



MISSION
RABIES

ANNUAL REPORT 2020





IN MEMORY OF
EMERITUS PROFESSOR MICHAEL J. DAY
 HONORARY PRESIDENT

Prof Day was a passionate supporter of Mission Rabies since the very beginning and served as a Trustee of the charity between 2015 and 2020.

A pathologist and One Health figurehead, Prof Day was instrumental in championing rabies elimination within the veterinary profession and beyond through his work as a lecturer at the University of Bristol, as well as through his various leadership positions in the World Small Animal Veterinary Association (WSAVA).

In recognition of and gratitude for his unwavering support of our work in global rabies hotspots, he was awarded the Honorary Presidency of Mission Rabies in April 2020.

PATRONS

RT HON SIR
DESMOND SWAYNE
 DT VR MP

LORD
CRANBORNE
 VISCOUNT CRANBORNE

OUR TRUSTEES

DR IAN BATTERSBY
 Specialist Medicine Consultant

PHILIP DAUBENY
 Dogs Trust

CLARISSA BALDWIN CBE
 Dogs Trust

DR RACHEL FOSTER
 Consultant in Acute Medicine
 and Infectious Diseases

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FROM THE CEO

We couldn't let a spike in rabies deaths be yet another unintended consequence of the COVID-19 pandemic. Thankfully, the World Health Organization (WHO) moved quickly to guide the delivery of essential health services, including rabies control. This, alongside swift action by our government partners on the ground, gave us the opportunity we needed to drive forward and save lives.

Across our project sites, we continued to deliver successful programmes adapted to the new reality on the ground. In India, despite seeing an increase in canine rabies from dogs migrating in search of food, we managed a third year in a row with no human rabies deaths reported in the state of Goa. In Malawi, we achieved our best year yet with over 100,000 vaccinations exceeding 70% coverage in every city and rural district. Whilst in Cambodia, we launched a surveillance and education programme in the country's capital.

If we had stopped work – like so many others had to – people would have died and rabies would have started to re-emerge in places where it has been banished to the history books. Thank you to our staff, partners, and donors for helping ensure this wasn't the case.

Rock on!!

Dr Luke Gamble BVSc DVM&S FRCVS
 Founder & CEO
 Mission Rabies



MISSION RABIES

is at the forefront of rabies elimination worldwide. With 99% of rabies cases being caused by an infected dog bite, we work in rabies hotspots to combat the disease directly at its source.

WE VACCINATE

We follow WHO guidelines to deliver mass canine vaccination programmes; vaccinating 70% of any given canine population to build herd immunity, stop the disease in its tracks, and protect whole communities from the threat of rabies.

AND EDUCATE

Lack of knowledge is a key reason why people die from rabies, so alongside our vaccination work, we run life-saving education programmes. Children are most at risk, so we teach them how to avoid dog bites, and the critical steps to take if they are bitten.

TO ELIMINATE

Through repeated annual mass vaccination, ongoing surveillance, and rapid response to suspected cases, we can eliminate rabies from an area. We are committed to working towards the shared global goal set by WHO, the World Organisation for Animal Health and the Food and Agriculture Organization of eliminating canine-transmitted human rabies deaths by 2030.

**RABIES: DEADLY.
PREVENTABLE. BEATABLE.**

**FOR CENTURIES, RABIES HAS
CAUSED UNTOLD PAIN,
SUFFERING AND DEATH.**

**BUT HERE'S
THE THING.**

**RABIES
CAN BE DEFEATED.**

**WE CAN BE THE
GENERATION TO
ELIMINATE RABIES
FOR GOOD.**

**TOGETHER, WE'RE MAKING THIS THE
FINAL RABIES GENERATION.**

Find out more on page 24.



A YEAR IN REVIEW

**2020 has been our most challenging yet.
But the pandemic did not stop us.**

The WHO singled out canine vaccination and dog bite response as essential services that should continue where possible in a safe way throughout the pandemic. So, working in collaboration with local governments, we were able to press on with our life-saving work, and so much more. We were granted special permission to perform investigations of suspect rabies cases, rescue sick and injured animals, as well as provide hundreds of strays with much-needed food.

INDIA ANIMAL RESCUE: AN ESSENTIAL SERVICE

With most animal welfare organisations in Goa, India, unable to continue their normal work in the lockdown, we filled the void. We responded to reports of animals in need, thereby safeguarding the wellbeing of many dogs who otherwise would have been left to suffer. Between April and June, we attended to and treated 165 cases of animal injuries, accidents and illnesses.

