

PRESS RELEASE: The Greek Mining Case: Skouries-Halkidiki. Did Eldorado tell Greek citizens the whole truth?



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Introduction

Halkidiki is a peninsula in the eastern part of the province of Macedonia in northern Greece and is one of the regional units of Greece. The autonomous Mount Athos region constitutes the easternmost part of the peninsula but not of the regional unit. The capital of Halkidiki is the main town of Polygyros located in the centre of the peninsula. The Cholomontas mountains lie in the north-central part of Halkidiki. Halkidiki consists of a large peninsula in the north-western Aegean Sea, resembling a hand with three “fingers”, though in Greek these peninsulas are often referred to as “legs”, named Cassandra, Sithonia and Agion Oros. Halkidiki borders on the regional unit of Thessaloniki which is the second biggest city in Greece in the north.

The main characteristic of mount Kakavos is the highly diverse fauna and flora. The Halkidiki area is one of the most touristic places in Greece. Tourists from all over the world visit Halkidiki every year. The land with its trees, animals, bees, beaches, rivers is the main source of income for the inhabitants of Halkidiki. Large scale mining industries would be lethal for the economy of Halkidiki. No other occupation could take place apart from the mining field in the particular area [1,2].

Halkidiki’s economy is based on tourism, fishing and agriculture. Tourism alone represents 15-20% of Greece’s GDP [3]. Halkidiki shows significant activity in the agricultural sector with farmland, sod pasture land, beekeepers and -hives, organic farming, fishing and aquaculture, wood logging, forest fruits, game preys and aromatic herbs. All these activities are at a fatal risk due to the deforestation of Kakavos mountain, the



desiccation of the aquifer, the dust that impedes the vital functions of plants, acid runoffs and bioaccumulation of heavy metals in the food chain.

The Cassandra mining complex has an ancient history. Through all these years, the mining in Cassandra was performed by human hands not affecting nature and human health extensively. Underground mining action helped the inhabitants of Cassandra to survive through conquerors, world wars and civil wars by giving them the income to pay the taxes imposed by conquerors.

The Homeland of Aristotle

The reign of Philippos the second (400 B.C.) father of Alexander the Great, and afterwards the reign of Alexander the Great himself is considered as an important era in the history of mining in Greece. This fact is evident from the several ancient mining works and also from the piles of rust that originate from gold (containing manganese and mixed sulphide ores) mining especially at the sites of Stratonis mountain. The activities continued during the Roman Empire in which the mining actions declined. The mining was then again initiated during the Byzantine Empire. After the conquest of the area by the Ottomans the mining industry started booming. Five hundred and fifty furnaces were working at that time to produce zinc and silver. Mine workers had to give the sultan one in every twelve dram of silver produced. Even with such levels of tax the mining was profitable.

During the 16th-17th century, the mining industry knew alternating periods of growth and decline. In 1705, the villages in the area acquired the privilege of self-management. In a decree of the sultan, the right was given to the inhabitants to exploit zinc and for this purpose, a mining partnership was formed with the representatives of the twelve biggest villages participating in the general administration.

In 1822, after the downfall of the revolution the villages lost their autonomy. In 1893, the mining rights were handed from the Ottoman Empire to the French-Ottoman S.A. which had its headquarters in Paris. Until 1900, seventy two thousand tons of ore were extracted and proceeded for further milling. In 1901, the company proceeded for the first time with superficial exploitation of the deposit of pyrite. In 1928, the mining activities were transferred to a S.A. Greek Company of Chemical Products and Fertilisers (SAGCP&F) and the department of mining was provided with the name "Cassandra Minings". Apart from the Cassandra minings, the Greek company also bought the Cyprus, Hermione, Oropos and Coroni minings. After World War II, the majority of the shares was property of Bodosakis Athanasiadis, whom with his actions gave a significant push to the mining sector. The Stratonis became the heart of the mining actions. In the early seventies, SAGCP&F had built the enrichment factory at Stratonis beach and started the production and the elaboration of the mixed sulphide concentrates. In 1992, SAGCP&F gets in to liquidation by the National Bank of Greece.

