



Canine mediated human rabies elimination from an Indian state: the example of Goa

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University of Edinburgh

Mission Rabies



- 1) Put theory into practice
- 2) Document examples of success
- 3) Support others to grow efforts



VACCINATION



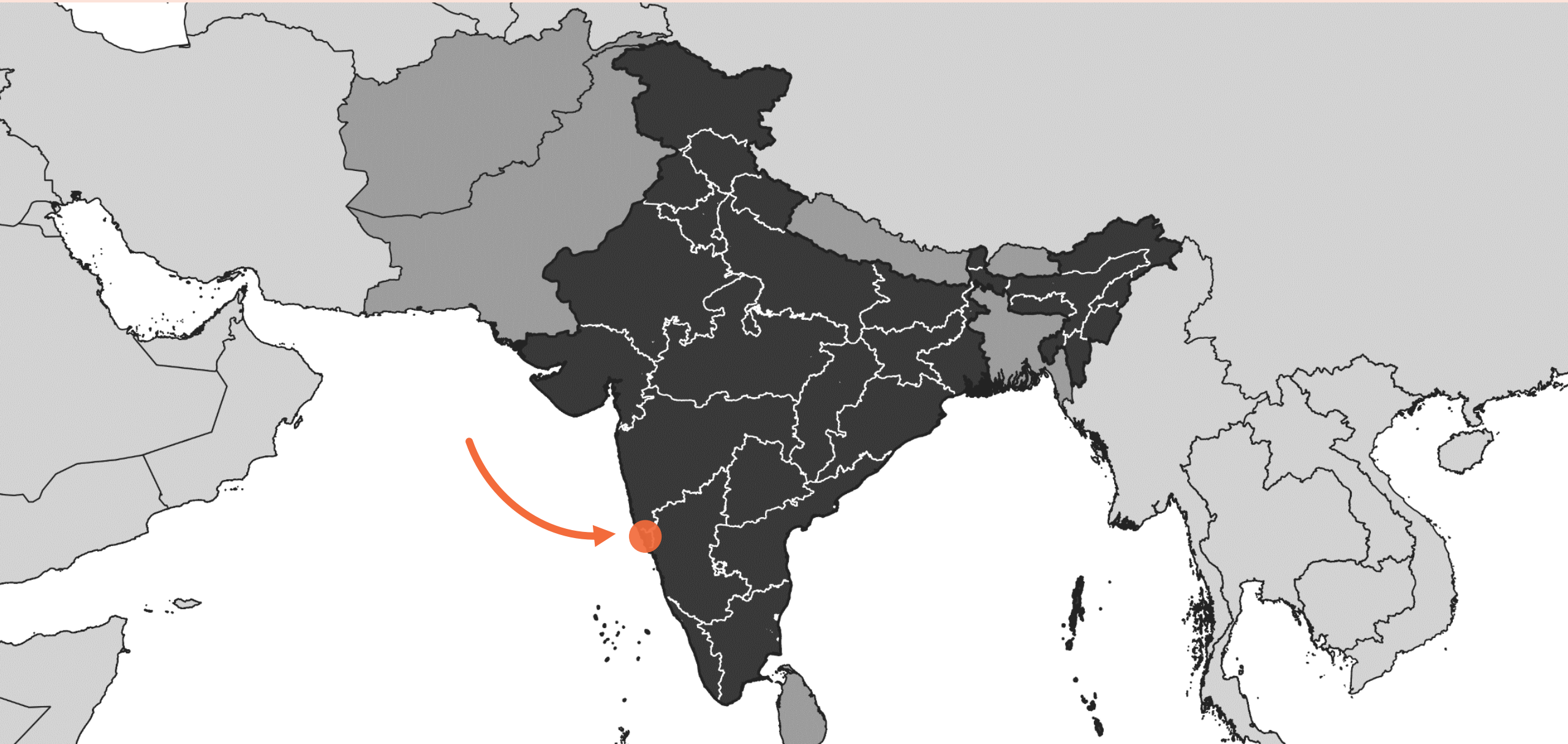
EDUCATION



