



**USAID**  
FROM THE AMERICAN PEOPLE

## BIODIVERSITY INTEGRATION REFERENCE SHEET

# BIODIVERSITY

 What is Biodiversity Programming?

 Challenges

 Approaches

 Programming Resources

 Monitoring, Evaluation & Learning

 Opportunities for Integration

 Key Documents

 Key Terms



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### ABOUT THIS SERIES

This reference sheet is one of a series of five whose purpose is to facilitate coordination and integration of biodiversity conservation with key sectors at USAID by using a common format to present the interests of these sectors and opportunities for integration through collaboration, co-funding or single sector funds. These sheets are intended to be used throughout the program cycle by environment and non-environment officers alike. For the full series of sheets, please see the back cover of this reference sheet.



# WHAT IS BIODIVERSITY PROGRAMMING?

## WHAT IS BIODIVERSITY?

Biological diversity, or biodiversity, is the variety of life including plants, animals, fungi and all other living things. It includes the range of variation within a single species, the variety of species in an ecosystem and the diversity of ecosystems on Earth.



## CONSERVATION IS DEVELOPMENT

Ecosystems are fundamental to life on earth. They provide the ecosystem goods and services critical to human development and well-being such as food, fiber, clean water, fertile soil and pollination. Maintaining these benefits is essential to realizing USAID’s goals of supporting self-reliance and resilience.

Developing countries are home to roughly two-thirds of the Earth’s biodiversity.

These countries play important roles as partners in safeguarding biodiversity around the world.

## BIODIVERSITY PROGRAMMING AT USAID

Biodiversity programming at USAID is guided by the 2014 [Biodiversity Policy](#), which includes two Agency-wide goals and six objectives to reach these goals. The policy also includes the four-part Biodiversity Code, which guides the Agency in determining whether activities meet the legislative requirements for the use of biodiversity funding. Each year, all USAID programs receiving biodiversity funds are reviewed for consistency with the Code. Regardless of whether they program biodiversity funds or not, all USAID missions must also identify opportunities for promoting biodiversity conservation across a mission’s portfolio at the country strategy level as mandated by the Foreign Assistance Act Sections 118/119 (see “Programming Resources”).

### BIODIVERSITY POLICY

#### VISION

To conserve biodiversity for sustainable, resilient development

#### GOALS

##### Goal 1

*To conserve biodiversity in priority places*

- Protecting and managing land and seascapes
- Investing in priority places to support people and nature
- Combating wildlife trafficking, illegal fishing and illegal logging

##### Goal 2

*To integrate biodiversity as an essential element of human development*

- Improving governance of biodiversity and natural resources
- Promoting security, health and prosperity of local communities
- Championing the rights of women, indigenous people and other often-marginalized groups

### BIODIVERSITY CODE

1

The program must have an **explicit biodiversity objective**; it isn’t enough to have biodiversity conservation result from a positive externality of another program.

2

Activities must be identified based on analysis of **drivers and threats** to biodiversity and a corresponding **theory of change**.

3

Site-based programs must have the intent to positively affect biodiversity in **biologically significant areas**.<sup>1</sup>

