



# Global Alliance for Rabies Control Annual Report January to December 2018



## 2018 – a year of significant progress

Rabies elimination is well on its way to the 2030 goal of no human deaths from dog-mediated rabies, with a number of major milestones in 2018. The Global Strategic Plan, created by GARC with the WHO, OIE and FAO (as United Against Rabies) forms a foundational support mechanism for countries to progress towards elimination. The Partners for Rabies Prevention group of international rabies stakeholders has committed to supporting the plan and contributing towards it.

The Pan-African Rabies Control Network (PARACON) no longer stands alone – MERACON (Middle East, Eastern Europe, Central Asia and North Africa Rabies Control Network) and ARACON (Asian Rabies Control Network) were launched this year, covering the majority of the rabies endemic countries globally, uniting countries through common challenges and supporting their progress by sharing experiences.

GARC's Country Pathway that focuses on sustainable, government-led in-country capacity building has expanded to more countries. This has resulted in not only improving local skills and knowledge but also taking national governments step by step from planning to the implementation of comprehensive rabies elimination programs.

We have developed surveillance systems at the community level to help rapidly identify any suspect rabies cases, ensuring that communities stay safe from any potential exposure to rabies.

Our annual World Rabies Day celebrations provide a great opportunity for people and organizations at all levels to increase awareness of rabies prevention and show the world the progress that is being made. It encourages individuals from around the world to take their place in the global rabies community.

Ultimately, everything we do benefits people and animals at-risk of rabies, from the international level right down to the smallest village.

GARC is grateful to everyone who has joined us on our journey towards a world free of rabies, and we are thrilled to be able to share how far we've come in 2018.



A handwritten signature in dark ink, appearing to read 'L. Nel'.

**Professor Louis Nel**  
Executive Director

# Global Activities

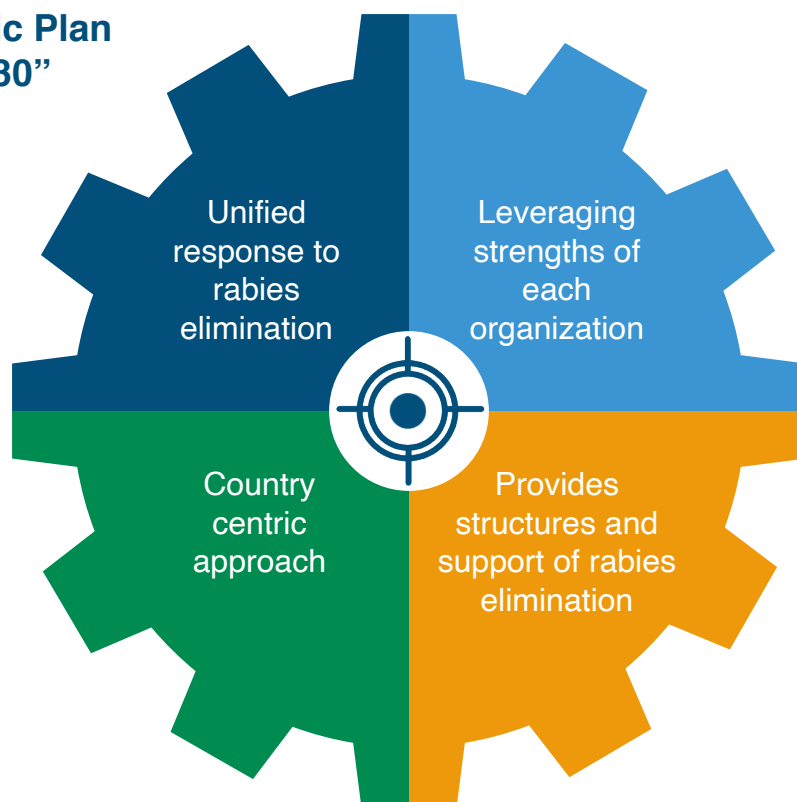
## United Against Rabies

The *United Against Rabies* collaboration, consisting of the Global Alliance for Rabies Control, World Health Organization, World Organisation for Animal Health, and the Food and Agriculture Organization of the United Nations, created and launched Zero by 30: the Global Strategic Plan to end human deaths from dog-mediated rabies by 2030.

The plan reflects GARC's vision of a country-centric approach to rabies control and elimination.

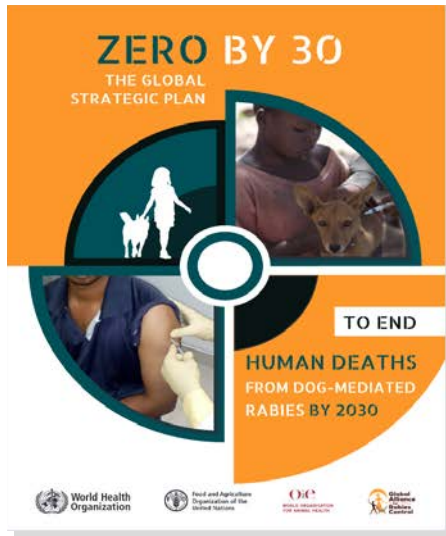
- It offers an integrated response to country needs to lead and strengthen elimination efforts.
- The plan anticipates a three-phased approach to elimination with Phase One (2018-2020) focusing on preparing and improving tools and structures to catalyze action.
- The complete plan was published in June 2018.  
<https://rabiesalliance.org/resource/zero-30-global-strategic-plan-end-human-deaths-dog-mediated-rabies-2030>

### Global Strategic Plan for “ZERO BY 30”

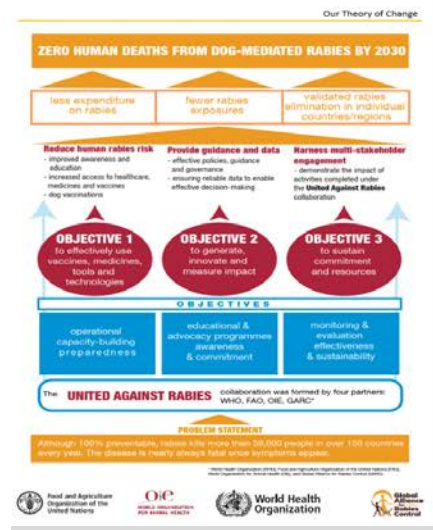


Our Global Strategic Plan **engages**, **empowers** and **enables** countries to lead elimination efforts, as they build sustainable institutional capacity and achieve the global goal.

