

Chapter 1 : Ways to Prevent and Reduce Air, Water, and Land Pollution | Soapboxie

We must join together in the quest to improve Earth's air quality. With engaging text and eye-catching images—plus a special Going Green section—this book tells you all about Earth's air and what you can do to protect it.

This entire planet is our home. We are the only species that systematically destroy our own habitat. Because we are all inhabitants on Earth, everyone is a stakeholder, and every person has something to contribute to advance effective pollution prevention awareness. Environmental protection is a natural extension of caring for ourselves, loving our children, and ensuring a sustainable future for generations to come. And, although we can each help combat pollution in our immediate environments, we can do more by working to change legislation and policy on a larger scale. Averting the onset of pollution in any area, be it in air or water or on land, could be the simplest preventive solution. If there are no pollutants, there will be no pollution. And yet, this is easier said than done. Certain bad habits are entrenched and industrial development as we know it seems to involve an expectation of pollution. Even the most simple preventive approaches are often quite complicated, expensive, and difficult for a small business to implement. Still, there are small changes we can make on the individual level that make a difference, both in the short and long term. We know that we can survive without food for several weeks and without water for few days, but without oxygen, we will die in a matter of minutes. What Can I Do? Source A List of Things You Can Do Every action or inaction of any person has an effect on the environment—be it good, neutral, or negative. By becoming aware and doing the right thing, we choose to be part of the solution. Here are some things you can do: Cigarette butts are not biodegradable and contain extremely toxic soluble chemicals. One butt thrown on the ground can remain for up to 25 years, leaking chemicals like arsenic, ammonia, acetone, benzene, cadmium, formaldehyde, lead, and toluene into the environment. Drive an electric or hybrid car or at least one that uses unleaded gasoline. Keep your car in good running condition to avoid emissions. Share a ride or carpool. Choose to walk or ride a bicycle whenever possible. Never use open fires to dispose of waste, especially chemicals and plastic. Adopt the 3 Rs of solid waste management: Use sustainable, reclaimed, or recycled building materials. Start composting leaves and clippings from your yard and food scraps from your kitchen to reduce waste while improving your soil. Use the power supplied abundantly and freely by wind and sun. Hang your laundry to dry to minimize your use of gas or electricity and open a window or put on a sweater rather than turning on the air conditioner or heater. Buy local foods and goods. In this manner, the use of fuel for transporting goods can be minimized. Look around your house or place of business for ways you could conserve water. Use and buy products that are eco-friendly or made with biodegradable materials. Always bring a bag when you shop. Get rid of your lawn: Plant bee-friendly, drought-tolerant, native plants instead. They clean the air, provide oxygen, and beautify your surroundings. Start an anti-litter campaign to educate your community. If you own a business, make sure you have considered the environmental impact of your business practices. Join an Earth Day celebration every April 22nd and consider making its tenets an everyday practice. What you can do to help stop pollution. Do you think people in general are doing enough to prevent pollution?

Chapter 2 : Tips To Protect Yourself From Bad Air Quality: Health Hazards

Get this from a library! Protecting Earth's air quality. [Valerie Rapp] -- Discusses air pollution: what it is; how it hurts people, animals, and plants; and what can be done to protect the air.