In 1995, the company was transferred to TVX Hellas S.A., which is a subsidiary of the Canadian company TVX Gold Inc. TVX Hellas took over all the rights and buildings of Cassandra minings. The primary purpose of the company was the creation of a gold mine in the area of Olympiada but due to the local communities' reactions that was prevented. In 2002 the state council, after an appeal by the local people, made the historic decision No 613 which recognised the environment as something of value that had to be compared in relation to the prospective profits. The economic profits compared to the environmental destruction were unsatisfactory and the destructive for the environment was bigger than the profit. So the company's plans were canceled.

Eldorado Gold

In 2003, TVX declared bankruptcy and left. The Greek state bought the mines for 11 million euros and at the same time sold them to Hellas Gold, for 11 million euros [4]. The state did not keep the money, they were used



as a compensation for the former workers of TVX (Xristos Pachtas former mayor of Aristotle municipality) [5]. Hellas Gold had been established three days prior to the purchase by two senior executives of the Greek constructor company AKTOR of the Bobolas group, one of Greece's most significant business groups. Soon after, two investors took part in the investment scheme namely AKTOR which was owned for 35% by the Canadian mining company and European Goldfields owing 30% [2]. The sale took place without a call for tenders as required by European law. The fair market value is estimated at 440 million euros.

Greek government considers the project profitable for the area and for Greece in general. For years now, Mr. Pachtas has abandoned the central political scene. He has returned to his land and was the mayor of the Aristotle Municipality until May 2014, where it is planned the open pit mines to be built. He is a man, who as Deputy Economy Minister gave away the mining field to Hellas Gold for 11.000.000 euros in December 2003. It must be pointed that the sale of the mines took place during a time when money existed and the economic crises could not be predicted and the country's undertaking major construction work because of the Olympic games [5].

After the bankruptcy of TVX the 472 employees had still not received any payment for months and were facing the danger of unemployment. They had barricaded themselves in the galleries and went on hunger strike. On the other hand, their colleagues were vigorously protesting outside the Ministry of Finance at the centre of Athens. During that period of time Greece was preparing for the Olympic games and the presence of unemployed workers was a bad image for the rest of the world to see so Mr. Pachtas decided to give the mines to the other party as it was, without any more profit or transfer taxes.

The European Court of Justice issued a decision against Greece regarding the sale of the Cassandra gold mines in Halkidiki, northern Greece, to Hellas Gold which did not include transaction taxes and were sold at a price that was below their real market value and, therefore, involved subsidies in breach of European Union rules [6]. The European Commission required Greece to retrieve the illegal subsidies of 15.3 million euros from Hellas Gold by June 23, 2011 and to inform Brussels of its action. The Commission resorted to the European Court of Justice after Athens failed to comply with the request. The court ruled that despite the fact that the nonpayment of taxes by Hellas Gold had been considered an illegal state subsidy, Athens never demanded their payment and, therefore, the court ordered Greece to recover the amount immediately. Instead of retrieving the money the minister of environment, George Papakonstantinou appealed to the European court because he stated that the decision was wrong and no money should be paid to the Greek government [7]. On October 17, 2013 Greece was convicted at the European Court because of the failure to take within the prescribed datelines all the required measures in order to recover the relief from Hellas Gold S.A. which was provided to the company [8]. The case of the mines in Halkidiki is considered as one of the biggest economic scandals in Greek history.

In 2004, soon after the mining rights were transferred to Hellas Gold S.A. the company composed the Environmental Impact Study (EIS) for the reopening of the "Mavres Petres" mining. The mining reopened its operations in October 2005 with the production of lead and zinc concentrates. After the positive impression of five ministries (Development, Environment, Culture, Agriculture, Mercantile Marine) on the pre-Environmental Impact Study in October 2009, the company applied at the ministry of Environment, Energy and Climate change the final EIS in August 2010. Tina Mpirmpili, minister of Environment, Energy and Climate change (October 2009 - June 2011) refused to approve the EIS due to concerns about a possible contamination of the groundwater and the danger of this contamination. George Papakonstantinou former minister of Environment, Energy and Climate Change (June 2011 - May 2012) approved the EIS nine days after he replaced Mpirmpili (June 26, 2011) [9].



