

S5 GEOGRAPHY 3 NOTES

TOPIC: **WETLAND RESOURCES IN UGANDA.**

Wetlands refer to areas that have become adapted to permanent and temporary flooding.

Wetlands are commonly referred to as swamps. They are extensive, complex and currently they cover about 11% of the total land area of Uganda.

Wetlands are classified into three types namely;

- **Lacustrine wetlands.** These are wetlands found around lakes e.g. Lutembe wetlands in Entebbe, Nabugabo and Nabajjuzi wetlands in Masaka, Luzira wetlands in Kampala all around Lake Victoria, Lwampanga wetlands in Nakasongola around Lake Kyoga etc.
- **Riverine wetlands.** These are wetlands that are found along courses of major rivers e.g. Kafu wetlands along R. Kafu, Katonga wetlands along R. Katonga, Mpologoma wetlands along R. Mpologoma etc.
- **Open valley floor wetlands.** These occupy depressions or low lying areas e.g. Kiruruma wetlands in Kabaale, Walugogo wetlands in Iganga, Doho wetlands in Butalejja, Busega Wetlands in Wakiso, Koga wetlands in Mbarara etc.

Draw a sketchmap of Uganda showing the distribution of wetlands.

Importance/significances of wetlands in Uganda.

Positives.

Wetlands filter water and trap the dirt, sediments and toxins from water. This helps to purify water used for both domestic and industrial purposes e.g. Nabajjuzi wetlands in Masaka provide clean water to the population in Masaka urban area, Kiruruma wetlands provide water to the people in Kabaale town.

Wetlands are important sources of fish. Various fish species do well in wetland conditions especially as their breeding grounds examples are cat fish and the mud fish. This has encouraged fishing which is a source of income to the people involved. E.g. Lumbuye wetlands in Iganga, Lutembe wetland in Entebbe etc.

Wetlands are vital because they help to modify micro climatic conditions of the areas where they exist. This is because they influence rainfall formation through the evapotranspiration processes resulting into increased amounts of rainfall. This is evident at Koga wetlands in Mbarara, Awojja wetlands in Soroti etc.

Wetlands help in charging the underground water sources and also maintaining the underground water table. This has provided constant supply of water in the various water sources like springs or wells for the local communities e.g. Walugogo wetlands in Iganga, Kiruruma wetlands in Kabaale etc.

They provide extensive land for crop cultivation mainly for the crops that do well in wet conditions. This is evident in Sango bay wetlands for sugarcane growing in Rakai, Kibimba wetlands for rice growing in Bugiri district, Doho wetlands for rice growing in Butalejja district.etc.

The swampy vegetation i.e. palms and papyrus reeds that grow in wetlands have harvested and used to make craft items that are used domestically and also sold for income to people. They are also used in the construction of houses and also as fuel in people's homes.e.g. Mpologoma wetlands in pallisa, Lutembe wetlands in Entebbe etc.

Wetlands provide grazing grounds with palatable pastures for animals. This very important especially during the dry seasons when pastures are scarce in other areas.e.g. Nyaruzinga wetlands in Rukungiri, Lwampanga wetlands in Nakasongola, Awojja wetlands in Soroti, all these are used for animal grazing.

Wetlands are tourist attractions that attract many tourists both locally and internationally thus promoting the tourism sector in the country. Wetlands are habitats for various animals e.g.snakes , crocodiles and birds e.g.the crested crane plus different species of plants. All these attract tourists e.g. around kazinga channel wetlands, luzira wetlands around L. Victoria.

Wetlands naturally control flooding by accommodating and containing the overflows from rivers and lakes and other water streams and through this they reduce on the risks of that could result from flooding like loss of property and lives.e.g. kafu wetlands along R. Kafu, Katonga wetlands along R. Katonga and many others.