# Global Activities



Global Strategic Plan



Theory of Change

## International Rabies Stakeholder Network (PRP)

- The Partners for Rabies Prevention (PRP) community consists of the major international rabies prevention stakeholders, the tripartite agencies (WHO, FAO, OIE), the WHO rabies collaborating centres, OIE rabies reference laboratories, research institutes, animal welfare charities and representatives from vaccine manufacturers.
- The 2018 meeting hosted by UBS Optimus Foundation, focused on introducing the United Against Rabies Global Strategic Plan to the international rabies stakeholder community, represented by the Partners for Rabies Prevention group.
- In addition to the detailed discussions on the major activities of the Global Strategic Plan, recent developments were presented. This included updates to the Post Exposure Prophylaxis (PEP) guidance and the learning agenda of GAVI, the vaccine alliance.



# Global Activities

## World Rabies Day 2018

- Responding to the need across rabies endemic regions, World Rabies Day focuses on raising rabies awareness and educating at-risk populations.
- GARC created the day and provides an online event platform and downloadable resources to help all rabies stakeholders hold and publicize rabies awareness events, from the community to the international level.
- The theme for 2018 World Rabies Day was Rabies: **Share the message. Save a life.**



- Almost 200 World Rabies Day events were registered from 62 countries, with events ranging from awareness walks to mass vaccination campaigns, organised by NGOs, governments, students, individuals, the private sector – everyone affected in some way by rabies.
- Our Facebook reach during the World Rabies Day period was over 65,000, and Twitter reach was over 94,000.
- Our ‘Did you know...’ social media toolkit was downloaded over 400 times, and the World Rabies Day banners were downloaded over 3,700 times.
- The 3rd World Rabies Day Awards were held with MSD Animal Health, with recipients this year from Bhutan, Nepal, Tunisia, the Philippines, Thailand, Uganda, Morocco and Brazil.



# Global Activities

## GARC Education Platform

GARC offers free access to online training on rabies education to all interested people through the initial foundational course, namely the Rabies Educator Certificate (REC). We also offer subsequent profession-specific courses on Animal Handling and Vaccination (AVC) targeted towards animal health professionals, and the Community Coordinator for Rabies Course (CCC) - which is directed at individuals serving the community in an official capacity.

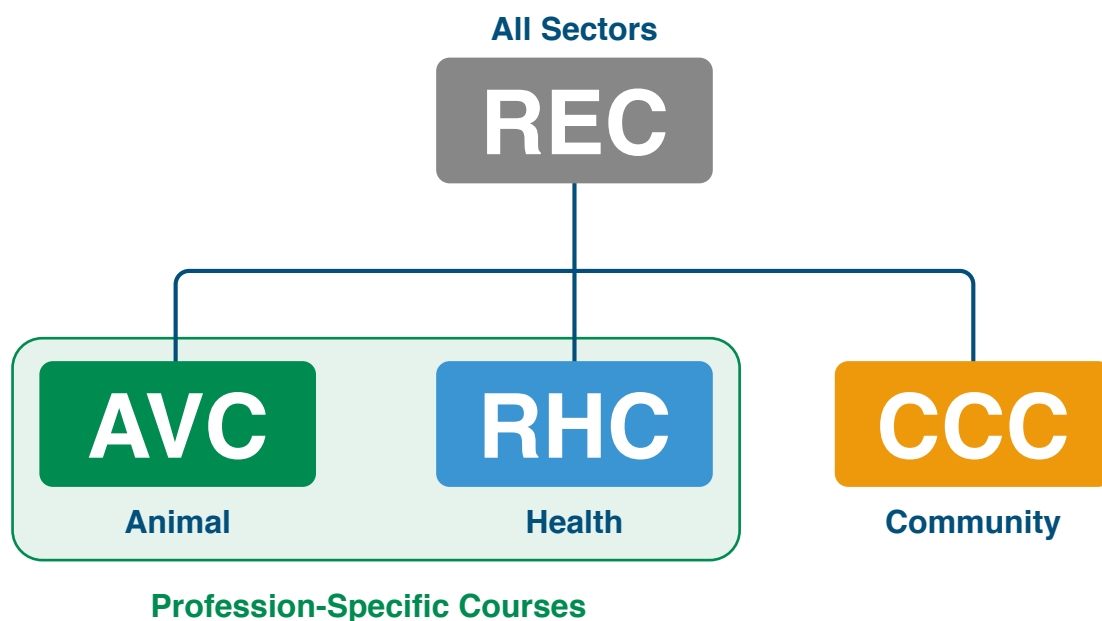
The Rabies Healthcare Certificate (RHC) is the latest addition to the GARC Education Platform. This profession-specific course was developed for professionals working in human healthcare and provides these professionals with all the information required to safely and correctly address all aspects related to rabies prevention and treatment in their local setting.

By incorporating the latest recommendations made by the World Health Organization (WHO) Strategic Advisory Group of Experts on Immunization (SAGE) into the coursework, the RHC course provides graduates with the latest and most up-to-date information pertaining to:

- The correct administration of rabies biologics for either pre- or post-exposure prophylaxis (PrEP and PEP);
- Special considerations for providing human PEP;
- The management of potential rabies exposure cases;
- The clinical diagnosis of suspect human rabies cases and the importance of subsequent laboratory confirmation.

The course was launched and made available on the GARC Education Platform in 2018.

