

GLOSSARY

Abiotic: Not derived from living organisms.

Abscess: An enclosed, pus-filled cavity in any tissue, usually caused by bacteria.

Accidental host: An organism that does not usually allow for the transmission of a pathogen to the definitive or typical target species; also referred to as an incidental or dead-end host.

Adaptive management: An iterative process of improving the management of natural resources by incorporating monitoring results in the decision-making process.

Agonist: A substance that activates a receptor inside a cell or on its surface.

Air blast: A sudden rush of air through openings, such as tunnels, caused when unsupported rock spanning a void in an underground mining system collapses.

Air sacculitis: A common inflammatory condition of air sacs, the tiny sacs off the laryngeal tubes of apes (and many other animals) that act as resonating chambers, amplifying vocalizations.

Allelic dropout: The failure of an allele (one of two or more versions of DNA sequence) to increase the number of copies of a gene in a polymerase chain reaction (PCR).

Amplifying host: An organism in which a pathogen can multiply to high levels, which facilitates the pathogen's spread.

Anemia: A lack of red blood cells (or hemoglobin) that leads to decreased oxygen transport.

Animal reservoir: see **reservoir**.

Animal welfare: Physical and mental wellbeing of animals.

Anogenital: The area around the anus and genitalia.

Anthelmintic: Any drug that acts against infections caused by parasitic worms (helminths).

Anthropocene: Unofficially, the current geologic epoch, during which human activity started to have a significant impact on Earth's climate and ecosystems.

Anthropogenic: Caused by humans or human activity.

Anthroponosis: Infectious disease that is transmitted from humans to other animals. Related terms: anthroponoses, anthroponotic. See also: **zoonosis**.

Arboreal: Living in trees.

Asset protection zone: An area surrounding a built asset or structure, such as a residence, farm, commercial building or landmark, where the level of forest fuel has been reduced to a level that does not support intensive fire behavior. The width of the area between the at-risk asset and the forest is determined by the predicted fire behavior. Commonly referred to as APZ.

Asymptomatic: Infected with a pathogen but not showing signs of disease.

Autonomy: Self-determination of individuals.

Bacteria: Single-celled, microscopic organisms that are ubiquitous in humans, other animals and the environment, and that can be beneficial (for example by promoting digestion) or cause illness (singular: bacterium).

Best management practice (BMP): Methods or means that have been determined to be the most effective and practical means of preventing or reducing disease risks from humans to apes and vice versa.

Bimaturism: Development characterized by differing stages or timings within a species or within a sex; among orangutans, mature males are flanged or unflanged (see **flanged**).

Bioacoustics: Digital technology, including equipment and software, used to record and analyze animal sounds.

Biopsy: The removal of a small piece of tissue from a living animal for diagnostic purposes.

Biosafety: A set of measures designed to prevent the accidental spread of pathogens to humans, animals or the environment, including safe handling measures of potentially infectious substances, for example through the use of

personal protective equipment (such as gloves and masks), disinfection and garbage disposal protocols. *Biosafety* aims to protect public health and environment from accidental exposure to biological agents. See also: **Biosecurity**.

Biosecurity: A combination of management practices and protocols designed to prevent the transmission of diseases and disease-causing agents. Biosecurity deals with the prevention of misuse through loss, theft, diversion or intentional release of pathogens, toxins and any other biological materials. See also: **Biosafety**.

Biotic: Relating to living organisms.

Bloating: The accumulation of gas in the intestines, often uncomfortable or painful.

Brachiation: Arboreal locomotion that relies exclusively on the arms to propel the body forward.

Bronchoalveolar lavage (BAL): A safe, simple and inexpensive diagnostic test of the lower respiratory system, which can be performed in the field without sophisticated equipment. BAL involves instilling sterile saline via a tube into an anesthetized animal's airways. The method provides an excellent sample of epithelial lining fluid for characterization of diffuse lung diseases (such as tuberculosis on polymerase chain reaction) and airway inflammation.

Burnout: A syndrome that results from chronic, unsuccessfully managed work-related stress.

Captive facilities: Sites of wildlife captivity, such as rescue and rehabilitation centers, sanctuaries and zoos.

