Good lessons, best practices and emerging issues in implementation of national commitments under the Rio conventions; A case of Mityana District

Presented By

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19th December, 2019

Back Ground

- Mityana District was created by an Act of Parliament in July 2005.
- It lies in the Central region, about 40miles west of Kampala.
- It covers a total area of 1,525.5 square kilometers.
- It is primarily rural with a population of about 328,964 people
- The economy of the district is highly dependent on its natural resources, making it vulnerable to the impacts of climate change that include; changing weather patterns, water scarcity, frequent hazards like prolonged drought, lightening, floods, pests and diseases, hail storms and drying up of water sources

Back ground

- Much of the natural vegetation in Mityana today is secondary (i.e. new vegetation that has grown up after the original plant cover has been destroyed).
- Mityana does not have a local forest reserve but has 8 central government forest reserved managed by NFA and private forests
- Most permanent wetlands are located on public land whereas most seasonal wetlands are on private land..
- Between 1990 and 2005 Mityana, lost 59% of its forest cover.
- Even more worrying is the loss of species that may have never been described and likely to be un known forever, especially invertebrates.
- Habitat loss has led to confinement of certain species to remaining fragments, thus rendering genetic diversity through exchange with populations increasingly difficult.

THE RIO CONVENTIONS

- The Rio Conventions entail three Multilateral Environmental Agreements (MEAs) on three critical components of environment and these Conventions include:
- United Nations Framework Convention on Climate Change (UNFCCC);
- United Nations Convention on Biological Diversity (CBD); and
- United Nations Convention to Combat Desertification (UNCCD).

The response of Mityana district to the Rio conventions is based on the principle of Common but differentiated responsibilities and respective capacities

Best practices under UNFCCC

These are aimed at reducing green house gas emissions and include;

Budgeting for tree planting annually

- Over 200,000 multipurpose trees were procured by the district and planted by individual farmers, community groups and institutions in the last five years to reduce emissions through carbon sequestration
- 5000 fruit trees were planted in schools and individual farms

Promoting use of improved energy saving Rocket cook stoves with appropriate saucepans

- Improved stoves with stainless human food grade saucepans and aluminium covers were provided to 16 schools.
- This has reduced fuel wood consumption in these schools by about 50%
- The headmaster of Kiyinda Islamic primary school reported that fuel wood consumption reduced from 7 trucks of wood fuel to 3 trucks per term after using improved stoves

Best practices under UNFCCC

Provision of alternative income generating activities

- Some farmers along lake Wamala in Banda sub county were mobilized to form a group
- They were given support to construct 12 poultry houses which were stocked with a total of 1,800 broilers
- They were also given 6 solar panels to light the poultry houses
- Some group members abandoned wetland cultivation as they became too busy with poultry which led to restoration of some degraded sections of lake shore wetlands
- The group also formed a SACCO

Environmental mainstreaming and continuous sensitization

- Environmental issues are incorporated in bid documents of infrastructure projects
- Tree planting is now being done along most roads worked on and most buildings constructed by the district.
- Site restorations are also considered in project implementation

Guiding developers to make Environmental Impact Assessment

- This helps to reduce their carbon foot prints

Improved cook stove at Kiyinda Islamic institute has reduced fuel wood consumption by over 50%

A woodlot established at Mityana SS

Poultry house constructed for Chairperson of LWECOTEP community group to provide alternative income

Homestead of the chairperson LWECOTEP provided with a water tank and poultry house for climate adaptation

Some of the broilers given to community group members for alternative income generation

Citrus trees planted for carbon regulation, income, nutrition and soil conservation by model farmer

Mango trees planted by a community member in lake Wamala catchment at Mawanga

Best practices for UNCBD

These are aimed at promoting the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources. They are;

Wetland Demarcation and Restoration

- Over 30ha of Nakatongoli, Wakitundu, Wabiruko and Nyanzi wetlands were demarcated using concrete pillars and then restored to conserve biodiversity

Best practices for UNCBD

Establishment and Conservation of a Forest with indigenous trees

- A forest of about 5 acres was established and conserved at the district agricultural training center and more 5 acres have been allocated for planting more indigenous trees to act as a gene bank for indigenous trees

Law Enforcement

- Enforcement is done by issuing improvement notices, making arrests, taking degraders to court and sometimes destroying crops grown in protected areas

Best Practices for UNCBD

Compliance Agreements

- They oblige degraders to stop destruction of biodiversity (The principle of Pacta Sunt Servanda)

