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Abiotic factors refer to non-living physical and chemical elements in the ecosystem. Abiotic resources are usually obtained from the lithosphere, atmosphere, and hydrosphere. Examples of abiotic factors are water, air, soil, sunlight, and minerals. Biotic factors are living or once-living organisms in the ecosystem. These are obtained from the biosphere and are capable of reproduction. Examples of biotic factors are animals, birds, plants, fungi, and other similar organisms. Abiotic versus Biotic comparison chart AbioticBioticIntroduction In ecology and biology, abiotic components are non-living chemical and physical factors in the environment which affect ecosystems. Biotic describes a living component of an ecosystem; for example organisms, such as plants and animals. Examples Water, light, wind, soil, minerals, gases. All living things — autotrophs and heterotrophs — plants, animals, fungi, bacteria. Factors Affect the ability of organisms to survive, reproduce; help determine types and numbers of organisms able to exist in environment; limiting factors restrict growth. Living things that directly or indirectly affect organisms in environment; organisms, interactions, waste; parasitism, disease, predation. Affects Individual of a species, population, community, ecosystem, biome, biosphere. Individual of a species, population, community, ecosystem, biome, biosphere. Biotic components are living organisms in an ecosystem. A biotic factor is a living organism that affects another organism in its ecosystem. Examples include plants and animals that the organism consumes as food, and animals that consume the organism. The following video covers the biotic and abiotic factors that influence most ecosystems, and introduces key vocabulary relevant to ecology. This is a good SlideShare presentation that covers the definition and examples of biotic and abiotic factors in an ecosystem; Relevance The scope of abiotic and biotic factors spans across the entire biosphere, or global sum of all ecosystems. Such factors can have relevance for an individual within a species, its community or an entire population. For instance, disease is a biotic factor affecting the survival of an individual and its community. Temperature is an abiotic factor with the same relevance. Some factors have greater relevance for an entire ecosystem. Abiotic and biotic factors combine to create a system or, more precisely, an ecosystem, meaning a community of living and nonliving things considered as a unit. In this case, abiotic factors span as far as the pH of the soil and water, types of nutrients available and even the length of the day. Biotic factors such as the presence of autotrophs or self-nourishing organisms such as plants, and the diversity of consumers also affect an entire ecosystem. Influencing Factors Abiotic factors affect the ability of organisms to survive and reproduce. Abiotic limiting factors restrict the growth of populations. They help determine the types and numbers of organisms able to exist within an environment. Biotic factors are living things that directly or indirectly affect organisms within an environment. This includes the organisms themselves, other organisms, interactions between living organisms and even their waste. Other biotic factors include parasitism, disease, and predation (the act of one animal eating another). Interaction Examples The significance of abiotic and biotic factors comes in their interaction with each other. For a community or an ecosystem to survive, the correct interactions need to be in place. A simple example would be of abiotic interaction in plants. Water, sunlight and carbon dioxide are necessary for plants to grow. The biotic interaction is that plants use water, sunlight and carbon dioxide to create their own nourishment through a process called photosynthesis. On a larger scale, abiotic interactions refer to patterns such as climate and seasonality. Factors such as temperature, humidity and the presence or absence of seasons affect the ecosystem. For instance, some ecosystems experience cold winters with a lot of snow. An animal such as a fox within this ecosystem adapts to these abiotic factors by growing a thick, white-colored coat in the winter. Decomposers such as bacteria and fungi are examples of biotic interactions on such a scale. Decomposers function by breaking down dead organisms. This process returns the basic components of the organisms to the soil, allowing them to be reused within that ecosystem. References Share this comparison via: If you read this far, you should follow us: "Abiotic vs Biotic." Diffeen.com. Diffeen LLC, n.d. Web. 23 Jul 2025. < > - of or relating to living organisms(of a factor in an ecosystem) produced by the action of living organisms Compare edaphic"Collins English Dictionary — Complete & Unabridged" 2012 Digital Edition © William Collins Sons & Co. Ltd. 1979, 1986 © HarperCollins Publishers 1998, 2000, 2003, 2005, 2006, 2007, 2009, 2012Consisting of living organisms. An ecosystem is made up of a biotic community (all of the naturally occurring organisms within the system) together with the physical environment.Associated with or derived from living organisms. The biotic factors in an environment include the organisms themselves as well as such items as predation, competition for food resources, and symbiotic