

1: Environmental Ethics (Stanford Encyclopedia of Philosophy)

Environment: Environment, the complex of physical, chemical, and biotic factors that act upon an organism or an ecological community and ultimately determine its form and survival.

Lake A lake from Latin lacus is a terrain feature , a body of water that is localized to the bottom of basin. A body of water is considered a lake when it is inland, is not part of an ocean , and is larger and deeper than a pond. Natural lakes on Earth are generally found in mountainous areas, rift zones , and areas with ongoing or recent glaciation. Other lakes are found in endorheic basins or along the courses of mature rivers. In some parts of the world, there are many lakes because of chaotic drainage patterns left over from the last Ice Age. All lakes are temporary over geologic time scales, as they will slowly fill in with sediments or spill out of the basin containing them. Pond A pond is a body of standing water , either natural or man-made, that is usually smaller than a lake. A wide variety of man-made bodies of water are classified as ponds, including water gardens designed for aesthetic ornamentation, fish ponds designed for commercial fish breeding, and solar ponds designed to store thermal energy. Ponds and lakes are distinguished from streams by their current speed. While currents in streams are easily observed, ponds and lakes possess thermally driven micro-currents and moderate wind driven currents. These features distinguish a pond from many other aquatic terrain features, such as stream pools and tide pools. Human impact on water[edit] Humans impact the water in different ways such as modifying rivers through dams and stream channelization , urbanization , and deforestation. These impact lake levels, groundwater conditions, water pollution, thermal pollution, and marine pollution. Humans modify rivers by using direct channel manipulation. Dams are good for humans, some communities need the reservoirs to survive. However, reservoirs and dams may negatively impact the environment and wildlife. Dams stops fish migration and the moving of organisms down stream. Urbanization effects the environment because of deforestation and changing lake levels, groundwater conditions, etc. Deforestation and urbanization go hand in hand. Deforestation may cause flooding, declining stream flow, and changes in riverside vegetation. The changing vegetation occurs because when trees cannot get adequate water they start to deteriorate, leading to a decreased food supply for the wildlife in an area. Lightning is an atmospheric discharge of electricity accompanied by thunder , which occurs during thunderstorms and certain other natural conditions. The remaining gases are often referred to as trace gases, [13] among which are the greenhouse gases such as water vapor, carbon dioxide, methane, nitrous oxide, and ozone. Filtered air includes trace amounts of many other chemical compounds. Air also contains a variable amount of water vapor and suspensions of water droplets and ice crystals seen as clouds. Many natural substances may be present in tiny amounts in an unfiltered air sample, including dust , pollen and spores , sea spray , volcanic ash , and meteoroids. Various industrial pollutants also may be present, such as chlorine elementary or in compounds , fluorine compounds, elemental mercury , and sulphur compounds such as sulphur dioxide [SO₂]. The atmosphere also retains heat during the night, thereby reducing the daily temperature extremes. These layers are mainly determined by whether temperature increases or decreases with altitude. From highest to lowest, these layers are: The top of the thermosphere is the bottom of the exosphere, called the exobase. It is the layer where most meteors burn up upon entering the atmosphere. The troposphere is mostly heated by transfer of energy from the surface, so on average the lowest part of the troposphere is warmest and temperature decreases with altitude. The tropopause is the boundary between the troposphere and stratosphere. Other layers Within the five principal layers determined by temperature are several layers determined by other properties. The ozone layer is contained within the stratosphere. It forms the inner edge of the magnetosphere. The homosphere and heterosphere: The homosphere includes the troposphere, stratosphere, and mesosphere. The upper part of the heterosphere is composed almost completely of hydrogen, the lightest element. Effects of global warming[edit] The Retreat of glaciers since of Aletsch Glacier in the Swiss Alps situation in , and , due to global warming. Effects of global warming The potential dangers of global warming are being increasingly studied by a wide global consortium of scientists. These scientists are increasingly concerned about the potential long-term effects of global warming on our natural environment and on the planet. It is

clear the planet is warming, and warming rapidly. The most recent report from the Intergovernmental Panel on Climate Change the group of the leading climate scientists in the world concluded that the earth will warm anywhere from 2. Some examples of recent collaboration to address climate change and global warming include: Another view of the Aletsch Glacier in the Swiss Alps and because of global warming it has been decreasing The United Nations Framework Convention Treaty and convention on Climate Change, to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. A common solution is to adapt a static view neglecting natural variances to exist. Methodologically, this view could be defended when looking at processes which change slowly and short time series, while the problem arrives when fast processes turns essential in the object of the study.