Wetlands are also sources of local medicinal herbs that are used to treat a number of ailments in people. The roots, leaves and stems of some of the plants that grow in wetlands have been harvested and processed into medicines to treat ailments like cough, tooth aches, measles etc. This is evident in Busega wetlands in Wakiso, madi wetlands in Gulu etc.

Under sustainable measures wetlands are used for industrial development and this is because they provide extensive flat bottomed floors suitable for the construction of industrial infrastructure like buildings and roads but also they can be used as dumping areas for industrial wastes.e.g. Luzira wetlands, Nakawa wetlands, Kyambogo wetlands all in Kampala.

Wetlands are also sources of food in terms of fish, some plant fruits where by the communities around such wetlands harvest for foodstuffs and also they carry out hunting in these areas for wild game. This is seen in Iwampanga wetlands in Nakasongola, madi wetlands in Gulu, Naigombwa wetlands in Iganga etc.

Wetlands are used for demarcation of boundaries for districts, counties and other territories. This has made regional administration easier thus reducing on inter territorial conflicts.e.g. Koga wetlands separate Bushenyi from Mbarara districts, Awojja wetlands separate Soroti from Kumi districts,Kafu wetlands separates Hoima from Kabarole districts.

Wetlands are also important sourced of minerals especially clay and sand therefore they are used for mining activities that have provided employment opportunities to many people who earn income thus improving their standards of living.e.g. sand mining in Lwera and Nabugabo wetlands around L.victoria in Masaka, clay mining in kajjansi wetlands.

Wetlands are used for construction of important infrastructure especially in the urban areas like Kampala, Jinja etc. This is because the wetland areas provide extensive flat land that makes it relatively cheap to construct and also these wetlands have relatively low settlement density thus less people will be displaced.e.g the northern by pass road passes through Busega, Bwaise, kalerwe wetlands.

Negatives.

Wetlands harbour disease spreading vectors e.g.water snails that spread bilharzia, mosquitoes that spread malaria in human beings. These are common diseases that affect the people who live around wetland areas e.g. around Iwampanga wetlands in Nakasongola, Mpologoma wetlands in pallisa etc.

Wetland hinder the development of transport and communication networks because it is expensive to construct and also maintain the transport networks like roads therefore areas that have extensive wetlands have few well developed roads e.g.doho wetlands in butalejja,mpologoma wetlands in pallisa etc.

Wetlands are liable to flooding and in many cases it has resulted into destruction of property and sometimes loss of lives. This common with wetlands like Walugogo in Iganga district, Awojja wetlands in Soroti, and many others.

Some wetlands have acidic soils that are not suitable for crop growing especially for along period of time thus rendering such wetlands unproductive in terms of arable farming. In most cases their productivity is restricted to only two seasons causing a problem of scarcity of food in those areas e.g. Tirinyi wetlands in pallisa district.

Some wetlands have been used as hiding grounds for wrong doers e.g. highway robbers and thieves who cause insecurity in such places. This is common in Lwera wetlands along kampala-masaka highway, Awojja wetlands along soroti-kumi road and many others.

Wetlands pollute the environment through emission of poisonous gasses into the atmosphere e.g. the ammonia gas that is very smelly. This is evident around Busega wetlands along kampala-masaka road, Lubigi wetlands along Kampala- Hoima road in Wakiso.

MAJOR THREATS TO UGANDA'S WETLANDS/ WETLAND DESTRUCTION.

Most of the wetlands are being misused/destroyed despite the fact that they are protected by National environment statute of 1995. The destruction rate is high that the coverage of wetlands has been reduced from about 13% to 11% in recent times.

Some of the wetlands under severe degradation include the following;

- The open valley floor wetlands of Doho in Butalejja, Kibimba wetlands in Bugiri, Pallisa wetlands for rice growing. Mutai wetlands in Jinja etc.
- Gabba wetlands, Luzira wetlands, Bwaise wetlands, Nalukolongo wetlands all in Kampala for settlement, industrialisation and infrastructural development.
- Lwampanga wetlands in Nakasongola, koga wetlands in Mbarara, Awojja wetlands in Soroti for animal grazing and many others.

