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Introduction

Poverty in Africa is still a largely rural phenomenon. Rural economic development is thus critical to poverty alleviation in Africa. Africa's fisheries can be an engine of growth because there is robust local and international demand for fish products (both marine and freshwater) and under-exploited potential for fish farming. Fish products are also an important source of affordable animal protein and micronutrients for Africa's poor. Yet fisheries livelihoods are severely threatened.

Some of the earliest recorded cases of HIV/AIDS were in fishing communities on Lake Victoria in 1982. The catastrophic scale of HIV/AIDS in Africa soon became clear but the development community has been slower to recognize that fishing communities in low and middle-income countries worldwide constitute one of the highest risk groups for HIV/AIDS. As a consequence: few HIV/AIDS programmes have specifically targeted fishing communities; the issue has received scant policy attention; much needed research on the topic is still at an early stage; and our understanding of susceptibility and resilience within the sector is still very limited.

This policy brief provides information on the scale of HIV/AIDS in the fisheries sector in Africa, the reasons why prevalence is so high and how this affects fishing communities. Access to health services and antiretroviral therapy is then briefly reviewed, as are some of the limited experiences directly targeting HIV/AIDS programmes to fishing communities. The concluding discussion highlights areas where more work is needed on policy development, action and further research.



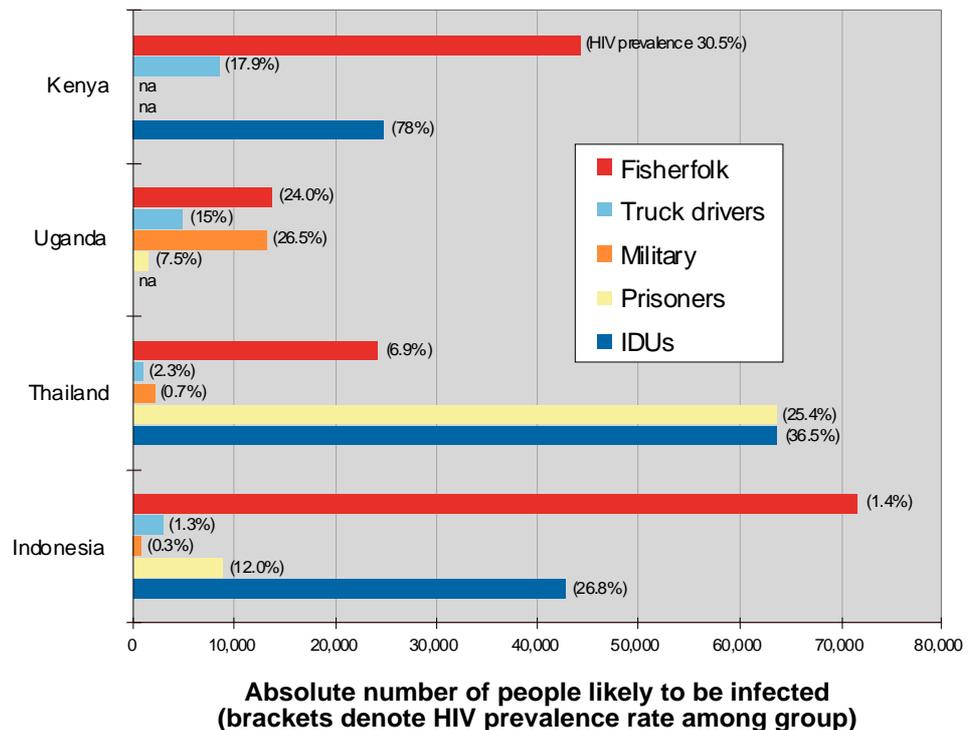
The scale of HIV/AIDS in the fisheries sector in Africa

Kissling *et al.* (2005) compare HIV prevalence among fisherfolk with both the wider population and with other groups generally considered at high risk of HIV infection. Their literature search yielded comparative data for ten low and middle income countries. In nine of those countries, fisherfolk were more likely to have HIV than the general population, by factors ranging between 4.4 and 14.0.

