PAVING THE WAY FOR ONE HEALTH

HIGHLIGHTS OF THE GLOBAL PROGRAMME PANDEMIC PREVENTION AND RESPONSE, ONE HEALTH

DISCOVER THE INTERACTIVE EXPERIENCE

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Gmb

COLLABORATION IS KEY

DEAR READER,

have you ever wondered what good collaboration and the implementation of the One Health approach looks like?

In this publication, Joshua Waiswa answers that question by telling us how vital it is for two countries to work closely together to prevent the spread of diseases such as the Peste des Petits Ruminants in Uganda and Tanzania. Cross-boundary and international cooperation across sectors and across stakeholders at global, continental, regional and country level is key for implementing the One Health approach in the prevention and response to endemics, epidemics and pandemics. Joshua, veterinarian and coordinator of one of our partner organisations in Uganda, was key when it came to building a collaboration based on a shared vision and trust.

We at the Global Programme Pandemic Prevention and Response, One Health, implemented by GIZ and financed by BMZ, have been active at the forefront: in the Amazon region in Bolivia and in the Selva Maya region, both areas rich in biodiversity and great indigenous knowledge. We accompanied our partners at livestock markets in Cameroon, where the risk of infection between humans and animals is particularly high. In Cambodia, a country where one in three households has a dog that can infect its owner with rabies, we initiated together with the Ministry of Health and the Institut Pasteur du Cambodge an innovative system of Integrated Bite Case Management which included a wide vaccination campaign on 110.000 domestic dogs.

New endemic and epidemic outbreaks are a reality long before a pandemic is declared. The One Health approach is key to efficiently counteract the emergence, transmission and evolution of pathogens in infectious disease outbreaks. **We can only meet this challenge together - by partnering and collaborating at all levels, across sectors and boundaries, worldwide.**

By collaborating with stakeholders such as the Quadripartite Alliance for One Health, regional organizations such as Africa Centres for Diseases Control and Prevention and networks like the Africa One Health University Network but also Universities in Asia and Latin America, several governments and public health institutions, with municipalities and local communities, we could show that the One Health approach can be successfully implemented at different levels. It makes a difference to people's lives.

> Partnering and collaborating at all levels, across sectors and boundaries, worldwide

In this publication you will meet our partners who let us share in their work. Come with us to see collaboration in action and why it is so important. Enjoy reading our Highlights!

Yours sincerely,

Ruth Schumacher & the team
Programme Pandemic Resilience, One Health - GIZ

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WHAT WE DO

Cooperation across sectors and involving stakeholders at global, continental, regional and national level is key for implementing a One Health approach and building resilient health systems. **The Global Programme Pandemic Prevention and Response, One Health** has supported relevant stakeholders such as the Quadripartite Alliance, Africa Centres for Diseases Control and Prevention and regional organisations like the Africa One Health University Network (AFROHUN) and the East African Community (EAC) from 2021 until 2024.

It facilitated collaboration and feedback across different levels as well as direct exchange between. In the EAC, the project supported the development and implementation of the regional One Health Strategy, linked to relevant continental and global initiatives such as the One Health Joint plan of Action, to anchor the One Health approach to pandemic prevention and response in the region.

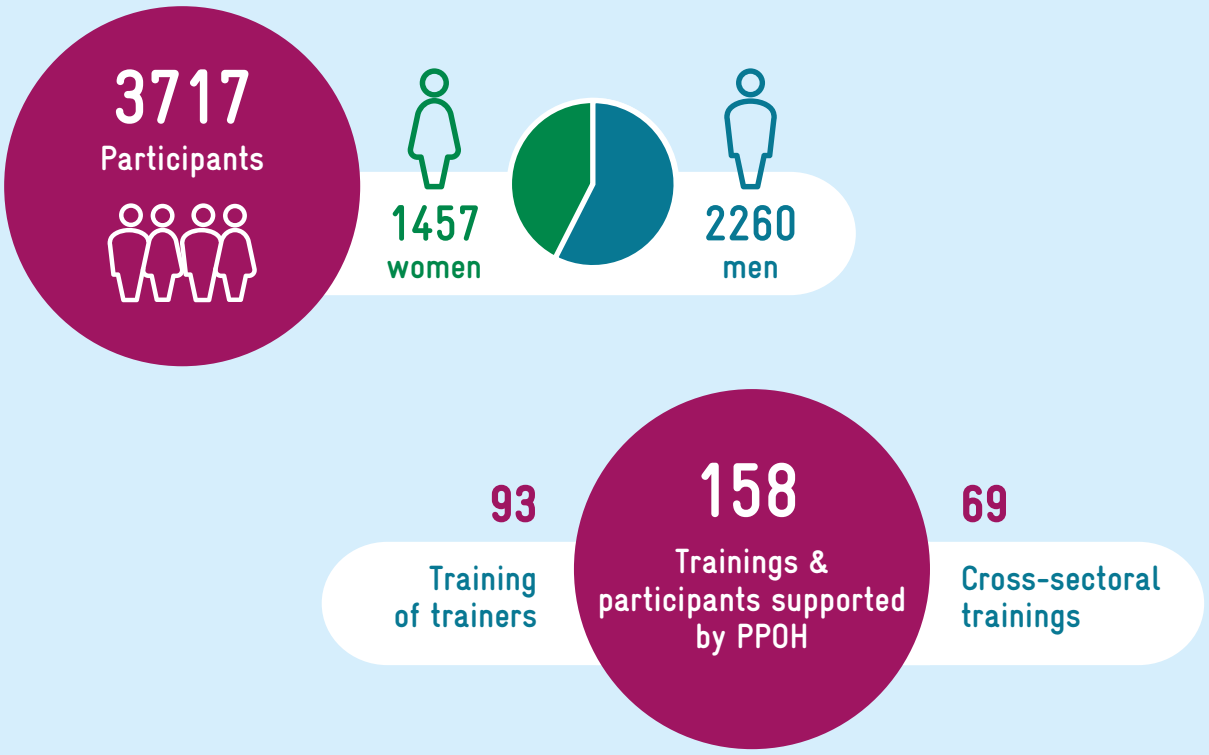
The programme was active in the following countries: Bolivia, Cambodia, Cameroon, Ecuador, the Selva Maya Region, and Vietnam. In all countries it worked with more than 25 stakeholders from government authorities to research institutions and civil society organisations to pave the way for One Health applying a multisectoral and multilevel approach.

Complementary, One Health workforce capacities were successfully strengthened, including in diagnostics and surveillance for partners to more effectively respond to infectious disease outbreaks through the German Epidemic Preparedness team as part of the Programme.

From September 2024 the programme will continue under the name "Pandemic Resilience, One Health". The focus will remain on implementation capacities and professional skills for the application of the cross-sectoral One Health approach. Exciting new activities will be the implementation of an integrative campaign to reduce the burden of female genital schistosomiasis in Malawi and a closer collaboration with the International Alliance against Health Risks in Wildlife Trade.

Let's go!

PARTNERS IN THE SPOTLIGHT



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SMALL DOG, BIG DANGER: BATTLING RABIES IN CAMBODIA

In Cambodia, GIZ is collaborating with the local government to help reach their goal of rabies elimination. This is crucial because the risk of infection is high and deadly, often posing a threat within people's own homes

By Eva Stübel

BATTAMBANG. – "Our dog was still very small. That's why I never worried that he might have rabies," says Soeun Oun. The father of 5 children lives in a village in the province of Battambang in Cambodia. However, one day in December 2023, he reports, the puppy - just two months old at the time - behaved strangely. "Normally, our dog always stayed close to the house, but on this day he suddenly ran around wildly and tried to bite people in the street," tells Soeun Oun. And it got even worse. When the man was working in the rice field, his wife called him: the puppy had bitten two of his children, two nephews, an uncle, his sister and a neighbor.

The puppy's behavior corresponded to the clinical symptoms of the neglected tropical disease rabies. Theoretically, it can be transmitted from any animal to humans. Rabies leads to an almost 100 percent death rate in both animals and humans after the onset of symptoms. But the disease can be reliably prevented by vaccination. People who have been bitten or scratched can be protected from a fatal infection by several injections as part of post-exposure prophylaxis (PEP for short) even after a bite event.

CAMBODIA

Small dog, big danger: Battling Rabies in Cambodia

In Cambodia, about 800 people are dying from rabies per year. Most transmissions come from domestic dogs. There are many of them in the Southeast Asian country: there is an average of one dog for every three people.

HOW A COLLABORATIVE ONE HEALTH APPROACH TRANSFORMS RABIES CONTROL

With the support of the GIZ Global Programme Pandemic Prevention and Response, One Health, an effective rabies control programme has been piloted in different provinces in Cambodia. The project is based on the global rabies elimination strategy and applies the One Health approach. It sees collaboration and integration of the animal, human and environmental health sectors as a prerequisite to prevent and combat the outbreak of infectious diseases, especially zoonoses. Within the last three years, 525 people have been trained across the sectors in Cambodia as part of the rabies initiative and many more have been sensitized to the issue.

WATCH ON YOUTUBE:

The Rabies Vaccination Campaign in Battambang

Module 1 – What is rabies?
Module 2 – Rabies in People
Module 3 – Rabies in Dogs

Soeun Oun reacted with presence of mind after the dog bites. He sent the affected family members to the nearby Centre for Post-Exposure Prophylaxis in Battambang City, which is run by the Insititut Pasteur du Cambodge (IPC) in cooperation with the Ministry of Health.

"This case was really extraordinary because so many people were bitten by the puppy," recalls Chiloeurn Chhoeurn. On 25 December, five of the seven victims, including Soeun Oun's two children, visited the PEP centre. Chiloeurn is responsible for coordinating the Integrated Bite Case Management (IBCM). The next day, the other bite victims came because of the same dog, she says. All of them were able to receive life-saving PEP injections.

IBCM is a rabies surveillance system that was established for the first time in the Southeast Asian country through the GIZ programme with both health sectors – animal and human health. As soon as a bite incident or suspicious dog is reported, the IBCM system immediately triggers measures – both towards the dog and the affected people. The system allows for better monitoring through documentation and systematic risk assessment. In addition, IBCM sustainably reduces the risk of infection for communities through rapid case tracking – and thus saves lives.

