USAID
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## BIODIVERSITY INTEGRATION REFERENCE SHEET

# HEALTH



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# INTEGRATING HEALTH AND BIODIVERSITY PROGRAMMING

## 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 other 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.

## HOW TO USE THIS SHEET

The health reference sheet introduces users to the health sector at USAID and provides ideas for integration between biodiversity and health programming. It starts by providing a brief introduction to global health programming at USAID, some common challenges and approaches, and examples of programming resources and monitoring and evaluation tools for the sector. It then provides some examples of opportunities for integration between health and biodiversity. The sheet closes with key documents and terms for the health sector.

## WHAT IS BIODIVERSITY PROGRAMMING?

The overall vision for biodiversity conservation programming at USAID is to conserve biodiversity for sustainable, resilient development. This is accomplished through two goals as articulated in the USAID Biodiversity Policy: (1) conserve biodiversity in priority places and thus help safeguard the diversity of natural ecosystems on Earth such as tropical forests, coral reefs and savannas, and the species they support; and (2) integrate biodiversity as an essential element of human development, considering both its benefits for and dependencies upon other program areas. More information on USAID's biodiversity programming is available from the Biodiversity Integration Reference Sheet.

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.

## FUNDING REQUIREMENTS AND INTEGRATION

Both biodiversity and global health have funding requirements that guide USAID investments in these sectors. Biodiversity programming at USAID is guided by the USAID Biodiversity Code, which determines whether activities meet the legislative requirements for the use of biodiversity funds (see the Biodiversity Integration Reference Sheet for more information). Similarly, global health programming at USAID is guided by multiple pieces of authorizing legislation that address the various challenges faced by USAID's partner countries. Opportunities for integration may be realized through collaboration, coordination, co-funding or single sector funds depending on the specific context (see "Opportunities for Integration," below).

# WHAT IS HEALTH PROGRAMMING?

## WHY HEALTH PROGRAMMING?

Recent decades have witnessed dramatic progress in global health, but preventable disease and premature death continue to plague much of the developing world, particularly affecting women and children. Of the 5.4 million deaths of children under five years of age in 2017 (90 percent of these in low- and middle-income countries), the majority are preventable. Furthermore, a woman in Africa's likelihood of dying from pregnancy or pregnancy-related causes is 100 times more than that of a woman in the United States. These statistics underline the importance of global health programming, particularly in countries that account for the majority of maternal and child deaths globally.

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## HEALTH AND DEVELOPMENT

Global health programming is a key component of development assistance and is central to achievement of USAID's long-term economic growth, conflict prevention and poverty reduction mandate. Health status directly affects economic growth and development through impacts on life span, labor productivity and the costs of caring for the ill. Health programming indirectly affects growth and development through factors such as educational performance, household income and life expectancy. Lastly, promotion of well-being and good health has the potential to lessen societal grievances that often drive the risks for violent conflict and unrest.

## HEALTH PROGRAMMING AT USAID

USAID health programming focuses on three strategic priorities: preventing child and maternal deaths, controlling the HIV/AIDS epidemic and combating infectious diseases. These priorities are often supported by centrally managed mechanisms that provide key support such as logistics, commodity sourcing and transport, and which involve substantial collaboration between Washington and country teams on design and adaptive management.

### GLOBAL HEALTH PRIORITIES

**Preventing Child and Maternal Deaths**

USAID focuses work in 25 countries that account for two-thirds of the world's maternal and child deaths and half of the global unmet need for family planning. Many of our programs contribute to saving the lives of mothers and children, including our efforts in maternal and child health, nutrition, family planning, malaria control and prevention, and water and sanitation.

