



# FORESTRY SOCIETY OF KENYA

*Promoting Professional Forestry in Kenya*

## FORESTRY PROFESSIONALS ONLINE FORUM\_#01

Friday 8<sup>th</sup> May, 2020

### “EXPLORING THE ROLE OF FORESTRY IN MITIGATING NATURAL HAZARDS IN KENYA”

#### Introduction

Climate change has led to increased natural disasters in the country which have seen more lives being lost, others displaced, property damaged and livelihoods threatened. Following the current natural calamities being experienced in the country, Forestry Society of Kenya (FSK) prepared a webinar to explore the role of forestry in mitigating the natural hazards in Kenya. The heavy rains that have been on going in various parts of the country have led to disasters such as landslides, mudslides, siltation and flooding in different parts of the country. Areas affected include West Pokot, Elgeyo Marakwet, Kericho, Kisumu, Siaya, Homabay, Garissa, just to mention but a few.

With the help of the moderators, Alex Kubasu (WWF) and George Tarus (FSK Scientific Chair) the panelists were taken through a series of questions to help expound more on the matter. The panelists included the Chief Executive Committee Member (CECM) Water, Environment, Natural Resources and Physical Planning- Elgeyo Marakwet County government, Mr. Abraham Barsosio; the Director- Kenya Forestry Research Institute (KEFRI), Dr. Joshua Cheboiwo; Deputy Chief Conservator of Forest- Kenya Forest Service (KFS), Charity Munyasya, and FSK Patron, Prof. Fred Owino.

#### QUESTIONS TO THE PANELISTS

1. **What is the extent and nature of the destruction associated with the disasters as witnessed in your country and the neighboring counties?**

##### *Mr. Barsosio*

The extent of destruction in Elgeyo Marakwet and other neighboring counties is dire. The impacts of the landslides, mudslides and floods have cut across the entire Elgeyo Marakwet escarpment upto West Pokot County. 28 people lost their lives as a result of the destruction with 25 from Kipchumbwa in Embobut Forest and 3 from Chesegon area. Most of these disasters are, however, manmade with human activities being at the forefront of stirring up these disasters.

2. **In your opinion, are these disasters related to environmental degradation and deforestation?**

##### *Dr. Cheboiwo*

Studies conducted over time have shown a strong relation between disasters and environmental degradation. However, human activities such as cultivation and settlement along steep areas, road construction, among others are the major cause of environmental degradation. Other factors such as rock formation are casual factors to disasters. The disasters being alluded to in this case are mainly landslides and floods.

In preparedness for the forest restoration in the country, studies carried out indicate that 65%-75% of all the forests in Kenya, especially the water catchment areas are degraded. These areas are heavily degraded limiting the ability of the forests to carry out their hydrological functions of rain water storage. Such areas, if well maintained, can help mitigate against the floods being experienced in the country.

##### *Prof. Owino*

It is unfortunate that many people have lost their lives due to environmental related disasters that can be avoided if appropriate measures are put in place. Land management issues need to be addressed more as they are the main causes of environmental degradation. Forests act as sponges in the hydrological process. Destabilization of the natural system is what is leading to the disasters being experienced today. Destruction of the forests is leading to the flooding as the river flow control is limited.

##### *Mr. Barsosio*

In my opinion, environmental degradation is the main cause of disasters. Human interference has been the major cause of disasters in Elgeyo Marakwet County. Activities carried out by people in mainly the disaster-prone areas have led to environmental degradation which ultimately leads to disasters occurring in the region. In the early 1960s and 70s, demarcation of escarpment boundaries had been done clearly by the agricultural officer in charge then. The boundaries clearly indicated the areas that people should cultivate and settle and those that were not fit for the same.

Unfortunately, over time, people have encroached into the areas that are unfit for settlement putting them at risk when disasters strike. An example is the area in Chesegon where over 20 lost their lives as a result of a landslide. Also following the eviction from the Embobut forest, the evictees were settled in an area known as the 'below the road'. This is one of the areas most prone to landslides in the region hence increasing the risk of the communities living there.

##### *Madam Charity*

Kenya has experienced various disasters and extreme weather conditions. Not all-natural disasters are associated with forest degradation. However, there is a direct link between forest degradation and natural disasters. Forests play a vital role in water infiltration and flow regulation. Destruction of these resources has led to increased flooding in the country that has caused destruction of property and livelihoods and loss of lives. There is need to protect and conserve the water catchment areas which are the forests and this will reduce some of the natural disasters experienced in the country.

3. **What roles are the agencies playing in mitigating against the various disasters in the country**

##### *Dr. Cheboiwo*

KEFRI's mandate involves undertaking research in the forestry sector including development of technologies. KEFRI has carried out ample research on various tree species that can be used on various ecological zones. If an integrated approach to management of disaster-prone areas is embraced, the institution is ready and willing to share the forestry related solutions best suited for the region such as encouraging agroforestry, contour tree planting, site-tree matching, among other solutions.

