



RABID BYTES

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The newsletter of The Global Alliance for Rabies Control

EDITORIAL

A key strategy for the Global Alliance for Rabies Control (GARC) is to build, with the Partners for Rabies Prevention (PRP), strong Rabies Control Networks in Asia and Africa, which are the regions of the world most affected by endemic dog rabies. These networks will be structures for the progressive application of tools such as the Rabies Blueprint, the Stepwise Approach to Rabies Elimination, Rabies Education Certificate Courses and World Rabies Day. It is also envisaged to provide a platform for the progression of initiatives such as the Rabies Vaccine Banks (OIE, WHO) and Stimulation Packages to catalyze rabies control actions where it is merited and needed most.

In Asia, GARC presented this strategy at the [recent ASEAN meeting](#) and is involved in the planning for the upcoming SAARC meeting supported by WHO, World Animal Protection and GARC, to be held in Sri Lanka in from 11 to 14 August 2015. GARC's aim is to combine this approach with the existing regional strategies for Asia.

For Africa, it was envisaged that a single Pan-African rabies expert network could greatly contribute towards a unified approach to rabies control and elimination on the continent and the idea of a Pan-African Rabies Control Network (PARACON), under the secretariat of GARC, was promoted during the latter half of 2014. Subsequently, the first PARACON meeting took place in Gauteng, South Africa in early June 2015. You can read more about the approach and the PARACON meeting in the separate article [here](#).

In order to eliminate rabies, regional approaches will be critical. Combining the support tools developed by the PRP group with regional strategies and supporting this with international effort to increase investment in rabies elimination is a clear way to benefit those countries committed to rabies control and elimination.

Prof. Louis Nel, Executive director, GARC

NEWS FROM GARC AND WRD

Inaugural Pan-African Rabies Control Network (PARACON) Meeting

The [first PARACON meeting](#) took place in Gauteng, South Africa 9-11th June 2015. The meeting was executed in the form of an intensive 3 day workshop and delegates from 33 African countries attended as official representatives for their countries. These participants represented either the veterinary or medical sectors of their countries where they are regarded as key rabies focal points, actively involved in matters such as rabies diagnosis, surveillance, epidemiology and control. With exceptional buy-in from all the participating African countries, and support from the PRP, PARACON was thus established as the future regional coordinating network for Africa.



**1st PARACON meeting
South Africa
9 - 11 June 2015**

Built around plenary sessions, the inaugural PARACON meeting took the form of several workshops, with a specific emphasis on topic-specific focus groups and discussion on the [Blueprint for Rabies Control](#), [Stepwise Approach to Rabies Elimination \(SARE\)](#) Framework, new Educational tools (e.g. [Rabies Educator Certificate](#)) and [World Rabies Day](#). The different sessions of the meetings can be summarized as follows.

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World Rabies Day 2015

World Rabies Day 2015 is fast approaching and GARC are delighted to announce this year's theme is *End Rabies Together*.

This theme builds on previous themes to highlight the ongoing importance of global commitment across sectors - governments, NGOs, donors, corporations, and many others - to effectively end the spread of rabies and save both human and canine lives.

At the time of writing (12 weeks before September 28) four events have already been registered.

In Argentina, the [Faculty of Veterinary Science at the University of Buenos Aires](#) is planning an event to keep veterinarians up to date on rabies prevention and diagnosis.

In the Matopos region of Zimbabwe, [Vets for Change](#) are planning a mass vaccination of dogs, with the support of the Zimbabwe State Veterinary Services.

In Mexico, the [Ministry of Health](#) is planning a commemorative lottery ticket alongside an intensive day of animal sterilization in all 32 states.

And, in Free State, South Africa, [Blind.Love.Africa](#) are working at raising awareness in children in the community through a series of workshops and press 'advertisements' that feature images for children to color in.

The rabies prevention community is active and vibrant but too often the difference you make on the ground isn't recognised by policy decision makers who can support your work. Organizing or supporting a World Rabies Day event near you is an effective way to make your voice heard at the global level. Every registered event - however big or small - adds to the momentum that will bring us closer to the end of rabies. [Please get involved](#).

Let's #EndRabiesTogether

The Great Adventure for Rabies Control

Dane Medina is a Communication Officer for GARC based in the Philippines. She supports the GARC Global Communication Team and GARC's communications in the Philippines. She was recently assigned to support the communication needs of the rabies elimination program in Nias Island, Indonesia. Here she talks about her visit to the project site.



One of the advantages of being in "Team Nias" is that I get to explore the different project areas. Just last May 16 to 22, Dr. Sarah Jayme (GARC Philippines Country Representative) and I travelled to Nias to meet with the partners and present updates on the Communities Against Rabies Exposure Project in Nias as well as plan for pipeline activities.

Fakhri our ever-smiling GARC Field Veterinarian in Indonesia was there to meet us at the airport when we touched down in Nias on a rainy Sunday afternoon, after three plane rides and a whole weekend of traveling.

Nias is the largest of the islands in Western Sumatra and home to more than 750,000 people and an estimated dog population of 50,000. Best known as a surfing destination, it was previously a 'rabies-free' island until a reported

outbreak in 2010 that claimed 26 lives by the end of the year.

We had an early start on the second day. Before heading out, we made a quick stop to Fakhri's rented apartment,

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...PARACON continued from page 1.

Welcome address and opening session:

The opening address (Prof LH Nel, University of Pretoria and GARC) highlighted rabies as a disease of poverty, but also presented contemporary evidence from health economic research that strongly argues the cost benefits of rabies prevention and elimination across the world and including the poorest of countries.

The need for a coordinated approach towards rabies control and elimination across the African continent was discussed, at the hand of several examples in the history of dog rabies in the world. Emphasis was placed on the importance of country reports, building the evidence base through effective surveillance and persistent stepwise progress.

The motto for PARACON 1 was derived from an old African proverb:

"If you want to go fast, go alone. If you want to go far, go together... But not too slowly!" ~ PARACON

Partners session (WHO/OIE/FAO/WAP):

In this session, the global commitment to humane rabies control to benefit human health, was re-emphasised. It was highlighted that countries should be aiming for better cared for, longer living, vaccinated dogs in order to break the rabies transmission cycle. Various examples reiterated that rabies is a disease linked to poverty, but global partners are working on ways to use regional data to create powerful regional and global messages.

