

# **Institutions and Governance: Commercialization of Wetland Resources and its Effect on Traditional Institutions in the Nyando Papyrus Wetlands, Kenya**

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# Introduction

**Agriculture**



**Livestock grazing**



**Boat making**



**Sale of papyrus products**



**Due to their functions and services, economies have developed around the Nyando papyrus wetlands**

**Fish trade**



**Sale of wood products**



**Brewing alcohol**



**Fishing**



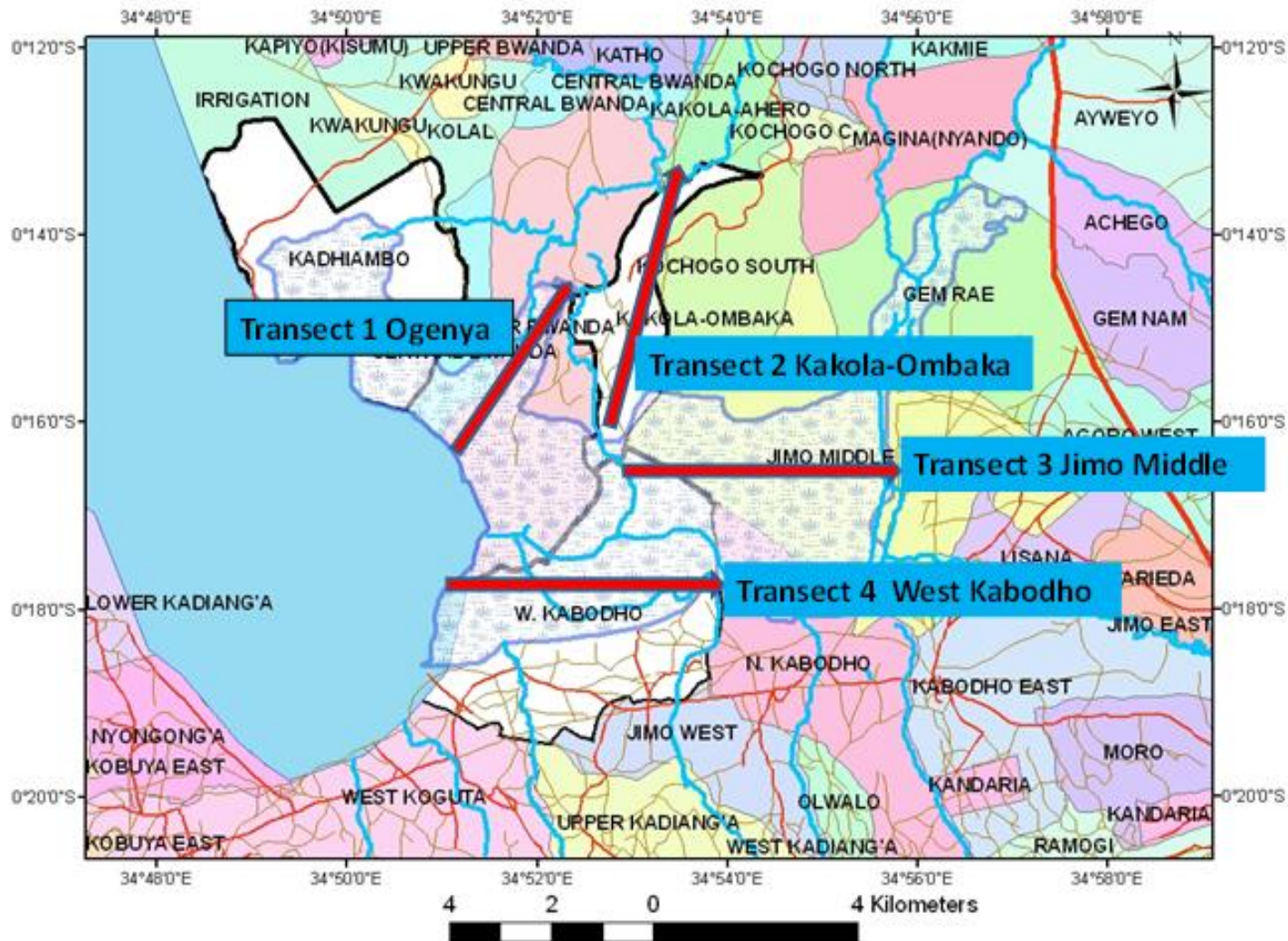
# Role of institutions in resource use in the Nyando papyrus wetlands