##### *Mr. Barsosio*

In Elgeyo Marakwet County, one of the main approaches being used to mitigate against the disasters is creating awareness of the issues. However, there are challenges that are making it hard to deal with the disasters. Lack of adequate funds is one of the challenges as most of the funds allocated to environmental conservation are minimal. Another challenge in the county is human settlement along disaster prone areas such as the hanging valleys. Relocation of these people will ultimately help reduce the impact of the disasters



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## *Madam Charity*

KFS is committed to combat forest degradation in the country. This will be achieved through curbing illegal logging, and encroachment of forest land. The institution has also directed more resources to protection of the gazetted forest area in the country. KFS is also planning on engaging the CFAs more by giving them contracts to carry out restoration activities. This allows for the communities to benefit from the exercise while at the same time conserving and managing the forests.

## **4. How are you positioning your institution to tackle the natural disasters in the country?**

### *Prof. Owino*

What we are experiencing in Kenya is a case of excessive encroachment of forests. People have encroached the forests limiting their ability to act as sponges and this has disrupted the hydrological functioning. FSK works in various fronts and when issues like this emerge, discussions are held and deliberations recorded and statements issued. With its pool of members from various forestry related organizations including KFS and KEFRI, FSK is able to bring all the parties in the sector together to discuss on issues affecting the sector and provide a way forward on the same.

### *Mr. Barsosio*

Despite having the second highest forest cover in the country, Elgeyo Marakwet is the leading county in landslides. The county is reaching out to various stakeholders and partners to help deal with the disasters in the region. Through UNDP funding, Elgeyo Marakwet County is in discussions to formulate a forest management bill specifically for the county. Such documentation will help in enhancing implementation of the right measures to reduce degradation of environment and forests in the region.

The county in collaboration with KFS and the Ministry of Environment and Forestry is working to deal with the issue of indigenous people that is the Sengwer community. Such efforts help in ensuring that funding on forest conservation are not halted by the donor agencies. The county government has also enhanced its relations with KFS and are working together to ensure proper management of forests in the county.

## *Madam Charity*

As KFS, we have mapped out the degraded areas on the natural forests in the country. These efforts were made to ensure that we are aware of which area need to be restored. Efforts are in place to restore the natural forests starting with these degraded areas in disaster prone areas. However, these efforts may not bear fruits immediately. Bamboo trees are being planted in these areas to help hold the soil and reduce landslides in these areas.

## **5. What are some of the interventions and quick way forward in terms of research, policy and programmatic action regarding these disasters should be actualized? (all)**

### *Madam Charity*

KFS is working to direct more resources to forest reclamation, restoration, management and protection. There is also need to strengthen the county governments to manage the community and farm forests as well as encourage tree growing in the counties. Another intervention would be working with the communities to ensure they understand fully the benefits of conservation matters and work in collaboration with the county governments to deal with the disasters.

### *Prof. Owino*

The main cause of forest destruction in the country is agriculture and settlement. The Ministries of agriculture and of settlement, need to work with the Ministry of Environment and Forestry to come up with a way forward in ensuring that forests are not destroyed in efforts to enhance agricultural activities and provide settlement to the people. KFS can work with the ministry of water in the construction of dams along the water ways to reduce flooding.

## **6. The disasters have been occurring on an annual basis and some biannually in Kenya. Are there surveys done on the costing of the disasters?**

### *Dr. Cheboiwo*

The cost of natural disasters is enormous. The number of people displaced is high as well as the amount of property destroyed. However, there is no survey done or documented on the actual cost of disasters such as flooding along rivers in the country. Disasters have extreme negative economic impacts and unless well documented and costed, the allocation of funds to deal with the disasters will be overlooked. There is need for a clear approach on costing of the disasters that can help inform policies and rally actual interventions to reduce the impacts.

## **7. There is a clear need for a multiagency approach in dealing with the natural disasters. What is FSK doing to coordinate advocacy work to enable the multiagency approach?**

### *Prof. Owino*

In the past, we have had proposals and, in some cases, even funding for projects that can help reduce the disaster impacts. During the implementation phase of most projects, challenges occur halting most of the projects. Some of the challenges include corruption cases of disagreements between the various stakeholders and leaders. Integrated planning has been attempted in the past but is mainly frustrated by a few individuals out to benefit solely from the projects.

When it comes to such projects, we need to think beyond the forests and think of the people downstream. How do they benefit from all the project? Are their views incorporated in the planning of the same? It is important to have a broad ecological thinking. As FSK, we can state that Kenya has missed opportunities as people in senior positions in government do not support most of the projects.

