Rabies Elimination: The Bangladesh Experience

World Rabies Day
Session 1: Global Progress and Risk Communication
28 September, 2020

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DPM, Zoonotic Disease Control, CDC, DGHS

- Introduction
- Importance of Risk Communication to move towards Rabies Elimination
- Risk Communication: Bangladesh experiences
  - National approach through National Strategy
  - Strong Inter-sectoral collaboration, coordination and partnership for risk communication
  - Good planning, Capacity building
  - Little Doctor Program
  - Establishing sustainable system
  - Involving local administrations and engaging local people
  - Issues and challenges ahead

RABIES

Zero deaths by 2030

99% human cases result from **dog bites**



One death every **15 minutes** worldwide

4 out of 10 deaths are in **children**







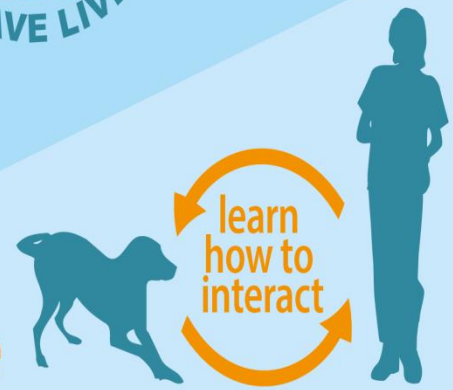






100% vaccine preventable



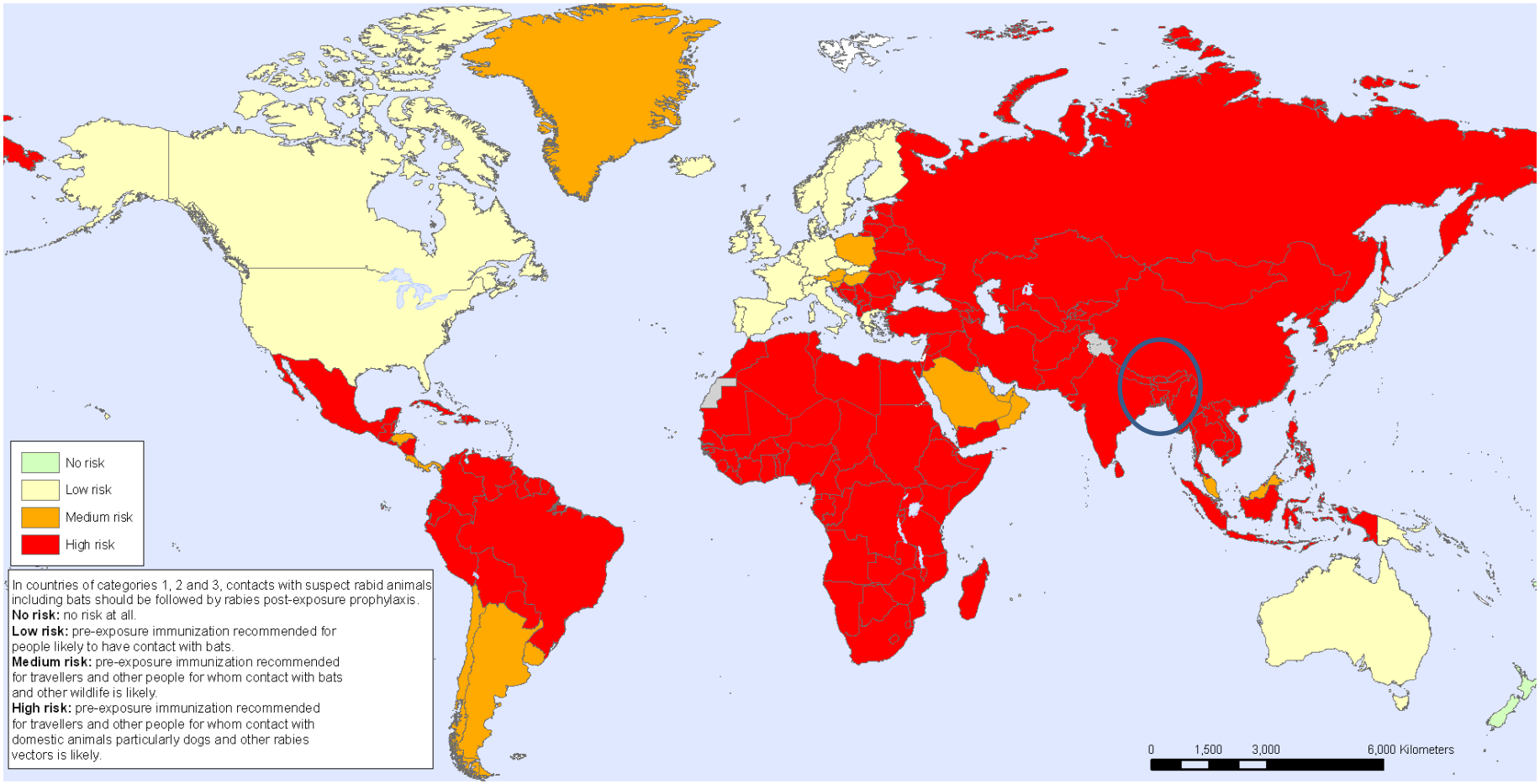


no bite
no rabies

World Health Organization

#rabies
28 September
World Rabies Day
www.who.int/rabies/en

Rabies: Global Burden in 2011



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: WHO Rabnet/CDC
Map Production: Public Health Information and Geographic Information Systems (GIS)
World Health Organization

