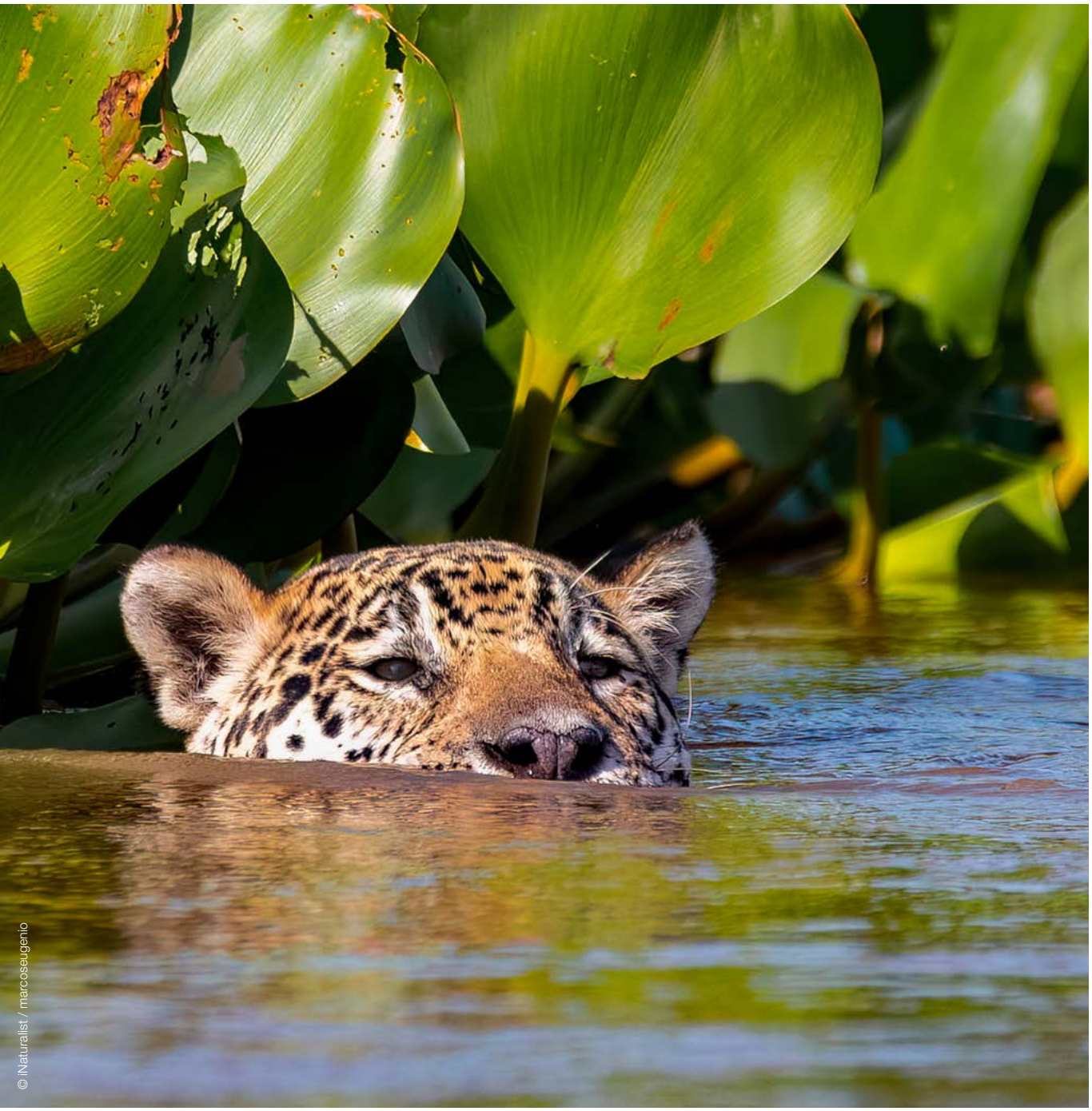
- the Jaguar 2030 Conservation Roadmap for the Americas;
- and the Regional Conservation Strategy for the Jaguar in South America.

Several of the Objectives and related Results and Activities will contribute to achieving the 2030 Targets of the Global Biodiversity Framework (GBF) of the Convention on Biological Diversity (CBD), namely Target 2 (Restore 30% of all Degraded Ecosystems), Target 3 (Conserve 30% of Land, Waters and Seas), Target 4 (Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts), Target 5 (Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species), Target 9 (Manage Wild Species Sustainably To Benefit People), Target 11 (Restore, Maintain and Enhance Nature's Contributions to People), Target 18 (Reduce Harmful Incentives and Scale Up Positive Incentives), Target 19 (Funding), Target 20 (Strengthen Capacity-Building and Cooperation for Biodiversity) and Target 21 (Ensure that Knowledge is Available and Accessible To Guide Biodiversity Action).

11 The Jaguar is also specifically listed in the CMS-CITES Joint Work Programme 2021-2025 (Action B10: "Collaborate on the conservation of Jaguar, taking into account existing mandates, and ongoing efforts and initiatives in the region" (See CITES SC73 Doc 13, Annex 2))

Previous versions were made available at the CITES 78th Standing Committee meeting in Annex 3 to document SC78 Doc. 44.2 as a draft Program of Work. The CMS and CITES Secretariats invited Parties and partners to comment on the document (CMS Notification 2025/011 and CITES Notification No. 2025/023, respectively).

CMS and CITES Secretariats held a joint jaguar range State meeting online on 2 June 2025 which *inter alia* also considered the draft Program of Work. Brazil, Colombia, Costa Rica, Mexico and the United States of America commented on it, and it was agreed that further comments could be provided by 30 June 2025 to produce a draft Regional Action Plan. The document was revised again based on the answers received in response to the Notifications and during and after the Virtual Meeting to become this draft Regional Action Plan for Conservation of Jaguar to be discussed at the Second Range State meeting in Mexico on 22-24 September 2025.



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ANNEX I – OVERVIEW NATIONAL ACTION PLANS (NAPS) AND OTHER STRATEGIC DOCUMENTS

National or Regional (transboundary) Action Plans, developed in a participatory approach considering national legislation and including all important sectors and national/local stakeholders and communities concerned, are an important tool for the implementation of over-arching, range wide conservation Results and principles. Several Range States already have developed such plans, which should considered being updated, other Range States are invited to develop NAPs.

