Analysis of Regional Stakeholders on Vector-borne Diseases and Vector Control in Africa for the Programme for Increasing the Impact of Vector Control (PIIVeC)

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Executive Summary

Vector-borne diseases are illnesses transmitted by mosquitoes, ticks, tsetse flies, lice, snails etc. Africa is disproportionately affected by vector-borne diseases, with most deaths occurring among children under five. The main vector-borne disease in the continent include malaria, yellow fever, dengue and HAT. The Partnership for Increasing the Impact of Vector Control (PIIVeC) programme seeks to reduce the burden of vector-borne diseases through effective, locally appropriate, and sustainable vector control. The objective of this stakeholder analysis was to identify key regional stakeholders and assess their interest and influence in vector-borne disease programmes and policies in Africa. This stakeholder analysis was based on a rapid desk review of policies, strategies, programmes and other relevant information from the various stakeholders. Based on these reviews, we scored stakeholders' interests and influence in vector-control and vector-borne disease policies and programmes in the continent. The results show the stakeholders that provide strategic advantage to PIIVeC as partners for regional engagement and evidence uptake. The resuts reveal that PIIVeC needs to prioritise engagement with WAHO, ECOWAS, WHO AFRO and Elimination 8, which have both a high interest and influence in vector control policies and programmes in the region. Leveraging on the interest and influence of these stakeholders in decision making spaces in the region could push the PIIVeC agenda forward. The second set of stakeholders to engage are AU, ECCAS, SADC, EAC, Africa CDC and NEAPACOH. This second group has significant influence on vector control policies and programmes, but their interest is relatively lower than the first group. Engagement with these stakeholders should involve consultations and information sharing to increase support and prioritisation of vector control. The third group of stakeholders to engage include PAMCA, AMMREN and ARNTD, which have a high interest in vector control but are guite limited in their influence of vector control policies in the region. These groups are essentially composed of vector-borne disease research organisations and should be kept adequately informed about PIIVeC's activities and findings. The findings of this stakeholder analysis demonstrates that PIIVeC has an opportunity to work with these key stakeholders in the region to bring about the desired changes in vector control research and policy. Stakeholders with promising potential to contribute to PIIVeC's broad objectives have been indicated as priority stakeholders along with their relevant platforms.

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Vector-borne diseases	Estimated annual cases	Estimated annual deaths
Malaria (mostly Africa)	212 000 000	429 000
Schistosomiasis	207 000 000	200 000
Dengue	96 000 000	9 100
Lymphatic Filariasis	38 464 000	NA
Onchocerciasis	15 531 500	NA
Zika Virus	500 000	NA
Yellow Fever (mostly Africa)	130 000	500
Trypanosomiasis (mostly Africa)	10 700	6 900

Table 1. Global vector-borne disease burden

Source: WHO, 2017; NA=Not available

The Programme for Increasing the Impact of Vector Control (PIIVeC)

The Programme for Increasing the Impact of Vector Control (PIIVeC) aims to reduce the burden of vector-borne diseases in low and middle-income countries through effective, locally appropriate, and sustainable vector control. PIIVeC recognises that to achieve its objective, there is need to strengthen local research capacity and to have a solid evidence base. The programme also recognises the need to engage stakeholders, enhance surveillance and monitoring, and efficiently scale-up new interventions and integrated approaches. By reducing the vector-borne diseases burden, PIIVeC will directly contribute towards achieving Sustainable Development Goal (SDG) 3 in Africa; safeguarding good health and well-being. Reducing vector-borne diseases will contribute to a healthy workforce which is critical for reducing poverty, increasing agricultural productivity to address hunger, maintaining a healthy life and contributing to development. A healthy population becomes innovative in developing strategies to further improve quality of life. Therefore, through the PIIVeC programme, the transformed communities will eventually work towards addressing other challenges and further contribute to achieving other SGDs. In addition, PIIVeC offers a platform for international collaboration and partnerships to achieve the SDGs.