4

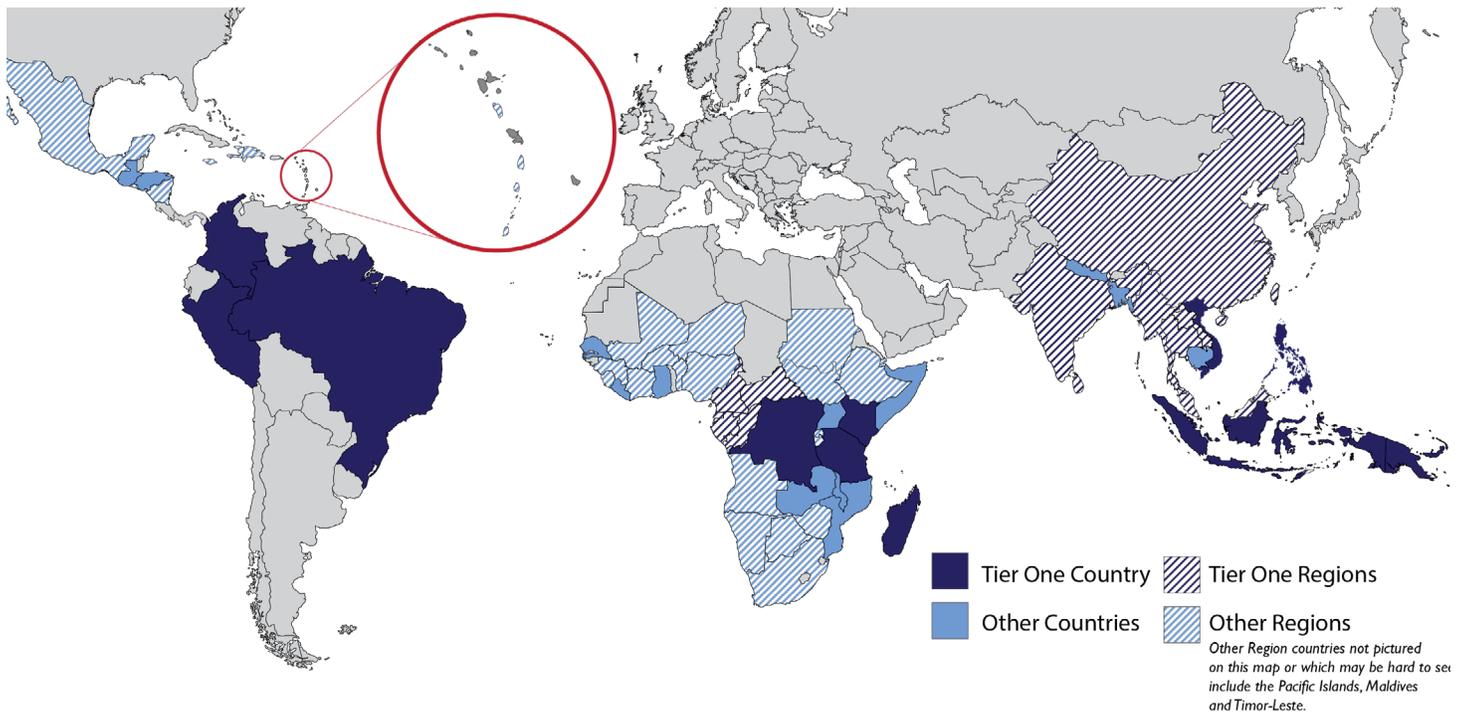
The program must **monitor indicators** associated with a stated theory of change for biodiversity conservation results.

<sup>1</sup> See the USAID Biodiversity Policy for more information (pps. 21 and 34)

## WHERE DO WE WORK?

USAID focuses its biodiversity programming on approximately 40 countries and regions placed into two tiers. Tier One operating units are highly ranked for their biodiversity value and contain a preponderance of globally significant ecoregions. Tier Two operating units either contain a globally significant ecoregion, provide important habitat for endangered and threatened species, add to the range of ecosystems supported by the USAID portfolio or exhibit a comparative advantage or previous record of success for USAID. More than half of Agency biodiversity funding focuses on the 14 Tier One operating units. The map below captures all countries where USAID supported biodiversity programming in FY17.

### USAID FY17 Biodiversity & Forestry Programming



### TIER I OPERATING UNITS

#### Latin America & the Caribbean (LAC)

- South America Regional
- Brazil
- Colombia
- Peru

#### Sub-Saharan Africa (AFR)

- Central Africa Regional
- Kenya
- Madagascar
- Tanzania
- Democratic Republic of Congo

#### Asia

- Regional Development Mission - Asia (RDMA)
- Indonesia
- Philippines
- Vietnam
- Papua New Guinea



# CHALLENGES

The primary causes of biodiversity loss are habitat loss and degradation, overexploitation of natural resources, pollution, invasive species and climate change. Underlying these categories of threats are a variety of social, economic and political factors. The USAID Biodiversity Policy divides these challenges into **threats and drivers** and identifies at least five key categories of each.