CAMBODIA

Small dog, big danger: Battling Rabies in Cambodia

Within the IBCM system, the presentation of the 5 family members not only led to the processing of their case data by coordinator Chiloeurn, but also triggered a chain of response activities. For real-time exchange of information, an app is used, which was adapted and translated for Cambodia as part of the project. The Battambang Animal Health Authority stepped on the scene next: The veterinarian Piseth Heang visited the family at home, at the site of the incident. In consultation with the father of the family, the field officer initiated veterinary measures. "The puppy was almost dead at that time," Piseth reports. "So, following our protocol, I euthanized and buried him at the family home."

Before that, he had taken a brain sample of the puppy, which he then sent to the IPC laboratory in Phnom Penh. Another laboratory in the country that can test for rabies is the National Animal Health and Production Research Institute (NAHPRI). Rabies diagnostics were established there by the GIZ project in cooperation with the IPC.

After two days, the final confirmation from the laboratory arrived: the puppy was rabid. However, since the clinical symptoms of the dog already suggested the disease, the IBCM system did not wait until laboratory confirmation.

In addition to euthanizing or isolating the affected dog, one of the tasks of a field officer is to immediately inform those around them about rabies in the event of a suspected high-risk exposure. Furthermore, he must advise those affected to wash wounds with soap, visit the PEP center and, if necessary, quarantine other dogs in the area. Since the start of the project, 9721 cases have undergone an IBCM risk assessment. In 1100 of them, case tracking was carried out by telephone or on site.

BATTAMBANG'S SUCCESS: REACHING MORE THAN 70% OF DOGS

Knowledge about rabies, correct behaviour around dogs and the possible contact points in Cambodia has improved considerably, say both Chilouern and Piseth. One reason for this is the awareness raising supported by the project. The dog vaccination campaign in Battambang, carried out with an app from the non-governmental organization Mission Rabies, also received a lot of attention. Here, the goal of vaccinating over 70% of the dog population in the province was achieved. An online course on rabies for teachers was also developed.

The piloted rabies control measures and IBCM system have already achieved a lot for the Cambodian people, Chiloeurn reflects; however, in her opinion, as many provinces as possible should have their own PEP service providers. In addition, knowledge in the communities, including about other zoonoses, must continue to be advanced, Piseth adds. The two are convinced of the intersectoral cooperation.

> "If we have a system of collaboration between the human and animal sectors through information sharing and joint action, we can save lives and avoid infections – Piseth"

CAMBODIA

Small dog, big danger: Battling Rabies in Cambodia

The measures saved the Oun family from the fatal consequences of the zoonotic disease. In particular, IBCM's rapid response to bite incidents was a key factor here.

"I am very happy that the field officer reacted immediately! Without him, I would have been very afraid for everyone who was bitten," says Soeun Oun today, relieved.

PARTICIPANTS IN RABIES-RELATED TRAINING COURSES

525

CAMEROON

HAND IN HAND AT ALL LEVELS

Cameroon is one of the first African countries which has mobilised to implement the One Health approach by developing a National Plan of Action. The plan involves tackling zoonoses and food safety issues. By collaborating with four global organisations that aim to guide countries in addressing complex One Health challenges, Cameroon ensures the plan's comprehensiveness.

By Liva Haensel

As coordinator of a regional fund for health promotion in the rural northern region of Cameroon, Adamaoua, Aïssatou Fanta knows what One Health means in practice: Introduced to the holistic approach by GIZ, her organisation realised that health is not just about humans, but also about animals and the environment. This was a big plus for her organisation, which primarily works with rural communities to promote public health services, she says. Numerous training sessions on One Health, hygiene standards and infection prevention at markets as well as anti-microbial resistance are planned to be held through Aïssatou Fanta's Fonds Regional in cooperation with several partner organisations of GIZ in Adamaoua and central Cameroon.

At the same time, an exciting process with a lasting impact on the country is also taking place at a global level. The GIZ Global Programme Pandemic Prevention and Response, One Health supported Cameroon to align its National One Health Action Plan with the One Health Joint Plan of Action of the Quadripartite.

WELL PREPARED FOR THE FUTURE

The Quadripartite – the World Health Organization (WHO), the World Organisation for Animal Health (WOAH), the Food and Agriculture Organization (FAO) and the UN Environment Programme (UNEP) – set out to guide countries in coordinating and collaborating among the human, veterinary, environmental health, and agricultural sector. If Cameroon – a country with a rich biodiversity on the one hand, and many zoonotic diseases and challenges due to climate change on the other hand – is well prepared, humans, animals and the whole environment will benefit hand in hand.

This year, Cameroon collaboratively developed and endorsed its National Action Plan on One Health in alignment with the Joint Plan of the Quadripartite. By building on efforts to implement the One Health approach that the country had already started in 2012 – still with a focus on zoonotic diseases at that time – GIZ built a bridge between the national and global levels and accompanied all the parties involved in the process. The new action plan now also entails the areas of environment, food security, climate change and anti-microbial resistance so Cameroon can better prepare for coming health threats. "Being context-specific and addressing the needs and gaps in the country, it both guides national actors and international cooperation," summarises Elisabeth Dibongue, Deputy Permanent Secretary of Cameroon's OH Platform.

For Aïssatou Fanta, the woman from rural Adamaoua, One Health already got real. "To make the approach become alive on the ground, we managed to set up dialogue structures in the communities," she concludes. By autumn 2024, her organisation will have implemented trainings on raising awareness among 3,750 market traders and educate multipliers. Like the politicians in Yaoundé who sat at the table to develop Cameroon´s National Action Plan, she is already realising this for her region, step by step.

WATCH ON YOUTUBE:

Validation of the One Health Joint plan of action

THE ONE HEALTH PLATFORM OF CAMEROON

"WOMEN IN CAMEROON ARE ALREADY INVOLVED IN THE ONE HEALTH APPROACH"

Fanta Aissatou is head of the partnerships unit at the Regional Funds for health promotion (FRPS) in the Adamaoua region in Cameroon. The Fonds's mission is to strengthen good dezentralized health governance, to mobilise and manage resources for health financing, distribute medicines and other pharmaceutical products in health institutions and carrying out activities with a strong community participation. GIZ supports the institution with a grant of around 89.000 Euro and technical accompaniment for seven months. Here Fanta Aissatou explains about her first contact with the One Health approach and how the different activities work out in Adamaoua.

Fanta Aissatou: Working with the One Health approach in Cameroon is a new experience for us, because generally all our activities were more focused on the human health sector in collaboration with the Ministry of Health.

Our first encounter with the One Health approach came in March 2022, when we were invited to one of the GIZ-PPOH meetings, so it's the GIZ that introduced this concept to us.

The One Health approach enabled us to realise that health is not just about people, but also about animals and the environment. It has linked us with other sectors in achieving our objectives. We used to be in contact with these sectors, but I must say that we did not involve them enough in upscaling our activities.

With the One Health approach, we have forged a lot of links. We intend to continue these multisectoral cooperations from now on, even when the collaboration with GIZ will end.

It has led us to work with 5 ministries now: the Ministry of Public Health, the Ministry of Agriculture and Rural Development, the Ministry of Forests and Fauna, the Ministry of Livestock, Fisheries and Animal Industries and the Ministry of the Environment, Nature Conservation and Sustainable Development. At community level, we also work with members from all these sectors and the municipalities.

CAMEROON

"Women in Cameroon are already involved in the One Health approach"

Our regional Fonds also emphasises on the dialogue structures. Their representatives stand for the community level, and they will be able to continue these activities within the local sectoral bodies, thereby decentralising cooperation. In all our actions, we see it as a priority to involve the local authorities to a much greater extent, because we are committed to the concept of decentralisation.

I would like to thank the entire GIZ team for the trust they have placed in our Fonds for running this project. It has enabled us to enhance our image, and, at the same time, it is a contribution to our various missions, which are to carry out health promotion activities, and therefore to build the capacity of important day-to-day implementors of a One Health approach like livestock-market players. We have carried out a situational analysis of the markets, on the basis of which we were able to develop manuals on hygiene, water and waste management and antimicrobial resistance.

Currently we train and raise awareness among 3,750 market stakeholders in the communes of Meiganga, Ngaoundal, Tignère. Until the end of the project, we are going to be doing a lot of capacity development work in the various livestock markets in these different communes. First, we plan to recruit master trainers in each commune. We will select 1 master trainer in each of these communes and they will train trainers. There will then be such 3 train-the-trainers in each commune. Later they will train "facilitators", who will be the actors in the implementation of this capacity development in the communal markets, since it is them who will facilitate reaching the 3,750 market players.

We're also going to put a lot of emphasis on the number of women taking part in the trainings: we want to reach out at least 30% of women and 20% of young people.

We also want to have women as hygiene ambassadors in the markets. They work a lot in livestock markets in our region and can continue to raise awareness as role-models for improved hygiene standards. Rural women face a lot of barriers here: e.g. they often don't have access to health care and drinking water. But they have always been working in the human sector, the animal sector and even the environmental sector, so here in Cameroon they are already involved in the OH approach at each level. I am convinced that women are fully capable of managing projects and even creating activities.

> In the near future and through the GIZ support, our women in Adamaoua will occupy a very important place.

Towards the end I would like pay tribute to GIZ for choosing a focal point here for the project who is from the region, who knows the culture of the region, and who has therefore managed to organise activities in remote areas despite the stigma attached to these areas.

Call protocol by Liva Haensel and Fatma Letaief.

AN OUTSTANDING COOPERATION

The GIZ Global Programme Pandemic Prevention and Response, One Health (GP PPOH) in the East African Community (EAC) region cooperates with the GIZ "Support to Pandemic Preparedness (PanPrep) Programme". One of its most important partners for the last years was the EAC Secretariat. For several years, the EAC has followed a multi-sectoral and multi-disciplinary approach in the prevention and response to infectious disease outbreaks. Against this background, the collaboration between the GP PPOH and the EAC Secretariat has focused on the establishment of an EAC One Health Coordination Unit, capacity development among an interdisciplinary workforce including operationalizing a regional, rapidly deployable expert pool, strengthening food safety, and the prevention and control of transboundary animal diseases and zoonoses.

ABOUT DR DAVID BALIKOWA

Dr David Balikowa is the Senior Livestock Officer at the East African Community Secretariat based in Arusha, Tanzania since 2017. He is responsible for a diverse portfolio relevant to One Health, including animal health, agriculture and food safety. As the EAC One Health focal point for the agriculture sector, he was among the main contact persons guiding the collaboration with the GIZ programme. Here David Balikowa talks about why transboundary animal and zoonotic diseases are still a high risk, which fruits were born out of the partnership and what kind of challenges he is expecting for the future.