Introduction

This report presents an analysis of regional stakeholders and their associated interest and influence on vectorborne disease (VBDs) programmes and vector control (VC) in Africa. Generally, the interest of many stakeholders and the related measures of vector control in the region are focused on malaria. This is understandable because Africa carries more that 90% of the global malaria burden, and malaria is by far the leading vector-borne disease in the continent (WHO, 2018). There is emerging interest among stakeholders and key actors in neglected vector-borne diseases such as dengue fever, schistosomiasis, trypanosomiasis, hookworm and onchocerciasis in the region. There is the need for collaboration among programmes and stakeholders involved in malaria and those focused on other neglected VBDs. Such a collaboration is critical for programmes and stakeholders to share experiences, develop areas of common interest and build integration beyond operational levels. Some areas to build integration include capacity strengthening of entomologists, communication and advocacy for VBDs at various levels in society and the need to promote VC as a basic strategy in reducing their burden. These programmes can pull together the scattered policy documents and develop a combined vector control policy covering all VBDs as advocated by the WHO (WHO, 2017).

Objective

The objective of this task under work package 4 of the PIIVeC programme was to identify the main stakeholders (including funders) in the vector-borne diseases policy development and advocacy landscape in Africa. In this assignment, we also examined the interests and level of influence of the various stakeholders with the intention of informing the regional stakeholder engagement and evidence uptake strategy of the PIIVeC programme.

Methodology: rapid desk review

The first phase of this stakeholder analysis involved a compilation of an initial list of stakeholders based on suggestions from members of the PIIVeC work package 4 team. We also identified other stakeholders through Google searches using the search terms: [vector-borne diseases OR Malaria OR neglected tropical diseases] AND [Strategy OR program* OR advoca* OR organi* OR network OR fund] AND [Africa] AND [Central OR East OR West OR South]. In addition, we searched the websites of stakeholders in our initial list for references to other stakeholders that could not be retrieved through our search.

After compiling the list of stakeholders, we retrieved and scanned through documents and information from each stakeholder to identify their policies, programmes and strategies on vector-borne diseases and vector control. We assessed the documents and information from each stakeholder to determine the extent of their interest and influence in vector-borne disease and vector control programmes and policies in the region. We then scored each stakeholder's interest and influence based a matrix developed by PIIVeC. The results of this stakeholder matrix show which stakeholders provide a strategic advantage as partners for PIIVeC's stakeholder engagement and evidence uptake strategy. It is important to note that our assessment is based solely on information retrieved from online searches. It is possible we have missed other stakeholders or information that might change our assessment of some of the stakeholders in this analysis. Further reviews and discussion of this initial analysis with the PIIVeC team and external stakeholders might help to refine the assessment of the stakeholders.

Results of the stakeholder analysis

Major funders

The burden and consequences of vector-borne diseases in Africa, particularly among the poor, calls for significant investment in VBD programmes in the region. Even though there are calls for collaboration among stakeholders and coordination of VC activities especially between malaria control programmes and other VBD programmes, funding has not expanded to implement such an approach. Much of the available funding still focuses on malaria programmes. Even then there is a huge funding gap for malaria. For instance, an estimated US\$ 5.8 billion is needed for essential commodities used in malaria vector control, diagnosis and treatment in 30 African countries over the next three years and out of this, US\$ 1.3 billion is not yet financed. Domestic funding for malaria is estimated at just 28% of total funding (WHO, 2018). In fact, only Cameroon and Mauritania

have succeeded in doubling their funding for malaria despite commitments to the Abuja declaration and the SDG agenda by many African countries (WHO, 2018). Compared to malaria, funding for neglected VBDs is negligible.

In light of the persistent funding gaps for vector-borne diseases, WHO recommends collaboration and coordination of VC activities for various VBDs in order to optimise resources (WHO, 2017). For instance, vector control measures such as indoor residual spraying and larviciding used mainly in malaria control can also be used to reduce the population of vectors that cause other related diseases. There is therefore the need to increase funding from both domestic and international sources in order to scale-up coordinated vector control interventions. Research and development (R&D) is essential for improving existing vector control products and developing new ones. Yet, African governments rarely budget for vector control R&D. The major international funders of studies on vector control measures include the Bill and Melinda Gates Foundation (BMGF), Wellcome Trust and the Global Fund. These funders are critical policy-influencing stakeholders to consider as part of our regional stakeholder engagement strategy.