National Action Plans:

Country	Year	Title	Elements
Argentina	**2016**	Plan Nacional de Conservación del Monumento Natural Yaguareté (*Panthera onca*)	8 *Objetivos particulares*, *74 Acciones*
Bolivia	**2020**	Plan de Acción para la Conservación del Jaguar (*Panthera onca*) 2020-2025	7 *Objetivos estratégicos*; 4 *Lineas estrategicas de acción* with 109 *acciones*
Brazil	**2018**	Plano de Ação Nacional para a Conservação dos Grandes Felinos, 2018-2023	6 specific objectives, 40 actions, 11 goals, estimated cost of R$ 5,073,100.00
	2025	Plano de Ação Nacional para a Conservação dos Grandes Felinos – ciclo II, 2025-2030	6 specific objectives, 56 actions, US$ 4,244,000.00
Ecuador	**2022**	Plan de Acción para la Conservación del Jaguar en el Ecuador 2022-2031	14 *Objetivos*, 5 *Lineas de acción*, 39 *Actividades*
Honduras	**2011**	Plan Nacional para la Conservación del Jaguar (*Panthera onca*), Honduras	7 *Objetivos específicos*, 7 *Lineas de acción*, 52 *Acciones*
Mexico	**2009**	Programa de acción para la conservación de la especie: Jaguar (*Panthera onca*)	17 *Componentes,* 67 *Actividades*
Panama	**2011**	Action Plan for Jaguar Conservation in Panama – 2011	4 Components, 16 Objectives
Paraguay	**2016**	Plan de Manejo de la *Panthera onca* Paraguay 2017-2027	5 *Líneas de Acción*, 16 *Objetivos específicos*, 53 *Actividades*
Peru	**2021**	Plan Nacional de Conservación del Jaguar (*Panthera onca*) en el Perú, período 2022-2031	4 *Objetivos específicos*, 8 *Lineas de Acción*, 21 *Actividades*
U.S.A.	**2018**	Jaguar Recovery Plan	3 Recovery Units, 8 Recovery Objectives, 32 Recovery Actions



Range-wide or Regional Plans:

Region	Year	Title	Publisher	Elements
Rangewide	**2019**	Estrategia de conservación Jaguar 2020-2030	WWF	5 *Objetivos*
Rangewide	**2022**	Jaguar 2030 Conservation Roadmap for the Americas	Jaguar 2030 Coordination Committee*	4 Pathways, 92 Steps
South America	**2023**	Regional Conservation Strategy for the Jaguar in South America	IUCN SSC Cat Specialist Group	9 Objectives, 30 Results, 100 Activities
Misiones, Argentina	2011	Plan de Acción para la conservación de la población de Yaguareté (*Panthera onca*) del corredor verde de Misiones	Subcomisión Selva Paranaense	7 *Programas*, 38 *Acciones*

*Jaguar 2030 Coordination Committee. 2022. Jaguar 2030: Conservation Roadmap for the Americas. UNDP, UNEP, UNODC, Panthera, WCS, WWF & Endorsing Jaguar Range Countries: 91 pp. Available from: https://internationaljaguarday.org/

ANNEX II – JAGUAR CONSERVATION UNITS, THE JAGUAR CORRIDOR AND CRITERIA FOR THE SELECTION OF LANDSCAPES

The Jaguar 2030 Roadmap uses the concept of „Jaguar Conservation Units" (JCUs) and the „Jaguar Corridor", terms also used in this Regional Action Plan. JCUs are „areas with stable prey community that contain a population of at least 50 breeding jaguars", and „areas with fewer than 50 breeding jaguars but with sufficient habitat and prey base such that jaguar populations could increase under favourable conditions". The Jaguar Corridor includes „least-cost path corridors connecting the JCUs". Together, JCUs and the Corridor, will ascertain the viability of populations. The maps from the Jaguar 2030 Roadmap depict the Transboundary Priority Areas for Mesoamerica and South America. More detailed maps (e.g. by country) can be found in the Jaguar 2030 Roadmap.

During the 1st Meeting of the Jaguar Range States (Cuiabá, 2023), there was a discussion session on criteria for the selection of landscapes (see SC77 doc. 43). During the session, participants discussed the minimum criteria for the characterization of national and cross-border territories to enable priority setting if the States consider it necessary. The exercise was based on the territories proposed in the 2030 Jaguar Roadmap: close to 80 landscapes. Participants defined the following criteria, which should be used to assess the landscapes in which conservation actions are implemented and to establish future priorities according to various needs:

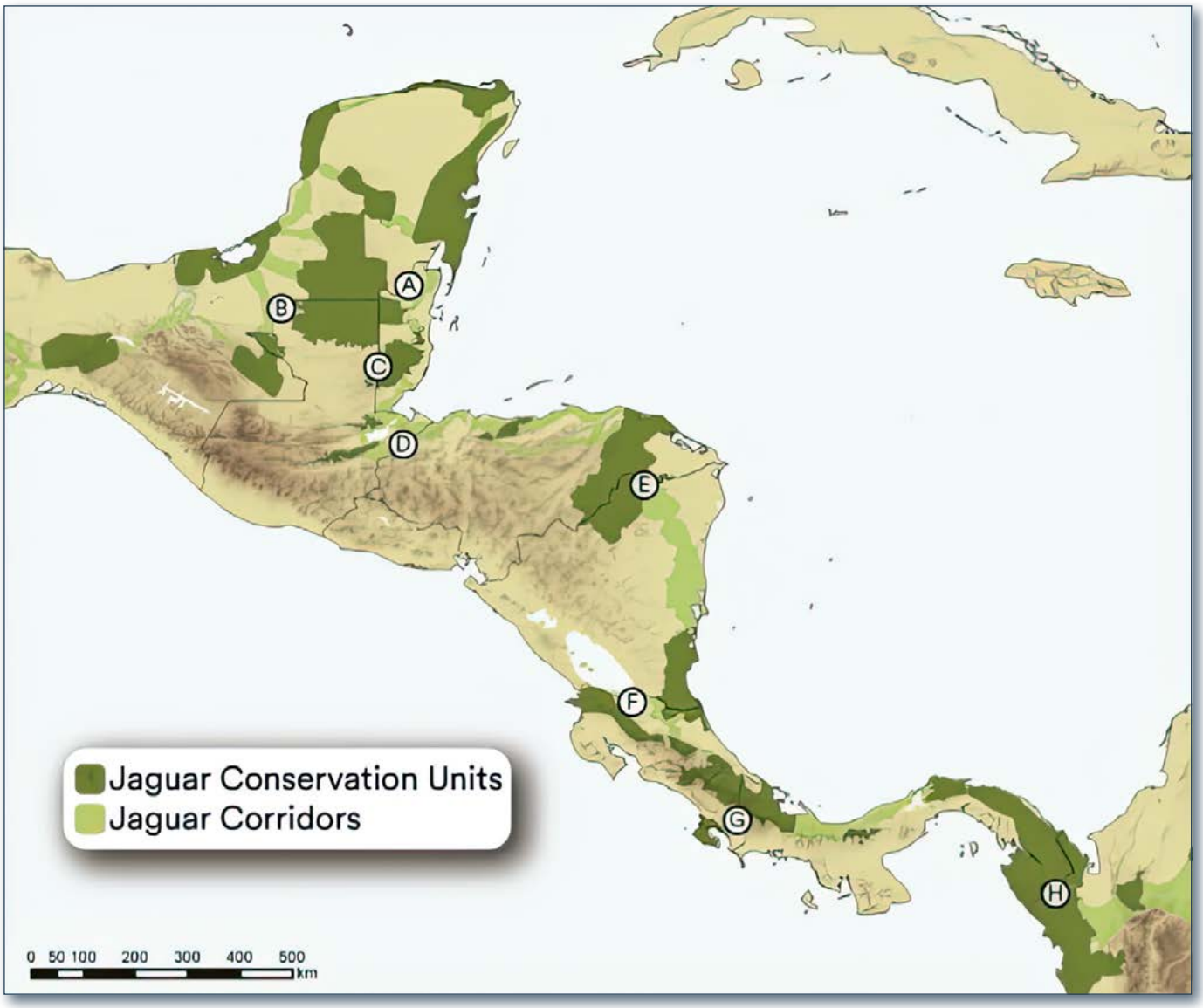
a) conservation status: presence/absence, population size, population density, population trends, habitat quality (land cover, prey, connectivity);

b) threats: killing of jaguars due to conflicts with humans, opportunism and livelihoods and illegal trade, habitat loss (i.e., expansion of unsustainable agricultural practices, wildfires, infrastructures, etc.), decrease of prey availability; and

c) conservation efforts: effective management of protected areas and corridors, management of negative human-jaguar interactions, landscape restoration, jaguar-friendly productive practices, enforcement, engagement and environmental awareness of indigenous peoples and local communities, and behaviour change.

Other indirect factors to consider in relation with the three criteria mentioned in the previous paragraph include mining, migration, fake news on social media, collisions with vehicles, existence of other effective area-based conservation measures (OECMs) and subnational protected areas, indigenous peoples and local communities, financial mechanisms, climate change, and property regimes.

It should be noted that it is not possible to apply the criteria uniformly to all countries, but an initial consensus was reached on the minimum necessary criteria that apply to all countries, considering that the threats are rather similar.



A – Selva Maya (Mexico-Guatemala-Belize)

B – Montes Azules – Sierra del Lacandón

C – Maya Mountains, Belize-Guatemala

D – Guatemala-Honduras

E – Honduras-Nicaragua

F – The Cerro Silva-Indio Maiz-Tortuguero

G – Talamanca Cordillera Central

H – Darien, Panama-Colombia border



A – Darien, Panama Colombia border

B – Colombia-Venezuela border

C – The Southwestern Colombia-Ecuador border

D & E – The northern Amazon, Colombia-Peru-Brazil

F & G – Eastern Venezuela

H, I, K & M – The northern Guyana shield

J, L & N – Guyana-Suriname-French Guiana borders

O – Ecuador-Colombia-Peru

P – Peru-Brazil

Q – Greater Madidi-Tambopata Landscape – Yungas – Amboro National Park

R – Noel Kempff

S – Chaco and Yungas

T – Bolivia-Paraguay-Brazil border

U – Paraguay-Brazil border

V – Paraguay-Argentina border

W – Paraguay-Brazil-Argentina border

ANNEX III – THREATS TO THE JAGUAR AS IDENTIFIED IN OTHER OVER-ARCHING STRATEGIC PLANS (SEE APPENDIX II)

The problem analysis, hence the identification of threats, underlaying causes and drivers, and constraints to the conservation of a species is an important exercise to define the Objectives of a Conservation Strategy or Regional Action Plan (see IUCN SSC Guidelines for Species Conservation Planning). Such exercise was not possible for drafting this document, but some documents refer to the threats. Two range-wide strategic documents have been consulted for the definition of the Objectives, the Jaguar 2030 Conservation Roadmap for the Americas and the Regional Conservation Strategy for the Jaguar in South America.

The Jaguar 2030 Roadmap presents a short narrative about general threats range-wide including their drivers, plus the main threats per country in the country profiles. Overall, habitat loss and fragmentation were identified as the main threat, which is driven by unsustainable agriculture and cattle ranching as well as by large-scale infrastructure development. Direct killing is the second most important threat. This is driven by actual or suspected livestock depredation, and by fear of attacks on people. Additionally, sport and trophy hunting still exist and appear to be increasing due to demand for jaguar parts for trade. Jaguars are also threatened by vehicle-jaguar collisions. See compilation in Table 1.

The Regional Conservation Strategy presents threats (but also weaknesses, strengths and opportunities) ranked according to their importance. Habitat loss and direct killing were top ranking. However, the analysis differentiated threats according to their drivers, so that e.g. direct killing simultaneously received the highest possible rating and the lowest possible rating depending on the underlying cause / driver. For direct killing, the highest-ranking drivers were retaliatory killing (livestock, dogs) and trade/ trafficking. Meanwhile, direct killing driven by fear / preventative / casual received the second-highest ranking, whilst direct killing for sustenance / trophy received the lowest ranking and was basically not considered a threat. The highest-ranking drivers for habitat loss are related to human expansion into natural habitats, including infrastructure, mining, agriculture and ranching. Habitat loss driven by fire, unsustainable logging and urban development were ranked lower. Prey base depletion was also identified as a threat, where sustenance and commercial hunting were ranked as higher drivers than the same causes as above (habitat loss and direct killing), and invasive and feral species. Climate change, and civil unrest received the second-lowest ranking.