Cardiologist: A doctor who specializes in treating diseases of the cardiovascular system—mainly the heart and blood vessels.

Cardiomyopathy: Diseases of the heart muscle involving stretching, thickening or stiffening of the walls of the heart chambers, which affect the heart's ability to pump blood around the body.

Cardiovascular: Related to the circulatory system—the heart and blood vessels.

Cardiovascular disease: A group of disorders of the heart and blood vessels.

Carry-over: Released apes carrying human pathogens to wild apes.

Case fatality rate: In epidemiology, the proportion of individuals who die from a specified disease among all those who have been diagnosed with it during a certain time period.

Catheter: A flexible tube inserted into a vein to administer or extract fluids intravenously.

Causative agent: A (micro)organism that causes a disease.

Chlorpyrifos: An insecticide, acaricide or miticide used to protect plants against damage.

Colitis: Inflammation of the bowels or large intestine (colon).

Command and control system: A structured system used to organize functional management and leadership, as well as to provide authorities with clear lines for planning, organizing and directing operations during response and recovery at the strategic and tactical levels.

Commensal: Relating to a relationship in which one organism obtains food or other benefits from another without damaging or benefiting the host organism; an organism in such a relationship.

Compassionate conservation: A discipline that combines the fields of conservation and animal welfare.

Compounding (or cascading) risks: Interacting risks whose collective effect exceeds those associated with the individual risks.

Conservation litigation: The use of liability lawsuits to ensure that companies, organizations and people who damage the environment or biodiversity are held responsible and have to take action to remedy the damage caused.

Conservation medicine: A field that combines veterinary science, conservation biology and public health to address animal, human and ecological health holistically, rather than as siloed branches of knowledge.

Conspecific: An individual of the same species.

Core area: The portion of the home range of a group or individual that is most frequently used.

Costs: In disaster management, the estimated or known monetary value of facilities, goods, services and provision of personnel provided by an agency or organization in support of activities during preparedness, response and recovery for which the agency or organization receives no payment; may be referred to as in-kind contributions.

Cramping: The sudden, extreme, involuntary tensing of muscle that results in pain.

Crisis: A system-wide disruption that is typically new, unexpected, uncontrollable or abnormal and that requires immediate solutions or interventions involving collaboration among local stakeholders. A crisis typically affects a particular industry, population or community; local stakeholders are able to address the disruption.

Cross-reactivity: The ability of some antibodies to target or “react to” parts of different pathogens other than the one with which the antibodies typically bind. If a test is not very specific, cross-reactivity can result in a false positive. See also: **reactivity**.

Cytomegalovirus (CMV): A common virus that can cause herpes infections that may become dormant and later reactivate. In individuals whose immune systems are compromised, symptoms may include fever, jaundice and lesions, as well as neurological and respiratory issues. Humans and other primates serve as natural hosts.

Data mining: The sorting and analyzing of very large datasets to find patterns and relationships that can serve as intelligence for facilitating planning and decision-making.

Deciduous: Pertaining to trees that lose their leaves for part of the year.

Deciduous teeth: Baby teeth, also known as milk or primary teeth, which are later replaced by permanent, or adult, teeth.

Degenerative: Related to the deterioration of organs, often caused by age.

Depigmentation: Loss of color, such as of hair or skin.

Dermatophyte: A common label for a group of fungi of the *Arthrodermataceae*, which commonly cause skin disease.

Design thinking: An iterative process used to understand and redefine problems with the aim of creating innovative solutions.

Diagnostic protocol: A practical text that can guide clinical approaches and facilitate diagnosis, for example by recommending questions and examinations.

Dichromatic: Exhibiting two color variations independent of sex and age.

Dimorphic: Having two distinct forms.

Dipterocarp: A tall hardwood tree of the family *Dipterocarpaceae* that grows primarily in Asian rainforests and that is the source of valuable timber, aromatic oils and resins.

Disaster: A serious disruption of the functioning of a community or society due to an interaction of a hazardous event with conditions of exposure, vulnerability and insufficient capacity to cope with the event. The consequences include significant social, built, economic and environmental losses and impacts. Locally impacted communities are unable to cope and require external assistance and coordination.

