



Global Alliance for Rabies Control

MERACON

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

MEEREB Network: what was achieved & the
integration to MERACON
2021

Dr. Valentina Picot, DVM
Fondation Mérieux

des racines pour la vie



roots for life



FONDATION MÉRIEUX

- Created in 2010, the MEEREB - **an informal network of national stakeholders involved in rabies disease management** committed to support and implement effective measures for the prevention and control of rabies in their countries / regions.
- The mission - **to foster rabies prevention and control in country through the support of complementary, synergistic & multisectoral collaborations and interventions.**



Diverse geographical spread

(image sourced from former Meereb website)



MEEREB includes members of the following countries:

**ALGERIA
CROATIA
GEORGIA
IRAN
IRAQ**

**KAZAKHSTAN
LIBYA
MOROCCO
POLAND
ROMANIA**

**SERBIA
TAJIKISTAN
TUNISIA
UKRAINE
UZBEKISTAN**



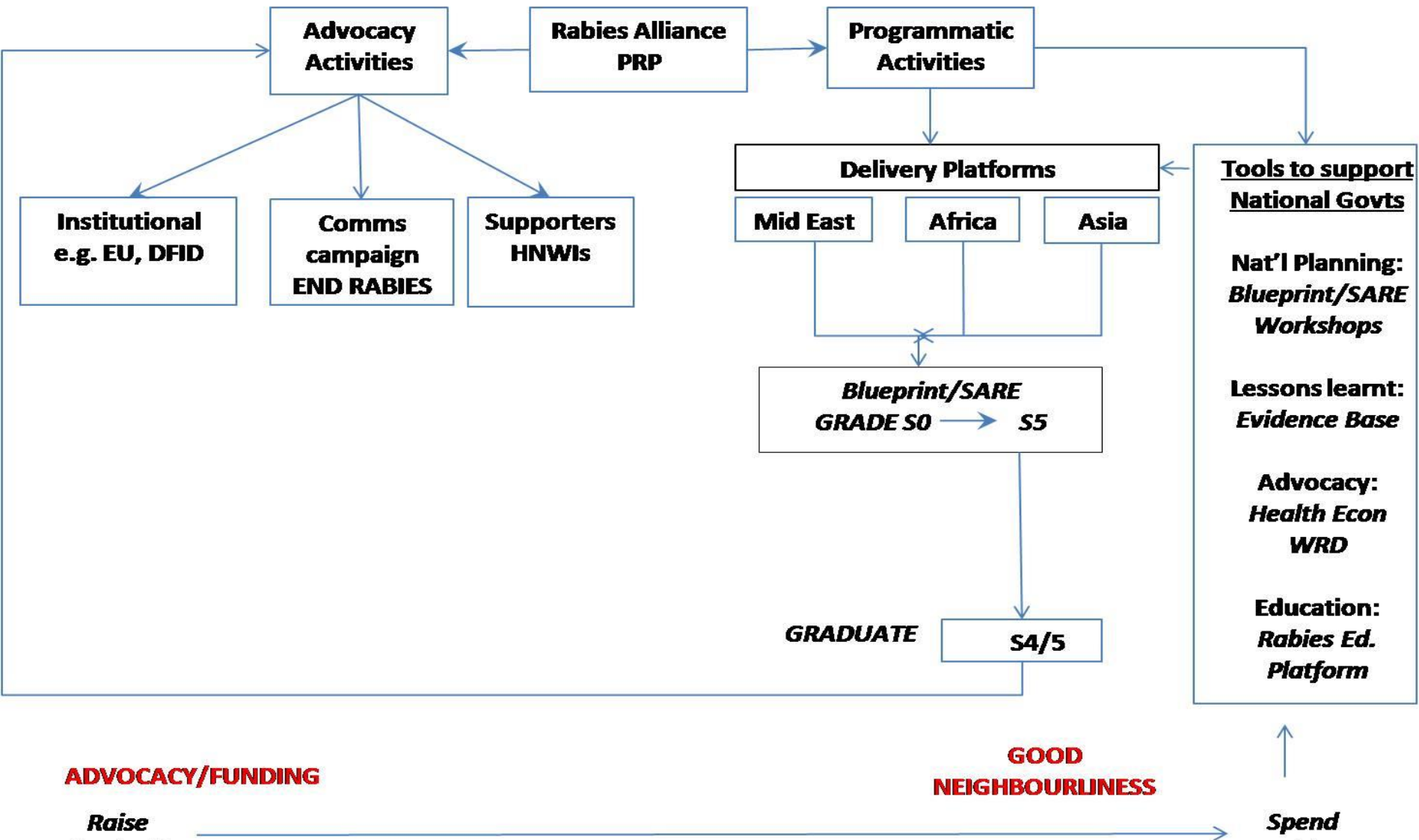
MEEREB

- Enhancing and facilitating access and delivery of information across countries and platforms;
 - <http://meereb2016.application-interactive.com/>
- Identifying opportunities where members can participate and provide expertise
- Support to local activities (WRD);
- Support complementary and synergistic actions with key stakeholders.