Factors that have led to destruction/degradation of wetlands in Uganda.

Wetlands have been destroyed to establish land for agriculture especially arable farming in the rural areas. This has been caused by the high demand for foodstuff as a consequence of population increase in the country therefore new land had to be opened up in swamps to grow crops especially those that do well in wetlands e.g. rice growing in Doho wetlands in Butalejja, Kibimba wetlands for rice growing in Bugiri etc.

Wetlands have also been degraded due to the need for land for settlement. This is very common in the urban areas where by people have settled in wetland areas due high population growth rates and therefore urban expansion.e.g kiteezi wetlands, Bwaise wetlands, Bugoloobi wetlands in Kampala city have been cleared for settlement.

Mining of clay and sand in the wetland areas has also resulted into wetland degradation. In the process of mining,vegetation is destroyed and also land is excavated creating pits and ditches. This is seen at kajjansi wetlands in Entebbe common for clay mining, Lwera wetlands for sand mining in Masaka.

Pollution through the discharge of industrial wastes into wetland areas and also poor disposal of wastes especially from the urban centres.e.g there is discharge of industrial wastes into Luzira wetlands like Uganda breweries industry, kaziire beverage industry in Mbarara discharges wastes into wetlands around R.Rwizi etc.

Excessive harvests of papyrus reeds and other materials for craft making has also contributed to wetland destruction. The uncontrolled harvest of these items leads to extinction of some plant species thus tampering with the natural set up of the wetlands that leads to degradation e.g. Lubigi wetlands in Wakiso, Kiruruma wetlands in Kabaale district.

Ignorance of the population about the value of protecting the wetlands.Most people lack knowledge of wetland conservation and some use these wetlands for their own benefits neglecting the role of wetlands to the entire community and this has resulted into destruction of wetlands e.g. Bugoloobi, munyonyo wetlands in Kampala which have been used for settlement.

The nature of the land tenure system in some parts of the country has also contributed to wetland destruction. The private ownership of land means that land belongs to private individuals that sometimes wish to use there land in the way they please making it quite difficult by the government to control those wetlands.e.g. Munyonyo wetlands, Bugoloobi wetlands in Kampala.

The need to establish transport and communication networks has also contributed to wetlands degradation. Many swamps have been reclaimed to pave way for road construction e.g.the northern by pass road passes through Busega, Lubigi, Bwaise wetlands in Kampala, Entebbe express high way also passes through Busega wetlands, Nakigalala wetlands, kajjansi wetlands and many others.

Wild fires started by farmers, hunters and sometimes natural fires also leads to destruction of some wetlands. The fires destroy the vegetation and other inhabitants of wetlands including animals and other micro living organisms. This is common in Lwampanga wetlands in Nakasongola, Pallisa wetlands in pallisa district, Madi wetlands in Gulu etc.

Corruption of some government officials in institutions NEMA,department of lands, department of environment plus police who connive to give away wetlands to private individuals through bribes and as a result leading to wetland misuse e.g. Munyonyo wetlands in Kampala which have been used for settlement.

Need for land for industrial development. Many wetlands have reclaimed for purposes of industrial establishments and this because wetlands provide relatively flat nature of landscape and they also used for dumping of industrial wastes.e.g. Namanve industrial park with industries like coca cola plant, Rwenzori water factory etc. in mukono.

Wetlands have also been destroyed due to poor garbage disposal especially in urban centres. Some of the garbage disposed off by people in urban areas do not decompose e.g. the plastics and other polythene e.g. wakalagga wetlands, kinawataka wetlands in Kampala.

Some wetlands have been destroyed because on being security threats by harbouring wrong doers like high way robbers, rebels etc. People in such areas tend to clear such wetlands in order to flush out the wrong doers e.g. Awojja wetlands in Soroti, Katonga wetlands along Masaka -Mbarara road.

