

Word from the Chief Executive



Hello,

I welcome you to this exciting edition of *One Health Digest*. I bring you warm greetings from Africa One Health University Network (AFROHUN). First of all, an announcement: *One Health Digest* is no longer quarterly, it is now bi-annual.



One Health Digest is now bi-annual

To give you a better reading experience, we have reviewed the frequency of the publication and we are now producing it twice a year. This way, we will be able to bring you more in-depth and synthesized content.

This edition therefore covers the period October 2021 to March 2022.

In this edition of the *One Health Digest*, we share our work around three key themes; 1) ensuring institutionalization and sustainability of AFROHUN work through different approaches, including capacity building of staff, building strategic and strengthening partnerships, repositioning our training programs, grant writing, among others; 2) igniting the One Health spark

Deliberate move toward institutionalization for the sustainability of AFROHUN Programs and Outcomes



Some of the AFROHUN Secretariat and country staff during a grant proposal writing session in Entebbe Uganda. The network is undertaking aggressive resource mobilisation efforts to ensure sustainability.

Institutionalization of projects and initiatives funded by external partners and donors is a major challenge in many Low- and Middle-Income Countries. Literature on this issue shows that some of the barriers to institutionalization are limited technical capacity of the recipient sector/institution/government, limited resources to match what was put in by the donor, inadequate time to internalize and appreciate the project aims and results by the beneficiaries, and lack of political will. In this section of the AFROHUN One Health Digest, we have a compilation of efforts in our different country chapters, to institutionalize our work, processes, results and tools.

The path to institutional sustainability: improving AFROHUN's institutional capacity to identify and maintain strategic partnerships

While interest in global health is increasing, thanks to the increasing occurrence of disease outbreaks and complex health challenges, global health funding seems to be reducing. This could be due to the increasing number of actors, sharing static resources. According to Donor Tracker, while global health funding stood at 22.8 billion USD in 2018, this reduced to 22.4 billion in 2019. With the US Government at the largest funder.

Since inception, AFROHUN has been largely funded by the USAID. Over the years, a few much smaller funders and partners have come on board, providing critical support to supplement USAID

Continued on page 2

among young people in AFROHUN countries; 3) addressing national One Health evidence needs through small grants for students and faculty. Under each of these broad themes, we share with you what the different AFROHUN country chapters have been doing, and the outcomes where these have already been realized.

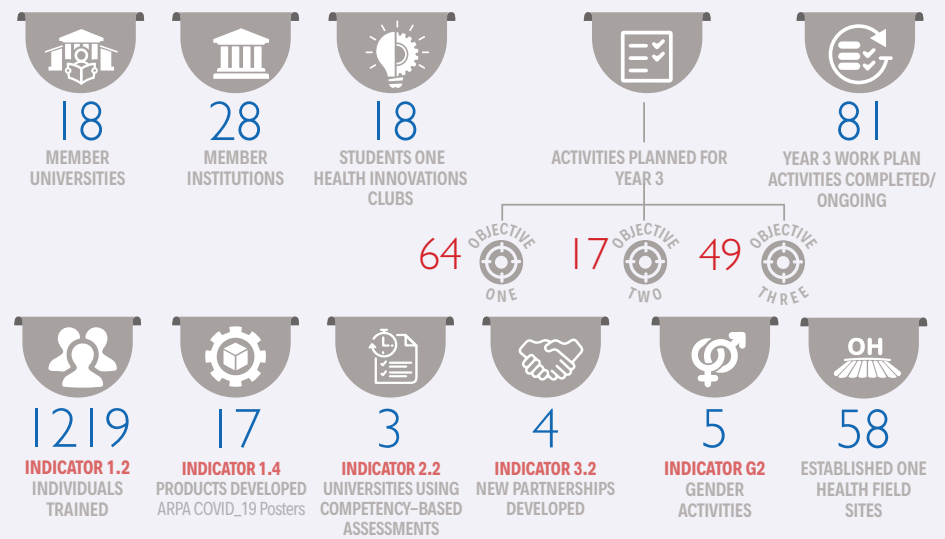
On the right, we also share what has been achieved in numbers, the period covered.

Enjoy reading and welcome!

Professor William Bazeyo

Professor of Occupational Medicine and Chief Executive Officer - AFROHUN

Consolidated dashboard statistics for OHW-NG Year 3 semi-annual period



From page 1 budgets. Amidst this funding landscape, AFROHUN has been aspiring to diversify its funding sources and also increase its level of funding. Effective partnering practices were introduced during the One Health Workforce project cycles to the network as one of the key strategies for resource mobilization. However, the bolts and

nuts on how to use this strategy for resource mobilization have always remained elusive to staff. Through the OHW-NG project, capacity has been strengthened in good partnering practice and in Year 2 of the One Health Workforce – Next Generation (OHW-NG) project, institutional partnering processes and procedures were upgraded to guide

partnership initiatives. Staff have learnt that proactive and continued engagement of potential funders by carefully aligning network plans to funders’ programs, accompanied by good demonstration of network capabilities can quickly win funders’ attention and thus funding support. This approach has already registered a few funding commitments.

Network Country Chapters step up Efforts to build and maintain partnerships

Two country chapters; Kenya and Cameroon are sharing their experience here. The Kenya team is sharing their experience of how they actualized the Partnership Practice training, while the team in Cameroon shares how working through partnerships and collaborations has enhanced their visibility and prudent use of resources.

demonstrated amazing progress in the application of this knowledge in fostering partnership initiatives.

For example, we engaged a local NGO as a partner in an activity that involved sensitizing teachers. They brought their experience and sponsored a team to the training. The local NGO gave indications to continue training teachers in other areas they have a presence in and would wish to do the same with AFROHUN”
Sam Wanjohi AFROHUN Kenya Country Manager.



“Before the training, my knowledge of partnerships was limited to engagements where partners came together at one point in time, engaged to deliver on the objective at hand and went their separate ways afterwards. However, the training shed light on partnerships being about relationships building. Subsequently, we started engaging partners strategically in high impact activities that would interest them in continuing well into the future.