### GARC Education Platform Courses



# Global Activities

## # REC graduates and # of countries

As of Dec 2018:  
**5,055 REC graduates (96 countries)**

Increase over year:  
**1,431 REC graduates (2 additional countries)**



## Impact REC graduates have made on their own communities every year:

If each REC graduate discusses rabies prevention with only 10 people over the course of a year (lower estimate), ±50,550 people benefit from the knowledge. This value excludes the people that the 2nd tier people talk to after being educated themselves.

If each REC graduate discusses rabies prevention with 100 people over the course of a year (upper estimate), ±505,500 people benefit from the knowledge. This value excludes the people that the 2nd tier people talk to after being educated themselves.

## # AVC graduates and # of countries

As of Dec 2018:  
**832 AVC graduates (68 countries)**

Increase over year:  
**484 AVC graduates (14 countries)**

## # CCC graduates and # of countries

As of Dec 2018:  
**350 CCC graduates (57 countries)**

Increase over year:  
**226 CCC graduates (21 countries)**



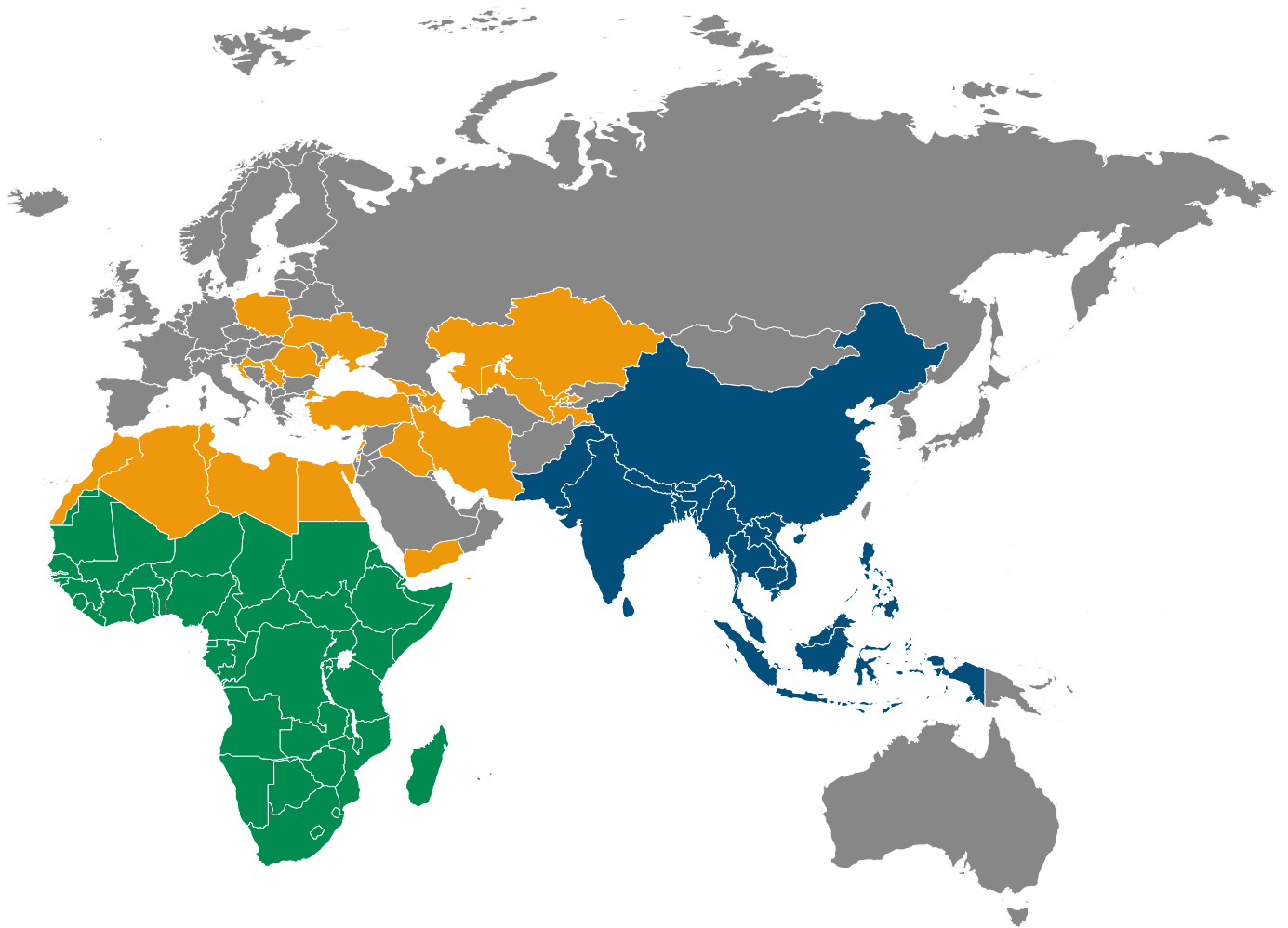
# Regional Activities

## Where we work

<https://rabiesalliance.org/about/where-we-work>

### Regional Rabies Networks

- PARACON
- MERACON
- ARACON





# Regional Activities

## 2018 Workshops

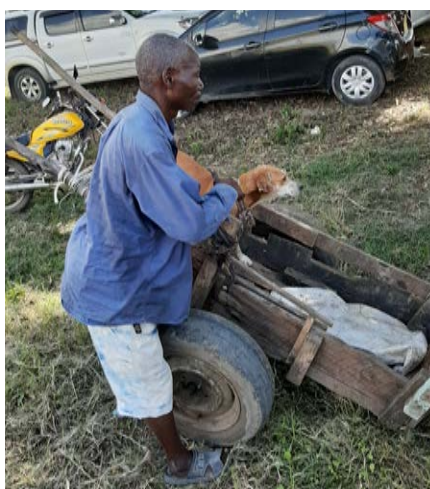


Global Alliance for Rabies Control

# PARACON

Pan-African Rabies Control Network

- The 2nd continent-wide PARACON network meeting was held in South Africa from 12 – 14 September 2018 as a joint meeting with the World Health Organization.
- The meeting was entitled: “Driving progress towards rabies elimination: New WHO recommendations on human rabies immunization and results of Gavi’s Learning Agenda on rabies and the 2nd international meeting of the Pan-African Rabies Control Network (PARACON)”
- The meeting was attended by a total of 37 country representatives (representing 26 African countries or territories) from the human and animal health sectors in sub-Saharan Africa as well as 48 international subject-matter experts that facilitated the meeting and its various breakout groups and workshops.