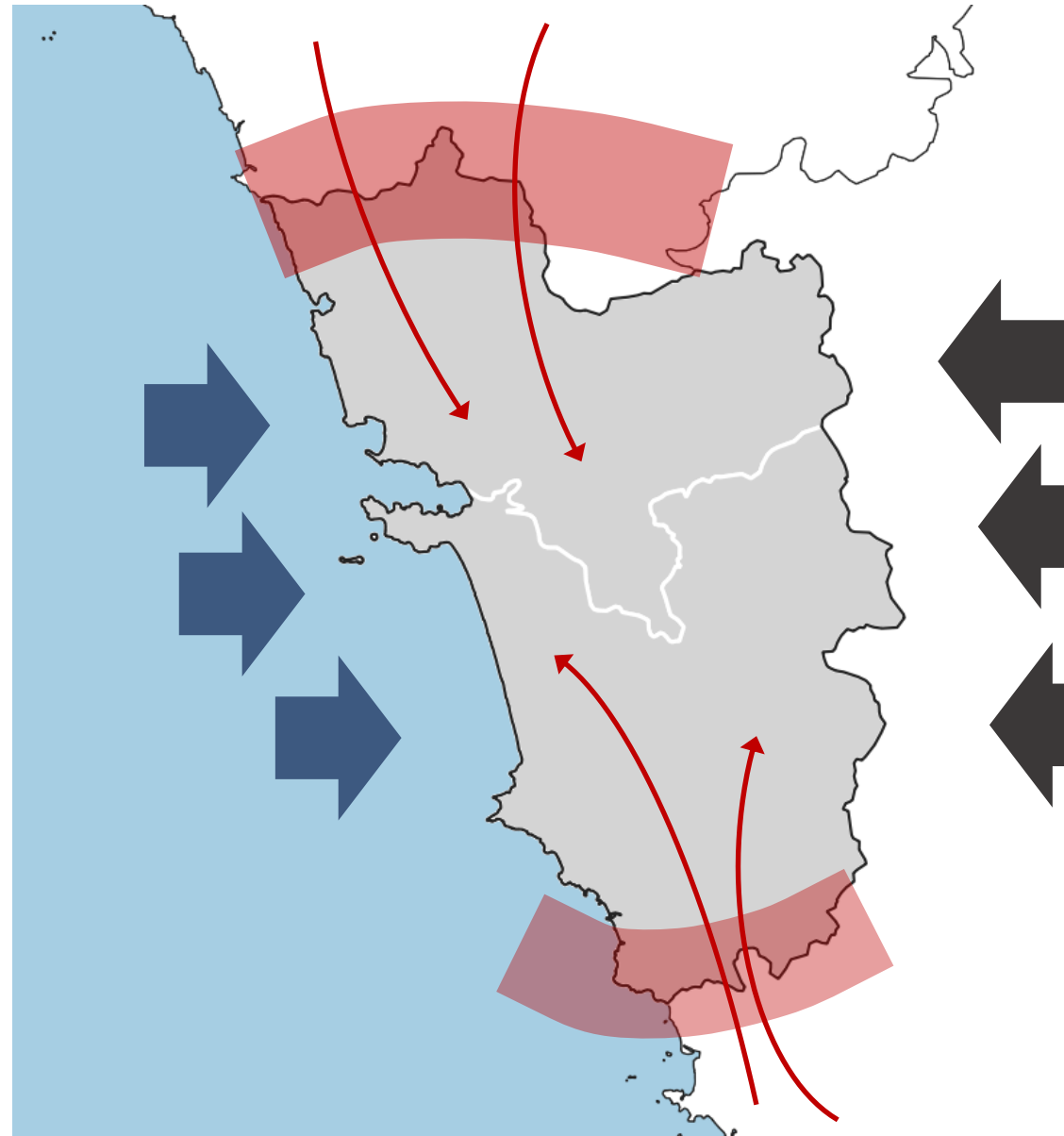
SURVEILLANCE



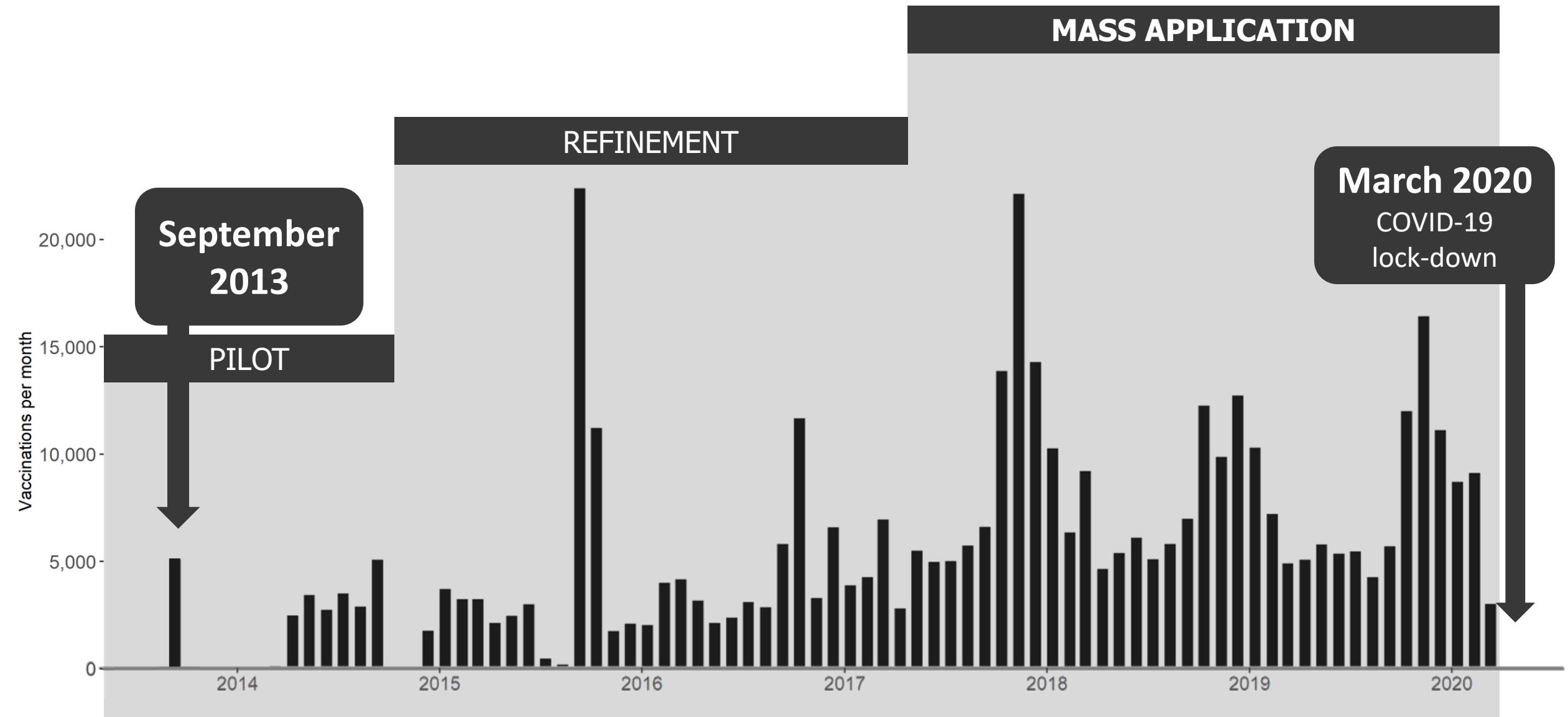
Goa state



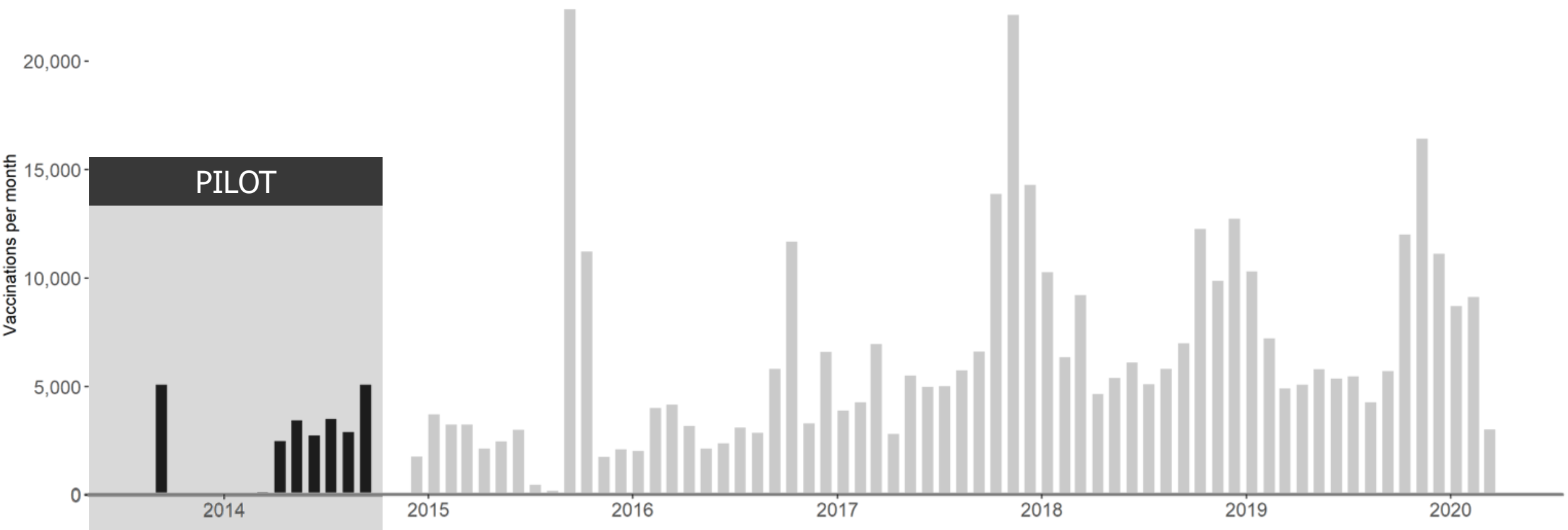
Goa State



Pathway



- 1) Vaccination method
- 2) Geographic management



Dog vaccination methods



Central point



Dog vaccination methods



Central point



Door-to-door