relationships.Compare abioticOrigin of biotic11590-1600; < Greek biōtikós of, pertaining to life, equivalent to biō-, verbid stem of bioûn to live + -tikos -ticOrigin of biotic1C17: from Greek biotikos , from bios lifeHow does biotic compare to similar and commonly confused words? Explore the most common comparisons:Examples have not been reviewed.The results show that biotic interactions can have a strong influence on plants' ability to adapt to abiotic factors and that adaptation is most efficient when plants are exposed to a variety of interactions."But few studies have examined biotic impacts, such as pathogen infection, on thermal tolerance in natural populations in combination with abiotic factors," she explained.But what happens to these biotic communities when the source of hot fluids is exhausted?The tendency of communities and the species within them to become more similar or more distinct across landscapes -- biotic homogenisation and differentiation -- are approximately balanced, according to a new study published in Science Advances.These changes also lead to biotic shifts, as species from warmer waters also flow into the Arctic along with the warm Atlantic water.bio-terrorismbiotic factorBrowse#aabbcoddeeffghhijjjklmmnooppqrrsstuuuwwwxyzzzAboutCareersContact usCookies, terms, & privacyHelpFollow usCet the Word of the Day every day!© 2025 Dictionary.com, LLC Also found in: Thesaurus, Medical, Encyclopedia, Wikipedia.Related to biotic: Biotic factors (bi-ō'tīk)adj. 1. Of or having to do with life or living organisms.2. Produced or caused by living organisms.American Heritage® Dictionary of the English Language, Fifth Edition. Copyright © 2016 by Houghton Mifflin Harcourt Publishing Company. Published by Houghton Mifflin Harcourt Publishing Company. All rights reserved. (baɪˈɒtɪk) adj. (Biology) of or relating to living organisms2. (Biology) (of a factor in an ecosystem) produced by the action of living organisms. Compare edaphic[C17: from Greek biotikos, from bios life]Collins English Dictionary - Complete and Unabridged, 12th Edition 2014 © HarperCollins Publishers 1991, 1994, 1998, 2000, 2003, 2006, 2007, 2009, 2011, 2014 (baɪˈɒtɪk) adj. pertaining to life or living beings. [1590–1600; < Greek biōtikós] Random House Webster's College Dictionary, © 2010 K Dictionaries Ltd. Copyright 2005, 1997, 1991 by Random House, Inc. All rights reserved. (bi-ō'tīk) Made up of living organisms; living: the study of the effects of pollution on the biotic community of a marsh.The American Heritage® Student Science Dictionary, Second Edition. Copyright © 2014 by Houghton Mifflin Harcourt Publishing Company. Published by Houghton Mifflin Harcourt Publishing Company. All rights reserved. Adj.1.biotic - of or relating to living organisms Based on WordNet 3.0, Farlex clipart collection. © 2003-2012 Princeton University, Farlex Inc. Collins Spanish Dictionary - Complete and Unabridged 8th Edition 2005 © William Collins Sons & Co. Ltd. 1971, 1988 © HarperCollins Publishers 1992, 1993, 1996, 1997, 2000, 2003, 2005 Want to thank TFD for its existence? Tell a friend about us, add a link to this page, or visit the webmaster's page for free fun content. Link to this page: Salient among the amendments introduced is the change of title from BBNP to Balbalasang-Balbalan Protected Landscape in line with Republic Act 11038 or the ENIPAS, a provision of which classifies protected areas into biotic, landscape, heritage areas, sea and marine habitat.The merged company will continue under the Synlogic name and will focus on advancing Synlogic's drug discovery and development platform for Synthetic Biotic medicines, which are designed using synthetic biology to genetically reprogram beneficial microbes to treat metabolic and inflammatory diseases and cancer.After a summary of recent advances in high-throughput technologies needed to research these mechanisms, chapters describe the use of natural variation in Arabidopsis thaliana in the studies of local adaption and evolution, how natural variation can be used with candidate gene approaches to understand the mechanisms of seed dormancy and viability, the abiotic stress response in plants from a single-cell perspective, metabolic responses to biotic stress, the role of small RNAs in biotic and abiotic stress responses, the evolutionary perspective on adaptation, the determination of adaptive patterns and predictions on plant behavior, and combining laboratory work with field experiments. Look up biotic in Wiktionary, the free dictionary. Biotics describe living or once living components of a community; for example organisms, such as animals and plants. Biotic may refer to: Life, the condition of living organisms Biology, the study of life Biotic material, which is derived from living organisms Biotic components in ecology Biotic potential, an organism's reproductive capacity Biotic community, all the interacting organisms living together in a specific habitat Biotic energy, a vital force theorized by biochemist Benjamin Moore Biotic Baking Brigade, an unofficial group of pie-throwing activists Abiotic Antibiotics are agents that either kill bacteria or inhibit their growth Prebiotic (nutrition) are non-digestible food ingredients that stimulate the growth or activity of bacteria in the digestive system Probiotics consist of a live culture of bacteria that inhibit or interfere with colonization by microbial pathogens Symbiotics