Disease emergence: A first-time outbreak of illness in a species or area, or a rapidly increasing incidence of outbreaks, typically with reference to zoonotic infectious disease. In contrast, re-emerging (infectious) diseases are ones that appear in species or areas in which they have not been seen for a long time.

Dispersing sex: Either male or female apes who, upon reaching sexual maturity, depart from their birth area to establish their own range, leaving the opposite sex behind.

Diurnal: Daily or active during the day.

DNA: Deoxyribonucleic acid, the hereditary material in almost all organisms.

Dysbiosis: An imbalance in the gut microbial community that is associated with disease and may be due to the gain or loss of microbial community members or changes in the relative abundance of microbes.

Dyspnea: Labored breathing.

Echocardiographer: A health care professional trained to use imaging technology to help physicians diagnose heart problems in patients, specifically by operating ultrasound equipment that provides moving 2-D or 3-D images of the heart and its chambers.

Ecosystem health: A paradigm or model that integrates environmental conditions with the effects of anthropogenic activities to yield information for the sustainable use and management of natural resources. An ecosystem in good health is one whose dynamic attributes are expressed within the normal ranges of activity relative to its ecological state of development.

Ecotourism: A sustainable version of nature-based tourism that contributes to biodiversity conservation and the wellbeing of local communities.

Ecotoxicology: The study of the toxic effects of chemicals on organisms and their ecosystems.

Ectoparasite: An organism that lives off or feeds on the surface of the body, such as skin and hair, including ticks and lice.

Ectopy: A mislocation of a body part. In the heart, ectopic contractions start in an abnormal location, are irregular and are associated with decreased function.

Emergency: An actual or imminent natural or anthropogenic event that endangers or threatens life, damages infrastructure or destroys the natural environment, thus requiring significant coordinated and time-critical responses, as well as extraordinary measures to save lives, protect vulnerable individuals and limit damage. An emergency tends to be local or regional, so does not result in serious disruption to the broader community or society. Emergencies can be categorized by size of impact area, and multiple simultaneous emergencies in one area may be classified as a disaster.

Encephalomyocarditis: An acute febrile disease, especially of swine and some primates, caused by a picornavirus and marked by degeneration and inflammation of skeletal and cardiac muscle and lesions of the central nervous system.

Endangered: Threatened with extinction.

Endemic: Native to or only found in a certain place; indigenous.

Endoparasite: A parasite that lives inside its host.

Epidemic: Rapid spread of a disease that causes a high number of cases in a limited space and time, such as a sudden outbreak.

Epithelium: The outer cell layer of skin or mucosae.

Epizootic: Relating to a disease that is temporarily prevalent and widespread in an animal population; such a disease.

Ethical: Pertaining to standards of “right and wrong” imposed by an external source, e.g., a community, profession.

Ethnoprimateology: A practice that combines primatology and anthropology to view humans and other primates as living in shared, integrated ecological and social spaces.

Ethology: The scientific study of animal behavior under natural conditions.

Evapotranspiration capacity: Water demand.

Ex-situ: Outside of a natural environment; in captivity.

Facial dysplasia: A disease in which bone in the skull is replaced by softer tissue, causing abnormal growth and an altered facial appearance.

Fauna: Animals.

Fission–fusion: Pertaining to communities whose size and composition are dynamic due to the coming together (fusion) and moving away (fission) of individuals.

Flagship species: A charismatic species that is selected to serve as ambassador for the protection of an ecosystem or an area inhabited by many species that are less well known.

Flagged: Pertaining to one of two morphs of adult male orangutan, the other being “unflagged”; characterized by large cheek pads, greater size, a long coat of dark hair on the back and a throat sac used for “long calls.”

Flora: Plant life.

Folivore: Any chiefly leaf-eating animal. Related terms: folivorous, folivory.

Fomite: An object or material likely to carry infection, such as clothes.

Food security: Constant physical, social and economic access to sufficient, safe and nutritious food that meets food preferences and dietary needs for an active and healthy life.