Dog vaccination methods



Central point



Door-to-door



Capture-vaccinate-
release



Dog vaccination methods



Central point



Door-to-door



Capture-vaccinate-release



Oral bait handout



Capture vaccinate release



\$127 / day



\$ 0.5 / dose

80 dogs

20 dogs

\$ 2.09 / dog

\$ 6.85 / dog

Dog population distribution

URBAN

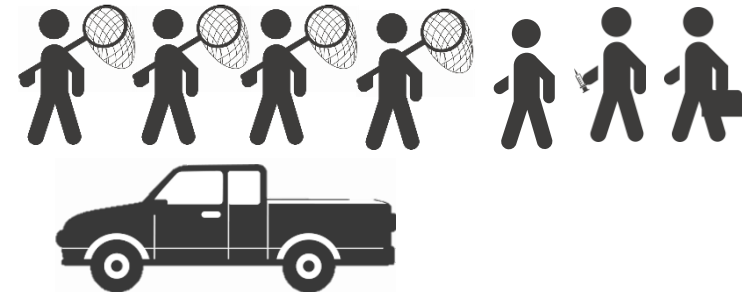
Owned confined



Owned roaming



Stray roaming



0

20

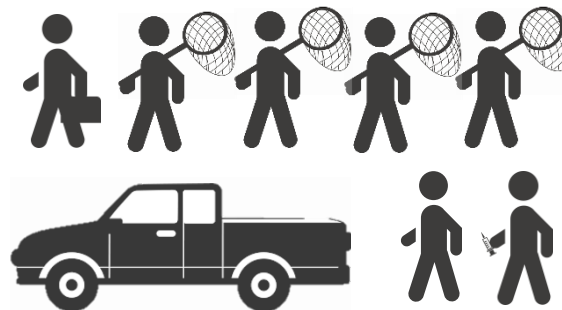
40

Combining methods



\$34 / day 

\$ 0.5 / dose 



 **\$127 / day**

 **\$ 0.5 / dose**

Dog population distribution

Urban



0 20 40

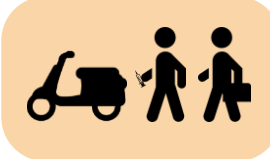
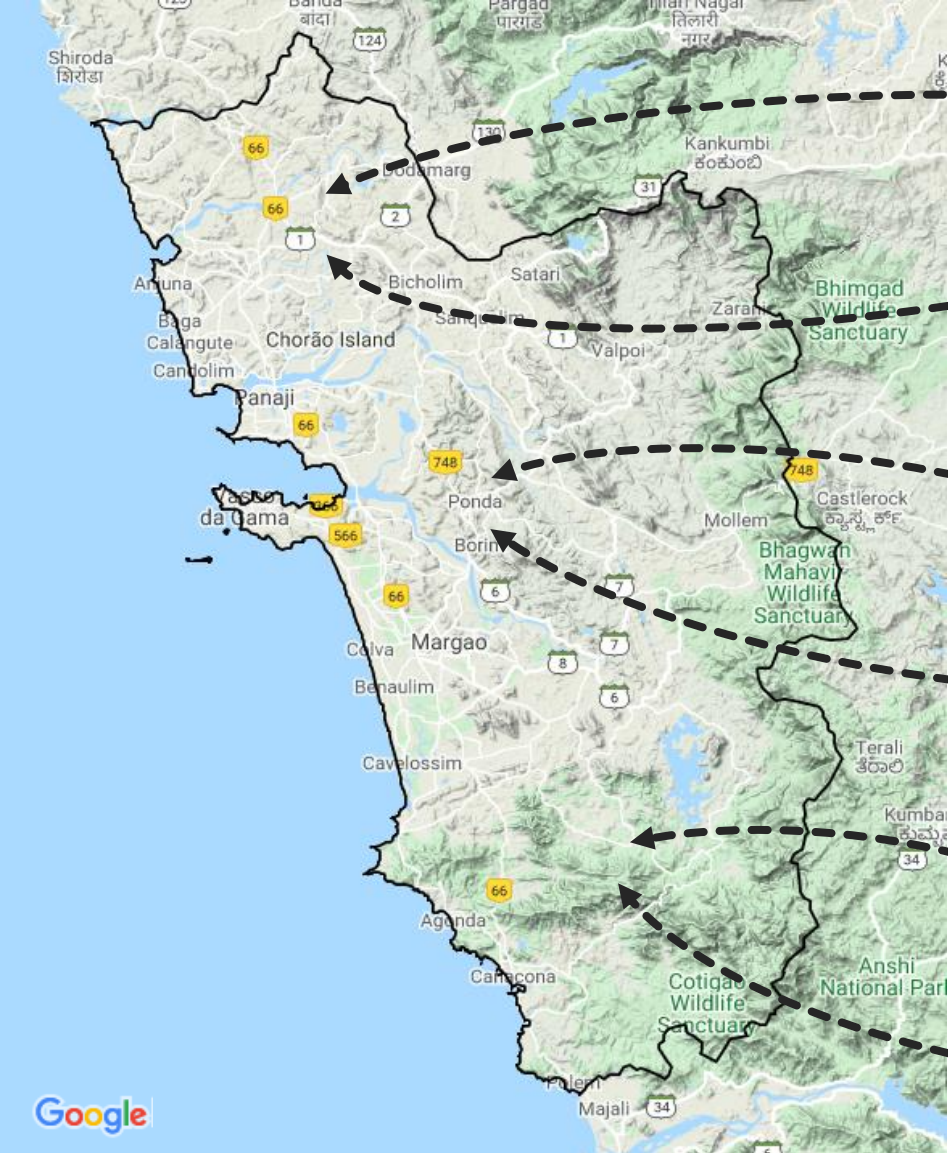
Rural



