

Crossing institutional boundaries: mapping the policy process for improved control of endemic and neglected zoonoses in sub-Saharan Africa

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The recent adoption of the World Health Assembly Resolution 66.12 for neglected tropical diseases (NTDs) in May 2013 is an important turning point for advocacy regarding a number of endemic zoonotic infections, defined by the World Health Organization as the neglected zoonotic diseases (NZDs). In addition to NTD-listed zoonoses such as rabies, echinococcosis (hydatid disease), leishmaniasis, Human African trypanosomiasis (sleeping sickness) and *Taenia solium* cysticercosis, the NZDs also include important bacterial zoonoses such as anthrax, bovine tuberculosis and brucellosis. To date, analysis of the processes that prioritize, develop and deliver zoonoses control programmes in many low- and middle-income countries is lacking, despite its potential to highlight significant evidence gaps and institutional constraints to the intersectoral approach required for their control. Policy process analysis was conducted via a series of semi-structured interviews with key policy actors within various ministries and institutes in Uganda and Nigeria. The study concluded that despite the rhetoric around 'linear' models of health policy development promoting consultation with a wide range of national stakeholders, the decision-making process for zoonotic disease control appears instead overtly influenced by the external political economy of trending pandemic threats, often overlooking national and regional zoonoses priorities. The inclusion of political systems remains a key factor in the zoonoses analysis matrix, enhancing our understanding of the intersectoral and transdisciplinary approaches required for their control. The authors consider policy process analysis to be a fundamental first step of any attempt to holistically strengthen human and animal health systems in a development context, particularly regarding the promotion of integrated control policies for regionally important zoonoses under the growing One Health movement.

Keywords Global Health Governance, global public goods perspective, health policy, health systems research, neglected zoonotic diseases, One Health

KEY MESSAGES

- Understanding the processes by which policy is developed to control the neglected zoonotic diseases (NZDs) across endemic regions is an important starting point for recommendations for their control, particularly given the multi-sectoral, multi-actor approaches required.
- Policy processes remain poorly understood in many developing countries, particularly regarding implementation of the One Health approach for zoonotic disease control at the human–animal–ecosystem interface.
- Policy development in Uganda and Nigeria’s public health sectors are highly influenced by external donors, the prevailing political economy and lack of evidence for funding many alternative disease options.
- A shift in institutional thinking is required to increase the profile and gain political support for control of zoonotic diseases important to individual countries or regions, despite their not necessarily being of ‘global’ importance.

Introduction

Zoonotic diseases—diseases that transmit between humans and animals—have been the cause of important human health issues for centuries (King *et al.* 2004; Steele 1964). More than 60% of human infectious diseases are believed to arise from domestic or wildlife animal origin, with emerging infectious diseases being more than twice as likely to be zoonotic (Taylor *et al.* 2001). Recent epidemics of emerging zoonoses such as sudden acute respiratory syndrome (SARS) and the highly pathogenic avian influenzas (HPAI) have resulted in mass political action, international advocacy and funding for their control under various global ‘One Health’ frameworks (CDC and EU 2011). The One Health movement has gained momentum in recent years, evolving from its roots in One Medicine to promote intersectoral collaboration and a ‘whole of society’ approach to Global Health Governance (Zinsstag *et al.* 2005, 2007; Scoones 2010; CDC and EU 2011; Lee and Brumme 2012). Political vigour towards zoonotic disease control under One Health appeared to escalate in 2005 after David Nabarro’s dire warning that essentially reframed the HPAI policy debate ‘from a problem of chicken farmers and hygienically inadequate markets in East and Southeast Asia to one that could affect everyone’ (BBC 2005; Scoones and Forster 2007). The 2008 multi-partner One World One Health Strategic Framework (FAO/OIE/WHO/World Bank/UNICEF/UN System Influenza Coordination 2008) is a striking example of the ‘significant policy shift’ that took place internationally at the time (Chien 2013). Despite such well-intentioned initiatives, concern remains that the ‘big politics’ of stamping out intermittent disease outbreaks continues to dominate global health policy dialogue, neglecting various livelihoods and systems-based approaches that are arguably more pertinent to developing economies or endemic situations (Scoones 2010; Mwacalimba 2012; de Savigny *et al.* 2004). Having said that, evidence that the processes for zoonotic disease prioritization and control are being framed through a more organic, transdisciplinary movement that encourages and incorporates alternative models for policy and practice, such as pattern-based and participatory assessments, is growing (Leach and Scoones 2013). A group of diseases that could potentially benefit from this latter approach are the politically ‘neglected’ endemic zoonotic diseases including rabies, echinococcosis (hydatid disease), *Taenia solium* cysticercosis (pork tapeworm), anthrax, leishmaniasis, brucellosis, bovine tuberculosis and Human African trypanosomiasis (sleeping sickness). The NZDs have been attributed to much greater chronic regional