Footprint: In relation to industrial development, the direct deforestation and disturbance area related to a project and its infrastructure.

Forest fuel: In a wildland forest fire context, the combustible materials such as fine live and dead leaves, twigs, and branches from the ground level to the treetops. Fine fuels are the primary fuel source for intense forest fires. Forest fire behavior is proportional to the level of fine fuels within the overall combustible biomass. High levels of fine fuels, which may be expressed as fuel load (weight per area, such as tons per hectare), are associated with more intensive fire behavior.

Formulation: The process of selecting the types and amounts of ingredients in an animal diet that is to contain planned concentrations of nutrients.

Frugivore: Any chiefly fruit-eating animal. Related terms: frugivorous, frugivory.

Fulminant: In medicine, rapidly progressing and severe.

- Fungi:** Spore-producing organisms that feed on organic matter—moulds, mushrooms, toadstools and yeast.
- Gastrointestinal:** Referring to the digestive system—from the esophagus, via the stomach and intestines, to the anus.
- Genome:** The complete genetic material of an organism.
- Genotypic:** Related to genetic information (see also: **phenotypic**).
- Glomerular:** Related to the kidneys' glomeruli, bundles of capillaries that transfer waste products from the blood into the urine.
- Glucocorticoids:** Anti-inflammatory steroid hormones that are involved in the metabolism of carbohydrates, proteins and fats.
- Granulomatous:** Forming nodes of immune cells in chronic inflammation.
- Guarded prognosis:** A prediction about an individual's health outcome based on insufficient information, such that the outcome is in doubt.
- Habituated:** Accustomed to the presence of humans, as achieved by frequent or prolonged exposure to people. Related term: habituation.
- Habituation:** A process by which animals are repeatedly exposed to the same stimuli, such as the presence of humans, until they no longer respond to those stimuli.
- Hazard:** A natural, socionatural or anthropogenic process, anomaly or event that is defined by location, magnitude, intensity, frequency and probability, and that has the potential to directly harm life as well as the built and natural environments and ecosystems. A hazard can cause indirect disruptions to an economy.
- Helminth:** Flat or round-bodied worm.
- Hepadnavirus:** A group of DNA viruses, such as the hepatitis B virus, that can cause liver damage.
- High-value areas:** In the forest fire context, the areas around valuable built assets including public infrastructure for transport, health and communications; private industry, such as agriculture, tourism and mining; environmental areas of significant biodiversity, and those important for endangered species, or of significant cultural value; and some managed water catchment areas.
- Histopathology:** A branch of pathology evidencing tissue changes characteristic of disease; microscopic evidence. Related term: histopathological.
- Holism or collectivism:** Approaches that value wholes, such as species and ecosystems, over individuals.
- Homeostasis:** In medicine, the state of balance among all body systems that is required for the body to function correctly.
- Home range:** An area in which individuals or groups regularly spend time and which territorial animals may defend from others.
- Hominines:** The evolutionary subfamily of great apes, including African great apes and humans. A similar Asian great ape subgroup is referred to as Ponginae.
- Hormone:** A biological messenger substance that is produced in the body and transported via the blood stream to different organs and tissues, where it influences the metabolism.
- Hybrid:** The offspring of two different species or varieties of plant or animal; something that is formed by combining different elements.
- Hybrid zone:** Area where closely related but genetically distinct populations meet, mate and give birth to cross-fertilized offspring.
- Hyperendemic:** Regarding a pathogen, persistently present at high levels in a region or population.
- Hypertension:** A condition in which the blood vessels have persistently raised pressure; also known as high or raised blood pressure.
- Hypertrophy:** Growth of muscle cells.
- Hypometabolism:** A condition marked by an abnormally low metabolic rate and decreased glucose consumption.
- Hypoplasia:** Genetic disorder that leads to underdevelopment of tissue, organs or organisms based on an insufficient number of cells.
- Hypotension:** Low blood pressure, as is commonly caused by anesthesia (because it expands the volume of the cardiovascular system).

Hypothermia: A drop in the core body temperature below the level at which the body can self-regulate.

Hypothesis: A proposed, testable explanation for an observation.

