

Chapter 17 | Glossary



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17 GLOSSARY

Table 17-1 List of technical terms and definition

| Term | Definition |
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| Acidic | Term used to describe a solution with a low pH (<7). |
| Alkaline | Term used to describe a solution with a high pH (>7). |
| Alluvial mining | It's a method of extracting minerals by dredging alluvial deposits. |
| Alluvium | Sediment deposited by flowing water, as in a riverbed, flood plain, or delta, also called alluvion |
| Alteration | Referring to physical or chemical change in a rock or mineral subsequent to its formation. |
| Amphibolite | A metamorphic rock composed chiefly of amphibole and plagioclase feldspar and having little or no quartz. |
| Anaerobic | An environmental condition of no oxygen. |
| Anoxic | The absence, or near absence, of oxygen. |
| Basalt | A hard, dense, dark igneous rock composed chiefly of plagioclase feldspar, pyroxene, and olivine, and often having a glassy appearance |
| Basement | Generally refers to the older rocks below the sedimentary base or solid rock underlying superficial weathered rock or soil. |
| Batter | Receding slope – backward and upward slope on a face of a bank. |
| Berm | Dirt and rock piled alongside a haulage road or along the edge of a dump point. A safety measure. |
| Bioaccumulate | The accumulation within living organisms of toxic substances occurring in the environment. |
| Bioaccumulation | The accumulation of a substance, such as a toxic chemical, in various tissues of a living organism. Bioaccumulation takes place within an organism when the rate of intake of a substance is greater than the rate of excretion or metabolic transformation of that substance. |
| Bioindicators | Bioindicators are molecular tools used in ecology, physiology, environmental microbiology and other disciplines, to detect stressors and other environmental conditions surrounding an organisms or cells. |
| Blast hole | Holes into which explosive is added in order to fragment the rock. |
| Blasting | Blasting is a primary means of extracting minerals and ores at surface mining operations. |
| Block model | A mathematical approximation of an orebody using regular rectangular blocks. |
| Breccia | Breccia is a rock composed of broken fragments of minerals or rock cemented together by a fine-grained matrix that can be similar to or different from the composition of the fragments. |
| Bund | (see contour banks). |

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| Calc-alkaline | The name given to a suite of rocks comprising the volcanic association basalt-andesite-dacite-rhyolite, or the plutonic association gabbro-diorite-granodiorite-granite. |
| CALPUFF | CALPUFF is an advanced non-steady-state meteorological and air quality modeling system developed by Exponent scientists. |
| Camera trap | A camera trap is a remotely activated camera that is equipped with a motion sensor or an infrared sensor, or uses a light beam as a trigger. Camera trapping is a method for capturing wild animals on film when researchers are not present, and has been used in ecological research for decades. |
| Carbonate | A rock composed principally of calcium carbonate (CaCO ₃). |
| Catchment | Also called A drainage basin, a catchment is an extent or an area of land where surface water from rain and melting snow or ice converges to a single point, usually the exit of the basin, where the waters join another waterbody, such as a river, lake, reservoir, estuary, wetland etc. |
| Colluvium | A loose deposit of rock debris accumulated through the action of gravity at the base of a cliff or slope. |
| Compensation | The payment—in cash or kind—for an asset (e.g. land, house, trees) or livelihood income (cash or kind) affected by the Project. |
| Critical habitat | Critical habitat is a habitat area essential to the conservation of a listed species, though the area need not actually be occupied by the species at the time it is designated. |
| Concentrate | A metal-rich product resulting from a mineral enrichment process such as gravity concentration or flotation. |
| Critical Conservation Outlook | IUCN in its "World Heritage Outlook" program as having a "Critical" Conservation Outlook meaning "The site's values are severely threatened and/or deteriorating. Immediate large-scale additional conservation measures are needed to maintain and/or restore the site's values over the short to medium-term of the values may be lost." |
| Cultural heritage | The legacy of physical artefacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations. |
| Culvert | A drain or channel crossing under a road, sidewalk, etc.; sewer; conduit. |
| Cumulative impact | Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is a combination of these effects and the resulting environmental degradation that should be the focus of the cumulative effects analysis. |
| Customary Tenure | Customary land which is owned by Indigenous communities and administered in accordance with their customs. |
| Cut-off grade | The estimated lowest grade of ore that can be mined and treated profitably in a mining operation. |
| Decibel | (dB) describes the sound pressure level of a noise source. It is a logarithmic scale referenced to the threshold of hearing. |
| Decommissioning | The shut down or closure of the mine. |
| Dissolved Oxygen | Oxygen saturation or dissolved oxygen (DO) is a relative measure of the amount of oxygen that is dissolved or carried in a given medium. |