“As an individual, I see my interest in partnering practice growing. It is one area that you constantly grow as you

learn. I am now more aware of my relationships at a personal level and in the workplace. It is literary about building the plane as you fly it as was demonstrated in one of our classes. Nothing has been more real and applicable to me than this training since I attended the program. I now have a better understanding of where and who I aspire to be," **Diana Muta Njambi** – AFROHUN Kenya Administrator.

Meanwhile in Cameroon, working through partnerships and collaboration has promoted and improved the network's visibility and more effective use of resources.

For several years, AFROHUN Cameroon has been working alongside partners, including government actors, partners implementing the Global Health Security Agenda (GHSA), among others. This collaboration has enabled partners to pool their efforts in areas of common interest, such as combatting the spread of zoonoses and strengthening systems and infrastructure to address

global health security in Cameroon. This pooling makes the actions of the different partners more visible and sustainable and above all, allows for an objective and rational mobilization of resources for common purposes. One barrier to AFROHUN Cameroon's visibility among partners implementing the GHSA has been the office's distance from the capital city, Yaounde, where almost all other partners are located. AFROHUN Cameroon is based in Bangangte, 250 km from Yaounde. AFROHUN Cameroon has therefore harnessed the value of online/virtual tools and strong remote communication and coordination to remain active and visible to the satisfaction of its partners. As a result, a number of new partnerships have been created including with USAID-funded projects like Infectious Disease Detection and Surveillance (IDDS) and Medicines, Technologies and Pharmaceutical Services (MTaPS).

Engagement of women's civil society for sustainable adoption of the One Health Concept in Cameroon

In recent years, multidisciplinary and multisectoral approaches to addressing complex health issues are proving the most effective ways of handling emerging infectious disease outbreaks. In the recent past, the world has been grappling with repeated outbreaks of Ebola, Marburg, yellow fever, Rift Valley fever, and recently the COVID-19 pandemic, with several waves happening in different parts of the world. In fact, during the last Ebola Virus Disease outbreak, fear gripped many Cameroonians following reports and rumor that cases of the disease were imported from neighboring Nigeria. To this effect, the Minister of Public Health, stressed the fact that surveillance must be strengthened in all the health districts at the borders of the country to prevent a possible emergence of this disease in the country. With other public health challenges like antimicrobial resistance, food security, and climate change, the knowledge and expertise required to manage them is a major area of focus. Training institutions therefore cannot continue to deploy the centuries-old, siloed approaches they have been using to train their respective professionals; something has got to change. Africa, one of the continents most affected by these complex issues,

is one of the places where this change is happening. Africa One Health University Network (AFROHUN) has developed and pioneered several experiential training programs and approaches with varying degrees of effectiveness.

In GHCC, student teams compete against each other for the most innovative and practical solution to the case. In the AFROHUN network, this training approach is promoted as one of the most effective ways of molding a future workforce that is collaborative, team-oriented, analytical, and can think on their feet to detect, respond and prevent disease outbreaks and other health and development challenges.

Global Health Case Competitions (GHCC) are a high-level approach to training the One Health workforce. Done right, the competitions heighten students' understanding of issues of national, regional and/or global interest and concern. They bring together students from multiple disciplines who work together to identify and propose innovative but practical ideas and solutions to a provided case scenario on a complex health challenge. The cases we have worked with have

focused on ever-changing and growing infectious disease threats, including COVID-19, rabies, among others. In GHCC, student teams compete against each other for the most innovative and practical solution to the case. In the AFROHUN network, this training approach is promoted as one of the most effective ways of molding a future workforce that is collaborative, team-oriented, analytical, and can think on their feet to detect, respond and prevent disease outbreaks and other health and development challenges.

AFROHUN Cameroon has been organizing Global Health Case Competitions (GHCC) as one of the strategies to promote OH learning among the pre-service workforce. In implementing the GHCC, AFROHUN has been partnering with the National Program for the Control and Prevention of Emerging and Re-emerging Zoonoses (PNPLZER), which was created in 2012 to serve as a national platform that promotes OH approaches throughout Cameroon. The GHCC has enabled students to develop innovative solutions to public health problems and was commended by PNPLZER. In November 2021, PNPLZER requested AFROHUN Cameroon's support to organize a GHCC for women in civil society as

part of the One Health Day celebrations. AFROHUN's contribution included developing the case that was used during the competition, orienting the women that participated in the competition, and training the mentors for the participating teams. Eight teams comprising of six women each, from civil society organizations participated in the competition. The competition was conducted in two phases where the first focused on food security relating to AMR issues and the second on health security issues. The innovations that came from the teams were beneficial and provided practical

answers to food and health security issues following a One Health approach. The competition was helpful in enabling participants to appreciate the value of One Health in addressing complex health challenges.

"This competition has enabled us to understand that we have a lot in us; and since the preparation and competition periods, we have understood the need for the One Health approach in the prevention of and response to health problems" – Mrs. Germaine Etoundi, President of the EcoBio women's civil society team.

This activity arose from lessons learned from partnering with AFROHUN

Cameroon, and PNPLZER was able to build the capacity of civil society in One Health in the different regions of the country. From the activity, the One Health

Network of Cameroonian Civil Society was born. This network will be instrumental in promoting One Health among women and minorities.



One of the competing teams during a discussion as they prepared their pitch.



A team pitching before a panel of judges.



A team leader collecting the teams trophy from a National One Health Platform official at the end of the competition.

Repositioning our Training Programs in DRC for sustainability and institutionalization

Applying OH leadership skills to respond to the COVID-19 pandemic

In the Democratic Republic of the Congo (DRC), Territory Administrators are key government personnel working to provide leadership and oversight for implementation of the government's

vision at the subnational level. They are responsible for health, security, and the wellbeing of people in their respective regions. Despite their involvement in responding to health emergencies, they do not receive any formal training in this area. This is problematic because DRC is increasingly confronted with epidemics and natural disasters exacerbated by poor preparedness of key actors, weakness in coordination

and communication, and inadequate community engagement and commitment. Capacity strengthening of the territorial teams is a priority of the Ministry of Interior and is set out in the roadmap of the General Inspectorate of Territorial agents.

