



Post-Genocide Environmental Threats in Rwanda

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ABSTRACT

The paper can be grounded into following categories: What are the current environmental threats in post-genocide Rwanda? What are the best possible mechanisms and institutions which a government can build to enable climate adaption and climate resilience strategy in a more effective way? How can national-regional and international NGOs can contribute in supporting the policies taken by the government and encouraging people to reduce their dependence on wood for fuel? Accordingly, the key research questions of the paper are: What renewable energy source, if any, has the most promise for becoming a major energy source? Is viable management alternatives and local community participation is possible in Rwanda? This paper attempts to spread message to the people about the negative effects of overpopulation and to motivate people to save trees as they prevent soil erosion, helpful in rainwater conservation and prevent sediment deposit during storms.

KEYWORDS

Climate, Non-Government Organisation (NGO), Rainwater Conservation, Sediment.

Introduction

The history of the Rwanda has always been remembered as one of the worst forms of violence by series of ethnic conflict. Thus last few decades was the most disturbing to Rwanda as genocide has led to loss of all socio-economic infrastructures such as banks had been looted, schools and hospitals were severely destroyed etc. This further leads to the demise of state institutions. The Central government had become powerless. Local people had lost confidence in their government and in the international community. Rwanda was devastated by civil war, rape, mass migrations, underdevelopment, economic crisis, HIV and other diseases, return of refugees, poverty and environmental destruction.

Moreover, the environmental degradation is the most important impact due to ethnic hatred as the Rwanda's households as still dealing with impacts caused by the massive population displacements. [1]

Significance of the Location of Rwanda

Rwanda, officially known as Republic of Rwanda is a land-locked and one of the smallest countries of Sub-Saharan Africa. It is located a few degrees south of the equator and is bordered by the Democratic Republic of the Congo to the west, Uganda to the north, Tanzania to the east and Burundi to the south.

Ecologically, Rwanda is divided into twelve agro with respect to farming practices and climatic characteristics. [2] According to the National Institute of Statistics of Rwanda, 2016 it had a population size of 11, 533, 466. It is comprised of three ethnic groups: the Hutus-Farmers (who made up roughly 85% of the population), the Tutsi-Cattle Keepers (14%) and the Twa-Hunters/Potters (1%). As per UN Data the land area is 26, 338 square kilometres with a high population density of 481.7 per square kilometre. It is one of the most densely populated countries on the African continent with population pressure on scarce land which is not only threatening the physical environment but also disturbing the social harmony in the country. Above all, the Climate change induced droughts in the recent years are now started threatening Rwanda's twin goals of food security and poverty reduction.

Historical Background

The bloody spattered history of ethnic conflict which resulted in a 100-days slaughter of 80,000 to 200,000 Hutu by the Tutsi army in Burundi from 1972 to the 1994 Rwanda genocide in which Hutu militia targeted Tutsi which was rooted in centuries-long competition for control over land and power. So if analyse the Rwanda's history shows that within Rwanda's society the Hutu

and Tutsi were largely constituted under the two different social categories and representing differing socio-economic positions where the longstanding conflict between Hutu and Tutsi has nothing to do with language or religion as they speak the same 'Bantu' language and practice Christianity as a religion. [3] So question comes how the distinction has raised? If we go back to the colonial period of Rwanda it can be said that until the late 19th century under the colonial domination both firstly under the German and then Belgian colonial rule where Tutsis represented the feudal monarchy rule occupied the higher strata in the social system and synonymous with having wealth and power whereas Hutus were the peasant masses or subjugated social group. [4] Gradually, with the growth of colonial dominance embedded the ideology of ethnicity identity cards among the Tutsi and Hutu consequently both of them became important political categories that they made this traditional structure even more radical and consequently Tutsis were privileged for all things whereas Hutus were really made into a much oppressed mass. Therefore, through the uprisings of 1959 Hutu leadership articulated and channeled their frustration, political consciousness, discontent and restlessness and eventually by early 60s in the name of majority rule the independence were took place across Africa and that reversed the system completely [5] as this was followed by ethnic violence between Hutu and Tutsi. But this continuous conflict gradually transformed into genocide when on 6 April 1994 when the President Habyarimana's death in plane explosion plunged the country into violence which enabled the Hutu elites to aggravate existing ethnic cleavages and this resulted the mass killings [6] of over 1 million people and the displacement of over 2 million people. Consequently, the Arusha Accords took place which provided for the creation of a transitional government until elections would be held in 1994.

Current Environmental Threats

Rwanda, having a growing population and facing many challenges simultaneously, has to get rid of the evils of unemployment, poverty and poor governance. Environmental degradation continues to threaten several lives in Rwanda today. Rwandese diaspora to Uganda, Congo, Tanzania, Zaire and Burundi is another significant problem from which Rwanda has to get rid of completely. The flows of Tutsi refugees from Rwanda to its neighbouring countries has increased the pressure on the natural resources such as gold, tin, ore, tungsten ore, methane, hydropower, etc.

Overpopulation leads to convert more land to agriculture in Rwanda. Conversion continues to pose major threats to wetlands, despite their vital importance. This has further led to destruction of

Rwanda wetlands which has resulted in degradation of soil, sedimentation on land cultivated downhill from eroded plots and habitat destruction etc. The major problems faced by farmers in many wetlands are water shortage and lack of availability of improved seeds and high prices of fertilisers.