World Health Organization

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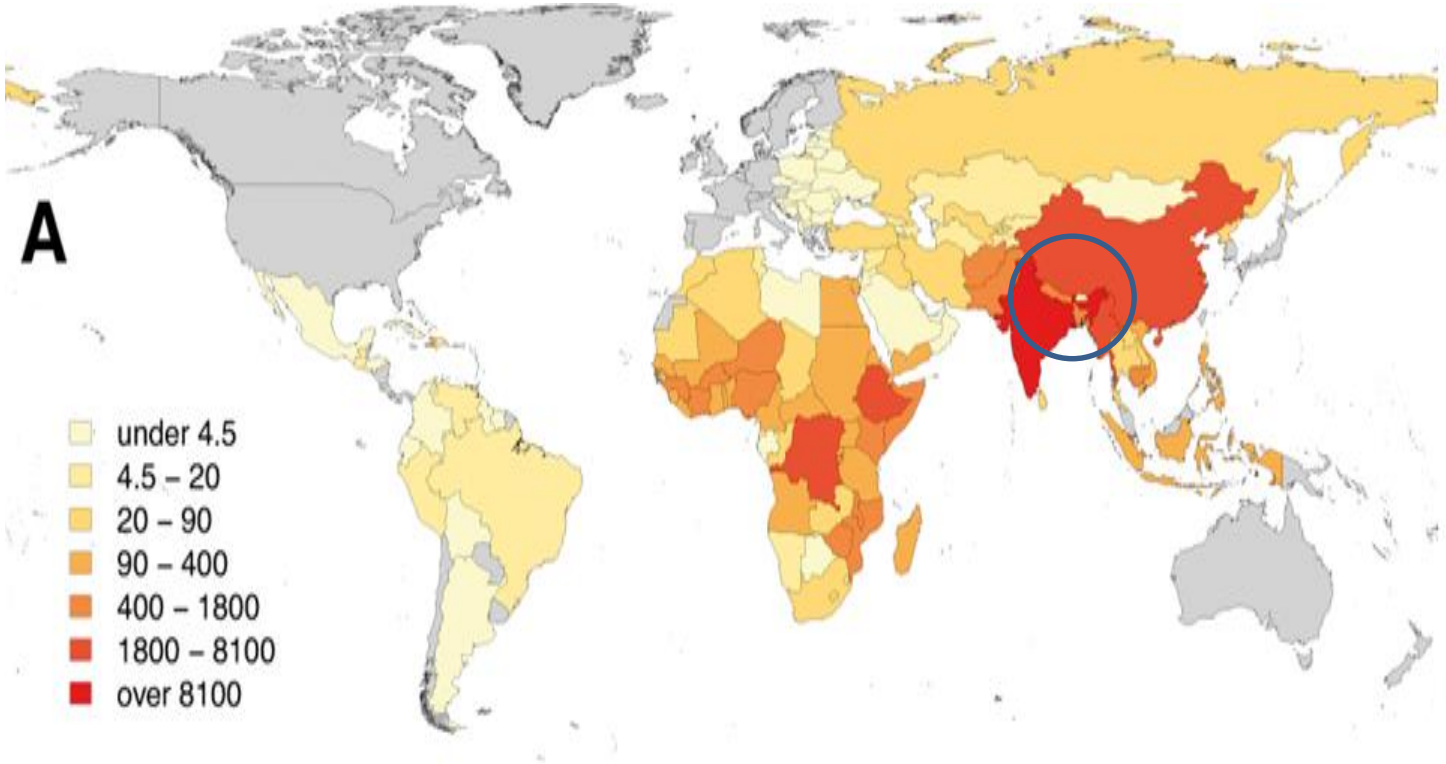
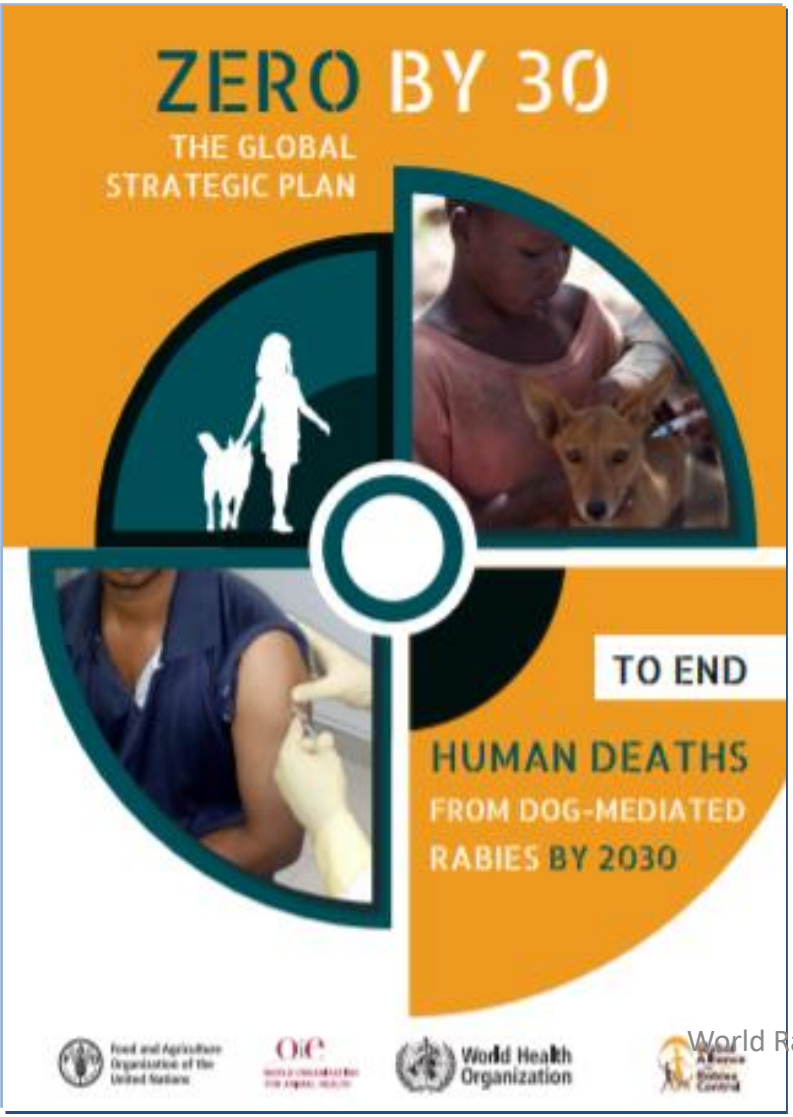
Ref: Global Alliance for Rabies Control, September 2011 (World Rabies Day)
WHO. Weekly epidemiol Record 2010;85:309-20.
WHO. International Travel and Health 2011: http://gamapserver.who.int/mapLibrary/Files/Maps/Global_Rabies_ITHRiskMap.png

Rabies: Global Burden in 2018



- Annually 59,000 rabies death
- Endemic mostly in Asia (59.4%) and Africa (36.4%)
- Bangladesh
  - Number of cases has been reduced than that of 2011

SDG Goal 3 Target 3.3



By 2030, end the epidemics of AIDS, tuberculosis, malaria and **neglected tropical diseases** and combat hepatitis, water-borne diseases and other communicable diseases