Table 1. Threats compiled from the Jaguar 2030 Roadmap (Range-wide and per country) and from the Regional Conservation Strategy for South America (South America) per region and Range State.

Threat	Range-wide	South America	AR	BO	BR	BZ	CO	CR	EC	GF	GT	GY	HN	MX	NI	PA	PE	PY	SR	VE
Habitat	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X
Killing	X	X	X	X		X	X	X		X				X	X	X		X	X	X
Vehicle	X																			
Prey		X	X*			X		X			X		X		X	X	X			
Climate		X																		
Unrest		X																		

*Indiscriminate hunting, even in protected areas

The Regional Conservation Strategy for South America also identified Weaknesses (sometimes synonymised with Constraints or Shortcomings). These Weaknesses are summarised in Table 2.

Table 2. Weaknesses identified by the Regional Conservation Strategy for South America. Four independent working groups identified the weaknesses. Consequently, they can have a ranking between 4 (identified as important weakness by all working groups) and 0 (not identified as important weakness by any working group).

Weakness	Ranking	Weakness	Ranking
Poor regulation & law enforcement (presence & prosecution)	4	Political instability / Slow political traction / poor governance / poor will	2
Lack of biological / social science knowledge / information	4	Lack of education and awareness and misconception of general public	2
Suboptimal collaboration between institutions/NGOs	3	Lack of suited PAs and proper management of Pas, and PADDD	2
Limitations to reach decision-makers	3	Inadequate resources / investments – limited funding	1
Corruption	2	Lack of biodiversity mainstreaming into different sectors	1
Poverty/Lack of alternative/sutainable livelihoods and opportunities for people	2	Lack of political will	0
Poor land-use planning	2	Poor communication / lack of multidisciplinary cooperation	0
Inadequate capacity (knowledge, patrol, PA management)	2		

ANNEX IV – SUMMARIES OF THE RED LIST AND THE GREEN STATUS OF SPECIES FOR THE JAGUAR *PANTHERA ONCA* IN THE IUCN RED LIST OF THREATENED SPECIES™

Tabea Lanz and Elliot Carlton, IUCN/SSC Cat Specialist Group, with thanks to Molly Grace, IUCN Green Status Working Group and Melissa Arias, ZSL

Note: *The Red List – estimating the extinction risk – and the new Green Status of Species – evaluating the recovery status – of a species are important assessment to inform the development of large-scale conservation plans. Both assessments are presently in process by a group of Jaguar experts and are expected to be published end of 2025. We summarise here the 2017 Red List Assessment (RLA; Quigley et al. 2017) and a preliminary Green Status of Species assessment (GSS; Carlton 2024).*

The IUCN Red List of Threatened Species™, known as the IUCN Red List, has been established in 1964 and is the world's most comprehensive inventory of the global conservation status of plant, fungi and animal species (IUCN 2019). The IUCN Red List assesses the extinction risk of a taxon based on a comprehensive, objective and scientifically rigorous approach (IUCN Standards and Petitions Committee 2024). The goal of the IUCN Red List is to inform and catalyse action for biodiversity conservation and policy change. It aims to convey the urgency and scale of conservation problems to the public and policy makers, and to motivate the global community to reduce species extinctions (IUCN 2019). To evaluate the extinction risk of taxa, the IUCN Red List uses five Criteria to classify them into one of nine Red List Categories (Figure 1.; IUCN 2012).

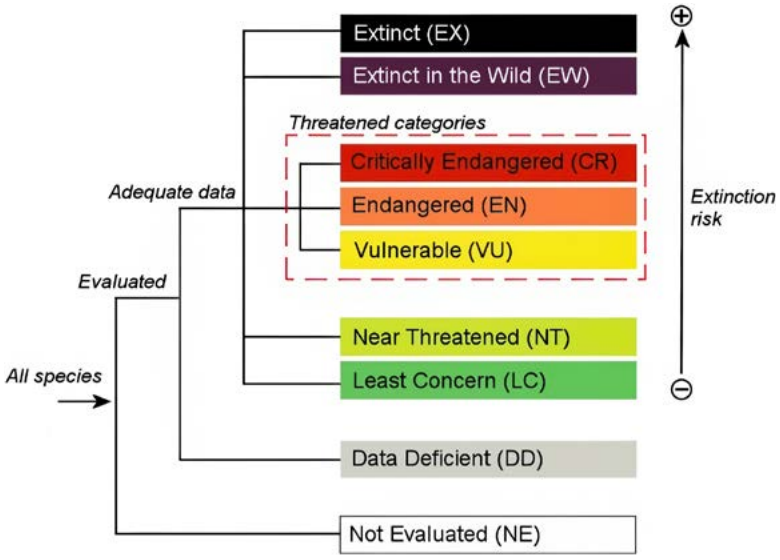


Figure 1. The nine IUCN Red List Categories. Species which were never evaluated against the IUCN Red List Categories and Criteria are labelled as NE, for species where very limited data is available and where it is not clear if they classify for LC or CR are DD. Species with a low risk of getting extinct in the near future are classified as LC, species that nearly meet the threatened Categories are NT, species with a high risk of getting extinct in the near future are classified as VU, with a very high risk of getting extinct as EN and with an extremely high risk of getting extinct in the near future as CR. When individuals of a species only remain in captivity they are classified as EW, if all individuals have gone and nowhere the species is existing it is EX (IUCN Standards and Petitions Committee 2024).



The IUCN Red List has a strong scientific base. Assessments are done by the world's leading species experts and go through a thorough review process before publication. The IUCN Red List is not just a list of taxa and does not only evaluate the extinction risk of a taxon but also provides important background information and analyses on the status of the taxon in a global or regional perspective such as on its range, population size and trend, habitats and ecology, use and trade, threats and conservation actions (IUCN Standards and Petitions Committee 2024). It establishes a baseline from which to monitor the future status of a taxon. The periodic assessment process for the IUCN Red List is important to identify improvements and aggravations of a taxon's situation. In this regard, the IUCN Red List helps to define the most urgent conservation measures for a taxon and is widely used to inform and influence biodiversity conservation. Ultimately, the IUCN Red List informs policy and provides information to international agreements such as the Convention on Migratory Species (CMS) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES; IUCN Standards and Petitions Committee 2024).