According to the state of environment and outlook report 2015 by Rwanda Environment Management Authority has released a list of critically endangered ecosystems and species including animals, plants, mammal species, reptiles and fungi etc. that are threatened in the country and therefore urgently need protection. The report stated that ten ecosystems are classified as critically endangered namely: Volcanoes National Park, Natural Forests of Busaga, Dutake, Gishwati, Karama, Karehe-Gatuntu, Ibanda-Makera, Nyagasenyi, Rujambura and Mukura Natural Forest. Human pressure, deforestation, poverty and poaching etc. are highly significant factors of forest loss in Rwanda.

The 2015 report also considered five groups of species namely plants, birds, mammals, reptiles and amphibians where 42 plants are threatened of which 7 are critically endangered, 28 are endangered and 7 are vulnerable. The report says 17 birds are threatened, 9 critically endangered 4 endangered, 4 vulnerable but data was insufficient to assess 46 birds. The survey shows 42 mammals are threatened of which 6 are critically endangered, 32 endangered, 4 vulnerable while 4 reptiles and amphibians are threatened of which 2 critically endangered and 2 endangered. [7]

However, due to human activities these conservation areas have been reduced considerably. Forests are degrading at a very fast pace in Rwanda. It already started setting off a devastating chain of events at local level like species extinction which has negative consequences for medicinal research, soil erosion, local water quality, poor health, flooding, landslides etc.

Over 90 percent of Rwandans depend on biomass fuels such as wood, manure and crops. As the population grows, demand for biomass fuels increases. It leads to cutting down of forests and other vegetation which can cause climate change, fewer crops, droughts and increased greenhouse gases in the atmosphere. 2005 was the hottest year in Rwanda.

The climate is moderate and tropical in Rwanda. Temperatures vary considerably between locations depending on their altitude. Since 2005, climate change is clearly visible in Rwanda.

Rainfall pattern is changing in Rwanda, with less rainfall during rainy seasons but with more intense bursts. For example, too many dry days during important crop growth stages can reduce yields or lead to crop failure, while short periods of very heavy rainfall can cause fatal flooding, killing thousands of people, as in Nyanza district in 2010. The flood in Mwogo river affected two hundred people and ultimately causing loss of six million of Rwandan francs.

Two years later, on April 12, 2012, heavy rains in Musanze Northern Province, and Nyabihu and Rubavu districts in Western Province of Rwanda have led to flooding causing extensive damage to houses and property. According to the Rwanda Red Cross and government local authorities, an estimated 2,200 households, or 11,000 people, have been affected. 348 houses were destroyed, 446 were damaged. Caused by torrential rainfall, in August 28, 2012, Rwanda suffered unprecedented landslides, soil erosion due to heavy floods resulting in destruction of infrastructure and crops including loss of human and animal lives. An estimated 32 people were killed and more than 1,400 houses and 2,222 hectares of land was destroyed.

In 2015 the capital, Kigali, has experienced rise in minimum temperatures all through the year. In its report Strategic Foresight also characterise Rwanda as a fast warming country, with an increase in average temperature of between 0.7 °C to 0.9 °C over fifty years. [8]

Higher temperatures also mean the spread of diseases such as malaria, dengue, sleeping sickness, leishmaniasis, lymphatic filariasis etc.

The World Health Organization classifies Rwanda as malaria-endemic country. In their study the authors found that almost all Plasmodium falciparum parasite rates above 50 percent were reported in Africa in a latitude band consistent with the distribution of Anopheles gambiae s.s. [9]

The Albertine Rift is one of the most biodiverse regions of the African continent. The Civil Wars in Uganda, Rwanda, Burundi and the Democratic Republic of Congo (DRC) has been affected the region badly. Illegal timber trade and artisanal gold mining has recognized as a drivers of forest degradation.

Some Valuable Suggestions:

1. The government should encourage rural communities, the foresters, extension agents and others to practice and promote reforestation in Rwanda.
2. Foreign donor agencies can also support and coordinate with the government of Rwanda.
3. Special training programs are needed for community foresters for producing trees and conserving existing woodstock resources.
4. The Government should set a target of increasing the national forest cover to 30 per cent by 2020.
5. Focus should be on to take necessary measures to ensure sustainable development and the protection of its ecosystem.
6. People should be encouraged to use alternative sources of energy like solar energy, wind energy etc.
7. More awareness programs should be launched by the government with the help of the developed nations on ill effects of deforestation.
8. Mainstreaming disaster management in national programmes (public sensitization and education) i.e. in poverty reduction, community development etc.
9. Promotion of such events through social network. Role of women is important.
10. National and International level Non-Governmental Organisations can also contribute in supporting the policies taken by the government and encouraging people to reduce their dependence on wood for fuel.
11. There should be a regional initiative on illegal trade and it should be properly managed.
12. International and regional support needs to be provided to build mechanisms and institutions to enable climate adaption and climate resilience strategy and to develop an implementation plan.
13. Health centers should be open to give counseling to those single mothers who are still struggling with the consequences of genocide and are raising their children alone.
14. Building an independent judiciary by putting in place the judiciary institutions: Supreme, High and Intermediary courts. Training of judiciary personnel is must.
15. Legal reforms are the order of the day. There should be a use of various new approaches to handle the genocide cases such as Gacaca courts and Abunzi (mediation courts).
16. An effective early warning system with respect to flood like situation must be operational with more effective contingency plans. Collaboration with neighbouring countries and exchange of data is required to anticipate the future emergency situation. It is important to understand that emergency management does not happen on the day of the emergency rather, it should be a well-planned process well ahead of the actual disaster.
17. Early enactment of the regional DRR (Disaster Risk Reduction) policy and law is required.

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