disease burdens when compared with recent outbreaks of emerging zoonoses such as HPAI and SARS, particularly in poor rural societies across the world (Hotez *et al.* 2009; WHO 2009; Okello *et al.* 2011).

Gaining advocacy and political traction for zoonotic disease control in the absence of a pandemic threat has proven difficult. This is particularly true for the NZDs endemic to many developing countries, given the total cost benefits of control—such as improved livestock health and productivity—are difficult to quantify (WHO 2006, 2009; Mablesen *et al.* 2014). The result is that neglected and endemic zoonoses tend to ‘fall between the gaps’ of human health and livestock sector responsibility, given their control depends on mutual co-operation of a wide range of health stakeholders whose mandates and priorities can greatly differ (WHO 2009). Confusion currently exists as to where leadership and funding for zoonoses should come from, particularly in countries harbouring large burdens of co-endemic disease that stand to benefit the most from integrating human and animal disease surveillance and control mechanisms. ‘Neglect’ is further exacerbated by the dearth of accessible and affordable private veterinary services across Africa; current zoonoses control models often rely heavily on owner initiative and effective delivery systems of private goods and services to animal reservoirs. Examples include the vaccination of domestic species against rabies or brucellosis, or trypanocidal treatment of cattle against zoonotic Human African trypanosomiasis (Roth *et al.* 2003; Cleaveland *et al.* 2006; Selby *et al.* 2013). The availability of intersectoral platforms and an analysis of the associated policy development processes that could drive such initiatives forward under One Health are becoming increasingly important to understand, especially in developing and middle-income countries with rapidly changing agricultural systems that perpetuate disease risk at the human–animal–ecosystem interface. Beyond the complex changing socioecological and socio-economic systems within which the NZDs are manifested, an inherent bottleneck to control remains our understanding of the underlying governance issues involved. The lack of national capacity and long term zoonoses funding commitments, limited information capture and flow, inter-departmental competition, and the largely unknown processes by which policies for zoonotic disease prioritization and control are developed all inhibit alleviation of the NZD burden in affected countries. A major objective for this research was to therefore develop an

understanding of the processes of policy development for zoonotic disease control in Uganda and Nigeria, identifying potential bottlenecks and influential ‘champions’ for the promotion of joint policies, and establishing whether One Health approaches already exist—or could potentially be accommodated—within the current policy processes in these countries.

Both Nigeria and Uganda have a significant history of zoonotic disease challenges; in 2006, Nigeria was the first African country to diagnose H5N1 avian influenza, whilst Uganda has faced recent anthrax and Ebola outbreaks coupled with the ongoing challenges of zoonotic Human African trypanosomiasis as described by Picozzi *et al.* (2005) amongst others. Despite the obvious sociopolitical and geophysical differences between Uganda and Nigeria, both countries experience similar development challenges and host valuable, yet neglected livestock sectors (WHO 2009). Moreover, the state of the public health and veterinary sectors in both countries epitomize the systemic weaknesses common across much of sub-Saharan Africa that hinder policy enforcement for the surveillance and control of both human and animal disease.

Policy processes in most developing countries remain poorly understood (Keeley and Scoones 1999,2003; Young 2005); more so for complex interactions that bridge multiple disciplines, sectors and actors such as those necessary to address zoonotic disease challenges. The ways in which actors develop policy narratives within the constraints of a certain political context lies ‘at the heart of the policy process’ (IDS 2006). An improved understanding of the policy process can help broaden health policy dialogue to encompass a ‘greater range of perspectives’ (IDS 2006) and through doing so, define how zoonotic diseases—particularly those endemic across the African continent—can gain more political traction in health and development decision-making processes. A policy process framework developed by Sussex University’s Institute of Development Studies (IDS) Environment Group (2006) was followed for this research, whereby three overlapping perspectives of policy analysis were considered (Figure 1). It is through this adapted framework that the evidence and conclusions discussed within this article are structured.