ZERO BY 30

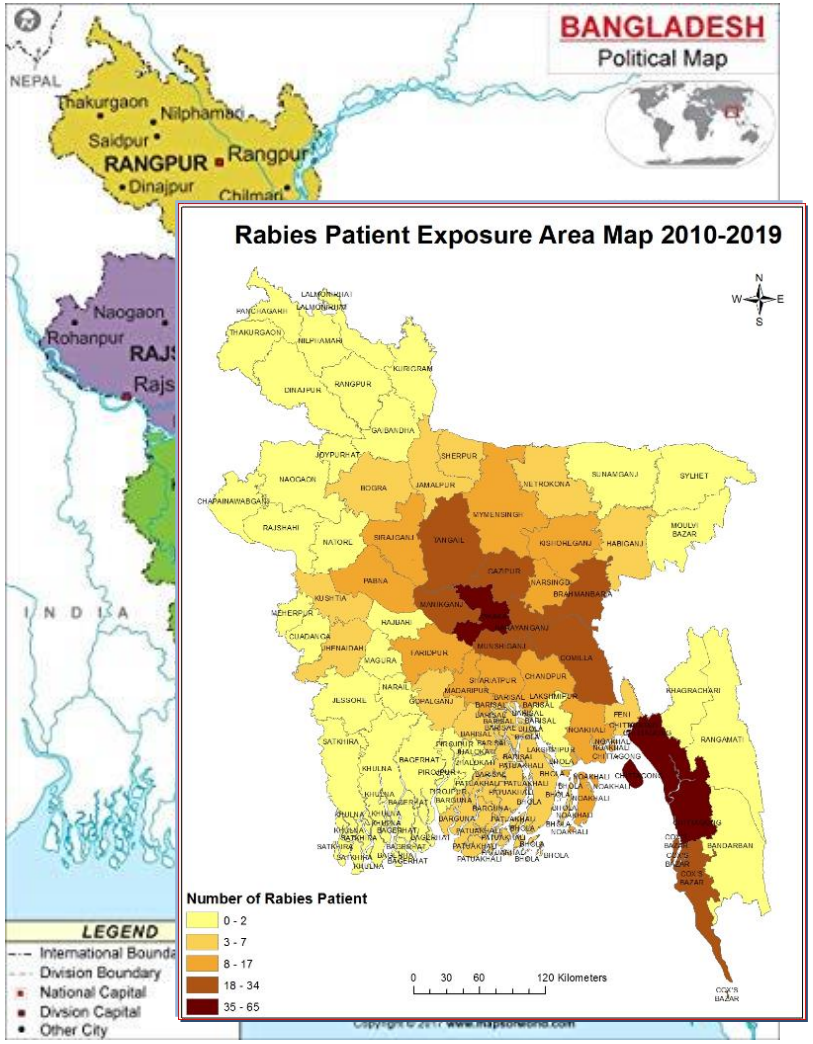
The Global Strategic Plan to end human deaths from dog-mediated rabies by 2030

Rabies in Bangladesh: A Journey from 2011 to 2020

Area: 147,570 sq.km.
Divisions:8
Districts:64

Population:>170million
Dog population: 1.7 million (estmd.)
Stray Dogs: > 83%

Human dog/animal bite: .3-.4 mill/yr
Annual Human rabies (Estm):
>2000 (in 2010) to <200 in 2019
Rural burden: > 85%
Children <15years: >45%
Annual Animal rabies: 25,000 approx.





জাতীয় জলাতঙ্ক নির্মুল কর্মসূচী, বাংলাদেশ

Goal

Reduction of rabies by 90% within 2015

Elimination of rabies by 2022

Strategy

-Advocacy, Communication and Social Mobilization (ACSM)

-Dog Bite Management (DBM)

-Mass Dog Vaccination (MDV)

-Rabies Surveillance and Research

-Dog Population Management (DPM)

Rabies Elimination Strategy 2010

World Rabies Day Webinar, 28 September, 2020

Guiding Principle

Prevention

- Human rabies by PEP
- Dog rabies and break transmission cycle by MDV
- Dog bite by

Promotion

- Community Awareness
- Social mobilization
- Responsible Dog Ownership Promotion