- ❖ **Institutions sustain the multiple benefits of wetland resources.**
- ❖ **Regulate the meeting of needs by rationalizing social interaction for resource use.**
- ❖ **Govern economic and social lives; and**
- ❖ **Govern the way in which natural resources are managed.**

# Questions

- ❖ **What institutions governed wetland resource use in the Nyando papyrus wetlands, Kenya in the past?**
- ❖ **What are the new institutions governing wetland resource use in the Nyando papyrus wetlands, Kenya?**
- ❖ **What factors have caused institutional change in the Nyando papyrus wetlands, Kenya?**
- ❖ **How has commercialization of wetland products caused changes in institution and institutional practices in wetland resource in the Nyando papyrus wetlands, Kenya?**





**Figure 1: Map of the study area**

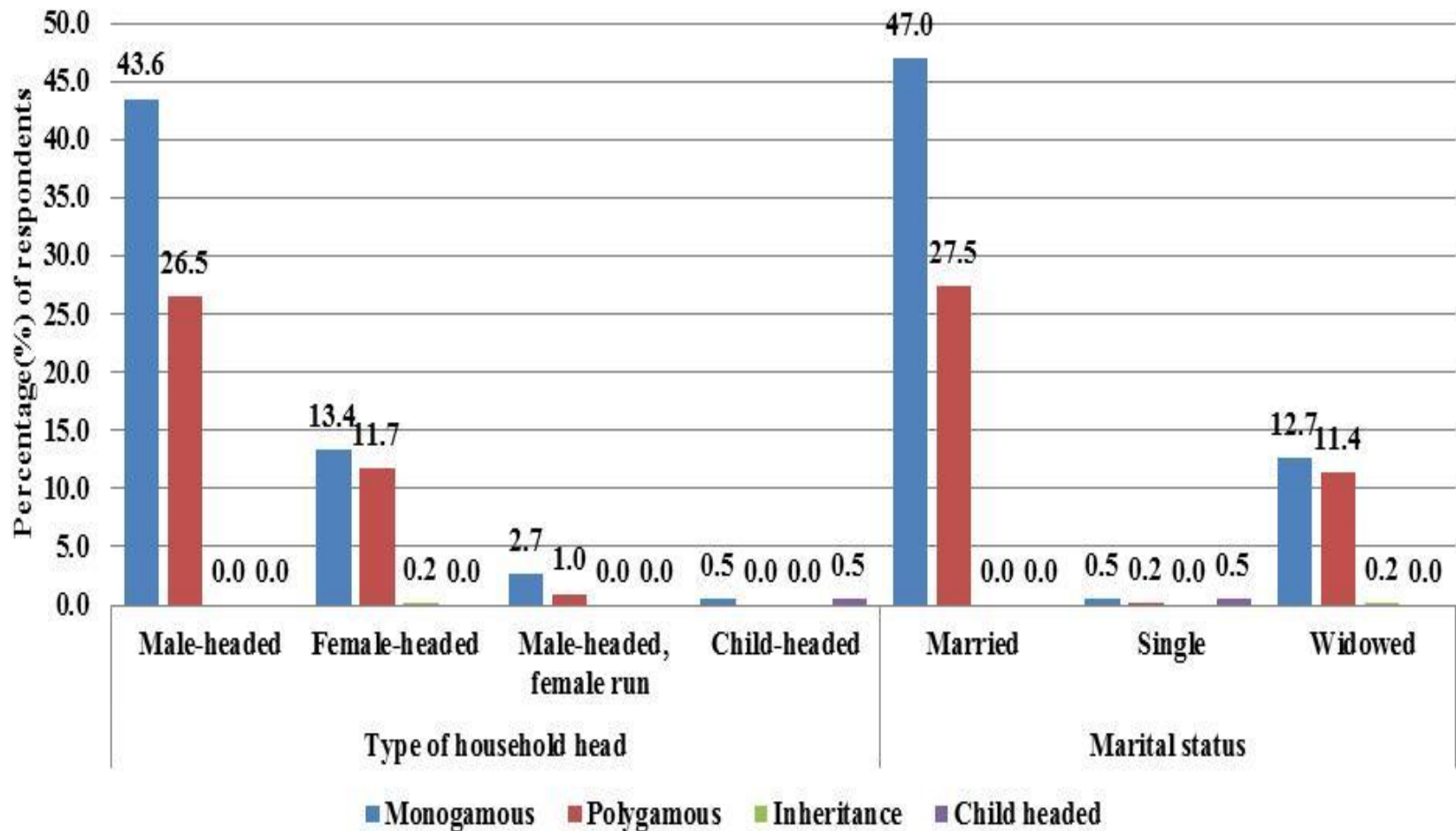
# Methodology

- ❖ **A study was carried out between October 2009 and May 2011**
- ❖ **A household survey with 411 respondents**
- ❖ **Key informant interviews**
- ❖ **Focus group discussions**
- ❖ **Data analysed using SPSS, Microsoft EXCEL and ATLAS.ti**