Three of the studies were conducted in Africa. Prevalence rates for fisherfolk were 20.3% in the Democratic Republic of Congo (DRC), 30.5% in Kenya and 24.0% in Uganda, representing rates respectively 4.8, 4.5 and 5.8 times higher than in the general population. Moreover, in Kenya and Uganda, this incidence was respectively 2.1 and 1.8 times higher than for truck drivers, a known high-risk group. The absolute numbers were also higher: 44,000 Kenyan fisherfolk infected as compared with 8,000 truck drivers, and 33,000 Ugandan fisherfolk compared with 5,000 truck drivers. The Kenyan study suggests that rates of HIV infection are even slightly higher for fisherfolk than for sex workers.

Work elsewhere in Africa (e.g., Senegal, Ghana, Tanzania, Zambia, South Africa and Benin) indicates that many fishing communities have high HIV/AIDS prevalence rates.

HIV among fisherfolk and other vulnerable groups;



Source: Kissling, Allison, Seeley *et al* 2005, *AIDS* vol 19

Why are fishers and fishing communities at high risk of HIV infection?

Of the main ways in which HIV can be transmitted, a number of lifestyle factors suggest that heterosexual sex is the prevalent channel in fishing communities. Susceptibility to HIV is determined by complex combinations of biological, social, cultural and economic factors. Several known HIV risk factors converge around fishing activities, though not all of these factors are present in all fishing communities:

- fishermen tend to fall in the age group most vulnerable to sexually transmitted diseases (15 - 35 years);
- many people involved in fishing or associated activities are mobile or migratory and therefore less constrained by family influences and social structures at home;
- it has been suggested that since fishing itself is high risk, a culture of risk denial may extend to other dimensions of fishermen's lives;
- since fishing is a low status occupation, this may cause "exaggerated or 'oppositional' forms of masculinity that challenge norms...in 'mainstream' society...[including] the expectation of multiple sex partners" (Kissling *et al.*, 2005, p.1939);
- cash income, poverty, irregular working hours and being away from home places fishermen in a group with disposable income and time off (when not fishing), that favours the consumption of alcohol and prostitution; the corollary of this is that low-income women are drawn to fish landings or ports precisely because of the opportunities to sell food, alcohol or sex;
- the chance of being exposed to HIV is increased where a small number of women have unprotected sex with a larger number of men, or vice versa (Garnett and Anderson, 1996, cited in Loevinsohn and Gillespie, 2003);
- in places where women compete intensely for the fish catch (for small-scale processing and local trade), "fish for sex" is not uncommon;
- gender inequality, compounded by poverty that puts women at risk of exploitation, makes it difficult for women to insist on condom use; and
- fishing communities have limited access to sexual health services.

Allison and Seeley (2004) caution against stereotyping, pointing out that not all fisherfolk engage in risky behaviour, that fisheries in developing countries comprise "...mixtures of migrants of varying duration and resident farmer-fishers" (*ibid.*, p.220) and that other studies (e.g., Neiland and Béné, 2004) support an alternative image of fishermen as hard-working and forward-thinking (which can, of course, co-exist with the above characterisation). Nevertheless, they conclude: "...that a high-risk subculture exists among some important fisheries in developing countries (e.g., the Gulf of Thailand, the African Great Lakes, West African coastal fisheries)" (*ibid.*, p.224).



How does HIV/AIDS affect the fisheries sector in Africa?

The effects of HIV/AIDS on rural households in Africa are now fairly well-documented. One effect is the loss of productive adult labour as the person with HIV falls ill and other household members take on, as far as possible, the additional labour burden of the sick person's work whilst also caring for him or her. With household resources under increasing pressure, first incomes, then savings, and finally household assets, are all used to meet the costs of farm inputs, consumption items and care of the sick (medicine, transport and special food needs). Children are taken out of school to work on smallholdings, but the harvest is poor because of reduced labour and purchased inputs. Younger children or orphans go to stay with grandparents or other extended family, putting enormous strain on those households to meet even subsistence needs. Credit (where it was ever available) is no longer extended to the sick person's household (because of stigma and inability to repay) whilst grandparent-headed "remnant" households fail to meet asset or age criteria for loans, thereby further tightening the poverty trap.

This generalized scenario also applies to fishing households. AIDS-affected families with fishing assets (such as nets or boats) may sell these to meet more immediate needs, thereby eliminating a future source of income for other household members or current income from loaning out fishing gear. Men who no longer have the strength necessary for fishing may switch to female-dominated sectors, such as fish processing. In doing so, they may displace women whose options for employment in fishing communities are very limited, but include commercial sex work. In Africa, where rural household livelihoods are diverse, fisherfolk are often farmers too, with women dominant in the latter role. These activities are complementary, and seasonal differences allow one to finance inputs to the other. A reduction in fishing income therefore has a direct effect on farming income too.