Dr David Balikowa: The East African region faces a heightened risk of transmission of transboundary animal diseases (TADs) and zoonoses. While most of the diseases are endemic to the region, the threat of emerging and re-emerging infections may be elevated by the growing cross-border trade among countries that form the East African Community (EAC), referred to as Partner States.

EAST AFRICAN COMMUNITY (EAC)

An outstanding cooperation

To facilitate free movement of goods, services and people within the region, EAC Partner States signed a Protocol on establishment of the EAC Common Market. While this has tremendous economic benefits owing to the increasing trade among the Partner States, the increase in cross-border trade in livestock and livestock products poses a higher risk of transmission of TADs and zoonoses. In addition, the seasonal migration of wildlife within the transboundary conservation areas, and the frequent cross-border movement of large herds of cattle, sheep and goats by pastoralists in search of water and pastures for their animals also contributes to the heightened risk of transmission of 16 TADs and zoonoses in the region.

With support from our partners, particularly the GIZ Global Programme on Pandemic Prevention and Response, One Health (GP PPOH) and USAID (Kenya and East Africa), the EAC Secretariat has mobilized the Partner States to draft and sign memoranda of understanding to cooperate in tackling this unique challenge as provided for in the treaty for the establishment of the East African Community. Through this support we mainstreamed the One Health approach in the prevention and control of TADs and zoonoses. For instance, we have facilitated the drafting and signing of a memorandum of understanding between the Republic of Uganda and the United Republic of Tanzania to collaborate on TADs and zoonoses along the common border.

Peste des Petits ruminants or Plague of small ruminants (PPR) is one of the most damaging animal diseases worldwide. It affects small ruminants in almost 70 countries in Africa, the Middle East and parts of Asia. The highly contagious disease causes annual losses of USD 1.5 to 2 billion and affects more than 330 million of the world's poorest people. Since the global eradication of rinderpest in 2011 was successful, the PPR Global Control and Eradication Strategy (GCES) was launched for the period 2015 - 2030. It is being implemented by the Global Eradication Programme (GEP) in cooperation with regional and sub-regional implementation partners. Since women guard mainly small ruminants, they are the main important ambassadors for One Health measures to address the disease.

The concerned stakeholders at national level and the border zones appreciate this approach and the support greatly.

The main challenge is that the priority TADs and zoonoses identified by stakeholders for joint action are many, including for example Foot and Mouth Disease (FMD), Peste des Petits Ruminants (PPR), Rift Valley Fever, Ebola

or Rabies, and the local governments in the border districts of Uganda and the United Republic of Tanzania do not have enough resources to implement the agreed joint actions. The EAC Secretariat is not able to play an active coordination role owing to budget constraints. Going forward, we plan to mobilize more resources to support the Partner States to continue with the cross-border consultation, planning activities and implementation.

While FMD, PPR and RVF are still a major threat to animal and public health in all the EAC Partner States, a number of hemorrhagic fevers such as Marburg, Crimean Congo Hemorrhagic Fever, and even Ebola Virus Disease constitute a serious threat to public health.

An increased risk of Rift Valley Fever outbreaks in most of the EAC countries is always associated with increased precipitation. Targeted vaccination campaigns against FMD, PPR and RVF have proved to be very beneficial in preventing widespread transmission of the diseases. Surveillance programmes for the hemorrhagic fevers and interventions to reduce the risk of introduction or spread of infection proved to be useful in the Democratic Republic of Congo, Uganda, and Tanzania where outbreaks were reported. The highly Pathogenic Avian Influenza in the poultry industry remains a high risk as the region continues to attract migratory birds from the northern hemisphere.

Rift Valley Fever (RVF) is a viral zoonosis that primarily affects sheep, goats, cattle, camels and antelopes. It is transmitted by mosquitoes and blood feeding flies. The virus was first identified in 1931 in a sheep epidemic on a farm in the Rift Valley of Kenya. In humans, the disease ranges from a mild flu-like illness to severe haemorraghic fever that can be lethal. When livestock is infected, the disease can cause significant economic losses due to high mortality rates in young animals and waves of abortions in pregnant females. While some human infections have resulted from the bite of infected mosquitoes, most human infections result from contact with uncooked meat or milk of infected animals.

The EAC Department of Agriculture, Food Security and Rural Development greatly benefitted from the collaboration with the GIZ.

Call protocol by Wiebke Kobel and Liva Haensel.

> Several activities, including the EAC strategy for transboundary animal disease control and guidelines for regional coordination, were completed with strong support from GIZ. Our collaboration helped overcome operational challenges that limited access to resources for implementing the department's planned activities.
>
> Dr. David Balikowa

EAST AFRICAN COMMUNITY (EAC)

"WE CANNOT DO THIS ALONE"

The East African Community (EAC) region experiences a high prevalence of transboundary animal diseases (TADs) and zoonoses of which many are endemic. TADs constitute a major constraint to livestock production and productivity in the EAC, a region where agriculture is among the most important economic sectors. These diseases adversely impact animal health, public health, food and nutrition security, livelihoods, wildlife conservation, tourism and trade. Effective prevention and control of TADs and zoonoses in the EAC requires cooperation of the EAC Partner States - Burundi, DR Congo, Kenya, Rwanda, Somalia, South Sudan, Tanzania, Uganda - along shared borders. In August 2023, Uganda and Tanzania reached a milestone by signing a Memorandum of Understanding (MoU) on the prevention of transboundary animal diseases and zoonoses. The two countries share a long border. This border is characterized by intensive cross-border movement of people, livestock and livestock products.

ABOUT DR. JOSHUA WAISWA

Joshua Waiswa (39) has been a Technical Project Manager at Vétérinaires sans Frontières Germany (VSFG) in Uganda since 2019. Born in Luuka district in a family of 15 children in Eastern Uganda – "a rural and poor part of the country with livestock dependent communities", he says – he later grew up in an urban setting in Massaka close to the Tanzanian border. Joshua holds a BA in Veterinary Medicine and a Diploma in Project Planning and Management as well as a M.A in Rural Development at Makerere University. He is currently pursuing a Master of International Infectious Disease Management.

In 2021, the Global Programme Pandemic Prevention and Response, One Health by GIZ took over the implementation of the project "Support of the Global Eradication Program for Peste Petits Ruminants", which had previously been funded by the Sustainable Agriculture Sector Project by GIZ. In the project, the International Livestock Research Institute (ILRI) worked together with the project partner Pan African Veterinary Vaccine Centre by supporting coordinated, risk-based control of PPR using an epizone approach and by supporting the evaluation of thermotolerant PPR vaccines. The organization Vétérinaires sans Frontières Germany (VSFG) and ILRI are continuing the Epizone approach to improve coordination, surveillance and control of PPR in combination with the zoonotic Rift Valley Fever (RVF) for institutionalizing coordinated interventions in the epizone bordering the Kagera region of Tanzania and southwestern Uganda.

EAST AFRICAN COMMUNITY (EAC)

"We cannot do this alone"

As a contribution to the implementation of the bilateral Memorandum of Understanding between Uganda and Tanzania, GIZ has supported the Organization Vétérinaires sans Frontières Germany (VSFG) through a grant agreement. It implemented a project at the Tanzania-Uganda epizone to enhance coordination, surveillance, and control of Rift Valley Fever and Peste des Petits Ruminants (PPR). We met with Dr. Joshua Waiswa from VSFG to talk about his experiences.

Joshua, you were responsible for the joint project with the GIZ on vaccination campaigns and more in the livestock sector. What was your first motivation starting to work on the topic of One Health and your relationship to animals?

Joshua Waiswa: I moved to Massaka town, an urban area, with my family when I was 4 years old and later I joined university. This is how my love for animals started, when they introduced us there about being admitted to veterinary medicine. At University in Kampala, my love for animals grew and I haven't looked back. Since then, I have been thinking about livestock dependent communities, about how we can help get these communities out of poverty. Surprisingly the border region Karamoja has one of the highest number of livestock but is at the same time still one of the poorest areas.

ON THE GIZ GRANT AND ACTIVITY

VSFG and the GIZ Programme have worked jointly: What have you done exactly?

Joshua Waiswa: First of all, VSFG`s focus is on gender responses, humanitarian responses, environment responses and crisis. In East African countries we're looking at access to markets and to the improvement of production for livestock communities. Most of the agencies in health and livestock health were focused on production and how to increase it, but very few were going into public health and global health as the next big threat. So we ventured into that with the Global Programme of Pandemic Prevention and Response, One Health of GIZ and it has been an interesting journey. Diseases are invisible. But they move on and through animals on vehicles they cross borders.

ON THE PUBLIC HEALTH APPROACH AND THE ROLE OF THE EAC

So, this is how the public health approach came in?

Joshua Waiswa: Yes. We know that there were inadequate disease control measures along the border points and many emerging and reemerging and zoonotic diseases. The other challenges we observed were poor coordination and poor surveillance. There is a need for improvement of surveillance. We wonder: Are we able to institutionalize early detection measures? We saw that we are working in areas or situations where vaccination was happening. But it was inadequate. I will give you an example: Isingiro, located in Southern Uganda at the border to Tanzania, has over 200,000 goats but only 20,000 doses of PPR vaccine were distributed.

We focused on enhanced community innovations and community resilience and surveillance for animal health and human health. But we concentrated on PPR and RVF, which would form a basis for the control of the other diseases.

> We could not do this alone. We noticed that when we are in Uganda that we cannot be at the same time in Tanzania.
> Dr. Joshua Waiswa

EAST AFRICAN COMMUNITY (EAC)

"We cannot do this alone"

So we needed to collaborate with the different agencies and that is how we noticed that the East African Community was facilitating the project activity with the Tanzanian and Ugandan Government authorities and experts to develop a Memorandum of Understanding (MoU). This MoU seeks to strengthen cooperation and coordination to prevent and control transboundary animal diseases and zoonoses along the joint border.

What happened next?

Joshua Waiswa: Our focus was on 4 border districts, two in Uganda, and two in Tanzania. The reason why we selected these communities is because of resources. But also we wanted to have a proof of concept to see if it works.

The target was to cover all animals, all technical people and all communities in these four districts. So our first step was community sensitization and because of limited resources we could not reach out to everyone. A complementary USAID-supported East African Community project helped us by mobilizing and forming so-called "One Health teams" in the district. In these four districts we used these communities and trained them.