Methods

Empirical data from policy makers at the national and sub-national ministerial levels in Uganda and Nigeria was collected

through a snowball sampling technique (Blaikie 2010, p. 179). Semi-structured interviews ($n=26$) were undertaken with key informants at various levels of health and agriculture governance in each country, together with members of international agencies, academia, national research institutes and the private sector. Community perspectives, particularly regarding participation in the consultation process and local impact of policy decisions, were sought via a series of Focus Group Discussions ($n=29$) with local communities in the Ugandan and Nigerian project areas. The primary objective of the research was to understand the processes by which veterinary and human health policies are developed; or simply, ‘how policies are made’. This enabled a greater understanding of the impact and processes by which inter-ministerial collaboration for zoonotic disease control occurs—and could occur in the future—particularly regarding the current global activity in the One Health space.

Results

Current global discourses and narratives for zoonoses control: One Health—integration, collaboration and international collective action as a means to tackle 21st century health issues at the human–animal–ecosystem interface

Applying the theoretical framework outlined in Figure 1, the first step was to frame current national approaches to zoonotic disease control in Nigeria and Uganda in the context of dominant international narratives regarding the intersectoral collaboration required for their control. One Health immediately surfaces as a prominent global movement in recent years, promoting international collective action to address the increasing burdens on human health from zoonotic disease; notably HPAI, and more recently in the context of endemic and neglected zoonoses in developing countries (WHO 2009; Okello *et al.* 2011; Gibbs 2014; Okello *et al.* 2014). The term ‘One Health’ has evolved to acknowledge the close relationship between humans, animals and the natural, political and socioeconomic environments in which they coexist. One Health advocates maintain that disease control as a result of intersectoral collaboration between the veterinary, medical and environmental sectors results in added benefits to each individual sector (Schelling *et al.* 2005; Zinsstag *et al.* 2005). To date, the One Health movement has been largely driven by

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- i) **Discourses and Narratives:** What are the major overlying international policy narratives connecting African zoonotic disease priorities to that of global agendas?
 - ii) **Actor-Networks:** Who is involved in the policy making process for public health issues in Nigeria and Uganda, and how are they connected?
 - iii) **Politics and Interests:** What is the political context currently surrounding zoonotic disease control in Uganda and Nigeria?

Figure 1 The policy process framework used in this research. Adapted from IDS (2006).

western powers, in particular North America and Europe, with political endorsement from international bodies such as the World Organisation for Animal Health-Food and Agriculture Organization-World Health Organization (OIE-FAO-WHO) tripartite. Whilst high-profile International Ministerial Conferences on pandemic influenza viruses have been held in Beijing (2006), New Delhi (2007), Sharm-El-Sheikh (2008) and Hanoi (2010) amongst others, specific events to mould and drive political and financial support for One Health have been largely hosted by the west. Examples include the Winnipeg (2009), Stone Mountain (2010), Melbourne (2011), Atlanta (2011) and Davos (2012, 2014) One Health meetings; with the Second International Congress (Bangkok 2013) the only event of this type not hosted by a high-income-Organisation for Economic Co-operation and Development (OECD) country to date. Until now, international policy discourse for zoonotic disease control has remained largely focused on emerging pandemic threats under health securitization narratives and the ‘broad consensus’ that One Health is a public good (CDC and EU 2011).

Whilst the ‘One Health as a public good’ narrative certainly promotes the international collective action required to operationalize One Health on a global scale, it can only apply to situations where disease control in one country is ‘beneficial’ to another; e.g. eradicable diseases such as polio, disease of trade such as bovine spongiform encephalopathy (BSE), and ‘swiftly moving’ diseases such as SARS and HPAI (Smith and McKellar 2007). Despite therefore being appropriate for some diseases in some circumstances, global public goods (GPGs) also have the potential to propagate vertical approaches to health challenges and neglect other national or regional priorities, as seen with the international response to H5N1 HPAI. This is in direct contrast to the wider One Health philosophies that promote transdisciplinary and more holistic approaches to health outside of a crisis situation, shown to be successful in a growing number of cases (Bechir *et al.* 2004; Scoones 2010; Leach and Scoones 2013; Okello *et al.* 2014). Furthermore, whilst defining One Health as a GPG could certainly aid international decision making and policy development through facilitating partnerships and alliances between developed and developing countries, care must be taken to ensure that such a definition carefully navigates the real risk of ‘global’ disease responses being perceived as simply promoting the self-interest of particular countries—predominantly North America and Europe—thus potentially discouraging many low- and middle-income countries from engaging in the One Health movement.