Awareness raising

- This is done using all types of media, community sensitization meetings, technical planning committee meetings and workshops
- Traditional healers/herbalists in Mityana district were also sensitized on conservation of herbal plants
- It was also done in schools through environment clubs and MDD
- Boat races and bicycle races were also used
- Hosted the National commemoration of World Wetlands day in 2014 and this raised more awareness on biodiversity conservation since it involved bird watching activity on Lake Wamala

Best practices for UNCBD

Aquaculture promotion

- Over 20 fish ponds were constructed and stocked with Tilapia and cat fish
- This helps to reduce pressure on lake Wamala

Improving sanitation in Lake Wamala catchment areas

- Public latrines were constructed at most landing sites
- This helps to conserve the aquatic resources by preventing pollution

Establishment of Lake Protected areas

- Fish breeding zones on Lake Wamala were identified and marked
- This enhanced the recruitment capacity of fisheries resources

Best practices under UNCBD

Routine monitoring and inspection

- This threatens the would be encroachers and also prevents further encroachment on fragile ecosystems
- Priority was given to the relatively intact wetlands to minimize chances of their encroachment

Improving transport system

- Routine mechanized maintenance of access roads to Lake Wamala is done to reduce post harvest losses thereby conserving fisheries resources by reducing wastage

Best practices under UNCBD

Promoting mixed cropping

- This helps to conserve agricultural biodiversity

Kitchen gardening

- Communities are encouraged to have home gardens for traditional vegetables for biodiversity conservation
- Farmers in LWECOTEP group were supported with seeds to establish kitchen gardens

Co-Management of resources with communities

- Beach Management Units were formed on Lake Wamala
- They were empowered and given a motorized boat by the district to assist in regulation of fisheries activities on the lake
- They fully participate in enforcement activities

Demarcated and restored section of Wabiruko wetland for biodiversity conservation

A clear view of the signpost warning people against wetland degradation

A restored section of Nakatongoli swamp forest

A protected section of Nakatongoli wetland that supplies piped water in Mityana municipality

A degraded section of Wakitundu wetland before restoration

A section of Wakitundu wetland undergoing restoration/Secondary succession after demarcation

Community adjustment: The formally cultivated wetland is now used for grazing animals. They use the demarcation pillars to tie their animals

A kitchen garden at Banda: Helps to conserve vegetable diversity

Part of the forest established and conserved by the district at the district agricultural training center

Fish pond under construction for climate change resilience

A stocked fish pond at Namamonde

Fish harvesting from a pond at Bukoma

Harvested cat fish from Bukoma fish pond

A latrine constructed in Lake Wamala catchment to avoid water pollution

Best Practices under UNCCD

Most of them are related to sustainable land management and include;

Promoting soil and water conservation technologies

- Over 400 farmers were trained in construction of soil bunds and other technologies
- 100 A frames were procured and given to farmers for use in soil bund construction
- Simple techniques like mulching, zero tillage, use of cover crops, construction of soak pits in banana plantations, use of trash lines to demarcate boundaries of plots, ridging for irish potatoes and vegetables and use of animal manure were also promoted
- Farms with the above technologies are not affected so much during extreme weather conditions

Best Practices under UNCCD

Promoting Water harvesting

- This reduces surface runoff and hence soil conservation
- It is also an adaptation to climate change and controls floods
- An underground rain water harvesting tank of 70,000 liters was constructed for Bukakanaga Orange Growers Association(BOGA) to provide irrigation water
- 20 corrugated iron rain water harvesting tanks of 5000 liters each were supplied to 20 households in Lake wamala catchment
- They use part of the water to irrigate their crops during dry season

Best Practices under UNCCD

Promoting Local Economic development

- Maize mills and Coffee processing factories were constructed
- A roadside market was also constructed at Kikandwa
- All these help to reduce post harvest losses which in turn reduces land degradation by relieving pressure on it

Best Practices under UNCCD

Establishing demonstration irrigation farms

- An irrigation system has been established at the district agricultural training center for demonstration purposes
- Model farmers are also used to transfer knowlede

Expanding agriculture extension services

- Over 90% of the required agricultural extension workers were recruited and facilitated

Establishing physical planning Committee

- A district physical planning Committee was put in place to guide land development.
- Development applications which are not meeting environmental standards are rejected by the committee

Best Practices under UNCCD

Ordinance formulation

- An ordinance for food security and Environment management was passed to regulate anthropogenic activities and avoid desertification