The IUCN Red List assessments of the Jaguar (*Panthera onca*)

The Jaguar (*Panthera onca*) has already been assessed eight times for the IUCN Red List of Threatened Species™. In the first four evaluations, the Jaguar was assessed as Vulnerable (1982, 1986, 1988 and 1990). In 1996 it has been down-listed to Near Threatened (NT) and stayed NT in the 2002 and 2008 assessment. In the last Red List assessment of 2016 (Quigley *et al*. 2017), the Jaguar has been re- classified as Near Threatened under the Criteria A2cd in spite of a suspected population decline of 20– 25% over the past three generations (21 years) based on declines in area of occupancy, extant of occurrence and habitat quality, together with actual or potential levels of exploitation (Figure 2.a, b).[12]

12 Note: in some national assessments, the Jaguar is listed in a higher threat category.



Figure 2.a Comparison of the range of the Jaguar from 2008 and 2015 and identified gaps in knowledge from 2008 (2,006,502 km²).

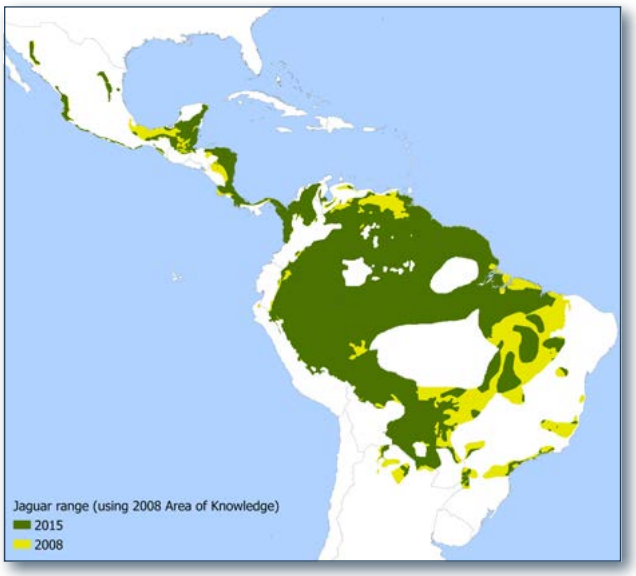


Figure 2.b After eliminating gaps in knowledge from the 2008 assessment, there is a documented 20% decline in Jaguar range from 2008 to 2015. (Figures taken from Quigley *et al.* 2017.)

In most of the range countries, declines in the Jaguar population and habitat loss have been documented and connectivity among Jaguar populations has been lost at local and regional scales. The population trend of the Jaguar has been assessed as decreasing and its population assumed to be severely fragmented. However, the Jaguar is difficult to assess, has low densities and the effects of small population and habitat degradation is unclear. Thus, according to the 2017 assessment, the suspected population decline could have been a significant underestimate and the species could likely qualify for VU again in the near future.

Since 2008, threats to the Jaguar have continued to intensify and there have been indications of increasing fragmentation of Jaguar populations, particularly in eastern and south-eastern Brazil, northern Venezuela and the Maya Forest of Mexico and Guatemala. Beside habitat loss and fragmentation, Jaguar-livestock conflict has been assessed to be a serious threat to the survival of the species across its range in 2016. Additionally, even in nominally protected areas, Jaguars were stated to often suffer from human impacts such as illegal hunting. The stronghold of the Jaguar is the Amazon basin. In much of the drier northern part of its range, in Arizona and New Mexico in the United States and the extreme northern Sonora state in Mexico as well as northern Brazil, the pampas scrub grasslands of Argentina and throughout Uruguay, the Jaguar is virtually extinct. Overall, Jaguars were estimated to only remain in around 51% of its historic range.

Jaguar viability was assessed by Sanderson *et al*. (2002). For populations in 70% of the Jaguars range (Amazon Basin rainforest and adjacent areas in the Pantanal and Gran Chaco, tropical moist lowland forest in Mesoamerica and a small strip of the Choco-Darien of Panama and Colombia to northern Honduras) a high probability for survival was estimated. In 18% of the Jaguar range (areas adjoining the areas with high chance of survival and including large part of the northern Cerrado, most of the llanos in Venezuela and Colombia, the northern part of the Colombian Caribbean coast, highlands of Costa Rica and Panama, southern Mexico

and Sierre de Taumalipas and Sierra Madre Oriental) populations were estimated to have a medium probability of long-term survival. In 12% of the range (Atlantic Tropical Forest, Cerrado of Brazil, parts of the Chaco in northern Argentina, the Gran Sabana of northern Brazil, Venezuela and Guyana, parts of coastal dry forest in Venezuela and remaining range in Central America and Mexico), Jaguar subpopulations were estimated to have a low chance of survival and to be of high conservation concern.

Jaguar densities were estimated at 0.75 to 6 adults per 100 km² in Mexico. The Jaguar population in the Selva Maya in Yucatan Peninsula (Mexico) was estimated at 2,000 individuals, in the greater Lacadona Ecosystem in southern Mexico, Jaguar population was estimated at 62 to 168 individuals within protected areas. Mexico's national Jaguar census estimated 4,000-5,000 individuals in 2011. In the northern and central areas of Mexico Jaguars were becoming increasingly isolated and disappearing where they were previously detected.

In Central America Jaguar densities ranged from 0.74 to 11.2 per 100 km² and was found to be declining across the human-influenced landscape. The Talamanca Mountains of Costa Rica and Panama support a Jaguar population but the probability of long-term persistence was assessed as medium to low. Furthermore, Jaguar populations in protected areas in Guatemala, Honduras and Nicaragua were evaluated to be under great pressure from deforestation and hunting.