We had several Health Teams; the smallest had 12 people, the average one about 36. By building trust with the people, we trained them and we were mentoring them so that they could multiply their knowledge and transfer it to other 10 persons. That's the whole concept. Finally, we could see that the multiplication occurred successfully in these districts.

The vaccination process of goats against Peste des Petits Ruminants (PPR) involved preparation and procurement of vaccine from the PPR vaccine producers in Tanzania, and vaccine delivery and storage to the zonal veterinary offices. We then procured and provided necessary equipment, such as syringes, needles, and gloves to the technical officers.

The technical officers identified animal farms that were to be vaccinated in each district. This process was documented with the vaccination details, including date, vaccine type, dose, and animal identification.

> Due to the MoU between Tanzania and Uganda for transboundary animal disease control, we were able to have samples tested at Uganda's laboratory. Currently, some samples are there, while others remain in Tanzania for potential future analysis.
>
> Dr. Joshua Waiswa

We took the samples because we wanted to know the serostatus of PPR in Tanzania so that we can guide the next interventions and inform decision-making-processes. So this was a real collaboration! We just had to facilitate the movement because the lab in Tanzania is far away - about 960 kilometers - while the lab in Uganda is about 350 kilometers away. We saved costs and the benefit of the collaboration was that the Tanzanian government was able to give us a documentation on moving those samples transnationally. Today, some samples are in Uganda while others remained in Tanzania.

Through the project, we were also able to procure consumables used in collecting samples and vaccination. Things like injection syringes, injections, prepared tubes, and testing kits for the lab. We are going to do now an ecological niche mapping for RVF which is transmitted by a mosquito vector. We know that this disease is also driven by environmental factors, like rainfall and vegetation.

EAST AFRICAN COMMUNITY (EAC)

"We cannot do this alone"

ON GENDER ROLES

Women play a crucial role in this issue because they own small animals and if the small animals get diseases, then the women are heavily affected by this. Could you tell us bit more about this?

Joshua Waiswa: Women own mainly the small ruminants. But they do not have power in terms of marketing and control. Even when they sell and get the money, this is mainly controlled by men. Men control the resources. So when you're going to vaccinate goats or sheep, you have to reach out to the women because they are the owners. But if you're coming up with the issue of marketing, you have to talk to the men. We can consider: It is the men who own the large livestock such as cows or camels. The small ruminants like goats and sheep are owned by women and seen as "an addition".

When you found out that the meetings with the OH teams on awareness were mainly attended by men and no women, could you address that?

Joshua Waiswa: There are areas where we had no control, for example when it came to technical officers. Most of them are men. Actually, in Tanzania we didn't have any female participants and the same in Uganda. So we told the person who coordinated the meetings: If you invite 10 persons, please make sure, you will have at least two women who will attend this meeting. In our initial meetings it was obvious: If you ever saw this attendance list of the first meetings, you felt like it was only a male affair! It is the same we experienced on the issue of data sharing: There is a fear of men to lose something.

Why is the burden of infectious diseases in this area such a challenge for the people and the animals?

Joshua Waiswa: Because the borders are open. There is no coordinated and harmonized response. If Uganda is controlling the disease or vaccinating animals, it is not happening in Tanzania. Or if Tanzania is vaccinating, maybe Uganda does not know or is not undertaking the same.

We face a technical and a financial capacity gap. A district like Isingiro which has about 200,000 flocks in terms of goats and sheep has only 2 veterinary officers, I think. It is a very low number. Laboratories are far away. There is a need for more awareness and capacity building.

Concerning PPR and Rift Valley fever: If surveillance, diagnostics and therapy would work well in future, how would this look like?

Joshua Waiswa: 1. Usually goats have a short lifespan. But the vaccine for PPR is lifelong. When you give it once, it is done. You have covered the goat for life. So the future will be a place where the majority of the goats and sheep are vaccinated.

2. In districts and across the border, people will know how to diagnose this disease, they know about the disease because that's what led to the control of Rinder pest.

3. Communication. I point this out because there is a lot of information out there, but many people don't know what it is exactly. VSFG is doing this. Maybe another partner is doing the same. Sometimes it is conflicting, sometimes complementary, so we have to push a good communication between us as organizations.

4. Coordination. If we vaccinate the side of Uganda, we should vaccinate the other side across the border, too.

A coordinated livestock identification system would be ideal because it would help us to control the movement of animals, but financially it is not viable in Africa. A functioning vaccination system - we have the data now - and in collaboration with empowered communities that participate in disease surveillance - is the future I see!

> "A coordinated livestock identification would be ideal!"

How has the EAC-architecture facilitated additional space for the project implementation, perhaps beyond strategic frameworks?

Joshua Waiswa: We got to know that the EAC had facilitated signing of an MoU between Tanzania and Uganda. We knew that there were some harmonized protocols already existing. We as VSFG alone, we could not communicate much by e-mails with governments. But an e-mail or a phone call or chat by a person from the East African Community Secretariat worked and it has really helped to pave the way so that people could understand the project. It is a welcome project. When you go to Tanzania now, you have people who know you, think in the same direction, who help with the border crossings and on the access to laboratories. That was very helpful!

ON FINDINGS & LEARNINGS

What did surprise you the most in terms of the achievements you've made and the findings and lessons learned?

Joshua Waiswa: The Tanzanian government had never picked samples from Tanzania. We do, but they had never done vaccinations in Tanzania! So that surprised us most. And this, too: Every part of the country blames the other! That is the root of the problem. RVF-affected countries were hesitant to share data, especially on disease control because they didn't know where it would end up. For example, if they tell you, we have Rift Valley Fever in this district, it means for the community that it needs to restrict the movement of animals and their products. It leads to an economic loss and opportunities. The best way to manage this, is reaching out to the decision-makers, the chief veterinary officers. We explained why we need this data. We were transparent and told them, what we will use it for. Tanzania approved that, but preferred to keep a copy of the samples.

ON THE COOPERATION WITH GIZ

Is there a feedback you would like to give us?

Joshua Waiswa: Yes. What I say now is very honest. It has been smooth with GIZ. We had monthly catch-ups, where we talked to each other and shared all openly. In these calls, my GIZ partners talked about what is working, what is not working and if anything went wrong. They were really helpful concerning technical and administrative support. I can say, it felt as if we have worked together for 10 years!

Dear Joshua, thank you very much for the good cooperation and for this interview!

The interview was conducted by Liva Haensel and Wiebke Kobel.

THE GERMAN EPIDEMIC PREPAREDNESS TEAM (SEEG)

The SEEG supports partner countries and organizations concerning disease outbreaks worldwide with a flexible, at short-notice using a 'One Health' approach. SEEG as part of the GIZ Global Programme collaborates with Robert Koch Institute, Bernhard Nocht Institute for Tropical Medicine, Friedrich-Loeffler-Institute, and Charité University Hospital. Until today it coordinated 65 deployments in more than 35 countries.

SEEG

STRENGTHENING THE GAMBIA'S RESILIENCE AND RESPONSE TO AVIAN INFLUENZA

The Gambia mounted an impressive response to its first outbreak of avian influenza in 2023. Bolstered by a subsequent deployment of the German Epidemic Preparedness Team (SEEG), it has become a showcase for neighbouring countries.

In late March 2023, Binta Sambou, Senior Wildlife Conservation Officer in The Gambia's Department of Parks and Wildlife Management, received a call from a guide in the Tanji Bird Reserve about dead birds in the wetlands. With avian influenza making headlines in Europe since late 2022 and The Gambia's critical position on avian migration routes, Ms. Sambou was rightly concerned. Ten rapid tests were conducted on the dead birds, and one showed the presence of avian influenza. Further PCR tests confirmed everyone's worst expectations – The Gambia was in the grip of an avian influenza outbreak of the type H5N1.

Ms Sambou – who is also The Gambia's One Health Focal Point for Wildlife – activated the One Health platform.

Its key members, including the Epidemiology and Disease control (EDC) Unit at the Ministry of Health and the National Public Health Laboratory, as well as colleagues from the Ministries of Environment, Climate Change and Natural Resources and Agriculture, immediately got to work to manage and monitor the outbreak. The largest threat lay in the potential for the virus to cross over to The Gambia's domestic poultry with poultry farming playing a critical role in the country's economy.

Healthy Developments (bmz.de)

THE RISING GLOBAL THREAT OF AVIAN INFLUENZA

Highly pathogenic avian influenza (HPAI) is a highly contagious and adaptable viral disease which causes massive loss of life among infected bird populations. Infected migratory birds can transmit the virus to domestic poultry, as well as to captive and wild birds in the countries they pass through. This chain of infection has led to the world's largest ever documented wave of HPAI in recent years, both in terms of the number of disease outbreaks and their geographical distribution.

The current strain of avian influenza (H5N1) is affecting a far wider range of avian and mammalian species than ever before recorded, including foxes, seals and mink. In January 2024, the first polar bear died of the disease and recently dairy cattle have been infected in the United States indicating a new and more unpredictable development in the spread of the specific avian influenza strain in livestock and potentially in humans. This is a typical situation, where outbreak response teams like the SEEG need to be alerted, need to monitor the situation closely and be ready to react.

LIMITED RESOURCES POSE A MAJOR CHALLENGE

A serious challenge for managing infectious disease outbreaks in The Gambia lies in the lack of dedicated resources. 'When the outbreak took off', says Ms Sambou, 'we were really worried because we do not have the capacity to do critical things like testing and using personal protective equipment (PPE), and this delays our response'. Such delays carry very real risks for citizens, particularly fishing and farming communities. Women are at higher risk of exposure because they do the farming and slaughter the animals, while children sometimes play with the dead birds, greatly increasing the risk of animal to human transmission.

The shortage of human resources is particularly acute. In 2012, an assessment by the World Organization for Animal Health (WOAH) estimated that The Gambia needed 22 veterinarians to manage its livestock. Currently, there are only 3 or 4 trained veterinarians in the country. However, The Gambia's livestock is much larger today than it was ten years ago, leaving the country completely unprepared to adequately manage animal-disease outbreaks in a timely manner.

BUILDING CAPACITIES FOR BOTH SIDES

In May 2023, SEEG was contacted by Abdoulie Sawo, Principal Wildlife Conservation Officer at the Department of Parks and Wildlife Management, and Binta Sambou's boss. SEEG began to put together an interdisciplinary team of experts, drawing on SEEG's coordinating institution Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, as well as partner organisations, the Friedrich-Loeffler-Institut, Robert Koch Institute, and the Wadden Sea Secretariat.