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| Doré bars | A <i>doré</i> bar is a semi-pure alloy of gold and silver, usually created at the site of a mine. It is then transported to a refinery for further purification. The proportions of silver and gold can vary widely. <i>Doré</i> bars weigh as much as 25 kg. |
| Electrical conductivity | The measure of a material's ability to conduct electricity. It gives a measure of the concentration of total dissolved solids/ions in solution. |
| Electrowinning | Electrowinning, runoff also called electroextraction, is the electrodeposition of metals from their ores that have been put in solution via a process commonly referred to as leaching. Electrefining uses a similar process to remove impurities from a metal. |
| Endangered species | An Endangered (EN) species is a species which has been categorized by the International Union for Conservation of Nature (IUCN) Red List as likely to become extinct. "Endangered" is the second most severe conservation status for wild populations in the IUCN's schema after Critically Endangered (CR). |
| Ephemeral | Temporary/short lived. |
| Felsic | In geology, felsic refers to igneous rocks that are relatively rich in elements that form feldspar and quartz. |
| Ferrallitic soils | Ferrallitisation is the process in which rock is changed into a soil consisting of clay (kaolinite) and sesquioxides, in the form of hydrated oxides of iron and aluminium. |
| Ferricrete | Ferricrete is a hard, erosion-resistant layer of material at the land surface that consists of near surface sediments cemented by iron oxide in to a duricrust. Ferricretes contains sediments and other non-indigenous materials, which have been transported from outside the immediate area in which it occurs. The iron oxide cements are derived from the oxidation of percolating solutions of iron salts. |
| Flocculants | A chemical for producing a flocculation/aggregation of suspended solids. |
| Flotation | A mineral concentration process where the surface chemistry of the desired mineral particles is chemically modified such that they preferentially attach themselves to bubbles and float to the surface while the gangue minerals are chemically suppressed and do not float. |
| Flyrock | The fragments of rock thrown and scattered during quarry or mine blasting. |
| Gallery forest | Gallery forests are forests that form as corridors along rivers or wetlands and project into landscapes that are otherwise only sparsely treed such as savannas, grasslands or deserts. |
| Gleysol | Water saturated soils that are not salty. |
| Grade | Quantity of metal per unit weight of host rock. |
| Grievance Mechanism | A way for socially responsible businesses to meet requirements of corporate responsibility-related agreements or pacts, reduce risk while capacity-building or developing internationally, and assist larger processes that create positive social change. |
| Grinding | Reducing mineralised rock to the consistency of fine sand by crushing and abrading in a rotating steel grinding mill. |
| Habitat loss and degradation | The process in which natural habitat is rendered functionally unable to support the species present. In this process, the organisms that previously used the site are displaced or destroyed, reducing biodiversity. |