In December 2011, European Goldfields sold its share to the Canadian mining company Eldorado Gold. Corp. at the price of 1.8 billion euros. Hellas Gold S.A., at present for 95% owned by the international gold producer Eldorado Gold based in Vancouver has a market capitalisation of 2.3 billion euros and the value of the minerals in Halkidiki is estimated at 15.5 billion euros.

In March 2012, four square kilometers of public forest were transferred to the company so that the operations of the plan could start. It should be noted that the transaction happened without economic assessment of the assets and without an open competition as is obligatory to happen at these occasions [4].

The Open pit and underground mine

The investment plan of Hellas Gold includes the existing mine in Mavres Petres, a new open-pit and underground mine in Skouries, an underground mine in Olympiada, a 8.5 kilometers underground tunnel for the transport of ore (Olympiada - Maden Lakkos), a copper gold metallurgy plant, a sulphuric acid plant (1000 tons/day), four tailing disposal and storage sites, an industrial port, storage tanks, and the exploration of 14 other potential mining areas. One hundred fifty-three million tons of ore are stored at the Skouries site. Specifically, the site contains 3.5 million ounces of gold and 750 thousands of copper. Each ton of soil that will be extracted, will contain 0.45 grams of gold.

According to Hellas Gold, two mines will be built for extraction. One is an open-pit mine of which the diameter and depth is estimated to be 700 meters and 200 meters (140 meters below sea level), respectively after five to six years of extraction. The estimated amount of reprehensible ore will be approximately 65 million tons. For the open-pit extraction, excavation and blasting method six tons of explosives will be used every day. Under the open-pit mine there would be an underground mine of which after 21 years the length of the tunnels will be almost 25 kilometers long. The annual production of the underground mine will contain 22 thousand tons of copper and 100 hundreds ounces of gold.

Two evaporation basins at the “Karatza Lakkos” and “Lotsaniko” area where all the waste will be deposited after milling, are about to be built. The two streams will no longer exist and two huge dams will be built instead. The Karatza Lakkos basin will be 615 meters in length, 15 meters deep and at maximum 190 meters high. The total amount of deposition will be 522,000 square meters. The Lotsaniko basin will be 455 meters in length, 15 meters deep and at maximum 180 meters high, and the total amount of deposition will be 308,000 square meters. The project has already started with the construction of the facilities [10].

Environmental Impact

According to the Environmental Committee of the Aristotle University of Thessaloniki (and other independent institutes), the EIS displays a variety of deficiencies, problematic methodologies, misinterpretation of statutory limits of pollutants and absence of alternatives, in case of accidents.

The mining industry is important for the global and for the Greek economy. Therefore its growth is welcome, only if it is sustainable for the public interest. This precondition is divided in three conditions. a) The agreement between the state and the company ensures states interests, b) there must be a reliable mechanism that will control the maintenance of the Environmental terms and c) the long-term environmental effects should not be proportion less towards the public benefit. None of these three conditions are fulfilled by the company's Environmental Impact Study.

a. According to the Greek mining law all the profit from the mining industry stays to the extracting company. As a result of this law, the only profit that the Greek state will take, is from the taxes the mine employees and the mining company will deposit and the reduction of the unemployment by some hundreds individuals. On the other hand, the loss with the mining activity overcomes the profit from the employers and company's taxes.



b. Unfortunately, until this moment the observation of the environmental parameters from public institutions are at least incomplete. In addition, as concerns environmental issues a specific law that gives the areas, the equipment and intangible possessions to Hellas Gold a) removes the consequences for the company and for the members of the boards from every administrative and/or criminal liability or obligation for any violation of the law and for the protection of the environment generally or resulting from the mining law, approvals or licenses, such as from infringements of the insurance and tax legislation creating a very bad precedent and b) provides for the new company that for any environment lesions or third people losses, which were made or the operative causes happened before the company started the works, the buyer company has no responsibility. These regulations are making the sanctions to be given.

c. Environmental effects. Hellas Gold in its Environmental Impact Study considers as sustainable exploitation the mining actions in whichever spot of the 264,000 acres of land which had been granted to the company from Greek government. According to the non technical abstract of the EIS "The plan in national and global climax constitutes a significant activity as it redefines for the specific area wholly or partially the economic characteristics and the development prototype through a whole development of the recorded deposits, and the parallel investigation for the extent of the known deposits and the determination of new ones". It must be noted that the company announced the existence of exploitable deposit also in Pianitsa area. The company considers as exploitable small contents in gold, since in Skouries, as bound of the actions sets the 0,4 grams per ton of extracted soil material.