Since 2016, AFROHUN has been supporting the Ministry of Interior AFROHUN has been engaged in

building the capacity of the Territory Administrators for pandemic leadership and response. To do this effectively, AFROHUN brought on board experts from different disciplines and sectors to develop a training module on One Health leadership in early detection and response to health emergencies. Since then, trainings have been conducted in two provinces, benefiting more than 200 Territory Administrators and their technical staff. During these trainings, territorial teams created contingency plans for pandemic response. Following the COVID-19 pandemic, the territorial teams used their contingency plans to manage the pandemic. The training enabled territorial authorities to effectively lead and coordinate during the prevention, response, and recovery phases.

“After this training, back to my territory, I was able to map the risk of health emergencies in my region. Together with communities, church leaders and technical staff we developed a contingency plan to mitigate the priority risks. When the COVID-19 came, I worked with the

same team to respond, the community was at the center of all our activities”, a Territory Administrator shared.

During Year 3 of the OHW-NG project, AFROHUN DRC worked with various partners to review the Territory Administrators’ training module which was developed more than five years ago. As a result, the module now includes risk communication and community engagement (RCCE) and has been included in the Territory

Administrators’ curriculum at the National School of Administration (NSA) as a short course to be provided to Territory Administrators before they start their duties. This will ensure sustainability of this valuable training. One hundred and Forty-Five (145) Territory Administrators and their technical staff are expected to benefit from it. In addition, coordination is anticipated to improve during response to health emergencies.



A Territory Administrator proudly displays the certificate she was awarded after the training

The impact of USAID funding on the career growth of public health professionals in DRC

The DRC has experienced multiple disease outbreaks, including Ebola, Measles, Yellow Fever, and Marburg. Many of these outbreaks happen in rural areas and congested urban settlements. The 2018-2020 Ebola outbreak in the eastern part of the country and the 2020 COVID-19 pandemic highlight the need for a more comprehensive health system and a skilled One Health workforce to prepare, detect and respond to current and future public health emergencies.

With a low score of 2 out of 5, the Joint [External Evaluation](#) (JEE) conducted in 2018 highlighted limited capacity for a One Health workforce and a large disparity between rural and urban areas, with most of the trained and skilled personnel concentrated in populous urban regions. Following this evaluation, the National Workforce Development Plan 2019-2022 (Plan National de Développement Sanitaire 2019-2022) highlighted the need for the country to improve the training, retention, and distribution of skilled workforce. In 2019, the country developed a National Action Plan for Health Security (NAPHS), outlining a roadmap to build country capacity to address priority gaps identified in the JEE. The need for a multidisciplinary workforce to tackle

health challenges using a One Health approach was one of the key elements considered. It is therefore essential to incorporate One Health core competencies into higher education programs to align with this national plan and address these priorities.

Expanding the public health workforce in DRC: Established in 1987, with the support of USAID and in collaboration with Tulane University, the Kinshasa School of Public Health (KSPH) is the leading institution in training public health professionals in DRC. The school plays a critical role in developing public health leadership and has done this amidst limited resources.

The KSPH Master of Public Health (MPH) program is 15-months long and requires a thesis defense. The MPH program has five areas of focus: 1) Field Epidemiology and Laboratory Training Program (DRC - FELTP), 2) Health Economics (DRC- ECOSANTE), 3) Nutritional Epidemiology (DRC-EPINUT), 4) Health-Environment (DRC-ENVIRONNEMENT), 5) Community Health (DRC-SAPU). To date, KSPH has trained 1,450 MPH students (261 females/1189 males).

Due to challenging socio-economic status of the potential candidates for the program, USAID established an MPH scholarship program that has supported over 300 students as part of its program to strengthen human resources for health in the DRC. In 2020, USAID engaged AFROHUN and the OHW-NG consortium members to assist KSPH, an AFROHUN member institution, with administration of the scholarship program and integration of One Health into the program's curriculum. This grant enabled the USAID country office to provide 60 scholarships for health professional development in DRC over two academic years, of 30 scholarships each.

The purpose of this paper is to share the success and results achieved to date about through this 2-year USAID support. AFROHUN aims at improving overall school management and integrating the One Health approach in their curricula with a gender-balance focus.

The first component of this work is to strengthen the MPH program administration. This involved establishing a formal partnership between KSPH, AFROHUN and the OHW-NG. A sub-award agreement was developed and is now being implemented. This is meant to pursue the capacity building of the KSPH to independently manage these processes in future with a large autonomy in the long-term.

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The second component is the integration of One Health core competencies into the MPH curriculum. This process involved curation and assessment of the existing curriculum. One Health competency gaps essential to the MPH program were identified, and this informed the integration process. This is a major milestone in keeping the program relevant to emerging needs.

“The integration of One Health is the consideration of health in a global and integrated way, considering the interdependence between human, environmental and animal health, as well as the consideration of the community aspect of health problems.

KSPH admits students from various fields. The integration of this approach promotes experience sharing and the strengthening of the capacities of both professors and students. This experience will allow the country to have the human resources to manage public health emergencies in a global and interdisciplinary way,” - Professor Desire Mashinda Kulimba, Dean KSPH.

Outcomes

As a result of the integration of One Health, a standalone One Health module was developed and is now being taught across the KSPH. Students enrolled on the MPH program appreciate the One Health component and the teaching approach which fosters inter-disciplinary learning and sharing.

“Today with health problems we need a multidisciplinary approach, one which brings together many sectors in order to solve the problems efficiently. I think today for the current health problems, they can't be resolved only by medical interventions. We need approaches which bring together several fields to find solutions. I think the example of the COVID-19 pandemic proved this very clearly,” said Rose Mubindikila – Community Health track and a molecular biologist.

“My predecessors who missed this working with other sectors they did not practice using social solutions or negotiating with several sectors. It makes us a better team lead. And, it is a whole career that is boosted,” Mimbula Mokalo Elie Caleb – community health track, medical doctor with National Program of Nutrition.