Partnership

- Human health
- Animal health
- Professionals
- NGO
- Development Partners

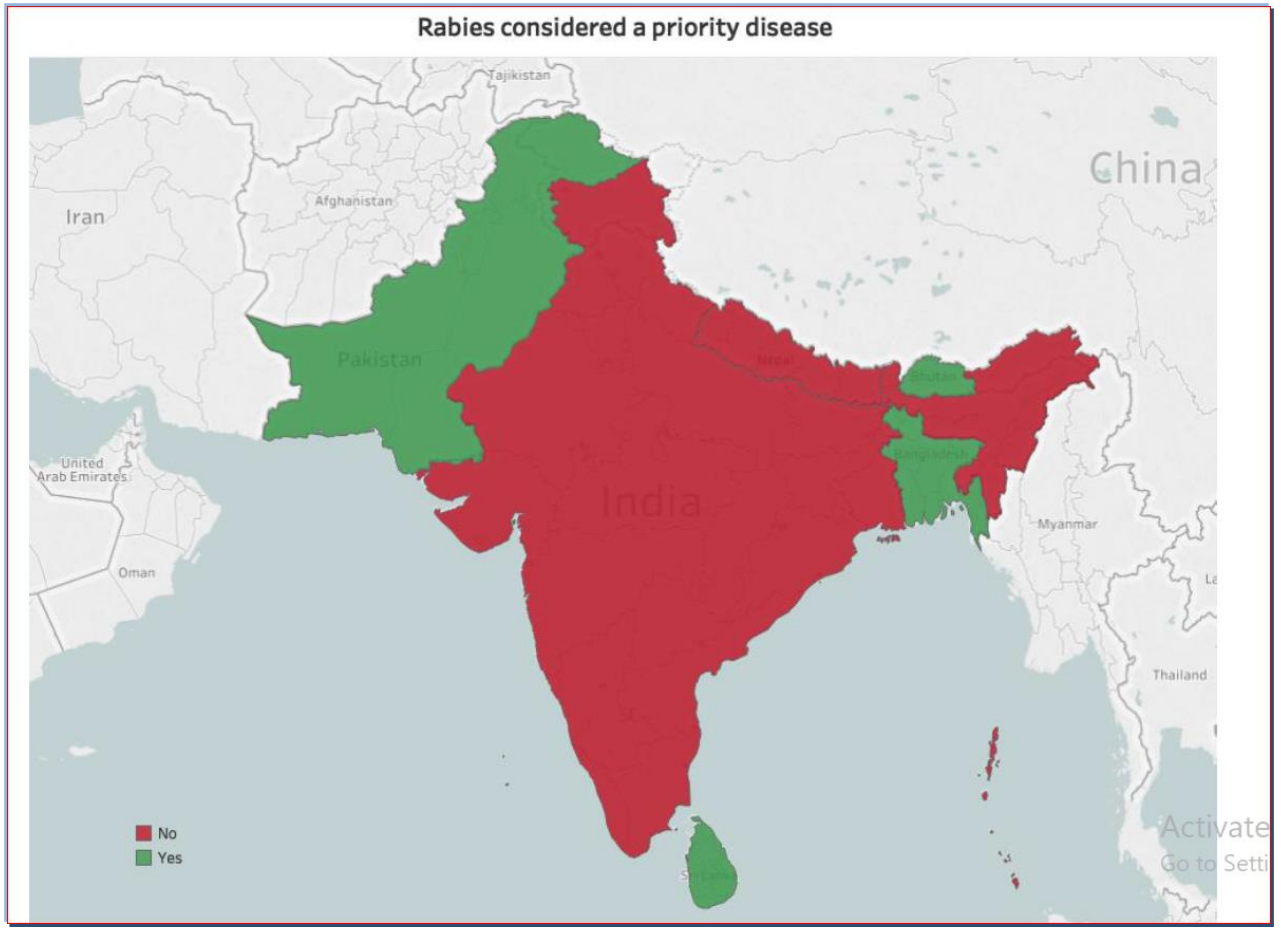
Political Commitment

- Sustainable program
- Effective policies
- Good governance
- Guidance

Provision of Resources

- Fund allocation
- Man power
- Quality vaccine

Rabies: A priority Zoonotic Disease

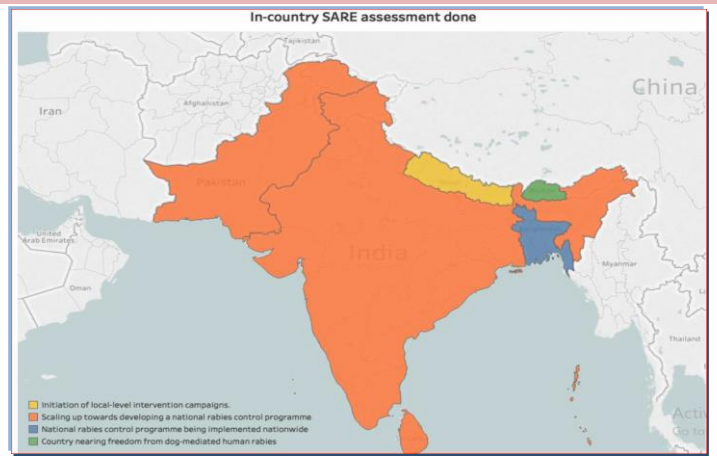


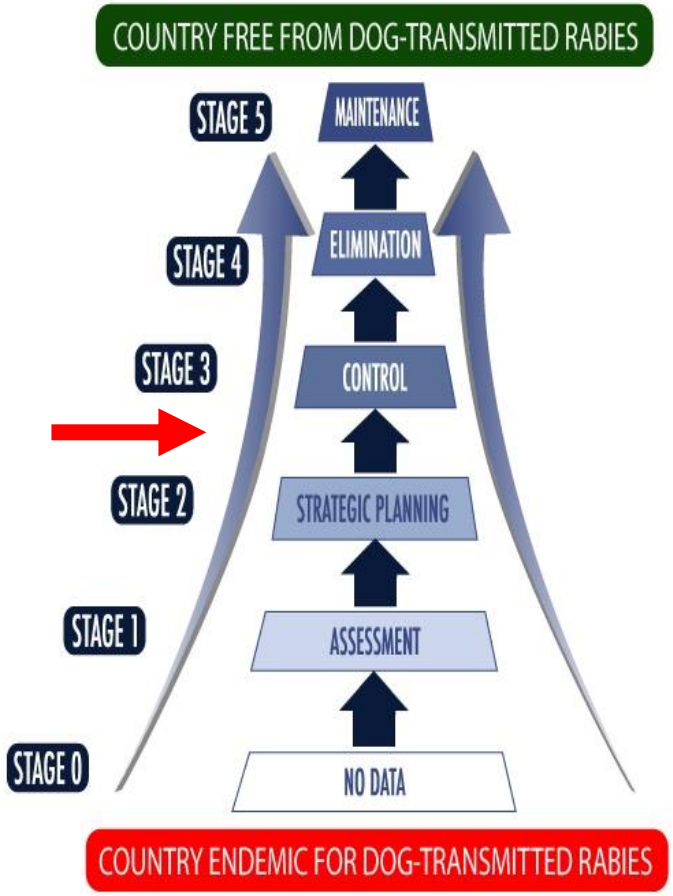
SARE Assessment: Bangladesh

SARE Score: 2.5

Current SARE milestone: 2.5

National rabies control programme being implemented nationwide, with clear inter-sectoral collaboration





Bangladesh is Ahead of other SAARC countries except Bhutan

Multi-sectoral Collaboration/Partnership

Partnership

Governments
- CDC, DGHS, MoH
- DLS
- Local Gov.

Development partners
- WHO, FAO, OIE, US-CDC

Civil society
- Local leader, School teachers

NGOs/Private sector
- Avoyaronno, Platform

One Health



ACSM

Advocacy
Communication
Social Mobilization





Understanding

The science

Public Health Importance

Technical Feasibility

Seminar-Conference









Advocacy, Communication and Social Mobilization (ACSM)









Advocacy, Communication and Social Mobilization (ACSM)





Rabies Day

Little Docto r

Folk Song

Overcom e Stigma





Folk Song for Community Awareness



DGHS.MOH&FW
BANGLADESH





















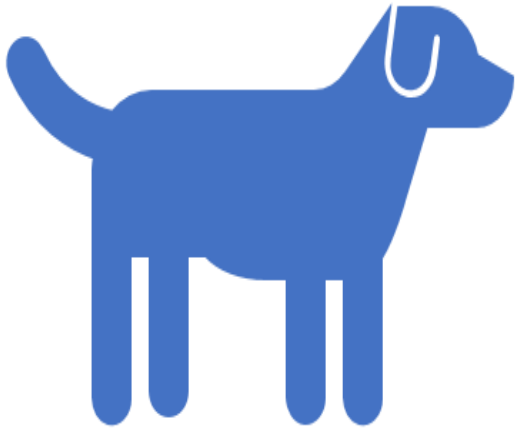








Observation of World Rabies Day



Dog Bite Management: Saving Human Lives

World Rabies Day Webinar, 28 September, 2020

Washing of the Wound





Intradermal RV (ID-RV)



National Rabies Prevention and Control Centre (NRPCC) IDH, Dhaka:

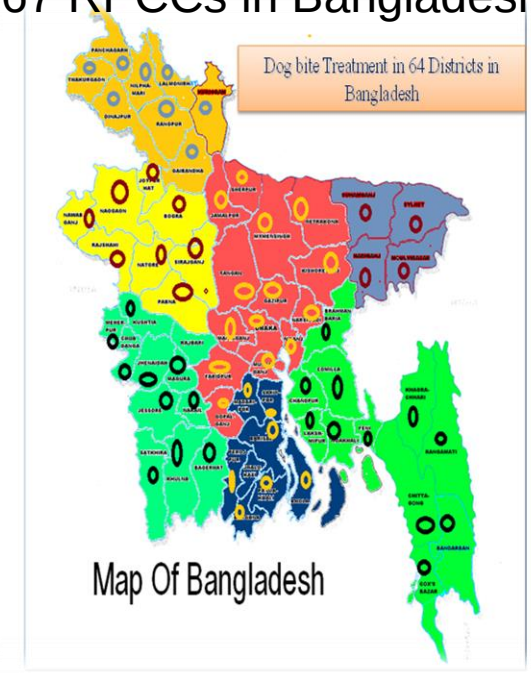


600-700 Cases Attend Everyday

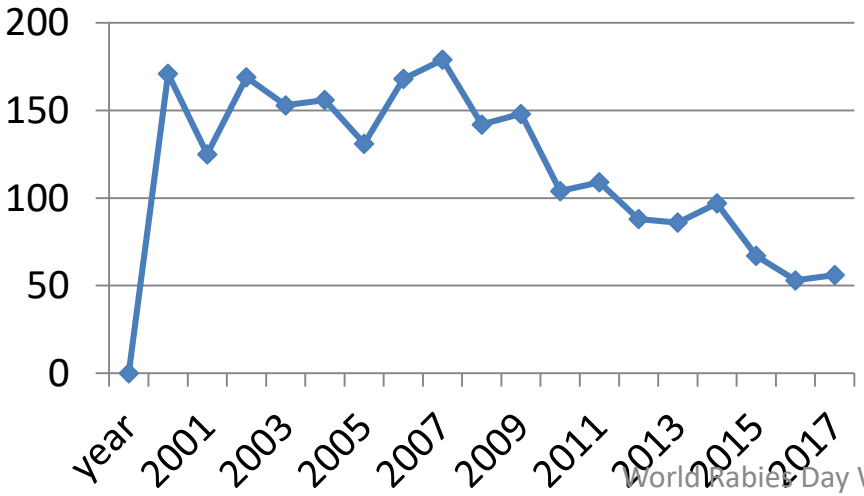
May be the largest IDRV centre in the world

