



PARTNERING FOR SUCCESS

ELIMINATING RABIES IS AN ACHIEVABLE GOAL, IF WE WORK TOGETHER

The elimination of human deaths from dog-mediated rabies is entirely possible, yet rabies still kills one person every nine minutes, and almost half of them will be children. Today, rabies is a disease of poverty. The poorest and most marginalised are most at risk, not only from the trauma of dog bite and risk of death, but by rabies' harsh economic consequences, estimated to be over US\$ 8.6 billion per year. Many die due to high treatment costs or lack of access to post-exposure prophylaxis (PEP). If no new action is taken, a million people will die from rabies by 2030.

A global plan for rabies control and elimination was agreed by FAO, the OIE and WHO in [Zero by 30: The Global Strategic Plan to End Human Deaths from Dog-mediated Rabies by 2030](#) (Zero by 30). Key elements include improved access to PEP, especially for the poorest, as well as mass dog vaccination, improved disease reporting and surveillance tools and community education and outreach.

The United Against Rabies Forum, announced by the Directors-General of FAO, the OIE and WHO in September 2020, seeks to accelerate the sustained effort needed to deliver on the vision of Zero by 30.

rabies
kills
one person



almost half
of them will
be **children**



© FAO

'We now have a chance to strengthen One Health coordination and regional cooperation... Uniting against rabies is an excellent way to put those ideas into action.'

Dr Qu Dongyu,
Director General of FAO



© OIE

'Despite the role of dogs as the main vector, their vaccination is not often prioritised in countries where human rabies is still present, for economic and structural reasons.'

Dr Monique Éloit,
Director General of the OIE



© WHO

'COVID-19 has reminded us of the intimate links between our own health and that of animals and the environment. We can only end rabies with a One Health approach.'

Dr Tedros Adhanom Gebreyesus,
Director-General of WHO

The aim of the **United Against Rabies Forum** is to enable effective collaboration by a wide range of partners to achieve the goals set out in [Zero by 30: The Global Strategic Plan to Eliminate Human Deaths from Dog-mediated Rabies by 2030](#). In a high-level online programme announcing the Forum, Tripartite leaders emphasised the importance of a multisectoral One Health approach. www.uarforum.org



RABIES, COVID-19 AND ONE HEALTH

... the current global crisis highlights more than ever the **interdependence of human, animal and environmental health**, and the need for a **One Health approach**



While a number of countries have drawn up national rabies control programmes, key actions, including sustained mass dog vaccination campaigns, surveillance and reporting, remain limited.

The coronavirus pandemic has further hindered progress. Overwhelmed public health systems have less capacity to treat potential cases of rabies exposure and individuals bitten by dogs have been less likely to seek help. Medical supply chains have been disrupted and dog vaccination campaigns cancelled or postponed.

Laboratory services for rabies have been reduced, surveillance capacity has been redirected, and in-country training and community outreach activities have been suspended or cancelled.

Yet the interdependence of human, animal and environmental health has never been more evident. The world needs to make One Health a reality. At a time when zoonotic disease and One Health are at the forefront of the global agenda, United Against Rabies is bringing multiple sectors together.

The aim of the United Against Rabies Forum is bold – not only to end the suffering caused by this ancient and deadly disease, but to future-proof animal and human health systems against other disease threats as well.

A DISEASE OF POVERTY AND NEGLECT

In 2020, rabies mainly affects poor and marginalised communities in Africa and Asia. **WHO's Director for the Control of Neglected Tropical Diseases, Dr Mwelecele Ntuli Malecela** described rabies' impact on the Sustainable Development Goals (SDGs): *'It is a high cause of mortality in the poorest of the poor. It is impacting people who are already in the cycle of poverty.'* She identified the high cost and lack of availability of the human PEP as a matter of 'huge inequality,' welcoming the decision by Gavi, the vaccine alliance, to add PEP to its portfolio in 2021. But, she said, 'a two-pronged approach – PEP and dog vaccines – is needed to eliminate human rabies deaths by 2030'.



