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HIV/AIDS, artisanal fishing and food security in the Okavango Delta, Botswana

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Abstract

Generally, rural households pursue all year round natural and non-natural resource-based livelihood systems to diversify these options in order to cope with risks emanating from a range of shocks and stressors. Artisanal fishing in the Delta is not only a major livelihood option but also a source of food security. This paper is based on analysis of primary data collected from a survey of 248 subsistence fishers' households through simple random sampling in 22 villages in the Delta. The overall objectives of the survey were to assess the general prevalence of HIV/AIDS in the Ngamiland district of Botswana, to investigate potential effects of AIDS-related stressors, particularly chronic illness on artisanal fishing activities, and to assess implications towards food security. Results from this study indicate that HIV prevalence rates for pregnant women attending antenatal clinics in the Delta are approximately 30% and are related to factors such as marriage, education, and employment. Despite this relatively high prevalence percentage, most of the affected households do not have adequate access to HIV/AIDS support facilities. Support services are provided on the basis of population size and/or status of the settlement (i.e. urban, urban village, rural or remote). Therefore, since about 50% of the Delta's population lives in settlements of less than 500 people, they receive health services indirectly through major population centres whose capacity to deliver timely HIV/AIDS services is limited. This disproportionate access to HIV/AIDS services disadvantages the majority of fishing communities in the Delta, and may affect their ability to fish. Moreover, about 53% of sampled households had cared for a continuously ill person/s (CIP's) in the last 5 years, out of which approximately 29% felt that this seriously impacted fishing activities. These serious impacts included sale of family assets, depletion of savings, and switching or abandoning fishing activities. Subsequently, household food security is seriously affected because fish provides a significant proportion of food to CIP households where approximately 55% of households get their food from fish products. During food shortages, CIP households resorted to a hierarchy of strategies which included cutting down on meals or reducing meal portions, looking for paid work, gathering wild fruit, asking for food from relatives, selling livestock, and getting social assistance. In conclusion, artisanal fishing is a natural safety net which constitutes an important buffer for households affected by HIV/AIDS-related stressors in the Okavango Delta. Access to fish helps these households mitigate potentially adverse impacts such as deterioration into chronic poverty.

Keywords: Artisanal fishing; Okavango Delta Botswana; HIV/AIDS; Food security

1. Introduction

The negative impacts of HIV/AIDS across all sectors of the Botswana economy has been well documented (Central Statistics Office (CSO), 2002, 2004). However, positive strides have also been made since the first AIDS case in Botswana was diagnosed more than 20 years ago. These include the advent of antiretroviral drugs (ARV) treatment which has prolonged life, the prevention of transmission from mother to child (PMTCT) reduced cases of infant HIV infections, more people seeking voluntary testing and counselling which makes it possible for people to protect themselves against infection (Ministry of Health (MoH), 2005). Although recent data suggest some indications of sexual behavioural change at the individual level,

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varying levels of access to HIV/AIDS services within and across rural and urban districts in the country means that prevalence rates within and across social and occupation groups, and the impacts of the disease across economic sectors, are also likely to differ significantly. Inevitably, HIV/AIDS is likely to have profound impacts across livelihood systems (natural and non-natural based) in Botswana. Logically, the impact of the epidemic on human productivity, including the capacity to cope and mitigate the effects, both within and across economic sectors, is also likely to vary substantially.

Sources of livelihood in the Delta are diverse: natural resource-based (e.g. fishing, arable farming, collection of veldt products, basket making, and community-based natural resources management – CBNRM), and non-natural based (formal employment) sources. Similar to other economic sectors, HIV/AIDS is likely to have profound impacts on subsistence fishing. Possibly, it is likely that a large proportion of fishing households have experienced irreversible losses of income, assets, and the capacity to invest in the future. In fact, some researchers have noted that fishing communities in Africa are 'hot-spots' for the HIV/AIDS virus (Baro, 2004; Forum, 2005; Gordon, 2005; MAAIF, 2005). Additionally, hygiene and sanitation conditions in fishing camps are usually poor and thus contribute to people's vulnerability to infection (World Fish Centre, 2006). In particular, fishing communities have limited access to sexual health services including HIV/AIDS prevention, care, and support. Although subsistence fishing is the main source of livelihood for most communities in developing countries, these communities are rarely taken into account in national HIV/AIDS control programs and their socio-economic and environmental significance have been ignored (SFLP, 2004).