## **8. Nature Based Solutions have been seen as the most cost-effective approaches to help mitigate against the climate change impacts. Are there any NBS in place to help in disaster mitigation?**

### *Madam Charity*

The most effective approach that KFS is using is the fencing of the forest areas. This is restricting and controlling movement of animals and people in and out of the forests, allowing the forests to naturally regenerate and restoration activities to be done. However, nature-based solutions are faced with several challenges among them the increasing population. Another challenge is the need for economic benefits from the forests. Most communities living adjacent to the forests are constantly looking at how they benefit from conserving the forests.

## **9. Conservation issues have mainly been faced with political backlash in the country. In your opinion, what are some of the measures that can be taken to reduce the backlash?**

### *Mr. Barsosio*

Success of conservation, eviction and resettlement efforts is dependent on the political goodwill of the leaders. Without this, most of these efforts fail. There is need to ensure that the leaders are on board before commencing with these plans.





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Another measure should be the implementation of the law as it is. If there are policies in place, they should be followed to the latter and this will help reduce the backlash. There is also need to properly handle the agricultural sector that is, in most cases, the main cause of environmental degradation through poor farming practices. This can be done through engagement and working with the agricultural departments in the various counties.

## *Prof. Owino*

Political backlash can be solved by including politicians in the discussions. An example is the Mau restoration plan where political leaders in the area were actively involved. However, there is need to find a balance as some of the leaders may turn the conservation efforts to gain political mileage and this may affect the forests. Also, resettlement efforts require political support at both local and national levels

## *Madam Charity*

Creating awareness among the leaders on forest conservation and management can help in reducing the backlash. Once leaders understand the benefits of conservation and management of the resources, they will support efforts by the various institutions and offer goodwill. Other measures can include engaging the Council of Governors in various conservation and restoration activities. An example is Meru County where the leadership has embraced conservation matters and is training county ranchers who will be on the forefront in forest protection and conservation in the county.

**10. It is clear that there is need for use of collaborative approach when dealing with the disasters. What has been the missing link limiting this approach?**

## *Prof Owino*

Most government ministries are not open to working together. They prefer each working independently and, in some cases, there is need to pool the resources so as to achieve some goals. Environmental and forestry issues mainly depend on efforts from various departments and lack of collaboration makes it hard to deal with the issues. Also, county governments are not adequately equipped to deal with the disasters in terms of financial capability.

## *Dr. Cheboiwo*

Multi-sectoral partnership has deemed difficult in this country. There is a missing framework that brings all the relevant stakeholders together despite the sectors being interlinked. If the government can find a way of bringing together all the relevant sectors in a project, then the project will be a success. KEFRI has technologies that can provide forestry solution for the various sectors.

**11. What are some of the innovative actions that can be put in place to mitigate these disasters now and in the future? (all)**

## *Prof Owino*

Integrating the KFS plans and the County Government plans will help in ensuring that the efforts are in line with the conservation needs. This will also create a good working relation between the counties and the service with the aim of ensuring that forests in the country are properly managed. There is also need to address projects that were halted and had the potential to provide solutions to the disasters. County governments should also be well funded to be in a position to carry out preventative measures against the disasters in their respective counties.

## *Mr. Barsosio*

Some of the actions that can help reduce disasters in Elgeyo Marakwet County include clear demarcation of the escarpment prone to disasters,

rehabilitation and restoration of degraded lands, awareness creation amongst the communities, encouraging diversification of economic activities among the people and also engaging the youth through CFAs to reduce unemployment rates in the county which may lead to illegal logging and charcoal burning in the forests. There is also need for the government to ensure that people evicted from the forests are resettled in areas that are not disaster-prone areas. Residents with lands in these areas should be relocated and the land degazetted and forests restored.

## *Madam Charity*

Landslides can be managed through proper soil management. If the soil is well compacted, then incidences of the disaster will be minimal. This can be achieved through proper tree species mix during restoration activities. There is also need to put more efforts on farm forestry. The people are the bearers of most of the lands and it is the work of KFS together with the counties to try and win the hearts of these farmers to ensure that they plant more trees on their farms in an effort to increase the country's forest cover, while at the same time benefiting from the produce. It has been noted that where farmers/ communities have an economic benefit from the trees, they are willing to actively plant and maintain forests on their farms.

## *Dr. Cheboiwo*

There is need for an integrated approach when dealing with disaster prone areas. This will ensure all needed technologies are integrated to help deal with the disasters. Commercial forestry is also slowly catching up. This can be embraced as it will help in maintaining the soils to avoid landslides and also reduce water flow and at the same time, benefit the farmers through the same of wood products upon maturity. It is important to make forestry a competitive sector as is agriculture and this will attract more investments in the sector which will in turn boost conservation and management efforts.

