

How are we doing with our Ghanaian land and waterscapes?

By

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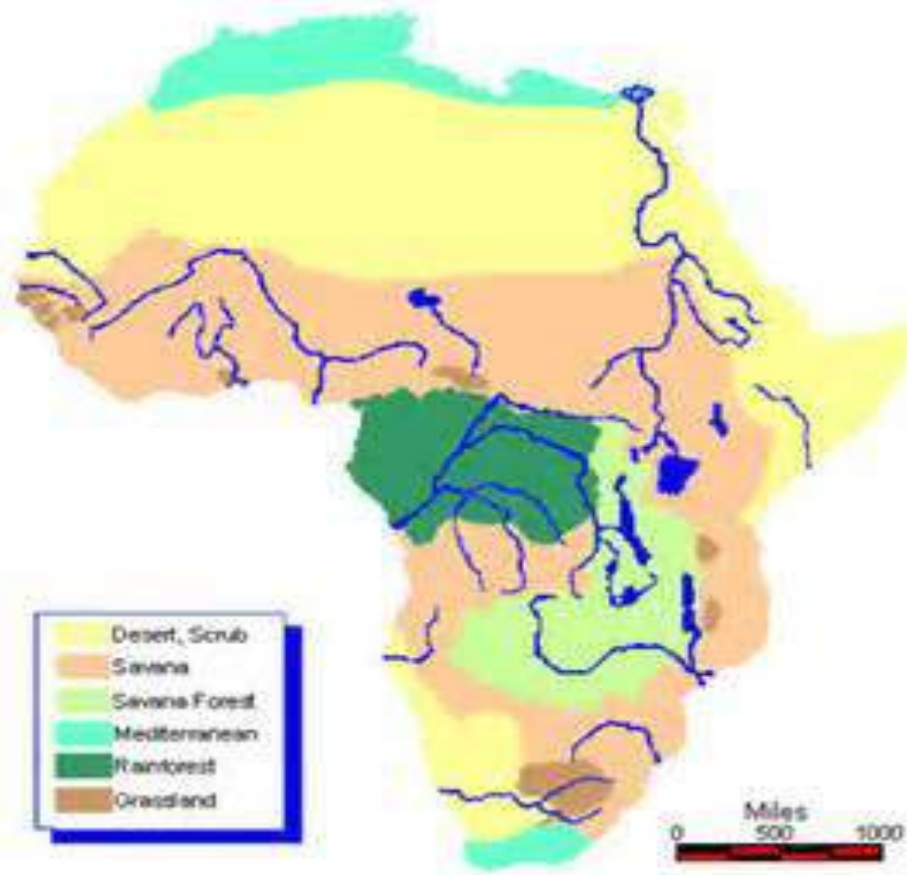
outline

- Setting the scene
- The ecological zones of Ghana
- The pressures on these zones
- The current status on terrestrial and aquatic ecosystems
- The impacts of this state of affairs on people
- What solutions are available?