Generally, women in most fishing communities play an important role in fishing such as processing and marketing (World Fish Centre, 2006). However, different sexual relations have developed from these activities which have facilitated the prevalence of sexually transmitted diseases (SFLP, 2004, p. 9). In Botswana's rural areas, women are more likely to be unemployed than men (CSO, 2004). Therefore, some women in fishing villages are more likely to resort to risky behaviour such as having multiple partners, engaging in transaction or inter-generational sex, sale and consumption of alcohol especially in landing sites. This is compounded by gender and age inequalities which make women more vulnerable to sexually exploitative relations which place them at risk of contracting the HIV virus.

According to Erskine (2004), few studies have considered HIV/AIDS as a threat to natural resource use. Notwithstanding, several case studies in Kenya, Namibia, South Africa, Uganda (Ruhweza and Thaugphet, 2001) and Malawi (COMPASS, 2003) have assessed the linkages between HIV/AIDS and natural resource management, including mitigation effects (Oglethorpe and Gelman, 2004 http://www.frameweb.org/). For instance, Bishop-Sambrook (2004) conducted a systematic analysis of the link between gender, HIV/AIDS, agriculture and other natural resources sectors.

A systematic analysis of the impact(s) of AIDS on fisheries-based livelihoods has hitherto received little attention (Allison and Seeley, 2004, 2006; Gordon, 2005). Several case studies have shown that some African fishing communities (e.g. in the DRC, Kenya, Uganda, Zambia and Tanzania) have higher HIV prevalence rates than 'known risk groups' (e.g. truck drivers and commercial sex workers) (Tanzarn and Bishop-Sambrook, 2003; SFLP, 2004; Allison and Seeley, 2006; Keizire, 2006; Keulder, 2006; M'Boussou, 2006). Therefore, although ecosystem variability determines fish availability in floodplain fisheries (Welcomme, 1985), HIV/AIDS is fast becoming a major factor in regulating fish availability to most fishing communities (ID21, 2006).

According to MAAIF (2005), fish availability can be dramatically reduced when people become too weak to fish (or eventually die) with a consequent loss of indigenous knowledge and fishing skills (due to the HIV/AIDS pandemic). Therefore, HIV/AIDS can have a multiplier effect whereby productive pursuits such as fishing are severely curtailed with a resultant loss of rural employment and provision of food (Campbell and Townsley, 1996). The paper addresses this knowledge gap by investigating the effects of chronic illness (an HIV/AIDS-related stressor), on subsistence fishing in the Delta. This is the first study of this nature in the Delta's fishery, and it is hoped that it will lay the foundation for a comprehensive management regime.

Existing HIV/AIDS programs in Botswana concentrate more on non-natural resource-based formal employment sectors. Conversely, HIV/AIDS is not featured as a major threat to fisheries-based livelihoods. Surprisingly, the threat of HIV/AIDS to the sustainability of natural resource-based livelihoods generally and subsistence fishing specifically was ignored in the ODMP project. Admittedly, information about the prevalence and spread of HIV at village level is scarce if not non-existent. Therefore, without a systematic investigation, it is difficult to establish the location of HIV/AIDS "hot spots" in the Delta. Notwithstanding, HIV/AIDS prevalence rates among fishing communities in developing countries are generally five to ten times higher than the general population (http://www.sflp.org/ftpl/others/). Hence, it can be assumed that the Delta's fishing communities are likely to share similar characteristics based on prevalence and transmission rates. According to McGoodwin (2001), production relations and organization of fishing activities of small scale fishers in developing countries are similar even though members have very distinct cultures.

Moreover, lack of information on HIV prevalence at the village level results in the compartmentalisation and marginalization of small-scale fishing communities in public policy. This is also coupled with a lack of knowledge regarding the significant role played by small scale fisheries