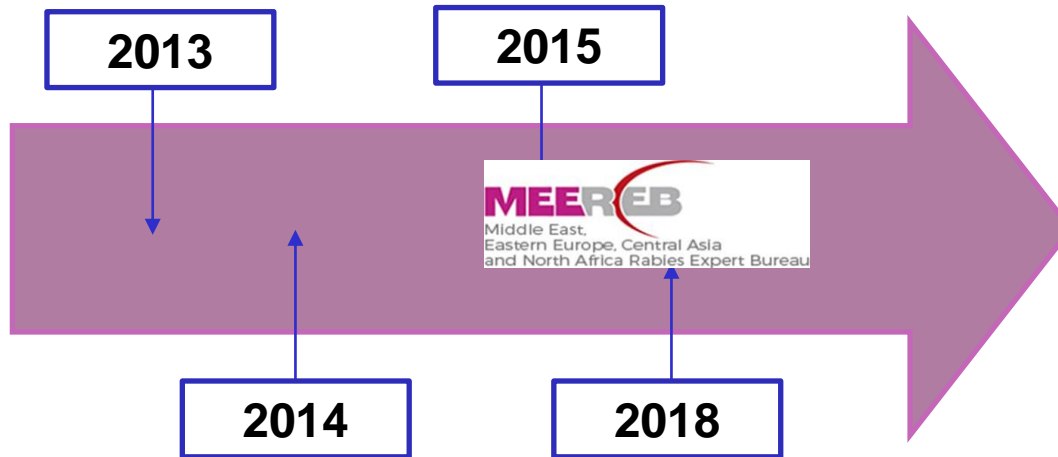


MEEREB a Delivery Platform within GARC

RABIES ELIMINATED BY 2030



Activity Timeline





WORLD RABIES DAY

**New Concept in Preventive and Curative
Rabies Vaccines & Vaccinology Approaches**

29 & 30 September 2013





ປະຊາຊົນລາວ ຕ້ອງໄດ້ຮັບການສັກຢາວັກແຊັງ ກັນພະຍາດວໍປະມານ 9.000 ຄົນຕໍ່ປີ

ຂປລ.ກະຊວງສາທາລະນະສກ
ຊື້ໃຫ້ເຫັນວ່າ: ເນື່ອງຈາກວ່າໃນ
ທົ່ວໂລກ ມີຜູ້ເສຍຊີວິດຈາກພະຍາດ
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ແລະ ຕ້ອງໄດ້ຮັບການສັກຢາວັກ
ແຊັງສະເລ່ຍປະມານ 9.000 ຄົນ/
ປີ; ຢ່າງໃດກໍຕາມພະຍາດດັ່ງກ່າວນີ້
ສາມາດປ້ອງກັນໄດ້ 100% ດ້ວຍ
ວັກແຊັງທີ່ມີປະສິດທິພາບ, ເຊິ່ງ



ອ່ານຕໍ່ໜ້າ 2



FONDATION MÉRIEUX



4th MEEREB Meeting

23-25 April 2018 – Les Pensières Center For Global Health



Les Pensières
— CENTER FOR GLOBAL HEALTH —

Data Sourcing



Rabies in Ukraine

4th MEEREB Meeting, 2018
April 23-25, 2018 * Anancy, France

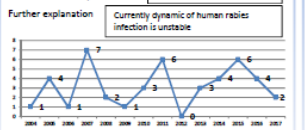
INTRODUCTION

Rabies at the early twenty-first century is a significant veterinary disease, which is one of the biggest rabies-infected countries in the world. Mandatory and vaccination of cats and dogs is carried out. Immunization of Wild Carnivores (ORV) has started economic and military-political reasons, since 2014 the western regions on the border with Poland and