Idiopathic myocardial fibrosis: A significant increase in the collagen volume of muscular tissue of the heart due to an unknown cause.

Imidacloprid: An insecticide widely used to control pests in agriculture.

Immunocompetence: A body's ability to produce a normal immune response following exposure to an antigen.

Infanticide: The act of killing an infant.

Influenza: A contagious upper respiratory viral infection, commonly referred to as “the flu”.

In-situ: In a natural environment; in the wild.

Instrumentalism: A view that ascribes value to an individual or a collective for its extrinsic worth, disregarding or denying any intrinsic value.

Intact forest landscape: Large, connected tracts of undisturbed woodland.

Inter-: Between.

Interbirth interval: The biologically determined period of time between consecutive births.

Interception capacity: The amount of rainwater that can be retained by the leaves and branches of plants and trees, as well as the debris on the forest floor, and so does not reach the soil.

Interferon-gamma assay: Medical test used in the diagnosis of some infectious diseases, especially tuberculosis.

Interstitial: Relating to spaces between cells, tissues or organs in the body.

Intra-: Within.

Intravenous: Into or within a vein.

Intrinsic value: Worth of an individual irrespective of extrinsic valuing, such as in instrumentalism.

Isotopes: Atoms of the same element that contain the same number of protons but a different number of neutrons.

Laryngeal: Referring to the larynx (voice box).

Lesion: Abnormal tissue growth resulting from injury or disease.

Macroparasite: Parasites that are large enough to be visible to the naked eye, such as worms and ticks.

Maculo-papular: Related to skin lesions typically characterized by red, flat and raised bumps.

Mast fruiting: The simultaneous production of fruit by a large number of trees every 2–10 years, without any seasonal change in temperature or rainfall.

Metabarcoding: A method of species identification that uses a section of DNA or RNA in a way that allows for the simultaneous identification of many species within the same sample.

Metabolic syndrome: A combination of conditions that increase the risk of heart disease, stroke and diabetes.

Metazoan: A multicellular organism with differentiated cells. Parasite examples include helminths and arthropods.

Microbiome: All microorganisms in a certain habitat, such as the gut (gastrointestinal system) or skin.

Microcosm: A small subset of a whole that is generally considered representative of the whole.

Mitigation hierarchy: A tool used to limit the negative impacts of development projects on biodiversity.

Mixed methods: The combination of quantitative and qualitative data collection and analysis within the same study.

Molecular: In this volume, related to DNA- or RNA-based methods, such as polymerase chain reaction (PCR) tests.

Monogamy: The practice of having a single mate over a period of time.

Moral: Pertaining to what a person feels they ought to do—distinguishing between “good and bad” and “right and wrong”—based on guiding principles shaped by their environment and sometimes their belief system.

Moral courage: The ability to take action in line with ethical values despite the risk of adverse consequences.

Moral distress: Unease that results from discrepancies between what an individual perceives as an ethically correct action and what the individual is tasked with doing.

Moral resilience: The ability to deal with an ethically adverse situation without experiencing lasting effects of moral distress.

Moral standing or status: In ethics, an ascribed quality based on which an individual is worthy of moral consideration and moral significance.

Morbidity: Sickness. In epidemiology, the number of individuals in a population who suffer from a disease compared to the total number of individuals in the population.

Morph: A distinct form of an organism or species.

Mortality: Deaths. In epidemiology, the number of individuals in a population who die from a disease compared to the total number of individuals in the population.

Multi-agency response: In disaster management, collective work undertaken by a number of agencies, each with its own command and communications system, to deliver shared aims and objectives; as part of the response, they also pursue their own, separate priorities, which reflect individual agency strengths, including resource type and expertise.

Multimodal approach: Characterized by multiple means of communication, such as a combination of text, video, photos and audio. With respect to ape conservation, its relevance is consistency of scientific communication between various communities.

Multiple-use zones: Land characterized by a range of integrated uses, such as residential, commercial, industrial, agricultural and conservation-related.

***Mycobacterium tuberculosis* complex:** A genetically related group of bacteria that cause tuberculosis.

Nasal flora: Microorganisms in the nose.