Figure 1.0 Major funders of vector control research and development



Source: (MESA Track, 2020) https://mesamalaria.org/index.php/mesa-track?theme=921

Regional economic blocs

African Union (AU)

The African Union (AU) is the leading continental governance body in Africa. AU has several commitments and programmes for vector control and the prevention of vector-borne diseases, but the focus of many of these commitments and programmes are on malaria. AU's development work is guided by the Agenda 2063, which has set elimination of malaria by 2030 in Africa as a target (African Union, NEPAD, 2018; African Union, 2016). The AU envisions long-lasting insecticide-treated mosquito nets (LLINS) and indoor residual spraying as key vector control measures for preventing and reducing malaria transmission (African Union, NEPAD, 2018). The main initiatives of the AU to reduce malaria transmission are the African Leaders Malaria Alliance (ALMA) and the Zero Malaria Starts with Me campaign. The ALMA initiative recently included neglected tropical diseases (NTDs) which are mostly vector-borne into its scorecard in order to increase visibility in the fight against NTDs (Friedrich, 2018). The ALMA scorecard is a tool for monitoring performance and tracking bottlenecks in programme implementation for malaria control and elimination. With this inclusion, NTDs have been recognised as a top health priority for the continent, along with malaria (Friedrich, 2018). One of the challenges with the scorecard is the lack of data on key indicators such as insecticide resistance for many countries. ALMA has called for the establishment of national multi-stakeholder councils/commissions and high-level committees to

ensure stakeholder participation in the fight against malaria. These National End Malaria Councils (EMCs) are similar to PIIVeC's TVCAGs in that both are country-owned and led, and are comprised of high-level/senior representatives from multiple sectors. They function differently in that, EMCs convene senior leadership from multiple sectors to support the national malaria control programme and implementation of the national strategic plan for malaria elimination whilst TVCAGs advise the MoH on effective tools, strategies and interventions in vector control. Although this call is appropriate, it is not clear how many countries have heeded to it and established such groups. While the AU has shown commitment to addressing malaria and other VBDs through the ALMA initiative, the union does not have an explicit VC strategy for other neglected VBDs. In addition there is no evidence of collaboration between ALMA and other stakeholders involved in other VBDs, and there is no coordination of VC activities for malaria and that for other neglected VBDs as part of AU's strategy.

Economic Community of West African States (ECOWAS)

ECOWAS is composed of 15-member states in West Africa: Benin, Burkina Faso, Cabo Verde, Cote D'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo. ECOWAS established a West Africa Integrated Vector Management (WA-IVM) programme to strengthen vector control through increased inter-sectoral collaboration, capacity building and improved surveillance. The WA-IVM programme comprises of the ECOWAS Ministerial Council on Health, a WA-IVM steering committee, Technical Working Groups (TWGs) and a secretariat. The secretariat is run by the West African Health Organisation (WAHO) and supported by the New Partnership for Africa's Development (NEPAD). The establishment of the WA-IVM programme will provide a platform to harmonise vector-control policies, pool funding from various sources, bring together experts across fields and elevate vector control programme, for vector control is in line with PIIVeC's objective to bring together research institutes and national disease control programmes to develop evidence-based solutions for integrated vector control. While ECOWAS may represent a strategic stakeholder to amplify vector control efforts in West Africa, targeting the West African Health Organisation (WAHO), a specialised agency of ECOWAS, which hosts the WA-IVM secretariat might be more strategic.

Economic Community of Central African States (ECCAS)

ECCAS is composed of 10-member states in Central Africa: Angola, Burundi, Cameroon, Central African Republic (CAF), Chad, Republic of the Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Sao Tome and Principe, and Rwanda. ECCAS aims to promote and strengthen cooperation in order to realise a balanced and self-sustained economic development, particularly in the fields of industry, transport and communications, energy, agriculture, natural resources, trade, customs, monetary and financial matters, human resources, tourism, education, culture, science and technology and the movement of persons. ECCAS also aims to achieve collective self-reliance, raise living standards, maintain economic stability, foster peaceful relations between the member States and contribute to the development of the African continent (ECCAS, 2020). Health promotion in general and vector-control in particular does not seem to be a priority of ECCAS. This makes ECCAS a weak platform for policy engagement.