HUMAN RABIES IN 2017

N° of animal bites: 66350 of animal bites
N° of rabies deaths: 2 cases of human rabies in 2017

2-Clinically diagnosed
2-Laboratory confirmed
Further explanation: Currently dynamic of human rabies infection is unstable



PRE-EXPOSURE PROPHYLAXIS (PrEP)

Vaccination schedule (route/n° doses): 3-0-2 (IM regimen used)
Vaccine used: Verorab, Rabipur, Indurab
N° of persons who received PrEP: 174
Who pays for PrEP? Profile organizations and laboratories in which people at risk are employed

Description of the inter-ministerial zoonosis unit or national rabies

KEY ACTION POINTS

What actions supporting rabies control (at animal and human level) have been

Actions	Achieved or Progress so far?
1) Vaccination of stray dogs with oral vaccine	Awareness on the level of State Veterinary Agency about efficacy of oral vaccination of stray dogs
2) Development of National programme of rabies control	Documentation and Action Plan 2023 has been developed
3) World Rabies Day 2018 and public awareness	A cycle of lectures has been done for vet doctors at students
4) Organization of a Forum on rabies laboratory diagnostics	A network of veterinary laboratories has been established

Rabies in LEBANON

4th MEEREB Meeting, 2018
April 23-25, 2018 * Anancy, France

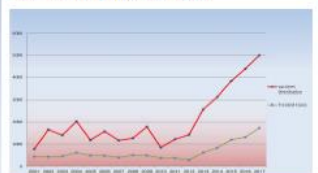


INTRODUCTION

Rabies continues to be a problem in Lebanon, specially with the inability of the country to produce the vaccines. Since 2013, significant increase of the number of exposed cases was notified with the massive influx of refugees. Although a national multidisciplinary committee was developed few years ago, close coordination between all involved stakeholders and municipalities is crucial. Awareness and prevention of exposure remain the 2 main keys to avoid human rabies cases in the country.

HUMAN RABIES IN 2017

- 3000 animal bites cases
- 1 rabies death (clinically diagnosed)
Based on the data from 2001-2018, there is an increase in the number of human exposure (dog bite cases) starting 2013.



ANIMAL RABIES IN 2017

N° of animal / dog rabies cases: unknown
- Laboratory confirmed: unknown
N° of dogs vaccinated: 120,000
% dogs vaccinated: 90% including both private & public sectors



PRE-EXPOSURE PROPHYLAXIS (PrEP)

Vaccination schedule (route/n° doses) IM/0, 7, 21, 1 yr., every 2 yrs
Vaccine used: Rabipur
N° of persons who received PrEP: unknown
The person him/her self pays for the PrEP

POST-EXPOSURE PROPHYLAXIS (PEP)

Vaccination schedule (route/n° doses) IM/0, 7, 21 days
Vaccine used: Rabipur
N° of persons who received PEP: 1700 in 2017
N° of persons who received RIG: 160
The Ministry of Public Health pays for the vaccines and immunoglobulins

Description of the inter-ministerial zoonosis unit:

A National Zoonotic Committee is developed at the MOA and regrouping both MOH and MOA. Also, a National rabies committee was developed by ministerial decision (Ministry of Agriculture) headed by the DG of the MOA and regrouping different ministries and stakeholders.

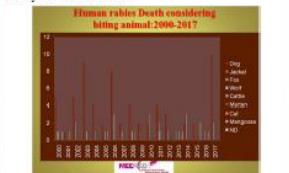
KEY ACTION POINTS

Actions	Achieved or Progress so far?	Challenges	Future actions
1) Post-exposure treatments in humans	- Increase post-exposure treatments in humans through increase in public awareness	- Reach rural areas and displaced populations (Syrian refugees)	- Spread awareness specially among displaced populations
2) Information, Education and Communication (IEC)	- Rabies trainings launched in all public and private hospitals - Rabies public awareness brochures distributed to all PHCs, public & private clinics - Media campaigns in TV: Talk shows, press release, press conferences... in both animal and human sectors	- Increase public awareness among animal owners about vaccinations - Increase public awareness about animal exposures in rural areas especially among displaced populations - Presence of rabies in neighbouring countries with no coordination	- Seek government commitment to allocate budget for veterinary services to better control rabies - Make sure local actions are in line with current epidemiological recommendations
3) Rapid response and observation of rabies-susceptible animals	Systematic documentation in place of all animals suspected of rabies	- Limited budget for veterinary services for rabies control activities - Difficulty monitoring animal movement (in both wild and stray animals)	Update and implement strategy for rabies control and eradication
4) Integrated (human-animal) bite cases management	- Human medical and animal specialists both notified of new rabies cases - All information documented	- Not always able to locate the animal responsible for bite - More control in rabies exposure for animals via domestic animal vaccinations - Vaccinate wild animals - Seek the help of armed forces to vaccinate wild animals - Get the municipalities involved in these activities	- Always have enough national site vaccines and immunoglobulins for humans and animals - Allocate resources to have enough vets in all regions specially rural area - Allocate more resources to invest lab capacities