# Human population

- ❖ **The population density in Nyakach and Nyando in the census of 2009 was given as 357 persons per km<sup>2</sup> and 413 persons per km<sup>2</sup> respectively**
- ❖ **Average household size of 5 persons per household.**
- ❖ **The increase in the population density within the perimeter of the wetland can also be attributed to the fact that these wetland areas had fertile soils and had lots of moisture especially during the dry season (Maithya et al., 2011).**

**Figure 2: Household head, marital status and the type of marriages of respondents in the Nyando wetlands, Kenya**





# The multiple benefits of the Nyando papyrus wetlands

Figure 2 Respondents harvesting wetland products for subsistence and/or commercial use in the Nyando papyrus wetlands, Kenya

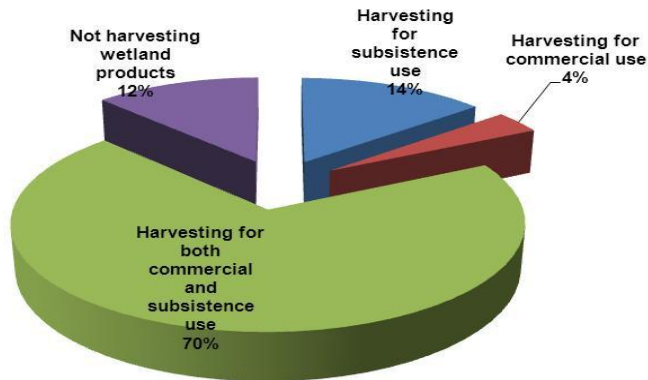


Figure 3 : Type of household(Head) harvesting papyrus for commercial and /or subsistence use in the Nyando papyrus wetlands, Kenya

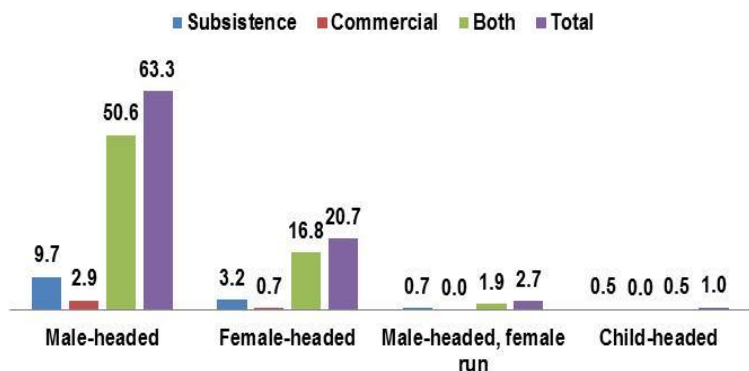
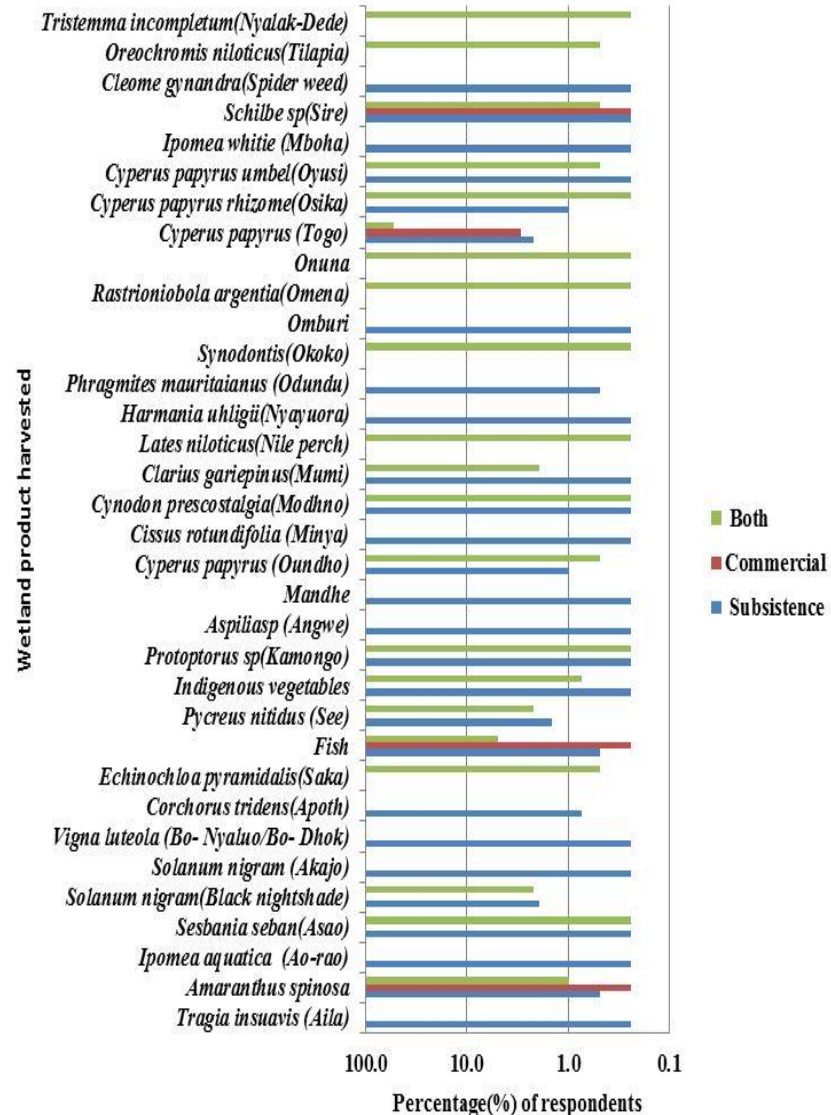