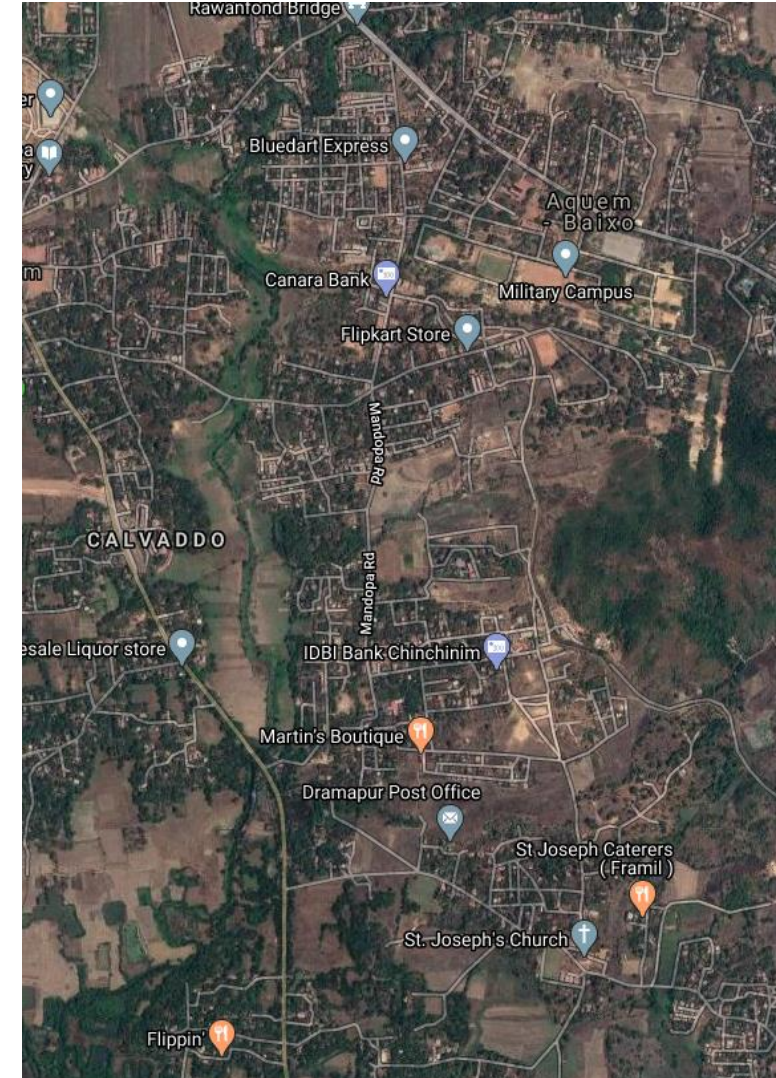
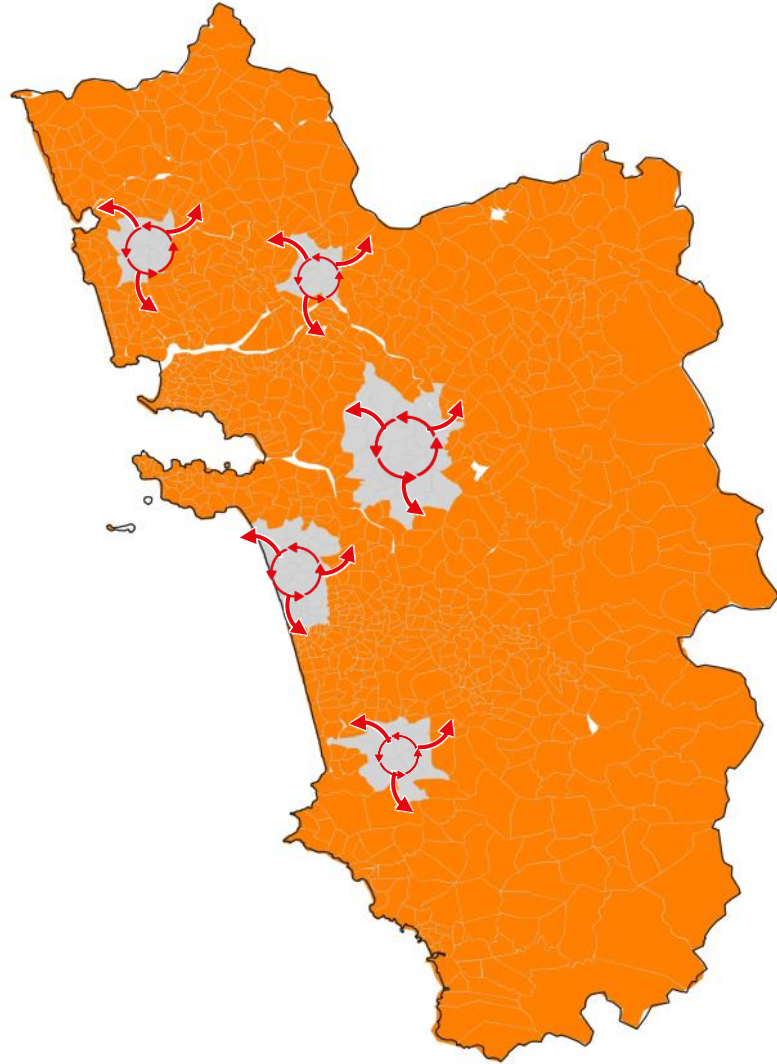
0 10 20 30 40 50