In South America Jaguar density in the Brazilian Pantanal reached from 6.6 to 11.7 per 100 km². In the Bolivian Amazon 2.8 per 100 km², and in the Colombian Amazon 4.5 and 2.5 per 100 km². In the Savannas of the Brazilian Cerrado density was 2 individuals per 100 km², 3.5 per 100 km² in the semiarid scrub of the Caatinga, 2.2 per 100 km² in the Atlantic Forest and 2.2-5 Jaguars per 100 km² in the Bolivian Gran Chaco. The Atlantic forest subpopulation in Brazil was estimated at 200 +/- 80 adults. Jaguar populations in the Chaco region of northern Argentina and Brazil and the Brazilian Caatinga showed low-density and were assessed to be highly threatened by livestock ranching and related persecution.

Across the Jaguar range, 34 subpopulations were identified by de la Torre *et al*. (2017). 97% met the criterium for Critically Endangered (25 subpopulations) or Endangered (8 subpopulations). The large Amazonia subpopulation, estimated to hold 89% of the total species population (57,000 out of 64,000), was the only one assessed as Least Concern (Figure 3.).

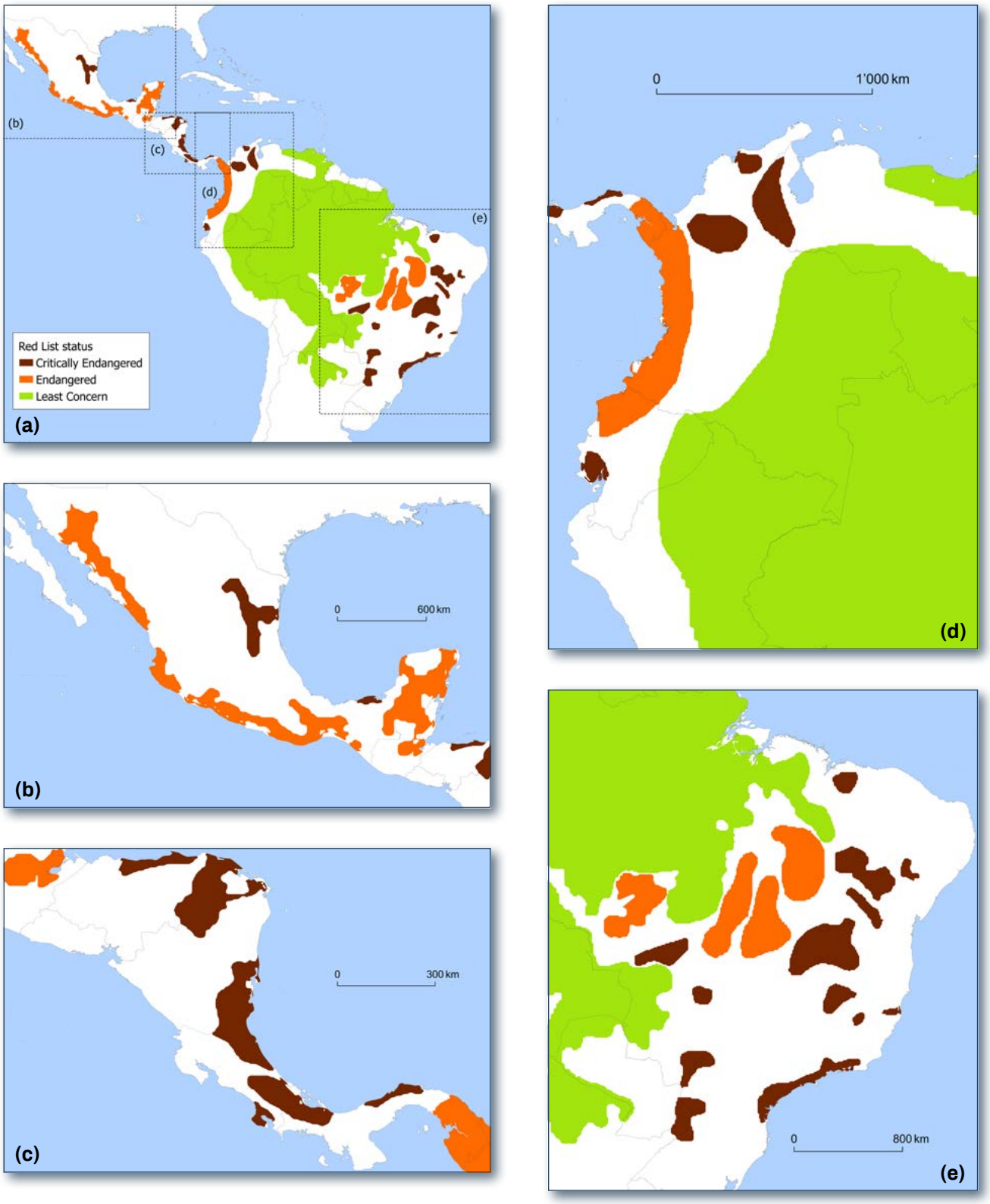


Figure 3. Red List Categories of Jaguar subpopulations according to de la Torre *et al.* (2017);
(a) throughout the Jaguars range,
(b) in Mexico,
(c) in Central America,
(d) in northern South America and
(e) in southern Amazonia
(Figure taken from Quigley *et al.* 2017).

Main threats to Jaguar populations identified in 2016 were habitat loss and fragmentation, killing for trophies and illegal trade in body parts and pro-active or retaliatory killings associated with livestock depredation and due to competition for wild meat with human hunters. Fragmentation and displacement were stated to lead frequently to a reduction in Jaguar and prey densities in leftover forest patches due to easier access by humans and Jaguars feeding on the replaced livestock, enhancing Jaguar-livestock conflict. Generally, the increasing human population is threatening the Jaguar by leading to more habitat loss and fragmentation and making wildlife easier accessible for hunting. Persecution is another big problem and only few areas within the Jaguar range could be considered to be safe. There is still a demand for Jaguar paws, teeth and other products, especially in local markets. Jaguars are also considered a replacement for tiger bone for traditional medicine purposes by the increasing Asian community in Latin America.

