

Climate Change and Challenges for people in Africa: with special reference to Tanzania

Climate change is a great challenge globally. Though people in most African countries produce little CO₂ but they are the one suffer/affected most with the climate change. E.g. droughts, water scarcity, floods and little or heavy rain which resulted to destruction of the crops, hence the outbreak of hunger and acceleration of poverty. African Climate scientists predicted more and heavy effects of climate change over the coming decades, includes extreme weather events, flooding, droughts, retreating glaciers, the rise of sea level, increased spread of life-threatening diseases and shifts of habitants.

- Majority of people in Africa (e.g. Tanzania) live in rural areas, whereby agriculture is the main economic activity. Even One-third of the income in Africa is generated by agriculture. (FAO, 2010)
- That means, they rely mostly on climate (rain falls) for the agriculture activities but at the same time they use heavily natural resources to survive eg - fuel/energy for cooking come from trees and other vegetations

Causes of environmental degradation in most of the African countries

- Human lifestyle and industrialization are main factors causing the destruction of ecological balance. We have used the natural resources unconsciously and roughly.
- The main drive of the environmental degradation in many African countries is poverty, whereby there is unsustainable use of water, land and forests
- Deforestation – for the purpose of increasing cropped areas or human settlement. Deforestation has also accelerated as a result of the growing demand of timber.

- Overgrazing – caused by either livestock in poorly managed agricultural application or overpopulation of animals.

Impact/Challenges brought by Climate change in Africa

- Water sources are among most vulnerable sectors to climate change
- Disappearance of snow and glaciers on mountains eg mount Kilimanjaro – Tanzania, mount Ruwenzori in Uganda and Mount Kenya. These mountains represent water Tanks for many African Rivers. Recently, it has been observed that several rivers are drying out in dry season due to declining level of ice-covered reservoirs.
- In East Africa, inter – annual lake level fluctuation, whereby there is low and higher level of water (eg. In Lake Victoria, Tanganyika and Turkana)
- Unreliable and variation of rainfall, eg the decrease or increase of rain, which may result of destruction of crops. Variability in rain has more significant impact on livelihood particularly in terms of the frequency of drought
- Deforestation, overgrazing and Reduced rainfall has turned marginal grazing land into desert.
- Droughts and floods
- Disappearance of some animals, birds and fish species as they are being hunted or their habitats degraded or destroyed.
- Shortage of water and fuel resulted from local degradation of land, forest, wildlife and water sources.
- Water scarcity is impacting upon water quality, which will result in sanitation problems and deteriorated health condition.

Climate change will have a significant impact on food availability and stability in many parts of the Africa. Climate change poses a significant risk of

decreased of water, increased crop failure, loss of livestock and will impact on local food security.

Theological perspective on environmental care

- Though the Bible is talking much about the care of the environment entrusted to us, I would like to say in brief theological perspective on the matter based on creation stories.
- Genesis 1:26-28 states that human beings are formed from the dust and created in God's "image and likeness" and given dominion over all other creatures.
- "*Dominion*" is sometimes misunderstood and has contributed to unlimited exploitation of humanity. "*Dominion*" does not mean "*destruction*," or a license to abuse God's creation, but it refers to *stewardship* over the earth on God's behalf. God wants us to care His Creation in line with His will, desires and purposes. That means, our rule is to mirror God's, because "*the earth is the Lord's and everything in it*"(Ps. 24:1)
- In Genesis 2, the human beings are given the garden to tend and serve, which symbolizing our obligation and responsibility to care for creation. (See also Psalm 115:16 "*the Earth He has given to mankind*"). This responsibility includes both stewardship of resources and care for the environment, by making sure it continue/ thrives and flourishes.
- We are called upon to tend and serve the earth as a sacred trust for which we shall one day give an accounting.
- Before God entrusted His Creation to humanity, He was very pleased and He declared the whole of His creation to be "*very good*" (Gen. 1:31): earth and all of its living creatures have value in and of themselves.
- Humanity is total dependent on environment, without it humanity cannot exist, that is, our life is sustained in the world in which God has placed us. There is also interconnectedness between nature and humanity, that's why

we are called to preserve the nature, which we are trusted as God's representatives on the earth to take care of in a just way. We have to understand if we continue to misuse the natural resources in our environment, the future generation will never find the habitable environment.

- By depleting natural resources or polluting the environment, humans are violating life, God, Gods property and the divine trust of our duty to the environment.
- Sometimes we are driven by our selfishness, greed, arrogance and a desire for a greater share of worlds resources and don't always *love our neighbors as we love ourselves* esp. the next generation *neighbors*.
- The Bible is given an account of how God Himself is take all measure to preserve and sustain His creation (a good example is during flood time - God preserved and sustained not only human race but also all species)
- Generally, the Bible reveals clearly that humans were created in continuity with the rest of created order. This connotes that we are bound up in solidarity with all of creation. Therefore human as well as the rest of creation have the right to ethical treatment

What can we do to care for creation?

The future generation is threatened if no measures are taken to take care of the creation.

1. Example from Tanzania: some measures which have been taken to mitigate the problems brought by climate change

Due to financial limitations, Tanzania like many other countries in Africa is not well prepared for extreme climate events eg droughts and floods. Together with the financial challenges it faces, Tanzania government has tried to respond to the impact of the problem by;

- Sensitize and educate the society, the importance of environmental care by preserving both tradition/origin and modern trees through a campaign called “*panda miti kata mti*” which means “*plant trees cut a tree*” This campaign has succeeded in some parts of the country esp. urban areas. So this shows, more campaign for educating is needed.
- It encourages people esp. farmers to adopt, cultivate and learn to use for food purpose crops which do not need lots of water/rain eg Millet, cassava etc.
- It has reserved and protected some few forest areas for water sources. It would be of a great help if more areas could be reserved for the same purpose.
- Introduction and use of climate friendly stoves for domestic energy in some parts of the country.

2. Measure to be taken by many African countries facing

- Improving national parks and game reserves, so as to protect and prevent the disappearance of some animals and birds.
- There should be more water harvest and reserving
- Application of Irrigation system
- Reforestation
- Improving catchment and groundwater management
- Promote the use of climate friendly equipments and energy eg the use of wind and solar energy
- Improving environmental management by reducing poverty esp. in rural area which is the key drive of the destruction of environment in Africa.

3. Measures to be taken by the whole world to care for the creation

- First and foremost, Environment education has to be offered and spread to all people living in the world, so as to create environmental awareness and building up sense of environmental friendly, care, just, love and responsibility. This education should be a life-long education which emphasizing both the importance of environmental care and the impact of climate change regionally, countrywide and globally.
- The key objective of preserving the environment should include; reducing pollution, sustaining natural resources and preserving ecosystem.

Conclusion

I would like to conclude this presentation with two famous sayings: one is from Gandhi who once said ***“If we could change ourselves, the tendencies in the world would also change. As a man changes his own nature, so does the attitude of the world change towards him. ... We need not wait to see what others do.”*** The second one is; ***“You can only change things if you get involved”***. Both sayings are calling upon all of us regardless of our gender, race, age, believe and position/status to get involved, to take part in bringing a difference in our world especially now during this great crisis of climate Change. Therefore the issue of environmental care and climate change should involve each and every one of us in mitigating its impact and to some extent slowing its advancement.