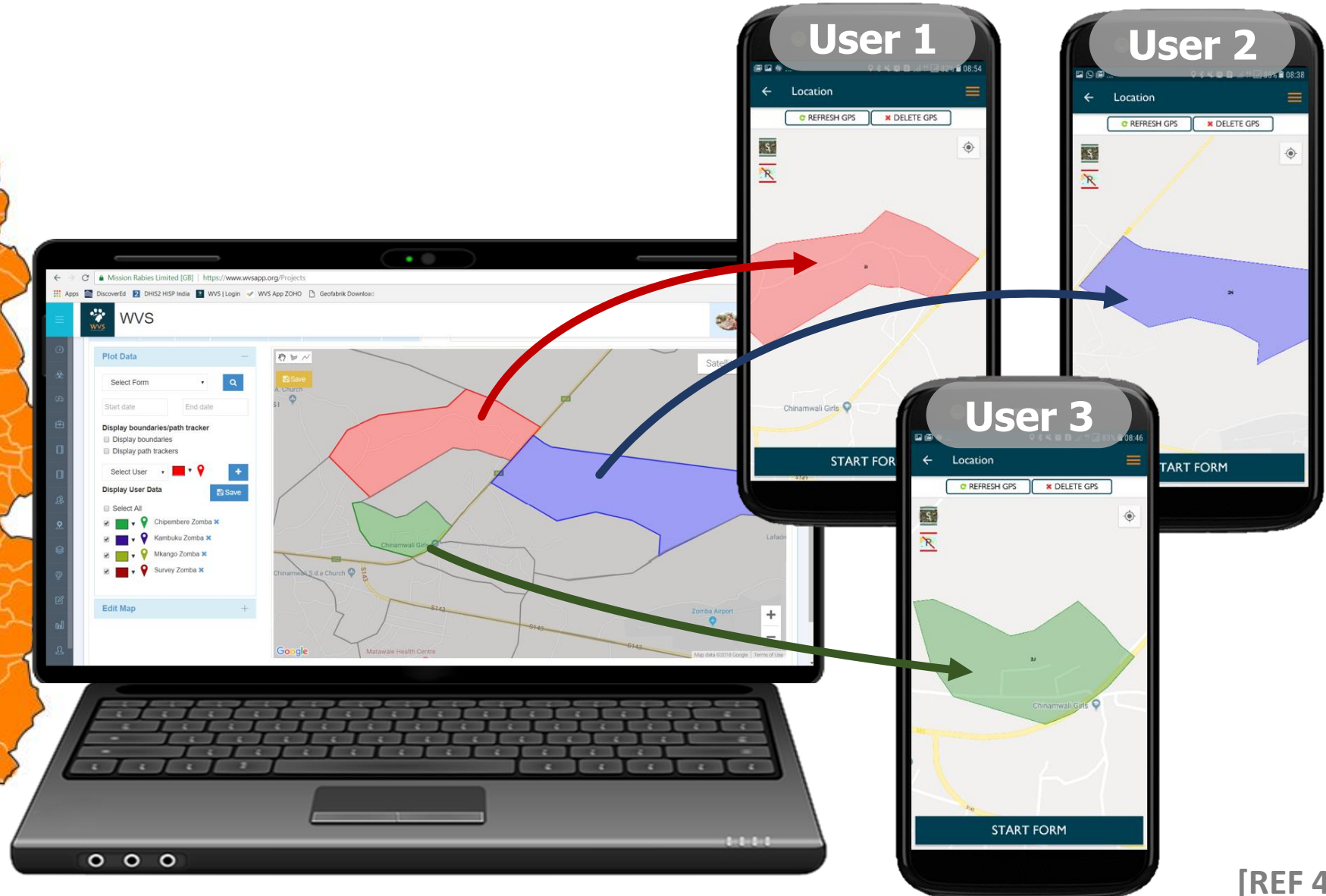
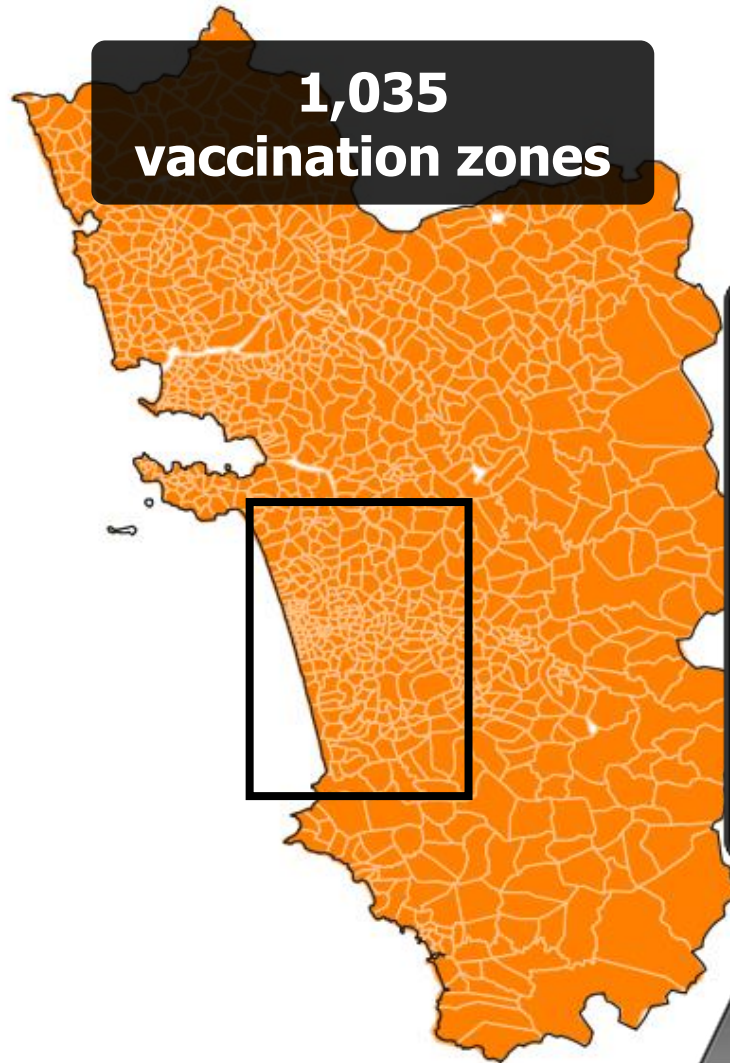
Vaccination team management