Nasopharyngeal: Related to the area covering the back of the nose and the throat.

Natal philopatry: The tendency of some animals to remain in or return to the area of their birth.

Nature-based tourism: Travel-related experiences that are centered on wild and natural environments.

Necropsy: Examination and dissection of an animal corpse to assess health prior to death and cause of death.

Necrotizing: Related to an inflammation type defined by dead cells or tissue.

Necrotizing dermatitis: An inflammation of the skin defined by dead cells or tissue.

Nematode: A worm of the phylum *Nematoda*, commonly referred to as a roundworm.

Nephritis: An infection or inflammation of the kidney.

Nervous system: The brain and network of nerves that transmit information from the brain to the rest of the body and vice versa, controlling the entire organism, including breathing, moving, thinking and feeling.

Net gain: In an ecological context, a positive outcome for biodiversity following a development project and the application of targeted conservation measures.

Neurological: Related to the nervous system.

Next-generation sequencing (NGS): A technology that is able to run multiple parallel RNA/DNA sequences at high speed and throughput to reveal entire genomes or larger RNA/DNA sequences than is possible using standard sequencing.

Nodules: Little nodes.

No net loss: In an ecological context, an outcome that avoids an overall loss of biodiversity and ecosystem services following a development project and targeted conservation activities. This term is often used in association with the **mitigation hierarchy**.

Nucleic acid: A molecule that carries genetic information, such as DNA and RNA.

Nulliparous: Never having given birth to a live baby.

Nutritional security: See **food security**.

Omnivorous: Related to animals who eat a large variety of foods, both animal- and plant-based.

One Health: A transdisciplinary approach that addresses the interdependence of human, animal and environmental health, with the aim of producing shared optimal health outcomes through international collaboration.

One Welfare: A framework designed to help improve animal welfare, human wellbeing and the integrity of the environment by emphasizing their interconnections.

Operant conditioning: A method of learning using reward and punishment to impact behavior; i.e., behavior that is rewarded will likely be repeated and behavior that is punished is less likely to be repeated. Also known as instrumental conditioning.

Osteoarthritis: Inflammation of a bone that has spread to a joint.

Pandemic: A global epidemic.

Parasite: An organism that lives off or in another organism, to the detriment of the host organism.

Parasitemia: Parasites in the blood stream.

Pathogen: A microorganism that causes sickness or disease.

Pathogenicity: An organism's ability to cause disease.

Pelage: Fur; coat.

Personhood: The legal status of a person. Under the law, a "person" has one or more rights while a "thing" has none. Historically, some humans were classified as "things" under the law; today, personhood is not restricted to human beings.

Phage: A virus that infects bacteria.

Phenotypic: Related to the appearance or observable characteristics of an organism (related words: phenotype).

Phylogenetic: Relating to the evolutionary development, diversification and relatedness of a species or group of organisms, or to a particular feature of an organism.

Physiology: The study of how a living system works.

Pith: The spongy tissue in the stems and branches of many plants.

Planetary health: A paradigm that focuses on the health of humans and the state of the natural systems on which they depend.

Plasma: The cell-free part of blood.

Plasmodium sp.: Single-celled parasites that cause malaria.

Pneumoviruses: Viruses of the family *Pneumoviridae*, which cause respiratory diseases, including common colds in humans.

Poaching: Illegal hunting, killing, capturing or taking of wildlife in violation of local or international wildlife conservation laws.

Polyandrous: Pertaining to a mating system that involves one female and two or more males.

Polygynandrous: Pertaining to an exclusive mating system that involves two or more males and two or more females. The numbers of males and females are not necessarily equal.

Polygynous: Pertaining to a mating system that involves one male and two or more females.

Polymerase chain reaction (PCR): A laboratory technique for the rapid production (amplification) of millions to billions of copies of a specific segment of DNA, which can then be studied in greater detail.

Positive reinforcement training: Use of a reward (praise, treat, prize, . . .) to encourage the repetition of desired activities/behavior.

Post-mortem: After death.

Prediabetes: A condition characterized by blood sugar levels that are higher than normal, but not high enough for a type 2 diabetes diagnosis.