Anuradha Gupta, Deputy CEO of Gavi, said that Gavi hopes to make PEP available once 'we are through the peak of the (coronavirus) pandemic', and it will need to be part of an integrated, One Health approach: 'Human vaccination needs to be situated in a wider array of interventions, such as dog vaccination which we know is much more cost effective.'

Institut Pasteur in Cambodia has found that three sessions of PEP has the same efficacy as the currently recommended four treatments, reducing the cost of treatment. **Dr Sowath Ly, Deputy Director, Institut Pasteur**, said: 'Those findings contributed to Gavi's agreement to add PEP to its portfolio and consequently to save thousands of lives'.



© Serengeti carnivore disease project

RABIES AND ONE HEALTH

A One Health approach is the foundation of most countries' national rabies control programmes, usually involving multiple ministries and levels of government, and most importantly, engaging communities and civil society. This can also help to strengthen national health systems to address other zoonoses.

Katinka de Balogh from FAO's Regional Office for Asia and the Pacific said: 'Rabies is actually the One Health model disease. [It] needs this multisectoral approach, not only with human and animal health, but also with local government, the private sector, and communities.'

Dr Papa Seck, Special Adviser to the President of Senegal told the meeting: 'The best way to address this issue is to utilise a One Health approach...it's the only way, to have tight collaboration with animal health and human health sectors'.

Namibia's Minister of Agriculture, Water and Land Reform, Carl H.G. Schlettwein, emphasised the critical role of community engagement. 'Ministries must be well coordinated, but probably most importantly, we believe communities themselves must be aware of what we are doing, why we are doing it and how they can cooperate'.

In Morocco, rabies is a priority zoonosis, subject to mandatory reporting.

Dr Abderrahman El Abrak, Chief Veterinary Officer of Morocco outlined his country's One Health approach, including free vaccination programmes for owned dogs, control and vaccination of stray dog populations, and treatment for people exposed to rabies.

The Philippines has implemented a multi-sector, multi-agency rabies control programme and **William Dar, Philippines' Secretary for Agriculture**, told the meeting that rabies education is included in the national school curriculum.

The country has recorded a significant reduction in rabies with some provinces and islands declared rabies-free.

Speaking from the *Dominican Republic*, **Minister of Public Health, Dr Antonio Plutarco Emilio Arias Arias** described a national strategy focused on dog vaccination. He highlighted the importance of forecasting and having access to high-quality vaccines. Vaccines are provided through the Pan American Health Organization (PAHO) Revolving Fund.

From the Association of Southeast Asian Nations, H.E. **Kung Phook, Deputy Secretary General of ASEAN**, said 'The ASEAN rabies elimination strategy is built on four pillars known as STOP: social and cultural interventions; technical enhancement and capacity building; organisational One Health approach; and policy and legislative support.'



© World Animal Protection

SURVEILLANCE AND DATA FOR RABIES ELIMINATION

Good data is essential for detecting disease outbreaks and monitoring progress. **Dr Matthew Stone, Deputy Director General, International Standards and Science, of OIE** said that although OIE Members are obliged to report the occurrence of rabies, 'there is a highly variable picture about the level of detail. The OIE's World Animal Health Information System (WAHIS) allows reporting by point location or administrative region, by animal species, number of cases. All that information would be very interesting and useful, but not all countries can do it'.

In India, Goa State recognised early on it had a problem with data on its dog population. **Dr Prashant Suryawanashi, Directorate of Health Services**, told the meeting, that a partnership with UK-based NGO, Mission Rabies, since 2015 has helped it measure the dog population using an app, and to carry out vaccination programmes. Since 2017, 'Goa has not recorded a single human death from rabies.'

INVESTING IN RABIES ELIMINATION

At present there is no single pooled fund for rabies elimination and investments are small and fragmented. This hinders many aspects of rabies elimination, including sourcing sufficient quantities of quality dog rabies vaccine.