Vaccination team management



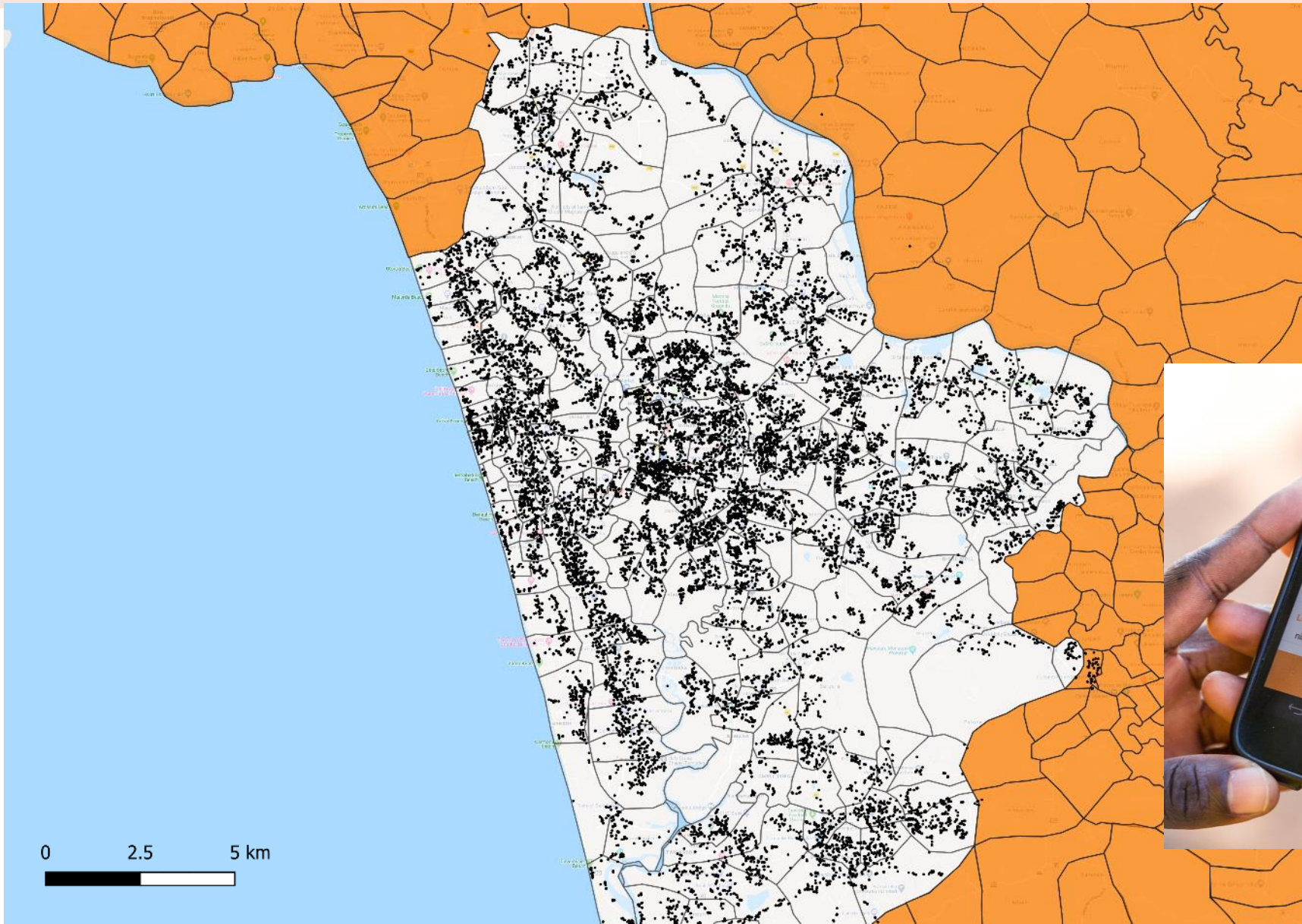
Vaccination team management



Campaign management through mobile tech

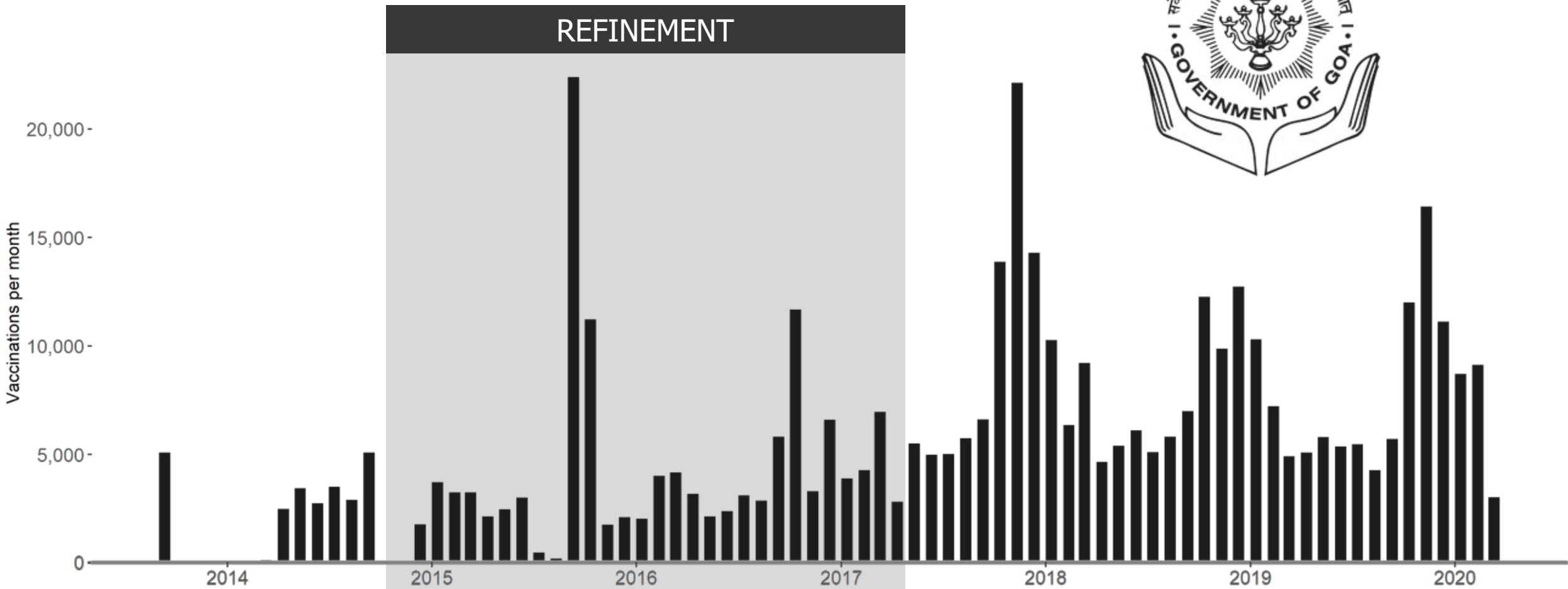