Rabies Blueprint session:

Delegates were introduced to the Canine Rabies Blueprint as well as the Rabies Surveillance Blueprint. The ensuing discussions highlighted some of the important components of rabies control and it was demonstrated how the Rabies Blueprint provides guidance on all aspects of canine rabies and surveillance. Delegates also had the opportunity to explore the Blueprint online – for some delegates it was their first exposure to the Blueprint. Examples of case studies where the Blueprint has been influential confirmed that rabies should become a priority disease - not remain a neglected disease. Several examples also underlined that regional and international cooperation can enhance diagnostic capacity and control efforts. Once again the importance of data availability was emphasised. This showed the need to manage rabies and measure impact of control efforts to justify budgets for further programmes.

Case Studies and National Strategies:

Examples of significant recent progress across Africa (from Western, Central, Southern and Eastern Africa) were presented and discussed. Some of the main messages across all programmes included:

- o With increased awareness more rabies cases are reported.
- o The importance of linking animal and human health sectors to break the dog rabies cycle.
- o Innovative approaches can combine public and private sector funding in a sustainable way
- o Dramatic short term reduction in the incidences of rabies cases is possible
- o Sustained control programs are key to ensure long-term control, and this is often difficult when rabies incidence has dropped significantly.

Delegates from 3 countries (South Africa, Namibia and Kenya) shared their country's recently developed national rabies control strategies and some key messages included:

- Successful programmes are highly reliant on motivated and dedicated individuals.
- National strategies for each country will be different.
- A good general approach was found to be: Start small and scale up - success attracts partners. This also allows a process of learning and refining as the programme progresses.
- Regional strategies are needed in recognition of the transboundary nature of a disease such as rabies.
- Responsible dog ownership should always be encouraged as fundamental aspect of ensuring a safe and healthy dog population.

Stepwise Approach towards Rabies Eradication (SARE):

The Stepwise Approach towards Rabies Elimination workshop enabled country representatives to assess previous efforts with regards to rabies control and elimination within their country. A workshop and interactive SARE outputs

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World Rabies Day “One Health Workshop” Works towards Rabies Elimination in Haiti

Haiti is currently one of the last countries in the Americas suffering from a significant number of human deaths from canine rabies. As part of the “last mile” of rabies eradication in Haiti, US Army veterinarians are partnering with GARC, Centers for Disease Control, Humane Society International, International Fund for Animal Welfare, Pan American Health Organization and the government of Haiti in the development of a “One Health Workshop” as a part of Continuing Promise 2015.



A young girl waits in line at a government run canine rabies vaccination clinic, unfortunately only held every few years due to lack of funds. Photo: Kelly Crowdis

Continuing Promise 2015 is a medical focused, humanitarian assistance mission delivered by the US Navy aboard the hospital ship, the USNS Comfort. One major goal of the mission is to join with host nation medical professionals in order to build host nation capacity in numerous medical and veterinary fields. The Comfort will visit eleven Caribbean, Central and South American countries over a six-month deployment, and Port-au-Prince, Haiti is the last mission stop of the event.

The One Health Workshop will have three workgroups designed to promote the establishment of a Haitian rabies eradication plan, train veterinary agents to receive the rabies educator and rabies vaccinator certificates and collaborate with local primary school educators on canine bite prevention and animal welfare.

The workshop will be held just weeks prior to World Rabies Day 2015. The goal of the three-pronged approach is to affect a broader spectrum of the population in Haiti to participate in the rabies eradication effort from the community level to the national level. The overall end goal is the collaborative development of a national rabies control and elimination plan.

The veterinary detachment aboard the USNS Comfort completed numerous vaccine clinics, educational exchanges, and veterinary civil action programs in each country visited during Continuing Promise 2015. In all, approximately 1500 companion animals were vaccinated against rabies in conjunction with host nation veterinarians and veterinary students in the eleven Caribbean, Central and South

American countries. You can follow the mission’s progress on their [Facebook page](#).

Contributed by Marc Knobbe MAJ, VC, Battalion Veterinarian of the 98th Civil Affairs Battalion (Airborne), Fort Bragg, USA.

World Animal Protection Collaborates with WHO and GARC on Bite Prevention Materials

Dogs are renowned as faithful companions, and their company is sometimes even good for our health. But despite the close bond between humans and our canine friends, millions of people suffer from dog bites every year.

Dogs can’t talk, but they do communicate and can tell us when they are not happy. Learning to recognize the signs dogs give when they are unhappy can avert a dog bite, avoid potential exposure to rabies, and save lives.

World Animal Protection, together with the World Health Organization and GARC, recently developed the *5 Keys to Bite Prevention*, a set of web resources in Spanish and Portuguese that are designed to educate anyone, but particularly children, on how to protect themselves from dog bites. These tools will be of great interest to school teachers and health educators.

The resources provided in the *5 Keys* are primarily designed for children, and consist of a diverse range of materials that can be printed out directly from the website, including a poster, a banner, illustrations, an educational cartoon video, and a teacher’s manual. These individual materials are separate aspects of one message and should be used all together rather than independently. A general user’s guide is provided with the online materials to help educators make the most of the *5 Keys* materials and should be consulted first.



The *5 Keys* can be accessed through the World Animal Protection website in [Spanish](#) and [Portuguese](#).

Contributed by Melania Gamboa of [World Animal Protection, Costa Rica](#).

Webinar on Rabies prevention and control tools in Asia

On 30 June, FAO organized a Webinar on rabies prevention and control tools in Asia, the first of a series of two webinars dedicated to rabies.

In order to improve knowledge on rabies prevention and control, this webinar was organized under the framework of [LinkTADs](#), a research consortium funded under the European Commission's Seventh Framework Programme (FP7), which aims to coordinate research on animal disease control between partners in the European Union (EU) and China. The webinar was organized with the technical assistance of [EuFMD](#).

The webinar started with a presentation given by Bernadette Abela-Ridder from [WHO](#) making the case of rabies for global elimination. This part highlighted the burden of rabies for poor and rural local communities and the role of surveillance so that data/evidence informs monitoring and evaluation but also better programmatic planning and dog and human vaccine procurement forecasts.