2: Environmental encyclopedia - Gale Research Inc - Google Books

Lerner BW. Environmental Encyclopedia. 4th ed. (Blanchfield DS, Lerner KL). Cengage Gale;

The Challenge of Environmental Ethics Suppose putting out natural fires, culling feral animals or destroying some individual members of overpopulated indigenous species is necessary for the protection of the integrity of a certain ecosystem. Will these actions be morally permissible or even required? Is it morally acceptable for farmers in non-industrial countries to practise slash and burn techniques to clear areas for agriculture? Consider a mining company which has performed open pit mining in some previously unspoiled area. Does the company have a moral obligation to restore the landform and surface ecology? And what is the value of a humanly restored environment compared with the originally natural environment? If that is wrong, is it simply because a sustainable environment is essential to present and future human well-being? These are among the questions investigated by environmental ethics. Some of them are specific questions faced by individuals in particular circumstances, while others are more global questions faced by groups and communities. Yet others are more abstract questions concerning the value and moral standing of the natural environment and its non-human components. The former is the value of things as means to further some other ends, whereas the latter is the value of things as ends in themselves regardless of whether they are also useful as means to other ends. For instance, certain fruits have instrumental value for bats who feed on them, since feeding on the fruits is a means to survival for the bats. However, it is not widely agreed that fruits have value as ends in themselves. We can likewise think of a person who teaches others as having instrumental value for those who want to acquire knowledge. Yet, in addition to any such value, it is normally said that a person, as a person, has intrinsic value, i. For another example, a certain wild plant may have instrumental value because it provides the ingredients for some medicine or as an aesthetic object for human observers. But if the plant also has some value in itself independently of its prospects for furthering some other ends such as human health, or the pleasure from aesthetic experience, then the plant also has intrinsic value. Many traditional western ethical perspectives, however, are anthropocentric or human-centered in that either they assign intrinsic value to human beings alone i. For example, Aristotle Politics, Bk. Generally, anthropocentric positions find it problematic to articulate what is wrong with the cruel treatment of non-human animals, except to the extent that such treatment may lead to bad consequences for human beings. From this standpoint, cruelty towards non-human animals would be instrumentally, rather than intrinsically, wrong. Likewise, anthropocentrism often recognizes some non-intrinsic wrongness of anthropogenic i. Such destruction might damage the well-being of human beings now and in the future, since our well-being is essentially dependent on a sustainable environment see Passmore ; Bookchin ; Norton et al. When environmental ethics emerged as a new sub-discipline of philosophy in the early s, it did so by posing a challenge to traditional anthropocentrism. In the first place, it questioned the assumed moral superiority of human beings to members of other species on earth. In the second place, it investigated the possibility of rational arguments for assigning intrinsic value to the natural environment and its non-human contents. It should be noted, however, that some theorists working in the field see no need to develop new, non-anthropocentric theories. Instead, they advocate what may be called enlightened anthropocentrism or, perhaps more appropriately called, prudential anthropocentrism. Briefly, this is the view that all the moral duties we have towards the environment are derived from our direct duties to its human inhabitants. Enlightened anthropocentrism, they argue, is sufficient for that practical purpose, and perhaps even more effective in delivering pragmatic outcomes, in terms of policy-making, than non-anthropocentric theories given the theoretical burden on the latter to provide sound arguments for its more radical view that the non-human environment has intrinsic value cf. Norton , de Shalit , Light and Katz Furthermore, some prudential anthropocentrists may hold what might be called cynical anthropocentrism, which says that we have a higher-level anthropocentric reason to be non-anthropocentric in our day-to-day thinking. Suppose that a day-to-day non-anthropocentrist tends to act more benignly towards the non-human environment on which human well-being depends. This would provide reason for encouraging non-anthropocentric thinking, even to those who find the idea of non-anthropocentric intrinsic value hard to