**Controlling the HIV/AIDS Epidemic**

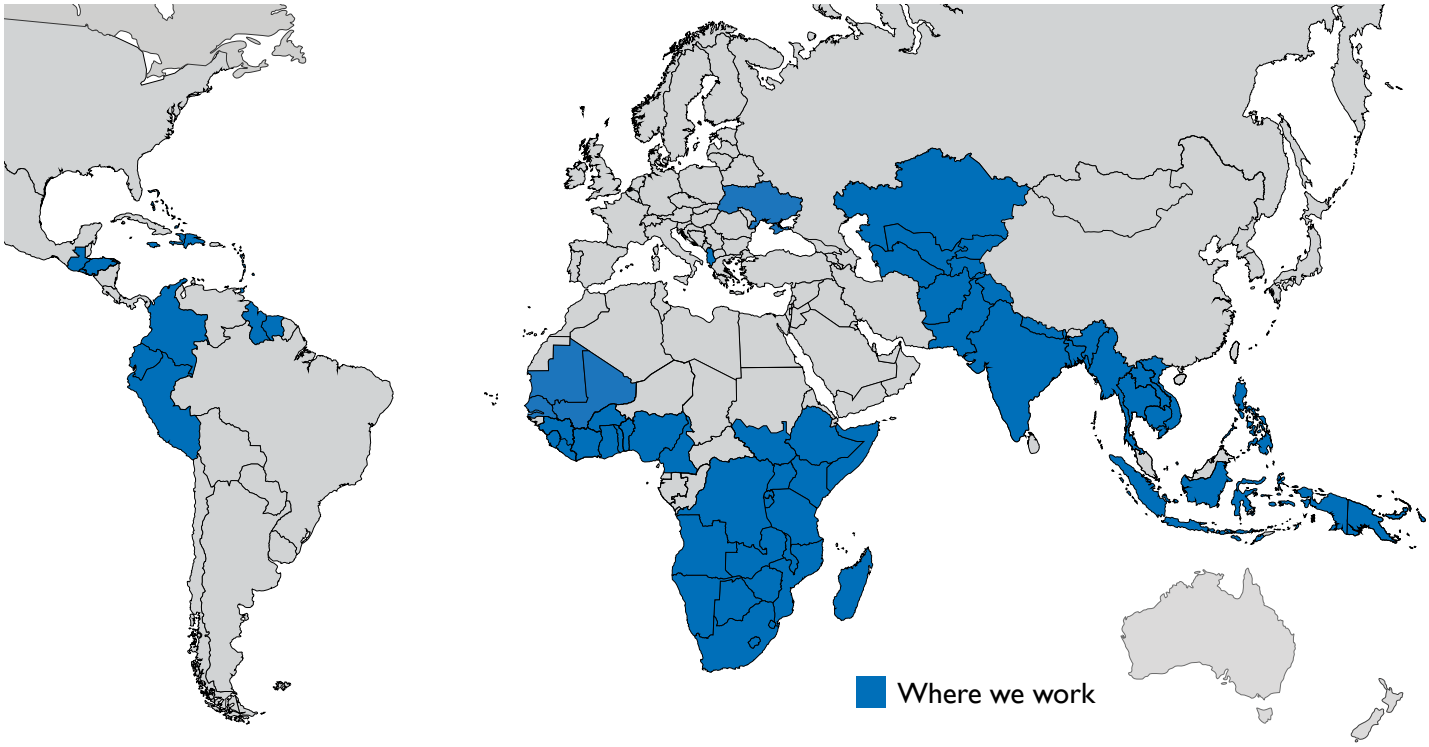
The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) is supporting life-saving antiretroviral treatment for 13.3 million people and has provided HIV testing services for 85.5 million people.

**Combating Infectious Disease**

USAID is a leader in the control and prevention of infectious diseases, including HIV and AIDS, malaria, neglected tropical diseases, pandemic influenza, tuberculosis and other emerging threats. Emerging diseases, including H5N1, Ebola and Zika, are on the rise and represent a growing threat to our health, economies and global security. USAID is a key partner in implementing the Global Health Security Agenda, an inter-agency effort to enhance our ability to prevent, detect and respond to disease outbreaks.

## WHERE DO WE WORK?

USAID Global Health programs work in more than 70 countries around the world.




## CHALLENGES

Many low and middle income countries face significant challenges in providing essential health services due to inefficient use of resources, weak information systems, a limited health workforce and other systemic challenges. A strong health system ensures that people and institutions, both public and private, effectively undertake core functions to improve health outcomes. It protects citizens from catastrophic financial loss and impoverishment resulting from illness or injury, and ensures consumer satisfaction in an equitable, efficient and sustainable manner.

### Preventing Child and Maternal Deaths

More than 15,000 children and 830 women still die every day from causes that could have been prevented. Mothers and children are invaluable to their families, communities, societies and economies, and the loss of even one life robs these families and communities of their full potential.

**Malaria:** Malaria kills 445,000 people every year, mostly children under five.

**Maternal and Child Health:** 303,000 women die annually from largely preventable complications related to pregnancy or childbirth, and 5.4 million under-5 children die every year.

**Nutrition:** Chronic undernutrition contributes to 45 percent of under-5 mortality.

**Family Planning and Reproductive Health:** 214 million women want to avoid pregnancy but are not using a modern method of contraception.