Some wetlands have been deliberately destroyed in a bid to control pests and diseases especially those that harbour vectors like mosquitoes that spread malaria, snails that spread bilharzia.e.g. part of Nabajjuzi wetlands in Masaka, part of Lubigi wetlands in Wakiso etc.

Some wetlands have been degraded because of overgrazing caused by uncontrolled grazing in some areas especially where livestock farming is predominantly practiced. This is common during the dry season when pastures are scarce in other areas and as a result there is extinction of some species of grass. This is seen in Koga wetlands in Mbarara, lwampanga wetlands in Nakasongola.

Poor fishing methods have also contributed to wetland degradation. Sometimes fishing in the swamps involves clearing the vegetation thus tampering with the eco system which results into degradation e.g. Naigombwa and Lumbuye wetlands in Iganga district.

Effects of wetland destruction/degradation.

Reclamation of wetlands results into exhaustion of the underground water that leads to the lowering of the water table. This in turn also results into drying up of some water sources like boreholes resulting into water scarcity of water for domestic and industrial use.e.g. pallisa wetlands in pallisa.

Wetland destruction has resulted into reduced capacity for the wetlands to purify and clean the water and as result affecting the quality of water in the different water sources like wells and springs in these wetlands where people draw water especially for domestic use thus becoming a health risk for their lives e.g. Kiruruma wetlands in Kabaale, Lubigi wetlands in Wakiso.

The massive swamp reclamation such as Mpolologoma, Naigombwa, Lumbuye in Iganga district has resulted into desertification. Since the swamps help in rainfall formation, there destruction results into reduced rainfall amounts thus limiting activities like crop growing in the areas where they exist.

The reclamation of wetlands has negatively affected the tourism industry and this is because when the wetlands are destroyed the eco-system and biodiversity will be tampered with leading to death and migration of wildlife that would attract the tourists. This is evident at Nabugabo wetlands in Masaka, Semuliki wetlands in Bushenyi and many others.

Encroachment on wetlands that results in their degradation has resulted in flooding in those areas because the wetlands can no longer contain water especially after heavy rainfalls. This has resulted in destruction of property and sometimes loss of lives. This is common in Bwaise, Kyambogo wetlands in Kampala.

Wetland destruction has also resulted in massive siltation of some rivers and streams. This consequently results in poor quality water from the streams, blockage of those streams, death of aquatic life also limiting the supply of water especially for irrigation purposes. e.g. reclamation of Doho wetlands has resulted in siltation of R. Manafwa in Butalejja.

Massive wetland destruction also has resulted in loss of materials like papyrus reeds and palms for art and crafts making thus depriving many people who stay around wetlands of their livelihoods. This is evident around Lubigi wetlands in Wakiso.

Wetland destruction has also resulted in increased incidence of disease outbreaks especially the water-borne diseases e.g. cholera, dysentery but also malaria. This is associated with flooding of these degraded wetlands and sometimes pits left after mining that turn into breeding areas for disease-spreading vectors like mosquitoes. e.g. Luzira wetlands, Bwaise wetlands in Kampala.

Excessive wetland destruction leaves the area barren rendering it a wasteland. This is basically as a result of clay and sand mining in the swamps plus other activities like brick making. These activities tend to leave behind pits and ditches that leave the area unproductive for any other activities. e.g. Nabugabo and Lwera wetlands in Masaka.

Massive destruction of wetlands for purposes of agriculture, settlement etc. has resulted in reduced stocks and sometimes total depletion of fish stocks in swamps. This therefore has limited fishing activities especially for those fish species that survive in wetlands like mud fish. e.g. Kibimba wetlands in Bugiri, Doho wetlands in Butalejja.

Wetland destruction has also contributed to shortage of sources for medicinal herbs. Many medicinal herbs that used to treat ailments/diseases like cough, measles etc. are got from the leaves, roots and stems of the swampy vegetation therefore their disappearance has caused the shortage of medicinal herbs.