The mining industry can be sustainable, only if it does not change the areas character, which has rich and unique natural environment, valued historic and cultural landscape. It must be noted that the archaeological sites include the birthplace of Aristoteles and big margins development in agriculture and touristic sector. (Aristotle University of Thessaloniki, Environmental committee) [11].

The rich region of Halkidiki

The ancient forest

The beech and oak forest of Skouries is among the few that escaped from fires and exploitation. The forest area which is about to be cleared according to Hellas Gold project consists of trees estimated to be 400 to 500 years old which are 15 meters high having a diameter of over 60 centimeters. Beech forest (asperulo-Fagetum) is the most prevalent forest type and it is in a very good sign of ecological conservation. With trees of advanced age growing up to 35 meters high. Near the lakes at Skouries trees have been found of approximately two thousand years old. A big part of the area belongs to Natura 2000. The damp understory of the forest in this area consists of rich and diverse vegetation, rich in organic substances. The human interference is minimal. This specific habitat is an interesting evolutionary stage within evergreen shrub and the tall oak forests of the area. During the last decade, the forest has merely been employed for small-scale logging purposes specifically to cover the inhabitants' needs [12].

Fauna

This large area which is the capacitor of flora species of the forest systems in the general area, combined with the absence of overgrazing, prohibition to hunt in certain areas, and the absence of human interference makes this area indispensable as a habitat for the survival and the reproduction of many forest species and wild fauna [10,12].

Avifauna

In the area, 159 different bird species can be found. Fifty-two species belong to the annex I of the instruction 2009/147/EC (European Parliament and Council on the Conservation of wild animals, November 30, 2009). Four species belong to the globally threatened (i.e. species of european conservation concern SPEC 1), twenty



species belong to SPEC 2 (i.e. species of which the global population is concentrated in Europe (> 50%) and is under adverse regime survival), three species are critically endangered and five species are endangered in the sense that they face danger of disappearance from their natural environment in the direct future (*Aquila pomarina*, *Ciconia nigra*, *Aquila pennata*, *Aquila chrysaetos*, *Falco biarmicus*). Eight species are categorized as vulnerable meaning that they are facing the danger of extinction in the medium future (*Aythya nyroca*, *Falco naumanni*, *Coracias garrulous*, *Hieraaetus fasciatus*, *Ardeola ralloides*, *Buteo rufinus*, *Circus aeruginosus*, *Acrocephalus melanopogon*). The high variety of avifaunal species that is observed in the area, is directly related with the presence of suited habitat for their survival and reproduction. The old tree clusters are directly linked with the species diversity of the area and are a very important habitat for its preservation. Almost all the basins of Asprolakkas consist of forest of which certain areas are relatively unperturbed, especially in the Skouries area where the characteristic species *Dryocopus marts* and *Aquila pennata* are found. In riparian forests, especially the undisturbed ones, biodiversity increases since they provide plenty of food, shelter and its linear shape allows the spread of species in general to neighboring habitats. Along the river of Asprolakkas and its tributaries, the presence of banks is very important for the growth of the riparians such as the semicollared flycatcher which is a very uncommon species that belongs to the instruction 79/409/EC. Species that are feeding with fish, such as the *Alcedo* species have significant impact on these rivers. Satisfactory populations of *Motacilla cinerea* and *Cinclus cinclus* were observed as well as 12 species of amphibians and 28 reptile species that live in the area. Two amphibians and seven reptile species belong to 92/43/EC (i.e. animals of community interest), 7 amphibian and 19 reptile species belong to 92/43/EC (i.e. require strict protection). Eight amphibian and 22 reptile species are protected with a Presidential Degree in Greece. Six amphibian species are strictly protected, and six amphibian species and 22 reptiles are protected by the Bern convention [10,12].