Agroforestry promotion

- Trees like calliandria and Grevillea were given out to farmers for planting in their gardens

Improving Land governance

- All sub county land Committees were sensitized on land act and conflict resolution
- Mapping Bibanja on Mailo land and harmonizing relationship between Bibanja holders and Landlords in 2 pilot sub counties
- Massive Sensitization on Land rights

A 70,000 liter underground rain water harvesting tank being constructed to provide irrigation water

A 5000L rain water harvesting tank installed at homestead in Bukanaga

A mulched banana plantation for soil and water conservation

Soil bunds constructed in Bukanaga for soil and water conservation

Road side market for local economic development (LED) and reduction in post harvest losses

Irrigation system installed at the district agricultural training center for demonstration

LESSONS AND RECOMMENDATIONS

- If the conventions are going to have significant impact, the conditional grant for District Natural Resources Management (NRM grant) must be increased
- Awareness should be accompanied with action
- There are some intact permanent wetlands and natural forests on private mailo lands. Subsidies should be given to owners of these fragile ecosystems to ensure their conservation
- Preventing environmental degradation is less costly than restoration. Government should therefore expedite the process of demarcating the vital wetlands which are still intact instead of waiting to act when they are degraded
- Each project implemented should have a sustainability plan

LESSONS AND RECOMMENDATIONS

- One method cannot work for sustainable ecosystem conservation. An integrated approach is needed
- Alternative income generating activities are needed to ease pressure on the declining natural resource base
- Government should consider provision of vehicles to natural resources departments since most of the work is field based, risky and requires timely response to degradation

LESSONS AND RECOMMENDATIONS

- Communities tend to prioritize sub projects focused on improved income, instead of sub projects that primarily aim at reducing environmental stresses
- Incentives can make people learn how to see beyond immediate, personal gain and act to preserve the environment for the sake of intergenerational equity
- Herbalists can be used to conserve the biodiversity of medicinal plants.
- Home herbal gardens can be promoted to ensure sustainable access to medical plants.
- There is need to document indigenous knowledge on biological diversity
- Collaboration among stakeholders is crucial to ecosystem conservation

LESSONS AND RECOMMENDATIONS

- Increasing biodiversity on the farm can be used to mimic nature. This can be done by growing various crop species on the same piece of land.
- A good mix should include both perennial and annual crops, high and low canopy crops, creepers as well as cover crops
- Biodiversity on the farm increases the resilience of the farm ecosystem but also reduces the risk of the farmer from losing all in case of climate variability
- Schools, cultural institutions and religious institutions have a lot of vacant land which can be used for tree planting through public private partnership

EMERGING ISSUES

High Immigration rate

- Immigrants come from neighboring countries and other parts of the country
- They occupy the remotest parts of the district with virgin ecosystems and degrade them
- They are also a threat to existence of indigenous people as they have a high fertility rate

EMERGING ISSUES

Rapid increase in government carbon foot print

- All the priority areas for government investment have very high carbon foot prints
- They include infrastructure development, oil and gas, power generation and commercialization of agriculture
- All districts were given road construction equipment which have increased the district carbon footprint
- However, the IPF/funding from central government to district natural resources departments keeps on decreasing every year and so little can be done by the districts to mitigate the negative impacts of government policies

EMERGING ISSUES

Rapid Urbanization and Increase in Population

- Mityana now has 4 town councils and a municipality
- Many other rural growth centers have developed with high population
- However, all the urban centers and rural growth centers in the district lack appropriate solid waste management facilities
- They end up dumping the waste in fragile ecosystems which affects their biological diversity
- They also lack physical development plans for sustainable development

EMERGING ISSUES

Growing of Sugar canes in Wetlands

- This is due to the sprouting of cottage industries making alcoholic and energy drinks that need raw materials/jaggery from sugar cane

Depletion of Forest resources in Central Government Forest Reserves

- Almost all the reserves in Mityana district have succumbed to the tragedy of commons
- Government should consider restoring them using indigenous trees for biodiversity conservation

Fake Agricultural Chemicals on the market

- This has exacerbated Environmental pollution

CONCLUSION

- It will not be possible to manage natural resources in a sustainable manner when the people using them do not have an alternative way to make a living.
- Government should balance development with environment conservation if development is to be sustainable
- This can be done by strengthening the capacity of Local governments to manage environmental issues since they interact with resource user communities directly

THANK YOU FOR LISTENING