GAMBIA I SEEG

Strengthening The Gambia's resilience and response to avian influenza

In September, the SEEG team arrived in The Gambia, bringing with them supplies of PPE, test kits and much more. Although the acute phase of the outbreak had by then passed, the timing was in fact spot on, as Dr Norman Nausch, Head of SEEG explains. 'Often, it's not the acute phase when support is really required, but a couple of months later when you identify the gaps in the acute response and can use the momentum developed to press forward and address them.'

The deployment kicked off with a round of formal meetings with ministers and ministry representatives. During these meetings, SEEG team members were able to highlight the critical efforts of their Gambian colleagues during the early stages of the avian influenza outbreak, and to underline the importance of a collaborative One Health-led approach involving all sectors to address future outbreaks. Training on diagnostic capacities was provided for personnel at the public health and central veterinary laboratories, and The Gambia's rangers learned how to work with PPE and to safely dispose of the carcases, among other things.

PLANNING FOR FUTURE OUTBREAKS

A three-day risk assessment exercise brought together stakeholders from different disciplines and sectors to assess The Gambia's risk profile for avian influenza. Participants analysed the entry points for the virus, ranked the different risks and agreed how best to mitigate them. The workshop provided a much-needed opportunity to revitalise communications between The Gambia's different One Health stakeholders and to prepare for future outbreaks.

Although its own resources are limited and visits are often short, SEEG aims to help partner countries build resilience to infectious disease outbreaks. During the Gambia deployment, recommendations developed by One Health partners with support from SEEG were shared with senior government officials. These included the development of a binding, intersectoral response plan for future outbreaks, and renewed efforts on awareness raising and advocacy with government decision-makers.

ACHIEVING A LOT WITH VERY LITTLE

Jan Matern, GIZ Advisor for Pandemic Preparedness and One Health, who coordinated the SEEG deployment to The Gambia together with Lisa von Stebut, was really impressed how the Gambian colleagues managed to deal with avian influenza with the limited resources at their disposal and still successfully responded to the acute phase of the outbreak. Summing up SEEG's contribution, he says, 'thanks to our engaged Gambian colleagues, we were able to build a solid foundation for intersectoral collaboration, which will help The Gambia to tackle future avian influenza outbreaks'.

READ THE FULL ARTICLE HERE

Strengthening The Gambia's resilience and response to Avian Influenza – Healthy Developments (bmz.de)

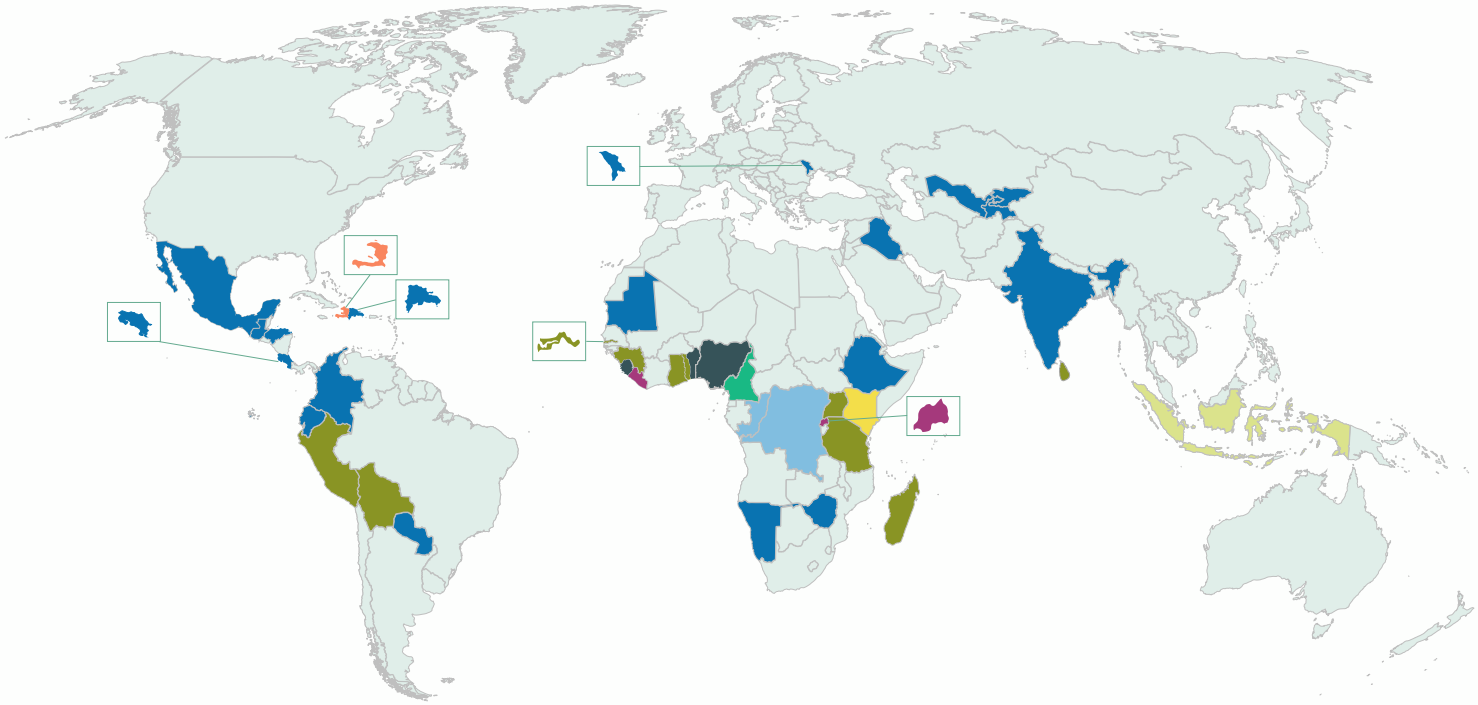
More than

1000

experts participated in all SEEG deployments

SEEG

SEEG DEPLOYMENTS



- COVID-19
- Lassa fever / Dengue fever
- SimEx / Training / Workshop
- Cholera
- Ebola
- Rabies
- Avian Influenza
- AMR
- Multiple deployments for different pathogens

CHARITÉ UNIVERSITÄTSMEDIZIN BERLIN

BNITM Bernhard Nocht Institute for Tropical Medicine

ROBERT KOCH INSTITUT

FRIEDRICH-LOEFFLER-INSTITUT FLI Bundesforschungsinstitut für Tiergesundheit Federal Research Institute for Animal Health

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Gmb

BOLIVIA

IN THE HEART OF THE AMAZON

Community-based surveillance in Bolivia is a collective mission. Its protagonists work hard to protect communities from epidemic outbreaks. The future oriented approach also arouses the interest of the Bolivian veterinary service.

By Katherine Argote

In the heart of the Bolivian Amazon, around 450 kilometers from the capital La Paz where nature unfolds its splendor, a silent battle is being fought for the health and well-being of communities. This unique environment, rich in biodiversity, faces growing challenges due to increased human activity and the interaction between human population, animals and the environment. Ongoing deforestation is one problem. The other is Tropical diseases which claim many lives if not recognized and tackled adequately.

"WE LIVE MAINLY ON FISH"

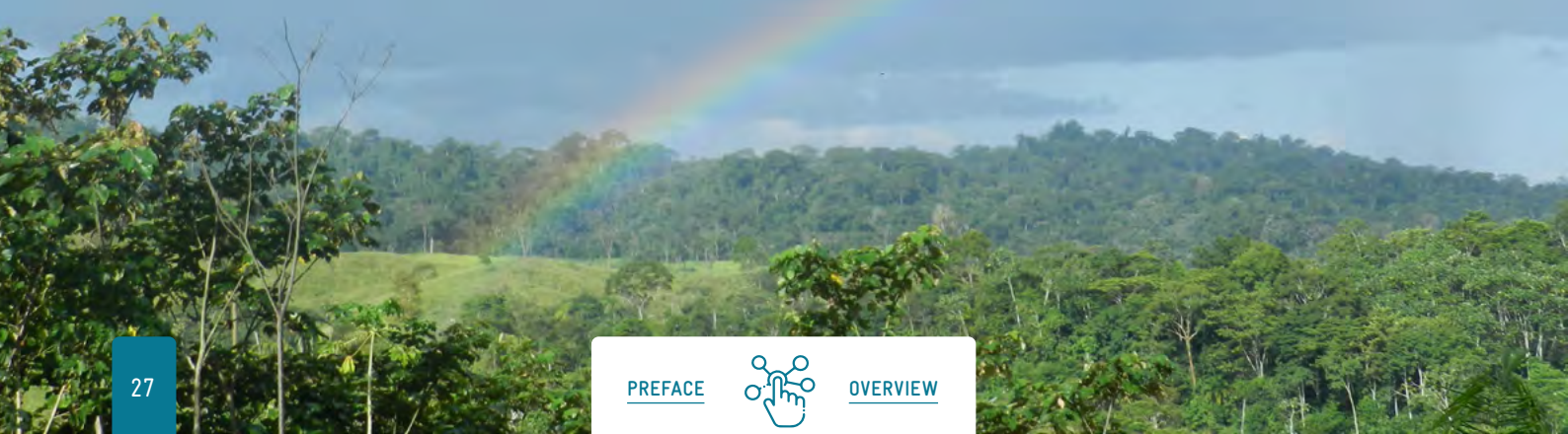
The region is home of Gladys Ybaguari. The 52-year-old community leader is an outstanding example of the commitment and determination of people who work tirelessly to protect the health of their communities in the Bolivian Amazon. Originally from San Silvestre and now a resident of Tumupasa, Gladys has dedicated much of her life to serving her community. As Secretary of Education, Health and Culture in the Indigenous Council of Tacana Peoples (CIPTA), Gladys plays a crucial role in the implementation and coordination of health projects in her region. "In the Amazon riverbanks, we mainly feed on fish, but lately, with gold exploration, the river has been contaminated

with mercury, and the fish are getting sick, which affects our health when we consume them", she says. The contaminated fish causes stomach infections. “Additionally, we face diseases such as Dengue and leishmaniasis”, she says. The lack of a functional monitoring system which follows up on the diseases in order to contain the infections, is a permanent concern.