Mammals

Forty species of mammals are recorded in the area. Twelve of them belong to the species of community interest of which the preservation requires delimitation of specific conservation zones. Twenty-four animal species require strict protection and another twenty-four are protected by the Greek law (67/1081). According to the red list of endangered animals the species *Rhinolophus mehelyi*, *Canis lupus* and *Capreolus capreolus* belong to the category “vulnerable” which are in high risk of extinction in the near future. *Canis aureus* and *Lutra lutra* species are endangered and are subject to the danger of extinction in the direct future [10,12].

Opportunities of ecotourism development, however, are lost since the exceptional positions for panoramic views are canceled. As concerns the restoration after the end of the project, the EIS does not explain where the topsoil of sixty centimeters will come from. It is also believed that the total design of the restoration is not correct, since it does not contain the area’s tree species but contains foreign species ecologically unknown to occur in this certain area [13].

Water resources

The Kakavos mountain supplies water to the entire north-eastern Halkidiki [14]. The proposed mining activity will directly and irreversibly affect the region’s water resources. The EIA does not meet any of the goals of the framework directive 60/2000/EL, establishing a framework for community action in water policy which has been incorporated into Greek law [15]. The current mining runoff amounts to 350 m³ / ha and is probably underestimated. The freshwater pumping in Olympiada will reach 663 meters below sea level which will cause intrusion of saltwater in the coastal aquifer.



Atmospheric Environment

Throughout the mining history in Greece, the mining actions have had important impact on the air quality which was mainly caused by the pendulous particulate and heavy metals emissions into the atmosphere. The air pollution estimates found in the EIA violate the statutory limits for gaseous and particulate pollutants. Only in Skouries the particulate emissions are estimated to 430 tons per year PM₁₀ (“*particulate matter*” with a diameter < 10 μm) containing high concentrations of heavy metals, particularly arsenic (As). The ore dust production sums up to 4,324 tons per hour with high concentration of sulphur compounds such as heavy metals antimony, arsenic, barium, cadmium, chromium, copper, iron, manganese, nickel, lead, mercury, zinc, etc. The emission of carbon monoxide, nitrogen oxides, volatile organic compounds, sulphur dioxide, and particulate matter PM₁₀ and PM_{2.5} reaches in total 715 t / y in the first two years of operation and over 950 t / y over the next year. These atmospheric pollutants will be transferred over long distances. It must be noted that according to older measurements of TVX Hellas, the previous owner of the mines, the quality of the air in the area is already impaired with As, with daily average numbers that locally exceed the proposed rate/target with one to two orders of magnitude. The levels of As concentration have reached maximum rate near the extracting areas and at the deposit areas but they have also high levels at the whole area due to wind diffusion. The mining dust which consists of sulphates of heavy metals will be transferred dozens of kilometers from the mines reaching neighboring areas [2].

Soil

Soil is considered a non-renewable natural resource. In almost all countries that operate or have operated gold mines, the land adjacent to mines and even the land at great distance remain contaminated with heavy metals for several decades or even centuries after closure of the mines. The decrease in soil pH due to acidic runoff and high heat metal concentration make the soil unsuitable for organism and plant growth. Soil contamination by the plant will have a great impact on the wildlife of Kakavos mountain, especially for the rare and endangered species. The mining activity will result in a dried topsoil within kilometers of the open-pit mine and severe soil erosion with subsequent catastrophic flood events of which the effects are estimated to be permanent and irreversible. Due to the amplitude of soil contamination the effects to the wildlife will be direct. In each country where mine actions are taking place the illness and the death of animals is a fact. At mount Kakavos the rare and endangered animal species that are supposed to be protected, face the possibility of total extinction as well as irreversible negative effects to animal populations.

The phenomenon that cattle is affected by mining practices is not uncommon in areas with large-scale mining activity. As in many other countries as well as in Greece, due to the soil and the water contamination the cattlemen will be forced to leave the area to save their animals from illness and possible death. The only solution for these inhabitants will be to leave the polluted area [5].

The real cost of mining

The profit from the investment is through the employers taxation. Apart from the employee taxation, Greece profits from the taxes the company pays to the state. However, the state will not receive any mining rights and apart from that they will not face any financial damage, concerning environmental damage resulting from previous operation of mines. _ [5,15].