The second consideration for national policy makers concerns current issues with One Health governance. With a general consensus from the 2010 Stone Mountain meeting that One Health is not ‘owned’ by any single organization or institution, a requirement for governance of the approach has nevertheless been acknowledged (Lee and Brumme 2012) amidst claims that ‘understanding what is going on with One Health has become mission impossible’ (CDC and EU 2011). The One Health Global Network Working Group was one of several formed at the 2010 Stone Mountain meeting to tackle the governance challenges of One Health operationalization, with the objective to ‘advocate and garner international support for One Health through a network that serves as a vehicle for further global collaboration’ (CDC and EU 2011). Given policy makers are more likely

to heed the recommendations of an epistemic community that ‘represent a consensus of opinion’ (Sutton 1999), it is important that agencies and associated stakeholders promote a united front if One Health is to be considered a suitable framework for the control of nationally and regionally important infectious diseases under a truly global movement. In essence, notwithstanding the struggles with leadership, governance and ownership that come at the early stages of any shift in institutional thinking, One Health’s application and relevance to current health issues—particularly in developing countries with an extensive list of health and development priorities—may be diluted unless current governance concerns are addressed.

National actors and networks for zoonoses control: identifying the gate keepers of health policy in Uganda and Nigeria

As described in Introduction, both Uganda and Nigeria have significant histories of response to important zoonoses outbreaks. However, to contextualize the empirical evidence from this study, it is necessary to compare and contrast the political dynamics of the human and animal health systems of the two countries, particularly regarding government structure, donor dependence and zoonotic disease prioritization. Interviews with state and non-state actors in Uganda and Nigeria confirmed that the ‘official’ policy process in both countries comprises a series of steps that involve growing levels of consultation and agreement by a range of government, industry and local community actors; not unlike the ‘conventional’ view of policy as portrayed by Wolmer and Scoones (2005). However, on closer examination, the actual process resembles more closely Clay and Schaffer’s 1984 portrayal of policy as a ‘chaos of purposes and accidents’ (quoted in Wolmer and Scoones 2005), whereby the influence of external actor networks and global mandates can often overwhelm national decision makers.

Uganda’s government system, led by President Yoweri Museveni’s National Resistance Movement (NRM) since 1986, has been described as semi-authoritarian; occupying ‘a middle space’ between democracy and authoritarianism, distinguished by their ‘lack of consistency in guaranteeing civil and political liberties’ (Tripp 2004). Museveni’s rule has seen political and administrative decentralization structures in place since The Local Government Act was passed in 1997, which resulted in a transfer of power to the district level for all its line ministries, including health and agriculture. Although Uganda’s decentralized structure can potentially promote greater consultancy of local actors in the policy process, it has also been attributed to various policy inefficiencies within both the health and agricultural sectors. Interviews and several publications have alluded to a process of ‘recentralization’ of veterinary services in recent years; however, it is yet to be fully implemented, with confusion amongst various district-level implementers cited as the reason for impediment. Similar calls for greater central control have been echoed in Uganda’s human health sector, where the high reliance on aid flow through several levels of decentralization has impeded the timely development of health sector capacity (Christiansen *et al.* 2007).