A presentation on Rabies Blueprint was given by Louis Nel from the [Global Alliance for Rabies Control](#) who stressed the role of GARC in raising awareness on this neglected disease, especially with the creation of World Rabies Day in 2007, as well as the importance of communication and how to engage with the local community in controlling the disease.

The FAO presentation, given by Katinka de Balogh focused on developing a stepwise approach for rabies control, describing all the six stages required to move from an endemic situation to freedom of the disease. FAO is providing guidance and support to countries in order to embark on rabies elimination.

Gregorio Torres from the OIE, focused on [OIE international standards](#) which included provisions for disease surveillance and notification, recommendations for international trade, stray dog population control and rabies diagnosis and vaccination. He briefly introduced the concept of OIE vaccine bank as vaccine procurement mechanism that has been successfully used by many countries.

Lastly, Eric Brum from FAO Bangladesh, described the principles and practices for rapid rabies control, highlighting the challenges faced by veterinarians in identifying incubating animals, and the field experience in implementing vaccination as an important element for reducing transmissibility, contact rate and the duration of infection to maximize the results of rabies prevention and control.

The 1.50 hr long webinar was recorded for viewing [HERE](#) and presentations can be downloaded [HERE](#).

Summarized from the news story on the [FAO EMPRES website](#)



The persistence of rabies is not due to our neglect. It's due to our collective ignorance, an ignorance now entrenched within our separated health systems.

Closing slide of the presentation by Eric Brum

The Rabies Educator Certificate Takes Off

"Every 10 minutes, somewhere in the world, someone dies of rabies". It is estimated that 59,000 people die of rabies every year with 84.7 % of the population of the world still at risk of canine rabies. This is despite the fact that this highly fatal disease is 100% preventable ([Hampson et al, 2015](#)).

With these staggering figures in mind, the Global Alliance for Rabies Control's Partners for Rabies Prevention informal expert group recognized the need for a coordinated approach to rabies education. Based on this need the GARC Education Platform (GEP) was established and the Rabies Educator Certificate (REC) was the first free course to be established. The REC was developed as a [free online course](#) to effectively disseminate accurate, life-saving information regarding rabies to at-risk communities throughout the world.

The REC is hosted as a free online course and is self-paced, so participants can complete it in their own time, although it should take between four and seven hours in total depending on previous knowledge and experience. In order to accommodate potential participants with slow or intermittent internet access, the entire course contents can be downloaded as a small PDF file and studied offline, with no specific deadline to complete the course.

In order to make the REC more accessible, a French version of the online course has just been officially launched. The "Certificat de formateur sur la rage" (CFR) is live on the GARC Education Platform and can be accessed directly by registering at <https://education.rabiesalliance.org/?lang=fr>.

The course contents were designed to encapsulate clear and specific information that should be applicable to all situations regardless of geographical location and circumstances, making the information truly globally relevant.

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Updated Rabies Blueprints Available in Additional Languages

GARC has expanded access to its newly updated [Canine Rabies Blueprint](#) – a comprehensive toolkit for developing rabies control programs – by providing translations of the website into Spanish and French. Version 3 of the Blueprint was originally unveiled in English in September 2014; however, collaborations with [Translators without Borders](#) and input from global rabies control experts have yielded updated Blueprint translations in both [French](#) and [Spanish](#) that were released in early June. Readers are now able to access the new translations through the drop-down language menu within the current Canine Rabies Blueprint website.



Developed by GARC and the Partners for Rabies Control, the updated version of the Canine Rabies Blueprint includes newly revised text, resources for effective rabies campaign communications, and additional tools such as the Stepwise Approach towards Rabies Elimination, which allows countries to plan and self-assess their progress towards canine rabies elimination. (For further information on the recently updated version of the Blueprint, see [this article](#) from November 2014.)

[The Rabies Surveillance Blueprint](#) – a centralized guide for designing and conducting adequate surveillance programs that brings expert knowledge from global health organizations and academic researchers into one place – is now also available [in French](#).

In order to be able to provide timely revisions and updates to these resources, GARC has chosen English, French and Spanish as the languages that will be supported going forwards. There are currently no plans to update the other translations, but the Arabic, Russian, and Portuguese translations of the Canine Rabies Blueprint, Version 2, will remain available on the website.

The June launch of the French versions of the resources coincided with the kick off of Blueprint workshops held at the June PARCON (Pan-African Rabies Control Network) meeting in South Africa. These workshops familiarized African public and veterinary health experts with the updated resources in the revised Blueprint. With a large West African contingent participating in rabies control projects, a French version of the Canine Rabies Blueprint was essential to providing broader access to rabies control workers in this region, and the feedback received from the meeting was very positive.

Prof Louis Nel, executive director of GARC, who has been involved in introducing the resources to both African and Asian rabies networks over the last few months, said, “Having the most recent updates available in Spanish and French will really help to broaden the Blueprint’s accessibility and value to countries working towards rabies elimination.”

Contributed by Laura Baker, GARC newsletter contributor and website editor, who implemented most of the online translation updates to the websites

...[Rabies Educator Certificate](#) continued from page 5.

The REC consists of five modules, each addressing key factors that are crucial in understanding rabies prevention and how to convey this life-saving information. The modules cover:

1. What is rabies and how do people and animals get the disease?
2. How to avoid dog bites and prevent rabies
3. Caring for animals
4. Understanding the role of a community educator in preventing dog bites and rabies in general.
5. Communicating lifesaving information to people

Once a participant has gone through the course, there is a final online assessment. Participants need to score at least 85% in this final assessment to pass and receive a certificate. The personalized certificates will also serve as a proof of readiness to provide lifesaving information to their target communities.

Since the official launch of the REC in February 2015 at the Asian rabies expert meeting in Thailand, users from across the world have enrolled for the course. Of the registered users, more than 130 have become qualified rabies educators, from countries across the African and Asian continents – all countries where the knowledge obtained can be put to good use within their communities.

Written by Andre Coetzer, REC Coordinator, GARC and Dr. Sarah Jayme, Country Representative, GARC.