In response to this growing health risk, an innovative pilot project has been started with GIZ: the Community Based Surveillance network (In Spanish: Red de Vigilancia Integral). The project focuses on the Rurrenabaque and San Buenaventura municipalities in the Bolivian Amazon, aiming to develop local mechanisms to detect early and respond effectively to health events – that may affect people, animals and the Amazon. The community based surveillance system is an organized and continuous system composed with 3 components: sensors, information units and focal points. People on the ground collect information on health events they have observed and that may occur through the interaction between human populations, animals and the environment. The so-called “sensors” are commoners, subsistence hunters, local tourist guides, domestic animal producers or people who work in local wildlife rescue centers in the Amazon.

A COMMUNITY LEADER'S FIGHT FOR HEALTH IN THE AMAZON

Gladys Ybaguari coordinates the reporting on health events for her organization CIPTA in the Tacana indigenous territory, located in the San Buenaventura municipality. “When a health event arises, our members – the “sensors” – head to the site, gather data, and transmit it to the authorities for conducting the necessary study, determining the causes, and providing us with the results,



BOLIVIA

In the heart of the Amazon

such as the number of deceased fish or other animals and the reasons behind it", she says. In February, in the neighboring municipality of Rurrenabaque, approximately 100 fish died due to the severe contamination made by her neighbors at the touristic site of the lagoon Los Sauces. A big slap in the face for the people living there.

The "sensors" report the health event subsequently to information units, constituted of local health servers, private veterinarians, rangers and indigenous communal authorities. They start to verify the reports, provide the initial response and handover the information to focal points from the different institutions and sectors taking part of the surveillance network on the municipality level.

Focal points communicate the event to each other and start a process to investigate, analyze and evaluate the event while defining strategies to reduce the risk in collaboration again with the Information Units.

The information loop covers also data which will be saved: Where was the dead animal discovered? Where did a person get an unusual disease? What does the investigation reveal? Where is the source of the infection?

The community based surveillance system is expected to answer these questions. It prevents and controls finally disease outbreaks through early detection and an effective management of health events.

With a view to sustainability, the municipality of Rurrenabaque has just requested support in developing a Municipal Norm to institutionalize its coordination group while the Bolivian National Veterinary Service is exploring how it can adopt the surveillance model now at the national level.

The two success factors of the network are a multi-sectoral coordination and widespread community participation. And the process continues: Recently, Rurrenabaque and San Buenaventura have established two coordination groups that meet regularly to analyze data, identify priority diseases and jointly coordinate preventive and response actions.

BOLIVIA

In the heart of the Amazon

So far, the two groups have received and responded to five health reports on parrots, poultry and fishes. The joint analysis facilitates coordination and promotes intensive collaboration between the human, animal and environmental sectors.

A ONE HEALTH AMBASSADOR

With determination, Gladys urges further expansion of the community based surveillance system as a real One Health ambassador: “Every step we take, every workshop we hold, and every collaborative effort we make shows that protecting health in the Amazon is an achievable goal, as long as we work together for this.“ She adds in conclusion: “Together, we can make a difference and ensure a healthy future for our families and our land.”

848
Persons trained on surveillance

437
women

BUILDING BACK BETTER IN LATITUDE ZERO

In February 2020, the first case of COVID-19 arrived in Ecuador. In the year after, the government started its cooperation on pandemic prevention with GIZ. The measures implemented include not only the upgrade of a biosafety laboratory, but also a wide range of capacity building efforts with Ecuadorian experts.

By Liva Haensel, Andres Murgueytio Castelo and David Brennan

"The constant support and accompaniment of GIZ in the implementation of tools, techniques and equipment allows us strengthening the epidemiological surveillance in our country", states Eva Nicola with satisfaction. She works as a leading expert at the National Reference Center of Mycobacteria at the National Institute for Health Research (INSPI). The pioneering institute in Ecuador for medical research is crucial for the country's response to disease outbreaks. The COVID-19 pandemic highlighted the critical need for the further capacitation of expertise in the epidemiological surveillance system and the benefits of a so-called BSL-3 laboratory serving public health purposes in Ecuador.

BSL stands for BioSafety Level. These laboratories are specially designed to allow the safe handling of infectious materials in the laboratory. BSL-3 laboratories handle biological agents at risk group 3, which can cause serious illness in humans and animals and are airborne. More than 350 officials, among them 66% women and 34% men, from the National Institute for Health Research (INSPI), the Ministry of Public Health (MSP) and other health institutions have been trained through collaboration with the GIZ Programme in topics such as field epidemiology

cooperación alemana
DEUTSCHE ZUSAMMENARBEIT

with a One Health approach, on the International Health Regulations (IHR), the analysis of statistical and epidemiological data, genomic surveillance, and laboratory diagnosis.

Consequently, the Ministry was supported to conduct a gender equality assessment of its epidemiological surveillance system. The assessment permitted the education and sensitisation of MSP staff concerning interactions between gender and health, which positioned Ecuador to be the first country in South America to have improved this capacity.

PREPARING FOR BETTER PANDEMIC RESPONSE

Ricardo Alejandro, another technician at INSPI, is pleased to note that the training courses on statistical data analysis and the simulation of emergency cases have helped to prepare for possible future scenarios. “The practical training for the use of a specific software was face-to-face. So, our doubts, questions and comments were immediately addressed during the meeting”, he says and continues: “The topics of preparedness and response have been very useful through replications to emulate a possible emergency, which serves a lot to mentally prepare and enables us to respond with capacity, coordination and effectiveness to any public health emergency.”

The capacities for analysing, data processing and reporting of the National Directorate for Epidemiological Surveillance at the Ministry have been improved, too: Surveillance processes that previously took a week, are now carried out in less than an hour thanks to the use of a new data warehouse, an automated visualiser and strengthened capabilities of the technical staff.

TWO FEMALE EXPERTS FOR ECUADOR’S LABORATORY

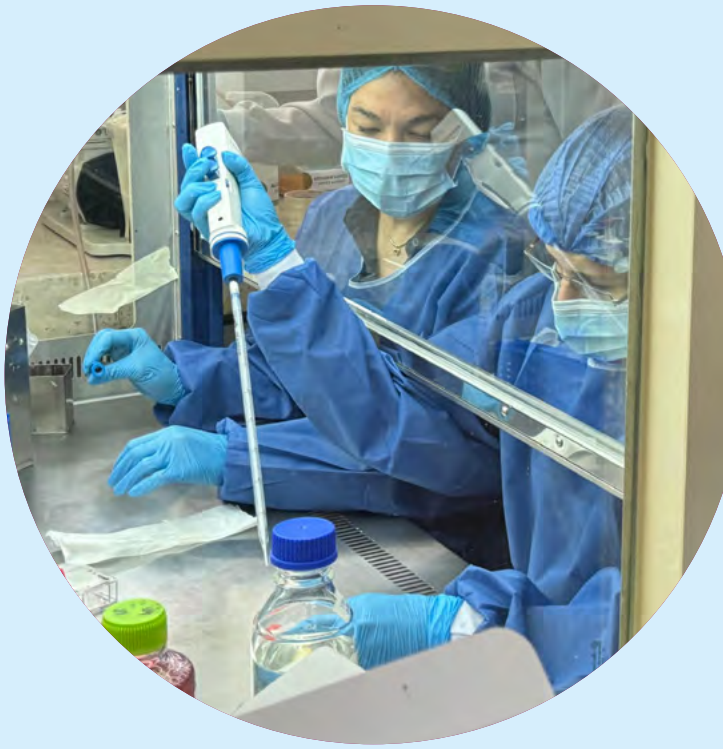
The upgrade of an existing laboratory to BSL-3 shall be the first of its kind in Ecuador and will serve public health purposes. The facility planned to begin operation by the end of 2024 and become essential for the safe handling of unknown pathogens and reduce reliance on foreign laboratories for sample processing and confirmation. The upgrade will enhance pathogen surveillance and research capabilities in Ecuador. Among the innovative and dynamic team of technicians working at INSPI, two of its

female researchers now benefit from strengthened capacities in biosafety and virology procedures. Through the GIZ support, Silvia Salgado and her colleague Eva Nicola participated in a two-month training assignment at Charité University Hospital in Berlin during August and September 2023.

Silvia Salgado, currently the Head of the National Reference Center of Exantemic, Gastroenterical and Vector-Borne Viruses, stated: “Strengthening the capacities of human talent with the use of BSL-3 techniques generates a strategic positioning for the proper use of the laboratory,” she says. This is how the Ecuadorian experts can reduce potential biological risks in future. In the meantime, the team has developed manuals and standard procedures to prepare for the exciting opportunities offered by an operational BSL-3 facility.

PAVING THE WAY FOR BETTER COORDINATION IN THE HEALTH SECTOR

Through the initiative "Ecuador es Salud," which assembles public and private actors, academia and civil society, GIZ supported the development of an action plan in the country which lays geographically on latitude zero why people speak about it as “the middle of the world”. By focusing on six thematic axes, which include public policy and management model like financing and sustainability, transparency and integrity, citizenship and patient empowerment, research and technological innovation in health, and the empowerment of human talent, paving the way for better coordination is already under way.



The action plan is foreseen to be the basis for establishing a binding roadmap with the health sector authorities for the joint implementation of concrete improvement actions in the different areas.

The entire package of measures in Ecuador is promising. Strengthening the pandemic prevention and response capacities of the national health system means first and foremost that this will benefit Ecuador's 18 million inhabitants.

A NEW BIOSECURITY LAB IS ENHANCING ECUADOR'S PANDEMIC PREPAREDNESS

In response to the devastating COVID-19 outbreak, Ecuador's government initiated reforms to make the country's public health system more resilient.

The port city Guayaquil in southern Ecuador, home to over three million people, witnessed one of the world's deadliest COVID-19 outbreaks per capita. Experiencing excess deaths at nine times the usual number monthly rate, an estimated 65% of the city's residents were infected, leading to numerous deaths.

Despite Ecuador's constitution guaranteeing universal public health, the pandemic exposed significant deficiencies in the healthcare system. Dr. Manuel Mancheno, former Under-Secretary at the Ministry of Health, conceded that the lack of a robust epidemiological surveillance policy impeded an effective early response. Consequently, the government urgently sought assistance from the GIZ to enhance pandemic preparedness.