Preparedness: Measures and actions taken for and by a community and community partners prior to an impact by a hazard, ensuring a timely and effective response to hazard impacts.

Preputial: Relating to the foreskin or clitoral hood.

Primary prevention: Intervention before a disease, injury or disorder occurs.

Priority biodiversity feature: Irreplaceable or highly vulnerable habitats, species, structures, functions or other natural elements needed to maintain ecological viability.

Pro-poor tourism: Travel-related experiences that generate net economic, social, environmental or cultural benefits for low-income communities.

Proprietary mixture: A combination of ingredients, often unique to a particular product, such as medication.

Proteomics: The study of proteomes, which are protein-based systems within the body.

Protozoa: Single-celled organisms.

Psychopathology: The scientific study of mental health issues and disorders.

Purulent: Containing or producing pus.

Quarantine: A state, place or period of isolation, the length of which is dictated by the time needed to detect diseases of concern. The most common period is 30 days, although a minimum of 90 days is common if tuberculosis is of concern, or 6 months for rabies.

Radiology: In this volume, X-ray and other medical imaging techniques that use radiation.

Radio telemetry: A technique employed to track the movement and behavior of animals, using the transmission of radio signals to locate a transmitter attached to the animal of interest.

Range state: A country that exercises jurisdiction over any part of the native distribution or range of a particular species or group of species.

Reactivity: In serological tests, a reaction/change in blood that has been mixed with an antigen that may indicate the presence of antibodies.

Reintroduction: The planned release of an organism into its natural habitat after life in captivity.

Renal: Concerning the kidneys.

Rescue and rehabilitation center: A facility that treats and cares for injured, orphaned or sick wild animals with the aim of restoring essential capabilities and releasing them back into their natural habitat.

Reservoir: Any living being or substance in which an infectious agent normally lives, grows and multiplies, and from where it can spill over to (other) species, where it may cause disease.

Retrovirus: A microbe that inserts DNA copies of its own RNA genome into the host cells that it invades; an enzyme called reverse transcriptase transcribes RNA into DNA.

RNA: Ribonucleic acid; genetic material that is structurally similar to DNA, although it is typically single-stranded rather than double-stranded.

Roving strategy: Actively searching for, or roaming between, females.

Sanctuary: A non-profit facility dedicated to providing care (often lifelong) for orphaned, confiscated or injured wildlife.

Secondary prevention: Screening to identify and reduce the impact of diseases, injuries or disorders in their early stages.

Semi-captive: Individuals ranging, foraging and socializing in their natural environment, with some level of human intervention such as enclosure management, shelter, supplementary feeding and veterinary care.

Sentience: The capability of animals to experience and feel different emotions, such as joy, pleasure, pain and fear.

Septicemia: Blood poisoning, especially that caused by bacteria or their toxins.

Seroconversion: A process by which the body's immune system produces specific antibodies in the blood to combat infection. These antibodies can be produced by infection or vaccination, which itself is aimed at enhancing the body's immune response to a particular infection.

Serology: The study of blood serum and other bodily fluids, with a focus on their immunological properties; testing of blood serum for the presence of antibodies.

Shared situational awareness: A common understanding among two or more people or agencies, based on three elements: the perception in time and space of the specified observations and outcomes for an area or activity (what has happened), the comprehension of what the observations and outcomes mean and a projection of that meaning into the future. Commonly abbreviated to SSA.

Silverback: An adult male gorilla who has reached maturity and developed silver hairs on the saddle of his back.

Sociality: The level to which individuals in a species or population associate with one another and form social groups.

Socionatural: Featuring both natural and anthropogenic characteristics.

Spillback: Disease transmission from any species to the species in which the disease originated. Tuberculosis, for example, was initially transmitted from humans to other species, but the disease is now spilling back into humans from these species.

Spillover event: A pathogen's jump from one species to another, where it can cause disease. A spillover can be self-limiting, not resulting in further transmission, or can result in spread of the pathogen in the new host population, which can lead to an epidemic (or pandemic) and potentially become endemic.

Spontaneous volunteers: Members of a community or the public who are not affiliated with a response or recovery agency or organization and volunteer their time and services.