Resources for dog population management from the 2nd ICAM conference

In early March, the International Companion Animal Management (ICAM) Coalition organized its Second International Conference on Dog Population Management (DPM). Held in Istanbul, Turkey, this conference brought together participants from all over the world from many related sectors— including animal welfare, animal health, public health, ecology and education— to support ICAM’s mission of developing humane and effective companion animal population management.

The ICAM conference was organised around the theme of “inter-sectoral collaboration, innovation and evidence-based solutions for dog population management,” and discussions focused on four overarching issues: 1) population dynamics, 2) government collaboration, 3) DPM programme monitoring, and 4) education and community engagement. Featured presentations by invited speakers covered all aspects of dog population programmes, from management at the population level to efforts conducted at the community and individual levels.

In countries where rabies is endemic, rabies control is usually integrated into dog population management strategies. Laws for controlling zoonotic disease typically incorporate measures to cope with stray dog populations, and animal welfare organisations in many places are the only agencies working to manage these animal populations humanely. These animal welfare agencies integrate rabies prevention into their programmes to increase their reach, to protect animals and people, and to stop the inhumane mass killings often featured in the reactionary measures implemented by governments when rabies deaths occur.

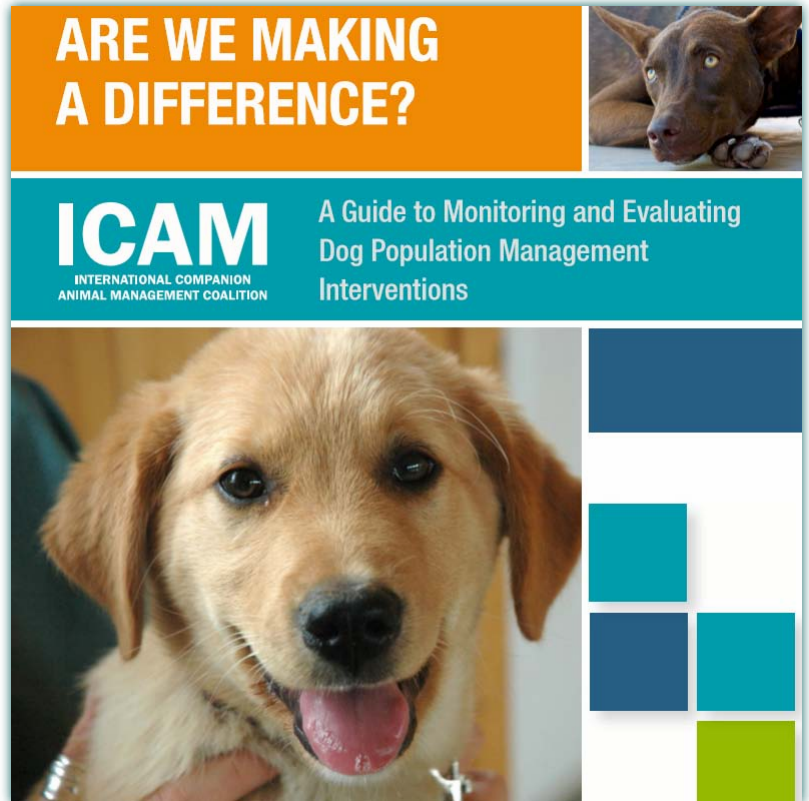
Dog population management can contribute to improved health and longevity in dog populations, as well as increasing responsible pet ownership. When combined with rabies vaccination, DPM can reduce turnover and help to achieve a stable, vaccinated dog population to protect both dogs and people.

The keynote speakers at the conference tackled the newest ideas for framing human-dog relationships, in addition to discussing current options for non-surgical dog sterilisation. Speakers also focused heavily on the need for community acceptance and involvement in order to achieve long term success during population management campaigns, along with strong partnerships at national and local levels.

Finally, strategies for augmenting community involvement in ongoing population control programmes were presented. The presentations were filmed and can be accessed [here](#).

Conference attendees acquired several new tools and resources to assist in monitoring and evaluating dog population campaigns, including a new ICAM Coalition guidance document: [Are we making a difference? A Guide to Monitoring and Evaluating Dog Population Management Interventions](#), which is accompanied by several [online tools for evaluating individual programmes](#). The OIE also presented a [self-assessment and monitoring tool](#) to measure in-country compliance with the [OIE standard on stray dog population control](#), developed as part of the OIE’s stray dog population management initiative for Balkan countries. As rabies is part of this standard, it is also relevant to rabies-endemic countries in other parts of the world.

Written by Deepa Balam, who represented GARC at the ICAM conference. Current members of ICAM are: [International Fund for Animal Welfare](#); [World Animal Protection](#); [Royal Society for the Prevention of Cruelty to Animals](#); [Humane Society International](#); [World Small Animal Veterinary Association](#); and the [Global Alliance for Rabies Control](#).



...*Great Adventure* continued from page 2.

which was about 20 minutes away from where we were staying, to get the vaccines and other materials. It's a modest, two-room apartment which serves both as his living quarters and the GARC headquarters in Nias.

Of all the equipment in the house, the one that got my attention was Fakhri's life vest which he uses when he has to travel by sea to vaccinate dogs or monitor the vaccination coverage. Fakhri shared that sometimes he has to travel four to five hours by boat just to reach an island for a vaccination activity.

I rarely get to join the vaccination activities in our other project sites so I was thrilled that for the next two days I'd be able to observe how they do it in Nias. It was a bit unnerving to document the trip while on a motorcycle (the most common form of transportation in the Island) but it was all part of the adventure, or the Great Adventure for Rabies Control, as Fakhri puts it.

From travelling 10 km of rough roads by motorcycle to trekking mountainous paths, the vaccination activity was undeniably the highlight of our trip. I was able to see first-hand the lengths that the vaccinators go to reach far-off villages and ensure that the dogs in the Island are safe and vaccinated against rabies. These volunteer vaccinators, who were trained last year, come from all walks of life. To date, 226 volunteer vaccinators and 68 post-vaccination surveyors have been trained.

Sometimes villagers are wary of vaccination activities so it helped that the village leaders came with us during the vaccination. Some families had two dogs while some even had a "family" which included few puppies. I was also amused at seeing children closely observing their pets while in the capable hands of the vaccinators.