Although the Jaguar is fully protected at the national level across most of its range, is included in CITES Appendix I and specific conservation plans have been developed in several Range States (Appendix II), there is a need for further conservation actions. Jaguars have lost about 49% of their historical geographic range and are considered extinct in El Salvador, Uruguay and the United States. Jaguar population declines and habitat loss were documented for most of its range countries and connectivity among Jaguar populations has been lost at local and regional scales. Connectivity of Jaguar habitat, for example, has almost gone between Honduras and Guatemala, similar gaps have been documented across the Chaco Iguazu and Atlantic Forest, and between Tamaulipas and Veracruz. Additionally, corridors connecting Jaguar subpopulations lie mostly outside of protected areas making them even more vulnerable to human impacts. Many Jaguar populations require improved connectivity between core sites to survive in the long term. Evidence of little genetic differences among Jaguar populations further suggests that maintaining connectivity across the range is important. There is also a need for improved habitat protection, enhanced area and trade management, awareness raising, improvement of legislation at national and sub-national level and improved livestock management and compensation schemes. Better surveillance is needed regarding Jaguar population size and trend as well as the distribution and habitat trends, threats and trends in trade. More research is recommended regarding Jaguar life history and general ecology.

Important conservation actions conducted so far include reduction of Jaguar-livestock conflicts by improving livestock management practices and responding to reports of livestock depredation, further research to understand and address the hunting of Jaguar prey, awareness raising regarding the laws governing the hunting of wildlife and the necessity to adopt sustainable hunting practices, monitoring and safe-guarding Jaguar core populations (Jaguar Conservation Units (JCU); see Appendix III), maintaining of national and regional connectivity between populations by identifying Jaguar corridors between the JCUs and conserving them, as well as the development of national, regional and local monitoring programmes for Jaguars and their prey.

The IUCN Green Status of Species assessment of the Jaguar (*Panthera onca*)

The IUCN Green Status of Species (GSS) provides a standardised assessment of recovery status, complementing the Red List to provide a more complete picture of a taxon's status and incentivise more ambitious conservation goals (IUCN GSSWG 2024).

The GSS has two main goals: (1) to assess recovery status and (2) to assess conservation impact. To assess current recovery status, the GSS considers viability, spatial representation, and ecological functionality to calculate a Species Recovery Score and Category including the following steps (IUCN GSSWG 2024):

1. Determination of the indigenous range (distribution of taxon in the absence of human impacts, informed by historical and current distribution).

2. Division of the indigenous range into spatial units (subdivisions of the entire indigenous range, e.g., based on genetic or ecological divisions).

3. Assessment of the recovery status at the level of spatial units. Spatial units can be assigned one of four states: Absent (extinct or extirpated from the spatial unit), Present (the taxon is assessed as either threatened or Near Threatened with continuing decline under the regional Red List criteria in the spatial unit; IUCN 2012), Viable (the taxon is assessed as either Least Concern or Near Threatened with no continuing decline under the regional Red List criteria in the spatial unit; IUCN 2012), and Functional (the taxon is Viable and the taxon is fulfilling ecological functions at baseline levels across a majority of the spatial unit).

4. The states are weighted and based on this the Species Recovery Score (SRS) is calculated, and Species Recovery Category defined (ranging from 0% = Extinct in the Wild, to 100% = Fully Recovered or Non-Depleted; Figure 4.).

Under the GSS, a taxon is described as "Fully Recovered" if it is both Viable and Functional at baseline levels across its indigenous range. Within the GSS framework we can also assess the past and expected future impact of conservation by assessing the recovery status under several hypothetical scenarios; (1) counterfactual: hypothetical present status of the taxon if there had been no past conservation actions, (2) future-without-conservation: status in 10 years' time if all conservation actions were halted today, (3) future-with-conservation: expected status in 10 years' time given all planned conservation actions, and (4) long-term aspirational: potential status of the taxon in 100 years' time if all possible conservation actions are implemented. The scores calculated under these scenarios are compared to the current SRS to calculate the four Conservation Impact Metrics: Conservation Legacy (the past impact of conservation), Conservation Dependence (the expected short-term impact of halting conservation), Conservation Gain (the expected short-term impact of planned conservation actions), and Recovery Potential (an aspirational recovery target for the next 100 years; Figure 4.). The outputs of the GSS are published alongside the Red List of the corresponding taxa and together these provide important inputs regarding conservation planning and definition of priority conservation actions to enhance the recovery of taxa.

Conservation Impact Metrics for the Iberian Lynx (*Lynx pardinus*)