Southern African Development Community (SADC)

SADC is composed of 16-member states in Southern Africa: Angola, Botswana, Comoros, Democratic Republic of the Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia, and Zimbabwe (SADC, 2012). SADC's policies and frameworks on vector control and vector-borne diseases focus on malaria. These include the SADC Protocol on Health (1999), the SADC Malaria Strategic Framework (2007-2015), the SADC Malaria Elimination Strategy, the SADC Malaria Advocacy and Communication Framework and the SADC Regional Minimum Standards for Malaria. In addition, SADC compiles an annual malaria report to update progress on malaria control and elimination in the region. It is important to emphasize that SADC's policies and frameworks for malaria control are part of a broader strategy to address the three major causes of illness and death in the region: Malaria, HIV/AIDS and TB. Like AU, SADC has no elaborate policy or framework for addressing other vector-borne diseases. Thus, SADC's vector control measures are focused on the malaria vector. Even though the lack of policies on other vector-borne diseases represents a major gap in SADC, the commitment shown for malaria through the various policies and frameworks is an opportunity to engage SADC for other vector-borne diseases.

East Africa Community (EAC)

EAC is an intergovernmental organisation composed of six-member states in the African Great Lakes region in Eastern Africa: Burundi, Kenya, Rwanda, South Sudan, Tanzania, and Uganda (EAC, 2020). The treaty establishing the EAC sets a foundation for member countries to jointly implement disease control measures. The organisation has a strategy for communicable and non-communicable diseases including vector-borne diseases. In addition, EAC has a regional contingency plan for epidemics due to communicable diseases (2018-2023) which prioritises vector-borne epidemics such as malaria, yellow fever, trypanosomiasis and onchocerciasis. The EAC has a standing Technical Working Group on the Control and Prevention of Communicable and Non-Communicable Diseases which among other things seeks to strengthen cross-country and cross-institutional collaboration for the control and prevention of diseases including vector-borne diseases. The fact that EAC has policies and institutional arrangements which mention vector-borne disease as part of their areas of focus is an opportunity to engage the organisation for further prioritisation of vector control and vector-borne diseases.

Regional health bodies and organisations

World Health Organisation (WHO) Regional Office for Africa (WHO AFRO)

As one of the regions under the global WHO, WHO AFRO is a technical agency covering 47 countries in Africa. WHO AFRO contributes to policy development and provides technical support for controlling and preventing vector-borne diseases in member states in the region. As part of the regional strategy for the management of environmental determinants of human health (2017-2021), WHO AFRO prioritises the scaling up of integrated vector management strategies to reduce or interrupt transmission of multiple vector-borne diseases (WHO AFRO, 2017). Some of the vector control interventions that are being prioritised for scaling up include long-lasting insecticidal nets and indoor residual spraying; vector surveillance and the management of insecticide resistance (WHO AFRO, 2017). WHO AFRO has secured funding from the United Nations Environmental Programme to implement operational research and capacity building in integrated vector control in 14 African countries. In addition, WHO AFRO is supporting a five-year project, the Expanded Special Project for the Elimination of Neglected Tropical Diseases (ESPEN), to address five NTDs including two vector-borne diseases (Onchocerciasis and Lymphatic Filariasis). The increasing prioritisation of vector control and vector-borne diseases with the organisation.

Africa Centres for Disease Control and Prevention (Africa CDC)

In early 2017, the AU launched Africa CDC, Africa's regional public health agency (Africa CDC, AU, 2019). Africa CDC's work focuses on five strategic areas: public health research; laboratory systems and networks; information systems; emergency preparedness and response; and surveillance and disease intelligence (Africa CDC, AU, 2019). Malaria is listed as a priority disease which the Africa CDC seeks to address through strengthening surveillance systems (Africa CDC, AU, 2019). However, the organisation has no specific policy, framework or strategy for vector control or addressing multiple vector-borne diseases. In addition, the organisation is currently not involved in a project or programme for integrated vector control. While the lack of a policy, strategy or framework on vector-borne diseases represents a major gap, the organisation is relatively young which is an opportunity to spark Africa CDC's involvement in vector control and multiple vector-borne diseases. The Africa CDC has a framework for antimicrobial resistance (2018-2023) with accompanying surveillance networks. It is possible to initiate discussions for a similar framework and network to be established by the organisation if such discussions are already not in place.

