



THE REPUBLIC OF UGANDA

MINISTRY OF AGRICULTURE ANIMAL INDUSTRY AND FISHERIES STATEMENT ON AQUATIC WEED CONTROL IN UGANDA

BACKGROUND

1. Colleagues as you are aware, Ugandan water bodies were invaded by Water hyacinth in the late 1990's and it paused great socioeconomic, environmental and health hazard to our lakes and fishing communities.
2. Government through the Ministry of Agriculture Animal Industry and Fisheries and working with other Ministries, Departments and Agencies was able to reduce the weed infestation to manageable levels (i.e. less than 20% in area coverage) but it had covered 80 % of the shoreline on Lake Victoria.
3. This was achieved through use of manual, mechanical and biological control methods with greater community participation and GoU/Donor funding. **The water hyacinth is however now resurging as evidenced by the current blockage of Port bell in Kampala and other sheltered areas on lakes Victoria, Kyoga, Albert and Lakes Bisina and Opet.**
4. Colleagues you should note that Lakes Albert and Kyoga, and the Nile have since 2013 been invaded by a new aquatic weed termed as the **Kariba Weed** whose scientific name is *Salvinia Molesta*. The cover and spread of the Kariba weed has reached alarming levels continuously affecting fisheries (fish breeding and nursery grounds), the water quality and quantity consequently having an effect on the drinking water supplies, hydro power generation, tourism and the transport system along these water bodies.
5. The weed has also been reported in the Lake Victoria basin (Lake Kimira in Bugiri District) and some fish ponds.

THE PROBLEM AND MAGNITUDE

6. Colleagues, the Kariba weed, is basically spread through viable pieces that are dispersed by water currents, animals carrying viable pieces on their bodies,

unnecessary movement of different fishing gears, boats, and vehicles from one lake site to another.

7. Colleagues, the Kariba weed has spread to most water systems in the Kyoga basin, and to other lakes like Kwanja, Albert and Albert Nile. This new breed of weed adds to the water hyacinth problem which though under control, has resurgence patterns that occasionally threaten the Uganda waters.
8. The existing equipment in MAAIF cannot handle the Kariba weed unless modified or when the weed is in succession with water hyacinth and other aquatic plants.
9. The support for control of water hyacinth through the Lake Victoria Environmental Management Project II ended in June 2017 and was limited to Lake Victoria. The support from the Arab Republic of Egypt has also since ended though the project equipment is available to undertake weed control.

EFFECT OF THE KARIBA WEED ON THE WATER BODIES

10. Colleagues, like water hyacinth, the Kariba weed is considered as one of the world's worst aquatic weeds. The mat grows to choke waterways, blocking sunlight and oxygen from reaching the waters below, outcompeting other water plants that are beneficial to insects and the fish.
11. The water quality beneath the mats is continuously degraded by decreases in dissolved oxygen, increase in carbon dioxide and hydrogen sulphide and as the plants die, organic debris accumulate at the bottom of a water body thus creating shallow water environments which are less suited for fish growth.
12. The weed affects fish breeding and nursery areas consequently reducing the fish stocks on top of affecting other fishing operations
13. In relation to water transport, the weed interferes with the movement and docking of ferries and boats.
14. The water covered by the Kariba weed gives off a bad smell and this has been reported to affect water supplies for domestic use.
15. Tourism and hydro power generation have been subsequently affected by the weed cover.

CONTROL MEASURES

16. Water hyacinth has been controlled through manual, mechanical and biological control. Like Water hyacinth, the Kariba weed can also be controlled through Manual, mechanical, biological and chemical methods.

17. The manual removal method involves physical removal of the weed using hand tools like rakes and wheel barrows with the help of protective gear. **This method is very labour - intensive suitable for clearing small infestations or delimited areas like landing sites.**
18. The Mechanical control method is based on harvesting, removing and transporting all types of aquatic weeds using different machines working from banks or floating on water surface. **This method is effective but expensive**
19. The Biological Control method involves rearing and release of weevils (insects) that feed on the Kariba weed. **It is cheap, slow but effective and sustainable**
20. The Chemical Method of aquatic weed control involves the use of chemical herbicides for controlling infestations of the Kariba weed.
21. In addition to the above, one of the key long term options for control of aquatic weed is watershed management that aims at reducing the influx of excess nutrients into surface waters.

INTERVENTIONS UNDERTAKEN SO FAR.

22. The OPM is coordinating an inter-Ministerial technical Committee with representation from the Office of the Prime Minister (as Chair and Secretariat) Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Ministry of Water and Environment, Ministry of Defence and Veteran Affairs, The Ministry of Local Government, the Uganda Police Force, National Environment Management Authority (NEMA) and Nakasongola Local Government.
23. Government through the Ministry of Agriculture Animal Industry and Fisheries and working with other Ministries, Departments and Agencies implemented manual, mechanical and biological control since 1992 and reduced weed infestation to manageable levels by 2005.
24. Maintenance control has been on to-date and to manage the current resurgence like the one at Port-bell and other parts, MAAIF has sensitized communities in District Local Governments and distributed manual control equipment including wheel barrows, pangas, forked hoes, forked spades, Life jackets, Hip waders, Hand gloves, Gumboots and rakes to 23 affected districts on Lake Kyoga, Albert and Victoria.
25. A study was conducted to assess the extent of spread of the weed and the abundance and distribution recorded to guide management strategies.

26. The Government of the Arab Republic of Egypt has committed US \$ 230,000 for a one year pilot phase project to control the Kariba weed. This limited support is helping MAAIF in a) modify the existing hyacinth project equipment to suit the mechanical control of the Kariba weed, b) procurement of manual removal equipment and c) piloting biogas production in Bugondo on Lake Kyoga and Wanseko on Lake Albert.
27. In late February 2017, NARO imported the initial batch of *Salvinia* weevils that are specific biological control agents for Kariba weed. These, though few, have undergone quarantine and host-specificity tests on a range of crops and other plants. The weevils have been deployed to control Kariba weed on Lake Kyoga

CHALLENGES ENCOUNTERED SO FAR.

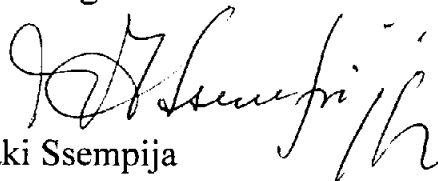
28. Government still lacks the adequate human and machinery capacity to address the challenges posed by the Kariba weed. The affected Local Governments lack adequate logistical capacity to satisfactorily establish adequate sanitary facilities along landing sites to curb nutrient loading.
29. Nutrient enrichment of the water bodies from un-regulated point and non-point sources causing pollution and providing nutrients to the weeds

FINANCIAL REQUIREMENTS

30. The interventions proposed in the inter-ministerial control strategy under the OPM requires financial allocations to a tune of 16,354bn. The immediate actions require 7,554bn. The medium term interventions require 4,960bn shillings while the Long term interventions require 3,840bn. **MAAIF requires at least Ug. Shs 4bn as an emergency fund to maintain and operate the existing equipment so as to respond to abrupt resurgences.**

CONCLUSION

Given adequate resources, and with the long-term experience in weeds management, MAAIF is committed control of the new weed and water hyacinth resurgence. MAAIF will endeavor to plan for resources to continue working with MDAs in managing aquatic weed infestations and resurgences. Development partners will be further engaged to support weed management so as to ensure a health environment for fish and good water quality.



Hon. Vincent Bamulangaki Ssempija

Hon. Minister of Agriculture Animal Industry and Fisheries