“One Health has helped me to think in a different way, having a holistic view of issues, openly and widely. It has increased our ability to work in a team and when we have many competences there is more help to solve problems. I think One Health gives us more opportunities. During the period of study, I saw that the concept of One health is very, very useful because it

helps us to think differently and to see the world openly and widely also.”, Lobukulu Lolimo Genese, Medical Doctor in the Health Economics track, and working with the KSPH as faculty.

While the program and the funding are helping build the necessary One Health competencies, it is also expanding capacity in terms of human resources for health numbers, a fact that is acknowledged by both KSPH management and the students.

“This funding has allowed the DRC to have more people trained and able to better understand health in different aspects. Thanks to this funding, we can count on a new generation of experts in Public Health (Epidemiology and Health Economics) with a better vision of global health and the health problems facing the country and the world”, says Professor Desire Mashinda Kulimba, Dean KSPH.

“Human resource is one among the resources that is important in the confronting health problems. I think the problems are there and the solutions are somewhere; when the human resource is available, you can find the competencies to go through the health problems. Especially during the epidemics and outbreak that we are facing in our country, you know. And I think that's what's going on right now”, Lobukulu Lolimo Genese, Medical Doctor in the Health Economics track, and working with the KSPH as faculty.

“Yes! really, it is going to improve the human resource capacity, but we have to make sure that those who study return to where they came from to put into practice on the ground the knowledge gained”, Mayala Masiala Viviane-medical doctor in the Health Economics track and working with the KSPH Department of Management.

The financial aid through the scholarship program has made it possible for many otherwise financially constrained Congolese professionals, especially in the public sector to access the MPH program. This has been hailed as a game changer in their professional lives.

“It was complicated. I was telling myself that if I get the admission and no scholarship, I would have to wait for another year. I would like to use this opportunity to thank our financial partners because this training was well-funded, we

are well fed and accommodated. It helps to focus I managed to get a Distinction this semester. I hope to continue with an average of above 70 %”, **Mayala Masiala Viviane**— medical doctor in the Home Economics track working with KSPH in the department of Management.

“If I had to pay for myself, I would have needed a lot of personal savings.... I would not be concentrating like now as a residential student. I would have, like my predecessors, taken a bank loan, been non-resident, because that cuts off half the fees. With all the financial risks that come with borrowing in our low-income country”, **Mimbula Mokalo Elie Caleb** – community health track, medical doctor with National Program of Nutrition.

“We should encourage women to apply. It is not easy when one has children and other commitments at home to take on such trainings. But if the woman has the will and determination, it is possible to make it. This opportunity was good because it took good care of us. Me, I am married since 3 years ago and I have a child of 2 years but I have the

determination to study. Even when you are in class there are (people at home) calling you. But you have to have the will to continue,” **Mayala Masiala Viviane** – medical doctor in the Home Economics track working with KSPH in the department of Management.

“Special attention needs to be focused on gender and targeting the stakeholders in the provinces in the hinterland of the country”, **Professor Desire Mashinda-Kulimba**.

The KSPH has therefore identified gender as an area that requires urgent attention. A gender gap study has been conducted to identify factors that are hindering women professionals to apply for the MPH and subsequently benefit from the scholarship program. A dissemination meeting that will bring together key stakeholders in this area is being planned to share the key findings and discuss viable interventions to address the challenge.

Sustainability of the scholarship gains will require support from the

government as Prof. Mashinda points out. He notes that although the number of scholarship beneficiaries is still low in relation to the country's human resource needs, it is not insignificant. He advocates for increased focus by the government authorities and university leadership in exploring other funding options. KSPH has made its infrastructure and staff resources available to the program. “The Congolese national government should contribute to the training of professionals by supporting the scholarships and administrative costs of KSPH. KSPH is also looking for other potential funding partners for the scholarships.”

It has only been a few years, but efforts put in strengthening the delivery of the MPH program and the management of the scholarship program, are paying off. Successes so far registered need to be sustained by continuous improvement and diversifying funding sources for the scholarship to bring more deserving Congolese on board.

Taking steps to Strengthen training of Veterinary Technicians in Côte d'Ivoire

Dr. Achi Louise is a Veterinarian and the Director of School of Specialization in Livestock and Meat Trades of Bingerville (ESEMVB). ESEMVB is the only school in Côte d'Ivoire that trains veterinary technicians to attain a Level 3 diploma. This school participates in OHW-NG project activities as an affiliated training institution of UFHB. Results of a situation analysis on One Health training programs in 12 institutions in Côte d'Ivoire indicated that ESEMVB did not have One Health competencies integrated into its curriculum, so AFROHUN Côte d'Ivoire began prioritizing how to expand One Health curriculum within participating universities through multisectoral training and

interdepartmental engagement of universities across the country. AFROHUN Côte d'Ivoire organized an introductory workshop to the One Health approach which was attended by multidisciplinary participants from UFHB, University of Nandjou Abrougoua, affiliated training institutions of UFHB, Ministry of Health, the Department of Veterinary Services, and the Ministry in charge of Human Resources of the Public Administration. At the end of the training, Dr. Achi Louise, along with other participants, committed to introduce the OH approach into the training programs of her school for the 2022 – 2023 academic year. Efforts towards institutionalizing

One Health into training programs are now under way. Following the training, she designated a faculty, Mr. Djaah Georges, as the One Health Focal Point in the school. Since then, Mr. Djaah Georges has been participating in activities related to One Health in his institution and has used the knowledge gained to develop a training plan on One Health for ESEMVB students.

“The training on the OH approach is an opportunity for our students to be equipped with skills in management of zoonotic diseases, especially rabies, which veterinary technicians are confronted with in their daily work”– **Dr Achi Yaba Louise** epse **Atse Directeur de ESEMVB**.



At the end of the training, Dr. Achi Louise, along with other participants, committed to introduce the OH approach into the training programs of her school for the 2022 – 2023 academic year.