The "SEEG team", the German Epidemic Preparedness Team as part of the Global Programme Pandemic Prevention and Response, One Health, supports partner countries in preparing for and responding to disease outbreaks quickly, flexibly, professionally and globally. In May 2020, during a critical phase of the initial COVID-19 outbreak in Ecuador, SEEG's mission along with Ecuador's authorities identified that the lack of a laboratory facility capable of handling dangerous or unknown pathogens securely was affecting the country's prevention and response

ECUADOR

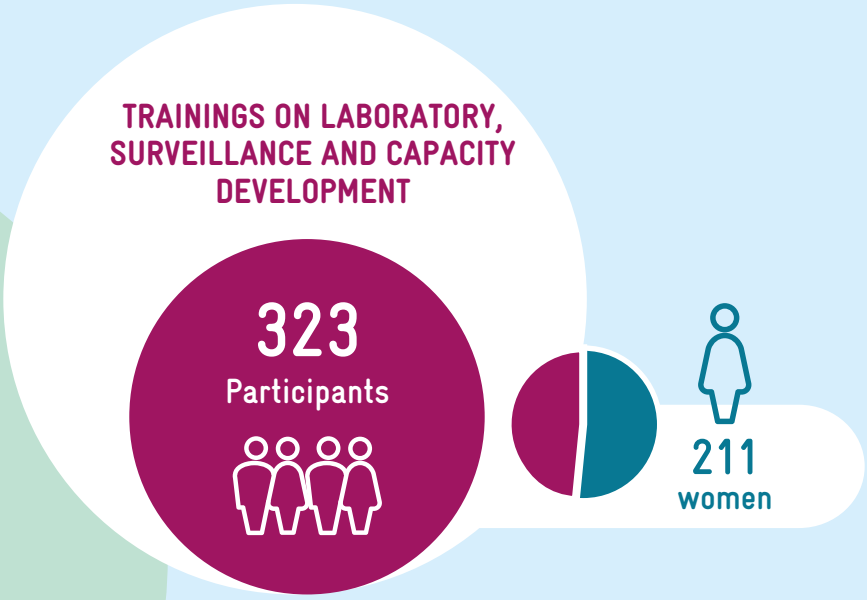
A new biosecurity lab is enhancing Ecuador's pandemic preparedness

Curious how the bio-security lab boosted Ecuador's Pandemic preparedness?
Read the full article from 2022 here!

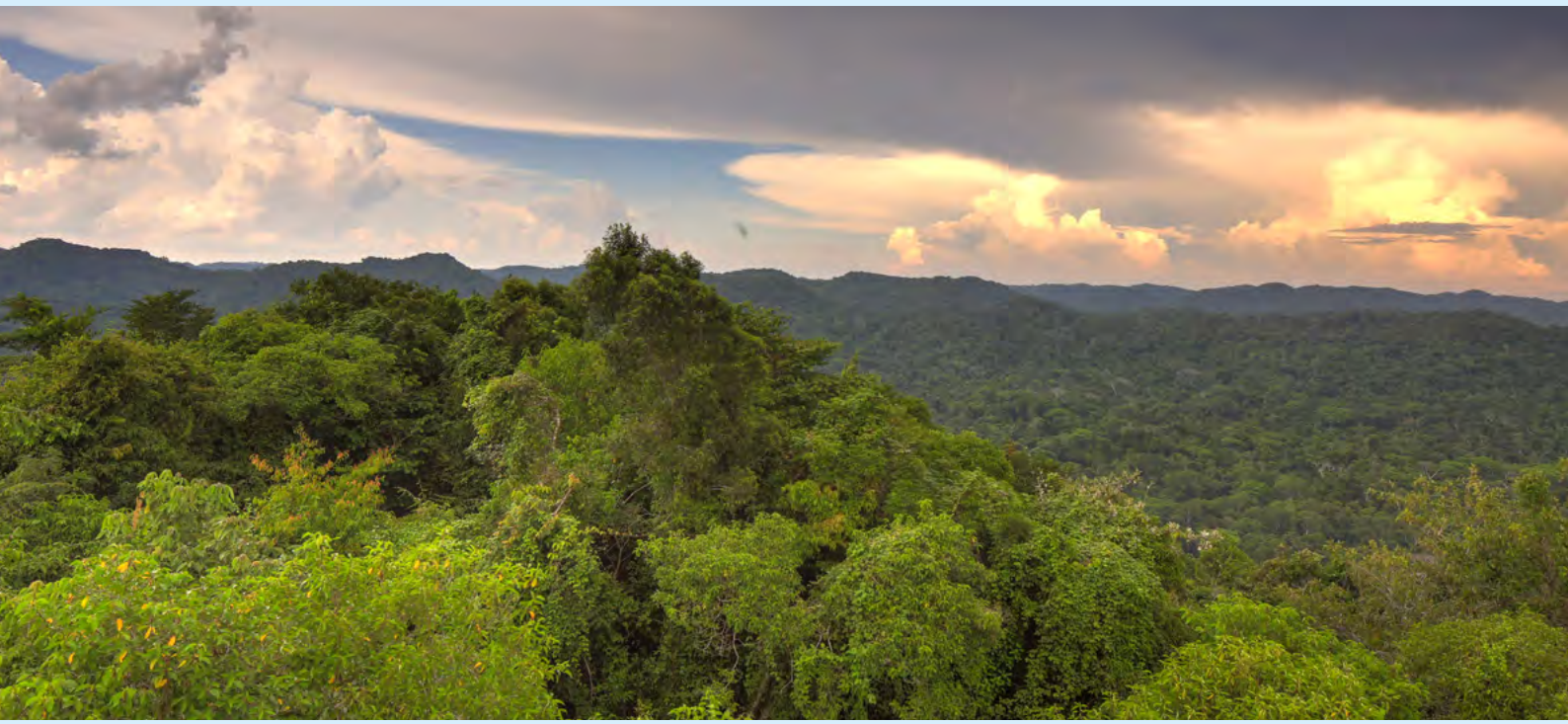
capacities. A few months later, after an official cooperation request was sent by the Ecuadorian government, the dream of a BSL-3 laboratory upgrade started to take form. This lab aims to provide advanced diagnostic services for infectious diseases, including COVID-19, and shall serve as the first of its kind for addressing public health needs in Ecuador.

Launched officially in March 2022, the project supports upgrading the existing infrastructure of Ecuador's National Institute of Research and Public Health (INSPI) and capacity development in different areas aiming at improving various epidemiological surveillance processes.

This initiative is part of Germany's Global Programme on "Pandemic Prevention and Response, One Health" and GIZ's Sector Network Working Group on Global Health Security that works not only in Ecuador, but also in other areas in South East Asia, Africa and in Central America. Their objective is to strengthen the capacity of health systems to respond to epidemics by implementing the One Health approach, i.e. working together at the intersections of human, animal and environmental health.



SWITCHING ON THE LIGHT FOR INDIGENOUS TRADITIONS AND ANCESTRAL KNOWLEDGE



In times of climate change, deforestation and increasing health risks, the need for sustainable solutions could not be of greater significance. In the Selva Maya region, GIZ implemented three different projects[1] based on the One Health approach. They share the same goal: to address emerging threats within the habitats of Selva Maya to wildlife and its population.

By Liva Haensel, David Brennan, Gabriel Berrios and Sayra Chanquin Avendano

Selva Maya is a truly beautiful natural wonder. Whoever comes to visit the region must stand still in astonishment: the 10 million hectares of rainforest known as "Selva Maya" encompass all of Belize and traverses its borders with Guatemala and Mexico. The region contains a mosaic of several unique protected areas and indigenous communities, where a multitude of languages, traditions and incredible biodiversity are at home. This makes it an ideal region for the One Health (OH) approach, which stands for a special trinity formed between three sectors – an interconnection of human, animal, and environmental health. The explanation is simple: a virus that is transferred from an animal to a human - e.g. through a mosquito - can also result from changes to the environment. Increasing temperatures favor the spread of tropical diseases while the transmitting animals – experts call them vectors – become even stronger and increasingly spread into environments further from the tropics.

However, countries, regions and continents can only prevent disease outbreaks if they

1 Strengthening Regional Strategic and Operational Cooperation for the Protection of Selva Maya Programme; the Global Programme Pandemic Prevention and Response, One Health; and the Global Program Support to the International Alliance against Health Risks and Wildlife Trade.

understand the linkages. Therefore, the OH approach is based on intensive collaboration between all stakeholders and disciplines from these three sectors, seeking sustainable development and optimal health for communities while it brings together actors from civil society, science, and politics.

A LIFESAVING PRODUCT

In Selva Maya, a key approach for GIZ to apply the holistic and future oriented OH concept is to integrate traditional indigenous practices and consider its knowledge as part of the strategy in the region for developing sustainable and culturally sensitive local measures. This is where academia's scientific focus comes into play. Prof. Dr Carlota Monroy is a renowned researcher at the University of San Carlos (USAC) based in Guatemala City. She is a pioneer for new approaches in vector control to prevent the spread of Chagas and other neglected tropical diseases amongst marginalized populations in Guatemala.

On behalf of GIZ, the expert led a research team to reside nearby the two villages Concomá in Poptún and Cangrejal in San Luis in Selva Maya. During their residence, the team tested the application of a lime product to the walls of dwellings during May 2023 until February 2024. This lime product is created from natural ingredients found locally in great abundance within the rainforest, which makes it easily accessible for the indigenous Mayan population to create and apply to their walls. It has been proven to repel mosquitoes that are responsible for mortal malaria infections amongst other diseases. The research team also identified other commonly found plants used as repellants and insecticides from residents to test their effectiveness when used together with the lime solution.

AN EFFECTIVE PILOT FOR VECTOR CONTROL

As a means to reinforce sustainability for the short-term pilot project, the project linked community members with political representatives and scientists.

> "We brought employees from the Ministry of Health into the villages. We did this because through actively participating in this pilot project, they could see with their own eyes that there are alternative options for effective vector control."
> Carlota Monroy

The researcher hopes that by bringing together people from both parts – Community and Ministry - the collaborative character of her project will lead to better guidance in public health. For her, that means to acknowledge and integrate indigenous traditions and ancestral knowledge already known to the inhabitants of Selva Maya since thousands of years.

1 Strengthening Regional Strategic and Operational Cooperation of Selva Maya Programme; the Global Programme Pandemic Pr Response, One Health; and the Global Program Support to the Alliance against Health Risks and Wildlife Trade.

In future the lime product and tested vector repellents could serve as a natural alternative to the current use of expensive and toxic chemical-based sprays imported from abroad. Such measures are usually easier and cheaper to apply for humans in order to prevent mortal diseases, rather than having to treat, surveil and contain them afterwards.