West African Health Organisation (WAHO)

WAHO is a specialised agency of ECOWAS responsible for health issues. WAHO's vision is to "be recognised by the Member States and the International Community as a proactive instrument of regional health integration that enables high-impact and cost-effective interventions and programmes" (WAHO, 2016). WAHO's disease control programme identifies malaria and vector-borne diseases such as HAT, lymphatic filariasis, onchocerciasis and schistosomiasis as priority diseases that need to be controlled in order to reduce morbidity and mortality in the region (WAHO, 2016). As part of the efforts to control and prevent these diseases, WAHO is currently implementing a number of projects in the region. These include the Sahel Malaria and Neglected Tropical Diseases (SMNTD) project in Burkina Faso, Mali and Niger, and the Action Through Data project to integrate health data sources into a single database and strengthen cross-border health and epidemiological surveillance. Regarding vector control, WAHO currently hosts ECOWAS's new integrated vector management programme

(WA-IVM).

In addition to having programmes and projects that prioritise vector-borne diseases as well as the strategic advantage of hosting the region's vector control strategy, WAHO also has other strategic advantages as a stakeholder. These include having a direct line of communication with political decision makers in member states and the ability to advocate at the highest level for the adoption and implementation of health resolutions by member states. These comparative advantages make WAHO a very strategic stakeholder to engage if PIIVeC is going to have an impact in West Africa.

East, Central, and Southern African Health Community (ECSA-HC)

ECSA-HC is an inter-governmental health organisation that seeks to foster coordination between member states to address health needs (ECSA-HC, 2019). Vector-borne diseases including malaria do not appear to be prioritised by ECSA-HC. Therefore, the organisation has no policy, strategy or ongoing projects focused on addressing vector-borne diseases. This is a major gap in ESCA-HC's areas of focus, and it is also worrying given the persistence of malaria and the emergence of new vector-borne diseases in the region including the zika virus. ECSA-HC is therefore a weak stakeholder when it comes to vector control and vector-borne diseases in the region. PIIVeC's stakeholder engagement strategy should seek to demonstrate to ESCA-HC and its member states the need to prioritise vector-borne diseases in the work of the organisation.

Network of African Parliamentary Committees of Health (NEAPACOH)

Parliaments in Africa are critical agents for social and economic transformation through their oversight and legislative function. Parliaments can therefore provide high-level political leadership and influence required to address health issues broadly and vector-borne diseases in particular. NEAPACOH is a network of MPs in parliamentary committees of health which aims to address the health challenges confronting the continent. Even though the stated objective of NEAPACOH is to address all critical and urgent health challenges, the focus of the network in recent years has disproportionately been on reproductive health and family planning. Aside from NEAPACOH, there is no known regional parliamentary group for malaria or vector-borne diseases. Meanwhile, there is growing recognition of the need to form All-Party Parliamentary Groups on Malaria in the region similar to those in the UK and US. Such groups are expected to survive changes in political administrations and to help keep a focus on malaria and related vector-borne diseases. NEAPACOH offers a platform to encourage the formation of an All-Party Parliamentary Group on vector-borne diseases and vector control. Establishing a partnership with NEAPACOH through PIIVeC could help set an agenda for the formation of such a group.

Vector-borne disease(s)-specific regional bodies and organisations

Pan-African Mosquito Control Association (PAMCA)

PAMCA is a professional association of African researchers that seeks to build capacity and share knowledge for concerted vector control initiatives in order to tackle the burden of mosquito-borne diseases across the continent (PAMCA, 2020). PAMCA's capacity building initiatives also target decision-makers and policy implementers. PAMCA has chapters/branches in eight African countries; Burkina Faso, Cameroon, Kenya, Mali, Nigeria, Tanzania, Zimbabwe, and South Africa. PAMCA organises annual conferences that focus on the elimination of vector-borne diseases in the continent. The 6th PAMCA conference was held in Cameroon in September 2019. In addition, PAMCA often organises symposia and training workshops as part of its efforts to strengthen capacity for vector control and the elimination of VBDs. PAMCA's interest in vector control especially as it relates to malaria is very high and it also has a wide geographic reach through its chapters. PIIVeC is well aligned with PAMCA in two of the three PIIVeC countries where PAMCA has branches (Burkina Faso and Cameroon). Continued partnership and collaboration will continue to strengthen PIIVeC's visibility and network in the region. However, the association has little or no known influence on decision making at the highest levels in the continent including at AU or any of the sub-regional bodies.