Towards Sustainable One Health Training among In-Service Professionals in Rwanda

AFROHUN Rwanda has identified CPD as one of the strategies for sustainable OH capacity development among the in-service professionals. A One Health sensitization workshop for Rwanda's professional regulatory councils was conducted in Year 1 of the OHW-NG project. During this workshop, all councils requested AFROHUN to train their leaders in OH as a step towards enriching CPD credit points for in-service professionals. In March 2022, AFROHUN Rwanda conducted a follow-on training workshop aimed at identifying the OH modules to be prioritized by each council and establishing a roadmap for incorporation of OH modules into the CPD programs. All participants acknowledged the importance of having OH competencies in their CPD programs.

“This training was most appropriate to us as custodians and regulators of professional practices and training. Of particular significance, the various One Health modules that were introduced will go a long way to adding value to our CPD training programs.” Rita Umutoni Mupende, Registration Coordinator at the National Council of Nurses and Midwives.

All councils recommended AFROHUN to be the One Health CPD provider; therefore requesting AFROHUN Rwanda to apply for accreditation as a CPD provider.

Representatives from each council worked in different sessions to identify and prioritize training modules for their members. The most frequently prioritized module was One Health Concepts and Principles, followed by Communication; Collaboration;

and Infectious Disease Management. Participants scanned and discussed modules to be incorporated into their CPD programs. All councils recommended AFROHUN to be the One Health CPD provider; therefore requesting AFROHUN Rwanda to apply for accreditation as a CPD provider. The councils went ahead and developed a roadmap for incorporation of One Health modules into the CPD programs. Offering One Health modules as CPD courses is one of the key strategies that will promote sustainability of OH training among the in-service professionals in Rwanda.

With One Health integrated in CPDs, the need for AFROHUN to organize one-off trainings for in-service professionals will be eliminated while institutionalization of the One Health approach will be ensured.

Tanzania pilots One Health CPD for institutionalization of the approach

AFROHUN Tanzania trained 20 in-service professionals and members of professional councils, during a workshop to pilot training on a One Health CPD course. The training covered One Health competencies that included leadership skills; One Health Concepts and Principles; Systems Thinking; Team building and

Conflict management and resolution; Risk assessment; Communication and Management. Other topics covered included emerging and re-emerging pandemic threats; antimicrobial resistance; disaster preparedness and response; structure of the One Health coordination desk, and role of stakeholders and field visits.

This course is planned to be conducted on a yearly basis by the two AFROHUN member institutions which were accredited to run it for the next ten years. It will contribute towards income generation for the institutions and the network once it is rolled out.

Moving curriculum integration and institutionalization to lower levels in Tanzania

For several years now, AFROHUN Tanzania has been working with pre-university institutions to integrate One Health competencies in their curricula. These institutions contribute the highest number of frontline health workers in Africa. Grassroot level technical

personnel are the first responders to complex health emergencies in communities. Yet, in Tanzania they are not adequately equipped with the necessary knowledge and skills to respond to such emergencies. However, when AFROHUN was developing One Health modules, the

content was designed for university education, leaving out the pre-university categories. AFROHUN Tanzania took up this challenge and has been supporting these institutions to scale down and integrate One Health content in their programs.

During this period, a workshop was conducted to integrate One Health content into the curricula of 3 diploma and certificate training programs. This activity focused on newly identified programs that were not included in the previous phases of content integration. One Health content was incorporated into the diploma and certificate level curricula for the clinical dentistry programs as well as the revised format of the environmental health and medical laboratory certificate and diploma curricula. The workshop was attended by 19 participants from the diploma and certificate level training colleges, Ministry of Health, National Council for Technical Education (NACTE), Muhimbili University of Health and Allied Sciences (MUHAS), Sokoine University of Agriculture (SUA), and AFROHUN Tanzania country office. From the workshop, draft curricula were developed at the diploma and certificate levels for the three programs. The draft curricula were submitted to the Ministry of Health for validation and subsequent approval. In order to prepare tutors to deliver One Health

integrated curricula, we 28 tutors of diploma and certificate levels from 14 colleges were trained on One Health approaches. The training utilized One Health materials which had been incorporated in the diploma and certificate level curricula. So far, AFROHUN Tanzania through the OHW-NG project, has trained tutors from 60 (about 86%) of existing colleges. Teaching of One Health in these colleges will be institutionalized once the integrated curriculum is approved and rolled out nationally.

Flora Lucas is a Tutor at HERMARGS Institute where she teaches pharmaceutical sciences. She is one of the 30 tutors

from eight colleges training diploma and certificate level students, who were trained on delivering One Health integrated curriculum in June 2021. Following this training, Flora appreciated the One Health approach and immediately started teaching her students using the One Health enriched curriculum. Her first class had 69 students who were trained on One Health.

“When I was trained by AFROHUN to train my students about One Health, I was excited because it was new to me, and soon after training I immediately started training my students at HERMARGS Institute about One Health concepts and practices even without waiting for the approved curriculum.”

I just wanted to apply the knowledge and skills I gained immediately after training. My first class of One Health had 69 students and I hope to do this every year. My college gave me the opportunity to apply the knowledge immediately.” **Flora Lucas Tutor at HERMARGS Institute.**

Flora is one of the 150 tutors from the multiple colleges that have so far been trained on delivering the One Health integrated curriculum. These tutors are expected to train a critical mass of health workers that can ably participate in detection, prevention and response to complex health challenges using the One Health approach.

“One Health is an important subject and integrating it in existing curricula of diploma and certificate levels will ensure the competence-based training is taken by the lowest cadre in the professions who work at community level to respond to epidemics.” **Official from National Council for Technical Education (NACTE) which accredits curricula.**

The downscaling of One Health modules that were designed for graduate level is a success story in Tanzania and provides the rest of the AFROHUN institution good learning.



Flora Lucas teaching pharmaceutical students using OH integrated curriculum.

Taking One Health to lower levels in a different way: the Kenya Approach

Meanwhile in Kenya, the idea of taking One Health education to the lower levels was conducted amongst in-service professionals and county level. Building on the collaboration that was initiated in Year 2, AFROHUN Kenya built capacity of 29 participants from the Siaya County Assembly and the executive of Siaya County, on One Health. The three-day training was officiated by the Clerk of the Assembly. This training aimed to contribute to the institutionalization of the One Health approach at the sub-national government level. Siaya County co-sponsored the training by meeting the allowances for the participants as well as supplementing transport for AFROHUN Kenya students going to the outreach activity at Jaramogi Oginga Odinga University of Science and Technology (JOUST).