Africa's industrial fisheries and fish processing sub-sectors are also affected by HIV/AIDS, through the loss of skilled labour and high levels of absenteeism due to sickness or compassionate leave to attend funerals. In addition, Allison and Seeley (2004) highlight potential impacts on natural resource management, pointing out that:

- HIV/AIDS undermines the long-term perspective needed for successful co-management in fisheries, whilst deepening and desperate poverty may drive fisherfolk towards increasingly short-sighted and unsustainable practices; and
- indigenous knowledge about resource management may also be lost, along with crucial capacities in universities and public services.

HIV/AIDS in the fisheries sector has much wider impacts too. Mobile and part-time fishing populations, moving in and out of the sector, along with interactions through trade and markets, permit HIV and its impacts to be spread outside the sector. The multiplier effects of the loss of productive labour and declining productivity may affect rural incomes more broadly. HIV/AIDS, moreover, threatens the ability of the fisheries sector to supply fish and fish products to the low-income groups for whom it represents an important and affordable source of animal protein and micronutrients.



Some fisheries generate important foreign exchange and the loss of those revenues has wider economic effects. The diversion of household and government resources to tackle the epidemic reduces the funds available for other services and investment in productive activity. As school attendance drops, there is a long-term effect on human capital. The cycle of deepening poverty can be a cause of increased migration in fishing communities. It can also lead to recourse to sex work. Both these factors may contribute to the wider spread of HIV/AIDS.

Health services, VCT and antiretroviral therapy in fishing communities in Africa

In general, rural Africa is not well served by health services. It is difficult to recruit trained health professionals to work in rural locations with extremely limited resources and support. Poor roads, telecommunications and electricity, as well as lack of access to clean water and low levels of education in the target population exacerbate the difficulties in providing preventive medicine, diagnoses and treatment. Some fishing communities (including island communities) are further disadvantaged by flooding and seasonal inaccessibility (by road), the temporary or migrant status of part of the community and, possibly, stigma relating to perceptions of lifestyle (alcohol abuse and prostitution).

Voluntary counselling and testing (VCT) is a key strategy in the diagnosis and treatment of HIV/AIDS, but access to such services is extremely limited. Fewer than 10% of those living with HIV in developing countries are aware of their condition (UNAIDS, 2005). Moreover, even where VCT is available, the treatment of AIDS with antiretroviral therapy (ART) poses special challenges. Laboratory facilities are required for diagnosis and monitoring. Reliable access to drug supplies and strict adherence to a life-long treatment regime, including taking pills regularly, are essential. As the virus mutates and drug-resistant strains develop, individual response to the treatment must be monitored and different drugs prescribed. The 3 by 5 initiative (reaching 3 million people in poor countries with ART by the end of 2005) did not meet its target, but even if it had, it would still have been insufficient to meet the needs of the burgeoning numbers with AIDS. High costs and an excess of demand over supply inevitably lead to rationing and a focus on those most likely to respond to treatment. Seeley and Allison (2005 p.693) argue:

“Lifestyle factors like high mobility, irregular working hours as well as place of residence, often remote from infrastructure, would seem to put [fisherfolk] among those least likely to access ART, and most likely to be judged inappropriate for therapy, even if programmes are massively scaled up....Add to this some of the factors like high consumption of alcohol...and fisherfolk seem unlikely to be ranked among those “viable” for ART even if they are among the vulnerable.”



Experience in addressing HIV/AIDS in the fisheries sector in Africa

Whilst HIV/AIDS in the fisheries sector has rarely been tackled in a comprehensive way, there is growing experience with a range of interventions that target the fisheries sector in different ways and at different levels. Some examples of different approaches are described here, including a more integrated policy-level response to the issue.

AIDS prevention and care

In Zambia, Médecins Sans Frontières (Netherlands) has been working with fishing communities on Lake Mweru, where its programme focuses on education, VCT, and support for HIV-affected households (strengthening capacity in local organisations, developing support groups, promoting home-based care, preventing mother to child transmission and providing welfare clinics that focus on high energy protein supplements, ART, tuberculosis and bed nets, to reduce the incidence of malaria). Whilst the programme has reached many women in fishing communities, some important challenges remain:

- it has proved difficult to persuade men to participate in VCT
- sero-positive women risk being cast-out by their husbands / partners
- it is difficult to reach high numbers of “outsiders” (seasonal migrants and traders), including cross-border migrants (from DRC), and
- there are high levels of “stigma discrimination” towards these communities.