Measures to control/save/conserves the wetlands.

Public awareness has been emphasized through media like radios, television and print media like news papers where programs about the values of conserving wetlands and their importance have been made known to the people. This had been done by government institutions like NEMA and consequently reducing on misuse of wetlands like Busega wetlands in kampala.

Research has been extensively carried out both by government and private individuals to provide adequate information about the systems, functions and values, size and distribution of wetlands throughout the country. This has helped to give better information to all who intend to utilize the wetlands sustainably. This has helped to conserve wetlands like lutembe wetlands, luzira wetlands around lake Victoria.

Setting up of proper guidelines that are required for sustainable use of the wetland resources. The wetlands require well formulated guidelines of environmentally sound management which will result into conservation of wetlands and this has been done by NEMA resulting into sustainable use of wetlands like Doho wetlands in Butalejja.

Training of labour to acquire skills necessary for the provision of technical guidance in form of monitoring and evaluation wetland exploitation and development at all levels .e.g. Makerere university offers degree courses in environmental management, Botany etc.and because of this wetlands have been conserved e.g. Lutembe wetlands, mpologoma wetlands etc.

Change in the land tenure systems where by there has been a declaration that all wetlands are owned by the government therefore private individual owners can not utilize the wetlands without guidance from government through NEMA. This has helped to guide on sustainable use of wetlands like Lwera wetlands and Nabajjuzi wetlands in Masaka.

There has been establishment of reserve swamps where by such wetlands are not accessible to the public to reduce on their usage e.g. the lacustrine wetlands around L. Kyoga like Lwampanga wetlands, Lutembe wetlands around L.victoria.

Ensuring strict control and protection of wetlands by training and deploying of guards e.g. the environmental protection unit of police. This has helped to guard against the miss use and encroachment of wetlands like Lubigi wetlands in Wakiso, Busega wetlands in kampala etc.

Fighting corruption by establishing institutions like IGG, the auditor general, state house anti corruption unit and many other organs that are mandated to check on government departments against the miss use of government funds. Through this institutions like NEMA are also checked for proper management of wetlands and this has helped to protect wetlands like Luzira wetlands.

Improving on security in areas where wetlands are used as hiding places for wrong doers such that these wetlands are not destroyed for that reason. As a result wetlands like Awojja wetlands in Soroti and Tirinyi wetlands have been saved.

There has been eviction of encroachers from some wetlands. This has been enforced by NEMA together with environmental protection unit of police. This has been evident in Munyonyo and Bugoloobi wetlands in kampala.

The government through NEMA is encouraging the use of alternative building materials like metal bars, iron sheets, to try and reduce on the exploitation of wetlands for that purpose. Through this wetlands like Nabajjuzi in Masaka have been saved.

The government has gazetted specific industrial parks so as to avoid wetland destruction through industrial development e.g. Namanve industrial park in mukono, mbale industrial park etc. This has saved wetlands like Luzira wetlands, Lutembe wetlands in Entebbe.

Hunting of wild animals and birds has been banned in some wetlands to try and avoid wild fires that are normally started by hunters. This has been enforced by NEMA together with wildlife Authority and it has minimized on incidence of wild fires that destroy wetlands.e.g. mpologoma wetlands.

There is control of garbage disposal to try and protect the endangered wetlands especially in urban centres e.g. KCCA acquired specific garbage dumping sites at kiteezi in wakiso to protect wetlands like wakaligga in kampala.

The government through NEMA are encouraging filling up of pits left behind after sand and clay mining to try and replenish the exploited wetlands. This evident at kajjansi wetlands, seeta wetlands in mukono and many others.

Emphasis has also been put on treating industrial wastes before being released into the wetlands so that dangerous toxic substances are removed to try and protect the aquatic lives within the wetlands. This done by Uganda breweries at Luzira wetlands in Kampala.

END.