Institutionalization of the Uganda One Health Institute at Mbarara University of Science and Technology

The Community Based Education (CBE) approach first emerged during the 1970's in response to population demand for need based education. At the core of CBE was a paradigm shift away from viewing universities as ivory towers. Contextually, Mbarara University of Science and Technology (MUST) at its inception in 1989 embraced CBE as the philosophy for health professions' education within the Faculty of Medicine.

The purpose was to establish a curriculum which would facilitate the interaction between the local communities, University lecturers and students, to make them more directed towards the prevailing and emerging needs within Uganda and beyond. MUST continues to tailor its curriculum towards the emerging health and health care needs and demands.

From the 1990s to 2009 the CBE model laid emphasis on service learning, represented in the acronym COBERS (Community Based Education and Service). During 2010, there was curriculum review that incorporated aspects of leadership and put more emphasis on research. Coincidentally, all the medical schools in Uganda chose to come together under the MEPI-MESAU consortium to build synergy in addressing the prevailing health and healthcare bottlenecks in the county using an educational approach. It was agreed that guided by the core MESAU competencies and the demand for evidence-based practice research becomes mainstreamed into the service-learning agendas leading to the emergence of COBERS (Community Based Education Research and Service).

Since joining AFROHUN, MUST has been engaged in a process of integrating One Health in the COBERS program,

thereby institutionalizing the approach. The process has been conducted across three years and has involved content review of the program, training of faculty and the community supervisors and onlinization of the program which served very well during the COVID-19 pandemic lockdown.

Mbarara University of AFROHUN Uganda supported MUST to train 25 multi-disciplinary field supervisors and 20 faculty involved in community activities from all academic disciplines. The field supervisors included Medical Officers, Clinical Officers, Nursing Officers, Community Development Officers, environmental / public health professionals, Agricultural Officers, and teachers. Knowledge obtained from this training will enable more field sites to adopt the One Health approach during students' attachment to the sites.

Moureen Kirungi is a nurse who works as the in-charge for Buhara Health Centre III in the Kabale district. For more than six years, she has been supervising students of Pharmacy, Medicine, Laboratory Science, and Nursing from MUST during field placement. MUST attaches multidisciplinary students to Moureen's Health Center as part of the University's Community Based Education, Research and Service (COBERS) program. When the COBERS program began, Moureen did not feel confident enough to supervise multidisciplinary students with a higher level of education compared to herself.

Moureen is one of the 81 MUST Field Supervisors that have been trained on One Health by AFROHUN Uganda with funding from USAID through the OHW-NG Project. As a result of the training, 19 MUST field sites can supervise students using a One Health approach.

"Supervising students who are highly trained, especially in the modern setting, is very tricky. It requires skills and competencies that are up to date, which can only be achieved during continuous development trainings. I have been supervising these students with less confidence given the high level at which I see them."

In November 2021, Moureen was one of 45 participants selected to attend a one-week training for MUST Community Field Supervisors in One Health. The training covered various modules including One Health Concepts and Principles; problem identification; gender, culture & ethics; role of IT in managing emerging challenges and supervision; the importance of One Health in managing infectious diseases; the problem tree analysis and challenge diagnosis tools; and community diagnosis verses clinical diagnosis. After completing the training, Moureen felt more confident to supervise the students effectively:

"This training has equipped me with critical skills that have put me at a different level. I highly appreciate COBERS for selecting me to be part of the training. I also appreciate AFROHUN Uganda for facilitating this training. I am now confident and believe in myself that I can supervise these students with ease"

Moureen Kirungi Buhara HC III in-charge.

The Mbarara University of Science & Technology is a shining example of using existing programs, infrastructure and opportunities to institutionalise the One Health & AFROHUN programs & initiatives.

Moureen is one of the 81 MUST Field Supervisors that have been trained on One Health by AFROHUN Uganda with funding from USAID through the OHW-NG Project.

Ethiopia is Expanding One Health beyond AFROHUN member Institutions

For the last three years, AFROHUN Ethiopia has been holding monthly engagements aimed at sensitizing Ethiopians on the One Health concept and approaches. The monthly virtual One Health advocacy and sensitization program, which is open to all persons in the country, is aimed at influencing individuals and institutions to gain interest and take up the One Health ideology in Ethiopia and advocate for its use. Following the advocacy campaigns conducted so far, AFROHUN non-member institutions are sensitizing their leaders, faculty and students to establish Student One Health Innovation Clubs (SOHICs) in their respective institutions and have started writing official letters to AFROHUN Ethiopia requesting to join

the network. Using virtual platforms, it has been possible for us to easily reach out to many non-AFROHUN member institutions, enabling them to benefit from the network's activities. This has also enhanced our visibility in Ethiopia.

During this period, we were able to reach out to 88 SOHIC members from AFROHUN and non-AFROHUN member institutions. The content for the sensitization was a blend of theoretical principles based on selected global One Health topics and practical priorities for the SOHIC in Ethiopia. Participants gained knowledge on a variety of One Health-related areas.

AFROHUN Ethiopia has continued using social media outlets, particularly Telegram to engage students in One Health and this too has made AFROHUN Ethiopia more visible. So far, more than 30 One Health related issues and discussions have been shared with approximately 6500 students on Ethiopia SOHIC social media channels. One Health topics discussed include, the importance and challenges of the One Health approach, zoonotic diseases, the prioritized zoonotic diseases in Ethiopia, antimicrobial drug resistance in national and global context, common environmental health issues in Ethiopia, food safety and security, and the Ethiopia National One Health Strategic Plan.