FEEDING TASKFORCE: LOCKDOWN HEROES

Lockdowns removed the regular food sources of hundreds of dogs overnight. Our teams in India began daily feeds to support a large number of dogs on the empty streets and fishing ports, who were now at risk of starving. For months, they baked home-made dog biscuits, cooked large quantities of rice, and provided free-roaming dogs with the sustenance – and the regular human interaction – they needed to get through the lockdown.

MALAWI FULL POWER: COVID-SECURE VACCINATIONS

We adapted our large-scale vaccination programmes to incorporate all preventative measures to limit the risk of coronavirus transmission, including handwashing stations, facemasks for all staff as well as social-distanced queues regulated by queue marshals. Whilst following government guidelines strictly, the hardworking team managed to reach a record-breaking number of vaccinations and maintained at least 70% vaccination cover.

CHANGING TACK: RABIES AWARENESS

We shifted the way we delivered our rabies prevention lessons, developing creative and COVID-safe methods to engage people at-risk. In Malawi, we did this by rolling our preventative teacher-training to reduce the risk of transmission between schools and going door-to-door to encourage pet owners to take part in the vaccination campaign, and act to support rabies control.

IN 2020
197,008
DOGS VACCINATED



IN 2020
765,420
CHILDREN EDUCATED



**1,484,361
VACCINATIONS
SINCE 2013!**

For the past eight years across rabies hotspots worldwide, we've worked tirelessly to vaccinate dogs and protect people from disease. The challenges of 2020 didn't stop us from reaching new heights: almost 1.5 million vaccinated dogs.

**NEARLY 1.5 MILLION
DOGS VACCINATED**

ALMOST 4 MILLION CHILDREN EDUCATED

Every year, rabies kills an estimated 59,000 people, mostly children under the age of 15. We run education programmes to teach children living in at-risk communities how to stay safe around dogs and crucially, what to do if they are bitten. In 2020, our teams had to find new and safe ways of reaching students and teachers outside the classroom. See pages 11, 13 & 19 for more details.

**3,973,150
EDUCATED
SINCE 2013!**



INDIA

IN 2020
82,012
DOGS VACCINATED

VACCINATING DOGS TO SAVE HUMAN LIVES

Thanks to our efforts, zero human rabies deaths have been reported across the state of Goa for the last three years. An incredible achievement in a country that's considered the world's biggest hotspot for rabies. In 2020, the COVID-19 pandemic had the potential to undo eight years of tireless work and allow the rabies virus to get the upper hand once again. However, we were able to pivot and adapt in the face of unprecedented challenges to vaccinate over 80,000 dogs, and continue to protect 1.5 million people who call Goa home.

IN 2020
0
HUMAN
RABIES DEATHS

IN 2020
4,101
CALLS TO OUR
RABIES HOTLINE

SAVING LIVES: DOG BITE FIRST AID

In 2020, 28 people in Goa were bitten by dogs that tested positive for rabies, all of which were counselled through our Integrated Bite Case Management programme to receive a full course of post-exposure prophylaxis. This is out of 2,865 people who were bitten by dogs and contacted by our team to gather information about the possible risk of rabies and offer guidance. Continued public awareness of the risk of rabies and the need for treatment, as well as the need to report any animal suspected to have rabies, is key.

IN 2020
213,735
CHILDREN EDUCATED

DELIVERING KEY KNOWLEDGE

Many of our conventional community awareness events were cancelled in 2020 due to the pandemic, including large-scale events, school visits and local workshops. Yet, our education teams adapted, powered on and delivered our life-saving lesson to over 40,000 more children than in 2019.

RABIES IN SCHOOL CURRICULUM

We participated in a curriculum review in Goa, which resulted in our rabies lessons being added to the *6th Standard Science Book*, 2020 edition. The textbook was printed and distributed to all schools in the state during August. This result at the state level will provide the first step towards creating further positive change at the national level.

IN 2020
333
COMMUNITY WORKSHOPS
DELIVERED TO 17,379 PEOPLE!

IN 2020
1,461
SCHOOLS REACHED
90% OF THE TOTAL SCHOOLS
IN GOA STATE!

IN 2020
10,265
TEACHERS REACHED

A NEW WAY OF TEACHING

With education taking place online, we converted our rabies prevention lesson into a format for virtual learning. We also developed easy-to-share videos, ran drawing competitions and managed seminars for key people on the frontline: bus drivers, lifeguards, police officers and railway workers, to reach more people outside the classroom.