# Regional Activities

## 2018 Workshops



Global Alliance for Rabies Control

# ARACON

Asian Rabies Control Network

- The inaugural ARACON meeting was held in Bangkok, Thailand from 13-14th March 2018, organized by GARC in collaboration with the US CDC. Participants included 27 country delegates from 13 Asian countries as well as representatives from international organizations, animal welfare organizations and several pharmaceutical companies.
- It enabled the first SARE assessments for many Asian countries and the Workplan component of the SARE was launched. This additional component builds the pending activities from the SARE assessment into a country-specific work plan complete with GANTT charts, objectives, outcomes, deliverables, and timelines.
- Other highlights of the meeting were the sharing of lessons learnt from different countries (Thailand, Philippines, Indonesia, Sri Lanka, and Malaysia) in the implementation of national rabies programs as well as a presentation from Vietnam on how a country aligns its rabies program based on a regional strategy, the ASEAN Rabies Elimination Strategy (ARES).

Publication: Formation of the Asian Rabies Control Network (ARACON): A common approach towards a global good



Country delegates develop rabies control workplans.



# Regional Activities

## 2018 Workshops



Global Alliance for Rabies Control

# MERACON

Middle East, Eastern Europe, Central Asia  
and North Africa Rabies Control Network

- In April, the 4th MEEREB (Middle East, Eastern Europe, Central Asia and North Africa Rabies Expert Bureau) Meeting was held in France with Fondation Mérieux.
- The Middle East, Eastern Europe, Central Asia and North Africa Rabies Control Network (MERACON) was formed at this meeting, transferring coordination of the network to GARC, with the continued participation of Fondation Mérieux.
- MERACON will build on the substantial efforts of the MEEREB network over the last few years and continue to develop collaboration and support capacity building at the country and regional level.

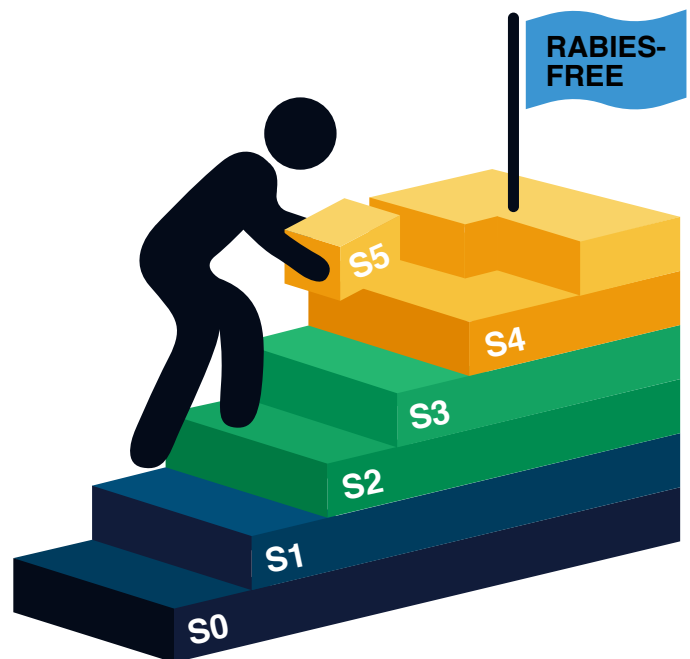
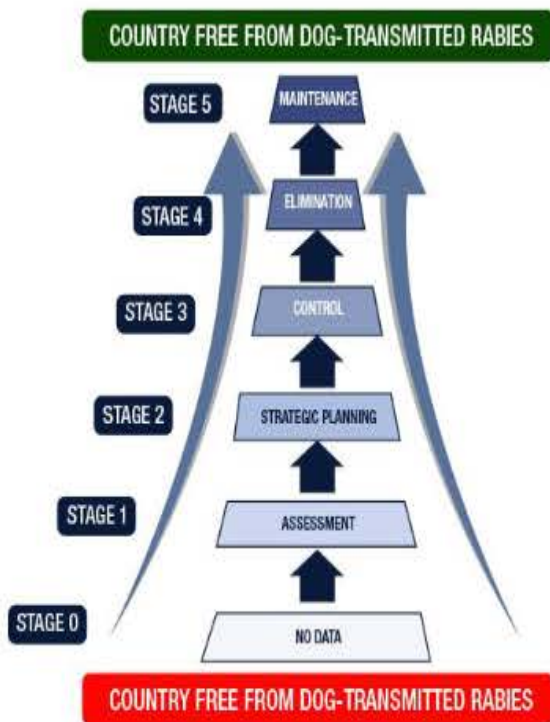


# Strengthening national health systems

GARC has developed a number of planning, vaccination and surveillance tools to assist national governments and improve transboundary and regional coordination of rabies control programs.

