

Review role of minerals on environmental pollution

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Abstract: Environment massive collection by various factors that influence the evolution of living organisms and components of the Earth's surface over millions of years to come, and therefore will have a direct impact on human activities. This article attempts to examine the role of various minerals and environmental pollution and damaging them as well as their experiences. Environment is a great variety of ecosystems, seas and oceans, forests, mountains and natural surroundings, different biomes ranging diversity of animal and plant species are included. Hence the need to consider both the environment and the balance between nature manipulations with special attention also consider developing standards and work together in protecting the environment. As we know, a significant amount of ore mining activities, mining and metal is coating material in the form of dust in the air, soil, water or methane gas emissions and sporadic adverse effects on human health. Hence, the maximum allowable material mineral-health standards, adverse effects of diseases and cancers associated with the mining industry, special attention was suitable for individual and group health and the culture medium used in immunization and prevention at the primary level, focusing on the pros and cons took precedence under the administration of the new technologies proper working environment, the harmful effects of occupational diseases minimized. In this paper, analytical - descriptive and using the library and internet resources are going to analyze and describe a wide variety of minerals, in addition to the benefits, significant losses that can be harmful to their health, their goal is to target the population examined in the world.

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1. Introduction

Investigation the history of mining and mining activities during the extraction of this material shows that substantial amounts of ore and stone coating material for dust in the air, soil, water or methane gas emissions gradually spread effects will have adverse human health. Occupational lung diseases such as silicosis many, coal workers' pneumoconiosis caused by dust or, asbestosis, of technology and the increasing need of man is mining. (Silica pollutants, cadmium, asbestos, coal, carbide, lead, cadmium, vanadium, cobalt, molybdenum, nickel, copper, etc.), heavy metals and water with soil pollution - air, water and human health activities had a negative impact. In history and ancient civilization of Iran has always used the rocks, ores and minerals are extracted together with these metals to a wide range allocated. What in the construction industry, artifacts, jewelry, pharmaceuticals and treatment of diseases, nutrition and medical science is considered.

The role of minerals in medicine so deep, it seems that the new discoveries P (on dates) with cortisone material in order to prevent complications and corticosteroids are very useful. Salt bath to eliminate toxins and balance the skin dryness or moisture, are effective, bromine present in sea salt useful for prevention of warts and a substance known to help smooth, elastic and smooth the skin presented.

Sources suggest that the mix of fluorination of the most dangerous pollutants of the environment can be considered as generally fluorine element gas in pure nature to be found, but when the humidity is combined HF hydrofluoric creates very dangerous for human health. Molybdenum over time affects the respiratory tract but actually is safe inhalation copper; antimony shows itself as a skin rash on workers. Since minerals are the basic building organisms are very important in maintaining their health on the other hand they also increase complications of the whole health damage and specific diseases in human, it could be a fresh look at scientific projects, research and documentation, and use these tips and to accept or reject the hypothesis.

This study aims to evaluate the effect of mineral research has been done on environmental pollution.

Research Background:

One of the most important pillars of sustainable development of any country is its preservation of the environment of heavy metals in water and a soil organism, the ecosystem threatens life.

In a study by Sotouhyan et al., they investigated environmental impacts of lead and zinc mine drainage Abad, results showed that compared with international standards on the Pb and Zn in soil and water and waste area is exceeded and the produced water has entered irreparable damage to the environment.

The results Shariati et al. in 2009 and is also on the constructive ore Anguran show that a high percentage of pollution.

Ghadimi and Moqimi in 2011 have investigated inverse relationship between distance and the amount of deposits found pollution.

Shahbazi et al, in 2012 carried out study about skinheads in the soil heavy metal pollution using pollution factor indices showed that the concentration of these substances above the maximum acceptable concentrations in soil.

Nowrouzi et al. in 2008 have shown that even lower concentrations of contaminated water can cause long-term limit on the accumulation of nutrients in the soil and crop.

Karimi and Ghasempour in 2012 have proven that contamination of heavy metals lead, zinc, nickel, chromium and arsenic in the sediments above the limit determined plain.

Due to the low water and polluted waters of the results deteriorated as a result of mining activities is extremely important. Mine tailings depot also creates the environment free of dust, erosion and the release of elemental ions and the resulting increase in pollution.

Definition of minerals: minerals contain two elements are carbon and hydrogen (not organic) are in the category of minerals. Environment: including vivo (humans and animals, nature) and abiotic (air-water-soil), natural resources, plants and their relationships in which the organization operates.