In contrast, Nigeria has a federal setup, consisting of 37 states divided into 774 local government authorities (LGAs). Although

both the Ministries of Health and Agriculture are represented down to the LGA level in Nigeria, local policies are generally directed and funded by state management, with resource restrictions appearing to dilute the support of both human and animal health at the community level (informant interviews, Nigeria). Nigeria's federal structure has shaped the delivery systems for both human and animal health in the country; with all three tiers of government involved to various degrees in the delivery, management and financing of health (Olaniyan and Lawanson 2010). The setup for human health, although not recognized by law, is that tertiary health care is the responsibility of the federal government, whilst the state and LGAs co-ordinate health services at the secondary and primary levels, respectively (Olaniyan and Lawanson 2010). In the animal health sector, whilst most disease control is co-ordinated at the state level, transboundary animal diseases (TADs) and diseases of national economic importance (DNEI) are governed under federal law, providing a means to co-ordinate control for diseases affecting many states, such as what occurred during the HPAI response in 2006 (key informant interview, Nigeria).

The two countries also differ markedly in their reliance on donor aid for health expenditure, with Nigeria's 'encouraging' low levels in stark contrast to the situation in Uganda, or indeed many African countries; in 2005, the donor contribution to Nigeria's total health expenditure in the country was <1% (Olaniyan and Lawanson 2010). Moreover, the country has almost double the per capita health expenditure compared with Uganda; figures from 2009–13 show an expenditure of 80US\$ in Nigeria compared with Uganda's 42US\$ (World Bank 2014). In comparison, Uganda's healthcare system is heavily dependent on overseas aid; from the Government of Uganda's total health sector budget of US\$312 million in 2008/09, ~US\$116.8 million was donor-funded (MoH Uganda 2009). There is also clear evidence to suggest that off-budget aid through various Global Health Initiatives and other vertical programmes overwhelms on-budget aid in Uganda's health sector (Christiansen *et al.* 2007; Marchal *et al.* 2009). For example, in 2005, Uganda's entire Ministry of Health budget (\$112 million USD) was swamped by the \$167 million USD HIV/AIDS funding from the World Bank, the Global Fund and the US President's Emergency Plan for AIDS Relief (PEPFAR) (Marchal *et al.* 2009).

At first glance, Uganda's process of policy development appears largely participatory and needs-driven; once the technical issue has been identified, district government representatives obtain the inputs of local stakeholders (e.g. farmers in the case of agricultural policy) from a sample of districts across the country to 'identify issues that are concerns of the local people' (informant interview, Uganda). Local Councillors (LCs) at the parish and even village levels in Uganda (LC2s and LC1s, respectively) have an opportunity to produce policy development workplans for submission to the district councillor (LC5), who can then forward them onto Entebbe for discussion at the central level. A draft policy addressing the relevant issue is subsequently drawn up and presented to a wider consortium of actors and networks, including technocrats in sister ministries, Non-Government Organizations and United Nations agencies for review and consolidation over the course of a one or two day meeting. Upon agreement, a legal draft is drawn up by the

Ministry of Justice, which is then sent to the Permanent Secretary, whose role is to then 'sell' the policy to the minister (informant interview, Uganda). In the event, a policy requires legislative amendment or the creation of a new law for implementation, the process of enacting a bill can slow the process even further;

"it takes time, even some years, but depending anyway on how active the policy actors are—we have seen some laws enacted in record time" (informant interview, Uganda).

In Nigeria, the annual meeting of the National Council of Agriculture (NCA) is the uppermost platform for agricultural policy decisions, including livestock development and zoonotic disease control. The NCA is a body consisting of ministers, policy makers and state commissioners, seated at the federal government level, where technical experts and policy advisors assist the ministerial heads to determine national agricultural policies, officially through an interactive process using information and research evidence fed in from each of Nigeria's 37 states. Memos presented to the NCA are first approved by the National Livestock Development Council (NLDC), comprising of a committee of mostly veterinarians. NLDC communications are presented by the state Chief Veterinary Officer, but can come from any stakeholder group concerned with a particular issue, e.g. farmers' associations, government health services or the private sector. If the NCA agrees to support a proposed policy, the funding arrangements are agreed through the Financial Allocation Committee and an implementation process will appear within a legally binding NCA agreement.

The National Council of Health (NCH) is the higher human health policy-making body in Nigeria, chaired by the Minister of Health, who will present the proposed policy to the Federal Executive Council (a platform represented by all ministries in the country) for agreement and adoption. In contrast, Steering Committees comprising a variety of state and non-state actors also have the power to develop policies, which are subsequently signed off by the Health Minister. Policy decisions for many zoonotic diseases fall into this latter category, coming under the mandate of the Neglected Tropical Disease Steering Committee (formed by managers of the various Ministry of Health NTD programmes, along with academic and international representation from international agencies). Similar to the Ministry of Agriculture, policies within the Ministry of Health are generally formed according to a defined need:

"there's a lot of research, a lot of enquiries are made, after which (issues) are presented of course from the lowest level to the state level and then to the federal for consideration" (informant interview, Nigeria).