## Planning Tool - Stepwise Approach towards Rabies Elimination (SARE)

- The SARE tool consists of two components, viz. an assessment component and a workplan creation component.
- Using the SARE, governments can objectively assess the rabies situation across the country according to activities that form part of seven core categories that are critical to effective rabies control and elimination. Once the assessment has been undertaken, the SARE highlights completed and pending activities in a clear summarized form, together with a progress score that is automatically calculated based on the responses and achieved activities.
- In addition to the assessment component, the SARE also facilitates the development of a unique workplan that is customizable, enabling national authorities to prioritize the pending SARE activities into a multi-year work-plan that is based on clear objectives, responsible authorities and deliverables.
- GARC's tools are integral to the regional activities and workshops. Over the course of the three 2018 regional meetings, country representatives from 26 (PARACON), 13 (ARACON) and 12 (MEEREB) rabies-endemic countries were introduced to the SARE and its associated outputs.



# Strengthening national health systems

## SARE

- SARE assessments undertaken at regional rabies network meetings serve as both an introduction to the tool and an initial assessment of a government's rabies control program.
- Following the 'Orientation' SARE assessments, governments progress by hosting in-country SARE-workshops.
- These are 4/5 day workshops whereby stakeholders from the human, animal, environmental and other relevant sectors are guided by the SARE (and expert facilitators from GARC) to evaluate the current rabies situation in their country, prioritize pending activities and develop a comprehensive, nationally endorsed Workplan to address these pending activities.
- These intensive workshops require input from all relevant rabies stakeholders – including authoritative government representatives – so that the outputs can be endorsed and included into the national rabies program.
- The development of the Workplan – using the workplan component of the SARE – enables governments to identify priority activities for the short- and medium-term.

### Countries that have undertaken in-country SARE workshops in 2018:

Benin, Cote d'Ivoire, Ghana, Guinea, Liberia, Madagascar, Pakistan, Senegal, Zanzibar island (Tanzania)

### Countries and regions that have generated comprehensive/revised Workplans:

Cote d'Ivoire, Ghana, Guinea, Liberia, Madagascar, Pakistan, Senegal, Zanzibar island (Tanzania)



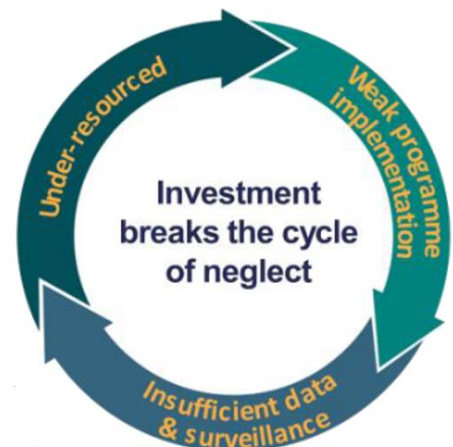
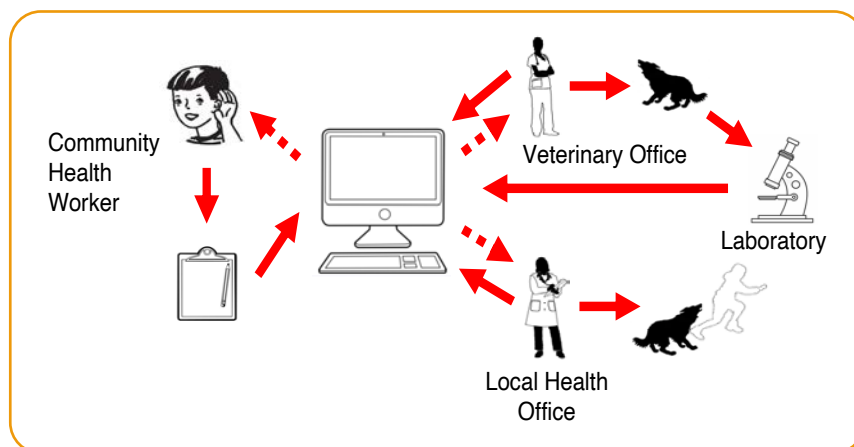
# Strengthening national health systems

## Economic Assessment

- Alongside the SARE assessments, the Global Dog Rabies Elimination Pathway (GDREP) is also implemented to provide an economic landscape analysis to gain insight into the financial goals and timeframe required to achieve disease elimination.
- By linking the Workplan with the economic landscape analysis from the GDREP, governments can ensure programmatic focus and inform stakeholders and partners of the specific programmatic needs and requirements to ensure timely resource mobilization and progress – resulting in sustainable and continued progress towards eliminating rabies in humans and dogs.

## Surveillance - new Community-Based Rabies Surveillance Tool

- The underreporting and under-resourcing of rabies control programs has been the result of a lack of accurate disease surveillance. The Rabies Epidemiological Bulletin (REB) was developed to address this challenge and now provides national governments with a comprehensive national surveillance tool.
- To complement this, GARC developed the Community-Based Rabies Surveillance System (CBRS) component, designed to provide simple, yet comprehensive, surveillance of both humans and animals who have been exposed to rabies. This integrates the grassroots-level bite case management data into the overall country surveillance data.
- The functionality and ease-of-use of the CBRS was tested in an October training workshop in Muntinlupa City, the Philippines. This workshop was held for representatives from the City Health Office, City Veterinary Office, and the National Laboratory, as well as community health workers.
- Large-scale training for widespread implementation of the CBRS in the pilot area, Muntinlupa City, Philippines will begin in January 2019, after which the system will go live.