One of the difficulties during the vaccination activity was keeping the vaccines cold and viable for the whole day. The team were amazingly resourceful. Though they didn't have enough cold packs for the vaccine carriers, they still managed to keep the vaccines viable by using makeshift ice packs.



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On the last day, I joined Fakhri for an Information Education Communication (IEC) activity in one of the sub-districts attended by village chiefs and officials of the village health center. The video he showed before the lecture was produced by the Department of Health in the Philippines and translated into Bahasa, the official language of Indonesia. Even though I am familiar with rabies, it was still heart-wrenching to watch the video and realize that those people could have been saved if only they had been educated about rabies and received proper treatment.

Our brief stay in Nias was an eye-opener in many aspects. While it's always invigorating to be in the field and be part of the action, it has also helped me put things in perspective and made me reflect on my role as a Communication Officer. Seeing the actual situation

and dedication of the team serves as a challenge as to how I can effectively carry out my responsibility in this great adventure to eliminate rabies in Nias Island.

The CARE (Communities Against Rabies Exposure) Project in Nias Island is supported by the UBS Optimus Foundation and World Animal Protection in collaboration with the national government of Indonesia (Directorate General of Livestock and Animal Health Services- Directorate for Animal Health) and the North Sumatra Province (Provincial Livestock and Animal Health Services Offices). In 2014, the Office International des Epizooties (OIE) provided 50,000 doses of anti-rabies vaccines for animals while the national government of Indonesia supports the provision of vaccines in 2015.

...**PARACON** continued from page 3.

worksheet highlighted the specific areas that need to be addressed within each African country, and also provided tangible markers in order to perform self-assessments of the progress towards rabies control and elimination. The SARE will be re-visited at the next meeting in order to determine what progress has been made in each country and to consider the next steps. This workshop was well received and detailed outputs from the working sessions are considered valuable documentation of the status quo across the different nations represented at PARACON.

Education, innovation and World Rabies Day:

A clear demand was revealed for educational tools structured for various applications and resources available from multiple partners to support educational endeavors were discussed. As these tools assist in getting the right message to right people, education and public awareness was a prominent theme throughout the meeting. Among others, the Rabies Educator Certificate (REC) was showcased. Following on the demonstrated success of the REC, additional new online courses are being developed and implemented. The GARC education platform promises to continue to grow with several exciting and useful new courses to come. The launch of the “Want a friend, be a friend” educational booklet targeted at young children at the meeting was met with prominent interest for use in a variety of African countries as well as the offer of aid in translating it into several different languages.



New proposals for technological advances towards enhanced surveillance and data capture were also presented, and it is evident that such new tools are likely to make significant contributions towards better rabies control efforts in the near future.

The value of WRD was discussed and various ideas for WRD campaigns that may impact on local and governmental levels were generated. Delegates were encouraged to register their World Rabies Day events on the GARC [World Rabies Day website](http://www.garc.org/world-rabies-day).

Recommendations of 1st PARACON meeting

PARACON MEMBERS:

1. Consider rabies to be a neglected disease that should be prioritised.
2. Consider rabies control a public good and a social responsibility.
3. Consider that rabies is an obvious fit for the multi-sectoral One Health approach.
4. Declare that the tools, methods and evidence base for the elimination of canine rabies exists.
5. Consider the vaccination of dogs as the priority activity towards the elimination of canine rabies.
6. Aspire to a canine-mediated human rabies elimination target of 2030 in Africa, in line with the Sustainable Development Goals.
7. Consider the Canine Rabies Blueprint/SARE as useful tools in the development of national rabies control and elimination plans, with the intention to measure progress along the different stages towards elimination.
8. Consider World Rabies Day (September 28th) an opportunity for rabies advocacy on all levels concerned - community, provincial, national, regional, and beyond.
9. Declare key messages that advocate the benefit of rabies control and elimination at the source level (dogs) vs. cost of rabies through PEP, loss of life and burden on society.

For more information about PARACON, please visit the website at the following address: <https://paracon.rabiesalliance.org>. The meeting resolutions, as well as other important information from the meeting can be found at: <https://paracon.rabiesalliance.org/meetings/archived/paracon-archives>

Written by the PARACON organizers, Louis Nel, Andre Coetzer, Nicolette Wright and Terence Scott.

The Value of Translation – *and a huge thank you*

The best information in the world is useless if people cannot access or understand it. Communication and distribution of information and materials on rabies control was a central reason for GARC’s establishment, and has been at the core of what we have done ever since.

We know from our own project work that translation is a critical part of community engagement. For instance, various Information, Education, and Communication (IEC) materials including brochures, billboards and posters have been translated specifically into the local dialects of our project sites (Ilocos Norte and Sorsogon) in the Philippines. Several materials have also been translated into Bahasa for Nias Island in Indonesia.

Having these materials translated and effectively conveying our key messages into the language that community members can fully understand and relate to encourages wider community participation and gives them a sense of ownership on the project. This has proven to be extremely valuable in mobilizing the community because more than information dissemination, what we aim to achieve in the long run is sustainable social and behavior change.

GARC and the global rabies community have always benefitted enormously from the work of generous volunteers from within and outside the rabies field who have donated their time and talents to support improvements to our tools and their reach – from the information itself, to translation and proofreading.

Many people have submitted educational materials in their native languages to our [education bank](#), which we are delighted to make as widely available as we can. Similarly, our community has helped us to translate the [World Rabies Day logo into 49 languages](#). To translate our newsletter into French and Portuguese, Betty Dodet, Brigitte Dunais and Phyllis Romijn, all active rabies and public health specialists have donated many, many hours of time for which we are very grateful. We hope to begin translating articles into Spanish starting with this issue.

For our larger projects such as the translation of the Canine and Surveillance Blueprint, we have partnered with FAO Bamako in Mali and the European Commission and have recently started to work with Translators without Borders, a non-profit that allows translators to donate their talents to support NGOs such as ours. Since January 2015, Suzanne Assenat, Jacques Barrat, Lizette Britz, MultiPro, Murielle Brugoux, Nora Glembocki, Benoit Grommersch, Daniela Helguera, Iadynaty, Eric Ragu, Irene Vitali have all provided invaluable translations and proofreading services.