**Threats** are the human activities or processes that directly cause degradation or loss of biodiversity. The greatest current threat to terrestrial biodiversity globally is habitat loss and degradation due to agricultural expansion. Other threats include wildlife trafficking, overharvesting of wild animal or plant resources, invasive species and disease, pollution, and the impacts of changing climate on species and their distributions.

**Drivers** are also known as *indirect threats* and are the underlying factors—usually social, economic, political, institutional or cultural—that enable or otherwise add to the occurrence or persistence of threats. Drivers can include key concerns of other USAID sectors including weak governance, the absence of economic opportunities and food insecurity.

## CATEGORIES AND EXAMPLES OF THREATS & DRIVERS

### THREATS



#### Habitat Loss and Degradation

Unsustainable agricultural expansion causing clearing of tropical rainforest



#### Climate Change

Increased ocean temperatures causing coral reef die-off



#### Pollution & Excessive Nutrient Load

Fertilizer runoff from fields causing collapse of aquatic food chains



#### Overexploitation & Unsustainable Use

Wildlife poaching resulting in species population reductions



#### Invasive Species

Invasive fish populations causing extinction of native species

### DRIVERS



#### Demographic Factors

Increase in unemployed youth seeking income driving illegal logging



#### Economic Factors

Boom in the biofuels market driving increased agricultural demand



#### Sociopolitical Factors

Requirement of capital to fund elections causing liquidation of natural resources



#### Cultural & Religious Factors

Mistaken belief that rhino horn cures cancer creating increased rhino horn demand



#### Scientific & Technological Factors

Development of industrial-scale freezers for fishing vessels enabling unsustainable fishing



# APPROACHES

USAID’s approaches to these biodiversity challenges are as diverse as the challenges themselves, ranging from land and water protection to private-sector engagement and livelihood alternatives. These approaches can address both direct threats to biodiversity and the drivers of those threats, or help create the enabling conditions for conservation. USAID’s biodiversity conservation approaches are aligned with the [standard classification](#) developed by the [Conservation Measures Partnership](#) and International Union for the Conservation of Nature, as described below.

	Categories of Conservation Approaches	Illustrative Interventions
Management	Land and Water Management	<ul style="list-style-type: none"> <li>• Site management</li> <li>• Ecosystem restoration</li> <li>• Natural resource governance</li> </ul>
	Species Management	<ul style="list-style-type: none"> <li>• Species recovery</li> <li>• Species reintroduction</li> </ul>
Behavior Change	Awareness Raising	<ul style="list-style-type: none"> <li>• Outreach and communications</li> </ul>
	Law Enforcement & Prosecution	<ul style="list-style-type: none"> <li>• Detection and arrest</li> <li>• Criminal prosecution and conviction</li> <li>• Non-criminal legal actions</li> </ul>
	Livelihood, Economic & Moral Incentives	<ul style="list-style-type: none"> <li>• Conservation enterprises and alternative livelihoods</li> <li>• Conservation-friendly products and management practices</li> <li>• Market-based incentives</li> <li>• Conservation payments</li> </ul>
Enabling Conditions	Conservation Designation & Planning	<ul style="list-style-type: none"> <li>• Protected area designation</li> <li>• Land and marine tenure promotion and easement designation</li> <li>• Land- and water-use zoning</li> <li>• Conservation infrastructure</li> </ul>
	Legal & Policy Frameworks	<ul style="list-style-type: none"> <li>• Local, national or international law, regulations and codes</li> <li>• Government policies and guidelines</li> </ul>
	Research & Monitoring	<ul style="list-style-type: none"> <li>• Basic research and biodiversity monitoring</li> <li>• Conservation monitoring, evaluation and learning</li> </ul>
	Education & Training	<ul style="list-style-type: none"> <li>• Inclusion of conservation in formal education</li> <li>• Conservation training and capacity development</li> </ul>
	Institutional Development	<ul style="list-style-type: none"> <li>• Organizational management and administration</li> <li>• Alliance and partnership development</li> <li>• Conservation finance</li> </ul>



# PROGRAMMING RESOURCES

**Biodiversity and Development Handbook** The [Biodiversity and Development Handbook](#) is a key tool for implementation of the USAID Biodiversity Policy. It provides step-by-step guidance on biodiversity and integrated biodiversity programming and describes major conservation strategies through the lens of USAID experience. The handbook also facilitates integration of biodiversity conservation with other development sectors by defining key concepts and mapping out programming and policy intersections.