Standard operating procedures (SOP): A set of written instructions describing a step-by-step process that must be taken to perform a routine activity properly.

Stochastic: Having a random probability of occurrence or pattern that cannot be predicted precisely.

***Strongyloides*:** A genus of parasitic roundworm, known as threadworm in the United States. The main species that infects humans is *Strongyloides stercoralis*, but it can affect other primates as well. The main species in primates is *Strongyloides fuelleborni*.

Subacute: Concerning the duration of a disease (between 14 and 30 days), between acute and chronic.

Subadult: Not yet having attained all adult characteristics; an animal in the subadult stage.

Substrate: Any organic substance that may be used as bedding or nesting material, insulation, food or as an absorptive layer for animal excreta.

Superinfection: A complication following or adding to a prior infection, whereby a pathogen can overgrow and overwhelm a host. Superinfections are due to antimicrobial resistance or immunosuppression.

Surge capacity: The ability to increase resources (stores, equipment, facilities, services, personnel) significantly in a short period of time to deliver a timely and effective response.

Sympatric: Pertaining to species or populations that occupy the same geographic ranges.

Syndromic surveillance: Collection and analysis of health data for the rapid detection of health threats.

Taxon (plural: **taxa**): Any unit used in the science of biological classification or taxonomy.

Terrestriality: Adaptation to living on the ground.

Tertiary education: University or other post-school studies.

Tertiary prevention: Management of the impact of an ongoing illness or injury that has lasting effects.

Tracker: An observer employed to follow the movements of a specific group of apes or other animals.

Transit facility: A site that temporarily accommodates seized and rescued wild animals, either prior to their transfer to a rehabilitation center or sanctuary, or prior to their release into natural habitat.

Translational medicine: A field that links medical research, medical practice and community to produce a holistic approach to medicine, connecting the patient to the environment.

Translocation: In conservation, the process of moving organisms (animals or plants) from one area to another, in captive or wild settings. Conservation translocations can reinforce an existing population, reintroduce one that has disappeared, or introduce a species outside its indigenous range.

Ulcerative: Related to inflammation that is defined by ulcer formation, a lesion of skin or mucosa.

Ultrasound: An imaging method and diagnostic tool that uses high-energy sound waves to produce images of tissues and organs inside the body. Unlike X-rays, ultrasound can be used to portray soft tissues in detail, such as the uterus. Also known as a sonogram.

Umbrella species: A species whose conservation leads to the protection of many other species in the same ecosystem or landscape.

Understory: The shrubby plant layer below the forest canopy.

Utilitarianism: An ethical theory that includes all sentient beings in moral consideration so as to maximize overall wellbeing.

Vascular changes: Alterations in blood vessels that could be associated with, or could lead to, disease.

Vector: An organism that carries a pathogen (on the inside or outside) and spreads it. Examples include mosquitoes carrying blood parasites from one person to another when feeding, as well as vectors that transfer pathogens mechanically, such as rodents who move from stable to stable carrying dirt under their feet.

Venous: Relating to veins.

Vicarious resilience: An experience of personal growth based on witnessing growth in others, such as among professionals.

Vicarious traumatization or compassion fatigue: An indirect traumatic reaction to the traumatic experiences of others.

Virus: An infectious organic structure whose replication depends on a living organism. Some can cause disease, many are commensals.

Wadge: A lump of fibrous fruit matter, which apes spit out after chewing the fruit to extract the juices.

Wean: To accustom a young animal to nourishment other than the mother's milk.

Wildlife tourism: Travel-related experiences that provide close contact with wild animals and nature.

Zoo: A captive facility that puts animals on display for public viewing. Zoos typically have integrated reproduction strategies, whereas sanctuaries generally prevent captive breeding.

Zoonoses: Diseases that can be spread from animals to humans and vice versa (see also: **zoonosis, zoonotic**).

Zoonosis: Infectious disease that is transmitted from animals to humans and vice versa. Related terms: zoonoses, zoonotic. See also: **anthroponosis**.

Zoonotic: Related to diseases that can be spread from animals to humans and vice versa (see also: **zoonosis, zoonoses**).