Dog/Animal bite management: prevent Rabies

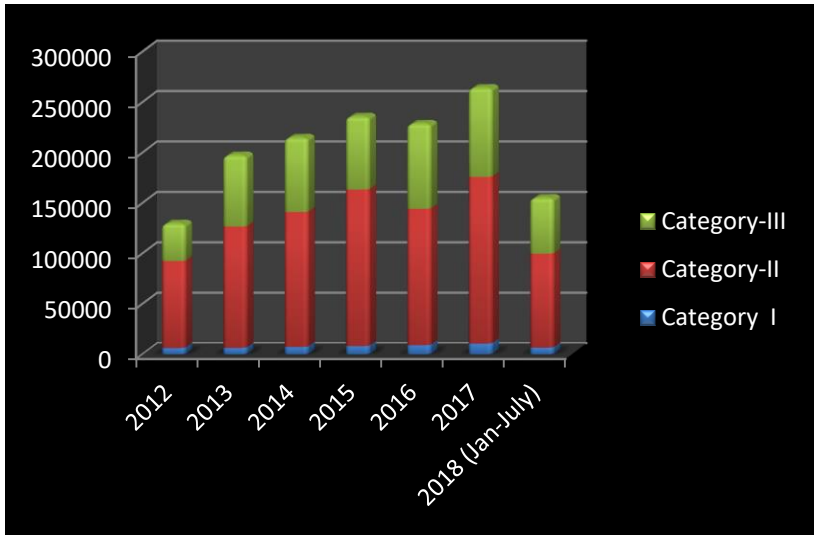
67 RPCCs in Bangladesh



- Physical facility: 67 RPCCs
- Provision of logistics:
  - Inj. Human ARV (IDRV) & RIG (limited) for free of cost
  - Syringe with needle
- Human resource:
  - > 3000 trained physicians, nurses & HCPs

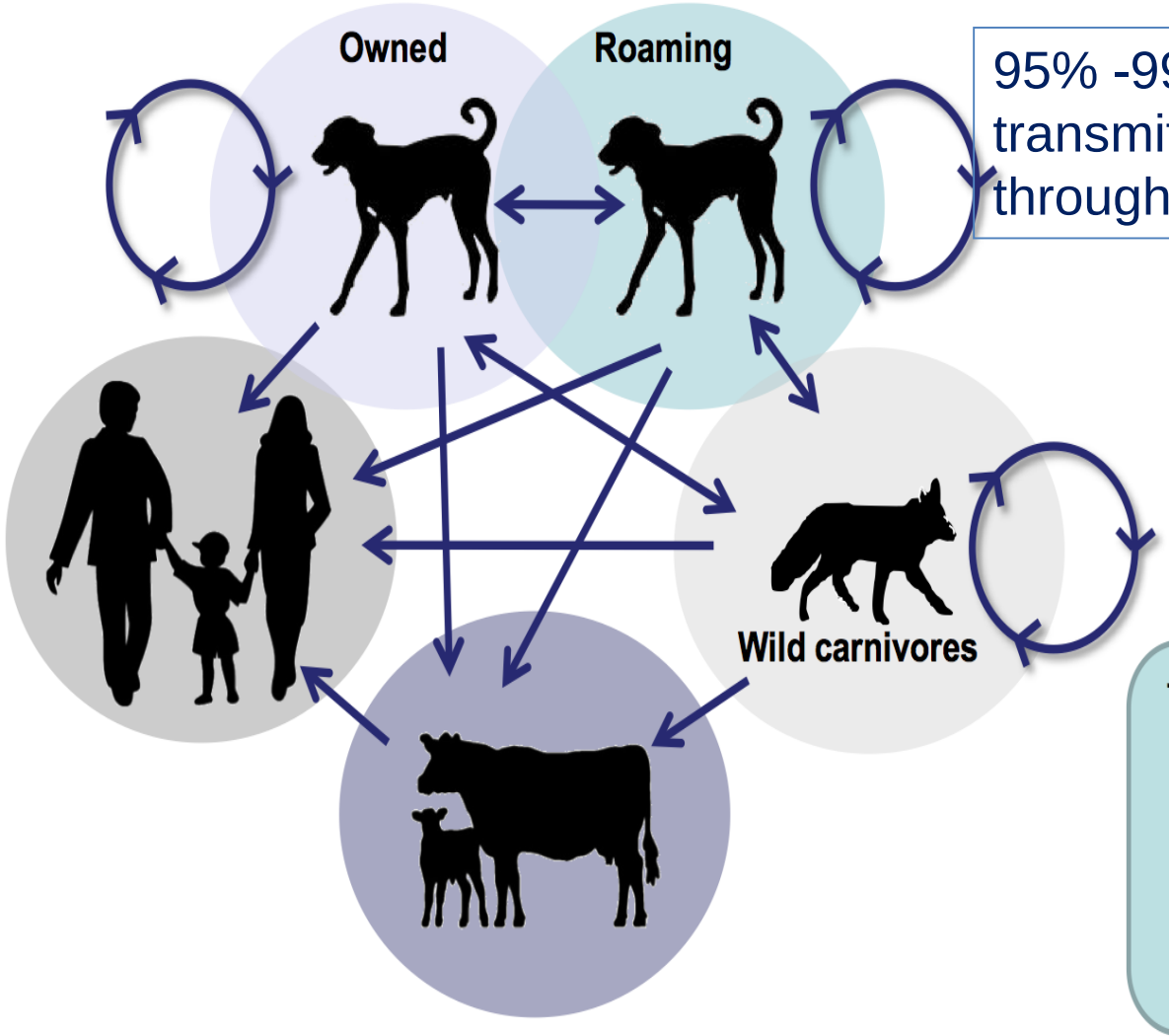


Trend of rabies death

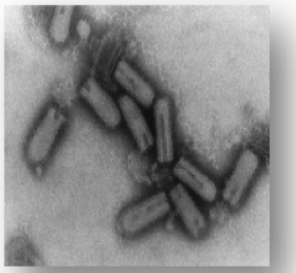


Animal bite cases managed at RPCCs

Dog Rabies:
Dynamics of Virus Transmission and Exposure



95% -99% transmitted through dogs



Transmission pathways

1-way

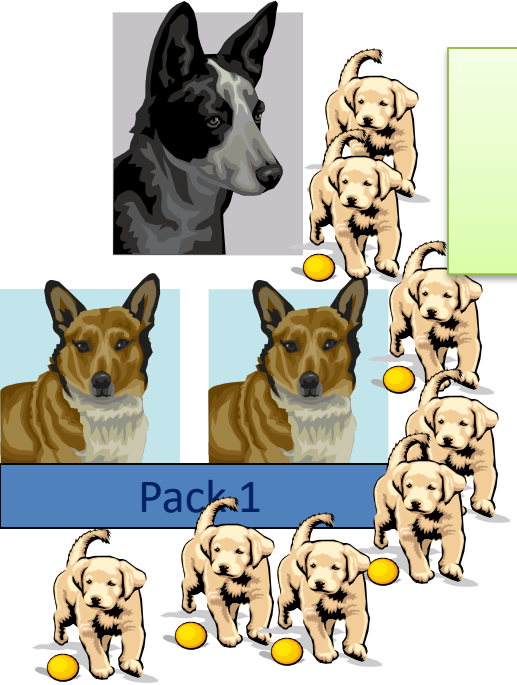
2-way

Circulating

নৃশংসভাবে কুকুর মারা



নৃশংসভাবে কুকুর মেরে কি কুকুর কমে ?