PEP treatments, resulting in considerably low death incidences from

HUMAN RABIES IN 2017

N° of animal bites: 170000
N° of rabies deaths: 12
- Clinically diagnosed: 7
- Laboratory confirmed: 5 (4 by FAT, 1 by PCR)
80.5% of animal bites are due to dogs, 14.8% by cats and the rest by the other animals.



PRE-EXPOSURE PROPHYLAXIS (PrEP)

Vaccination schedule (route/n° doses): IM / 5 doses (ESSEN)
Vaccine used: Rabipur, Verorab
N° of persons who received PrEP: 3000
Who pays for PrEP? Paid by government

Description of the inter-ministerial zoonosis unit or national rabies coordination unit if any: There is a National Rabies Committee including representatives from MOH, IVO, DOE, Municipalities and IPI. Since 2015, A Rabies Elimination Committee has also been established based on National Rabies Committee that also includes representatives from MOH and Police



Rabies in Serbia

4th MEEREB Meeting, 2018
April 23-25, 2018 * Anancy, France



INTRODUCTION Rabies is still present in Serbia. But only sporadic cases of fox rabies cases are registered in last couple of years. Namely the epidemiological situation of rabies in Serbia has been drastically changed since 2010, when Veterinary Directorate, Ministry of agriculture, forestry and water management, project of oral vaccination of wildlife against rabies, co-funded by EU. Mass vaccination campaigns of dogs have been started in 1960s, which enabled eradication of dog rabies in 1980s, when the last human rabies case was registered. From that period on sylvatic rabies with fox as the main reservoir of rabies prevailed in Serbia with occasional spillovers on domestic animals. Round 200 animal rabies cases were diagnosed on average annually till 2010, when the oral vaccination campaigns have started with huge success. In 2017 only one fox rabies case was registered.

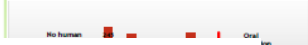
HUMAN RABIES IN 2017

1 rabid fox (laboratory confirmed)
0 Rabies deaths, 0 Clinically diagnosed, 0 Laboratory confirmed
SINCE 1980 THERE IS NO HUMAN RABIES CASES

ANIMAL RABIES IN 2017

1 rabid fox (laboratory confirmed)
* 95,536 microchipped dogs 281,010 vaccinated dogs
Ca. 80-90% vaccinated

Animal rabies cases in Serbia and Montenegro 1984 – 2005 and in Republic of Serbia 2006 – 2017



PRE-EXPOSURE PROPHYLAXIS (PrEP)

Vaccination schedule: 3-Dose IM regimen 0, 7, 21
Is the most commonly used schedule
Vaccine used: Verorab®, Sanofi Pasteur



Rabies in Morocco

4th MEEREB Meeting, 2018
April 23-25, 2018 * Anancy, France

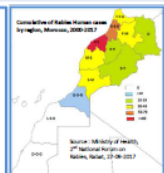


INTRODUCTION

Rabies continues to be endemic in Morocco, with all provinces being affected except the Saharan provinces, and to date control efforts deployed by the sectors involved have failed to achieve the goal of eliminating the disease.

The epidemiological situation of human rabies in Morocco remains critical in 2017:

- 45 rabies deaths among which 8 confirmed in the laboratory
- Based on the data from 2000 to 2017, an average of 21 rabies deaths are recorded continuously each year. The majority of regions are affected (map opposite):
- The dog is involved in 94% of reported cases.



Dogs: 94% in cause



POST-EXPOSURE PROPHYLAXIS (PEP)

- Vaccination schedule: 4-dose IM Zagreb Regimen (2-1-1: D0 - 2 injections and 1 injection at 17 and 121).
- Vaccine used: Verorab
- 65 000 people received PEP.
- The vaccination is given free of charge in 265 rabies centers in the country. The acquisition of the vaccine is provided by the municipalities.