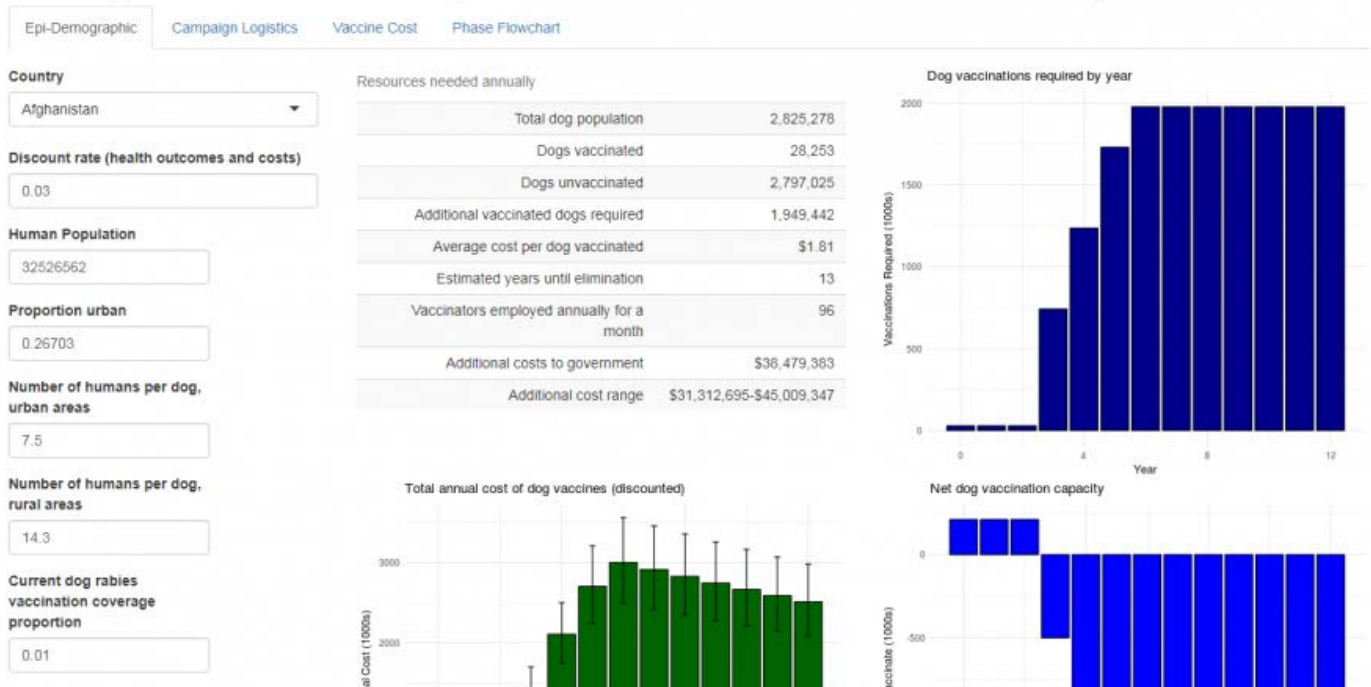


# Strengthening national health systems

## Planning – new online version of the Global Dog Rabies Elimination Pathway Tool

- A CDC collaboration with GARC has developed an online version of the CDC tool, the Global Dog Rabies Elimination Pathway (GDREP).
- The Global Dog Rabies Elimination Pathway (GDREP) tool, is a user-friendly tool to help public health officials plan the resources needed to achieve rabies elimination by 2030 through the mass vaccination of dogs. The tool was based on the WHO recommendation of vaccinating 70% of the dog population for several years to eliminate dog rabies.
- The GDREP focuses on four key factors that determine rabies elimination efforts: country development, cost of dog vaccination programs, potential demand for dog rabies vaccine, and the availability of vaccinators. Outputs from the planning tool allow programme managers to predict workload, budget and capacity needs for an elimination campaign.
- <https://rabiesalliance.org/capacity-building/gdrep>

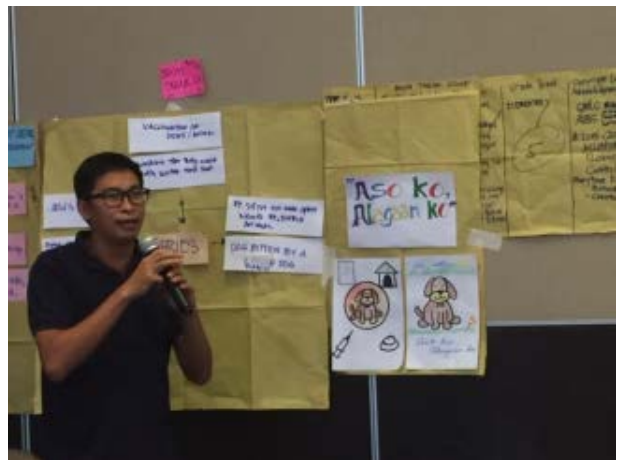
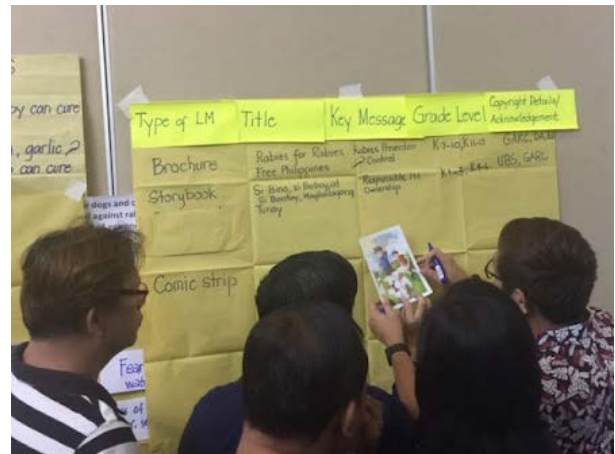
### Planning aid for the control of dog-mediated human rabies deaths based on dog vaccination



# Strengthening national health systems

## Education - Rabies prevention integration into school curriculum

- The Philippines' Department of Education (Dep Ed) and GARC have been collaborating for the past two years to integrate rabies into the national education curriculum for kindergarten through grade 10, and these lesson plans will be uploaded to the Dep Ed's learning resources online portal in 2019.
- It is envisioned that the national rabies education integration initiative will benefit an estimated 21 million students in 46,847 public schools, as well as teachers, school health personnel, parents and the community as a whole.
- After the lesson plans were developed, selected health supervisors, school heads and teachers from more than 180 school divisions in the country attended the training of trainers workshops. Session guides were developed to provide training material on rabies and the national program. These guides also provided instruction on how to use the rabies lesson plans in schools and how to develop a regional/division plan on cascading the use of the rabies lesson plans up to the school level.