A similar initiative has been developed by the AIDS Support Agency in Uganda, which has been providing nutritional and positive living support to fisherfolk living with HIV/AIDS. In Tanzania and the DRC, primary health services have been provided to mobile and migrant fishers (FAO, 2005).

Behaviour change through peer-to-peer education

The Zambia experience highlights the critical need for “champions” from within the community to help spread prevention messages. This has been tried in the Republic of Congo, Benin and Ghana (FAO, 2005). In the Chorkor area of Ghana’s capital, Accra, UNICEF has been working with members of the Youngsters Peer Education Project – a local NGO. Perceptions about HIV/AIDS are gradually changing but it requires a lot of work. Awareness raising is best done person to person because of high levels of illiteracy; mobilising peer educators from within the local community, who are sensitive to locally-specific problems, is critical (UNICEF, 2004). The Women in Fishing Industry Project is using radio to reach women and other marginalized groups in fishing communities in Kenya on Lake Victoria.



Workplace “AIDS-competence” programmes in the fishing industry

HIV/AIDS leads to the loss of work days (e.g., to attend funerals), reduced labour productivity, and loss of skilled staff to illness and death. This is driving commercial seafood and fishing companies in Africa to adopt work-place programmes aimed at increasing awareness of HIV/AIDS, preventing transmission, and providing information on testing and treatment. “AIDS-competence” programmes also highlight the ethical issues and establish best practice guidelines on confidentiality and workplace treatment of people with AIDS.

Ownership and empowerment as a means of responding to health issues

With pressure on other income sources and increasing prices for fish, the Kafue Flats in Zambia are attracting growing interest as a source of livelihoods for migrant fishermen and traders – a shift that has been accompanied by an increase in HIV/AIDS. Recent action research indicates that one factor in the transmission of HIV/AIDS is “fish for sex”. This type of transaction helps women secure fish supplies in an increasingly competitive arena (Merten and Haller, forthcoming). Where poverty is a key driver of behaviour that leads to infection, improved incomes must be a component in fighting it. The Kafue Flats study is exploring ways to empower communities and women engaged in fisheries to take steps to prevent the further spread of AIDS. Local committees are developing “bye-laws” that regulate external trade, guarantee minimum fish supplies for local women traders, and prohibit “fish for sex” deals. Improving women’s ability to insist on condom use is also important. Whether such steps can withstand strong market forces will need to be proven but it is clear that community-based approaches are critical for any chance of broad uptake.

Another example of a community-based initiative comes from Lake Edward in Uganda where local fishing crew associations and Beach Management Units donate a proportion of their day’s catch to support the education of orphans whose parents have died as a result of AIDS (FAO, 2005). Donations such as these also highlight the potential for community contribution (in the form of fish) to the High Energy Protein Supplements (HEPS) so important to the health of those living with AIDS.

Savings schemes for vulnerable women and girls in fishing communities

Just as the Kafue work points to the importance of poverty as a driver of infection, so partners in the Republic of Congo (the National AIDS Committee and FAO/UK Department for International Development Sustainable Fisheries Livelihoods Programme) have also recognised this dimension to the spread of HIV/AIDS. To address the problem, they have developed savings schemes for vulnerable women and girls in fishing communities (FAO, 2005). By promoting self-reliance this can be viewed both as a preventive measure (reducing the need for “fish for sex” transactions) and as impact mitigation, by strengthening livelihoods.



Impact mitigation

Recognising that AIDS-affected households have reduced labour, severe financial constraints and are often headed by women, grandparents or children, the WorldFish Center is working with local NGOs and farmers in Malawi and Zambia to develop the technology and tools they need to adopt integrated agriculture-aquaculture as a labour-saving resource-use strategy. Existing technology can be adapted to particular farming systems (where synergies between agriculture and aquaculture can be exploited) and the resources (both labour and cash) available at household-level. With the objective of improving incomes and nutrition, the project focuses on building the capacity of NGOs as implementing partners as well as the development of appropriate technology, extension tools and the group marketing interventions needed to assure sufficient outreach and impact. Stakeholder processes and the information generated help situate the project in the broader AIDS debate, where it can influence policy and wider uptake.