swallow. The position can be structurally compared to some indirect form of consequentialism and may attract parallel critiques see Henry Sidgwick on utilitarianism and esoteric morality, and Bernard Williams on indirect utilitarianism. The Early Development of Environmental Ethics Although nature was the focus of much nineteenth and twentieth century philosophy, contemporary environmental ethics only emerged as an academic discipline in the s. The questioning and rethinking of the relationship of human beings with the natural environment over the last thirty years reflected an already widespread perception in the s that the late twentieth century faced a human population explosion as well as a serious environmental crisis. Commercial farming practices aimed at maximizing crop yields and profits, Carson speculates, are capable of impacting simultaneously on environmental and public health. In a much cited essay White on the historical roots of the environmental crisis, historian Lynn White argued that the main strands of Judeo-Christian thinking had encouraged the overexploitation of nature by maintaining the superiority of humans over all other forms of life on earth, and by depicting all of nature as created for the use of humans. Central to the rationale for his thesis were the works of the Church Fathers and The Bible itself, supporting the anthropocentric perspective that humans are the only things that matter on Earth. Consequently, they may utilize and consume everything else to their advantage without any injustice. For example, Genesis 1: And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it: According to White, the Judeo-Christian idea that humans are created in the image of the transcendent supernatural God, who is radically separate from nature, also by extension radically separates humans themselves from nature. This ideology further opened the way for untrammelled exploitation of nature. Clearly, without technology and science, the environmental extremes to which we are now exposed would probably not be realized. Nevertheless, White argued that some minority traditions within Christianity e. Around the same time, the Stanford ecologists Paul and Anne Ehrlich warned in *The Population Bomb* Ehrlich that the growth of human population threatened the viability of planetary life-support systems. Here, plain to see, was a living, shining planet voyaging through space and shared by all of humanity, a precious vessel vulnerable to pollution and to the overuse of its limited capacities. In a team of researchers at MIT led by Dennis Meadows published the *Limits to Growth* study, a work that summed up in many ways the emerging concerns of the previous decade and the sense of vulnerability triggered by the view of the earth from space. In the commentary to the study, the researchers wrote: We affirm finally that any deliberate attempt to reach a rational and enduring state of equilibrium by planned measures, rather than by chance or catastrophe, must ultimately be founded on a basic change of values and goals at individual, national and world levels. The new field emerged almost simultaneously in three countriesâ€”the United States, Australia, and Norway. In the first two of these countries, direction and inspiration largely came from the earlier twentieth century American literature of the environment. That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics. It is wrong when it tends otherwise. His views therefore presented a challenge and opportunity for moral theorists: The land ethic sketched by Leopold, attempting to extend our moral concern to cover the natural environment and its non-human contents, was drawn on explicitly by the Australian philosopher Richard Routley later Sylvan. According to Routley cf. From the human-chauvinistic or absolutely anthropocentric perspective, the last person would do nothing morally wrong, since his or her destructive act in question would not cause any damage to the interest and well-being of humans, who would by then have disappeared. Nevertheless, Routley points out that there is a moral intuition that the imagined last acts would be morally wrong. An explanation for this judgment, he argued, is that those non-human objects in the environment, whose destruction is ensured by the last person or last people, have intrinsic value, a kind of value independent of their usefulness for humans. From his critique, Routley concluded that the main approaches in traditional western moral thinking were unable to allow the recognition that natural things have intrinsic value, and that the tradition required overhaul of a significant kind. It would be wrong, he maintained, to eliminate a rare butterfly species simply to increase the monetary value of specimens already held by collectors. Species, Rolston went on to argue, are intrinsically valuable and are usually more valuable than individual specimens, since the loss of a species is a loss of genetic possibilities and the deliberate destruction of a species would show disrespect for the very biological processes which make possible the emergence of

individual living things also see Rolston , Ch Meanwhile, the work of Christopher Stone a professor of law at the University of Southern California had become widely discussed. Stone proposed that trees and other natural objects should have at least the same standing in law as corporations. This suggestion was inspired by a particular case in which the Sierra Club had mounted a challenge against the permit granted by the U. Forest Service to Walt Disney Enterprises for surveys preparatory to the development of the Mineral King Valley, which was at the time a relatively remote game refuge, but not designated as a national park or protected wilderness area. The Disney proposal was to develop a major resort complex serving visitors daily to be accessed by a purpose-built highway through Sequoia National Park. The Sierra Club, as a body with a general concern for wilderness conservation, challenged the development on the grounds that the valley should be kept in its original state for its own sake. Stone reasoned that if trees, forests and mountains could be given standing in law then they could be represented in their own right in the courts by groups such as the Sierra Club. Moreover, like any other legal person, these natural things could become beneficiaries of compensation if it could be shown that they had suffered compensatable injury through human activity. When the case went to the U. Supreme Court, it was determined by a narrow majority that the Sierra Club did not meet the condition for bringing a case to court, for the Club was unable and unwilling to prove the likelihood of injury to the interest of the Club or its members. Only items that have interests, Feinberg argued, can be regarded as having legal standing and, likewise, moral standing. For it is interests which are capable of being represented in legal proceedings and moral debates. This same point would also seem to apply to political debates. Granted that some animals have interests that can be represented in this way, would it also make sense to speak of trees, forests, rivers, barnacles, or termites as having interests of a morally relevant kind? This issue was hotly contested in the years that followed. Skeptical of the prospects for any radically new ethic, Passmore cautioned that traditions of thought could not be abruptly overhauled. Any change in attitudes to our natural surroundings which stood the chance of widespread acceptance, he argued, would have to resonate and have some continuities with the very tradition which had legitimized our destructive practices. The confluence of ethical, political and legal debates about the environment, the emergence of philosophies to underpin animal rights activism and the puzzles over whether an environmental ethic would be something new rather than a modification or extension of existing ethical theories were reflected in wider social and political movements. It is not clear, however, that collectivist or communist countries do any better in terms of their environmental record see Dominick All three shared a passion for the great mountains. The deep ecologist respects this intrinsic value, taking care, for example, when walking on the mountainside not to cause unnecessary damage to the plants. To make such a separation not only leads to selfishness towards other people, but also induces human selfishness towards nature. The identity of a living thing is essentially constituted by its relations to other things in the world, especially its ecological relations to other living things. If people conceptualise themselves and the world in relational terms, the deep ecologists argue, then people will take better care of nature and the world in general. The idea is, briefly, that by identifying with nature I can enlarge the boundaries of the self beyond my skin. To respect and to care for my Self is also to respect and to care for the natural environment, which is actually part of me and with which I should identify. Grey , Taylor and Zimmerman It also remains unclear in what sense rivers, mountains and forests can be regarded as possessors of any kind of interests. Biospheric egalitarianism was modified in the s to the weaker claim that the flourishing of both human and non-human life have value in themselves. The platform was conceived as establishing a middle ground, between underlying philosophical orientations, whether Christian, Buddhist, Daoist, process philosophy, or whatever, and the practical principles for action in specific situations, principles generated from the underlying philosophies. Thus the deep ecological movement became explicitly pluralist see Brennan ; c. These "relationalist" developments of deep ecology are, however, criticized by some feminist theorists. The idea of nature as part of oneself, one might argue, could justify the continued exploitation of nature instead. For one is presumably more entitled to treat oneself in whatever ways one likes than to treat another independent agent in whatever ways one likes.