EMPOWERING TRADITIONAL MIDWIVES

Another example for the use of rich ancestral knowledge is mother- and childcare in the region. In this field traditional midwives have a crucial role in rural Selva Maya. The midwives visit and advise pregnant women and mothers with newborns in their communities due to their lack of access to public health services. It places the midwives in a unique position to act as the first people approached by community members for advice. If the midwifes would be acknowledged, entrusted and trained by the Ministry of Health to ensure their preparedness to respond to emerging threats and public health emergencies in their rural communities, they can help to save lives as a link between their own communities and the national healthcare system in future.

The pilot seeks to formalize the midwives' role as sentinels for early warning about emerging and reoccurring health threats to rural populations. The empowered midwives take a role as meaningful leaders of a community-based health surveillance approach.

A GREAT KNOWLEDGE PLATFORM

The meaningful connection between different stakeholders who all aim to strengthen better health can be seen also from the platform Alianza One Health Selva Maya (in short: AOHSM): with its 30 member organizations it promotes an intersectoral and regional cooperation. Its members will disseminate the experiences and knowledge collected, together with other implementing partners of GIZ, to political decisionmakers. "Participating in the Alianza has been very important to me because I have grown professionally and acquired new knowledge which gives us amplitude and a perspective in how to be more assertive with the One Health approach for implementation in Belize", says Belarmino Esquivel, Principal Agriculture Officer of the Ministry of Agriculture, Food Security and Enterprise in the country.

Melina Maravilla is convinced that the Alianza network is helpful for her organization. The director of the non-governmental organization "Agua Clara, Ciudadanos por Bacalar"in Mexico, says: "Our participation means for us representing strength and learning from people with much more experience than us. Above all, it means bringing this experience to our scope of impact, so bringing all this knowledge about the OH approach to the population of our community", Melina emphasized.

A REGIONAL NETWORK FOR NATIONAL IMPLEMENTATION

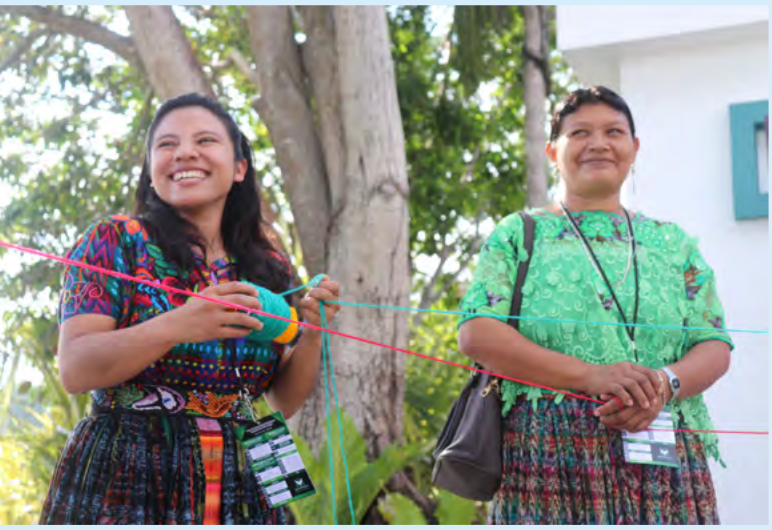
The dynamism of the trinational, inter-institutional and multi-level dialogue at the Alianza has also facilitated exchanges that have had both regional and national impacts beyond the promotion of indigenous knowledge. For instance, its membership requested the leading United States Center for Disease Control and Prevention (US CDC) to support a unique sub-regional zoonotic disease

prioritization workshop. In May 2024, line ministries from all three countries participated in the workshop and jointly committed to commonly prioritize six diseases prevalent in Selva Maya.

The participants also adopted an action plan for their prevention and control as part of both their regional cooperation and within each respective national context. The action plan shall orient crucial national public health decision-making and proved useful already: In Mexico the pilot of an intersectoral surveillance system, “SMART for Health”, has been launched with the line ministries for human health, the environment protection, and animal health. This pilot was able to integrate the prioritized zoonotic disease list into a common intersectoral data model for data collection by intersectoral ranger patrols.

NEW DIALOGUE STRUCTURES

An additional added value brought by the Alianza platform has been the strengthening of intersectoral dialogues in both Guatemala and Mexico. Although a national One Health coordination mechanism already existed in Belize, through GIZ support of the network and national partners, new OH roundtables (in Spanish “mesa”) have been established in both countries. The dialogue established at national level between members of different relevant ministries were respectively crucial for the creation of a gender strategy in Guatemala.



WATCH ON YOUTUBE:

The Midwifes of Petén: Petén region of Guatemala

In Mexico, one milestone was the official launch of the One Health Institutional Roundtable (MUSI) to tackle zoonotic diseases. "We achieved this thanks to the GIZ," says Dr. Verónica Gutiérrez, head of the Sub-directorate for Rabies and Zoonotic Diseases at the National Center for Disease Prevention and Control in Mexico. She adds, "The new OH roundtable let us take part in research and academic forums, planning workshops, setting priorities and running pilot projects between the agriculture, conservation, wildlife and health sectors." This showed the need for a space for dialogue, according to the expert. In this context, a drafting of cross-sectoral risk communication strategies and guidelines were produced for the first time in Mexico. Through several dialogues the roundtable currently addresses “all types of diseases with a multidisciplinary, multi-institutional, intersectoral approach", says Veronica Gutiérrez. Selva Maya - this diverse region with its many stakeholders - is gearing up for the future.

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THE USE OF PLANT-BASED INSECTICIDES AND REPELLENTS COULD HELP THE ENTIRE WORLD

Carlota Monroy led a research team into Selva Maya to reside in the villages Concomá in Poptún and Cangrejal in San Luis. The team was comprised of researchers from the University of San Carlos and employees from the Ministry of Health. Both tested the application of a lime product together with the application of other plant-based insecticide to the walls of dwellings during several months in 2023 and 2024. The lime product and insecticide are created from natural ingredients found locally and in great abundance within rainforest in order to fight mainly leishmaniasis, but also malaria, dengue, and other mortal infectious diseases.

ABOUT CARLOTA MONROY

Prof. Dr. Carlota Monroy (70) is a senior researcher at the Laboratory of Applied Entomology and Parasitology at the University of San Carlos in Guatemala (USAC). Her life motto "Research used for solving real problems of the communities" has always guided her through various stages of her career. The biologist wrote her doctoral thesis at Uppsala University (Sweden) on combating chagas disease in Central America and undertook numerous research visits to Canada, the USA and Japan, among other places. She worked as a professor at the USAC for 28 years.
Carlota Monroy's focus is on the question of how disease vectors can be contained through natural solutions. She lives in Guatemala City.

Prof. Carlota Monroy, you have led a pilot study from 2023 - 2024 on behalf of the University of San Carlos to better strengthen the prevention of disease transmission by insect vectors and dietary habits in the Petén region of Guatemala. This study was enabled through the GIZ Programme. The Ministry of Health (MoH) in Guatemala selected two rural villages for implementation. You established a short-term residency and lived there with your team.

What did the health and living conditions in the villages look like?

Carlota Monroy: The region is an endemic zone of malaria and leishmaniasis (editorial note: Visceral leishmaniasis is transmitted by sandflies and has a mortality rate of 90% in case of non-treatment). There is also the prevalence of zoonotic chagas disease in the jungle and the dengue vector came with a shortage of water supplies.

SELVA MAYA

The use of plant-based insecticides and repellents could help the entire world

The two villages called Gangrahal and Cocoma had cases of all four diseases and their vectors. The village population lives from local agriculture based on a diet of corn and beans, which is complemented with herbs, vegetables, and fruits from the jungle. Family livelihoods depend on agriculture and few people work outside the community. Women generally do not have an income.

Your focus was on ancestral Mayan knowledge and using plants as effective insecticides. Is there a trend visible that alternative methods are more often accepted today by scientific institutions?

Carlota Monroy: Science has only accepted what scientific journals publish. Therefore, we had to look into the publications of the plants that indigenous people use and learn from it. A scientific latin name is the first step to get more information on a plant used by indigenous people. I use several herbal products myself as medicine, food, insecticide and as repellents. The first step to validate such a knowledge is to use it. A plant may be used as an immunomodulator, but also as an insecticide due to different components in the leaves of flowers. Yet most of the medications have their origin in plants. Usually, the pharmaceutical companies select one component of the plant and then reproduce them in chemical factories.

How did your study contribute to an improved health situation for the local communities?

Carlota Monroy: Prevention of diseases is a long chapter that takes time. Our contribution was teaching the population how to act and ways to help themselves instead of waiting for the Ministry of Health. Once they tested painting their walls with a lime solution, they realized that the number of mosquitos inside their houses decreased. Next time they will know what to do.

> The villagers are now familiar with new alternatives and can today help themselves.

In the project, employees of the Ministry worked closely together with members of the community. What surprised you the most?

Carlota Monroy: Our most surprising discovery was that only few people know very simple alternatives to avoid mosquitos and diseases, like leishmaniasis. For instance, the use of long shirts, pants and the use of insecticide help them to avoid the vectors. The MoH personnel do not yet teach these communities simple ways to avoid vectors; through working with us, the personnel from the MoH started to understand that teaching and introducing simple approaches to the communities is important.

We did not only work with the people from the MoH because of their knowledge of the local native languages. We did it because by actively participating as partners in this pilot project, they could see with their own eyes that other options for vector control do exist. The MoH had the opportunity to witness our work with the communities firsthand.

How do you estimate the sustainability of the pilot measures?

Carlota Monroy: You can only reach true sustainability when you work 3 or 4 years with a village to solidify and implement a strategy. The work of one year cannot make gains to claim a sustainable impact; we only could introduce effective measures.

Sustainability may be achieved if the communities are convinced by the observable benefits from the strategy. Painting with lime is very simple and inexpensive. If the communities are convinced by its benefits, they will continue to do it by themselves. Concerning the MoH, sustainability may be achieved if the MoH integrates the strategy in its official protocols. However, it can take years to change these protocols to include new procedures at the political level.

International cooperation is currently criticized by many German and European residents as "expensive and not useful." How would you counter this argumentation of this with a view on One Health?

Carlota Monroy: I think, we need to change our global approach. The use of plants as insecticides and repellents could help the entire world, especially as we now recognize the environmental damage which is caused by continuous use of chemical insecticides. The preservation of the forest and jungle could be also associated with the use of comparable interventions all over the world. If we continue to destroy the environment with chemical insecticides and by damaging the forest, the world is losing a possible solution for the future.

LH: Mrs. Monroy, thank you very much for the interview.

The interview was conducted by Liva Haensel and Juan Mougan Navarro.

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