Other responses contradicted this however, indicating that despite the rhetoric, participation in the policy process can be low even for those working at the Federal level of government;

"you are asked to have an input but before you are done (the policy) has already gone through." (informant interview, Nigeria).

At the time of research, respondents from both Uganda and Nigeria could cite few examples of available intersectoral platforms or processes through which zoonotic disease control policies could be specifically discussed and developed in these countries. Apart from a small number of exceptions (notably zoonotic Human African trypanosomiasis in Uganda, see Okello *et al.* 2014), zoonoses were either included under general animal disease control policies in the Ministries of Agriculture, and/or addressed separately within the Ministries of Health under various NTD mandates; the latter having the potential to overlook several important zoonoses by the human health sector (Mablesen *et al.* 2014). In Nigeria, respondents agreed the Federal Ministry of Health could be represented at the NCA for the purposes of memos involving inter-ministerial collaboration; e.g. in March 2011 a memo was presented calling for ‘Control of zoonotic diseases in the light of One World One Health initiative’. However human health representation at the agricultural policy decision-making level appears skeletal at best, with dialogue around joint policy processes reflecting token appearances from the corresponding ministries rather than any concrete inputs and planning for policy funding and implementation.

Competing politics and interests: external agenda-setting and the ‘Erosion of Technical Authority’

In terms of setting the international health agenda, the World Health Organization—through the World Health Assembly—is still considered central to Global Health Governance (Ng and Ruger 2011). However, the rising stake of public–private partnerships, philanthropic organizations and non-governmental bodies in priority setting and decision making has challenged traditional models of health governance in recent years, allowing an increased number of ‘de facto’ health actors a stake in the decision-making process and raising larger questions around who exactly decides health policy, and how (Buissonnière 2012; Lee and Brumme 2012; Lidén 2014).

At the national levels in Uganda and Nigeria, further discussion with representatives of several government and non-government institutes suggested that despite the ‘linear’, largely consultative process of policy development portrayed in the aforementioned section, in fact only a small number of actor-networks could exert a truly dominant influence over the current processes for human and animal disease control, resulting in the exclusion of several important stakeholder groups. Informants in both countries, particularly Uganda—possibly as a result of the aforementioned greater reliance on donor health assistance—revealed feelings of a growing tendency to promote health policies ‘based on theories’ of the external donors, as such circumventing the policy process altogether given ‘the political decision is made prior to the process’ (informant interview, Uganda). One respondent described the growing ‘erosion of technical authority’ in recent years; describing how the entry point for health policy decisions ‘used to be from the technical wing’, however now the donors ‘just come, sit in the Ministry of Finance, discuss with those economists, make their decision and go away’ (informant interview, Uganda). A non-government respondent at the community level in Nigeria was openly frustrated by the

current processes for health policy; ‘Policies are the problem. They are not applicable to the field situation... poorly implemented and with very little enforcement... it is the vulnerable that suffer, the poor and ignorant are most at-risk of poor decision at the policy level’ (informant interview, Nigeria). A high profile agricultural programme in Sub-Saharan Africa was another key example of external influences on the policy process; despite being initially ‘rejected by technocrats’ due to concerns it was over-ambitious for the available systemic capacity at the time, the programme was nevertheless pursued by the donors and eventually accepted;

“(the money) acted as a bait for some of the policy makers to accept... you know the thing doesn’t work, but because the politicians are supporting it, the donors are supporting it, you come out publicly and say it will work” (informant interview, Uganda).

This aligns with previous observations regarding the reluctance of national decision makers to refuse external funding for specific globally mandated disease control programmes ‘even if that disease is not a significant concern in the area’ (de Savigny *et al.* 2004).