The political map of Africa

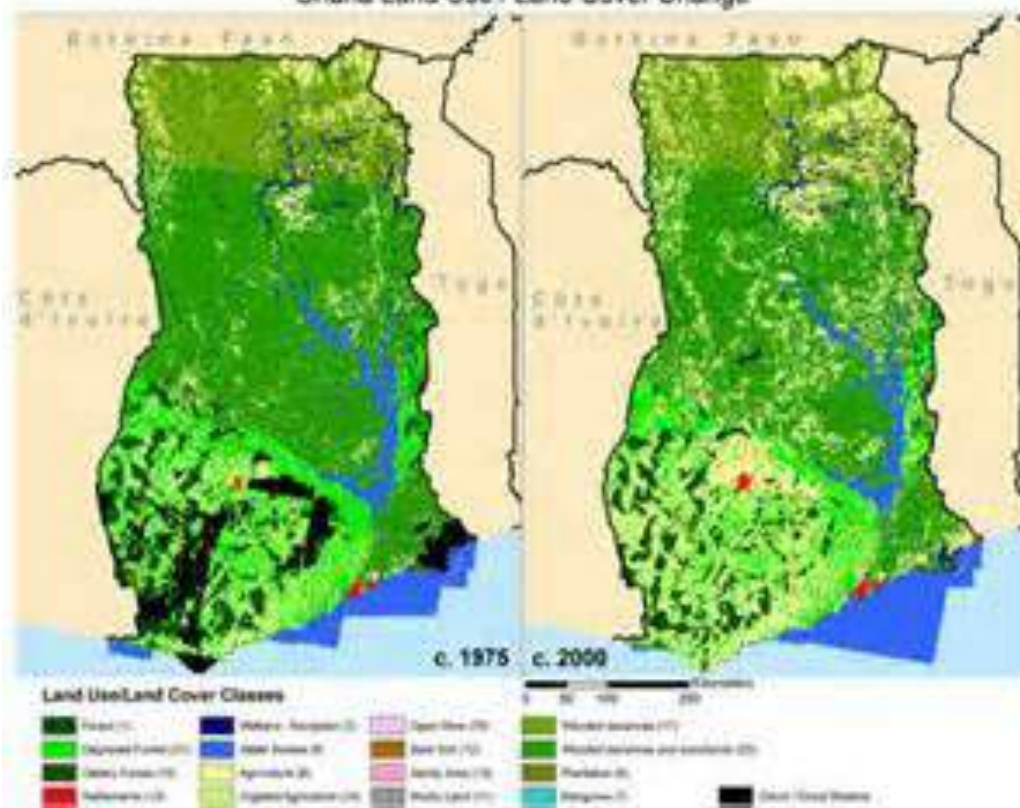


Major biomes of Africa



- The Ghanaian land and water scape is contains habitats that are distributed within a very large expanse of terrestrial and aquatic ecosystems. The terrestrial ecosystems are made up of forests and savannas in which are a large distribution of other land uses including protected areas, reserves, agricultural lands and settlements.
- The aquatic ecosystems including their wetlands are made up of inland fresh water systems consisting of dams, ponds, rivers, streams, reservoirs, estuaries, and marine and coastal water systems made up of lagoons, tidal pools and the open seas.
- Each of these ecosystems is characterized by very distinctive species which provide the genetic diversity base of the country. It is the utilization of these species and their accompanying genetic resources that has been the source of livelihoods for the people and contributing to the total wellbeing of Ghanaians. There is no doubt therefore about the importance of these biodiversity components for the survival of the people of Ghana

Ghana Land Use / Land Cover Change



The pressures/drivers

- Pollution
- Over-exploitation
- Climate change
- Land-use cover change and habitat degradation
- High population increases
- IAS
- Wild fires
- Human migrations, settlements, transhumance
- Monoculture
- New crop varieties

The current status: terrestrial

Forest ecosystems

there is evidence of

decrease in the size of land area of the forest estate (about 10% now remaining and reducing);

increase in populations of some forest species and decline of some other species, especially those that are over-utilized.

very high rate of land conversions into other land use, especially for agriculture, mining etc.

Decrease in some ntfps for forest dependent local communities

For the savannas

The coastal savanna landscapes have experienced severe reduction in the production of ecosystems goods and services. There is loss of housing materials, grazing lands, farmlands and productivity, wildlife habitats, energy sources, local displacement of species and scarcity of water sources; there is loss of livelihood options and a decline in living standards of the people leading to worsening poverty

In the northern savanna, as in coastal savanna, the following trends are obvious:

there is high intensity of wild fires and human emigration into the forest zone.

there is also the increasing incidents of floods and droughts (leading to land degradation and desertification). This leads to food insecurity, water scarcity, disruption of social structure (emigration) as the young ones desert home leaving the old people behind, loss of cultural heritage eg. totems, loss of energy sources, loss of lives and property.

