Global social issues and change

Science, Agriculture

According to Conacher (2009), “ Land degradation occurs in all climatic environments, with ‘ land’ interpreted to include vegetation and water as well as landforms and soils” (para. 2) Land is one of the resources that all living things on Earth are running out of that humans cannot reproduce of. Because of the expansion of the human population through urbanization, industrialization, agriculture, and land pollution having a direct effect on this resource as well as endangered plants and animals.

Although there are many causes and effects of this issue, which no one really thinks about, it does play a role in today’s economy, politics, environment and culture. According to Conacher (2009), “‘ Land degradation’ is considered to be caused or, at least, exacerbated by human actions, and is thereby distinguished from ‘ natural hazards’” (para. 2). Land degradation impacts the environmental aspect through deforestation that contributes to global warming. Deforestation is the cutting and removal of the rain forest and its inhabitants. Because the human population is expanding, we need room to grow.

Forests are cut down to accommodate human occupancy. When there is a high demand for lumber, buildings, and roads there is a need for infrastructure. In the 21st century we are more connected than ever. Agriculture is another big contributor to land depletion because the demand for crops. Poor practices of farming have also contributed to the unnecessary loss of land because of companies stimulating the world economies for profit. When companies are trying to make a quick buck they will cut through a piece of land to meet the supply and demand. Land pollution to include industrial waste is another contributor to land degradation.

In essence because of the large industrial growth creating so much trash we are running out of places to dispose of it and currently we are not doing so properly. There are various forms of trash but in the case of household trash roughly 85% of it goes to a landfill, 10 % is dump into the ocean, and 5% is disposed of by incineration or some other means. Most of this trash is recyclable, on an average household trash containers are made up of 10% glass, 30% is either paper or cardboard, 9% is metals, 3% textiles, 4% is plastics, 23% is food mainly vegetables, 21% is dust or others and less than 10% of all this is actually recycled.

Although most of the western world recycles about 30% of the trash, majority of the rest is still just dumping into landfills and not recycling (Information For Action, n. d.). There are many other forms of trash that renders land unusable for many years. In example nuclear waste and radioactivity is believed to be unsafe for thousands of years to 1 million years. Through advancements of our species we are destroying land as a resource by creating so much trash, but the trash is not necessarily the end all.

The way trash is being disposed of is the problem and being more efficient could help save our planet by recycling, creating more biodegradables and making products environmental friendly. Quarrying is a presented problem in land degradation because more land is destroyed than resources retrieved; we destroy entire hills and mountains taking a small percentage of usable rocks to build our homes, buildings and roads. Quarrying not only requires that trees are eradicated but terrain is changed and never rebuilt or

replaced, for instance when we mine for coal or minerals it is far more harmful than logging.

Because people do not want the noise and mess associated with mining and quarrying, it is done in further than needed areas or remote places that usually have precious and vulnerable ecosystems. And when the mining or quarrying operation is closed no trees are replanted the land is not rebuilt and the by product is dumped in one area the mine is left as is. Urban sprawl is a contributor to land degradation and the term was first used in 1956 and described as the spreading of urban developments (as houses and shopping centers) on undeveloped land near a city (Merriam-Webster, 2012).

The result of population explosion has given a rise for urban expansion; this has been a recent and rapid growth. For example in 1800 CE there was only 1 city with a million people or more; in 1900 16 cities total; and by 200 there were 400 cities with a million or more people living in them. Our planet is quickly urbanizing, in 1957 30% of the global population lived in urban areas, 47% in 2000, and an estimated 60% are projected to live in cities by 2030 (UN Population Division 2002). The eveloped countries of the world are well ahead of the curve, with 75% of their population residing in cities and an estimated 83% by the year 2030. According to estimates, cities inhabit 4% or less of the world’s land, but are home to almost 50% of the population. Urban areas consume 75% of the world’s natural resources, and create 75% of the world’s pollution and wastes (Redman & Jones, 2004). With urban expansion comes the opportunity for commercial developmental wants and not necessarily needs. Businesses’ take advantage of the demand and attempt to supply this need while also creating a new demand.

Basic human necessities will be needed for survival by all and these things are made easier and easier for people to obtain but the development of strip malls, shopping centers and fast food chains are not needs and can create various problems. Some of the effects of this population expansion and commercial development is the transformation of the surrounding land of these cities and increase the demand for energy and other resources, damaging and eliminating basic ecosystems and global diversity. Just because the population increased rapidly does not mean humans must deplete the resource of land.

It is common practice through commercial development to exhaust land for the maximum output in crops to make money now, while not being able to use the land again for a while. As all our ancestors knew and practiced we as occupants of this planet should be stewards of this precious planet. Because population goes up does not mean that land degradation is an automatic occurrence it simply means we must try harder and smarter to protect this precious resource. Land degradation is caused by many multiple forces.

Mining, oil processing, wood industry, pulp and paper, chemicals are also various industrial activities that occur from land degradation. (Moatar, Lazureanu, & Chisalita, 2011). Another type of important force is largely related to agriculture use. Agriculture is one of the major suppliers to land depletion. Through poor practice of farming it can have a strong impact on the soil. When the soil nutrients and organic matter begin to decrease removing quantities of nutrients, it will not be able restore back naturally to the soil’s maximum productivity.

In addition to various nutrients, pesticides pour into streams and leach into groundwater supplies. As a result it can cause land degradation and desertification. The causes that worsen land degradation come from the farmer’s determination to increase soil productivity. This includes, crops cultivated in areas at high risk from drought; shortening of crop cycles and the reduction of fallow periods; insufficient use of fertilizer after harvesting; inadequate crop rotation; intensive labor; intense breeding and overgrazing with pressure on vegetation and soil trampling by livestock; separation of cattle rearing and agriculture.

Even though there is an increased demand of land for agriculture use; the continuous need for cropping on the same land will have little time for the natural ecosystem to revive and protect the land from erosion. There are two major component of soil degradation: the loss of soil through erosion and the loss of soil fertility. When the soils are eroded from farmlands, not only the farm but the air is also filled with dust. According to Dupac (2010) “ Sand transport is caused by wind which affects the soil erosion and it severely affects vegetation development and agricultural production. Land degradation intensifies agricultural economic losses. It disorganizes local and regional food markets, and causes social and political instability. When companies are trying to make a quick buck they will cut through a piece of land to meet the supply and demand. To fight land degradation and desertification, it is necessary to restore and fertilize the land. Nutritive elements such as nitrogen, phosphorus, calcium, magnesium, in the soil are necessary for the crops to grow.