refer to nutritional supplements combining probiotics and prebiotics Topics referred to by the same term This disambiguation page lists articles associated with the title Biotic.If an internal link led you here, you may wish to change the link to point directly to the intended article. Retrieved from " Table of Contents Biotic Abiotic Difference between Biotic and Abiotic Biotic and abiotic are the two essential factors responsible for shaping the ecosystem. The biotic factors refer to all the living beings present in an ecosystem, and the abiotic factors refer to all the non-living components like physical conditions (temperature, pH, humidity, salinity, sunlight, etc.) and chemical agents (different gases and mineral nutrients present in the air, water, soil, etc.) in an ecosystem. Therefore, both the abiotic and biotic resources affect the survival and reproduction process. Furthermore, both these components are reliant on each other. Suppose if one of the factors is removed or altered, its repercussions will be faced by the entire ecosystem. Without a doubt, abiotic factors directly affect the survival of organisms. Read on to explore what role do abiotic and biotic resources play in the ecosystem. Also read: Ecosystem Biotic Meaning The term "biotic" is formed by the combination of two terms, "bio" meaning life and "ic" meaning like. Thus, the term means life-like and is related to all the living entities present in an ecosystem. Biotic Factors Biotic factors relate to all the living things in the ecosystem. Their presence and their biological by-products affect the composition of an ecosystem. Biotic factors refer to all living organisms from animals and humans, to plants, fungi, and bacteria. The interactions between various biotic factors are necessary for the reproduction of each species and to fulfil essential requirements like food, etc. Examples of Biotic Factors Examples of biotic resources include all the living components present in an ecosystem. These include producers, consumers, decomposers and detritivores. Abiotic Meaning The term abiotic refers to all the non-living factors present in an ecosystem. Sunlight, water and land, all constitute the abiotic factors. Abiotic Factors Abiotic factors refer to all the non-living, i.e. chemical and physical factors present in the atmosphere, hydrosphere, and lithosphere. Sunlight, air, precipitation, minerals, and soil are some examples of abiotic factors. These factors have a significant impact on the survival and reproduction of species in an ecosystem. For instance, without an adequate amount of sunlight, autotrophic organisms may not be able to survive. When these organisms eventually die, it will create a shortage of food for primary consumers. This effect cascades up the food chain, affecting every organism. Consequently, it leads to an imbalance in the ecosystem. Examples of Abiotic Factors Abiotic examples typically depend on the type of ecosystem. For instance, abiotic components in a terrestrial ecosystem include air, weather, water, temperature, humidity, altitude, the pH level of soil, type of soil and more. Abiotic examples in an aquatic ecosystem include water salinity, oxygen levels, pH levels, water flow rate, water depth and temperature. Now, let's have a look at the significant difference between the abiotic and biotic factors. Recommended Video: Difference between Biotic and Abiotic Factors Following are the important difference between abiotic and biotic factors: Difference Between Biotic Resources and Abiotic Resources Biotic Resources Abiotic Resources Definition Biotic factors include all the living components present in an ecosystem Abiotic factors refer to all the non-living, i.e. physical conditions and chemical factors that influence an ecosystem Examples of biotic resources include all flora and fauna Examples of abiotic factors include sunlight, water, air, humidity, pH, temperature, salinity, precipitation, altitude, type of soil, minerals, wind, dissolved oxygen, mineral nutrients present in the soil, air and water, etc. Dependence Biotic factors depend on abiotic factors for survival and reproduction Abiotic factors are completely independent of biotic factors Origin Biotic components originate from the biosphere Abiotic components originate from the lithosphere, hydrosphere and atmosphere Discover more about Abiotic and Biotic factors, their meaning, the difference between abiotic and biotic resources and other related topics only at BYJU'S Biology Biotic factors are the living components present in an ecosystem. More specifically, it includes all flora and fauna. Plants Animals Fungi Bacteria Abiotic factors refer to all the non-living components present in an ecosystem. It typically comprises physical and chemical components. Abiotic factors comprise the following: Climate Humidity Precipitation Wind Altitude Type of soil Light penetration Water depth Oxygen content Turbidity Biotic resources include every lifeform in an ecosystem. These lifeforms rely on abiotic factors as they directly affect their growth, survival and reproduction. For instance, turbidity is an abiotic factor that majorly affects the aquatic ecosystem. High levels of turbidity inhibit the growth of submerged plants. This consequently affects other species which depend upon these plants for food or shelter. PHBV Polymers

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