Figure 4 The most important products harvested by respondents and use in the Nyando wetland, Kenya



# Papyrus products



**Furniture**



**Ropes**



**Mats**



**Building materials**



**Brooms**



# Factors changing institutions in the Nyando papyrus wetlands, Kenya

- ❖ **As communities continue to grow, partly through immigration, they become more complex, fragmented, and even more ethnically mixed.**
- ❖ **Their socio-cultural and economic demands and activities become diverse leading to both positive and negative impacts contributed by different infringing institutions especially on natural resources.**
- ❖ **Some of these changes include commercialization of wetland resources and hence changes in the institutions that control how resources were used.**
- ❖ **Others include governance, human population, external factors (drought and floods) and religion**

# Governance

- ❖ **Exclusion by governments has left traditional institutions isolated and alienated in their development roles (Boku Tache and Ben Irwin, 2003).**
- ❖ **Traditional institutions in local communities, shows the pattern of power distribution and the amount of influence exerted by each actor in the community in the course of decision making and activities related to their development.**
- ❖ **Wetland resource access and control is shaped by the intersection of various institutions and the relationships of power and authority that exist between them (Maconachie Roy, 2008).**



# External factors

❖ The Nyando wetlands has had short falls in food supply recorded in the following years 1928, 1933-34, 1937, 1939, 1942-44, 1947, 1951, 1952-55, 1957-58, 1984/85 and 1999-2000 and these could be easily associated with rainfall deficits experienced in the respective years (Odada, E.O., Olago, D.O. and Ochola, W., Eds., 2006).

❖ There have been major floods in the Kano plains in the years 1937, 1947, 1951 and 1957-1958, 1961, 1964, 1985, 1988, 1997-1998, 2002 and 2003 (APFM, 2004, Ongwenyi et al., 1993:118-119).



# External factors cont'd

- Changes in the conditions of the lake such as increases pollution, invasion of the water hyacinth and lake recession have also impacted on the livelihoods of local communities especially those based on fishing.
- The fisher folk are now turning to alternative sources of income such as papyrus-based products such as mats and basket weaving cottage industries adding greatly to the human pressure on wetlands (Daily Nation Kenya, 2011; Mwanikah, 2006).