Dr Alasdair King, Director of International Veterinary Health, Merck Animal Health, outlined the challenges. 'The main barrier to vaccine production is not unwillingness on the part of the pharmaceutical industry. The main barrier for us is to do with planning. Companies take two years planning production... If I have reliable demand at least two years ahead, I can make sure we can hit the ground and do what is needed.'

Dr Daniel Madandi Ngamije, Minister of Health of Rwanda, said rabies is one of three zoonotic diseases targeted for elimination by 2030. The Rwanda One Health Policy informs a national strategic plan, which the minister said also helps to mobilise resources. Rwanda assumes the Chair of the Commonwealth next year, and the Minister said the 2021 Commonwealth Heads of Government Meeting (CHOGM) offers an opportunity 'to mobilise leaders for this agenda.'

Dr Thomas Mettenleiter, CEO of the Friedrich-Loeffler-Institut, in Germany chairs a government advisory group on One Health. He stated that 'rabies control and elimination can serve as a role model for intersectoral cooperation' and that the COVID-19 pandemic has highlighted the need for better understanding and funding for zoonotic diseases and One Health issues.

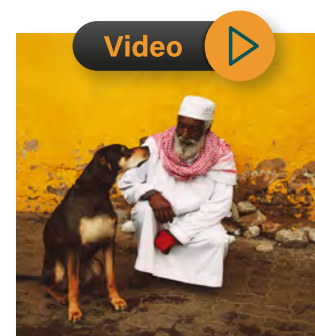
From the UK, **Lord Zac Goldsmith, Minister for the Foreign, Commonwealth and Development Office,** said that 'the UK has significant expertise in tackling rabies, and we are actively exploring further ways to support rabies elimination in affected countries. By working together, the international community will not only be better placed to address other zoonotic diseases but to develop and future-proof our public and animal health systems.'

Lord Alexander Trees, Emeritus Professor of Parasitology, UK agreed, saying that 'what we need now is a concerted, integrated effort... and that is what the United Against Rabies Forum is all about.' He added that it 'also gives a platform to secure the funding resources necessary from the international community.'

PEOPLE AND COMMUNITIES

Many speakers highlighted the importance of community engagement in successfully eliminating rabies. Fear of rabies often drives unnecessary cruel and inhumane treatment of dogs around the world and education is key to building community trust and engagement in rabies programmes.

A short sharable video was launched during the event, illustrating the fear that often drives communities' relationships with dogs, showing that dog vaccination can make all the difference.



© Tarryn Hatchett

Pankaj KC, Programme Director of Animals in Communities at World Animal Protection told the meeting that 'more than 10 million dogs are inhumanely culled every year as a means of controlling rabies, but this does not work. What works is education, and most of all, dog vaccination. When people have confidence that dogs are vaccinated, there is a much more harmonious relationship.'

Dr Nasseem Salahuddin, Director of Infectious Diseases at the Indus Hospital in Karachi, successfully treated thousands of people with dog bites and then joined forces with others to start a dog vaccination programme offered an upbeat conclusion. 'Rabies elimination by 2030 is extremely challenging but, I know we can do it, so we will do it.'

Finally, **Joel Chagalucha a PhD student** in Tanzania, who is currently training livestock field officers to vaccinate dogs, called for sustained support for rabies elimination, especially from governments. He also shared a message from local children chanting: 'No More Rabies!'

The **United Against Rabies Forum** provides a platform for rabies stakeholders to work together more efficiently and effectively to advance the collective efforts of all stakeholders in achieving Zero by 30. The UAR Forum facilitates new and more inclusive ways to bring partners together, supporting a wider range of organisations from all sectors, including public and animal health specialists, One Health specialists, civil society, research and academic institutions, and the private sector. It is a hub for sharing experiences and best practices and a new way to connect people and encourage collaboration. Through communication and connection, it is how the international rabies community will build and maintain momentum and commitment. The UAR Forum members will collaborate in result-focused working groups to drive the activities and actions that will contribute to the elimination of rabies by 2030.