Or what happens to all those delectable clouds of who-knows-what flowing from factory smokestacks and vehicle tailpipes? Or what makes a blanket of dense smog shroud a city skyline on certain days? Raymond Hoff, an air pollution expert based at the University of Maryland, Baltimore County, sure has. Hoff has studied air pollution for more than three decades researching topics ranging from Arctic haze, to ozone-damaged beans on the banks of Lake Ontario, to the river of fumes that emanate from Interstate As part of the campaign, NASA will fly a large aircraft – a foot P-3B – on low-altitude flights near major roadways. At UMBC, we use lidar, a type of laser, to create vertical profiles of pollutants in the atmosphere. We plan to make lidar measurements at the same time that NASA satellites and aircraft fly overhead and measure pollution from above. The idea is that the ground stations will help validate the satellite and aircraft measurements and give us a more accurate three-dimensional view of air pollution. In the summer in Baltimore, there are two pollutants of importance – ozone and particulate matter. Both can cause health problems. On bad air days, we see increases in the number of asthma incidents, cardiopulmonary problems, and heart attacks. Baltimore skyline on a clear day. Baltimore skyline on a hazy day. Where does ozone come from? Sunlight reacts with certain pollutants – such as nitrogen dioxide, formaldehyde, and other volatile pollutants – in a long chain of reactions to produce ozone. Combustion engines, power plants, gasoline vapors and chemical solvents are key sources of the precursor gases. What about particulate matter? In Baltimore, about 30 to 60 percent of the mass of particles in the air that we worry about are sulfates – small particles generated by emissions of sulfur dioxide. Coal-burning power plants, smelters, industrial boilers and oil refineries release most sulfur dioxide. The other 30 to 60 percent, depending on the day, is usually organic particles. Organics come from vehicle exhaust, evaporating paints, and various commercial and industrial sources. Vegetation also produces a significant amount of organics. The remainder is usually a mixture of dust, sea salt and nitrates. Is that a fairly typical mixture of pollutants? Yes, for a large cities along the Mid-Atlantic and in the Northeast. There are certainly regional differences. There are fewer sulfates in California, for example, because they cleaned sulfur out of their fuels. You see more dust in the West, more organics in the Southeast. You see high levels of certain industrial pollutants over cities like Houston where you have a robust petrochemical industry. We think about half of it comes in from the west over the Appalachians. Some of it comes up from Washington, and some, of course, is local. Tell me something interesting about air quality in Baltimore. If you have an urban area right next to a body of water, like we do with the Chesapeake, you have the sun beating down creating very hot surfaces and upward transport that produces winds that circulate air between the water and the land. Polluted air flows off the land and pools over the water. Not really because it comes back over land the next afternoon. There are actually Maryland Department of the Environment monitoring sites up at the top of the Bay that get higher concentrations than anywhere else in the state because of the bay breezes and the way the wind flow pinches at the top of the Bay. For example, the monitoring station at Edgewood, which is about 20 miles northeast of downtown Baltimore, tends to get hit particularly hard by bay breezes. Ozone requires nitrogen dioxide, organic compounds, and sunlight to form. It takes a few hours for the air to stew enough for ozone to form. When the wind is blowing through an urban area you can have your highest concentration of ozone downwind of a city by 20 to 30 miles. In fact, farms in rural areas downwind of cities can have problems with ozone because ozone damages plant health as well as human health. Beans, for example, are highly sensitive. If ozone levels get too high, they start to get brown blotches on their leaves. I know there are networks of ground-based sensors to measure ozone near the surface. Is it possible to measure ozone from space? A spaceborne measurement of ozone at the ground would be a great thing, but it is still a real challenge. Much of the ozone we have on the planet is high in the atmosphere in a layer of air called the stratosphere. You could say getting a good ozone measurement is a holy grail right now for NASA and the air quality research community. Aircraft will also be flying over

highways during the campaign. We know that transportation is a major source of pollution in the Baltimore area. Text by Adam Voiland. Flight tracks visualization by the Scientific Visualization Studio. Sea breeze illustrations from NOAA. Ozone-damaged leaf shot available here. Author avoiland Posted on.

Chapter 3 : Air Quality | Air Quality Planning & Standards | US EPA

Protecting Earth's Air Quality Saving Our Living Earth Download Pdf Files hosted by Elijah Black on October 29 This is a downloadable file of Protecting Earth's Air Quality Saving Our Living Earth that reader could be safe this by your self on calendrierdelascience.com