Policy development

In general, HIV/AIDS in the fisheries sector has not received attention from policy-makers. However, the Department of Fisheries Resources in Uganda has developed a strategy for reducing the impact of HIV/AIDS on fishing communities (Republic of Uganda, 2005). It takes a broad approach to both understanding the root causes of the epidemic and tackling it. It argues for the mobilisation of a wide range of organisations, working in a co-ordinated way at community, district and national levels. It recognises that the development of fisheries affects the spread of HIV/AIDS and that HIV/AIDS affects fisheries development. It proposes that the poor quality of life in fishing communities contributes to risky behaviour and that part of the solution is to improve infrastructure, social cohesion, and incomes in fishing communities. It underlines the need to learn from successful experiences in other sectors and argues for a rapid scaling up of community-level interventions. It is consistent with other Ugandan policies on HIV/AIDS and economic and social development.

What do the lessons from other situations tell us about responding to HIV/AIDS in fisheries?

Barnett and Whiteside (2002) argue that the appropriate response to HIV/AIDS involves a continuum of *policy* and *practice* spanning *prevention* and *impact mitigation*, with *care* an important component throughout. They highlight six concepts that should inform response strategies:

- (1) the mix of prevention, care and impact mitigation measures should depend on the stage of development of the epidemic; in its early stages, prevention is critical but if the epidemic takes hold, the scope and scale of the response must necessarily expand;



- (2) in Uganda, the informal exchange of information within communities and between friends and families has been important; this dialogue was a result of the leadership and high profile accorded to HIV/AIDS in official circles, non-stigmatisation, and encouragement to diverse organisations to respond to HIV/AIDS as a multi-sectoral problem;
- (3) action requires that there is awareness, ownership and empowerment; there is a critical need for empathetic approaches that do not alienate and stigmatise people, and an understanding of processes that empower and build capacity to respond;
- (4) Uganda’s relative success highlights the importance of a multi-dimensional response: a multi-sectoral approach involving everyone in prevention of HIV/AIDS; the development of strategies for prevention and impact mitigation that go beyond a purely medical response; and capacity-building at all levels;
- (5) sustainability and scaling up are critical, but extremely difficult to achieve where resources are so limited and local contexts so specific; sustainability should not be an over-riding concern for donors (though lower cost interventions should permit more people to be reached) because HIV/AIDS reduces community/individual resources and because AIDS orphans need long-term assistance urgently;
- (6) “coping” is a misplaced concept with very vulnerable HIV-affected households; individuals may manage to survive but disproportionately high numbers of the poor and vulnerable have no option but to take action that makes them yet more vulnerable (e.g., sale of productive assets, withdrawal of children from school); the need for impact mitigation measures is therefore paramount;

Loevinsohn and Gillespie (2003) stress the importance of mainstreaming, proposing that an “HIV lens” be applied to different situations and actions (including policies). This would “...support reflection on how the situation may be increasing or reducing the risks, either of contracting HIV or of suffering severe consequences flowing from AIDS-linked illness and death, and how the action, actual or planned, might contribute to these effects” (*ibid.*, p.39). The Ugandan strategy for HIV/AIDS in fishing communities is an example: it explores how the development of the sector both affects and is affected by HIV/AIDS and proposes measures to ensure that fisheries sector development reduces rather than exacerbates the impact of HIV/AIDS.

An agenda for HIV/AIDS in fisheries

On the basis of the experience reviewed here, there is a clear agenda for tackling HIV/AIDS in the fisheries sector. This comprises policy development, programming, research and dissemination, with important roles for government, donors, NGOs, the private sector, local communities and researchers in pursuing these goals.



Policy

First, there is a need for significantly more policy attention to be directed towards HIV/AIDS in the fisheries sector. The Ugandan experience underlines the importance of not narrowly apportioning responsibility for action. When fisheries departments take up the issue, it will be critical for them to work with a wide range of partners (including local communities) to achieve profile, depth, scale and impact in their responses. Arrangements will differ from country to country but recognition of the need for a multi-sectoral, multi-faceted approach is important. Policies will need to link interventions at different levels and across technical sectors. Mainstreaming is important, including the use of tools such as the “HIV lens” discussed above. The policies, moreover, must be implemented, with concomitant implications for the way in which they are developed (and owned) and, most importantly, for resourcing and capacity development. Donors and those working in fisheries can help advocate for these policies, but the policies themselves must come from government and their development must involve input from fishing communities and organisations working in the fisheries sector as well as those working with HIV/AIDS elsewhere.