Roles and activities

- ❖ Providing support to countries and regions to build capacity in critical areas, including surveillance, education and public awareness, dog vaccination, and development of partnerships
- ❖ Engaging countries to build and implement national programmes and supporting effective cross-border collaboration through coordination, meeting organisation, provision of expertise, technical assistance, regional strategies and more
- ❖ Demonstrating proof of concept and the case for investment through sharing best practices and lessons learned from successful national and regional rabies strategies, including community engagement and education, vaccination scenarios and success rates, surveillance systems, and promoting responsible dog ownership
- ❖ Building and sustaining international and domestic long-term investment, commitment, and momentum
- ❖ Promoting a more equitable and One Health approach in all rabies strategies, which will build One Health capacity that can be applied to other zoonotic diseases and during epidemics and pandemics.

Key messages and guiding principles

A One Health approach is the foundation of all UAR Forum activities and direction. Rabies is characterised as 'a One Health model disease.' Rabies control and elimination strategies build connections and capacity across animal health and human health systems. The skills and tools developed for rabies can be applied to numerous other zoonotic diseases, including neglected tropical diseases (NTDs). Having a One Health approach in place helps to address and recognise other disease events, allowing timely implementation of control measures.



© Serengeti carnivore disease project

Stakeholder Meeting Technical Sessions

The United Against Rabies Forum meeting included three technical expert panel sessions with contributions and questions from participants around the world. The ideas and suggestions raised during the discussions identified the priority action areas and activities to be addressed by the UAR Forum working groups over the next 12 to 18 months in order to progress to the global goal of Zero by 30.

Working groups – Key messages and guiding principles

The following cross-cutting key messages and guiding principles will also inform the activities and approaches of the UAR Forum working groups:

❖ **Use and improve existing resources**

- There are many resources and tools provided by the international rabies community to help countries design their rabies control and elimination programmes, and choose the tools that best meet their unique needs.
- The two major rabies elimination components where tools can add value are surveillance and dog vaccination. Robust surveillance and reporting data can guide decision-making on programmes and measure progress.
- Mass dog vaccination remains the key intervention to break rabies transmission, but improvements in vaccination operations are still needed. This includes ensuring adequate and continuous availability of quality, thermostable vaccines, risk-based strategic vaccination, vaccination monitoring and innovations such as the use of oral vaccines as a complementary tool to parenteral rabies vaccination in free-roaming unowned dog populations.

❖ **Promote collection and use of meaningful and accurate data**

- Data from rabies surveillance programmes needs to inform decisions and be shared with other national health information systems and across sectors and borders.
- Rabies surveillance tools can also improve capacity to address other zoonotic diseases.
- Rabies should be notifiable so identification of rabies cases¹ in both humans and animals supports targeted interventions.



❖ **Build on strengths and scale up successes**

- Good national programmes can be expanded or brought together to form regional programmes to prevent reintroduction of rabies into rabies free zones and avoid cross-boundary incursion.
- Regional approaches are required. Rabies does not recognise borders – countries need to work together in a coordinated, regional and One Health approach.

❖ **Mobilise and sustain investments**

- Investments in rabies programmes will strengthen fundamental national human and animal health systems, translating into better outcomes for other diseases and public health issues.
- Strong, integrated rabies elimination campaigns require large scale, coordinated and sustained funding instead of the current fragmented, short-term, and inefficient funding approaches.
- Strategies for resource mobilisation and resource management should engage multiple sectors and promote domestic resource mobilisation from governments. National commitment and investment are crucial in the fight against rabies.

¹ Definitions for possible, probable, and confirmed cases for humans are provided in [WHO TRS 1012](#) and for animals in the [OIE Terrestrial Animal Health Code, Chapter 8.14](#). Infections with rabies virus.