**12. How does the future projection in terms of the disaster look like?**

## *Mr. Barsosio*

The government has the potential to manage these disasters through the counties and relevant bodies. Good political will and engagement of the communities will help in ensuring that the disasters are properly managed in the counties and the country in general. It is important to engage the communities in forest conservation and management activities by properly informing them of the benefits of doing so. I am optimistic that with proper engagement of all the stakeholders involved, we will be in a position to reclaim the lost and degraded resources.

## *Dr. Cheboiwo*

I am hopeful of a better future when it comes to dealing with disasters. The laws that can help in dealing with the same are in place and the only thing missing is the enforcement efforts. If these laws are enforced, some of these disaster issues will be a thing of the past. Also, there is need to separate flooding and landslides and deal with them separately. For example, flooding occurs due to lack of water control. This can be solved through proper construction of dams along river ways. Landslides can be solved through planting of right tree species that are deep rooted and have the capacity to hold the soil better. When the two are separated, efforts to reduce the disasters will be more efficient.

## *Madam Charity*

KFS is looking at the landscape restoration approach through partnership with various stakeholders. Through the Transition Implementation Plans (TIPs), KFS is able to engage the county governments to ensure that forest conservation and management issues are addressed in the counties. TIPs have been used as a guide to ensure that adequate funds are allocated to forest conservation and management efforts. Every individual has a role to play to ensure that the disasters are reduced in the future.





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## PARTICIPANTS' QUESTIONS AND COMMENTS

1. Fragile lands are government property but are mainly being mis-used and encroached. Who will reclaim these lands?

**Dr. Cheboiwo**- County governments should be on the forefront of reclaiming these fragile lands. Some of the lands after reclamation can be demarcated as communal areas

**Mr. Barsosio**- Counties should reclaim the areas encroached. It is sad that some of the maps indicate that individuals own land beyond the rivers. Title deeds have been issued on these fragile lands and areas unfit for human settlement or cultivation such as steep slopes. Counties can use the available human resource to enforce the policies in place and reclaim such lands along river banks and wetlands. Elgeyo Marakwet County is currently working with NEMA to reclaim such areas such as the swamps.

2. There is need to deal with issues through an integrated approach. How can parties involved work together and pool resources?

**Mr. Barsosio**- there is need to embrace collaborative approach. All parties are working for a common citizen hence need to work together for the common good. On the issue of resources, impact projects can help in dealing with the funding issue. In Elgeyo Marakwet County, KFS allocated land to the county where a bamboo investment is in place with collaboration with KWTA. The counties can also provide farmers with inputs such as the tree seedlings and seeds to encourage farm forestry in regions

3. Governance issues need to be actively addressed when dealing with the disasters. There is also need to work together to improve the resource base. If all stakeholders pool resources towards environmental issues, then management and conservation efforts will be enabled. There is need to create awareness amongst the communities and leaders. Professionals should cease from only talking when disasters occur and always use the opportunities, they get to educate the public on the need to protect and conserve our environment and forests.

## RECOMMENDATIONS

1. Engagement of all stakeholders in the sector to deal with environmental and forest degradation and mitigate against the natural disasters.
2. Enhance the relationship between the county governments, national government, various agencies and the communities in dealing with matters of forest restoration and management
3. Explore integrated land-use management plan to enable settlement and farming of areas that have been earmarked for the same.
4. Create awareness to all government institutions on environmental matters and possible environmental calamities for action to be undertaken collaboratively.
5. Implement the policies in place to ensure proper management and conservation of the forest resources.
6. Engage the community living in forested areas and areas that are prone to the natural calamities through their associations e.g. CFAs for them to be able to raise seedlings for sale (to institutions such as KFS) and be able to plant on their farms.
7. Degazettement of lands allocated to people in disaster prone areas in the country and resettling them in other areas.
8. Implementation of laws and regulations in the forestry sector and other sectors that would ensure mitigation of natural calamities need to be undertaken fearlessly (both by the national government and the county government)
9. Put in place structures such as dams that can help in river flow control. They will hold water during the rainy seasons and release it in a less harmful way and help in management of water in the regions.
10. Construction of dams should be done outside forest gazetted areas. Kenya is a forest scarce country and construction of dams in the already limited forests will make the situation worse.

### Moderators

Mr. Alex Kubasu – World Wide Fund for Nature (WWF)

Mr. George Tarus – FSK Scientific Chairman / KFS

### Panelists

1. Mr. Abraham Barsosio - Chief Executive Committee Member (CECM); Water, Environment, Natural Resources and Physical Planning- Elgeyo Marakwet County government
2. Dr. Joshua Cheboiwo - Director- Kenya Forestry Research Institute (KEFRI)
3. MS. Charity Munyasya - Deputy Chief Conservator of Forest- Kenya Forest Service (KFS)
4. Prof. Fred Owino – Forestry Society of Kenya (FSK) Patron

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