A series of interviews and Focus Group Discussions ($n=29$) at the community level in both countries also supported the perceived disconnect between policy and practice at the ground level in the two countries. There was little evidence of local community understanding—and more importantly participating—in formal policy processes for animal and human disease control, with respondents largely aligning with the view of policy making as ‘the mystique of elites’ (Clay and Schaffer 1984, quoted in Sutton 1999). As one FGD respondent stated;

“Policies are supposed to be designed from the grass roots. But most of the ideas, most of the policies are made without consulting the local people; they just assume people want this. The politicians are supposed to talk to their people, the heads of department, the professionals; they are also supposed to be asking the people what they want, but it’s rarely done. At least I’ve never seen them coming here to consult; they just come and say ‘this is the policy’” (FGD participant, Uganda).

A similar exclusion from the policy process was apparent at the community level in Nigeria, with respondents revealing that people outside the ministries had ‘little access to policy makers’, with consultations rarely, if ever, occurring between the government and the public;

“They claim to do it but it’s not really done. If it ever is done, the information is not used in policy” (FGD, Kaduna State Nigeria).

When questioned about the perceived lack of consultation with local communities during the policy process, a several respondents admitted that whilst the ultimate aim was for communities to become as engaged as possible, inadequate funding appeared to be one bottleneck as to why such consultation rarely occurs:

“It requires a lot of money, going to talk to the people” (informant interview, Uganda).

Discussion

The analysis undertaken in this research aligns with previous observations of four key areas where the policy process in developing countries could potentially be influenced: the political context, problems of research supply and communication, ‘exaggerated’ donor influence and civil society organizations (Young 2005). Drawing together the three sections of the IDS framework, it appears that whilst opportunities to drive inter-ministerial collaboration for zoonoses control may exist in both Uganda and Nigeria, the importance of engaging a wide range of stakeholders appears to be underestimated, particularly by ‘high level’ decision makers and donors seemingly most able to direct the policy process. Furthermore, analysis of the policy process in this way reiterates the requirement for additional evidence on the extent of the zoonoses burden across Sub-Saharan Africa, and the potential cost savings to both the human and animal health sectors as a result of their control. Interestingly, the empirical evidence also reinforces the previously observed disconnect between dominant global human and animal health policy narratives; whilst human health maintains an overwhelming focus on pandemic threats and the ‘big three’ (HIV/AIDS, Tuberculosis (TB), Malaria) (Molyneux 2008), the livestock sector remains largely influenced by trade-associated TADs such as Rinderpest and Foot and Mouth Disease, emulating the OIE-FAO-WHO-led ‘safe trading in livestock’ narrative (IDS 2006). These contrasting dominant international narratives, coupled with a further separation of the policy process at the national level due to the lack of available integrated platforms and consultation processes, means it is little wonder that endemic zoonotic diseases are under-reported and inadequately prioritized in the current health agendas of many developing countries;

“Policy for disease control is still trying to be streamlined. Contingency plans exist for high profile diseases such as HPAI and Rinderpest; however no official policies exist for control of zoonotic disease” (informant interview, Nigeria).

Comparing the narratives that determine and drive zoonoses action at the international and national health governance levels also highlights an observed disconnect between the rhetoric promoting international collective action to ‘safeguard the planet’, and the realities of addressing the high—but often locally specific—burdens of endemic zoonotic disease in sub-Saharan Africa. It was found that whilst policy makers in both countries felt inclined to align zoonoses efforts with trending global health narratives regarding pandemic preparation, this in fact allows little opportunity to prioritize other nationally important zoonotic diseases. Similar experiences have been documented from other sub-Saharan African countries, e.g. the Zambian response to HPAI as described by Mwacalimba (2012), and more general criticisms around the ‘narrow definition’ of the current global health agenda, with claims that Africa-specific threats are being excluded in favour of ‘the interests of high-income countries’ (Hwenda *et al.* 2011). In the event national zoonoses priorities are considered, it appears that budgetary support and action is more easily justified for zoonoses that negatively affect the tourism industry or other aspects of the economy; as long as the neglected and endemic zoonoses remain relatively ‘out of sight’ in rural areas ‘everyone

will keep quiet’ (FGD, Uganda). Human African Trypanosomiasis was used as a pertinent example;

“Trypanosomiasis will continue not to attract much attention of both national government and probably the international agenda...so long as tourists don’t get infected when they go to the national park!” (informant interview, Uganda).