3: Environmental Topics & Sustainable Development

Environmental science is often confused with other fields of related interest, especially ecology, environmental studies, environmental education, and environmental engineering. Renewed interest in environmental issues in the late s and early s, gave rise to numerous programs at many.

Definitions[edit] Environmentalism denotes a social movement that seeks to influence the political process by lobbying, activism, and education in order to protect natural resources and ecosystems. An environmentalist is a person who may speak out about our natural environment and the sustainable management of its resources through changes in public policy or individual behavior. This may include supporting practices such as informed consumption, conservation initiatives, investment in renewable resources , improved efficiencies in the materials economy, transitioning to new accounting paradigms such as Ecological economics , renewing and revitalizing our connections with non-human life or even opting to have one less child to reduce consumption and pressure on resources. In various ways for example, grassroots activism and protests , environmentalists and environmental organizations seek to give the natural world a stronger voice in human affairs. In its recognition of humanity as a participant in ecosystems, the movement is centered around ecology , health , and human rights. Conservation movement and Timeline of history of environmentalism Lord Mahavira , the last Jain Tirthankar is also considered to be a great environmentalist. The earliest ideas of environment protectionism can be traced in Jainism , which was revived by Mahavira in 6th century BC in ancient India. Jainism offers a view that may seem readily compatible with core values associated with environmental activism, i. Their works covered a number of subjects related to pollution, such as air pollution, water pollution , soil contamination , municipal solid waste mishandling, and environmental impact assessments of certain localities. At the advent of steam and electricity the muse of history holds her nose and shuts her eyes H. The emergence of great factories and the concomitant immense growth in coal consumption gave rise to an unprecedented level of air pollution in industrial centers; after the large volume of industrial chemical discharges added to the growing load of untreated human waste. An Alkali inspector and four sub-inspectors were appointed to curb this pollution. The responsibilities of the inspectorate were gradually expanded, culminating in the Alkali Order which placed all major heavy industries that emitted smoke , grit, dust and fumes under supervision. In industrial cities local experts and reformers, especially after , took the lead in identifying environmental degradation and pollution, and initiating grass-roots movements to demand and achieve reforms. It was founded by artist Sir William Blake Richmond , frustrated with the pall cast by coal smoke. Although there were earlier pieces of legislation, the Public Health Act required all furnaces and fireplaces to consume their own smoke. It also provided for sanctions against factories that emitted large amounts of black smoke. The provisions of this law were extended in with the Smoke Abatement Act to include other emissions, such as soot, ash and gritty particles and to empower local authorities to impose their own regulations. During the Spanish Revolution , anarchist controlled territories undertook several environmental reforms which were possibly the largest in the world at the time. Daniel Guerin notes that anarchist territories would diversify crops, extend irrigation , initiate reforestation , start tree nurseries and helped establish nudist colonies. Financial incentives were offered to householders to replace open coal fires with alternatives such as installing gas fires , or for those who preferred, to burn coke instead a byproduct of town gas production which produces minimal smoke. His advocacy for legislation to protect animals from hunting during the mating season led to the formation of the Royal Society for the Protection of Birds and influenced the passage of the Sea Birds Preservation Act in as the first nature protection law in the world. The poet William Wordsworth travelled extensively in the Lake District and wrote that it is a "sort of national property in which every man has a right and interest who has an eye to perceive and a heart to enjoy". Systematic efforts on behalf of the environment only began in the late 19th century; it grew out of the amenity movement in Britain in the s, which was a reaction to industrialization , the growth of cities, and worsening air and water pollution. Starting with the formation of the Commons Preservation Society in , the movement championed rural preservation against the encroachments of industrialisation. Robert Hunter , solicitor for the

