

Ahmed biladi essay example

[Business](#), [Industries](#)



Coal Mining: Boon or Bane?

Energy is one of the determining factors in assessing the progress of a nation. In the absence of energy, people can not perform their daily activities. Trade and industries are put into a halt. Energy comes from renewable and nonrenewable resources. Renewable resources are those that can be replenished such as wind, solar energy, and hydro while non-renewable resources are finite—the likes of coal and fossil fuels. Thus, every nation explores all potential sources of energy. Because of the drawbacks of renewable energy resources (CIAB, 7), humans still resort to a more stable source of energy—coal. Before coal could be harnessed and used, humans will have to mine these resources. Coal mining has been inevitable, especially for countries rich in coal as it greatly contributes to their economic growth and development. However, such development comes with a price. This paper claims that environmental tradeoffs, outweigh the benefits of coal mining.

2. Contribution of Coal Mining to Economic Growth and Development

It has been contended that coal mining contributes a significant amount to the development of a country. United States In, 2011 exported 107 million short tons of coal—the highest in 20 years of mining. This **accounted for about 10% of total coal production, including thousands of employed workers. Coal mining generated a total of 141, 270 jobs—direct, indirect—which is tantamount to 1, 320 jobs for every million short tons of coal exported. Metallurgical coal supports 1, 460 employees in 2011 alone. Coal market seems very attractive to both labor sector and business people. The industry earned almost 50% more than the national average in wages and

benefits. Employees in coal mines, the transportation sector, port and port services firms and coal exporting ships reached to an annual average of \$96, 100 in terms of wages and benefits as opposed to the average wage (\$64, 500) of employees in the U. S. The total economic activity with respect to the labor sector is approximately equal to \$16. 6 billion gross value added to the U. S. economy (Ernst & Young 1-16). The benefit of coal mining to the economy has also been demonstrated in several modeling techniques. Aroca noted that 9% and 7-15% of the gross income is dedicated to compensate direct and indirect employees respectively “ exclusive of effects of final consumption”. (Rolfe, Gregg and Ivanova, 21)

. However, there is still an increase in the total output by \$1. 01 to \$1. 65 which translates to 3. 1 to 5. 7 additional workers to be hired in the regional economy.

The economic benefits of coal mining were not only realized in the United States and Chile but also in Australia. Nine point seven percent of the Gross State Product in Australia comes from the mining sector with an increase in direct and indirect employment. Coal production generates 88% of royalty payments across the state (Rolfe, Gregg and Ivanova, 25).

The bulk of electricity generated in the United States comes from coal (55%), followed by nuclear (20%), natural gas (12%), hydro (9%), oil (2. 7%), and non hydro renewables (1. 6%) (CIAB, 7). The Coal Industry Advisory Board (CIAB) argues that the “ depletion of one type of capital is consistent with sustainability if offset by an increase in other types of capital.” In other words, sustainability in perspective of the CIAB means that new capital and options for future generations are produce (i. e. infrastructures, new

technologies and new knowledge). New technologies allow coal to be exploited and the new capital that coal produces could be used to reduce environmental impact.

3. The Cost of Economic Development

Economic development comes with a price. While the CIAB argues that mining is sustainable in the context of producing new knowledge and technology to curb impacts, these new capital produce may not be sufficient to compensate for the environmental damages. The costs of coal mining to groundwater and impairment of streams and also to forest and marine communities have been well elucidated in various studies. Noted that while the effects of coal mining on water quantity seems to be temporary, it's impact on water quality can be very detrimental. (Choubey, 192-193)

While Hughes (391) recognizes the importance of mining in industry and economy, however he acknowledges the fact that mining can negatively change water bodies and the organisms they support. Mining can reduce the population of fishes due to ions leaching from coal and metal mines. These heavy metals can produce “toxic levels of conductivity, alkalinity, and acid that can eliminate aquatic biota across extensive stream reaches”. (Hughes)

Drilling and transporting petroleum lead to spills that damaged aquatic ecosystems. Mine tailings also not only contaminated groundwater but also polluted other marine ecosystems. As a result, the fishing industry has been gravely affected. According to Hughes (391), fossil fuel combustion altered marine and atmospheric chemistry thereby causing global climate change. Mining has also the potential to “increase channel erosion in rivers and streams, reduce riparian woody vegetation, and degrade aquatic habitats.”

Some studies also estimated how surface mining activity contributes to landscape disturbance (Lutz, Bernhardt and Schlesinger, e73203). In the Central Appalachians, studies showed that coal-level production on a country level is related to stream impairment and ecosystem loss of potential carbon sequestration. It has been also demonstrated that an area which is the size of Washington DC has to be mined every 81 days so as to keep up with the current demands of coal in the United States. One-year supply of coal is tantamount to 2, 300 kilometers of stream degradation and loss of carbon sequestration capacity which is equivalent to global warming potential of 33, 000 US homes.

4. Taking Sides

Coal mining significantly contributes to the economic growth of a country, though there are also lots of unrecognized tradeoffs that offset the benefits of mining. Apart from the contribution of the industry to greenhouse gas emissions, coal mining also poses a significant threat in the groundwater, forest, stream and marine communities. It is difficult to assess the economic value of the forest and other ecological communities that are gravely affected from this industry. This because the forest is not just home to a diverse array of flora and fauna, it also limits the amount of sediments brought to the marine communities during precipitation. The forest also serves as a carbon sink and it also helps in regulating climatic conditions. Further the forest provides livelihood for those living on subsistence scale and in a modern setting. Similarly, affected marine communities especially those of mangroves and seagrass play a key role in productivity. Mangroves and seagrass for instance are home to diverse species of marine organisms.

They also serve as feeding and spawning grounds for fishes and other marine organisms and support a complex food web. These ecosystems provide humans their livelihood. Not to mention the fact that these ecosystems act as barriers to impacts generated by earth processes such as tsunamis and typhoons. With these long-term benefits in the equation, the benefits of mining which only last for a short period are offset. However, as human needs evolved through time and his requirement for a better technology becomes inevitable it is also almost impossible to completely obliterate mining activities. And with these ecological benefits from nature, it should only be imperative to look for alternative resources to harness energy without posing a huge damage to the environment (i. e. harnessing energy on a sustainable level).

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