**Evidence in Action** [Evidence in Action](#) walks practitioners through steps to apply evidence and an evidence-based approach to the design and implementation of strategic approaches for biodiversity conservation in the USAID context. This comprehensive resource is composed of four units, including a series of thematic examples to illustrate concepts. A companion interactive learning resource, *Acting on the Evidence*, helps mission staff and partners apply Evidence in Action to the design and implementation of biodiversity programs.

**How-To Guides** The [Biodiversity How-To Guides](#) are a three-part series that provide in-depth guidance on key tools and practices to support teams from both USAID and implementing partners as they design, implement and learn from biodiversity and integrated biodiversity programs in the context of USAID's Program Cycle, Biodiversity Policy and Biodiversity Code.

How-To Guide	Connection to Biodiversity Code
<b>How-To Guide 1: Developing Situation Models in USAID Biodiversity Programming</b>	Identifies a program's scope, including the biodiversity focal interests, biologically significant areas and the drivers and threats present
<b>How-To Guide 2: Using Results Chains to Depict Theories of Change in USAID Biodiversity Programming</b>	Describes the theory of change that links program activities to achieving explicit biodiversity objective(s)
<b>How-To Guide 3: Defining Outcomes &amp; Indicators for Monitoring, Evaluation and Learning in USAID Biodiversity Programming</b>	Assists in the definition and monitoring of performance indicators for results along a theory of change. Also supports the creation of learning plans for the theory of change

**Conservation Measures Partnership** The [Conservation Measures Partnership](#) is a joint venture of conservation organizations and collaborators that are committed to improving the practice of conservation. By participating in the partnership, member organizations, including USAID, seek to capitalize on their individual and collective experience to avoid duplication of effort, bypass tried-but-failed approaches and quickly identify and adopt best practices. The partnership is also responsible for developing the [Open Standards for the Practice of Conservation](#), the foundation for USAID's Biodiversity How-To Guides.