Contaminants: include such non-biodegradable plastics, synthetic rubber and biodegradable organic material, human sewage, animal wastes and agricultural and animal carcasses and human.

Emissions: Play or mixing of foreign materials into the water, air, soil physical quality to the extent that it or biological change in humans, other creatures, buildings and monuments harmful.

Types of environmental pollution: air - soil - water - Sonic - heat - oil – radioactive.

Pollution caused by radiation of radioactive materials:

1. The radioactivity of minerals;

2. The cosmic ray interactions with gases in the air;

Artificial radiation from nuclear tests and laboratory waste.

Clean technology to minimize waste and waste and avoid dropping them into the atmosphere or water in nature.

Ecology: the science that studies organisms in terms of its natural environment and the relationships between organisms, the environment and respond to them.

Cancers and occupational diseases related to minerals:

Occupational cancer includes 4 to 20 percent of cancers prevalent forms of cancer and certain groups of society are more involved. Occupational cancer is entirely preventable and work environment interventions could claim millions of lives each year their habits.

Now more than half of human exposure to chemicals and substances in the workplace and groups by the International Agency for Research on Cancer classified as carcinogens among some occupational carcinogens and effect relationship amplifier lifestyle and resonator are caused by occupational exposure to asbestos lung cancer in smokers.

So far not a part of the contaminants are iron deposits but recently evidence has been found indicating that excess iron in human blood and blood vessels, blocking sediment. **Copper** at a high level anemia make bone changes, increased cholesterol, green hair and sometimes and leading to death. **Cobalt:** acute bronchitis and diseases of the skin's contact with the solution.

Vanadium: Have a meaningful relationship with bronchitis and some blood cancers.

Tin: input of harmful by inhalation, a type of cancer called benign creates Astatusis.

Mercury: cinnabar deposits exert negative effect on the nervous system.

The following table, Steinland et al. study in 2003 and review of Noormin and Karjalain in 2001 shown cancer and occupational exposure to carcinogens identified the most important factors:

Type of cancer	most important occupational exposure to carcinogens
Lung cancer	Asbestos - Silica - Ni - radon in indoor - production and refining Arsenic - Beryllium - Cadmium - aluminum - chromium, uranium mining - copper smelting - iron and steel industry
Cancer of the larynx	Mineral oils - asbestos - producing pickles - sulfuric acid
Mesothelioma	Asbestos
Skin Cancer	Coal - arsenic - making coke - high solar radiation - bitumen work
Cancer of the sinuses, throat and nose	Woodworking dust - nickel substances - hexavalent chromium - wood furniture and cabinets

So far, evidence of the disease by trivalent chromium mines in the ordinary people who live in the suburbs or the workers has not been found, but hexavalent chromium role in cancer development has been approved. Global Burden of Disease study conducted in 2002 by WHO and showed 20-30 percent of men and 5-20 percent women of working age (15-64) are the age may be at risk of lung cancer-causing asbestos, arsenic, beryllium, cadmium, chromium, nickel and silica and diesel engines are smokers.

In the whole world this occupational exposures because cancers of the lung and trachea and bronchi constitute 10.3% and about 4.2 percent of leukemia can be attributed to occupational exposures. Occupational cancer caused the loss of 1.4 million disability-adjusted life year (DALY), which in order of priority for the regions Europe, Western Pacific, Southeast Asia and America.

85 percent of cancers caused by environmental chemicals such as arsenic, aniline dyes, asbestos, nickel, amino benzene, bitumen, PVC and liver cancer, lung, kidney cancer. Miners exposed to radium are more susceptible to leukemia and gastrointestinal.

Of carcinogens that align with pollutants, hydrocarbons, oils, gasoline, asphalt and chemical plants are known arsenic and nickel. Working with iron oxide, arsenic, chromium, asbestos, petroleum and mustard gas are known risk of lung cancer. Contact Arsenic skin cancer, cancer of the respiratory tract Contact Chrome or development of asthma as a result of certain chemicals can be cited.

People at risk of radioactive materials thyroid cancer, leukemia, lung and bone with a higher had risk experience.

A person at risk of radioactive materials thyroid cancer, leukemia, lung and bone with a higher risk experience was considered.

Lead poisoning (SATURNISM) is one of the most professional diseases in humans. Myshvd.az heavy metal after gold and mercury is the heaviest metal and the second metal after iron is widely used by countries with low levels of arsenic and construction cable coverage, and antimony in the manufacture of alloys, ceramics, solder, weapons, ammunition and preparing cosmetic application range. In the auto industry and manufacturing car parts, including the battery, motor, paint and body work ethyl lead in gasoline is then ignites the air.