IN 2020
102,375
DOGS VACCINATED

MALAWI

In 2020, national elections in Malawi, coupled with an unfolding pandemic, made planning for the annual campaign slightly uncertain. Yet, thanks to the determination of the team, we administered a record-breaking number of vaccinations, totalling over 100,000 vaccinations – a milestone that has only been achieved once before.

IN 2020

44

DOGS AIDED WITH VETERINARY TREATMENT

IN 2020

3,054

DOG BITES REPORTED

SURVEILLANCE IS KEY

Our rabies surveillance efforts have increased year on year, as a result of improved awareness through our Integrated Bite Case Management work. In 2020, 3,054 dog bite cases were reported, allowing us to investigate and respond immediately. Our teams went door-to-door in any area of concern, ensuring that other dog bites hadn't gone unreported and that the community knew exactly how to seek treatment in the event of a dog bite emergency.

AIDING DOGS IN NEED

In the field, the vaccination teams work in synergy with the veterinary team from Worldwide Veterinary Service to aid sick and injured dogs. We reported between 5 and 10 dogs to the clinic each week during our vaccination campaign, which the vets treated and cared for on top of their usual caseloads. TVTs (Transmissible Venereal Tumours) were the most common concern. This is a potentially fatal cancer, which dogs develop if they mate with an infected dog. In 2020, we helped 44 dogs receive crucial treatment for TVTs.



IN 2020

510,685

CHILDREN EDUCATED

LIFE-SAVING EDUCATION

Most victims of rabies are under the age of 16. In Malawi, a large part of the population is youthful – 46% of the population is under 14, while 67% is under 24. With primary school attendance at 93% in Malawi, our rabies prevention programme focused on schools is saving countless young lives. In 2020, we reached over 500,000 children in Malawi, and have reached over two million children in just five years.

HELPING OUTSIDE THE CLASSROOM

Only 33% of secondary school-age children in Malawi attend school – and the pandemic is only making things worse. Whilst schools were closed and many community events were suspended, our Education Officers took to the streets to reach 242,509 people through door-to-door and household visits, using methods approved by the WHO. Through our work with youth groups and churches, we reached a further 65,500 people in both urban and rural areas.

IN 2020

7,633

TEACHERS REACHED

IN 2020

575

SCHOOLS REACHED

OVER 2 MILLION CHILDREN EDUCATED IN MALAWI SINCE 2015

REACHING NEW AT-RISK PEOPLE

Whilst schools were closed, we produced and aired a radio drama that reached an audience of 4.2 million people. It covered all our key messages, including the importance of vaccinating dogs and the misconceptions around rabies post-exposure treatment.



THE **MISSION RABIES** TRUCK

IN 2020
OVER 2,500
STERILISATIONS

Mission Rabies, in partnership with our sister charity Worldwide Veterinary Service, operates a truly unique, all-terrain, mobile veterinary hospital in India. The truck hosts outreach campaigns, training courses, and mobile clinics around the country – championing canine welfare through providing veterinary services of the highest standard in communities no other services can reach.

In the lockdown, the truck supported local efforts to manage the dog population, as well as serving as an information hub about animal welfare. Once it was safe to do so and permitted by the authorities, the truck supported targeted efforts in northern Goa to reach communities in desperate need of humane canine population control and community outreach. The veterinary team excelled to reach their target of 2,500 sterilisations in the year.



OUTREACH PROJECTS

Alongside our two flagship projects in India and Malawi, we run outreach projects in other rabies hotspots worldwide. These proof-of-concept projects provide us with a platform to drive forward our research, allowing us to refine our established methods, and ensure we continue to work most efficiently and effectively to eliminate human rabies deaths by 2030. They also demonstrate effective methods to new partners.

In 2020, we not only delivered projects in Tanzania and Ghana but launched a surveillance and education programme in Cambodia. Following the easing of travel and freight restrictions created in response to the pandemic, we'll return to our project sites in Sri Lanka and Uganda in 2021 to ensure these communities continued protection against rabies.

TANZANIA

It is estimated that 1,500 people die every year from rabies in Tanzania, however, the disease is greatly underreported. Research suggests the number of deaths is perhaps up to 100 times higher than official figures. We partnered with Mbwa Wa Africa in 2016 to run annual mass vaccination drives in North-East Tanzania and save the lives of the local people. Since we started, zero human rabies deaths have been reported in the communities in which we work. This highlights how effective our outreach work has been in at-risk areas.