## Controlling the HIV/AIDS Epidemic

Every week, 32,000 people are infected with HIV globally, including 6,900 young women and 3,000 children, and 19,000 people die of AIDS-related illnesses. In sub-Saharan Africa, adolescent girls and young women are especially affected. Of all the new HIV infections in adolescents in the region, nearly 75 percent are among females; they are up to 14 times more likely to contract HIV/AIDS than young men. This is particularly concerning as the population of those ages 15–24 in sub-Saharan Africa is set to double in size by 2020, reaching 200 million. The result: millions more young people who are entering a time in life when they are most susceptible to HIV infection, often without an education or job opportunities.

## Combating Infectious Threats

In an increasingly interconnected world, infectious diseases threaten the lives of millions each year. Based on experience from the H1N1, Zika and Ebola virus outbreaks, infectious diseases can present significant threats to both regional and international security. U.S. government efforts focus on combating tuberculosis, neglected tropical diseases, pandemic influenza, Ebola and other emerging threats.

**Tuberculosis (TB):** 10 million people develop TB and 1.6 million die of the disease each year.

**Neglected Tropical Diseases:** More than 1 billion people suffer from neglected tropical diseases affecting predominantly poor and powerless populations.

**Global Health Security:** The number and intensity of infectious disease outbreaks are increasing. In 2017, the 17 Global Health Security Agenda Phase I countries experienced more than 25 major outbreaks, 10 of them graded by the World Health Organization as requiring international responses.

# APPROACHES

## Preventing Child and Maternal Deaths

Through efforts in malaria, maternal and child health, nutrition, and family planning and reproductive health, USAID is working to prevent child and maternal deaths. USAID's maternal and child survival programs are concentrated in 25 focal countries with the highest need, demonstrable commitment, and the potential to leverage resources from the public and private sectors to improve health outcomes. Together, these countries possess large gaps in women's and children's healthcare needs and account for more than two-thirds of maternal and child deaths worldwide.

**Malaria:** The U.S. President's Malaria Initiative implements a comprehensive, integrated package of proven interventions including insecticide-treated mosquito nets, intermittent preventive treatment of pregnant women, seasonal malaria chemoprevention, indoor residual spraying and malaria case management.

**Maternal and Child Health:** USAID's maternal and child health investments seek to ensure that all women and children have the same chance of a healthy life, with a focus on respectful and quality care during delivery and increasing access to basic, life-saving services for newborns and children.

## Preventing Child and Maternal Deaths (continued)

**Nutrition:** USAID's maternal and child nutrition investments address the immediate, health-related causes of malnutrition, with an emphasis on those that target the 1,000 days from pregnancy through a child's second birthday.

**Family Planning and Reproductive Health:** The Bureau of Global Health expands access to high quality, voluntary family planning and reproductive health information and services in order to reduce unintended pregnancy and promote healthy reproductive behavior.

## Controlling the HIV/AIDS Epidemic

As a key implementer of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), USAID provides global leadership; supports country-led efforts; and applies science, technology and innovation to support the implementation of cost-effective, sustainable and appropriately integrated HIV/AIDS interventions at scale to achieve HIV/AIDS epidemic control.

## Combating Infectious Threats

While scores of infectious diseases continue to threaten humankind, USAID-led efforts through the Emerging Pandemic Threats program are strengthening health systems around the world by building better capacity to detect outbreaks, mitigate transmission and prevent epidemics. Though still a critical issue, the prevalence of TB has declined by nearly 50 percent since 1990; in 2015 alone, USAID successfully treated nearly 3 million people for TB and started more than 70,000 on multidrug-resistant TB regimens. Over the past 10 years, USAID has delivered more than 1.6 billion treatments to about 750 million people affected by neglected tropical diseases, a group of parasitic and bacterial infections that cause profound suffering. Through its global health security efforts, USAID recognizes that an infectious disease threat anywhere is a threat to health and security everywhere. USAID works to increase surveillance, prevention and treatment of long-standing and stagnant diseases, including TB, and more recent threats like Ebola and Zika.

**Tuberculosis:** USAID provides leadership for the U.S. Government TB Strategy (2015-2019) by contributing to the treatment of more than 13 million new TB cases and reducing TB incidence by 25 percent.

**Neglected Tropical Diseases:** USAID follows the World Health Organization recommended approach of reducing neglected tropical diseases, referred to as preventive chemotherapy, which includes the provision of single dose medication to all eligible individuals in an affected community at regular intervals, generally once or twice a year.