Teachers, school heads and health supervisors work on rabies curriculum.  
Photo: Sarah Jayme, GARC



# Strengthening national health systems

## Laboratory Training

- Guinea: Through a collaboration between the UN FAO, USAID and GARC, an intensive rabies diagnostic training course was hosted at the Central Veterinary Laboratory in Conakry, Guinea from 22-24 March 2018 by the Guinea FAO office.
- Six laboratory personnel were trained by a GARC expert in the use of the DRIT (Direct Rapid Immunohistochemical Test), an easy, cost-effective assay for the diagnosis of suspect rabies samples. The rabies diagnostic training was an important foundational step in improving rabies surveillance in the country, providing a strong platform for Guineans to advocate for support and raise awareness about rabies.
- Further laboratory training has taken place in Benin, and also in Zanzibar where GARC is working with the national authorities to eliminate rabies on the Island.



DRIT training in Guinea



Training in Zanzibar on Animal Handling and Vaccination

## Laboratory Training

- A rabies elimination campaign is ongoing in Zanzibar. Since August 2017, a strategic vaccination campaign has vaccinated approximately 67% of the total dog population (6545), with all the vaccinated dog populations residing in and around locations where rabies-positive samples have been detected within the last year.
- Every vaccinated animal has been recorded using the GARC Data Logger (GDL) devices, enabling a real-time monitoring and evaluation of the campaign progress, with the maps also providing impetus to the vaccinators to continue their work.
- To date, Zanzibar has 42 REC-certified members that can share essential rabies knowledge learned during the educational workshop; 15 AVC-certified graduates that have also undergone the physical training associated with the vaccination of dogs; and 2 CCC-certified graduates that act as rabies focal persons within their specific communities.

# Strengthening national health systems

## Establishing collaborations between civil society and government for the greater good.

### Selected highlights:

- Since February 2018, GARC has been collaborating with The Zimbabwean Department of Veterinary Services, the Zimbabwe National Society for the Prevention of Cruelty to Animals (ZNSPCA) and Veterinarians for Animal Welfare Zimbabwe (VAWZ) on a mass dog vaccination and public awareness campaign in Harare, Zimbabwe, where a rabies outbreak began at the end of 2010.
- Since the start of the campaign in February 2018, more than 9,600 dogs have been vaccinated against rabies in the Harare area.
- *Thanks to the generosity of the global community, we raised over £1,000 (USD\$1,313) to print the 'Want a Friend? Be a Friend!' educational booklets which were distributed in Harare.*
- In September 2018, Boehringer Ingelheim, an animal health vaccine company, donated 75,000 doses of rabies vaccine in recognition of World Rabies Day through their 'Shots for Good' campaign. The vaccines will go to a vaccination campaign in Madagascar, supported by GARC in concert with the government veterinary services and international and local NGOs.
- The team will use established protocols to plot and record each animal vaccinated along with real-time tracking of progress to ensure that each priority area is suitably covered before moving on to other areas. The coalition and support from local veterinary services will ensure a sustainable approach embedded in the local community.



GARC's educational resources being used in Harare, Zimbabwe

# Operational Research

GARC will occasionally undertake significant research programs to strengthen the global campaign for rabies elimination.

- In 2018, GARC published the results of a national evaluation of the Philippine government network of 513 Animal Bite Treatment Centres to supply rabies post exposure prophylaxis (PEP). Working with the national authorities, the network was evaluated using a review of existing national and provincial data, and key informant interviews and surveys in selected ABTCs to determine the cost-effectiveness of this network in preventing human rabies deaths. GARC evaluated the network from both a patient and health provider perspective.
- The outcomes from the research were distributed as part of GARC's engagement and involvement with the Gavi learning agenda for rabies. In the effort to improve affordability and access, particularly for vulnerable populations in rabies affected countries, rabies vaccines are a candidate for inclusion in the vaccine support programme through Gavi, the Vaccine Alliance.
- Every five years, Gavi uses its vaccine investment strategy (VIS) to determine which vaccines are made available through their program. Rabies vaccines were considered in the past two cycles, 2008 and 2013, but specific challenges and knowledge gaps have postponed its decision on the inclusion until the next VIS in 2018. Since 2007, GARC has been advocating for and contributing to the scientific case for support that rabies vaccines should be included within their portfolio.



# Sharing our Results and Approach

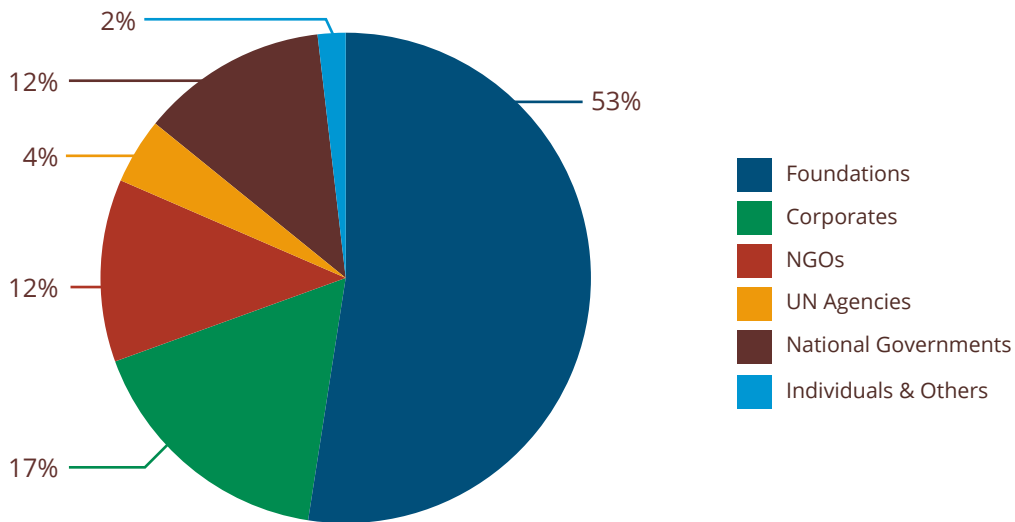
GARC is a science-led organization. As such, we seek to publish the results of our activities and approaches in peer-reviewed journals to help the wider community to learn from our work, as well as to document the challenges that we faced in an objective fashion.