Our new educational platform and Rabies Educator Certificate (REC), will shortly be available in English, French and Spanish. These three primary languages will be the only languages for the online platform, which will allow users to participate and become certified as Rabies Educators. GARC is also involved with a few large-scale training programmes targeting specific communities. Although these targeted education workshops are not the primary focus of the GARC Education Platform, the downloadable offline reading material has been translated into Creole and Khmer in order to assist in the large-scale training events where many participants are certified simultaneously. We would like to thank all the dedicated professionals that have set time aside to translate and proofread the downloadable course work, despite the fact that the work is done just for a single event.

We would love to be able to provide all of our resources in many languages, but how to make the best use of our limited resources is a constant challenge. So our model is to reach out via the internet, with our core materials available in a few key languages so that they can be kept up to date and as useful as possible. From here we rely on facilitators and educators in rabies endemic countries to adapt those tools and information to their own settings and communicate them in their own languages.

So, from all at GARC we say to all the translators that we know and all the translators in the wider community:



NEWS FROM THE COMMUNITY

Relaxation of EU Dog Transport Requirements May Threaten Rabies-Free Regions

The relaxing of European Union (EU) regulations surrounding the cross-border transport of dogs from rabies-endemic areas has led to an increased number of under-vaccinated dogs arriving in Norway, according to a recent study led by the Oslo-based Norwegian Veterinary Institute. The study revealed that a significant percentage of rescue dogs legally transported from Eastern Europe were not adequately immunized against rabies, elevating the risk of re-introducing this deadly viral disease into regions that are currently rabies-free.

The study evaluated 75 dogs brought to Norway from Eastern Europe—primarily from Romania, where rabies is still endemic—and found that over 50% of the dogs had anti-rabies antibody levels that were below the 0.5 IU/mL standard recommended by the WHO and OIE. This is the first study conducted after cross-border transport controls were loosened that directly quantifies the actual level of rabies protection in imported rescue dogs, demonstrating that compliance with the current EU rabies vaccination requirements cannot be accurately assessed by simply reviewing rabies certification paperwork issued by the originating country.

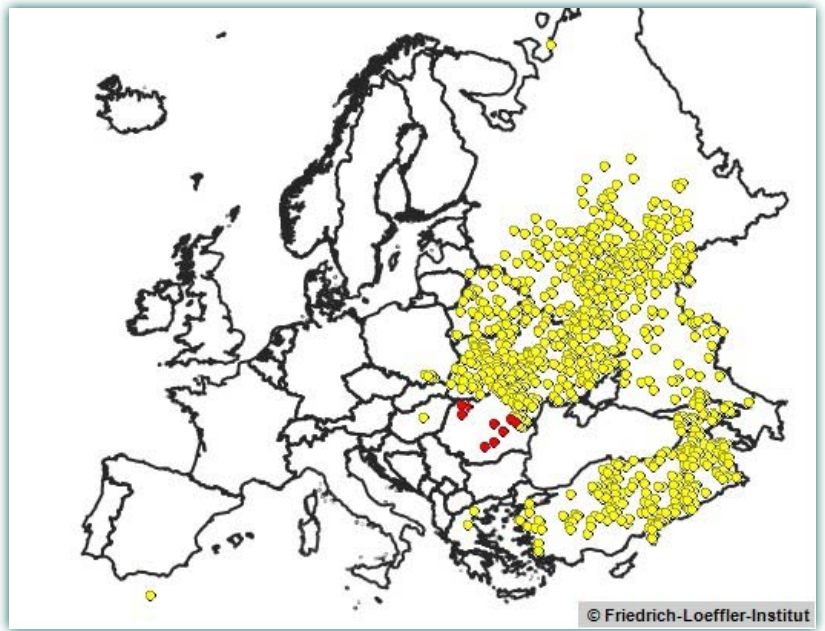
Previous EU requirements permitted the non-commercial transport of dogs into a rabies-free region as long as a serological test for rabies antibodies was performed in addition to “pet passport” microchipping and proof-of-vaccination documentation. However, with the recent harmonization of EU dog movement policies in 2012, animals can now cross borders

without having their antibody levels tested, and pets only need to be microchipped, vaccinated and de-wormed. This easing of importation requirements has inflated the population of rescue animals crossing into Norway—from 5000 in 2011 to over 7500 in 2012—increasing the number of dogs in the country that are potentially under-vaccinated for the rabies virus.

Results of the study indicate that only 45.5% of the rescue dogs had requisite rabies antibody titres of > 0.5 IU/mL compared to the 85.7% of conventionally-owned, domestic dogs used as a control population. While 41% of the imported dogs registered an antibody level below 0.5 IU/mL, a troubling number of dogs (19%) did not appear to have been vaccinated at all. The absence of antibody response in some rescued animals has raised skepticism from the study’s authors regarding the level of compliance with the current vaccination regimen required for transport. To provide protection from the disease, dogs must be immunized prior to exposure to the virus and generate a sufficient level of antibodies. Under-vaccinated rescue dogs and previously free-roaming dogs that are unknowingly exposed to the rabies virus prior to capture have little or no protection, and the effect of immunization on these dogs post-exposure is not well-established. There is no reliable way to establish the presence of the rabies virus in an exposed dog until symptoms appear. So to reveal an infection, dogs must undergo a lengthy observation for a period of time longer than the current 21-day quarantine requirement for transport into an EU country.

The statistics highlighted in this study raise understandable concern for EU countries importing dogs, particularly rescues from other rabies-endemic counties. Several European counties—including Britain, Ireland, Malta, Sweden and Norway—have been rabies-free for many years. However, ineffective animal transport regulations and poor compliance with immunizations could jeopardize their rabies-free status when dogs rescued from regions with active rabies infections are re-homed within their borders.

Contributed by Laura Baker, GARC newsletter assistant. The research study "[Cross-border transport of rescue dogs may spread rabies in Europe](#)" was published in the *Veterinary Record*.