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| HDPE geomembrane liner | HDPE is a geomembrane used in landfill and mining applications that require UV and Ozone resistance, chemical resistance or high-quality installations. |
| Health hut | Health hut are based in village level and are managed by community health workers. |
| Health Post | Health posts (<i>postes de santé</i>) located within Commune level according to Health System in Senegal. |
| Host rock | The rock containing a mineral or an ore body. |
| Hydraulic conductivity | Describes the ease with which water can move through pore spaces or fractures. |
| Hydrocarbon | An organic compound consisting entirely of hydrogen and carbon. |
| Hydrology | The science dealing with the occurrence, circulation, distribution, and properties of the waters of the earth and atmosphere. |
| ICOLD Guidelines | International Commission On Large Dams leads the profession in setting standards and guidelines to ensure that dams are built and operated safely, efficiently, economically, and are environmentally sustainable and socially equitable. |
| Introduced Species | An introduced, non-native or non-indigenous species, is a species living outside its native distributional range, which has arrived there by human activity, either deliberate or accidental. |
| IUCN Red List | The IUCN Red List of Threatened Species (also known as the IUCN Red List or Red Data List), founded in 1964, is the world's most comprehensive inventory of the global conservation status of biological species. |
| LA90 | A LA90 level is an A-weighted noise level which is exceeded for 90 percent of the measurement period. An LA90 level is considered to represent the "background" noise level. |
| LAeq | The equivalent steady-state A-weighted sound level ("equal energy") which, in a specified time period, contains the same acoustic energy as the time-varying level during the same period. It is considered to represent the "average" noise level. |
| LAmx | A LAmx level is the maximum A-weighted noise level during the measurement period. |
| Laterite | Laterites are soil types rich in iron and aluminium, formed in hot and wet tropical areas. Nearly all laterites are rusty-red because of iron oxides. |
| Leachate | The solution resulting from the dissolution of soluble substances from the downward percolation of water. |
| Leptosols | New class of soils that are shallow in depth and with weak profile development. |
| Life of Mine | The time in which, through the employment of the available capital, the ore reserves or such reasonable extension of the ore reserves as conservative geological analysis may justify—will be extracted. |
| Lithology | The physical characteristics of a rock or stratigraphic unit. |
| Livelihood | The full range of means that individuals, families, and communities utilise to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering. |

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| Livelihood Restoration Plan | A document which provides the necessary strategic framework for the social planning of the Project and encompasses livelihood restoration and compensation strategies (refer Volume D). |
| Macroinvertebrates | Macroinvertebrates are organisms that are large (macro) enough to be seen with the naked eye and lack a backbone (invertebrate). They inhabit all types of running waters, from fastflowing mountain streams to slowmoving muddy rivers. |
| Mineral | A natural, inorganic, homogenous material that can be expressed by a chemical formula. |
| Mineral deposit | Is a mineralised body which has been delineated by appropriate drilling and/or underground sampling to support a sufficient tonnage and average grade of metal(s). |
| Mineralisation | The process by which minerals are introduced into a rock. More generally, a term applied to accumulations of economic or related minerals in quantities ranging from anomalous to economically recoverable. |
| Mining Concession | A concession is a grant of rights, land or property by a government, local authority, corporation, individual or other legal entity. In the case of mining concession, a private company enters into an agreement with the government to have the exclusive right to operate, maintain and carry out investment in a public utility for a given number of years. |
| Mitigation | The action of reducing the severity, or seriousness of something. |
| Nutrients | Nutrients are the components in foods that an organism utilizes to survive and grow. |
| Open pit, open cut | Surface mining in which the ore is extracted from a pit or quarry. The geometry of the pit may vary with the characteristic of the ore body. |
| Ore | Mineral bearing rock that contains one or more minerals, at least one of which can be mined and treated profitably under current or immediately foreseeable economic conditions. |
| Oxidation | A chemical reaction in which an atom loses electrons and the valence of the element is correspondingly increased. |
| Oxidise | A chemical reaction where electrons are removed from an atom. An atom becomes an oxide; combined with oxygen. |
| Patrilineal | Inheriting or determining descent through the male line. |
| Peak ground acceleration | Peak ground acceleration (PGA) is a measure of earthquake acceleration on the ground and an important input parameter for earthquake engineering. |
| Perennial Crops | Crops developed to reduce inputs necessary to produce food. By reducing the need to replant crops from year-to-year, perennial cropping can reduce topsoil losses due to erosion,[3] increase biological carbon sequestration within the soil, and greatly reduce waterway pollution through agricultural runoff. |
| Permanent Cultivation | The replacement of a pre-existing natural ecosystem with a permanently maintained agricultural system, in order to produce crops as frequently as climate and soil conditions allow. |