According to a United Nations report concerning economic and social development in the world, countries that export raw materials such as ores grow at a slower pace and diverge more from developed economies. In theory, mining activity can be sustainable only if it does not alter the character of a region, and developmentally



sustainable if it is carried out in the overall interest of society. The latter amounts to the assurance of public interest, the existence of a reliable inspection mechanism and long-term preponderance of overall benefits over negative impacts. Neither of these criteria are met by the investment plan of Hellas Gold. With an EIS that lacks specific scientific data, the extent of economic losses for the area cannot be measured up to this point, however, everyone with a common sense can understand that the loss will, without a doubt, overcome the profit [16].

Halkidiki's brand name will suffer a huge and irreversible blow, with full depreciation of agriculture and fishing products globally as well as the public and private property. The economic losses in the tourism and agriculture sector will overcome the profit. On top of these economic losses, the environment will never recover from the contamination and exploitation in that the current profit that Greek state gets from the land will never be reached at the same level [17].

The EIS does not calculate all the jobs that will be lost due to the mine activities. Woodcutters, fishermen, farmers, beekeepers are more than possible to lose their jobs or to relocate their businesses. It must be noted that due to water contamination, fishing and swimming is no longer allowed in the Straton sea.

Agriculture

Halkidiki shows significant activity in the agricultural sector with 108.9 square kilometers of farmland, 276 square kilometers of pasture land, 814 beekeepers and 152,385 beehives (9.7% of the national total), organic farming and aquaculture. A significant contribution to the local economy is also managed by wood logging, forest fruits, aromatic herbs and game hunting. All these activities are at fatal risk due to the deforestation of Kakavos mountain, the desiccation of the aquifer, dust that impedes the vital functions of plants, acid runoffs and bioaccumulation of heavy metals in the food chain. Because of the great amount of mine dust that sticks to trees and plants, bees will not be able to assist in pollination and help with their reproduction which will impact the health of the forest [18,19].

The end of the bees

The mining activity in Halkidiki marks the end of beekeeping the wider area of Macedonia. In Halkidiki there are 814 beekeepers of which 389 are professionals and live exclusively from the income of the beekeeping exploitation. On average, 84 beehives per square kilometer are found in Halkidiki whereas the average number of beehive density in Greece, which is the record in Europe, is only 11 beehives.

The consequences of the mining activity in north-east Halkidiki will be catastrophic for the apiculture, not only for the area and the county but for the whole of Greece. The huge amount that contains heavy metals dust will be 3,116 tons for every hour of mining operations which will be produced during the extraction and deposition of the ore, removable with the wind will be deposit on the ground, water, plants and oak and pine trees resin creating a notably negative and toxic environment for the diet and survival of the bees. The impaired dust can be transferred over huge distances creating prohibitive zones for bees. Classic beekeeping areas such as Cassandra, Sithonia, Athos and even Thasos are in a risk of permanent extinction.

Bees have been used as environmental indicators of pollution with heavy metals because they are capable of collect, transfer and store nectar, pollen and water, contaminated with heavy metals. The result is the pollution of all their products, the decrease of their population and in the end the death of the entire beehive.



The resin of oak, pine trees and chestnut trees are exposed to the pollution and the drifting dust which results in the degradation of the pines' forest honey quality. Parallel, because the pine honey does not crystallize, it is used as the base of other greek honeys in order to limit the speed of the crystallization of the final product.

The deforestation of 2,500 acres will have negative consequences for the development and for bee survival which depends exclusively on the provided flora. Cholomontas mountain has many plants which not only provide and maintain a large number of bees but are working also as a shelter for the hives of the whole of Halkidiki and other areas. The distortion of that rich flora needed for apiculture will be irreversible due to the permanence of the planned projects.

The variety of endemic diseases that impair the bees are expressed when bee colonies are confined by lack of food, water or air pollution, food and general environmental pollution. All the consequences of the mining actions will have as a result the spread of diseases among the bees. Since the year of 2006 the usage of therapeutic preparations for all the bee diseases apart from the parasitic *Varroa* mite will not be applied anymore. The debilitation of the bees' immune system in combination with the endemic character of the diseases, will, definitely, cause difficult exploitation conditions of the bees [20].

Tourism

The Halkidiki area is one of the most touristic places in Greece. The contribution of tourism to GDP of north-east Halkidiki is estimated at 15-20% [3]. The mining activity will bring a fatal blow to the touristic sector in the area. It will degrade life quality of the residents and visitors. Most hotel managers take a strong position against the mining projects as they fear the loose of incomes [3].