Resources Contact Lead: Lead poisoning of environmental resources, social, occupational environment caused major pollution sources of the metal, air, soil, water and other contaminated food. People who work near place melting or lead production and workers and their families (through

inhalation of dust in their work clothes) are at risk for lead poisoning. Acute and chronic toxicity that first form is less common in the summer and children most affected (due to the direct relationship of Pb in the presence of vitamin D) in chronic gastrointestinal symptoms, anorexia, headache, create bar Burton on the edge of the gums, effect the peripheral nerves, muscle weakness and paralysis, convulsions and delirium. Accepted standards and the current level of lead in the air for daily working hours have been shown that there is no venue to discuss them.

Zinc oxide in the long-term workers who have been exposed to this substance does not cause serious side effects and only transient symptoms of fever, chills have been reported.

Cancers of the lung and Radon: Radon is a radioactive gas element, colorless and invisible, which can be produced from a variety of internal and external igneous rocks and through reaches the surface of the via soil, phosphate mining, coal combustion decay of uranium and the environment has high solubility in water and can be very damaging for miners and workers.

The effect of indoor work and life will be seriously damaging. If you enter lung tissue damage caused gradually and in the long run it will cause cancer of the tissues. Based on international research after smoking, radon is known as the most important factor for lung cancer.

Prevention of occupational diseases in occupational health team's work in partnership with medical specialist or doctor or medical professional screening patients and health professionals working professionals who are capable of primary and secondary prevention of occupational health care program comprehensive targeting HR through assessment efficient.

Discussion and conclusion:

For reasons of self-indulgence and disregard for the human race is reduced biodiversity in the world, especially Iran. The causes of this decline can be wetlands that are extinct inputs, vegetation is destroyed and the desert has become, the forest cover has declined and are subject to serious degradation are the past ten years, more than 14 thousand fires, 150 thousand hectares the surrounding forest and rangeland. 1.5 billion tons of soil erosion annually from the border with the past, more than 70% of protected areas and more than 50 percent dungeons wildlife refuge to revive a long time are required. Indiscriminate exploitation of vegetation, wildlife and plants trade, agriculture and residential land use change, unsustainable exploitation of natural resources are threatening the environment, the role of hunters and smugglers and non-native animal species such as

raccoons and entering nutria damaging the environment can also be a serious and strict regulations and severe punishments measures should be considered in this case and the destruction of nature are not increasing. As minerals for healthy teeth and bones, preventing osteoporosis, iron deficiency, hearing and eyesight and healthy skeletal structure is necessary to excessive accumulation of these substances in water, soil, air and soil pollution and damage to human health, air and water and the environment will follow the moderation in the use of new technologies and standards mining and mineral deposits, keeping pace with advanced technology in the world can be of great importance to environmental protection and sustainable development. Localization of heavy metal ions, other means of reducing waste by eliminating acidic and attention to compatibility with the ecosystem of the region.

Suggestions:

Depending on the capabilities and countless possibilities that exist in nature Iran, extensive research in the field of mineral waters have therapeutic effects and verify the use of these waters for treatment by medical groups and boundaries between scientific and medical facts be known popularly believed. For example, many people believe that the colored water fountains sorting between Kiasar and Semnan for the treatment of diseases of the stomach or skin inflammation and sulfur springs or calories south of the country, hot springs across the country has many health benefits that must be specifically approved by medical teams and specialized tests. For example, in the presence of salt caverns and beneficial effects in patients with asthma and respiratory problems, if approved by the medical staff, and in the hypothesis and conjectures of science and practice there and become, in addition to the medical treatment area and can attract tourists to sustainable development and revenue for the regions benefit from these capabilities, but suffer from poverty and lead out of a recession.

In many countries, so the soil should be turned upside down so that the manganese, while we have manganese mines Jiroft land mines. But as it is the merit and necessity of young people and professionals in order to raise capital and create jobs is not used and the Department of Geology necessary position amidst

the dense crowd of graduates is still not won, as far as the province rare gem insulation was used instead, which shows the lack of knowledge.

Environmental geochemistry assessment of drinking water and proper supervision on the quality of performance springs near the mines and miners can reduce environmental pollution, future or in the long term with good management prevented the destruction and pollution of groundwater resources.

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