African Malaria Network Trust (AMANET)

AMANET is a pan-African International NGO with a mission to promote capacity strengthening and networking of Malaria R&D in Africa (Wilama et al, 2007). AMANET has invested in building African human and infrastructural capacity to develop a malaria vaccine. The organisation is also involved in other malaria interventions such as antimalaria drugs and vector control. As part of its efforts to strengthen capacity, AMANET conducts short-term and long-term online trainings for malaria interventions. AMANET is currently conducting a Health Research Ethics project, funded by the Gates Foundation. Whilst AMANET's mandate has expanded to include vector control, its interests and activities in vector control are limited. In fact, AMANET currently has no known project on vector control. The organisation's visibility and influence in the vector-borne disease landscape is also quite limited. AMANET is therefore not a suitable stakeholder to partner with at this point.

Elimination 8 (E8)

E8 is a SADC ministerial initiative aimed at eliminating malaria in eight SADC countries. The countries which make up the E8 are Angola, Botswana, Mozambique, Namibia, South Africa, Swaziland, Zambia, Zimbabwe. E8 is composed of senior health officials from these eight countries along with partners from academia, non-profit think tanks, civil society organisations, and private foundations. Malawi is not a member of the E8 initiative though it shares borders with some of these countries and also has a similar malaria ecology. The E8 approach involves knowledge sharing and collaboration; promoting accountability through the use of the E8 scorecard; fostering collective strategy and action; and promoting efficiency (Elimination8, 2016). The E8 technical committee has an influential role in setting policy standards and bringing new evidence and operational approaches for improved national and regional malaria elimination strategies. The E8 technical committee has several working groups including one on vector control. E8 has formed strategic partnerships with other key stakeholders in the malaria elimination space including ALMA, WHO, Global Fund and BMGF. For instance, E8 was recently awarded a US\$14.2 million grant from the Global Fund to fight against AIDS, TB and Malaria. The fact that E8 has a working group on vector control and its influence in policy making spaces in the SADC region makes it a strategic stakeholder for partnership in vector control.

African Research Network for Neglected Tropical Diseases (ARNTD)

ARNTD is a professional body that facilitates collaboration among researchers, policy makers and implementers; promotes research and strengthens researchers' capacity and; disseminates information for the control and elimination of neglected tropical diseases (NTDs) in Africa (ARNTD, 2020). ARNTD is one of the few organisations that focuses on neglected vector borne diseases such as HAT, schistosomiasis and zika virus. A key approach in ARNTD's work is the translation of research findings in the laboratory to tangible products or interventions in the field or among communities. ARNTD is currently providing small research grants to 18 research on Neglected Tropical Diseases. Even though ARNTD's interest in neglected vector-borne diseases is very high, the organisation has little influence in decision making spaces on vector control and neglected tropical diseases in the continent including decisions at AU and sub-regional groupings. This notwithstanding, ARNTD has a wide network of researchers across the continent. Also, the growing interest and commitment by African leaders in NTDs, evidenced by the integration of NTDs into the ALMA scorecard, makes ARNTD a potentially powerful stakeholder in future efforts by AU to address vector-borne diseases broadly and NTDs in particular.

African Media and Malaria Research Network (AMMREN)

The mass media and increasingly social media constitute an important source of information for policy makers and the general public in Africa. The mass media is an especially useful tool for disseminating information to a wide segment of the population. The media also serves as a watchdog for public interest and promotes accountability. Despite the influence of the media in policymaking in the region, it has often shown a lack of interest and capacity in reporting on issues of health research and interventions (Oronje et al., 2011). The African Media and Malaria Research Network (AMMREN) is probably the only organisation in the continent that brings together journalists and scientists with the aim of reducing the burden of malaria. AMMREN's mission is to promote the timely communication of malaria research findings and outcomes through strong collaboration between malaria researchers and journalists (AMMREN, 2020). A key approach in AMMREN's work is the provision of training to journalists and student journalists on effective reporting of malaria and health in general. AMMREN's own records show that is has trained over 300 journalists and student journalists since 2006 (AMMREN, 2020). AMMREN's head office is located in Accra, Ghana but it also has networks in Burkina Faso, Gabon, Kenya, Senegal, Tanzania, Gambia, Malawi, Nigeria and Mozambigue. Under its new initiative, AMMREN-Plus, the network has expanded its work to include other diseases such as Ebola and non-communicable diseases. AMMREN's footprint in 10 countries including 2 PIIVeC focus countries as well as its expanded focus on other diseases makes it a strategic stakeholder to partner with in reaching journalists and disseminating information on vector control. It is possible for PIIVeC to plan a series of webinars or media trainings in collaboration with AMMREN.