Rabies cases in dogs in Romania (Red) and the Rest of Europe (yellow) in 2014. Source: Rabies Bulletin Europe

Rabies Control Situation in Bali Deteriorates

Recent news reports from Bali indicate that human deaths from the rabies virus are on the rise again. Bali, an island province in Indonesia of around 4.2 million people, and a very popular tourist destination, was historically rabies-free. Cases of rabies in humans and dogs were first reported in late 2008. The site of the original infections was a peninsula on the southern coast of the island, and good surveillance coupled with a timely, effective intervention around that location would likely have prevented the epidemic that ensued.



Mount Batur Volcano in Bali
Photo: William Cho, via Wikimedia Commons

Control efforts started in December 2008 and involved mass culling of dogs and emergency vaccination at fixed posts. Vaccination (with a local vaccine that required boosting after 3 months) was estimated to reach around 40% of the dogs, with only 25% receiving the required boosters. This was not sufficient to control the epidemic which spread across the whole island within 2 years. In 2010, 82 people died of rabies.

A rabies prevention bylaw enacted in 2009 stipulates that dog owners have to keep their pets at home and have them vaccinated regularly, but this is not proving practical in a culture where most owners cannot easily restrain their dogs and have always let them roam freely.

Island-wide concerted rabies control efforts focussed on mass dog vaccination reached more than 70% of dogs in 2010 and 2011. The high-quality vaccine used did not require boosting, and reduced the burden of human deaths dramatically, but did not fully eliminate the disease from the dog population. As a result of the programme, human rabies cases were reduced from eleven per month in 2010 to just one per month the following year. Following a mass vaccination of dogs, there was another major reduction in 2012 and 2013, bringing the number of reported cases down to only one human case in all of 2013.

However, recently the human death toll has been rising again. From just one human death reported in 2013, there were 3 deaths in 2014, and 7 deaths in the first six months of 2015, according to Head of the Bali Provincial Health Office, Dr. Ketut Suarjaya quoted in the Bali Times. An original target of a rabies-free Bali by 2015 is now impossible, and to make the revised target date of 2020 will require a 2-year period without human or dog cases of rabies.

Shortages of human rabies vaccines are being reported as the government has apparently run out of money to buy more. Last month it was reported that none of the major public and private hospitals had vaccine supplies, and a return to dog culling has occurred. Whilst owned and community dogs are allowed to roam free, there is the risk that vaccinated dogs are also being culled, and residents have been insisting that their vaccinated (and collared to demonstrate this) dogs have been rounded up and culled.

Clearly, rabies will exploit any breach in control measures. It is disheartening to see the immense progress in reducing both human and animal deaths start to slip away, and the resultant rise in deaths that could have been prevented. Culling of dogs is universally agreed to be an ineffective means to control rabies, can destroy vital community support for more effective control interventions and encourages dog population turnover. In the case of Bali, this situation is also potentially resulting in the removal of vaccinated dogs that would otherwise be protecting their communities. Free roaming dogs that are effectively vaccinated do not pose a rabies risk, and are in fact the most important dogs to vaccinate to stop the spread of the rabies virus.

Sustained, intensive dog vaccination campaigns with high quality vaccine that reach over 70% of the population are known to be highly effective, and have been shown to be so on Bali in recent years. If these are reinvigorated quickly, further human deaths can be prevented and could achieve rabies elimination remarkably quickly in an island situation where the importation of dogs is controlled. The goal of a rabies-free Bali by 2020 is still within reach.

Written by Louise Taylor, from the following sources. Putra et al (2013): [Response to a rabies epidemic, Bali, Indonesia, 2008-2011](#), FAO website: [Bali Serves as a Model for Control of Rabies](#), Jakarta Post: [June 27th 2014](#), New York Times: [March 24th, 2015](#), Bali Times: [June 15th 2015](#), Letter to Jakarta Post: [June 19th, 2015](#).

New WHO Report Stresses that the Tools to Control NZDs Already Exist

A newly published WHO report finds that most neglected zoonotic diseases can be controlled through the use of existing knowledge and tools. The report urges accelerated action by the global community in line with World Health Assembly resolutions that provide the policy framework to act collectively against these diseases.

“The international community must rise up and take responsibility in pushing ahead for the control and elimination of these neglected zoonotic diseases,” said Dr Bernadette Abela-Ridder, Team Leader, Neglected Zoonotic Diseases, WHO Department of Control of Neglected Tropical Diseases. *“These infections affect mainly poor segments of populations that interact closely with animals and our role should be to implement proven measures now that can contribute to the health and improved livelihood of affected families.”*

The report is based on the fourth international meeting on neglected zoonotic diseases *“From Advocacy to Action”* (held in Geneva, Switzerland, 19–20 November 2014) hosted by WHO, which was attended by more than 120 delegates and financially supported by the European Union seventh framework programme through the ADVANZ (Advocacy for neglected zoonotic diseases) programme. It highlights the need for and potential of intersectoral collaboration in adopting a global ‘one-health approach’, particularly at the subnational level. Scaling up of known effective methods requires a combination of leadership and community-level engagement for greater impact. The report also discusses opportunities for innovative funding mechanisms to support control outside traditional donor models. These include initiatives stemming from national bodies and the private sector.

“We have existing knowledge and evidence that can be transformed into strategies and applied on a large-scale,” said Dr Dirk Engels, Director, Department of Control of Neglected Tropical Diseases. *“We need to be able to capitalize on experience and the growing political commitment to involve other sectors, with community participation, to speed up the elimination agenda.”*

The report states that achieving a world free from dog-mediated human rabies by 2030 is feasible with current tools and increased investment, as demonstrated by recent rabies success stories. However, the report notes other endemic zoonoses such as *echinococcus* have a low political profile, attract scant investment and are unlikely to achieve their 2020 target.

Discussions focused on increased recognition of zoonotic diseases and initiatives by national governments to mitigate their impact on citizens by implementing control programmes. Many countries provided examples of programmes that are advancing control of some neglected zoonoses, both at national and local levels, from across three continents.

WHO’s 2012 Roadmap on accelerating work to overcome the global impact of neglected tropical diseases and Resolution WHA66.12 adopted by the World Health Assembly in May 2013 have enhanced the visibility of neglected diseases with zoonotic components – notably rabies, cysticercosis, echinococcosis, human African trypanosomiasis, foodborne trematodiasis and leishmaniasis. There is now an important opportunity to mobilize existing knowledge, experience and political will, and move from advocacy to action.