Building Student capacity to tackle the Challenging issue of Vaccine-hesitancy among university communities in Côte d'Ivoire

Since the launch of the COVID-19 vaccination program, there have been challenges arising out of vaccine hesitancy globally. Africa, with arguably the highest levels of ignorance and limited access to information, has born the higher burden of vaccine hesitancy amidst low vaccine numbers. University communities were singled out as those with low turn up for vaccination, especially among teaching staff. The American Rescue Plan Act (ARPA) program provided funding to AFROHUN Côte d'Ivoire to conduct awareness campaigns within universities and surrounding communities to increase uptake of COVID-19 vaccination as well as



Dr. Karen Saylor of Labyrinth Global Health - a One Health Workforce - Next Generation Project Global Consortium member, supports participants during the training.

adherence to infection prevention measures. In collaboration with key partners that included: Ministry of Health, Ministry of Education, UFHB, Université Nangui Ambrogoua, Institut National de Formation des Agents de Santé, and École Nationale de Statistiques Appliquées, AFROHUN Côte d'Ivoire has, and is still working with professional and student associations at the universities to conduct awareness and training activities to increase the uptake of vaccination within the university communities and neighboring communities.



The Dean School of Public Health, UFHB addressing participants during the One Health training.

Within this framework, AFROHUN Côte d'Ivoire collaborated with Breakthrough Action and trained 357 students from three Universities (Korhogo, Bouaké, Yamoussokro) on the One Health concept, rabies, AMR and COVID-19. This activity helped to build capacity of students from various disciplines including human health, animal health, environmental health and social sciences in Risk Communication and Community Engagement during a health crisis.



Participants working in groups during the training.



Participants at the OH training.

Igniting The One Health Spark: Creating Resilience and Preparing the Young generation for the Future

Kenya moves into non-traditional One Health territory

When 10 primary school teachers, one Local Area Chief, three representatives of youth groups, and four members of a local NGO received invitations to attend a 3-day One Health (OH) sensitization workshop, none of them knew what to expect from the training. Moreover, none of them knew what OH was all about, other than it being a buzzword during the COVID-19 pandemic. This situation presented a learning opportunity and challenge for

the AFROHUN facilitators on how to effectively pass on OH knowledge to participants from the non-traditional OH related disciplines. Using various adult learning techniques, facilitators were not only able to generate a lot of interest in OH among the participants, but also promoted participatory learning. Drawing upon “Contagion” the movie which is centered on the threat posed by a deadly disease, participants appreciated the urgency for adoption and implementation

of the OH approach to safeguard the future and the next generation. Participants formed a WhatsApp group to continue discussing and sharing OH information. As part of an outreach activity, the workshop participants collaborated with Student One Health Innovations Club (SOHIC) leaders and members to sensitize approximately 1,200 primary school children on various OH issues including environmental management, hand hygiene and waste segregation.

Participants highly appreciated the knowledge gained from the workshop as exemplified by their comments:

“It was my first time to hear about One Health, and based on what I have learnt, I plan to be a change agent in the community, to guide others to create awareness and sensitize them on the importance of promoting One Health”

Cynthia Kioko Mumbua, Intern, Farming Systems Kenya.

“One of my biggest lessons from the training is I have come to know what One Health means. I support this initiative because it is through the primary school children that we can send the same message to the community, and having the children as ambassadors, we shall educate the whole world. From the workshop, I will take the One Health knowledge to other children and the community. I wish all Kenyans



Lakeview Primary School Head teacher participating in OH outreach activity in her school.

embraced this message of One Health” **Rose Wambura, teacher, Lakeview Primary School, Naivasha sub-county, Nakuru County.**

“This collaboration with AFROHUN presents an opportunity for us to capture the One Health concept holistically and therefore making sure that the pupils are empowered in a holistic manner. This is an opportunity for us as FSK, because we are going to make sure whatever package we are giving to the pupils is wholesome. I will be following keenly to see how this issue of One Health unfolds in our schools. For me, the biggest fulfilment I feel we are deriving out of this is the generation we are going to bring up, a generation of young people who are fully equipped and empowered taking care of their planet earth”, **Humphrey Wafula Executive Director, Farming Systems Kenya.**

After the training, participants implemented various initiatives which they had committed to at the end of the workshop. Within a couple of weeks after the workshop, the following results were achieved:

i) Teachers from Kinungi Primary School sensitized

approximately 1,000 school children on OH.

- ii) An estimated 450 primary school children were sensitized on OH upon completion of their national examinations and before sending them back home for holidays.
- iii) Teachers who participated in the workshop sensitized another 30 teachers on One Health.
- iv) Participants from a local NGO - Farming Systems Kenya, sensitized 30 of their staff members on OH.
- v) A women’s fellowship group (30 members) as well as one of the villages (15 members) were sensitized on OH.
- vi) One of the teachers took the OH messages to his village and mobilized an environmental clean-up campaign.
- vii) While appearing on a local radio channel to discuss issues surrounding their core activities, some of the participants took the opportunity to sensitize listeners on OH.



SOHIC members and their faculty mentor during a OH Sensitization workshop for primary school teachers in Naivasha.



SOHIC members with primary school pupils after donating waste segregation receptacles.

AFROHUN Rwanda Expands the growth and influence of Student One Health Innovations Clubs

AFROHUN Rwanda supported the expansion of the University of Rwanda Student One Health Innovations Clubs (SOHIC) to Rukara campus. In addition, the Integrated Polytechnic Regional Center (IPRC) - Kitabi was supported to initiate a SOHIC. As part of supporting the introduction of SOHIC at the two institutions, students and faculty were sensitized about the value and role of SOHIC in preparing the future One Health workforce to address health challenges. The sensitization meetings were attended by approximately 240 and 50 students at Kitabi and Rukara respectively. The

Principal at IPRC Kitabi proposed having a more formal partnership with AFROHUN and to initiate some impactful joint projects. Experiential learning initiatives like those implemented through the SOHICs have continued to be key training approaches within AFROHUN country chapters.



The students of IPRC-Kitabi during a meeting to initiate a SOHIC.