society, worked with Hardwicke Rawnsley, Octavia Hill, and John Ruskin to lead a successful campaign to prevent the construction of railways to carry slate from the quarries, which would have ruined the unspoiled valleys of Newlands and Ennerdale. He observed in Swiss and Siberian glaciers that they had been slowly melting since the dawn of the industrial revolution, possibly making him one of the first predictors for climate change. He also observed the damage done from deforestation and hunting. In Hill, Hunter and Rawnsley agreed to set up a national body to coordinate environmental conservation efforts across the country; the "National Trust for Places of Historic Interest or Natural Beauty" was formally inaugurated in 1895. Idealists championed the rural life as a mythical Utopia and advocated a return to it. John Ruskin argued that people should return to a small piece of English ground, beautiful, peaceful, and fruitful. We will have no steam engines upon it. By 1895, public support for the organisation had grown, and it had over 25,000 members. The Garden city movement incorporated many environmental concerns into its urban planning manifesto; the Socialist League and The Clarion movement also began to advocate measures of nature conservation. The movement in the United States began in the late 19th century, out of concerns for protecting the natural resources of the West, with individuals such as John Muir and Henry David Thoreau making key philosophical contributions. He published his experiences in the book *Walden*, which argues that people should become intimately close with nature. He successfully lobbied congress to form Yosemite National Park and went on to set up the Sierra Club in 1892. The conservationist principles as well as the belief in an inherent right of nature were to become the bedrock of modern environmentalism. In the 20th century, environmental ideas continued to grow in popularity and recognition. Efforts were starting to be made to save some wildlife, particularly the American bison. The death of the last passenger pigeon as well as the endangerment of the American bison helped to focus the minds of conservationists and popularize their concerns. The Forestry Commission was set up in Britain to increase the amount of woodland in Britain by buying land for afforestation and reforestation. The commission was also tasked with promoting forestry and the production of timber for trade. By the 1930s the Forestry Commission was the largest landowner in Britain. The concept of the *Dauerwald* best translated as the "perpetual forest" which included concepts such as forest management and protection was promoted and efforts were also made to curb air pollution. The book is sometimes called the most influential book on conservation. Throughout the 1930s, 40s, and 50s and beyond, photography was used to enhance public awareness of the need for protecting land and recruiting members to environmental organizations. David Brower, Ansel Adams and Nancy Newhall created the Sierra Club Exhibit Format Series, which helped raise public environmental awareness and brought a rapidly increasing flood of new members to the Sierra Club and to the environmental movement in general. The powerful use of photography in addition to the written word for conservation dated back to the creation of Yosemite National Park, when photographs persuaded Abraham Lincoln to preserve the beautiful glacier carved landscape for all time. The Sierra Club Exhibit Format Series galvanized public opposition to building dams in the Grand Canyon and protected many other national treasures. The Sierra Club often led a coalition of many environmental groups including the Wilderness Society and many others. After a focus on preserving wilderness in the 1930s and 40s, the Sierra Club and other groups broadened their focus to include such issues as air and water pollution, population concern, and curbing the exploitation of natural resources. The book cataloged the environmental impacts of the indiscriminate spraying of DDT in the US and questioned the logic of releasing large amounts of chemicals into the environment without fully understanding their effects on human health and ecology. The book suggested that DDT and other pesticides may cause cancer and that their agricultural use was a threat to wildlife, particularly birds. The limited use of DDT in disease vector control continues to this day in certain parts of the world and remains controversial. With this new interest in environment came interest in problems such as air pollution and petroleum spills, and environmental interest grew. New pressure groups formed, notably Greenpeace and Friends of the Earth US, as well as notable local organizations such as the Wyoming Outdoor Council, which was founded in 1972. In the 1960s, the environmental movement gained rapid speed around the world as a productive outgrowth of the counterculture movement. Protection of the environment also became important in the developing world; the Chipko movement was formed in India under the influence of Mohandas Gandhi and they set up peaceful resistance to deforestation by literally hugging trees leading to the term "tree huggers". Their peaceful

methods of protest and slogan "ecology is permanent economy" were very influential. Another milestone in the movement was the creation of Earth Day. Earth Day was first observed in San Francisco and other cities on March 21, , the first day of spring. It was created to give awareness to environmental issues. On March 21, , United Nations Secretary-General U Thant spoke of a spaceship Earth on Earth Day, hereby referring to the ecosystem services the earth supplies to us, and hence our obligation to protect it and with it, ourselves. Earth Day is now coordinated globally by the Earth Day Network , [43] and is celebrated in more than countries every year. It marked a turning point in the development of international environmental politics. The Back-to-the-land movement started to form and ideas of environmental ethics joined with anti-Vietnam War sentiments and other political issues. These individuals lived outside normal society and started to take on some of the more radical environmental theories such as deep ecology. Around this time more mainstream environmentalism was starting to show force with the signing of the Endangered Species Act in and the formation of CITES in A new look at life on Earth, which put forth the Gaia hypothesis ; it proposes that life on earth can be understood as a single organism. This became an important part of the Deep Green ideology. Throughout the rest of the history of environmentalism there has been debate and argument between more radical followers of this Deep Green ideology and more mainstream environmentalists. Since , the percentage of Americans agreeing that the environment should be given priority over economic growth has dropped 10 points, in contrast, those feeling that growth should be given priority "even if the environment suffers to some extent" has risen 12 percent. They have also set up corn and coffee worker cooperatives and built schools and hospitals to help the local populations. They have also created a network of autonomous community radio stations to educate people about dangers to the environment and inform the surrounding communities about new industrial projects that would destroy more land.