Summarized from the WHO article [here](#) from where you can also download the full report



Recent Research

Dog vaccination

[Control of Dog Mediated Human Rabies in Haiti: No Time to Spare](#). A desk and field mission review of Haiti’s rabies situation found that implementation of the national rabies plan, particularly dog vaccination, is hampered by limited funding. Official surveillance figures do not accurately reflect the findings of enhanced surveillance, and although international support is common, it is not comprehensive.

[On dogs, people, and a rabies epidemic: results from a sociocultural study in Bali, Indonesia](#). Dogs are kept mainly as guards and companion animals and 79% of respondents kept free-roaming dogs. The rabies outbreak in Bali and Western dog breeds becoming more popular mean that responsible dog ownership is increasing, but there is room for improvement. Sociocultural aspects with potential for community-driven interventions to optimize current rabies elimination efforts were identified.

[Evaluation of methods for short-term marking of domestic dogs for rabies control](#). Spray and crayon livestock marking methods were evaluated for longevity and visibility. After 10 days, 90% of spray marks were still visible, compared with only 46% of crayon marks. Visibility of marks was reduced in darker-coloured dogs, and colors of marks were frequently misclassified. Marks were considered good enough to evaluate vaccination campaigns within 5-7 days after marking.

[Effective vaccination against rabies in puppies in rabies endemic regions](#). Virus neutralising antibody titres were measured in 27 dogs less than 3 months old that were vaccinated with high quality, inactivated rabies vaccine in Tanzania and South Africa. All puppies seroconverted to a single dose of vaccine with no adverse reactions reported and with peak titres from

Continued on page 14...

...Recent Research continued from page 13.

2.0 to 90.5 IU/ml. The authors recommend that all dogs in rabies endemic regions, including those less than three months of age, are vaccinated to reduce the public health threat from rabies.

[Genetically modified rabies virus ERA strain is safe and induces long-lasting protective immune response in dogs after oral vaccination](#) A genetically modified ERA vaccine strain (rERAG333E) induced strong virus neutralizing antibodies responses in dogs which lasted for over 3 years. Sizeable booster responses to RABV VNA were induced by a second oral dose 1 year after the first dose, suggesting that the strain has potential as a safe and efficient oral live vaccine against rabies in dogs.

[Low coverage of central point vaccination against dog rabies in Bamako, Mali](#). An estimate of the coverage of a central point vaccination campaign (free to dog owners), showed a vaccination coverage of only 17.6%. As only around 8% of dogs were estimated to be ownerless, this points to low participation by dog owners. Reasons given including a lack of information and the inability to handle dogs, and provide information useful to improving future campaigns.

Epidemiological Modelling

[Development of a Novel Rabies Simulation Model for Application in a Non-endemic Environment](#). A stochastic, spatially explicit rabies simulation model based on individual dog information collected in two remote regions in northern Australia was developed to describe dog rabies outbreaks in disease free regions. Plausible results suggested that R_0 was 1.7, the epidemic would peak 97 days post-incursion, and vaccination was the most effective response strategy.

[Owned and unowned dog population estimation, dog management and dog bites to inform rabies prevention and response on Lombok island, Indonesia](#). The island of Lombok is rabies-free, but at considerable risk of a rabies incursion from nearby islands such as Bali and Flores. As part of a rabies risk assessment project, surveys were conducted to estimate the size of the dog population and to describe dog management practices of households belonging to different ethnic groups.

Human Vaccination and monitoring

[Comparison of safety and immunogenicity of two WHO prequalified rabies vaccines administered by one week, 4 site intra dermal regimen \(4-4-4-0-0\) in animal bite cases](#). 0.1mL of either Rabipur or Verorab vaccine was administered intradermally into 4 sites on days 0, 3 and 7 to 90 bite victims with Cat II or III wounds. Both vaccines were found to be safe, immunogenic and comparable with each other.

[Evaluation of Rapid Neutralizing Antibody Detection Test against Rabies Virus in Human Sera](#). The rapid neutralizing antibody detection test (RAPINA) a quick test to detect 0.5 IU/ml antibodies in human and animal sera or plasma was compared the rapid focus fluorescence inhibition test, using 214 sera of vaccinated and unvaccinated people in Vietnam. The sensitivity and specificity of the RAPINA test were 100% and 98.34% with concordance of 98.6%, suggesting that the test can be used for rapid determination of NAb in the field.

Pathology

[Diabolical effects of rabies encephalitis](#). Recent research is reviewed to provide an improved understanding of how Rabies virus causes neuronal injury and how the infection results in behavioral changes that promote viral transmission to new hosts.

Advocacy

[The Neglected Zoonoses - The Case for Integrated Control and Advocacy](#). Addressing NZDs by targeting the animal reservoir can deliver a double benefit, through a reduced risk of infection for humans, as well as improved livelihoods through increased animal productivity. Advocacy for NZD control is increasing, but with it comes a growing awareness that NZD control demands activities both at scale and over a long period of time, requiring long term financial commitment, particularly as disease incidence decreases and other health priorities take hold.

Upcoming Conferences



Rabies in the Americas
Fort Collins, Colorado

26th International Conference on Rabies in the Americas (RITA) will be held from October 4th - 8th, 2015 at Fort Collins, Colorado in the USA. For more details and to register go to www.RITAconference.org. Abstracts are due July 31st, 2015.

The 14th International Symposium of Veterinary Epidemiology and Economics, entitled "Veterinary Epidemiology and Economics: Planning Our Future" will be held 3-7th November 2015, in Merida, MEXICO. Abstracts are now being accepted. Further details at: <http://isvee2015.org>

The 6th Northern European Conference on Travel Medicine (NECTM6) will be held in London, 1-4 June 2016. For more details go to [their website](#).

The editor of the GARC newsletter is Louise Taylor, typesetting is by Peter Else. If you have news items or information of interest to those working to defeat rabies, please contact Louise at louise.taylor@rabiesalliance.org. For more details see www.rabiesalliance.org.