In 2020, in 10 working days, we vaccinated 7,387 dogs against rabies, whilst our education teams visited 57 schools to teach 27,249 children about rabies prevention – more than double our total from last year.

IN 2020
7,387
DOGS
VACCINATED

IN 2020
27,456
CHILDREN
EDUCATED



GHANA

Following the success of the 2019 pilot project, we returned to Ghana's Bosomtwe district in 2020 to run a two-week One Health campaign. Supported by the Public Health Service and the Veterinary Service in the district, our teams went door-to-door and set up central vaccination points to systematically vaccinate 4,225 dogs across 66 communities. Whilst our education teams visited 156 schools, educating 25,043 children and 1,479 teachers in rabies prevention.

IN 2020
4,225
DOGS
VACCINATED

IN 2020
27,571
CHILDREN
EDUCATED



Photo taken February 2020

IN 2020
1,009
DOGS VACCINATED



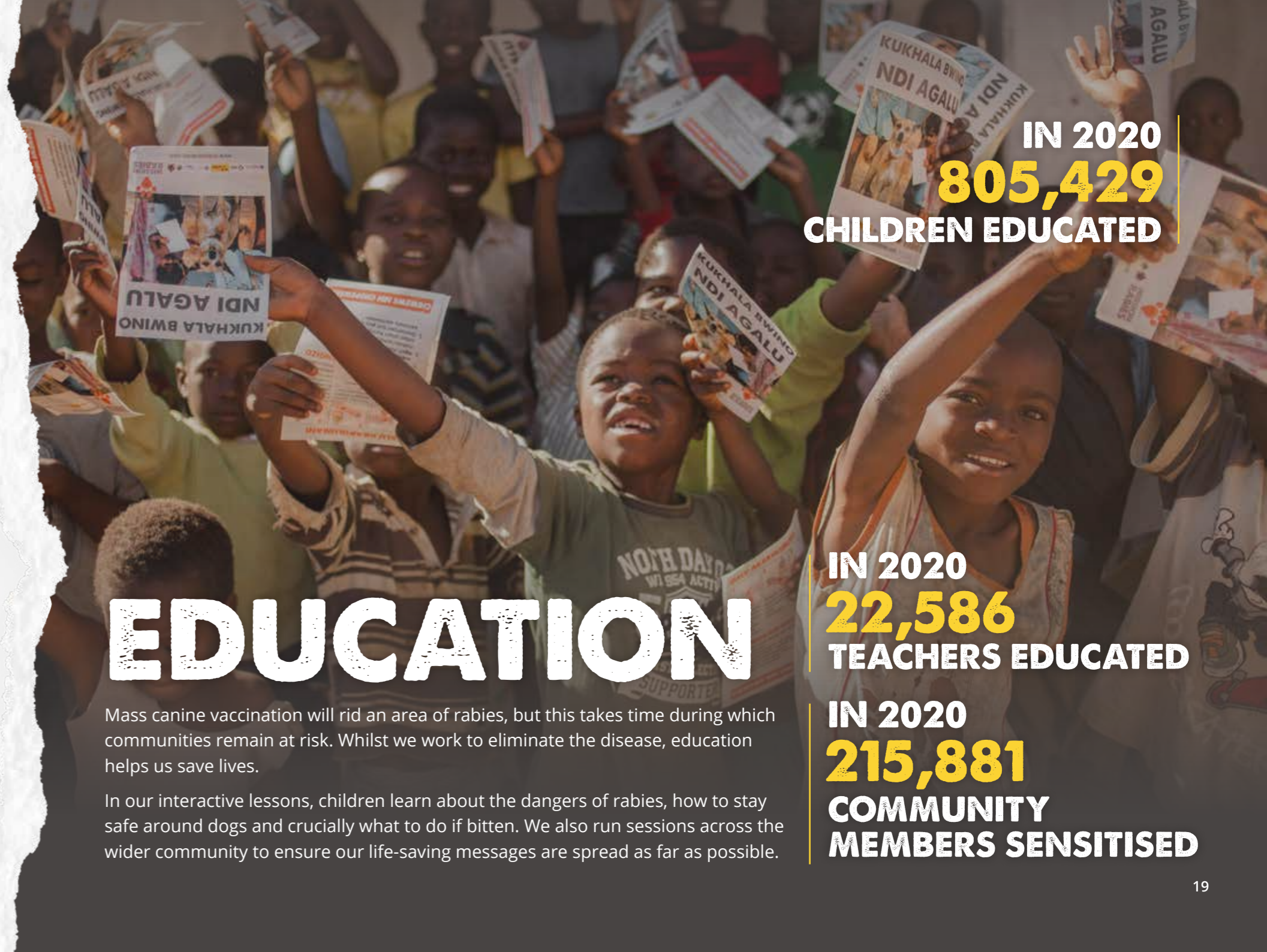
IN 2020
1,227
DOG BITES
INVESTIGATED

CAMBODIA

With an estimated human-to-dog ratio of 3:1, the number of rabies incidence is much higher in Cambodia than in nearby countries in Southeast Asia. In the city of Phnom Penh, the Institut Pasteur du Cambodge (IPC) is the busiest human rabies vaccination unit in the country – seeing an average of 150 people with dog bite wounds every day. We partnered with the local government, IPC, and local animal welfare charities, Animal Rescue Cambodia and Phnom Penh Animal Welfare Society, to eliminate the risk of canine-mediated rabies for the local people, and reduce human-dog conflicts.

In 2020, we launched a surveillance and education programme in preparation for running a large-scale vaccination campaign in the future. The education programme prepared 18 government staff to train 2,000 teachers to deliver rabies prevention lessons to over 50,000 children in 46 schools across the city during 2021. The surveillance component helped identify and investigate high-risk human bite cases. We could then locate and quarantine suspected rabid animals, and ensure further human cases are sent for treatment.

IN 2020
18
GOVERNMENT STAFF PREPARED
FOR TRAINING IN RABIES EDUCATION



IN 2020
805,429
CHILDREN EDUCATED

EDUCATION