Air quality has a negative effect on your health. Breathing polluted air for a long time can cause serious health hazards. Eat jaggery to flush out the pollutants from your lungs. Air quality has a negative effect on your health. Much of the pollution that is affecting our air comes from human activities. It is a result of rising temperatures, increasing population, globalization, manufacturing, transportation and our dependence on fossil fuels like gas and coal. Exposure to pollutants like smog, sulfates, nitrates and carbon can have a significant impact on both human health and the health of the earth. When air quality is bad, it irritates your eyes, nose, and throat, cause shortness of breath, aggravates asthma and other respiratory conditions. It also affects your heart and cardiovascular system. Breathing polluted air for long periods of time can cause serious health problems and even death. Try to take steam with a few drops of eucalyptus oil or peppermint oil for better results every day in the evening. It will help you relax your air passages and help your body remove the harmful particulate substances. Jaggery, a natural detox food which is packed with nutrients that help remove harmful elements from the bloodstream, lungs, respiratory tract, as well as the food pipe. You should eat jaggery to flush out the pollutants from your lungs. You can eat it raw or simply replace it with refined sugar in your daily preparations. Jaggery is a natural detox food. Photo Credit: Include ginger in your diet. You can just add grated ginger to your cup of tea or chew a fresh piece with a pinch of salt to keep your immune system in shape. Ginger contains gingerol and certain other compounds that can help in reducing airway inflammation and inhibit airway contraction. Ginger does wonders for people who are asthmatic. Ginger can reduce airway inflammation. Photo Credit: Incorporate citrus fruits like lemon, gooseberries, oranges, etc in your diet. The vitamin C content in the citrus fruits will help boost your immunity and lessen the effects of air pollution. Know The Health Benefits 5. Tulsi should be planted in your household in order to absorb pollution. You should have tea infused with ginger and tulsi at least twice a day. It will help boost your immunity. Tulsi also absorbs the harmful pollutants. You can also drink ml of Tulsi juice daily to keep your body guarded against external pollutants. NDTV Beeps - your daily newsletter.

Chapter 4 : Protecting Earth's Air Quality : Valerie Rapp :

*Protecting Earth's Air Quality (Saving Our Living Earth) [Valerie Rapp] on calendrierdelascience.com *FREE* shipping on qualifying offers. Every living thing on our planet needs air to survive. Most of the time, we hardly even think about Earth's air.*

Top of Page Air Pollution Challenges: Climate Change EPA determined in that emissions of carbon dioxide and other long-lived greenhouse gases that build up in the atmosphere endanger the health and welfare of current and future generations by causing climate change and ocean acidification. Long-lived greenhouse gases, which trap heat in the atmosphere, include carbon dioxide, methane, nitrous oxide, and fluorinated gases. These gases are produced by a numerous and diverse human activities. Carbon dioxide and other greenhouse gas pollution leads to more frequent and intense heat waves that increase mortality, especially among the poor and elderly. Those most vulnerable to climate related health effects - such as children, the elderly, the poor, and future generations - face disproportionate risks. Studies also find that climate change poses particular threats to the health, well-being, and ways of life of indigenous peoples in the U. The National Research Council NRC and other scientific bodies have emphasized that it is important to take initial steps to reduce greenhouse gases without delay because, once emitted, greenhouse gases persist in the atmosphere for long time periods. EPA and the National Highway and Traffic Safety Administration between and issued the first national greenhouse gas emission standards and fuel economy standards for cars and light trucks for model years, and for medium- and heavy-duty trucks for Proposed truck standards for and beyond were announced in June EPA is also responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. Shaped by years of unprecedented outreach and public engagement, the final Clean Power Plan is fair, flexible and designed to strengthen the fast-growing trend toward cleaner and lower-polluting American energy. It also shows the world that the United States is committed to leading global efforts to address climate change. This partnership is laid out in the Clean Power Plan. In January EPA announced a new goal to cut methane emissions from the oil and gas sector by 40 to 45 percent from levels by, and a set of actions by EPA and other agencies to put the U. In August, EPA proposed new common-sense measures to cut methane emissions, reduce smog-forming air pollution and provide certainty for industry through proposed rules for the oil and gas industry. The agency also proposed to further reduce emissions of methane-rich gas from municipal solid waste landfills. EPA in July finalized a rule to prohibit certain uses of hydrofluorocarbons -- a class of potent greenhouse gases used in air conditioning, refrigeration and other equipment -- in favor of safer alternatives. Toxic Pollutants While overall emissions of air toxics have declined significantly since, substantial quantities of toxic pollutants continue to be released into the air. Elevated risks can occur in urban areas, near industrial facilities, and in areas with high transportation emissions. Numerous toxic pollutants from diverse sources Hazardous air pollutants, also called air toxics, include pollutants listed in the Clean Air Act. EPA can add pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or to cause adverse environmental effects. Examples of air toxics include benzene, which is found in gasoline; perchloroethylene, which is emitted from some dry cleaning facilities; and methylene chloride, which is used as a solvent and paint stripper by a number of industries. Other examples of air toxics include dioxin, asbestos, and metals such as cadmium, mercury, chromium, and lead compounds. Numerous categories of stationary sources emit air toxics, including power plants, chemical manufacturing, aerospace manufacturing and steel mills. Some air toxics are released in large amounts from natural sources such as forest fires. Since that assessment, EPA standards have required significant further reductions in toxic emissions. Benzene and formaldehyde are two of the biggest cancer risk drivers, and acrolein tends to dominate non-cancer risks. How EPA is working with states and communities to reduce toxic air pollution EPA standards based on technology performance have been successful in achieving large reductions in national emissions of air toxics. As directed by Congress, EPA has completed emissions standards for all major source categories, and 68 categories of small area sources representing 90 percent of emissions of 30