**Global Health Security:** Global Health Security efforts include a multi-sectoral approach that links human and animal health, agriculture and environmental sectors; minimizing the potential for new emergent diseases to pose threats to global health, especially in geographic "hot spots"; and addressing the rising threat of anti-microbial resistance in both human health and animal sectors.

# PROGRAMMING RESOURCES

Health programming at USAID is supported by multiple resources, many of which are designed for specific health issues as described above. Following is a description of key resources with a focus on those used by USAID operating units to set their programming priorities.

**Demographic and Health Surveys (DHS)** The USAID DHS program works with governments to collect and share key information about people, their health and their health systems. This includes information on infant and child mortality, fertility, family planning use, maternal health, child immunization, malnutrition levels, HIV prevalence and malaria. Governments, donors, researchers and civil society use the information from these surveys to inform health-related programming, policies, funding priorities and research. The data collected by the DHS Program allow USAID to monitor trends across health program areas and set priorities for funding, interventions and policy changes. The DHS Program is now the largest and longest enduring survey program of its kind.

**Malaria Indicator Surveys (MIS)** Malaria indicator surveys, available through the DHS program, measure indicators related to the President's Malaria Initiative targets, the Roll Back Malaria Global Malaria Action Plan and the Millennium Development Goals. Information is collected on the ownership and use of insecticide-treated mosquito nets, indoor residual spraying of insecticides, prompt and effective treatment of fever in young children and the prevention of malaria in pregnant women. Most MIS also include biomarker tests for anemia and malaria. As with DHS data, MIS data allows USAID to monitor trends and adapt USAID malarial programming appropriately.

**Population-Based HIV Impact Assessments (PHIAs)** The PEPFAR-funded PHIA Project measures the reach and impact of HIV programs in PEPFAR-supported countries through national surveys. Each PHIA survey offers household-based HIV counseling and testing conducted by trained survey staff, with return of results. The surveys also ask questions about access to preventive care and treatment services for adults and children. The results measure national and regional progress toward UNAIDS' 90-90-90 goals and guide policy and funding priorities.

**The HealthMap Program** Through a partnership with the USAID Emerging Pandemic Threats PREDICT project, the HealthMap application filters data sources to provide spatially explicit and real-time health alerts to support travel advisories and health assessments globally. Through HealthMap's automated and continual updating process, the system monitors, organizes, integrates, filters, visualizes and disseminates official information in nine languages about priority infectious and zoonotic diseases considered a threat to human and animal health.

# MONITORING, EVALUATION & LEARNING

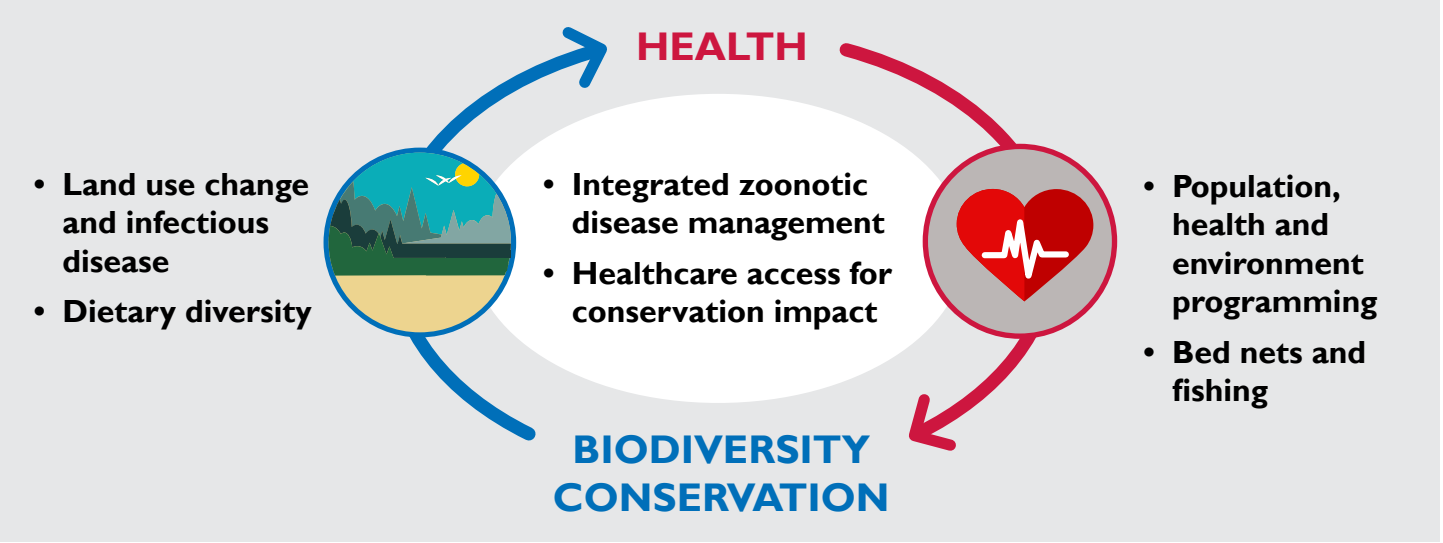
Monitoring and evaluation of USAID health programming is conducted both for individual issues (e.g., HIV and tuberculosis; see "Challenges," above) and for Agency-wide health objectives (e.g., combating infectious diseases; see "What is Health Programming," above). This work is conducted using both standard indicators defined by the Office of Foreign Assistance at the U.S. Department of State, and custom indicators defined for individual programs. In addition, this work is supported by centralized monitoring and evaluation mechanisms that provide consistent methods and values though time and across health programs.