Building capacity of SOHIC members in One Health Concepts and Principles in Senegal

Early detection and response to emerging health threats in the human, animal, and environment interface requires a workforce that is well trained to manage these challenges. Engaging students in OH will help equip them with the transdisciplinary collaboration, communication, and leadership skills needed in the professional workforce. AFROHUN Senegal, in collaboration with Breakthrough Action, Le Service National de l'Education et de

l'Information pour la Santé (SNEIPS), and National One Health Platform (NOHP), engaged Student One Health Innovation Club (SOHIC) members on One Health Concepts and Principles through three training sessions. The workshop focused on Leadership and One Health; Gender and Infectious Disease Management (IDM); and Risk Communication and One Health. This training provided an opportunity for 141 students from six Senegalese universities to work in multidisciplinary and multi-university teams. Such training is very important in preparing students to address current and future health challenges in a multidisciplinary manner. This evidence has been highlighted by the Permanent Secretary of the NOHP who indicated that students are lucky to benefit from such training which did not exist when she was a student.

Testimonies from students indicate how the trainings have transformed their mindsets and how they intend to use the knowledge gained.

“On behalf of all students we thank you for these rich training sessions you are delivering to us, both professionally and in our daily lives. I remember the previous training on leadership which has transformed us and helped creating bridges as mentioned by Dr Nicolas. We have maintained strong relationships with students from other disciplines and universities”, SOHIC leader.

“Trainings allowed me to have a global vision and be more curious about public health as an agronomist.” Masters’ student of Agro-business.

“A better understanding of gender has allowed me to explain more clearly to many people who think that gender refers to homosexuality.” PhD student

This training provided an opportunity for 141 students from six Senegalese universities to work in multidisciplinary and multi-university teams. Such training is very important in preparing students to address current and future health challenges in a multidisciplinary manner.

Contributing to National & University One Health Research priorities through small grants for students and faculty


Senegal Takes the Lead in Addressing National One Health Priorities

Applying a One Health approach to research enables researchers to examine challenges in an integrated and wholesome way. This ensures that interventions to address complex health and development challenges are comprehensive and sustainable.

Given the complex nature of One Health challenges and issues, One Health research is also complex in terms of study design and team composition and team building. In the African setting especially, it is a relatively new area of

research focus. AFROHUN institutions are contributing to building pre-service competency in One Health research by providing small research grants to multi-disciplinary teams of students and young faculty. In Senegal, eight small grants have been awarded to-date, amounting to over USD 48,000. This has benefited 35 students; both graduates and undergraduates, while 11 faculty have been engaged. See table below for summary of achievement over the last three years.

2020


Number of grants

4


Number of students involved

15

Graduate	8
Undergraduate	7
Males	11
Females	4


Number of faculty involved

5


Study Topics

- ✓ Etude de la résistance aux antibiotiques selon une approche One Health aux abattoirs de Dakar: Recherche et caractérisation de l'antibiorésistance des souches de Salmonella sp et d'E coli présentes dans la viande ovine et dans l'environnement d'abattage.
- ✓ La pandémie de la covid 19: Attitudes, perceptions et comportements des étudiants de l'Université Cheikh Anta Diop de Dakar face à la pandémie de la covid 19
- ✓ Enquête CAP sur les maladies zoonotiques et leurs implications socio-économiques dans le cadre de l'approche One Health dans la commune de Niakhène
- ✓ Etude comparative des gènes de virulence staphylococcique isolées des écosystèmes alimentaires ou laitiers et en milieu hospitalier

2021


Number of grants

2


Number of students involved

8

Graduate	5
Undergraduate	3
Males	3
Females	5


Number of faculty involved

3


Study Topics

- ✓ Analyse du risque de dissémination de la Grippe Aviaire au Sénégal
- ✓ Etude des connaissances, attitudes et pratiques des prestataires de santé humaine et animale dans le district sanitaire de Kaffrine (Sénégal) sur la prise en charge de la rage en 2021.

2022


Number of grants

2


Number of students involved

12

Graduate	12
Males	5
Females	7


Number of faculty involved

3


Study Topics

- ✓ Etude des connaissances, attitudes et pratiques des prestataires de santé des hôpitaux, des services et établissements de santé vétérinaires de la région de Dakar sur la résistance aux antimicrobiens en 2022
- ✓ Contribution des espaces verts dans la conservation de la biodiversité urbaine, la lutte contre la pollution atmosphérique et la santé des populations dans la commune de Fann - Point E – Amitié, Dakar (Sénégal)

Over the years, AFROHUN Senegal has realized that most of the topics covered by proposals were not well-aligned to university and national needs. It was realized that it would be beneficial to have a big program that is aligned to university and national need. Based on this, AFROHUN Senegal decided to take the opportunity provided by a regional level grant writing training to put in place a research project which will allow all future scholarship beneficiaries to work on topics that will reflect the needs of national level actors as well as members institutions. Research studies therefore must be linked to Senegal's priority zoonoses, AMR, environmental challenges (climate change, pollution, biodiversity loss, etc.). In addition, the research should allow for synergy between several sectors and disciplines, and between the three AFROHUN member institutions.

For this period, six graduate students were selected to receive scholarships for OH research, following a call for applications that was shared with all AFROHUN member institutions in the country. The research areas for the scholarship recipients include biodiversity and health, antimicrobial resistance (AMR), economic effects of tuberculosis and aflatoxins in cow milk. In these research studies, students have integrated at least two dimensions of health and they will be able to better understand interrelations in health issues. AFROHUN Senegal conducted its third edition of the small OH grants program, awarding grants to

For this period, six graduate students were selected to receive scholarships for OH research, following a call for applications that was shared with all AFROHUN member institutions in the country.

two multidisciplinary teams. These teams are comprised of graduate students and early career researchers and each team has a faculty member who supervises their work to ensure quality and timely development of deliverables. Projects submitted by these teams were selected on a competitive basis by a board of examiners. The first team is working on a study on

“Knowledge, attitudes, and practices on AMR among health care providers in hospitals, veterinary services and institutions in Dakar region”.

The second team is looking at the *“Contribution of green spaces in conservation of urban biodiversity, combating air pollution and population health in the commune of Fann-Point E Amitié, Dakar (Senegal)”.*



For More Information about AFROHUN

Plot 20B Kawalya Kaggwa Close, Kololo-Uganda

P.O Box 100953 Kampala

+256 392 001 642

secretariat@afrohun.org

www.afrohun.org

@AFROHUN_

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