ANIMAL RABIES IN 2017

- 234 animal rabies cases in 2017 (Average of 300 cases between 2004 and 2017)
- About 15% of dogs vaccinated
- An average of 150,325 dogs vaccinated / year during the period 2004-2016
- Increasing the vaccination coverage rate remains one of the major challenges of the national rabies control program.

Annual evolution of dogs vaccination against rabies, Morocco 2004-2016



National rabies coordination is carried out in the framework of the National program implemented since 1986. Ministry of Health, Ministry of Agriculture and Ministry of Interior are the main actors. In recent years, some ONGs, such as National Association of Fight Against Rabies (ANLAR) have begun to play an important role in the prevention and control of the disease.

KEY ACTION POINTS

Actions	Achieved or Progress so far?	Challenges	Future actions
1. Revision of the strategy of the program and re-evaluation of all control activities.	• National Program since 1986, revised in 2003 (multisectoral aspect). • Strengths and weaknesses of the program analyzed and highlighted.	• Real political commitment and better involvement of actors. • Improved accessibility to human vaccination centers.	• Development of a national plan for the elimination of the disease covering the period 2019-2030
2. Increase in the vaccination coverage rate of dogs.	• Local manufacture of the vaccine. • Availability of the vaccine in all provinces and prefectures.	• Better knowledge of the socio-economy of dogs • shy adhesion of dog owners to vaccination (to improve)	• Conduct socio-ecological surveys on canine populations. • Implement oral vaccination for inaccessible dogs (complement to parenteral vaccination) and carry out awareness campaigns.
3. Skills enhancement of professionals through new training/learning methods.	• Celebration of World Rabies Day since 2007: a training and awareness opportunity. • Developing and Uploading a Rabies Training Tutorial: Let's Learn Together to Fight Rabies.	• Training approach based on the pedagogy of reality.	• Development and implementation of a training plan in support of the national plan to eliminate rabies

N° of persons who received RIG: 435000

Who pays for PEP? Paid by government

Publications

G Model

JIPH-726; No. of Pages 7

ARTICLE IN PRESS

Journal of Infection and Public Health xxx (2017) xxx–xxx

Title

Rabies in the Middle East, Eastern Europe, Central Asia and North Africa: Building evidence and delivering a regional approach to rabies elimination

Authors

Emma Taylor¹, Victor Del Rio Vilas¹, Terence Scott², Andre Coetzer^{2,3}, Joaquin M. Prada¹, Gholami Alireza⁴, Nasr A. Alqadi⁵, Atika Berry⁶, Bassel Bazzal⁷, Abdelaziz Barkia⁸, Firuzion Davlyatov⁹, Firoozeh Farahtaj⁴, Khaouther Harabech¹⁰, Paata Imnadze¹¹, Fazia Mahiout¹², Mohammed Ismael Majeed¹³, Vitalii Nedosekov¹⁴, Louis Nel^{2,15}, Hassan Rich⁸, Abderazak Soufi¹³, Radovan Vodopija¹⁶, Nenad Vranjes¹⁷, Valentina Sanchez Picot¹⁸, Daniel Horton¹.

¹ Sanofi Pasteur, France

² World Health Organization, Switzerland



FONDATION MÉRIEUX

A decision support model for the prioritization of dog-mediated rabies prevention and control capabilities

Collaboration amongst University of Surrey, Guildford, UK and Fondation Mérieux, France



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Knowledge Sharing Activity Timeline

The diagram illustrates the timeline of knowledge sharing activities. It begins with a purple arrow pointing right, representing the **MEEREB** (Middle East, Eastern Europe, Central Asia and North Africa Rabies Expert Bureau) period from 2013 to 2018. The years 2013, 2014, 2015, and 2018 are marked with boxes and arrows pointing to the purple arrow. This transitions into a larger orange arrow pointing right, representing the **MERACON** (Global Alliance for Rabies Control Middle East, Eastern Europe, Central Asia and North Africa Rabies Control Network) period from 2019 to 2021. The years 2019 and 2021 are marked with boxes and arrows pointing to the orange arrow. The MERACON logo, featuring a globe and the text "Global Alliance for Rabies Control" and "MERACON Middle East, Eastern Europe, Central Asia and North Africa Rabies Control Network", is displayed within the orange arrow.