# Religion

- ❖ **Traditional religions there has been a long-standing reverence for the environment and culture is a very powerful force to turn the tide of biodiversity destruction. (Science Daily, 2010).**
- ❖ **In contrast with these religions, Christianity encouraged exploitation of the environment for our own ends.**
- ❖ **55.96% of the respondents adapt Christianity as a coping strategy to deal with traditional institutions that affect wetland resource use.**
- ❖ **44.04% observe traditional institutions that affect wetland resource use.**

# Categories of institutions in the Nyando papyrus wetlands

**Traditional institutions can be categorised as**

- 1.Those affecting men, women and children**
- 2.Those affecting women**
- 3.Those affecting men**

**The institutions currently used in the Nyando wetlands can be put into 3 categories**

- 1. Local institutions made by the community**

**N/B Borrows from traditional institutions.**

- 2. Institutions made by the government and include policies, laws, rules and regulations. These are formal and codified.**

- 3. Institutions made by the government but implemented at community level(public private partnerships)e.g. Beach Management Units**



# Commercialization of fish and institutional change

- ❖ Introduction of Nile perch in the 1950s and technology like the engine boats and refrigerated containers in 1979 took fish trade to a higher level with the international market.
- ❖ Hence, introduction of Fisheries Act Cap 378 laws of Kenya of 1989 to regulate fishing
- ❖ The Act borrowed from traditional institutions rules like 'off season' restriction and catching of immature fish.
- ❖ In 2007, Beach management Unit Regulations were put in place to devolve management of fisheries(PPP)
- ❖ There are new local institutions that are used along side the formal institutions

# Commercialization of fish and institutional change cont'd

- ❖ **Women are increasingly becoming boat owners.**
- ❖ **Off season restriction is not adhered to strictly due to poor enforcement.**
- ❖ **Fish breeding areas which were restricted in the past by traditional institutions are now open to fishing**
- ❖ **Open lake fishing is still predominantly a male issue but women are now involved in catching the fingerlings of the *Clarius gariepinus* in the periphery of the lake.**

# Changing faces of fisheries in the Nyando wetlands, Kenya



**Fish traders buying fish from a boat**



**Different types of fish**



**Fishing using mosquito nets**



**Fishmonger displaying her wares**

# Commercialization of papyrus

- ❖ **Started in 1940-1950 with mats sold to neighbouring communities like the Kabondo, Kipsigis, and Kisii.**

- ❖ **Reasons for commercialization :**

**beddings replacing hides and skins, for sun drying grains, burial of the dead bodies, making doors and barter trade.**

- ❖ **The technological advancement in communication and transport has taken commercialization to a higher level**

- ❖ **More women are involved in the harvesting papyrus and sale of mats more than men.**



# Papyrus: Predominantly a woman's business



# Commercialization of wetland farming

- ❖ Commercialization of wetland farming started in 1960s with Sorghum and millet for brewing local brew(*Busaa*).
- ❖ In the mid-1960s the National Irrigation Board (NIB) converted 1700 ha of wetlands into irrigated agriculture through two pilot irrigation schemes (Ahero and West Kano irrigation schemes).
- ❖ Sugarcane was grown for chewing locally.
- ❖ In 1970s commercial farming increased especially with production of indigenous vegetables like *Solanum nigrum* (Black nightshade), *Cleome gynandra* (Spider weed), *Corchorus olitorius/tridens* (*Apoth*), *Vigna unguiculata* (Cowpeas) and *Amaranthus spinosa* (African spinach)



# Commercialization of wetland farming cont'd

- ❖ In early 1980s horticultural crops were introduced for purposes of commercial farming e.g. tomatoes, kales, onions among others.
- ❖ There are formal rules that govern farming like the Agriculture Act Cap 318 but there are local institutions that are made by the community and borrows from traditional institutions.
- ❖ Commercialization of wetland agriculture has made women go into vegetable production and also work as casual labourers.
- ❖ Women can own farms through buying and /or lease farms hence restrictions to access of land is reduced.



# Diverse commercial crop production in the Nyando wetlands, Kenya



**Kales**



**Fruits**



**Maize**



**Arrow roots**



**Rice**



**Sugarcane**



# Conclusion

- ❖ **Institutions operate differently in polygamous and monogamous homes and this impacts on natural resource use.**
- ❖ **Weakening institutions and kin networks impacts on resource use in child and female headed households**
- ❖ **Communities have their own institutions that guide wetland resource use and these are very effective since the sanctions are harsh.**
- ❖ **Institutions that have public-private partnerships are successful.**
- ❖ **Government institutions are not effective and are not properly enforced.**
- ❖ **Successful modern institutions are those that are embedded in traditional/old institutions**
- ❖ **Institutions that have a commercial relationship will also be adhered to such as the BMUs that generate income.**

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# Thank you

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