Mass canine vaccination will rid an area of rabies, but this takes time during which communities remain at risk. Whilst we work to eliminate the disease, education helps us save lives.

In our interactive lessons, children learn about the dangers of rabies, how to stay safe around dogs and crucially what to do if bitten. We also run sessions across the wider community to ensure our life-saving messages are spread as far as possible.

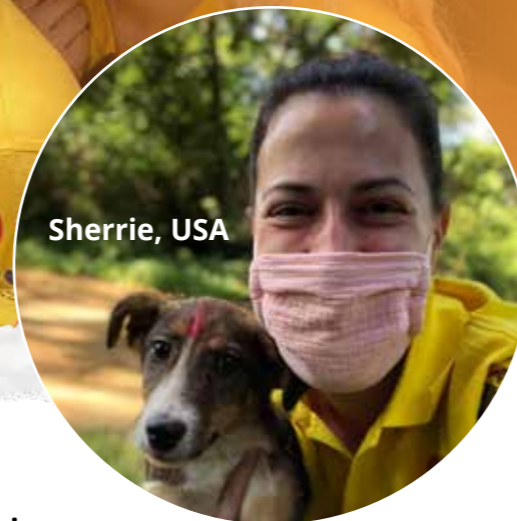
IN 2020
22,586
TEACHERS EDUCATED

IN 2020
215,881
COMMUNITY
MEMBERS SENSITISED



"NEVER FOR A MOMENT DID I TAKE FOR GRANTED HOW BLESSED I AM TO HAVE THESE KINDS OF OPPORTUNITIES."

Arnold, USA



Sherrie, USA

Outreach project: Tanzania

"This trip was nothing short of AMAZING. Start to finish. It was just what the doctor ordered. I've never felt such a sense of purpose and accomplishment. I worked with the most amazing people. I met the most amazing people. I tried food I had never heard of. I learned Swahili. Most importantly, I worked my butt off to be part of a large-scale movement to save lives. Mission Rabies has become near and dear to my heart."



Leigh, UK

Outreach project: Ghana

"The best part of being a veterinary nurse is that you can take the job anywhere, and offer your skills to animals in need whilst travelling the world. I really enjoyed volunteering with Mission Rabies in Ghana. I was able to detect different conditions, some that we may not normally see in the UK. I also gained more confidence with being around nervous or aggressive dogs too, which was very beneficial."



Arnold, USA

Outreach project: Ghana

"Mission Rabies Ghana, February 2020; what an adventure! To be able to visit interesting and exotic places, work with local and international veterinarians and technicians, meet fellow volunteers, and help people and animals is amazing and wonderful, and never for a moment did I take for granted how blessed I am to have these kinds of opportunities. If you want to broaden your horizons and see a country in ways that you never imagined, meet fabulous people, and have both a direct impact on people's lives as well as a global impact in helping eradicate a deadly disease, then I urge you to consider applying for a Mission Rabies project."