In 2018, we published 9 scientific, peer-reviewed articles on our rabies control activities:

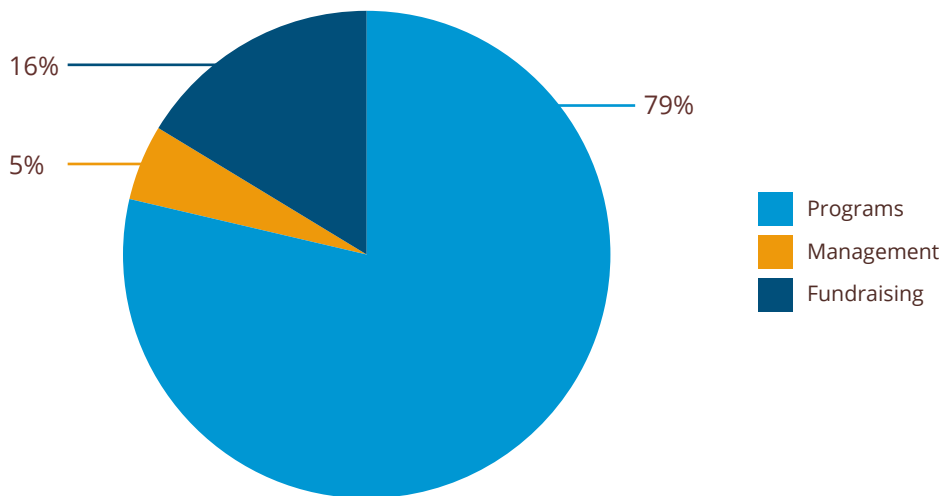
- The evaluation of operating Animal Bite Treatment Centers in the Philippines from a health provider perspective.  
Publication: PLoS ONE 13(7) :e0199186. <https://doi.org/10.1371/journal.pone.0199186>
- The evaluation of Animal Bite Treatment Centers in the Philippines from a patient perspective.  
Publication: PLoS ONE 13(7) :e0200873. <https://doi.org/10.1371/journal.pone.0200873>
- Protecting children from rabies with education and pre-exposure prophylaxis: A school-based campaign in El Nido, Palawan, Philippines.  
Publication: PLoS ONE 13(1): e0189596. <https://doi.org/10.1371/journal.pone.0189596>
- From recognition to action: A strategic approach to foster sustainable collaborations for rabies elimination.  
Publication: PLoS Negl Trop Dis 12(10): e0006756.  
<https://doi.org/10.1371/journal.pntd.0006756>
- The role of non-governmental organisations in controlling rabies: the Global Alliance for Rabies Control, Partners for Rabies Prevention and the Blueprint for Rabies Prevention and Control  
Publication: Scientific and Technical Review, Office International des Epizooties (paris) 2018, 37 (2), 751-759
- New global strategic plan to eliminate dog-mediated rabies by 2030. Lancet. Vol 6 Issue 8.  
[http://dx.doi.org/10.1016/S2214-109X\(18\)30302-4](http://dx.doi.org/10.1016/S2214-109X(18)30302-4)
- Characteristics of owned dogs in rabies endemic KwaZulu-Natal province, South Africa. BMC Veterinary Research. Vol 14. Issue 1.  
<http://www.ncbi.nlm.nih.gov/pubmed/30200962><https://bmcvetres.biomedcentral.com/articles/10.1186/s12917-018-1604-z>
- Formation of the Asian Rabies Control Network (ARACON): A common approach towards a global good. Antiviral Research. Vol 157. pp134-139.  
<https://doi.org/10.1016/j.antiviral.2018.07.018>
- Modelling the potential impact of improved provision of rabies post-exposure prophylaxis in Gavi-eligible countries. Lancet Infect. Dis.. S1473-3099(18)30512-7  
<https://www.thelancet.com/action/showPdf?pii=S1473-3099%2818%2930512-7>

# Accounts 2018

## Operating Revenue 916,398 USD



## Operating Expenses 689,454 USD



The 2018 revenue includes two major grants from Foundations to undertake work over the next 24-month period. Support from national governments and UN agencies allows us to provide capacity building and training activities to governments within rabies endemic countries. Corporate support was both in-kind and sponsorship to support the global and regional network activities. We are extremely grateful to all our individual donors, who have sought us out, and supported our efforts.

**We are extremely grateful to all our donors who empower us to undertake our work to save human and animal lives from this most deadly of diseases.**

# Organizational information

## Global Alliance for Rabies Control

 529 Humboldt St., Suite 1, Manhattan, Kansas 66502 USA

 **Website:** <https://rabiesalliance.org>

 **End Rabies Now campaign website:** <https://endrabiesnow.org>

 **email:** [info@rabiesalliance.org](mailto:info@rabiesalliance.org)

 **FB:** [www.facebook.com/GlobalAllianceforRabiesControl](http://www.facebook.com/GlobalAllianceforRabiesControl)

 **Twitter:** <https://twitter.com/RabiesAlliance>

 **YouTube:** <https://www.youtube.com/user/worldrabiesday>

 **LinkedIn:** <https://www.linkedin.com/company/global-alliance-for-rabies-control/>

The Global Alliance for Rabies Control is registered in the United States as a 501(c)3, non-profit organization.

It works alongside its sister charity, the Alliance for Rabies Control, a registered charity in Scotland, United Kingdom. Alliance for Rabies Control, 168 Bath Street, Glasgow, G2 4TP, United Kingdom