2013

2014

2015

2018

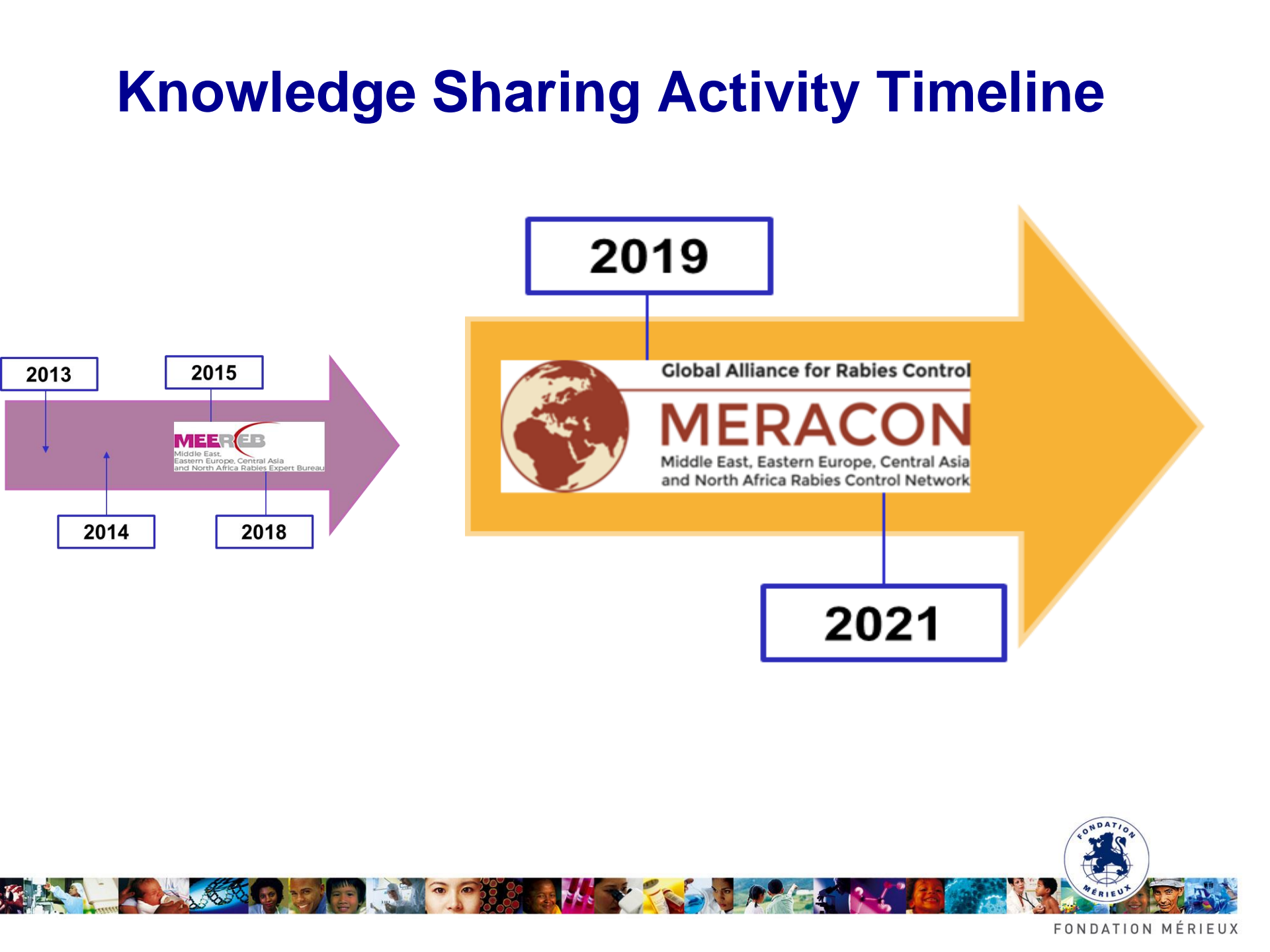
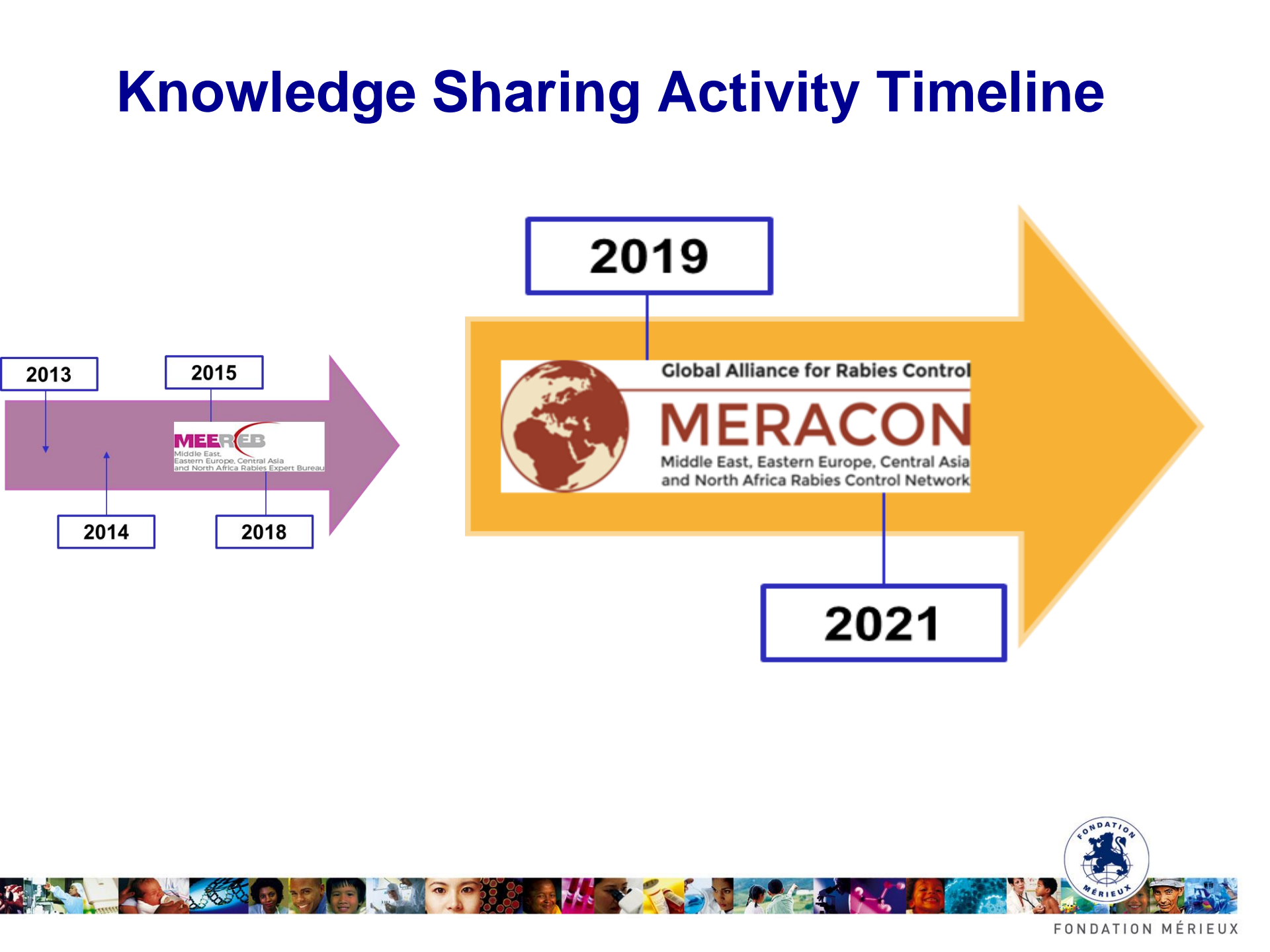
2019

2021

MEEREB
Middle East,
Eastern Europe, Central Asia
and North Africa Rabies Expert Bureau

MERACON
Global Alliance for Rabies Control
Middle East, Eastern Europe, Central Asia
and North Africa Rabies Control Network

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2019 support to SARE
workshops:
SriLanka, Algeria



MERACON: Returning to rabies elimination in 2021 webinar

26 February 2021, 09:00 am – 12:00 pm (CET Time)



Other 2021 meetings:

- PRP
- MERACON 2021- F2F Meeting



Approach to close collaboration

- Foster cooperation and mutual teams efforts in well defined partners roles
- Build commonly on knowledge dissemination, advocacy and interventional strategies
- Call together for application of funding opportunities
- Cultivate public-private partnerships



THANK YOU!



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4. Action Plans

3. Identify Gaps

2. Mapping Interventions

1. Baseline Assessment