The lack of a united front between national human and animal health actors, possibly due in part to insufficient evidence of the true zoonoses burden in these countries, and the misalignment of dominant narratives from the international community, leads to inaction regarding national zoonoses priorities, allowing donors to further promote global pandemic preparedness narratives in the ensuing policy space. Where countries are more dependent on donor contributions, there is perhaps even less available ‘wiggle room’ to invest in national priorities. In contrast, less donor dependence arguably gives greater flexibility to promote evidence gathering and policy development in line with national zoonoses priorities; however, attempts at this are still marred by low advocacy for the endemic zoonoses and reactive rather than preventative attitudes to health ‘there is no preparedness—we work out things when there is crisis’ (informant interview, Uganda). Interestingly, given the high clustering of many endemic zoonoses as a result of risk factors associated with tradition, cultural practices or environmental circumstance, greater decentralization potentially provides a vehicle to ensure local priorities are better addressed. Again, lack of awareness and evidence the problem exists, coupled with inadequate ownership of funding at local governance levels to address issues in a sustainable way, have restricted progress on this possibility to date.

The aforementioned lack of joined-up platforms to discuss nationally or regionally important zoonoses, coupled with varying levels of decentralization that could improve—or in some cases possibly hinder—the roll-out of ‘national’ control programmes, means that identifying and defining the roles and responsibilities between the health and agricultural sectors for zoonoses surveillance and control remains vitally important. It is clear in both countries that despite the enthusiasm in principle for a greater focus on zoonotic disease control, a ‘very big gap’ still exists between the human and animal health actors;

“the health people are saying that it’s the work of the vets, but the vets are also saying that it’s the work of the health people. So, there is some gap there, there’s nobody who is really sensitizing the communities as to who’s at risk of the problem” (informant interview, Uganda).

Whilst respondents from both the human and animal health sectors overwhelmingly agreed that intersectoral collaboration under a One Health framework for zoonoses control makes sense, institutional barriers and finance systems remain tenacious in both countries;

“If you go to the Ministry of Health and ask to budget for animal treatment they will think you are crazy. But actually when you treat the animals your target is to protect the human beings—it has nothing to do with the animals. Until I see the Ministry of Health putting a budget line to control animal disease presumed to

be more of a risk to the people than the animal, that's when I will believe in One Health" (informant interview, Uganda).

Conclusion

A number of events in recent decades including rapid globalization, securitization of major global health issues and the growing influence of non-traditional health actors have necessitated innovative approaches towards global health. It is within this complex maze of interactions that interdisciplinary movements such as those advocated by One Health could potentially oversee or even 'radically transform' Global Health Governance, given its commitment 'to institutional boundaries within and across human, animal and environmental health' (Lee and Brumme 2012). If there is a genuine role for One Health to 'remedy, and not be subsumed by, existing functions in Global Health Governance' (Lee and Brumme 2012), further clarification is required regarding the roles and responsibilities of animal and human health institutions and organizations, and their 'rules of engagement' at the human–animal–ecosystem interface at all governance levels.

The observations surrounding national policy processes discussed in this article are likely consistent for many developing countries, particular in sub-Saharan Africa where the lack of state capacity and a poorly performing private veterinary sector affects the ability for governments and private actors alike to respond to the plethora of human and animal health demands. The prevention and control of endemic and neglected zoonoses under a One Health approach could simultaneously address some of these systemic challenges of human and animal health service provision, framing policy narratives and practice for zoonoses control in individual countries rather than a means of preventing global disaster. The institutional shift in thinking required to realize this however is 2-fold; vertically between donors and recipient governments, and horizontally within national government offices and regional alliances.

This research highlights the importance of understanding the policy process to promote innovative, multi-sectoral approaches to zoonotic disease control, simultaneously identifying bottlenecks and local 'champions' which could, respectively, prohibit or progress zoonoses control at regional or national levels. Further policy research into the complex multi-sectoral, multi-actor co-ordination required for zoonoses control could help improve the implementation of One Health and zoonoses control more generally; e.g. detailed case studies that map zoonoses responses as they happen and that focus on the barriers and conduits to control. The promotion of innovative approaches to human and animal health service delivery in line with 21st century challenges is anticipated to be a slow—but nevertheless important—course of action that should be actively pursued in coming years by health and development actors and donors alike.

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Ethical Approval

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