Health

The company's representatives have publicly admitted the use of arsenopyrite in the underground mine where the company is already operating. Despite the fact that they admitted the use of toxic liquids for the extractions they never confided the place where the toxic waste is disposed. Most likely, the waste is disposed into the river. Many complains had been made by citizens about the quality of the water which has the smell of sulfur [12].

Accidents

Last September a Hellas Gold track that carried metal concentrates at the industrial area of Thessaloniki stopped at the Redina area right outside the city of Thessaloniki due to a mechanical failure in order to fix the problem. The container of the track moved, the door which afterwards was found to be broken, opened and the arsenopyrite fell onto the ground. This was the first time that one found out that Hellas Gold did not obey the rules about the toxic material transfer and neither about the restitution after the accident. Unfortunately, this is not the first neither the last accident that took place.



The harbor of Thessaloniki has turned into a chemical server by Hellas Gold, when no district competed service seems to make any relevant audit as concerns the dangerous materials that had been transferred through the second biggest city of Greece, Thessaloniki. On October 5, 2013 only a

month after the accident in Redina another toxic leak took place, this time at the harbor of Thessaloniki. The captain of the ship “Paris” of MSC which transfers metal concentrates of Hellas Gold denied to load containers of Hellas Gold because of a leakage of toxic was concluded in some of them. When twenty-eight of the 128 containers with the arsenopyrite were already loaded, a leakage of toxic was found, the containers was unloaded at Thessaloniki’s harbor and afterwards they were transferred at a space where the company stores them temporarily.

One month after the accident in Thessaloniki on November 21, another incident took place during the transfer of raw materials when the tires inflamed of a moving track, just one kilometre from where the last accident took place. Fortunately, the driver disconnected the container from the main body of the track avoiding one more leak of toxic materials.

Apparently, from September until December 2013 one accident per month took place concerning a toxic leak. On December 11, 2013 one more accident was recorded, but this time at the largest Greek harbor in Piraeus city. After the ship “Paris” arrived at Piraeus harbor, a leak in one or more containers was observed. One or more of the containers with metal concentrates overflowed. The employees of the harbor started on their own to clean the storages of the ship. It must be noted that the materials that leaked in the ship belong to the category of “various dangerous substances and species” and requires special treatment for the restoration of the contaminated environment. Until this moment no statements from the state or Hellas Gold have been made to inform the public about the accident.

Apart from the accidents that happened during the transport of the extracted material a different accident took place on June of 2012. On June 13, toxic mine water of “Mantem Lakkos” and “Mavres Petres” of the Stratoni



mining facilities started to flow uncontrollably from the entrance of the tunnel No. 53 which is placed at the north-western limit of the Stratoni settlement. The industrial discharges ran off to the streets and ended up in the sea. The company opened a big hole to pump all the toxic water .

According to local people statements, the water was burning their hands. Right after the accident the police blocked the access to the places where the toxic water was flowing, preventing them to take photos, videos and water samples.

Unfortunately, this was not the first time that the sea was painted red from the toxic water. As a result of the mining activity in the Stratoni settlement the sea is contaminated in a level that according to the Special Regulation Stratonis Port (407B/25.04.1080 article 26,27 and 33 “Fishery”) the fishing of any kind of fishing boat is forbidden at specific areas. From the facilities of Hellas Gold at the westside along the coast for 1000



meters to the sea area Kouri and within one nautical mile the fishery of oysters, echinoderms and fish is strictly forbidden through all the months of the year for all the above mentioned areas which were described as contaminated. Article 33 forbids all swimming in the sea area of Stratonin inlet of which the water is characterized as contaminated as well as in a radius of 1000 meters from the spot of the extraction at the ore enrichment facilities of Hellas Gold. This law exists since the last 34 years and has not changed since that Hellas Gold owns the mines because no works for the restoration of the environment took place, so the sea is polluted up till now [22].

Arsenopirite

In April 2013, water samples were taken at streams that flow into Stimonikos bay (Halkidiki) near pisciculture and mussel cultures. According to the results, arsenic is present 49,000 times above the predicted numbers, manganese 2,660 times and lead 169 times.