One example of this centralized support is the USAID Monitoring and Evaluation to Assess and Use Results (MEASURE) Project, currently in its fourth phase, which builds on the decades-long commitment by the Bureau for Global Health to support health sector monitoring and evaluation and country health information system strengthening. The purpose of MEASURE is to enable countries to strengthen national, community and facility-based systems to generate high quality health information that is used to inform decisions on policies, programs and resource allocations at all levels of the health system. By improving the capacity of its partners to monitor progress, USAID is better able to adapt current programming and design new programs.

# OPPORTUNITIES FOR INTEGRATION WITH BIODIVERSITY CONSERVATION

The following section provides examples of the two-way relationship between biodiversity conservation and health. These opportunities may be realized through collaboration, coordination, co-funding or single sector funds depending on the specific context.

**Opportunities for Health and Biodiversity Integration** Millions of people in developing countries die each year from preventable causes such as malaria, undernutrition and diarrheal disease. Intact, biologically diverse ecosystems play important roles in promoting health and fighting disease by providing goods and services including wild foods, natural medicines, and clean air and water. Human health also plays an important role in biodiversity outcomes, as poor health and low access to health services are drivers of biodiversity loss. Following are examples of opportunities for integration between health and biodiversity conservation programming.




**Legend:** Linkages between biodiversity and health programming are presented on the left and right, and key tools for integration are presented in the center.

## LAND USE CHANGE AND INFECTIOUS DISEASE

Biodiversity programming and particularly forest conservation can yield substantial benefits for USAID infectious disease programming. Recent research, using USAID's supported Demographic and Health Survey data, has found that reduced tree cover upstream is associated with a higher probability of diarrheal disease among children in downstream communities. In addition, with support from USAID/Indonesia, the Infectious Disease Emergence and Economics of Altered Landscapes project leverages existing data sets and ongoing pathogen surveillance to project costs attributable to disease emergence as a function of land use change. These costs—including care and treatment, emergency response, and travel and trade restrictions—provide valuable information for discussion among governments, the private sector and civil society to define optimal land use policies.

## DIETARY DIVERSITY

For rural populations that are difficult to reach through conventional treatment systems, wild foods from intact ecosystems might provide an excellent source of essential micronutrients. USAID-funded research has recently found that high exposure to forests causes children to have at least 25 percent greater dietary diversity compared to lack of exposure, a result comparable to the impacts of some nutrition-sensitive agricultural programs. Specifically, proximity to forests could help reduce vitamin A and iron deficiencies. This research establishes the causal relationship between forests and diet and thus strengthens the evidence for integrating forest conservation and management into nutrition interventions, especially for rural communities.

## POPULATION, HEALTH AND ENVIRONMENT

By combining health, fertility and environment programming, USAID is simultaneously able to address drivers of overexploitation of natural ecosystems—population growth and poor health—and support those ecosystems themselves. USAID-supported population, health and environment programming in Madagascar worked with communities to reduce destructive fishing practices, protect local marine ecosystems and improve access to reproductive health and family planning services. Nearly 3,000 women gained access to family planning services, and the communities worked to conserve the ecosystems they depend on for food security and livelihoods.