You can volunteer with us. There are a huge variety of placements available with options for both volunteers with a veterinary and non-veterinary background. To learn how, please visit missionrabies.com

VOLUNTEERS

Our large-scale projects would not be possible without the support of volunteers. The energy and enthusiasm they bring inspires us all. Whether they're helping us with data collection, vaccinations, or marking of dogs, our volunteers provide vital support to our missions and help save lives. Meet some of these heroes.

RESEARCH

Research continues to underpin everything we do at Mission Rabies. Our proof-of-concept projects are test-beds that push the frontiers of operational research – developing effective and efficient approaches to mass dog vaccination, which can ultimately be implemented by governments on a large scale.

OPTIMISING THE APPROACH

Our collaboration with the University of Edinburgh remains productive, with a key publication in PNAS⁽¹⁾ reporting the refinement of the Blantyre vaccination campaign using data captured in the WVS App to almost double the efficiency of the campaign. This publication attracted broad attention, including a report in Nature⁽²⁾ and the BBC World Service. It is only through research like this that countries will be able to plan effective mass dog vaccination initiatives reaching the vaccination coverages required to control rabies.

In another publication⁽³⁾, we reflected on the key operational aspects which had enabled the successful implementation of vaccination efforts on a continental scale to control Polio globally and rabies in Latin America. The paper generated discussion into the practical components of vaccine deployment. The paper provides insight for practitioners in rabies endemic regions, as they find the best way forward for large-scale vaccination campaigns.



(1) *Using data-driven approaches to improve delivery of animal health care interventions for public health*
go.wvs.org.uk/pnas

(2) *Data helps an anti-rabies campaign go to the dogs*
go.wvs.org.uk/nature

(3) *Reviewing solutions of scale for canine rabies elimination in India*
go.wvs.org.uk/mdpi



LEVERAGING TECHNOLOGY

The WVS App continues to offer new possibilities in the remote spatial management of vaccination teams and enhance our ability to capture data at project sites. The system has recorded over 1.5 million dog vaccination events and thousands of rabies case investigations. This technological innovation has undoubtedly transformed the landscape for large-scale mass dog vaccination.

FINANCES

During 2020, Mission Rabies spent £1,342,364 delivering life-saving projects in rabies hotspots around the world. This demonstrates an increase of 3.6% compared to 2019, clearly showing our determination to eliminate human deaths from rabies, even during an incredibly challenging year.

Our income for the year saw a slight fall by 3.4% from 2019 to £1,289,757. This was primarily due to the impact of the pandemic, meaning trips could not go ahead as planned, but thanks to the generosity of all who donated and fundraised, we were still able to power on in the fight against rabies.





FINAL RABIES GENERATION

For thousands of years, rabies has persecuted the most vulnerable. It has torn apart families, left parents to mourn their children and forced communities to live in constant and agonising fear, and unfairly named our four-legged friends the enemy.

But the end is near. We know how to defeat rabies, and make this the final generation who live in fear of it.

The WHO has set a target of no human deaths from rabies by 2030. That's ten years to end the suffering caused by rabies and forever write this generation into the history books for all the right reasons.

In 2020, we launched a new campaign to make this reality. A campaign of hope for a rabies-free future, for all.

**Together,
we're making this the
Final Rabies Generation.**

BE A PART OF HISTORY AND THE FUTURE...

DONATE TODAY

Your donation will go directly where it's needed most – protecting communities in rabies hotspots worldwide with vaccine drives, life-saving lessons and 24/7 rabies surveillance and rapid response teams.

SIGN THE PLEDGE

Sign the Final Rabies Generation pledge today and keep up-to-date with this global movement to end rabies for good.

VOLUNTEER ON THE MISSION

Working directly alongside the communities you'll be protecting from rabies in the ultimate volunteering experience.

FUNDRAISE TO SUPPORT

However you want to raise the money, we're on-hand to support you and make you a fundraising champion!

**To learn about how you can get involved, visit
finalrabiesgeneration.org**





THANK YOU TO ALL OF OUR SUPPORTERS



Thank you to everyone who enabled us to power forward through this challenging year. Your support fires us all and showcases a collective determination that will empower us to reach our shared goal: making this the Final Rabies Generation.





**MISSION
RABIES**

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