Mountaintop Removal Mining: Detrimental to our Future

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Paper 3 - Multimodal Project
Abstract

Mountaintop Removal Mining (MRM) is a controversial issue in the mountains of Appalachia. The environmental destruction alone should be enough to deter anyone from seeing this as a viable possibility for coal production. There are also numerous negative health and economic issues that arise for the people in the communities that surround the MRM sites. The health issues involve both physical and mental ailments from the different kinds of pollution caused by MRM. The process of MRM is one that is detrimental to the environment and the people who live near and around these sites. There are other options that need to be sought in order to save our future.

Key Words: Mountaintop Removal Mining (MRM), environment, economy, health, Appalachia, coal, environmental protection
Mountaintop Removal Mining: Detrimental to our Future

Mountaintop Removal Mining (MRM) is a type of surface mining that requires extensive force and environmental destruction to be completed. MRM negatively affects the environment, economy, and wellness of the areas in which it takes place. The area of Appalachia has always been reliant on coal for jobs. This is why many people feel that MRM is such a valuable addition to the area because it will create more jobs, although this does not actually prove to be a reality. This paper hopes to show everyone that MRM should be strongly opposed, especially by the people in the area in which this occurs. MRM could be eliminated if it were not for those who naively think this practice creates jobs.

MRM begins when a site is chosen and the companies trying to mine the coal need to clear cut the forest that sits on top of the coal seam. They deforest the entire area to clear the way for blasting. The next step is to blast off the tops of the mountains that are covering the coal seam below. The type of explosives used is a mix of ammonium nitrate and diesel fuel, which was the same combination used in the Oklahoma City (OKC) bombing, but the blasts in the mountains are ten times stronger than the OKC bombing (Cordial, Riding-Malon, & Lips, 2012, p. 203). The material that is blasted off the tops of the mountain is deemed “overburden” and pushed by enormous equipment or dumped by massive trucks into the surrounding valleys. This creates what is known as “valley fills” that bury thousands of miles of headwater streams and destroy the ecosystem that was once there. After this the coal seam is uncovered and the coal can be removed relatively quickly, cheaply, and efficiently (Cordial et al., 2012, p. 201). Once all of the coal from the site has been collected there is a requirement stating that companies must “reclaim” the land close to what it was originally. This includes returning the mountaintop close to the original contour as well as ensuring there is a certain depth of topsoil so that forests can
regrow. There are other changes a companies can make in order to get around these regulations. If they can change the land into an economic opportunity that creates jobs then they do not have to return the land to its original contour. MRM only occurs in southern West Virginia, southwestern Virginia, a small part of northeastern Tennessee, and Kentucky. These are the states in which the coal seams are buried by the mountains and where other more easily reached coal has already been removed.
One of the most relevant and devastating consequences of MRM is the harm that is done to the environment. So far, over 500 mountaintops in the Central Appalachian region have been destroyed by MRM, and the area damaged overall equals an area about the size of Delaware (Cordial et al., 2012, p. 202). Deforestation of the mountaintops is the first step of MRM and this is not deforestation to harvest the wood for other purposes, the only purpose is to clear cut it away so they can begin to blast. Thousands of miles of headwater streams in Appalachia have been buried and contaminated by the “overburden” the miners push into valley fills. These valley fills can contain as much as 300 million tons of mining debris that can extend as far as 6 miles from the actual mining site (p. 202). In total, around 6,700 valley fills have been approved in West Virginia, Kentucky, Virginia, and Tennessee that cover approximately 84,000 acres of forests and have decimated nearly 380,000 more acres (Davis and Duffy, 2009, p. 677). District Court Judge Charles Haden II once stated (as cited in Davis and Duffy, 2009, p. 680) that “Valley fills are a waste disposal project so enormous that, rather than the stream assimilating the waste, the waste assimilates the stream”. This is a very powerful statement that shows how truly destructive this act is. For every ton of coal produced in the MRM sites about .25cm of stream is impaired. For every 11,500 tons of coal produced from every one hectare (100 acres) of land disturbed, there is 2,875cm of stream impaired (Lutz, Bernhardt, & Schlesinger, 2013, p. 4). Proponents of
mountaintop removal argue that the flat land that is created after the mining can benefit the region by creating space for development which in turn creates job growth (Woods and Gordon, 2011, p. 808). This contradicts the notion that they are supposed to return the land back to its original form. Flat land is the complete opposite of what was once there and does not fulfill the qualifications of reclamation, unless the companies prove that changing the land use will be more useful than returning it to its original contour. This can allow people to construct buildings or use the land for other purposes, such as golf courses. Neither of these new uses are at all beneficial to the environment and cause even more harm on top of what has already been done. Also, many companies state they will change the land use, but in the end nothing ever gets developed and the land is left barren.