# MONITORING, EVALUATION & LEARNING

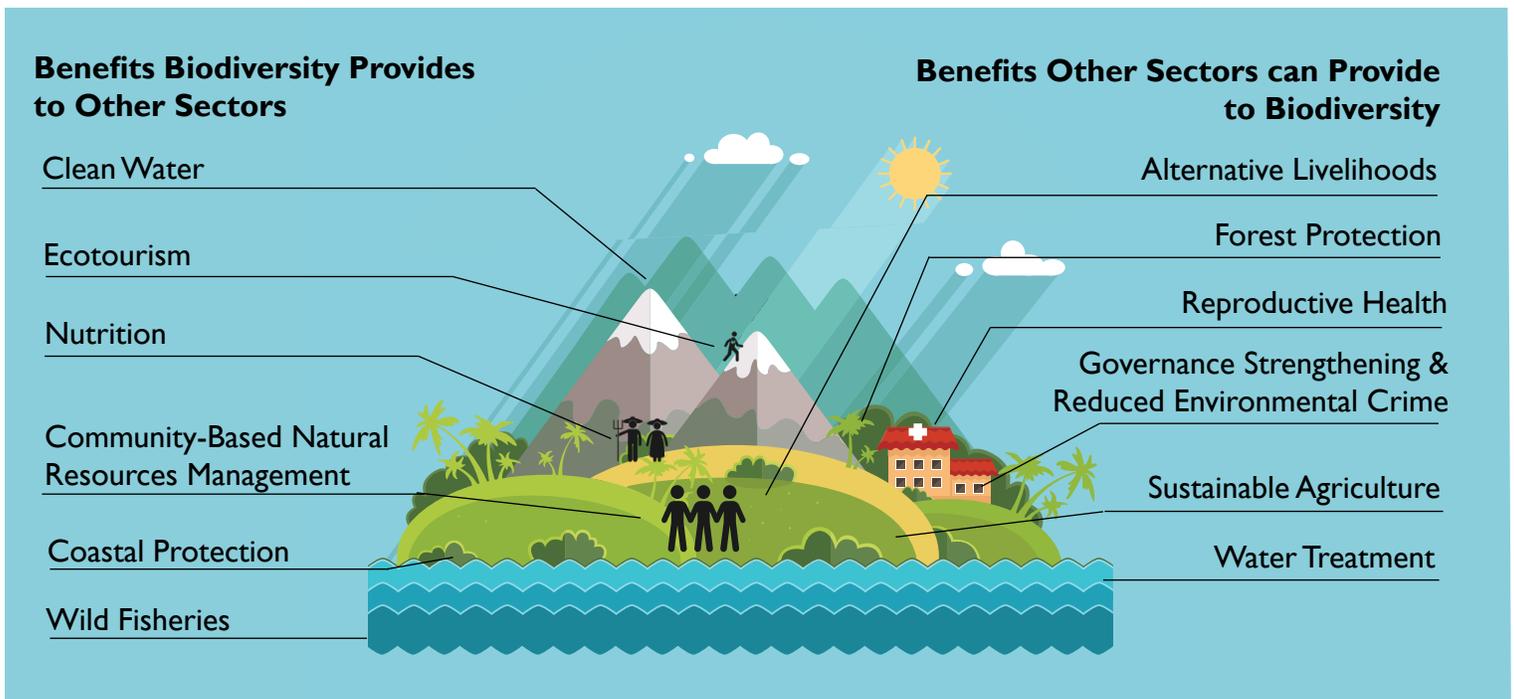
The Biodiversity Code requires the use of indicators that provide useful and meaningful measures of a project or activity’s progress along its theory of change. The Biodiversity and Development Handbook notes that the biodiversity standard indicators may not be sufficient for this purpose, and that custom indicators and other measures are necessary to effectively test a theory of change.

In addition to custom indicators, six standard indicators are required as applicable for USAID biodiversity programming. These include biologically significant areas with (1) improved conditions and (2) improved management; the number of people (3) trained in or (4) receiving increased economic benefits from natural resource management; (5) the number of policies, laws and regulations addressing biodiversity conservation; and (6) the number of people applying improved conservation law enforcement practices. For more information, see the USAID Biodiversity How-To Guide 3.



## OPPORTUNITIES FOR INTEGRATION

Opportunities for integrating biodiversity with other sectors are found throughout the USAID portfolio, and can be realized by the coordination of existing programs, co-location of new activities or planned co-funding. The five examples on the following pages illustrate the many ways in which biodiversity conservation works with other sectors to achieve USAID’s development goals, followed by four tools that can be used to support integrated programming.



**Legend:** The bidirectional relationship between biodiversity conservation and other USAID sectors, such that biodiversity programming both benefits and is supported by programming in other development sectors.



## WILD FISHERIES & FOOD SECURITY

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By supporting co-management and resource use rights, improving science-informed decision-making, and building political will and public support, USAID/Ghana's [Sustainable Fisheries Management Project](#) aims to rebuild marine fish stocks that are critical for food security and local economies. More than 100,000 men and women involved in the local fishing industry are expected to benefit from this project, yielding tens of thousands of metric tons of additional high-quality and low-cost food.



## COMMUNITY-BASED NATURAL RESOURCE MANAGEMENT (CBNRM) & GOVERNANCE

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Kenya's [Northern Rangelands Trust](#) is using a community conservancy approach to help communities reinvigorate traditional management systems and rehabilitate degraded areas across Kenya's northern rangelands. By 2019, the project had supported 39 community conservancies over an area of 42,000 square kilometres, including 71,000 people benefiting from conservancy-funded development projects since 2015 and 1,012 people permanently employed. The benefits for nature have been substantial, including a 77-38 percent drop in the proportion of illegally killed elephants in community conservancies since 2012.