In addition, USAID/Mozambique's Integrated Gorongosa and Buffer Zone (IGBZ) Program links biodiversity conservation in the Gorongosa National Park to income and employment opportunities, and promotes adoption of positive health and nutrition behaviors. As a result of the program's health interventions, mobile health brigades provide vaccinations and support pre- and post-natal care, family planning and HIV/AIDS counseling, testing and prevention for families in the park's buffer zones. The program also supports a "Model Moms" component that educates mothers about nutrition for women and children, the use of locally available foods, and community and household gardens.

## BED NETS AND FISHING

In countries such as Kenya, Tanzania and Malawi, fine-mesh bed nets are used for fishing, capturing fish of every species and age. As a result, fish essential to food and income are killed before they are mature enough to breed, and endemic species caught as bycatch face extinction, impoverishing communities and freshwater ecosystems alike. These findings reveal the sometimes negative impacts of health programming on biodiversity conservation outcomes. This challenge is already being met by USAID educational efforts, however, including the Democratic Republic of Congo's Integrated Health Project.

## INTEGRATED ZOONOTIC DISEASE MANAGEMENT

USAID's portfolio of One Health activities take an interdisciplinary approach, recognizing the linkages among human, animal and environmental health to address zoonotic diseases such as rabies, Avian Influenza and Ebola virus disease. One Health approaches include training local communities on different aspects of zoonotic diseases, developing new policies to mitigate the impacts of zoonotic diseases, and testing wildlife and livestock for zoonotic pathogens.

## HEALTHCARE ACCESS FOR CONSERVATION IMPACT

For many people, exploiting natural resources, like cutting down trees to sell, is the only way to afford health care and support their families. USAID's Indonesia Forest and Climate Support project tested whether convenient, affordable and quality health care might be the key to ending illegal logging. By providing innovative health services to communities around Gunung Palung, a national park in West Kalimantan, Indonesia, these groups have seen rapid and dramatic improvements in public health indicators while reducing the number of families involved in illegal logging by 90 percent. This work demonstrates that adding a meaningful health component to a biodiversity program can lead to greater conservation impact.

# 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's Global Health Strategic Framework: Better Health for Development
- USAID Biodiversity Policy
- USAID Biodiversity and Development Handbook

Additional resources are available from:

**USAID Health:** https://www.usaid.gov/global-health

**USAID Biodiversity Conservation Gateway:** https://rmportal.net/biodiversityconservation-gateway

# KEY TERMS

- **Biodiversity:** Biological diversity, or biodiversity, refers to genetic diversity within a species, species diversity within ecosystems and the diversity of ecosystems on the Earth.
- **Dietary diversity:** The number of different foods or food groups consumed over a given period of time.
- **Epidemiology:** An investigation of the links between certain behaviors or risk factors and the occurrence of disease or good health in a population.
- **Family planning:** Family planning encompasses the services, policies, information, attitudes, practices, and commodities, including contraceptives, that give women, men, couples, and adolescents the ability to avoid unintended pregnancy and choose whether and/or when to have a child.
- **H5N1:** A virus that is a subtype of the orthomyxovirus causing influenza A, which mainly infects birds and is highly contagious among birds, and that sporadically infects humans, often causing serious illness and death.
- **Health system:** The organization of people, institutions and resources that deliver health care services to meet the health needs of target populations.
- **HIV:** Human immunodeficiency virus, the virus that leads to acquired immunodeficiency syndrome (AIDS). HIV damages immune cells so that they are no longer able to fight off other infections.
- **Infectious disease:** A disease caused by the entrance into the body of organisms (such as bacteria, protozoans, fungi or viruses) which grow and multiply there.
- **Micronutrients:** Vitamins and minerals required by the body in small amounts daily (e.g. vitamin A and iron).
- **Nutrition:** The science of foods and the nutrients and other substances they contain, and of their actions within the body. A broader definition includes the social, economic, cultural and psychological implications of food and eating.
- **Pandemic:** A disease outbreak affecting large populations or a whole region, country or continent.
- **Reproductive health:** The diseases, disorders and conditions that affect the functioning of the male and female reproductive systems during all stages of life.
- **Vaccination:** A method of protecting the body against disease by injecting parts or all of a microorganism into a recipient, which will cause that recipient to develop antibodies against the microorganism and later be able to fight off disease.
- **Zoonotic disease:** An infectious disease that is transmissible under normal conditions from animals to humans.

## OTHER REFERENCE SHEETS IN THIS SERIES

**Biodiversity**

**Democracy, Human Rights & Governance**

**Food Security**

**Water & 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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