

# Earth

[Environment](#), [Pollution](#)



EARTH The earth is 4. 5 billion years old. The Big Bang theory says that there was an explosion caused by the crash of matter which created our Solar System. Millions of years ago, during the Paleozoic era, the seven continents formed one single super-continent, from which they later detached driven by endogenous forces. Mankind appeared on Earth 30000 years ago. According to Darwin organisms which adapt the best to the environment they live in, survive the longest. Mankind become the dominant species because mankind is the most intelligent species and has got the specific skill of adaptation and the desire to understand and study natural phenomena. But man's influence has also had an impact on the habitats and the living conditions of many plants and animals. This happens because, as technology and industries become more advanced, more and more of the natural resources available are being used. There are perpetual, renewable and non-renewable resources. Perpetual resources are unlimited instead renewable and non-renewable resources have a limit but renewable resources can be replaced. Deforestation is especially present in the tropical areas because of the poor economic conditions of the countries where big rainforests are located. The deforestation will affect the change of the global climate, the agriculture and water supply. Water scarcity will cause food scarcity, and all this will lead to high food prices, thus causing economic and political instability, especially in the developing countries. In order to have a sustainable development, we will have to replace our fossil-fuel-based system with a global renewable-energy-based economy. The Earth is the third planet in the solar system. The Earth is surrounded by the atmosphere, a mixture of gases which blocks out dangerous rays from the sun. Our

atmosphere is composed of 78% nitrogen, 21% oxygen and 1% other gases and it is divided into five layers. The atmosphere also protects the Earth from meteors, most of which burn up before they can strike the surface. Oxygen is essential to life, since it allows living beings to breathe. Some of the oxygen has changed over time to ozone, which filters out the sun's harmful rays. The Earth's interior is divided into four layers and each layer has different characteristics and is made of different elements and material. The scientific name of the uppermost layer of the Earth is lithosphere. The lithosphere includes the crust and the rigid topmost layer of the mantle and can be broken up into nine major plates plus fourteen smaller ones. The mantle lies beneath the crust. Its upper layer is called asthenosphere and consists of a 300 km deep " sea" of partially molten mantle rock on which the lithosphere floats, enabling plate tectonics to take place. The rest of the mantle is solid. The core of the Earth consists of two parts: the outer core and the inner core. Both contain iron and nickel, but the outer core is liquid, while the inner core is solid. The surface of the earth is different from that of the other planets as it is the only one which has liquid water in its liquid form. SOIL Soil is the unconsolidated covering of broken rock particles and decaying organic matter on the surface of the Earth. These rock particles pack loosely, forming a structure full of pores which contain soil solution and air. Water, wind, chemical action and varying temperatures act on the rock dividing it into smaller and smaller particles. The surface layer of the soil contains the organic material formed by the decay of living organisms, humus. The soil consists of: a solid component made up of organic and inorganic material a liquid components a gaseous component. Soil texture varies with particle

size from sand, silt and clay composition. The soil is the site of many chemical processes and the home to a great number of living organisms such as bacteria, fungi, insects and worms, whose activity is vital to the whole ecosystems. Heavy rainfall and high temperature stimulate an intense biological activity. According to the climate we have different biological activities and differences in the thickness of the soil. Weathering effects such as rain and wind also tend to erode the soil and vegetation is essential to avoid or reduce this problem. About 70% of the Earth is covered with water and only 3% of that is part of freshwater. Freshwater can find in rivers, lakes, groundwater and also in the form of ice at the poles. Most of the remaining freshwater is under your feet, as groundwater. It's the part of precipitation that seeps down through the soil until it reaches rock material that is saturated with water. Some regions are scourged by long periods of droughts and cannot even satisfy the primary needs of their inhabitants. According to many agricultural experts, the world's farms will have to use more water over the coming twenty years to feed the world's growing population. Environmentalists maintain that we should extract less water from rivers and underground sources in order to avoid further damage to ecosystems. A prime cause of global water shortage is the ever-increasing world population. As population grows, industrial, agricultural and individual water demands escalate. One solution could be re-using water, especially for agricultural and industrial use, or desalination, a process which transforms sea water or brackish water into potable water. **POLLUTION** Pollution is contamination of the natural environment with harmful substances often as a consequence of human activities. Traditional forms of pollution include air pollution, land

pollution and water pollution. But there are also modern types of pollution such as thermal pollution, noise pollution and light pollution. Pollutants are known to be a factor in many illnesses including cancer, immune diseases, allergies and asthma. Air pollution is the accumulation in the atmosphere of substances that, in sufficient concentrations, endanger human health or produce other effects on living matter. Factories and motor vehicles are among the main contributors to poor air quality. Factories often release greenhouse gases like carbon dioxide, CFCs, methane and nitrous oxide into atmosphere. These greenhouse gases trap heat within the atmosphere, thus raising the temperature of the Earth. Carbon dioxide, carbon monoxide, sulphur oxide, nitrogen oxide, hydrocarbons, particulates are primary pollutants because they directly affect the environment. But there are other gases are considered secondary pollutants because they react with other chemicals and then become harmful to the environment. Contaminated land is land that contains substances that could be harmful to human health or to the environment. Land contamination can occur as a result of poor environment management and waste disposal practices or accidental spills in industrial or commercial activities. Water pollution is largely caused by the introduction into fresh or sea waters of chemical or biological substances that degrade the quality of the water and affects the organisms living in it. Water pollution may come from two sources, point sources or diffuse sources. Point sources pollution is pollution that originates from single location. Diffuse sources are generated mainly by run-off after rain, which collects pollutants from across a wide area. Microorganisms that live in water feed on biodegradable substances. When too much biodegradable

substances is added to water, the number of microorganisms increase and use up the available oxygen. Substances like oil and paint are harming sea-life. The oil mainly comes from tankers which wash out their hold while out at sea. Water pollution: chemical (usually produced by human activity) and biological (derived both human activities or from natural processes of decomposition (or presence of bacteria))