4: Environmentalism - Wikipedia

Environmentalism or environmental rights is a broad philosophy, ideology, and social movement regarding concerns for environmental protection and improvement of the.

By Michael Evans - Thu, 12 May Sometimes a natural disaster can become an environmental disaster, but that is a topic to be discussed elsewhere. In most cases environmental disasters are caused by human error, accident, lack of foresight, corner cutting during industrial processes, greed, or by simple incompetence. In other words without some kind of human intervention they would never have happened. They are also often characterised by firm authoritative denials that anything serious has even happened. Lack of foresight is a common cause of an environmental disaster. In agriculture a classic example of is the increasing salinity of soils in hot climates. With the need to produce more food, a warm climate seems ideal for European-style agriculture, once the existing vegetation has been cleared. The one proviso is that there must be plenty of water. Irrigation projects and deep wells are usually the answer, but as has been found in Australia, if this is not properly managed, salination can result and the land becomes effectively useless. A further example of a catastrophic and misguided interference with nature resulted in the dust bowls that hit North America in the s. The fertile soil seemed ideal for intensive agriculture, but a combination of deep ploughing and a lack of crop rotation weakened the soil structure. Following years of drought, high winds simply removed all the topsoil and millions of acres of once fertile farmland became a virtual desert. It was considered that because sparrows ate grain seeds they were robbing the people of the fruits of their labour. The campaign was very successful that it cleared the way for swarms of locusts to descend on the farms. Crops were decimated, leading to a famine that resulted in the deaths of 38 million people. Introducing alien species can be just as disastrous as eliminating native ones. This has been the case in Australia when in 12 imported English wild rabbits were released so that a local settler could go hunting. In the course of time they multiplied and it is estimated that even after serious efforts to control them, the Australian rabbit populations is still between and million. As well as being responsible for the loss of vast acreages of agricultural crops and grazing land, rabbits are suspected of being the most significant known factor in species loss in Australia, killing young trees by eating the bark at the base of the trunk. They are also responsible for serious erosion as they eat native plants, leaving the topsoil exposed. It is very easy to upset the fragile balance of nature. In June a steamship ran aground on a Pacific Island and while it was stranded, Black Rats escaped and got ashore. In an effort to control the rats , Masked Owls were introduced but this simply compounded the environmental disaster. By introducing yet another predator to the ecosystem, the result was that many of the remaining sea birds were simply wiped out as breeding species. Industrial pollution has been the cause of so many environmental disasters that it is impossible to list them all. One of the most serious was the Bhopal disaster of December when a leak of methyl isocyanate resulted in at least 22, deaths plus various genetic diseases that will continue for generations. The chief causes of this disaster were negligence, corruption and the complete disregard of safety standards. The Bhopal Documentary from National Geographic. A number of environmental disasters have also been associated with the oil production industry with the Deepwater Horizon disaster of April being the most recent one that comes to mind. In this case following a sudden explosion on a drilling rig in the Gulf of Mexico, the safety valve that was designed to prevent an oil spill spectacularly failed. It was months before the leakage was sealed, during which time millions of gallons of oil poured into the sea. The resulting pollution was not just from the oil, but from the chemicals used to disperse it. Whole ecosystems were destroyed along with the livelihoods of countless people. Many endangered species are not expected to recover. In West Africa the Niger Delta covers 20, km² within wetlands of 70, km², formed primarily by sediment deposition. It is home to some 20 million people from 40 different ethnic groups. Its floodplain makes up 7. Its ecosystem contains one of the highest concentrations of biodiversity on the planet. In addition to supporting a vast range of flora and fauna, there is arable terrain that can sustain a wide variety of crops, tropical forests and more species of freshwater fish than any other ecosystem in West Africa. Unfortunately for the Niger Delta, oil was discovered in the region. Since drilling began in there has been a complete lack of concern by the Nigerian