Cyanide

According to independent scientific institutes, the company's EIS has incomplete scientific data and problematic methodologies, deviations from the procedures of the European Commission and misinterpretation of the statutory limits of pollutants.

First of all, the EIS mentions the flash melting method although it has never been applied on an industrial scale for the production of gold. Also, the method does not result in pure gold but in mixtures with copper, lead and iron and there is no reported separation method. In the copper extraction process, gold is a byproduct but this process can be applied as long as they can produce raw copper using enrichment methods. However, after a certain extent the enrichment methods can no longer be applied. After this point the company will use its alternatives. The first alternative is the use of cyanide. Hence, Hellas Gold will eventually implement the method of cyanosis.

Apart from cyanide application at the Skouries open-pit mine, the representatives of Hellas Gold admitted the use of cyanide at the underground mine in Stratonin where ores have been extracted since ancient times. Eventhough the use of cyanide was confirmed, it was not clear where the waste containing the cyanide is deposited.

Strong protests against the mining project

Huge demonstrations have taken place in past years against the mining actions in Skouries. In the largest cities in Greece, thousands of people demonstrated for their common cause. On March 9, 2013 more than 20,000 people demonstrated against the investment plan in Thessaloniki. A music concert took place on March 25 at Ierissos where 12,000 of people attended. On October of the same year another big concert took place in the city of Thessaloniki this time when 35,000 people sent their solidarity message to the straggling people in Halkidiki [2].

Not all the demonstrations were peaceful though. The situation got tangled from the police's side. Unnecessary violence was used and an irrational number of tear gas in houses, cars, schools, rubber bullets was use also. Police violence, deprivation of the adducted people right, legal interrogations without the appearance of lawyer, forced entry in citizens houses during the night and arrests in front of their children, abductions of minors, tear



gas in the streets of Ierissos, even in the school yard when students had classes, legal collect of DNA samples, tortures during the interrogations are only some of the examples of the means Greek Police uses to terrorise the people who are against the “investment” plan. In order to criminalise the fight of the local people, phone call transcripts between residents and local and international journalists they used them as juridical material and accuse them of criminal organisation [2].

In October 2013, Amnesty International called on the Greek authorities to conduct prompt, impartial and effective investigations into allegations of human rights violations by police in the village of Ierissos in Chalkidiki (Northern Greece) during that month. Among the allegations are that chemical irritants were used by police against protesters in Ierissos in an unnecessary or disproportionate fashion causing injury, that DNA samples were collected from residents in an inappropriate manner, and persons questioned by the police, apparently on suspicion of possible involvement in an arson attack on the work site of the mining company Hellas Gold, were denied access to a lawyer before or during questioning [21].

Activities in Skouries were banned out of the press

The Skouries case was not covered by the media with the significance it deserves. During the first steps of the inhabitants of the area near the upcoming open pit mine against the investment plan, big national media were silenced. The local media not be able to choose a completely silenced policy, were covering the topic but in a frowned way, speaking for a guided minority. They were representing the case only by the point of the company. The first publication on a wide transferred newspaper happened on the 19th of June 2011. The article cause the intense reaction of the newspaper’s employees, demanding the exemplary punishment of the author [3].

After the reactions not only continued but escalated and the government used riot repression forces, the media started covering the topic but using propaganda, misinformation and slander. Representative example is when a well known newspaper, characterised the protesters as far left guilds onslaughts and equated them with the fascist far rights people [3].

Also during the next huge demonstrations media kept the same pattern. It must be noted though that some journalists with the is articles and documentaries did a great job and covered the topic objectively as a true reporter has an obligation to do. Some of these examples are the documentary Exadas, Golden Times: Cassandra’s treasure, articles in many newspapers and internet sites. The topic was covered many times from foreign big media such us Le Monde, New York Times, Associate Press, El Pais, France2, etc. [3].

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Authorities that have expressed objections

- Environmental Council of Aristotle University of Thessaloniki (AUTH)
- Technical Chamber of Central Macedonia, Greece
- Board of AUTH
- Institute of Geology and Mineral Exploration
- Faculty of Agriculture and Greek Forestry Society (AUTH)
- Geological Association of Greece

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