## SUSTAINABLE AGRICULTURE & BIODIVERSITY

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Sustainable agriculture allows USAID partners to increase food production while conserving water, reducing soil erosion, minimizing the use of pesticides and fertilizers, and maintaining wild habitats. The [24 Feed the Future Innovation Labs](#) draw on the expertise of more than 70 top U.S. universities along with developing country research and educational institutions to tackle some of the world's greatest challenges in agriculture and food security, including identifying, developing and extending best practices in sustainable intensification.



## GOVERNANCE STRENGTHENING AND CAPACITY BUILDING & BIODIVERSITY

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In Nepal, the [Hariyo Ban](#) program built on the country's strong history of decentralization and co-management approaches to further enhance the capacity of and improve internal governance of community forest user groups. By practicing good governance and accountability, community forest user groups exemplify good governance and democratic practices and help hold government agencies accountable. In Nepal's 2017 elections, 776 community forest user group members were elected to government positions; 32 percent of them were women.



## IMPROVED PROSECUTION OF ENVIRONMENTAL CRIME

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In Guatemala, the [Security and Justice Sector Reform Project](#) improved investigation and prosecution of and partnerships on environmental crimes, including coordination between security forces, environmental security and justice institutions and civil society, ensuring overall rule of law. As a result, the number of environmental crime sentences tripled to 55 sentences in 2016, the largest number of decisions on environmental crime over the past eight years. In addition to benefits to biodiversity conservation, this program had substantial additional benefits in strengthening the rule of law through its support to judiciary and prosecutorial systems in Guatemala.

## TOOLS FOR INTEGRATION

**118/119 Guide and Mandatory Reference** As part of R/CDCS development, USAID missions are required to conduct an analysis of the actions needed to protect biodiversity and tropical forests in their country/region and the extent to which USAID programming meets those needs. This analysis is mandated by the Foreign Assistance Act sections 118 and 119, and commonly referred to as the “118/119 analysis.” It applies to all sectors, and is conducted even in missions that do not receive biodiversity funds. As such, the 118/119 analysis helps to identify opportunities for biodiversity integration across a mission’s portfolio. For more information, see the [FAA 118/119 Tropical Forest and Biodiversity Analysis Best Practices Guide](#) and [Mandatory Reference](#).

**Regulation 216 Analysis** To comply with [Title 22 of the Code of Federal Regulations Part 216](#), also known as “Reg 216,” USAID operating units are required to conduct an environmental impact assessment for all funded activities. This analysis applies to all sectors and operating units and is thus an ideal opportunity to identify potential impacts on ecosystem services and biodiversity. Reg 216 analyses also provide a means to address these challenges and develop “greener” solutions.

**Cost-Benefit Analysis (CBA)** Cost-benefit analysis is a voluntary analysis used to weigh the economic costs and benefits of USAID programming or compare multiple possible interventions. Most commonly applied to food security, energy and infrastructure investments, CBAs provide a quantification of the costs and benefits to USAID programming and can be instrumental in adapting or discontinuing USAID programming. By including valuations of ecosystem services and biodiversity in Agency CBAs, USAID programming could better identify unanticipated costs to its programming and avoid socially, environmentally and politically undesirable outcomes. For more information, see [Integrating Ecosystem Values into Cost-Benefit Analysis: Recommendations for USAID and Practitioners](#).

**Political Economy Analysis (PEA)** Political economy analysis is a voluntary analysis that explores the interaction of political and economic processes in a society, the distribution of power and wealth between different groups and individuals, and the processes that create, sustain and transform these relationships over time. These analyses allow USAID to understand the pressures for or against development efforts and reforms. By using PEA during biodiversity programming or by incorporating natural resource concerns into PEAs for other sectors, USAID can identify wealth and power disparities that affect access to natural resources, and key actors or institutions for improving biodiversity outcomes. For more information, see [Thinking and Working Politically Through Applied Political Economy Analysis: A Guide for Practitioners](#).



