




Challenges of harmonization of needs in agriculture, land settlement and biodiversity promotion in Siaya County, Kenya

HOW CAN BIODIVERSITY MONITORING BE HELPFUL?

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Agriculture in Siaya County

- ❖ Agriculture forms the basis of food production and significantly contributes to growth and wealth creation of Siaya County.
 - ❖ It contributes about 37.7 percent to the Gross Domestic Product and 53% to the Gross County Product (Kenya National Bureau of Statistics, 2019).
 - ❖ More than 75 percent of the population live in rural Kenya (World Bank, 2013) and directly or indirectly derive their living from crops, livestock and fisheries production
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Land settlement in Siaya County

- ❖ Siaya County has rapidly growing urban areas notably at Siaya and Bondo. The demand for housing in urban areas has put pressure on the available land for settlement.
- ❖ Agricultural land in rural areas is gradually getting fragmented as people construct new homes. Although the majority of the rural land is predominantly used for crop farming, deforestation is gradually making the land fallow.
- ❖ Climatic factors have also contributed to the decline in forest cover. Demand for razing and agricultural land has made the farmers encroach on ecologically sensitive and conservation land in search of pastures.- (Siaya County physical and land use plan 2023-2033)

Challenges affecting biodiversity and Importance of biodiversity



L. Kanyaboli receding levels, because of unsustainable agricultural practise


Wildlife support healthy ecosystems that we rely on.

- ✓ People in Siaya depend on the services ecosystems provide, such as fresh water, pollination, soil fertility and stability, food and medicine.
- ✓ Ecosystems weakened by the loss of biodiversity are less likely to deliver those services, especially given the needs of an ever-growing human population.
- One example of **Lake Kanyaboli** — the Africa's largest lake, a habitat for a variety of wildlife including birds, fish, sitatunga antelopes and a source of food and income for people.
- The lake and land is under heavy pressure because of overfishing, changing rainfall patterns and these changes are leading to a loss of biodiversity, declines in fisheries' yields and a reduced ability to support humans.

Biodiversity is an essential part of the solution to climate change.

- ✓ Protecting biodiversity plays a crucial part in achieving these emissions reductions. Trees and plants also store carbon in their tissue, making it even more necessary to protect them.
- ✓ Forests and wetland ecosystems provide crucial buffers to extreme storms and flooding related to climate change
- ❑ Siaya county has a tree cover of less than 10% constitutional target at 5.27%. The forest cover is the least in Kenya at 0.23% (National-Forest-Resources-Assesment-Report-2021).
- ❑ Forest degradation and declining soil fertility, Loss of traditional knowledge of how to use and protect forests in sustainable ways, Reduced income generation, Loss of cultural values

Biodiversity is good for the economy.

- ✓ The food, commercial forestry and ecotourism industries contribute to livelihood creation in the county.
 - ✓ Various Food crops in Siaya county rely on animals and insects such as bees to pollinate them, but many of these pollinator populations are in decline. (**Agrilinks** , 2020)
 - ❑ In the longer term, benefits of biodiversity benefits are gradual and the society needs quick profits.
 - ❑ An immediate opportunity to survive, causing encroachments causing loss of biodiversity products
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Biodiversity is an integral part of culture and identity

- ✓ Species are frequently integral to religious, cultural and national identities. Unfortunately, those species are threatened (Oduor, 2022)
- ✓ Yala Swamp is home to the nationally threatened Sitatunga antelope, other large mammals and numerous wetland birds (including the vulnerable Papyrus Yellow Warbler *Calamonastides-gracilirostris*).
- ✓ It is also a refuge for cichlid fish endemic to Lake Victoria that have become extinct in the main lake (BirdLife International, 2022).
- Political pressures when impoverished populations migrate to frontier forest areas.



Thank you