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| pH | A measure of concentration of hydrogen ions (grams of atom/L) used to represent the alkalinity or acidity of a solution. Measured on a logarithmic scale. |
| Piezometer | A piezometer is either a device used to measure static liquid pressure in a system by measuring the height to which a column of the liquid rises against gravity, or a device which measures the pressure (more precisely, the piezometric head) of groundwater [1] at a specific point. |
| Pre-feasibility | A relatively comprehensive analysis which is qualified by the availability and accuracy of fundamental criteria and assumptions to the degree that it cannot be the basis for final decisions. |
| Process water | Means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by product, or waste product. |
| Project Development Area | A broad boundary around the Project within which settlements and some forms of active land use may be excluded for safety reasons. |
| Project Footprint | Areas potentially directly affected by the Project including buffer zones. |
| Protected area | A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values. (IUCN Definition, 2008) |
| Proterozoic | The later of two divisions of the Precambrian era, during which the earliest plants and animals are assumed to have lived Compare Archaeozoic |
| Pyrite | A common iron sulphide mineral (FeS ₂). |
| Reduction potential | Reduction potential (also known as redox potential, oxidation / reduction potential, ORP, pE, or E_h) is a measure of the tendency of a chemical species to acquire electrons and thereby be reduced. |
| Regosol | A Regosol in the FAO World Reference Base for Soil Resources is very weakly developed mineral soil in unconsolidated materials. Regosols are extensive in eroding lands, in particular in arid and semi-arid areas and in mountain regions. |
| Rehabilitation | The process by which lands disturbed as a result of mining activity are rehabilitated back to a beneficial land use. Rehabilitation activity includes the removal of buildings, equipment, machinery and other physical remnants of mining, closure of tailings impoundments, leach pads and other mine features, and contouring, covering and revegetation of waste rock piles and other disturbed areas. |
| Residual impact | Residual impacts are defined as those impacts that remain following the implementation of mitigation measures. |
| Revegetation | Revegetation is the process of replanting and rebuilding the soil of disturbed land. This may be a natural process produced by plant colonization and succession, or an artificial (manmade) wilderness engineering, accelerated process designed to repair damage to a landscape due to wildfire, mining, flood, or other cause. |
| Riparian | The terrestrial region around a body of water or along a river bank. |
| Run-of-mine Pad | Run-of-mine is coal that is not graded according to quality or size. |

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| Sacred site | It's a place of great significance. |
| SAG mill | Semi-Autogenous Grinding mill; a large diameter grinding mill utilising steel balls and large rock pieces to grind mineralised material from a coarse feed size to a relatively small particle size. The SAG mill replaces the equipment normally used for fine crushing and rod milling. |
| Saprolite | Soft, thoroughly decomposed rock rich in clay and remaining in its original place. |
| Sediment | Solid material that has settled down from a state of suspension in a liquid. More generally, solid fragmental material transported and deposited by wind, water or ice, chemically participated from solution, or secreted by organisms, and that forms in layer in loose unconsolidated form. |
| Smelting | Smelting is a form of extractive metallurgy; its main use is to produce a base metal from its ore. This includes production of silver, iron, copper and other base metals from their ores. Smelting makes use of heat and a chemical reducing agent to decompose the ore, driving off other elements as gasses or slag and leaving just the metal base behind. |
| SOTER | SOTER aims to establish a World Soils and Terrain Database, at scale 1:5 000 000, containing digitized map units and their attribute data in standardized format. |
| Stockpile | A stockpile is a pile or storage location for bulk materials, forming part of the bulk material handling process. |
| Sulphide | A mineral compound characterised by the chemical linking of sulphur and metal. |
| Sump | A space where water is allowed to collect at the bottom of a shaft or below a passageway. |
| Suspended sediment | Suspended sediments are defined as solid particles transported in a fluid media or found in deposit after transportation by flowing water, wind, glacier and gravitational action. |
| Tailings | Sand to silt sized waste product from mineral processing operations. |
| Tholeiitic basalt | <i>Tholeiites</i> are a chemical sub-type of basalt defined on their silica content. |
| Total Dissolved Solids | Total Dissolved Solids (often abbreviated TDS) is a measure of the combined content of all inorganic and organic substances contained in a liquid in: molecular, ionized or micro-granular (colloidal sol) suspended form. |
| Tributary | The name given to a stream that flows into a larger stream of body of water |
| Turbidity | Turbidity is the cloudiness or haziness of a fluid caused by individual particles (suspended solids) that are generally invisible to the naked eye, similar to smoke in air. The measurement of turbidity is a key test of water quality. |
| UNESCO's List of World Heritage in Danger | UNESCO's List of World Heritage in Danger is designed to inform the international community of conditions which threaten the very characteristics for which a property was inscribed on the World Heritage List, and to encourage corrective action. |
| Vulnerable groups | Groups that experience a higher risk of poverty and social exclusion than the general population. |