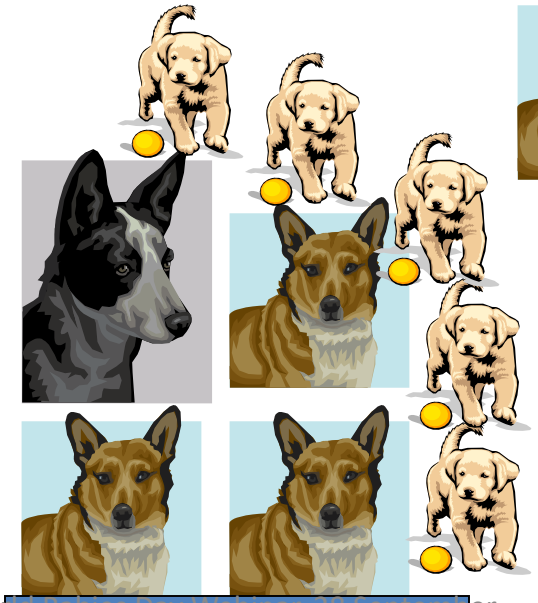








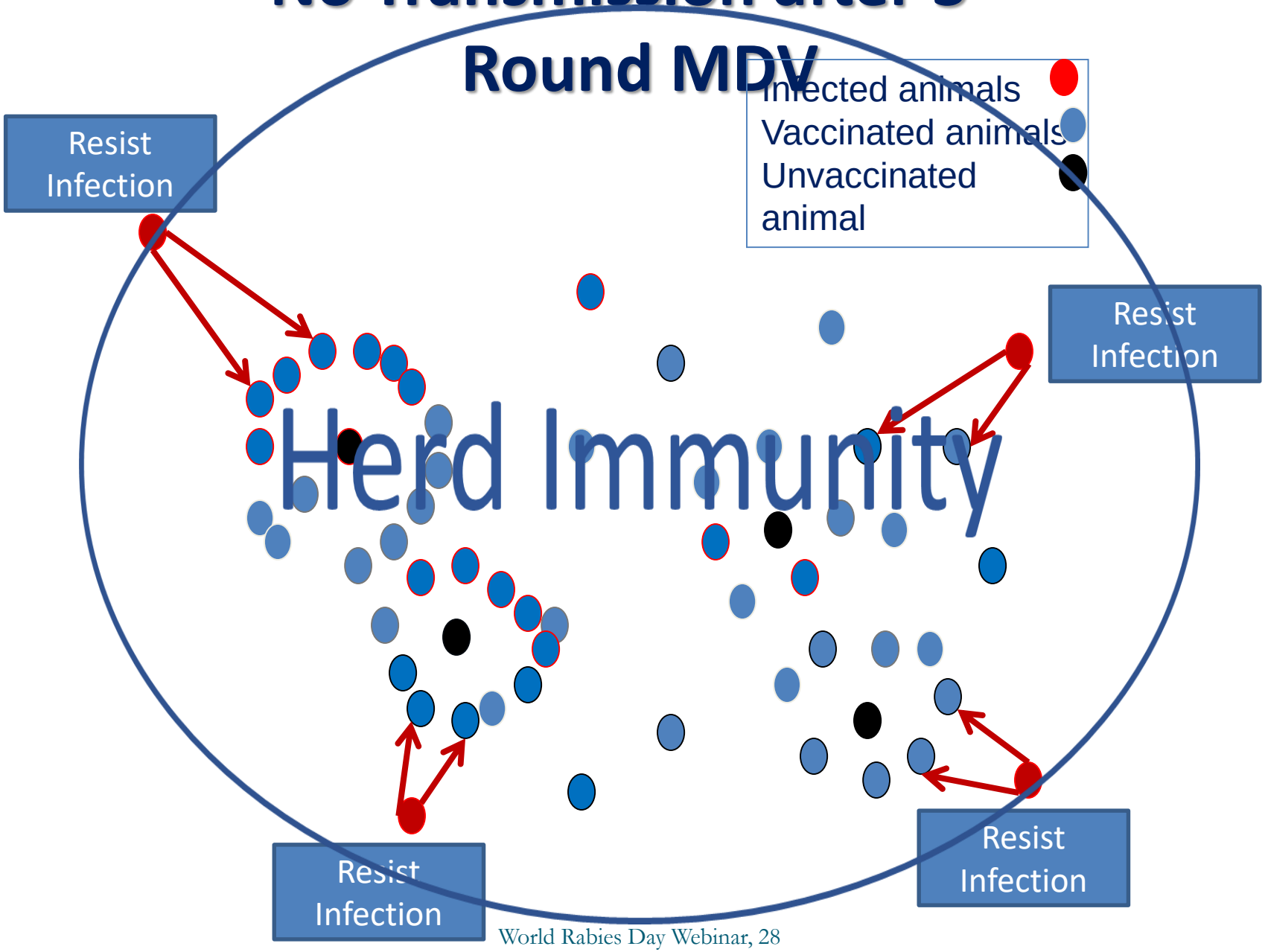






Acknowledgement:
Rubaiya Ahmed

No Transmission after 3rd Round MDV



Mass Dog Vaccination (MDV)

Break rabies transmission cycle

A Milestone for Bangladesh

Goal:

3 rounds of MDV throughout the country

Bangladesh Model of MDV: Characteristics



SNOW BALL CAPACITY BUILDING



SHORT DURATION CAMPAIGN



PUBLIC HEALTH PROGRAM WITH LOCAL FINANCING

MDV :
First Piloting at Cox's Bazaar district on 2011



I. Snow Ball Capacity Building



Dog Catcher Number: 0 to 40 to 3000



Dog catcher availability: No district to all 64 districts

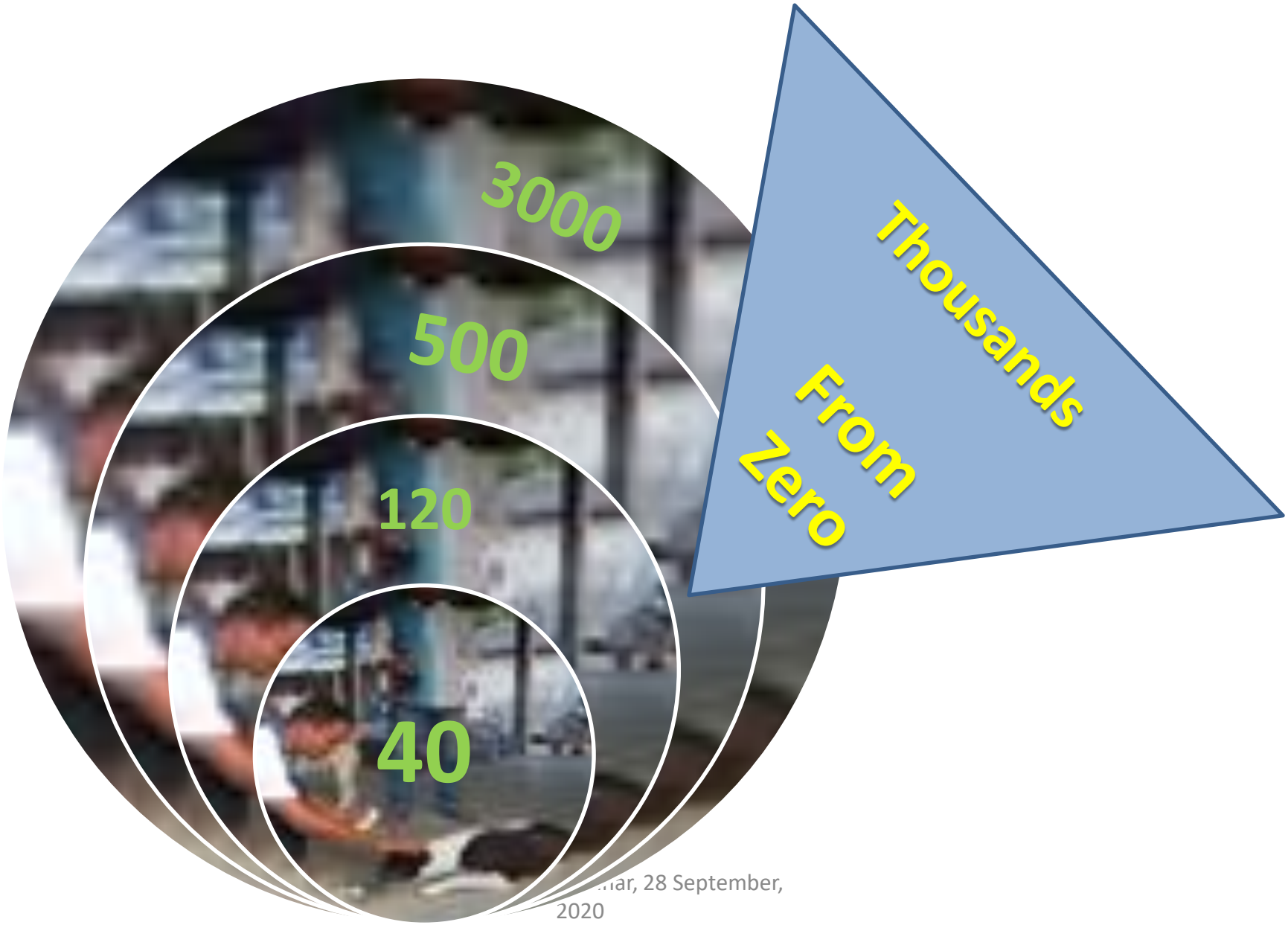


MDV Consultant (MDVC): 0 to 5; **Vets working for MDV**: 0 to 100



Campaign Capacity: One municipality to a whole division

Dog catchers



II. Short Duration campaign: 7-10 days

	Day 0-1	Advocacy Ground preparation
	Day 2	Microplanning
	Day-3	ACS Training
	Day-4-8	MDV Campaign

III. Public Health Program with Local Financing

STRATEGY & PLAN: HAS A NATIONAL STRATEGY AND NATIONAL COSTED PLAN

COMMITTEES: FUNCTIONAL STEERING AND TECHNICAL COMMITTEES

APPROVAL: INCLUDED AND APPROVED IN THE 4TH HPNSP AS A DIFFERENT PROGRAM

FINANCING: 33 MILLION USD

SUSTAINABILITY: ENSURED UP TO 2022 AND BEYOND

MDV Campaigns

Campaign: 500

One round:

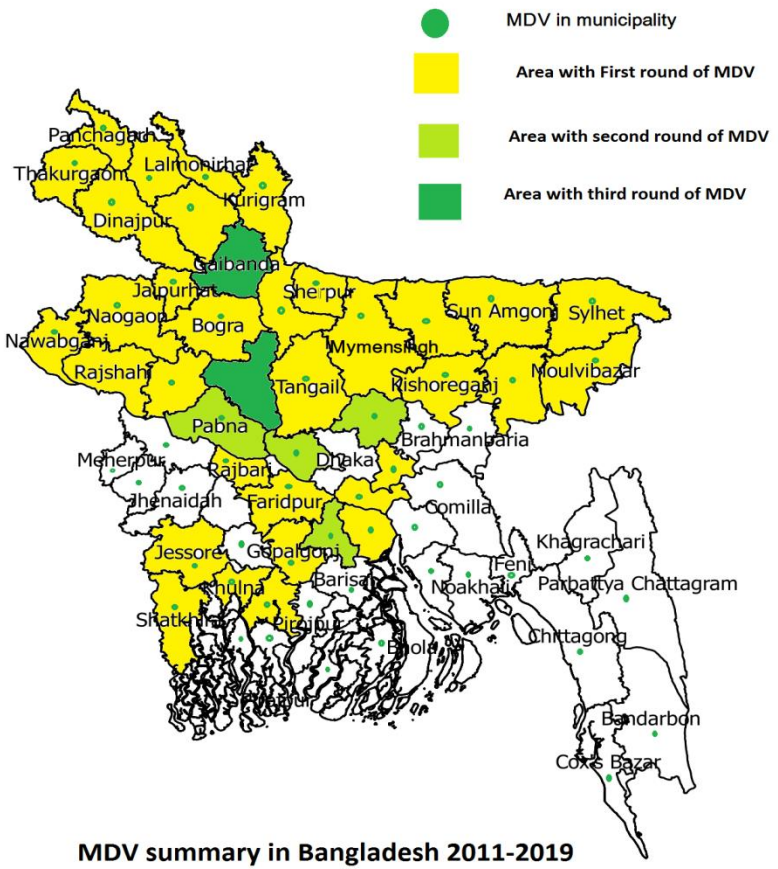
Districts: 60

City Corporations: 10

Municipalities:64

Two rounds: 2CC, 2 districts

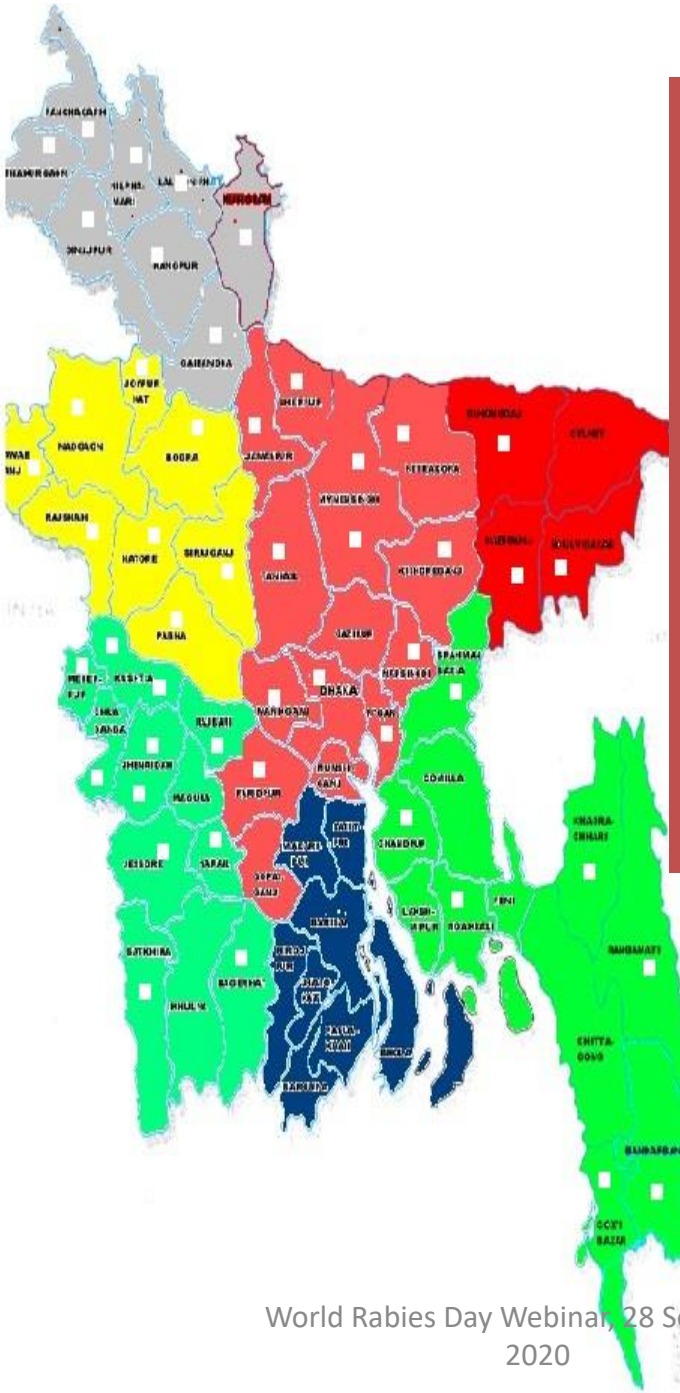
3 rounds: 2 municipalities and 2 districts



MDV summary in Bangladesh 2011-2019

Mass Dog Vaccination Coverage

Year	Dogs Vaccinated	Coverage (%)
2011-20	1.6 million	82%



- Ready to cover whole country

MDV Bangladesh Model



PROVED TO BE FEASIBLE OVER TIME AND PLACE IN BANGLADESH



MAY BE FEASIBLE IN COUNTRIES OF SOUTH ASIA

Expert Dog catchers/dog lovers









ব্যাপকহারে কুকুরের জলাতঙ্ক প্রতিষেধক টিকাদান







ব্যাপকহারে কুকুরের জলাতঙ্ক প্রতিষেধক টিকাদান











Global Alliance for Rabies Control

Mass Dog Vaccin
Revolution towar
elimination

•Community News

An unprecedented task,
in Bangladesh during No



2012) most of the distric
The MDV campaign of B
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catch dogs for killing) ou
municipalites) became
they can catch dogs wi
vaccinated thousand d
funds' we could mobiliz
We now have a nationa
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internationally, but it has

World Health Organization

Bangladesh tackles rabies thr
dog vaccination

September 2014

Bangladesh's canine vaccination programme
cycle of rabies transmission from dogs to hur



Huzzatul Mursalin

World Health Organization

Neglected tropical diseases

The Rabies Elimination Program of Bangladesh

A model for transformation and accomplishment



Credit: WHO

10 April 2017 | Geneva ––Bangladesh is leading a national multipronged rabies elimination program towards its goal of eliminating rabies by 2020, and serving as a role model for others in the region with similar economic and sociocultural characteristics.

The national rabies elimination strategy has two components:

- implementing mass dog vaccination campaigns
- introducing intradermal rabies vaccination following dog bites in health facilities throughout the country.

The Bangladeshi Health Department phased out nerve tissue rabies vaccine in 2011, in line with the recommendations of the World Health Organization.

Good Practice: Changes Brought About

Areas	2011-16	2017-2022
National strategy & Action Plan	Yes	Updating
Committees	NSC, NTWG	NSC, NTWG
Multisectoral collaboration	Health, Livestock, LG, WHO, FAO, OIE, World Animal Protection, HSI	One Health approach has been strengthen
Fund allocation	**7.2 million USD**	**33 million USD**
Vaccine	TCV & RIG	TCV & RIG
Accessibility of vaccine/yr	**TCV: 200 thousand**	**TCV: 350 thousand**
RPCCs	67 (all districts)	Better functioning
Trained HCPs **Committed Expert Dog** catchers & vaccinators	<1000 **<1000**	>3000 **>3000**
No. of dogs vaccinated	<0.3 million	>1 million
Lab diagnostic capacity & Surveillance	No	Animal: Functioning Human: Establishing

Challenges

- Large number of stray dogs especially in rural areas
- Quality vaccine (human and animal) and immunoglobulin
- Limited laboratory facility for rabies diagnosis
- Under reporting of human rabies cases
- Wild animal in some areas

Way Forward

- **Accomplish 2 rounds of MDV in 40 districts and 3 rounds in 24 districts**
- **Strengthening rabies reporting and surveillance**
- **Need more initiatives from other stakeholders including DLS, Local government and Development partners**

Bangladesh: Rabies Control to Elimination

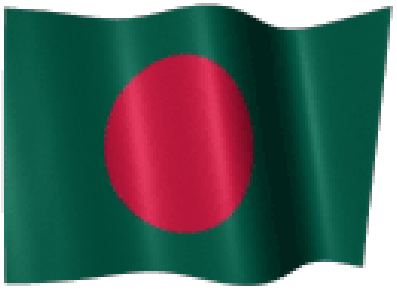
World Rabies Day Webinar, 28 September, 2020

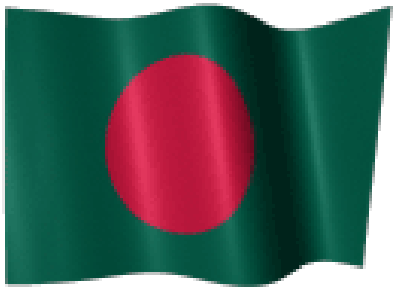
We Want to Lead in South-East Asia



How We Can Contribute?

Acknowledgements





Lets work together to make

Rabies free Bangladesh before 2030!



Thank You