- There is loss of habitats, decline in species populations, local species extinctions, increasing vulnerability to climate change impact, increasing incidence of alien invasive species, increasing transhumance leading to local and national insecurity, increasing poverty incidence as a result of loss of livelihood options, declining living standards, decline in soil fertility and productivity, increasing food insecurity, decline in the contribution to the GDP, increasing urbanizations leading to expansion in some areas and decline in others

The trend that is general to all the savanna ecosystems are: Decline in species, Increasing poverty levels, Over-exploitation of natural resources (e.g. fuel wood harvesting), Vulnerability to Climate change and desertification and land degradation, Degradation and loss of water sources, Decline in agricultural productivity leading to agricultural land expansion, Population increase and pressure, Non application of improved agricultural and sustainable land management practices, land use conversions into mono-cultures for mango cultivation and other highly sought after agricultural produce, Increasing incidence of invasive species, Pollution of water bodies, High intensity of wild fires and, Increasing human migration into forest zone, Increasing incidents of floods and droughts

Agricultural biodiversity

There is erosion of biodiversity of agricultural crops. Particular examples of this erosion can be seen in declining numbers of the local cereals, banana, cocoa and some yam species. Some yam species have completely disappeared from the system.

For livestock, some cattle breeds are on the decline. The West African short horn cattle which used to constitute about 80% of the national cattle population in the 1990s now constitutes about 47% of the national cattle herd.

Generally, there is decline in agro-biodiversity. However there are some positive developments that have contributed to encouraging increases in the quality of agro-biodiversity.

Some crops have had their diversity enhanced as a result of introduction of other varieties from outside the country

In the forest-savanna transition zone which was formerly a forested area but now rapidly turning into savanna and expanding further into the moist forest zone.

There is rapid deforestation and loss of watersheds. There is decline in soil fertility. The trend is as has been recorded for the coastal savanna

The current status: aquatic

The fresh water ecosystems are under intense pressure.

The biodiversity composition of fish, invertebrates and other fauna are seriously declining.

Aquatic weeds are flourishing in places that they are not supposed to be. There is mixed trends with some species of birds in which some are increasing in number, a few having stable populations and others decreasing.

- The marine water ecosystems are the most abused. Three species of turtles confirmed in Ghana are being monitored as they are under very serious threat. Marine fish which include small pelagic, large pelagic and demersal species as well as various brackish water species are declining.
- Mangrove forests are declining. Of three species, *Avicenia* sp., *Rhizophora* sp. and *Laguncularia* sp. Which are all threatened, the case of the last species is very serious.

Impacts on people, environment, and socio-economics

- fisheries productivity reducing making fish resources scarce;
- Ecosystem services for Flood control/ erosion/wind-storm breaks destroyed;
- Declining wood resources;
- Loss of livelihoods for rural people who directly depend on natural resources;
- Curtailment of cultural festivities (e.g. Homowo) because of the absence of certain species;
- declining wildlife based tourism as result of degradation;
- Potential loss of income because of cessation of livelihood activities;
- Increase in poverty levels as a result of loss of biodiversity;
- Malnutrition has become pronounced in some communities as people feed on unfamiliar food items;

- Food insecurity accentuates as variability of food sources reduce;
- Changes in social structure as influence from traditional authorities, through cultural activities, reduce and sometimes become redundant;
- National security implications related to health, social cohesion and livelihoods with Food and water insecurity are implied;
- Decline in biodiversity contribution to the national GDP;
- Declines in ecosystem goods and services for human wellbeing;
- Declines in the living standards of the people;
- Resource use conflicts become apparent leading to violence;
- Human wildlife conflicts become accentuated and more frequent

In conclusion

the verdict is that we are not doing 'so' well in the care and management of our land and waterscapes.

Any solutions available?

- Implement sustainable development agenda
- implement the goals, targets and actions developed and agreed in the NBSAPs
- Mainstream biodiversity into all national, district and local plans, programmes and projects
- Increase awareness creation opportunities on biodiversity and ecosystem services at all levels and across scales

THANK YOU