## KEY DOCUMENTS

This guide references a variety of documents that support programming and integration at USAID ranging from Agency policy to how-to guidance. These documents are listed below:

- [USAID Biodiversity Policy](#)
- [Biodiversity How-To Guides](#)
- [Conservation Measures Partnership](#) and [Open Standards for the Practice of Conservation](#)
- [FAA 118/119 Tropical Forest and Biodiversity Analysis Best Practices Guide](#)
- [FAA 118/119 Tropical Forest and Biodiversity Analysis Mandatory Reference for ADS Chapter 201](#)
- [Integrating Ecosystem Values into Cost-Benefit Analysis: Recommendations for USAID and Practitioners](#)
- [Evidence in Action](#)
- [Thinking and Working Politically Through Applied Political Economy Analysis: A Guide for Practitioners](#)
- [USAID Biodiversity and Development Handbook](#)
- [Biodiversity and Development Research Agenda](#)

Additional resources are available at

**USAID Biodiversity Conservation Gateway**

<https://rmportal.net/biodiversityconservation-gateway>



## KEY TERMS

- **Biodiversity focal interests:** The species, habitats and/or ecosystems that a program is working to conserve. For more information, see the USAID publication “How-To Guide 1: Developing Situation Models in USAID Biodiversity Programming.”
- **Biologically significant areas:** Areas of global, regional or national significance for biodiversity. These may include areas recognized as biologically significant by existing analyses and priority-setting exercises conducted by governments, research organizations or conservation NGOs. For more information, see the USAID Biodiversity Policy (pps. 21 and 34).
- **Co-management:** A process of management in which government shares power with resource users or non-governmental organizations, with each given specific rights and responsibilities relating to information and decision-making.
- **Conservation enterprises:** Enterprises that provide income to participants through the production and sale of goods and services such as ecotourism, beekeeping and crafts that are expected to lead to conservation of biodiversity.
- **Ecoregion:** A large unit of land or water containing a geographically distinct assemblage of species, natural communities and environmental conditions. Globally significant ecoregions are those selected as part of the WWF’s Global 200 ranking.
- **Ecosystem:** A dynamic system of interactions between all of the species inhabiting an area and the non-living physical environment. Ecosystems vary spatially and change with time, and no ecosystem is closed with respect to exchanges of organisms, matter and energy. Priority areas or sites for conservation exist within ecosystems.

- **Ecosystem services:** Services provided by ecological processes, including regulation of water flows and maintenance of water quality; the formation of soil, prevention of soil erosion and nutrient cycling that maintains soil fertility; degradation of wastes and pollution; pest and pathogen control; pollination; and climate regulation through carbon storage and sequestration.
- **Ecotourism:** Responsible travel to natural areas that conserves the environment and improves the well-being of local people.
- **Endangered species:** A species that is in danger of extinction throughout all or a significant portion of its range.
- **Environmental crime:** An illegal act that directly harms the environment, including trade in wildlife (see “Wildlife trafficking,” below); dumping and transport of hazardous waste; illegal, unregulated and unreported fishing; and illegal logging and trade in timber.
- **Invasive species:** A species, often introduced inadvertently or deliberately by human activities from another continent or ecosystem, that can crowd out native species and take over habitats, thereby threatening native biodiversity.
- **Natural resources:** Aspects of the biophysical environment that humans use or find of value, such as timber, freshwater or minerals.
- **Protected areas:** Areas such as national parks, national forests or other administrative units that are managed to maintain certain elements of biodiversity and the values they provide.
- **Results chain:** A type of logic model that displays the relationships between what a program intends to do and the changes and results it hopes to accomplish to achieve its program purpose (the theory of change). For more information, see the USAID publication “How-To Guide 2: Using Results Chains to Depict Theories of Change in USAID Biodiversity Programming.”
- **Situation model:** A diagram that uses a series of boxes and arrows to succinctly represent a set of observed or presumed causal relationships among factors (threats and drivers) that affect one or more biodiversity focal interests, including ecosystems and/or species. For more information, see the USAID publication “How-To Guide 1: Developing Situation Models in USAID Biodiversity Programming.”
- **Wildlife trafficking:** The poaching or other taking of protected or managed species and the illegal trade in wildlife and their related parts and products.

## OTHER REFERENCE SHEETS IN THIS SERIES



**Democracy, Human Rights  
& Governance**



**Food Security**



**Health**



**Water and Sanitation**

For more information on the topics discussed here, or to discuss opportunities for integration with USAID biodiversity programming, please contact:

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