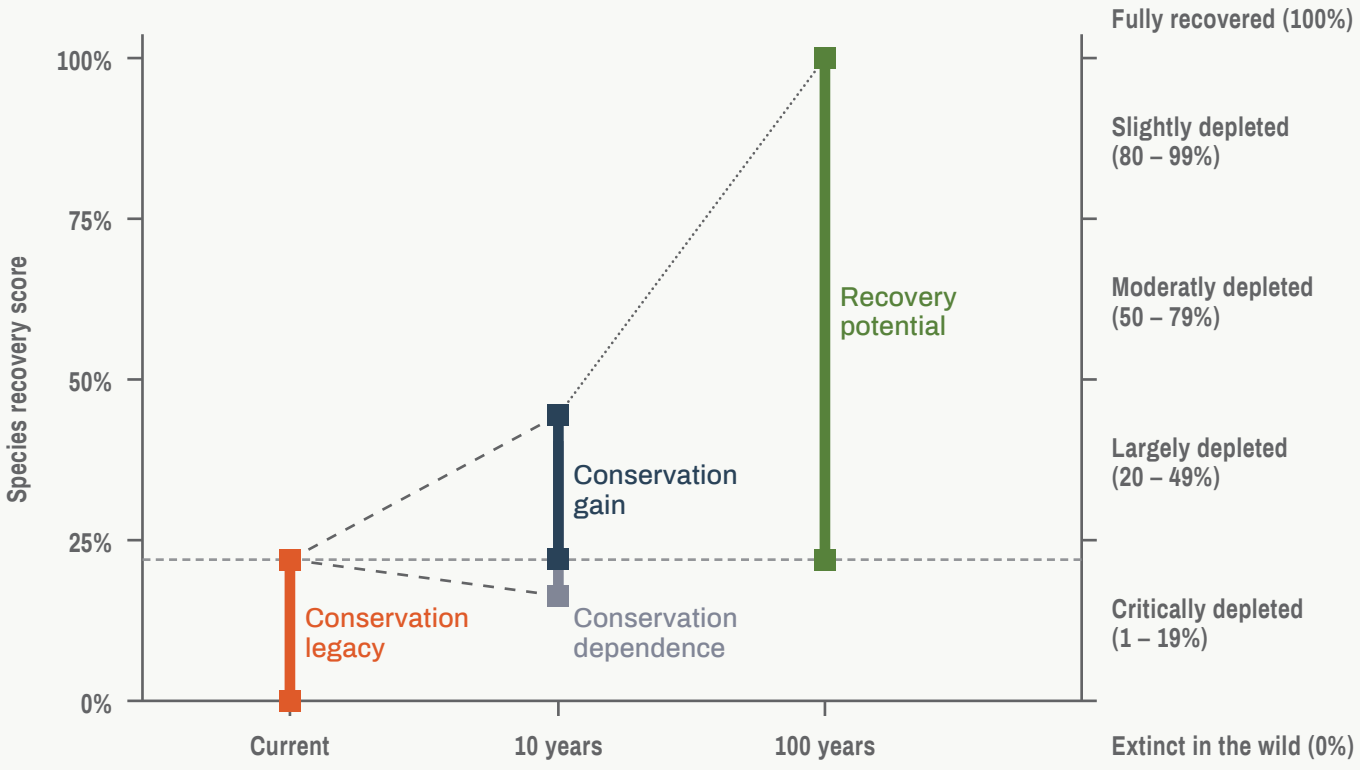


Figure 4. The four conservation impact metrics as calculated for the Iberian lynx (*Lynx pardinus*). Please note that these are not yet calculated for the jaguar and may take on very different values. The Green Score (left y-axis) and Category (right y-axis) are calculated under four hypothetical scenarios. The difference between these Green Scores and the current SRS (represented by the horizontal grey dashed line) gives the Conservation Legacy (orange), Conservation Gain (blue), Conservation Dependence (light blue), and Recovery Potential (green). (Salcedo *et al.* 2023)

A preliminary Green Status of Species assessment for the Jaguar (*Panthera onca*):

A Green Status of Species assessment for the Jaguar has not yet been published. However, a preliminary Green Status of Species assessment of the current recovery status of the Jaguar found the species to be Largely Depleted (Carlton, E. 2024). This preliminary result highlights that whilst the Jaguar is faring well in the Amazon (hence the latest Red List assessment of Near Threatened; Quigley *et al*. 2017), the species faces regional declines and extirpation across much of its indigenous range. The preliminary GSS assessment (i.e., estimation of the current state in each spatial unit) was conducted as part of master's research on the GSS using the assessment materials made available by the IUCN Species Survival Commission and mainly based on the last Red List assessment of the species (Quigley *et al*. 2017). It should be noted that the GSS assessment of the species is not final until it has been reviewed and published on the Red List website.

Historically, the Jaguar ranged from southwestern US, through central America, to as far south as central Argentina (Figure 5.; Panthera 2024). For the preliminary assessment, this historical range was delineated into 10 spatial units primarily based on the 8 Jaguar eco-regions of South America identified by Jędrzejewski *et al*. (2023b) - with two further spatial units based on the biogeographic regions of the Jaguar 2030

Roadmap (Forum for Jaguar Conservation 2018) representing the Jaguar's indigenous range in Central and North America (Figure 5.). The Jaguar was assessed as Functional in one spatial unit (Amazon) and Present in all other spatial units given the threatened status of these subpopulations (de la Torre *et al*. 2018, Jędrzejewski *et al*. 2023a, Thompson *et al*. 2023). This resulted in the recovery status being assessed as Largely Depleted. By highlighting regional threats and extirpations the GSS can emphasise the need for continued and intensified conservation action for the recovery of the species. This is particularly important as regional declines and extirpations of Jaguar also means the loss of critical ecosystem functions. Alongside an updated Red List assessment, species experts will do a GSS assessment for the Jaguar. The completed assessment will provide important information on the species' current recovery status. The Conservation Impact Metrics (which are not yet assessed withinthe preliminary assessment) will also provide information on the past, expected, and potential future impact of conservation on the status of the species.



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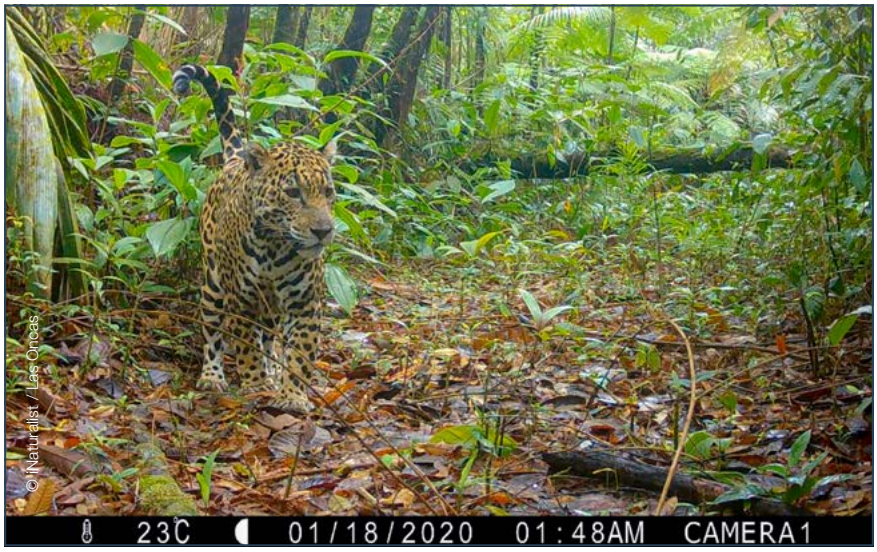

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Figure 5. Rough sketch of preliminary spatial units – adapted from historical range map taken from Panthera website (Panthera 2024), with spatial units primarily based on the Jaguar eco-regions identified by Jędrzejewski *et al.* (2023b); Pink: North America, Yellow: Central America, Dark Blue: Andes, Dark Green: Los Llanos and Guiana Highlands, Brown: Amazon, Light Blue: Cerrado East, Orange: Caatinga, Light Green: Cerrado West and Pantanal, Red: Atlantic Forest, Purple: Gran Chaco, Patagonia, and Pampas.

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