priority pollutants for urban areas. In addition, EPA has reduced the benzene content in gasoline, and has established stringent emission standards for on-road and nonroad diesel and gasoline engine emissions that significantly reduce emissions of mobile source air toxics. As required by the Act, EPA has completed residual risk assessments and technology reviews covering numerous regulated source categories to assess whether more protective air toxics standards are warranted. EPA has updated standards as appropriate. Additional residual risk assessments and technology reviews are currently underway. EPA also encourages and supports area-wide air toxics strategies of state, tribal and local agencies through national, regional and community-based initiatives. Among these initiatives are the National Clean Diesel Campaign, which through partnerships and grants reduces diesel emissions for existing engines that EPA does not regulate; Clean School Bus USA, a national partnership to minimize pollution from school buses; the SmartWay Transport Partnership to promote efficient goods movement; wood smoke reduction initiatives; a collision repair campaign involving autobody shops; community-scale air toxics ambient monitoring grants; and other programs including Community Action for a Renewed Environment CARE. The CARE program helps communities develop broad-based local partnerships that include business and local government and conduct community-driven problem solving as they build capacity to understand and take effective actions on addressing environmental problems.

Chapter 5 : Simple Ways to Help Save the Earth - wikiHow

How to Help Save the Earth. In this Article: Article Summary Conserving Water Preserving Air Quality Protecting the Health of the Land Helping to Protect Animals Conserving Energy Community Q&A.

Chapter 6 : Flood Cleanup to Protect Indoor Air Quality | Indoor Air Quality (IAQ) | US EPA

EPA's air research provides the critical science to develop and implement outdoor air regulations under the Clean Air Act and puts new tools and information in the hands of air quality managers and regulators to protect the air we breathe.

Chapter 7 : Google is mapping out air pollution levels on Google Earth

Tag: air quality AGU How Satellites Can Fill the Gaps in Air Quality Maps You've most likely seen color-coded, real-time AIRNOW maps of air quality on the web or on television that show whether the air is safe, unhealthy, or hazardous.

Chapter 8 : ClientEarth | Environmental lawyers, environmental law

Protect Our Future is Earth Guardians' ongoing campaign highlighting environmental issues connected to the Earth, Water, Air, and Climate. It is unique because you get to choose what kind of project will best serve your community needs.

Chapter 9 : air quality "What On Earth

The Clean Air Act provides the principal framework for national, state, and local efforts to protect air quality. Under the Clean Air Act, EPA's Office of Air Quality Planning and Standards (OAQPS) is responsible for setting standards, also known as national ambient air quality standards (NAAQS), for pollutants which are considered harmful to.