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| Waste rock | Rock containing no target element, or an un-economic quantity of the target element. |
| Waste water treatment Plant | A wastewater treatment plant is a physical plant where various physical, biological or chemical processes are used to change the properties of the wastewater (e.g. by removing harmful substances) in order to turn it into a type of water (also called effluent) that can be safely discharged into the environment or that is usable for a certain reuse purpose. |
| Water table | The planar, underground surface beneath which earth materials, as soil or rock, are saturated with water. |
| WISE | WiseMapping is a free mind mapping web based application written in Java, SVG and HTML5. |
| Woodland | Woodland is a low-density forest forming open habitats with plenty of sunlight and limited shade. Woodlands may support an understory of shrubs and herbaceous plants including grasses. |
| Zadra method | The Zadra process is characterized by simplicity of system design and operation. Mild steel equipment is normally used. Manual control is the standard. Fluctuations in flow and temperatures can reduce stripping efficiency but the only adverse effect is an extension of the required stripping cycle time. After desorption vessel has been filled with loaded carbon and solution flow is started, the only operator attention required is periodic system checks typical of any process plant operation. |

Table 17-2 List of acronyms and definition

| Acronym | Definition |
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| AMD | Acid and Metalliferous drainage refers to the outflow of acidic water from metal mines or coal mines |
| ANC | Acid Neutralising Capacity |
| ANCOLD | Australian National Committee on Large Dams Incorporated |
| ANFO | Ammonium Nitrate Fuel Oil |
| ARD | <i>Agence Régionale de Développement</i> |
| ASM | Artisanal and small Scale Mining |
| AVHRR | Advanced Very High Resolution Radiometer |
| BAP | Biodiversity Action Plan |
| CARITAS | A confederation of Roman Catholic relief, development and social service organisations |
| CBD | United Nations Convention on Biological Diversity |
| CFCE | <i>Contribution Forfaitaire à la charge de l'Employeur</i> |
| CHC | Community Health Centre |
| CIL | Carbon In Leach |
| CITES | Convention on International Trade in Endangered Species |

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| CMS | Bonn Convention / Convention on Migrating Species of Wild Animals (MS) |
| COSEC | <i>Conseil Sénégalais des Chargeurs</i> |
| CPUE | Catch Per Unit of Effort |
| CSMC | <i>Contribution spéciale sur les produits des mines et carrières</i> |
| CSS | <i>Caisse de sécurité sociale</i> |
| CT | <i>Comité Technique</i> |
| DEEC | <i>Direction de l'Environnement et des Établissements Classés</i> |
| DEF | <i>Direction des Eaux et Forêts</i> |
| DEFCCS | <i>Direction des Eaux et Forêts, Chasse et de la Conservation des Sols</i> |
| DFS | Detailed Feasibility Study |
| DGPPE | <i>Direction de la Gestion et de la Planification des Ressources en Eau</i> |
| DMG | <i>Direction des Mines et de la Géologie</i> |
| DPC | <i>Direction de la Protection Civile</i> |
| DPN | <i>Direction des Parcs Nationaux</i> |
| DREEC | <i>Direction Régionale de l'Environnement et des Établissements Classés</i> |
| DRTOP | <i>Direction des Relations de Travail et des Organisations Professionnelles</i> |
| EDD | <i>Étude de Dangers</i> |
| EITI | Extractive Industries Transparency Initiative |
| ESIA | Environmental and Social Impact Assessment |
| ESMF | Environmental and Social Performance Framework |
| ESMMP | Environmental and Social Management and Monitoring Plan |
| ESPF | Environmental and Social Performance Framework |
| FAO | Food and Agriculture Organization |
| FGM | Female Genital Mutilation |
| GDP | Gross Domestic Product |
| GEI | <i>Group d'Expert Indépendant</i> |
| GIIP | Good International Industry Practice. |
| GRS | Government of Republic of Senegal |
| HDPE | High-density polyethylene |
| HFO | Heavy Fuel Oil |
| HIV / AIDS | Human Immunodeficiency Virus Infection and Acquired Immune Deficiency Syndrome |
| IBA | Important Bird and Biodiversity Area. |
| ICMC | International Cyanide Management Code |
| ICMM | International Council on Metals and Minerals |
| ICOLD Guidelines | International Commission On Large Dams |