Summary of Stakeholder Matrix Results

As mentioned in the methodology, we relied on the analysis of stakeholder information retrieved online which we summarised above in the findings to score the interest and influence of each stakeholder on vector-borne diseases and vector control. Figure 2 below presents the stakeholder interest-power matrix showing which stakeholders to prioritise in our regional stakeholder engagement efforts.



Figure 2 Stakeholder Power-Interest Matrix

Source: WHO, 2017; NA=Not available

The power-interest matrix above shows that PIIVEC's regional stakeholder engagement strategy should prioritise engagement with WAHO, ECOWAS, WHO AFRO and Elimination 8. It will be highly strategic to gain support and involvement from these key stakeholders to leverage on their interest and influence in vector control decision making spaces in the region to push the PIIVeC agenda forward.

As influential stakeholders in the region, gaining the support of AU, ECCAS, SADC, EAC, Africa CDC, NEAPACOH will be highly beneficial for the project. Strategic engagement through consultations and information sharing to increase support and prioritisation of vector control in their work (policy, goals, programming, networks, etc) are required. It will be advantageous to utilise their influence in policy decision making spaces in the region.

PAMCA, AMMREN and ARNTD should be kept adequately informed about PIIVeC's activities and findings. These stakeholders can be engaged through consultations on their interest areas for support and involvement in the project. For instance, there could be dissemination of project findings and activities through their networks for momentum building in the region.

Engagement with ESCA-HC should be limited to monitoring and general communication about project activities and findings.

Conclusions

It is evident from this analysis that malaria is the main vector-borne disease that has been prioritised by many stakeholders in the region. There is little attention on vector-borne neglected tropical diseases such as dengue, HAT and schistosomiasis. The few stakeholders that focus on vector-borne neglected tropical diseases such as the African Research Network on Neglected Tropical Diseases have little to no influence in decision making spaces on vector-borne diseases. Even though malaria is the priority vector-borne disease in the region, there are still major funding gaps in the fight against malaria especially for malaria vector control commodities. There is therefore the opportunity for PIIVeC to reinforce interest and promote investment in vector control for malaria and VBDs among regional stakeholders. It is also important to explore ways of working with organisations that focus on neglected vector-borne diseases to influence policy decisions at the regional level. To achieve these broad objectives, we recommend prioritising policy engagement with the following regional stakeholders, taking advantage of their strategic goals, policies, extensive networks and platforms:

- i. WAHO which is the specialised agency of ECOWAS responsible for health issues is probably the most advanced in terms of vector control policies and strategies. WAHO is in the early phase of hosting an integrated vector control programme WA-IVM which seeks to harmonise vector control policies, funding and experts across sectors. We could take advantage of this new programme to promote PIIVeC's research and learn lessons from the process by engaging WAHO.
- ii. NEAPACOH which is a network of MPs in parliamentary committees of health in Africa offers a platform to promote PIIVeC research, set an agenda on vector-control policies and funding in parliaments and encourage the formation of an All-Party Parliamentary Group on vector control. Given AFIDEP's role as co-convener of NEAPOCOH's annual meeting, it is suitable for AFIDEP to lead the process of setting an agenda for vector control diseases at these meetings.
- iii. ARNTD is one of the few stakeholders in the region that focuses on vector-borne neglected tropical diseases. The growing interest of AU and other important stakeholders in neglected tropical diseases makes ARNTD a suitable stakeholder to partner with in order to promote an integrated approach for vector control.
- iv. AMMREN is an organisation that brings together journalists and scientists to combat vector-borne diseases. The media's role in disseminating information makes AMMREN a suitable stakeholder to engage in the promotion of PIIVeC's research findings and policy engagement activities. AMMREN's presence in Malawi and Burkina Faso will be particularly important for disseminating information in two of the PIIVeC focus countries.
- v. Africa's regional public health agency, Africa CDC has malaria listed as a priority disease which they seek to address through strengthening surveillance systems. Because the organization is relatively young, there exists an opportunity for PIIVeC to create awareness and spark their involvement and prioritization of multiple vector-borne diseases and vector control.

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