Government or the oil operators to exert any control of the environmental problems associated with the industry. The Nigerian National Petroleum Corporation admits that every year as a result of around individual spills, nearly 2, cubic metres of petroleum are jettisoned into the environment. A major reason for these spills is simply the result of poor maintenance. Pipelines are old and corroded and although they have an estimated lifespan of about 15 years, many have been in use for about Understandably there has been a major impact on the ecosystem. Enormous tracts of mangrove forest have been destroyed along with most of the flora and fauna that were once found there. The dumping of waste is obviously a serious issue and international regulations put strict controls on this. Unfortunately there will always be unscrupulous people who will try to get around the regulations. A classic example occurred in when a Panama-registered ship offloaded tonnes of toxic waste at the Ivory Coast port of Abidjan. The company concerned apparently wanted to avoid paying the 1, euros per cubic metre disposal charge it would have to pay in Holland. The waste, that was dumped at 12 sites in and around the city was later discovered to contain a mixture of fuel, caustic soda and hydrogen sulphide. This lethal cocktail gave off toxic gas and caused burns to lungs and skin, in addition to severe headaches and vomiting and is said to have caused 17 deaths and made dozens seriously ill. The company involved originally denied all responsibility, claiming that the waste was simply dirty water. It was only after some investigative journalism by the BBC that the full facts eventually came to light. Nuclear accidents can have serious environmental effects. Prior to the Chernobyl disaster would probably have been regarded as the most serious after an enormous explosion sent radioactive ash into the atmosphere covering most of Northern Europe, along with Belarus, Ukraine and Russia. Then in came the Fukushima 1 accident in Japan when an earthquake followed by a tsunami hit the nuclear plant. The earthquake knocked out the public electricity supply that powered the pumping of water to cool the reactors. Shortly after the earthquake a tsunami destroyed the emergency back-up generators that were due to start up when the public electricity supply failed. It was then realised that the designers had failed to take this possibility into account. As a result a catastrophic situation developed and 14, people had to be evacuated from the immediate area. After several weeks a number of brave workers , struggling in appalling conditions, managed to bring the situation under control, but as with so many environmental disasters, once again official information was misleading, sketchy, or simply non-existent. An environmental disaster is usually caused by some form human action, or some form of human negligence. A classic example is with climate change. At the same time people are completely ignoring the warning signs and shutting their minds to the consequences that lie ahead. The world seems to be on course for what is likely to be the worst environmental disaster of all time. There is still time to slow the process down, but it will require swift and worldwide action.

5: Environmental Disasters | The Earth Times | Encyclopaedia

Environmental science, interdisciplinary academic field that draws on ecology, geology, meteorology, biology, chemistry, engineering, and physics to study environmental problems and human impacts on the environment.

Environmental science Environmental science is often confused with other fields of related interest, especially ecology , environmental studies, environmental education , and environmental engineering. Renewed interest in environmental issues in the late s and early s, gave rise to numerous programs at many universities in the United States and other countries, most under two rubrics: The former focused, as might be expected, on scientific questions and issues of environmental interest; the latter were often courses, with the emphasis on questions of environmental ethics , aesthetics, literature, etc. These new academic units marked the first formal appearance of environmental science on most campuses, at least by that label. But environmental science is essentially the application of scientific methods and principles to the study of environmental questions, so it has probably been around in some form as long as science itself. Air and water quality research, for example, have been carried on in many universities for many decades: By whatever label and in whatever unit, environmental science is not constrained within any one discipline; it is a comprehensive field. A considerable amount of environmental research is accomplished in specific departments such as chemistry, physics, civil engineering , or the various biology disciplines. Much of this work is confined to a single field, with no interdisciplinary perspective. These programs graduate scientists who build on their specific training to continue work on environmental problems, sometimes in a specific department, sometimes in an interdisciplinary environmental science program. Many new academic units are interdisciplinary, their members and graduates specifically designated as environmental scientists. Most have been trained in a specific discipline, but they may have degrees from almost any scientific background. In these units, the degrees grantedâ€”from B. Environmental science is not ecology, though that discipline may be included. Ecologists are interested in the interactions between some kind of organism and its surroundings. Most ecological research and training does not focus on environmental problems except as those problems impact the organism of interest. Environmental scientists may or may not include organisms in their field of view: For example, acid deposition can be studied as a problem of emissions and characteristics of the atmosphere without necessarily examining its impact on organisms. An alternate focus might be on the acidification of lakes and the resulting implications for resident fish. Both studies require expertise from more than one traditional discipline; they are studies in environmental science.

Featured Article: The Oxford Research Encyclopedia of Environmental Science now features full-text articles including "Valuing the Benefits of Green Stormwater Infrastructure" by Amy W. Ando and Noelwah R. Netusil.

Appendixes Editor s Bio Dr. He received a doctorate of engineering in environmental technology and a doctorate of science in ecological modeling. He has also been the editor in chief of the Encyclopedia of Ecology. In he received the Pascal medal and was elected a member of the European Academy of Science. He has written more than papers, most of which have been published in international peer-reviewed journals. He has edited or written 70 books. Although some cases have considered and implemented almost all of these aspects, the majority of previous studies propose a specific solution, which would have been different if the missing disciplines had been included. This encyclopedia presents a unique collection of almost issues, case studies, and practices. As such, it will be of critical importance for the sustainability of human development as examinations of current state-of-the-art techniques have at last been made available, thus making possible a much faster development towards more refined solutions in the future. Whether discussing the management of air, water, soil quality, or indeed any other issue, including those of global importance, this encyclopedia will be used frequently for years to come by all who hold a stake in the environment, including educational programs related to environmental management, industry, environmental regulatory bodies, and non-governmental organizations. Reviewed here in its online version, it is also available as a four-volume print set. Reflecting extensive coverage of the field, the highly informative entries are profusely illustrated with graphs and charts. The editors claim to have included percent of the most important problems and solutions facing environmental management today. Noise" and "Yellow River. The solutions involve the use of environmental, ecological, and cleaner technologies as well as environmental legislation. Searching is easy and fast; articles load quickly. The bibliographies are extensive and cross-linked. Pricing is based on a standard fee, based on FTE. This is a valuable resource for all libraries supporting programs in environment studies, earth science, and geography. Lower-level undergraduates and above; general readers.

