Consequently, results of interpretation can be used for waste monitoring, collection, disposal and utilization. Also, it is used for monitoring of design, exploitation, and reclamation of the lands occupied by the waste. Method of reclamation helps to conduct effective ecologic monitoring in time: track and predict the development of negative processes; detect formation and dynamics of damp's development.

To choose the most suitable place for new landfills is as important as control of existing ones. Remote methods of control are useful in this area too. Using by high-resolution satellite images allows observing large area in details and choosing the most suitable area for landfill. It is applied into practice in other countries. For example, landfill area in Kerbala (Iraq) is determined by using the integration of Geographic Information Systems (GIS) and multicriteria decision analysis (MCDA) [6]. These systems include high-resolution satellite imagines. Satellite images of Kerbala and its environment are gathered from WorldView-2 satellite. The satellite multispectral image of Kerbala city taken in year 2010 of 0.5 meter resolution is used. Images and maps input are processed by many GIS software according to landfill site selection criteria.

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ECOLOGICAL PROBLEMS RELATED TO COAL AND HYDROCARBON PRODUCTION

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The ecological issues related to coal and hydrocarbon production have been thoroughly discussed over the past decades. Particularly, the main concern of the global society is burning of such fossil fuels as coal, oil, and gas. The production of these natural resources may contribute to global environment pollution more than other human activities. To prove this fact, it is even enough to mention "greenhouse effect" that leads to

blocking heat from escaping, which in its turn, results in global warming. In addition, coal and hydrocarbon production contributes to acid rain and air pollution that is the cause of various human diseases and death.

The main focus of the current research is to examine coal and hydrocarbon production technology paying special attention to fossil fuels burning.

It is a well-known fact that the main constituents of coal and hydrocarbons are carbon and hydrogen [2]. Burning is termed as chemical reaction involving oxygen contained in the air. The carbon combines with oxygen to form carbon dioxide (CO_2), and the hydrogen combines with oxygen to form water vapor (H_20). A great amount of heat is emitted during these two chemical reactions. As heat is required to induce these chemical reactions, there is a chain reaction: reactions cause heat, which, in its turn, causes reactions.

During these reactions carbon dioxide is emitted, which leads to the greenhouse effect. For instance, to produce 11 million tons of carbon dioxide, a big coal-burning plant annually burns 3 million tons of coal.

However, emission of carbon dioxide is not the only environmental problem related to coal production. Presently, 60% of coal is strip-mined. This procedure involves large earth-moving machines that strip off the top soil in order to reach the coal and then scoop it up and load it into the special trucks. These machines can pick up 300 tons of coal in a single bucket load. Sometimes, it is required to remove about 70 m of top soil to reach the coal. According to the coal-mining standards and regulations, in most cases the land being excavated should be further restored and recultivated. However, these rules are not always observed. Besides, not in all regions, the excavated soil can be restored. The result is that a great amount of strip-mined land is awaiting reclamation, and new land is being strip-mined at a rate of 65,000 acres per year.

The remaining 40% of is produced from underground mines, and this number will gradually increase as strip mine areas run out. One of the ecological effects of this activity is acid drainage from abandoned mines. The ground water reacts with sulfur compounds to produce sulfuric acid which, subsequently, reaches the surface and gets into streams and rivers. This contaminates water making it unsuitable for drinking, swimming, and even industrial applications. The methods to prevent sulfur compounds from mixing with ground water are rather expansive; therefore, they are not widely being implemented.

Another ecological concern of underground mining is land subsidence, i.e. ground on the surface moving downward as the abandoned mines below cave in. This makes the buildings or other constructions on the surface to break down or destroy To prove the gravity of the problem discussed, the following data can be provided: one-fourth of the 8 million acres that are above coal mines have subsided, 7% of the subsidence has been in cities, where the consequences are very crucial and tragic to the residents. In addition, subsidence can change the drainage patterns and make land unsuitable for farming. It should be noted that there are not laws and regulations which can force mining companies to assume responsibility for damage caused by subsidence.

The next ecological problem is fires that may start by accidents and are very difficult to put out. Some areas may smolder for several decades releasing smoke mixed with air pollutants. Due to the heat released, not only coal, but also vegetation is easily destroyed.

Above all, the profession of coal miner is the most dangerous. A person is always in contact with dirt, there is not enough room to stand up.

However, the most important health impact of coal mining is black lung disease [1]. Despite all recent improvements and inventions, this occupation is still the most dangerous one as it regularly kills over 100 men per year in the Russian Federation.

The most widely discussed ecological problem related to hydrocarbon production is oil spills. Despite the great amount of money spent on further clean-up, nevertheless, many of the beaches have been completely destroyed and numerous species of marine animals suffered a great damage.

Accidents on land can also spill oil into the oceans. The most spectacular case of this type was in Campeche Bay, Mexico, in 1979, where a well could not be capped for 280 days, during which it spilled 700,000 tons of oil into the Gulf of Mexico, doing heavy damage to aquatic life.

Oil spills or leaks can occur not only in marine environment, but also on land. The consequence of on-land oil spill is the formation of aesthetically objectionable landscape [3]. Above all, hundreds of villages, settlements have been eliminated due to the oil exploration.

In conclusion, it can be stated that there should be great social and environmental concern when petroleum and mining industry contaminate the water and land resources that the population depends on. Although more attention needs to be placed on damage that is done to the wildlife. Pollution that directly influences the health of human beings must be immediately dealt with. The government should elaborate not only the corresponding environmental regulations, but also the system of penalties and monitoring system for irresponsive mining and petroleum companies.

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RECYCLING OF PLASTIC WASTE

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Nowadays, industrial activities are in exponential increase, which has a negative impact on the environment. One of the environmental unfriendly factors is various types of industrial and commercial wastes, which accumulation pollutes the environment. Plastic items production is a bright example. The high-priced metals are replaced by plastic material due to its low cost and ease in use. Plastic material is widely used in different industries such as instrument and mechanic engineering, and medical equipment industry. Such items as cases, panels, and component parts are mostly plastic. In 2000, world plastic production exceeded 220 million tons per year. 40% of the capacity is used for package material, almost 30% - production of membrane, 5% - for furniture industry, and 3% - for engineering. The rest 22% is used in construction as a material for multilayer coatings and interior work [5, 6].