Introduction erosion in this region and they

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Introduction

The level of global environmental degradation is on the increase and many countries are already experiencing some of its effects. Just like other parts of the world, Washington State has been plagued by a lot of natural disasters over the past few centuries and it is currently grappling with the challenges caused by these natural disasters. For example it has experienced earthquakes and volcanic eruptions.

Apart from these common disasters, erosion of the Palouse soils has caused serious environmental degradation. These soils are mainly found in the eastern part of Washington State.

Importance of Palouse Soils

The importance of this Palouse soils lies in the fact that it is very fertile and it also has the capacity to retain water. “ This is because the particles of the silt that form the Palouse soils have pores that retain water and it therefore

has a great agricultural potential” (Duffin 78). Owing to the importance of this soil it is therefore important to analyze the causes of its erosion, its effects and how it can be managed.

Causes of Erosion

“ The history of the erosion of Palouse soils can be traced back to 1800s when crops were cultivated along the Palouse River Basin” (Duffin 34).

This erosion became worse in 1900s when the erosion interfered with the soil fertility. The sharp increase in erosion of Palouse soils during this time was attributed to the destruction of the vegetation which protected the top soil. The inhabitants of the Palouse region cleared the slopes to pave way for cultivation of grains which later exposed the slopes to serious erosions. In the subsequent years, other factors have contributed to the escalation of soil erosion in this region and they include the following. First, is the issue of farming whereby several crops like winter wheat have been grown on the Palouse area, which has sloppy a terrain. Second, the sloppy nature of the Palouse region makes it prone to soil erosion. This is because water runs faster on sloppy grounds as compared to low lands. The third factor is the increasing number of settlements in the region which also leads to environmental degradation.

In addition to these, the loose nature of the silt soil makes it to be eroded easily (Troeh and Donhue 542).

Effects of Erosion on Palouse soils

The erosion activities on the Palouse soils have caused many environmental challenges in this region and they include the following: “ A survey that was

conducted in this region revealed that close to 40 percent of the rich Palouse soils have been lost to erosion, and the situation could become worse if more cropland was put into production" (White 220). Due to the soil erosion, agricultural production has gone down considerably due to the decreasing fertility of the land.

" The increasing settlements, and cultivations have also led to the lowering of the ridges and some are now as low as seven feet" (Morgan 105).

How to Mange Palouse Soils from Erosion

Because of the devastating effects of this erosion a lot of mechanisms can be put in place to mitigate its effects on human beings and the environment at large. Several measures including reduction of farming activities in this region have been adopted to curb soil erosion and they have led to substantial reduction in the rate of soil erosion and its effects. The methods to be used in the prevention of this soil erosion should be in line with the landscape of the Palouse soils. Since this landscape is very sloppy the following recommendations though not new can be used to manage the effects of the soil erosion (Morgan 116). Farmers in this region should have a consensus on the cultivation practices to be adopted by most of them. For example, they can concentrate on regular planting of crops which do not expose the vegetation to erosion. For example cover crops should be grown extensively.

The application of contour farming technique can act as a good solution to a sloppy area like this one. " This is due to its ability to facilitate soil retention and it can therefore elevate agricultural production from approximately ten

to sixty percent” (Morgan 130). Because the Palouse soils are quite weak, the inhabitants of this region should plant many trees especially the evergreen species which will act as wind breaks through out the year. This will prevent soil from being blown off by strong currents of wind. Shrubs should also be maintained in order to check surface “ runoff”.

Gabions should also be constructed in areas with deep trenches to check the speed of water that runs down the slope during the rainy seasons. Apart from these recommendations, the government can relocate some of the people living here to other productive lands else where in order to decongest this place. This will ensure sustainable recovery of the Palouse soils.

Conclusion

If the above remedies can used consistently, the soil erosions that have ravaged the productivity of Palouse soils can be reduced to manageable levels.

It is therefore important for all the people living in this place to take an initiative toward protecting their land from any further degradation. The government should also monitor the rate of soil erosion and come up with sustainable programs which will restore the lost soil fertility.

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