7: Encyclopedia of Environmental Management, Four Volume Set - CRC Press Book

Environmental Encyclopedia, 4th Edition Preparing students for the 21st century and their growing role as global citizens also involves making them aware of future career opportunities in green living and clean.

By Michael Evans - Sun, 29 May Achieving a green economy involves transforming what we produce and how we produce it, responding to changes in both supply and demand. We need a balanced and environmentally sustainable economy that will support strong business investment and new opportunities in order to be able to meet long term challenges. It is crucial for natural assets to be managed sustainably and used efficiently across all sectors of the economy. It is important to reflect their value in all production and consumption decisions. In order for this transition to take place, business and consumers must take advantage of the benefits of resource efficiencies. The economy will need to grow, but this must be within the context of reduced environmental impact and a greater resilience to future environmental challenges, which will include climate change , material scarcity and any emergencies related to securing energy supplies and food security. From a business point of view going green might not always appear to be economically efficient, but in many cases companies will have no option since government policy and subsequent legislation will compel them to follow certain lines of action. There will obviously be costs involved. Buying eco-friendly equipment, packaging and materials can be expensive. Initial costs can be higher, even if the variable costs work out cheaper in the long run. Light bulbs are a good example. Environmentally friendly bulbs can cost three times as much as conventional bulbs, but they last much longer. The initial cost can be offset by long-term savings, provided the company stays in business for long enough to reap the benefit. Most consumers claim to be really environmentally conscious, with a genuine belief in the need to reduce their carbon footprint , but product cost is often uppermost in their minds. If for instance, they have a choice of an organic all-natural bar of soap that costs twice as much as a standard bar, many will instinctively opt for the cheaper one. Businesses must consider very carefully how much of their market research represents genuine consumer willingness and how much is simply lip service. Consumers can be very fickle, having different standards for different products. Someone who would only buy organic food might not be at all concerned that their car was not eco-friendly. Effective marketing is very important if a company wishes to sell green products. Well informed sales staff are also necessary because customers are not always equipped to recognise what makes a product green. The traditional manufacturing process never considered the disposal of products once they had come to the end of their useful lives. In this environmentally conscious age that is all changing. The simple dumping of unwanted goods and materials is no longer acceptable. Packaging is being made recyclable and many products are now being made in ways that make recycling very much easier. It is also important to look at supply chains when considering environmental business issues. A garment made of organic cotton might appear to be very environmentally friendly, but this would definitely not be the case if it was made using child labour in a far eastern sweatshop. On a much larger scale it is possible for major companies to save money by taking environmentally friendly action. In another example, in IBM set targets for saving water in its various microelectronic manufacturing operations. Within eight years the company had achieved a 2. Not only are these savings good for the environment, but they can make sound economic sense for a company. Organisations worldwide, from government agencies to retailers and financial institutions are now looking at the current and future impact of their activities. Areas under consideration include:

8: Environment | biology | www.enganchecubano.com

Enviropaedia is an online Environmental Encyclopaedia linked to a Green Directory with a Sustainable Living Guide and leading edge Articles on Sustainable Development. This free access and interactive resource is ideal for individuals and businesses who wish to live and work in a more eco-friendly manner.

9: Environmental Science | www.enganchecubano.com

It is the common understanding of natural environment that underlies environmentalism – a broad political, social, and philosophical movement that advocates various actions and policies in the interest of protecting what nature remains in the natural environment, or restoring or expanding the role of nature in this environment.

El Texto Puesto en Escena Letters of Evelyn Waugh and Diana Cooper The top 10 countdown to having a new teenager by Friday. Classics and the uses of reception Faa advanced avionics handbook Use the approach that best addresses your HR program evaluations objectives BOGGLE Jr. Word Search Puzzles Born to be a cowgirl The source of love 12]. Comprehensive assessment, written response The Accidental Vampire (Argeneau Vampires, Book 7) Pharmacy Practice II Learning Guide Transatlantic economic relations in the post-cold war era Globalizing the Peasant How to live with your feelings America Anonymous Ascendancy of the heart Personality (Introduction to general psychology: a self-selection textbook, edited by Jack Vernon) Voices of wisdom 6th edition Republication of translations of 5 stories: The black monk, The house with the mezzanine, The peasants, G A Brief History of the Birth of the Nazis Chemical engineering basics for interview Creo simulate tutorial releases 1.0 2.0 Ch. 4. Water scarcity, risk and vulnerability The blue sitting room Food for the Thoughtless Minds Legacy of a legend Role playing game manuals Analysis (Mathematics Studies) Residential Design Using AutoCAD 2008 While someone else is eating Defences Of Philadelphia In 1777 Do school-to-work programs help the / Ethiopian health care transformation plan for pharmacy Monster Math Prepack The design of everyday things filetype A true and historical relation of the poisoning of Sir Thomas Overbury Full size candy valentines Multi level marketing system project German Protestants face the social question.