Action

There is also an immediate need for action to tackle HIV/AIDS in fishing communities: to develop and implement policies; to translate the emerging lessons and approaches into programmes and activities on the ground, making sure that some of the key foundations are in place (including the availability of condoms, VCT centres, workplace policies, and other sensitisation and education programmes); and to engage with donors, governments, the private sector and communities to harness the commitment and resources needed to fight the problem. Such action implies a variety of roles appropriate to different groups and professions working at different levels, from policy right down to the communities themselves. Each has to commit resources too – be it funds from donors, governments or private sector initiatives, or community actions.

Research

Thirdly, there is a need for further research, including a strong element of action research and collaboration between practitioners and researchers. In particular, significant improvements are needed in our understanding of the factors that contribute to high-risk behaviour (e.g., poor living conditions and low incomes and ways to improve these), and to the determinants of resistance to HIV infection and resilience to withstand the impacts of HIV/AIDS.

Action research on these issues should be pursued in order to understand and document emerging good practice, so that the lessons can in turn be taken-up and applied in wider efforts to scale-up the response. Important areas where an improved understanding will be especially important include:



- finding champions within the community and peer-to-peer education;
- achieving VCT enrolment and particularly understanding how to effectively target unwilling groups;
- finding ways to engage and develop community capacity to respond, keeping in mind the potential lack of cohesion in “communities” with large numbers of outsiders;
- tackling fatalism in fishing communities (awareness without change in behaviour) by promoting positive (non-hopeless) outcomes, including effective ART;
- addressing some of the issues that would otherwise exclude fishing communities, such as
 - moral judgements and stigmatisation
 - seasonal / temporary residence – including cross-border dimensions
 - inaccessibility
 - institutional barriers to collaboration between different professional groups (e.g., medical profession, fisheries departments, private sector);
- focusing on some of the root causes of vulnerability, particularly for women, to promote economic and social empowerment through the development of other economic opportunities, training, rural finance, market access and support groups;
- using tools such as the “HIV lens” and identifying how they can be adapted and improved; and
- applying and adapting lessons from other sectors for use in fisheries, particularly work with mobile and vulnerable groups.

Dissemination

Finally, there is a need for dissemination. Information on HIV/AIDS in fishing communities is gradually becoming available, but this has not yet translated into widespread political awareness and commitment to tackle the issue. This must change if the information and resources needed to fight HIV/AIDS in fishing communities are to be marshalled. Forums for exchange of information (conferences, workshops and online discussion groups) can be an effective mechanism for dissemination. One such example is the workshop convened by the WorldFish Center, International Organization for Migration (IOM) and Food and Agriculture Organization (FAO), with SIDA support, and hosted by the Zambian National AIDS Council and the Department of Fisheries in February 2006. The workshop, focusing on efforts to tackle



HIV/AIDS in fisheries, the approaches that work, the identification of the investments and mechanisms needed to scale up successful examples quickly, as well as the establishment of a practitioners network, is a start, but follow-up is critical. The Regional Network on HIV/AIDS, Rural Livelihoods and Food Security (RENEWAL) is an African stakeholders' partnership facilitated by the International Food Policy Research Institute (IFPRI), whose remit covers policy dialogue, action research, community action and dissemination (Gillespie and Kadiyala, 2005). Additional mechanisms and wider "membership" are needed to take these emerging lessons on best practice to an even larger audience.

Conclusion

This paper shows that more and more information is becoming available on HIV/AIDS in the fisheries sector, and that experience in tackling it is growing too. Nevertheless, efforts to date have been patchy and insufficient. There is a need for a much larger and more co-ordinated effort by a wide range of organisations and groups to develop, resource and implement policies to reduce and counter the effects of HIV/AIDS in fishing communities. In its absence, many African countries with important fisheries will be hard-hit by HIV/AIDS, with all the human suffering, loss of life and falling productivity this entails. Moreover, if the problem of HIV/AIDS is not addressed, these countries will also forego the important and much-needed opportunity for rural economic growth and poverty reduction that fisheries can provide.

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