There are many different reasons why MRM has become such a controversial issue. The environmental effects alone should be enough to deter anyone from believing this is a feasible and efficient way to remove coal from the mountains. There are other associated problems that are equally as important as those created for the environment, but they may not be as easily seen until you look into the problem further. The health of people, both mentally and physically, living in the areas directly affected by MRM has been declining rapidly. Pollution from the coal ash, overburden, and explosives cause illnesses in the surrounding communities through water contamination and air pollution. Differences in the level of health in general is more prominent in counties with higher instances of coal mining (Knuckles et al., 2014, p. 158). People in these areas are affected through water supply contamination filled with harmful coal ash, chemicals, and debris which can cause bone damage, cancers in the digestive tract, and liver, spleen and kidney failure (Cordial et al., 2012, p. 203). Air pollution causes a whole other set of illnesses for the people who live in the coal fields. These illnesses include increased rates of hospitalization,
as well as pulmonary disease, hypertension, kidney disease, heart disease, and many different kinds of cancer (p. 203). Particulate matter associated with MRM operations has been found to cause cardiovascular morbidity and mortality (Knuckles et al., 2014, p. 158). These are only the physical effects of MRM in these areas, but there are also the mental effects that are harder to see, but just as harmful to people as the physical ailments. People in MRM areas have to deal with changes to their everyday lives on top of already poor socioeconomic conditions that are ever-present in Appalachia. Compared to the rest of Appalachia, in coal mining areas in general there are higher rates of substance abuse and mental health problems (Cordial et al., 2012, p. 203). This is due to coal mining in general which is not nearly as invasive nor disruptive to everyday life as is MRM. Imagine what these people go through when the mountains around them are literally being blown to bits; it must be extremely stressful not knowing if their homes are in danger or even their own lives. Stress is a key factor of this mental health consequence. People must deal with the startling noises of blasting throughout their day and the consequences of these blasts can be similar to the PTSD soldiers get after returning from war (p. 203). Another mental health problem that has arisen from MRM is a fear of speaking out about their concerns over this practice. Communities that once were tight-knit for generations can be divided by those opposed and those in support of MRM. Social support from these communities is one of the best ways to deal with stress which means if a community is divided, more stress can be added and therefore people cannot deal with their stress as easily (p. 203). The consequences of MRM these people face are unjust and need to be stopped. Community members have also had to deal with the rifts formed amongst their members that is brought about by the controversy within their once tight-knit communities. Also, the economies of these areas that are already very unsteady
and depressed, do not benefit at all by the presence of MRM and jobs are still as scarce, if not more scarce, than before.

The third consequence of MRM is what the MRM industry has done to the local economy. Appalachia has always been a poor area with few economic and educational resources. This can translate to having a small political voice which is why a lot of people in these communities do not speak out against MRM (Cordial et al., 2012, p. 204). The monoeconomy in Appalachia has always been coal mining and there are few other opportunities for jobs in the region (Cordial et al., 2012, p. 201). People in this area are desperate for jobs and will strongly support MRM and deal with the negative effects as long as there are possible employment opportunities (Cordial et al., 2012, p. 202). When the employment numbers in West Virginia are reviewed, about 67% of the employment through mining is through underground mining rather than surface mining (Woods and Gordon, 2011, p. 808). This clearly shows that MRM (a type of surface mining) does not bring more jobs because it employs so few people, one of the reasons it is so cheap. One of the many beliefs people have regarding mountaintop removal is that the sites, once leveled, can be used for economic development. This can include the building of golf courses, industrial parks, and prisons which in turn would theoretically create more jobs for the region (Cordial et al., 2012, p. 202). In reality, this does not usually happen. Many companies say they will do this, but due to the fact that valley fills settle drastically, no firm buildings can be built and virtually nothing happens to the flat land (Chance, personal communication, November 13th, 2014). The Bush administration supported the coal industry as the primary economic engine within the economically depressed region of Appalachia. This led to a hands off approach for the Office of Surface Mining Reclamation and Enforcement (Davis and Duffy, 2009, p. 689). What really needs to be done for the region is creating a new economic sector that
the people and communities can rely on instead of coal because the coal industry has been declining steadily and we cannot give them hope for this to be a reliable future (Chance, personal communication, November 13th, 2014).

Focusing on a problem without offering a solution is an ineffective way to show people their alternatives for the future. There is no one solution to the problem of MRM; it is a stratified issue that needs many components to solve. Chance suggests that the first problem that must be addressed is the problem of jobs in the area (Personal communication, November, 13th, 2014). Without another source of jobs the entire economy of the area will collapse and people will do whatever it takes to get a job, including resorting to MRM which in fact yields very few jobs. Appalachian Voices, an organization of people against the MRM industry, has created a program to generate jobs and they are well on their way to helping complete this first step. Another potential solution is to consider eliminating the practice entirely because MRM coal only produces 2% of the nation’s electricity (Chance, personal communication, November 13th, 2014). This along with Appalachian Voices generating new jobs is a real possibility to end MRM.

Overall, the solution is multifaceted and has important steps that need to be taken initially for any solutions following to be effective. MRM is a controversial issue not just in the realm of the impacts it has on the environment, but also on the adverse effects to the people and communities in Appalachia both from a health perspective and an economic perspective. This is an issue that we need to take a part in stopping for the good of the environment and especially for the good of the people. These are things you can do to take action today.
References

Chance, E. Personal Interview. 13 November 2014.