UNITED AGAINST RABIES FORUM PRIORITY STRATEGIC AREA

Optimising the effective use of vaccines, medicines, tools and technologies

In addition to applying a One Health approach to rabies control and elimination, priority strategic areas around the three objectives² of the **Zero by 30 Global Strategic plan** will focus the work of the UAR Forum members over the next 12 to 18 months.

An important role of the UAR Forum will be to help countries decide on the most useful tools for their situation, acquire tools, and ensure effective implementation. Many proven approaches and tools exist; however, actions are needed to address gaps and inefficiencies and improve accessibility and operationalisation.

Background and considerations

- ❖ The selection of the appropriate tool should be driven by the country's own needs, rather than outside influence.
- ❖ Vaccine forecasting helps predict the right number, right location, and time frame, and to obtain the right price for vaccines. For manufacturers, better forecasting data enables better production planning to assist countries' requirements. Forecasting requires robust standardised data collection and analysis, including accurate data on dog demographics.
- ❖ Pilot projects can demonstrate that a strategy works, lead to political buy-in, and help identify which tools are required to scale-up efficiently and economically.
- ❖ Vaccine innovations are needed, including temperature stability and oral vaccine options for free-roaming dogs not accessible to parenteral vaccination.
- ❖ Increasing community awareness about rabies, responsible dog ownership, bite prevention and PEP treatment supports and enables vaccination, surveillance, and data collection programmes.



© FAO

Technical Panel Discussion 1:

This session focused on ways to help countries decide on the most useful tools for their situation, how to acquire tools and how to ensure effective implementation by human health or Veterinary Services staff. In particular, the panellists discussed tools that can contribute to improving rabies surveillance and informing risk-based national strategies for rabies elimination. It also looked at the gaps in vaccines, medicines, tools, and technology, and how to address those gaps.

Moderator: Dr Keith Sumption,
Chief Veterinary Officer, FAO

Panellists:

Dr Umme Ruman Siddiqi,
Communicable Disease Control Unit,
Director of Public Health, Bangladesh

Dr Terence Scott, Global Alliance for
Rabies Control (GARC)

Dr Luke Gamble, Mission Rabies

Dr Thumbi Mwangi, Rabies Free Kenya

Dr Ryan Wallace, US Centers for Disease
Control and Prevention (CDC)



² 1) Optimising the effective use of vaccines, medicines, tools, and technologies
2) Identifying ways to generate, innovate and measure impact
3) Generating sustained commitment and resources



UNITED AGAINST RABIES FORUM PRIORITY STRATEGIC AREA

Optimising the effective use of vaccines, medicines, tools and technologies

Key result area–actions and activities

Maximising existing tools and information resources

- Provide guidance, information on best practices and lessons learned to help countries and regions select the rabies control tools best suited to their needs.
- Help identify gaps in the tool landscape where others are still needed.
- Create a compendium of all tools, reference materials, workshops, networks and other information resources.
- Identify gaps in existing national rabies elimination programmes and the tools that could close those gaps.

Strengthening surveillance systems

- Support countries and regions in developing/strengthening surveillance systems that could provide an accurate and detailed picture of the situation, including disease incidence in humans and dogs, dog populations and demographics, human-dog interactions.
- Promote cross-border strategy supported by robust surveillance data.
- Support the scaling up of pilot surveillance projects.
- Promote a One Health approach to surveillance that includes zoonotic diseases other than rabies.

Promoting innovation

- Better understand and address barriers to PEP use and dog vaccination.
- Real-time data collection methods.
- Ways to create community level surveillance and reporting.

Enhancing dog vaccines

- Encourage research and innovation for heat-tolerant vaccines and oral vaccines and baits approved for use in dogs.
- Use surveillance data to predict vaccine requirements, mobilise vaccination campaigns quickly and prevent stock-out periods.

Engaging communities for capacity building

- Share information on best practices and materials for community education and engagement, such as sample school curricula, community-based surveillance and reporting methods.

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_24057