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| IDEN | <i>Inspection Départementale de l'Éducation Nationale</i> |
| IFAN | <i>Institut Fondamental d'Afrique Noire</i> |
| IFC | International Finance Corporation |
| IPRES | <i>Institution de Prévoyance Retraite du Sénégal</i> |
| ISE | <i>Institut des Sciences de l'Environnement</i> |
| IUCN | <i>International Union for Conservation of Nature</i> |
| KKI | Kedougou Kenieba Inlier |
| LEPP | Local Economic Participation Plan |
| LFO | Light Fuel Oil |
| MEC | Mako Exploration Company |
| MEDD | <i>Ministère de l'Environnement et du Développement Durable</i> |
| NGO | Non-Governmental Organization |
| NMD | Neutral and Metalliferous Drainage |
| NOAA | National Oceanic and Atmospheric Administration |
| NTFP | Non Timber Forest Product |
| OHSAS | Occupational health and safety management systems |
| OMVG | <i>Organisation pour la Mise en Valeur du Fleuve Gambie</i> |
| OUV | Outstanding Universal Values |
| PAPIL | <i>Projet d'Appui à la Petite Irrigation Locale</i> |
| PCR | <i>Président de la Communauté Rurale</i> |
| PDA | Project Development Area |
| PDC | <i>Plan de Développement de la Commune</i> |
| PDD | Departmental Development Plans |
| PET | Potential Evapo-Transpiration |
| PNNK | <i>Parc National du Niokolo-Koba</i> |
| POAS | <i>Plan d'occupation et d'affectation des sols</i> |
| POI | <i>Plan d'Opération Interne</i> |
| PPI | <i>Plan Particulier d'Intervention</i> |
| PPV | Peak Particle Velocity |
| PROGEBE | <i>Projet Régional de Gestion durable du bétail Ruminant Endémique en Afrique de l'Ouest</i> |
| RBL | Rating Background Noise. |
| REMC | Regional Environmental Monitoring Committee |
| RPMCP | Rehabilitation and Preliminary Mine Closure Plan |
| RN7 | <i>Route Nationale N°7</i> |
| ROM | Run of mine |

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| SAG mill | Semi-Autogenous Grinding mill |
| SODEFITEX | <i>Société de Développement et des Fibres Textiles</i> |
| SOTER | Soil and Terrain Database |
| SSTM | Space Shuttle Topography Model |
| TMF | Tailings Management Facility |
| TRIMF | <i>Taxe Représentative de l'Impôt du Minimum Fiscal</i> |
| UCAD | <i>Université Cheikh Anta Diop</i> |
| UEMOA | <i>Union Économique et Monétaire Ouest Africaine</i> |
| UMDF | Upper Mixed Deciduous Forest |
| UN | United Nations |
| UNAIDS | Joint United Nations Program on HIV/AIDS |
| UNEP | United Nation Environment Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNESCO-MAB | UNESCO Man and Biosphere |
| USAID | United States Agency for International Development |
| USEPA | United States Environment Protection Agency |
| US SWMM | United States Storm Water Management Model |
| WHO | World Health Organization |
| World Vision | World Vision International is an Evangelical Christian humanitarian aid, development, and advocacy organization |
| WRD | Waste Rock Dump |
| WSD | Water Storage Dam |