December 2018
January 2019
February 2019
March 2019



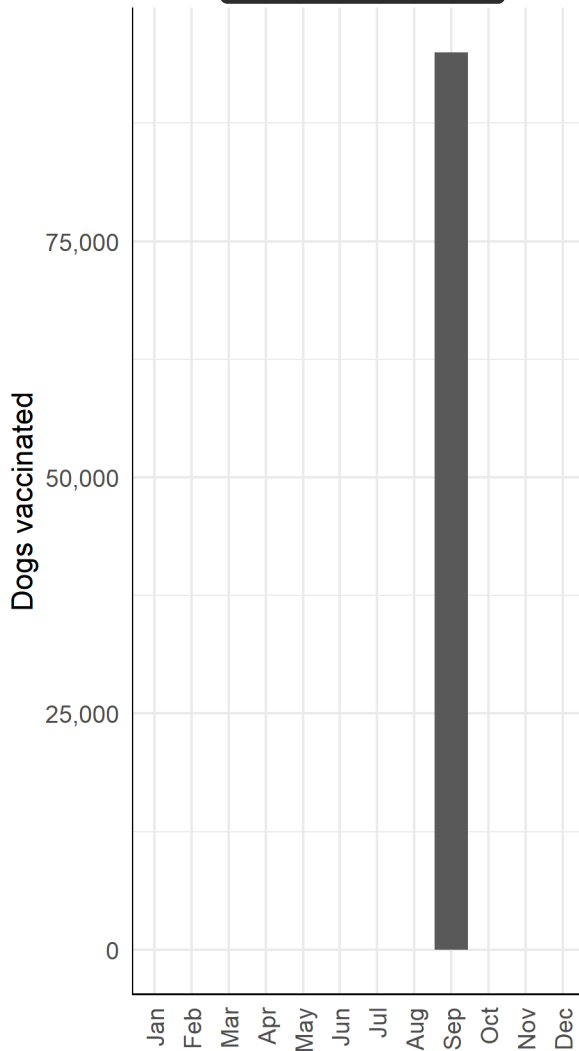
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- Campaign duration



Campaign duration

1 month

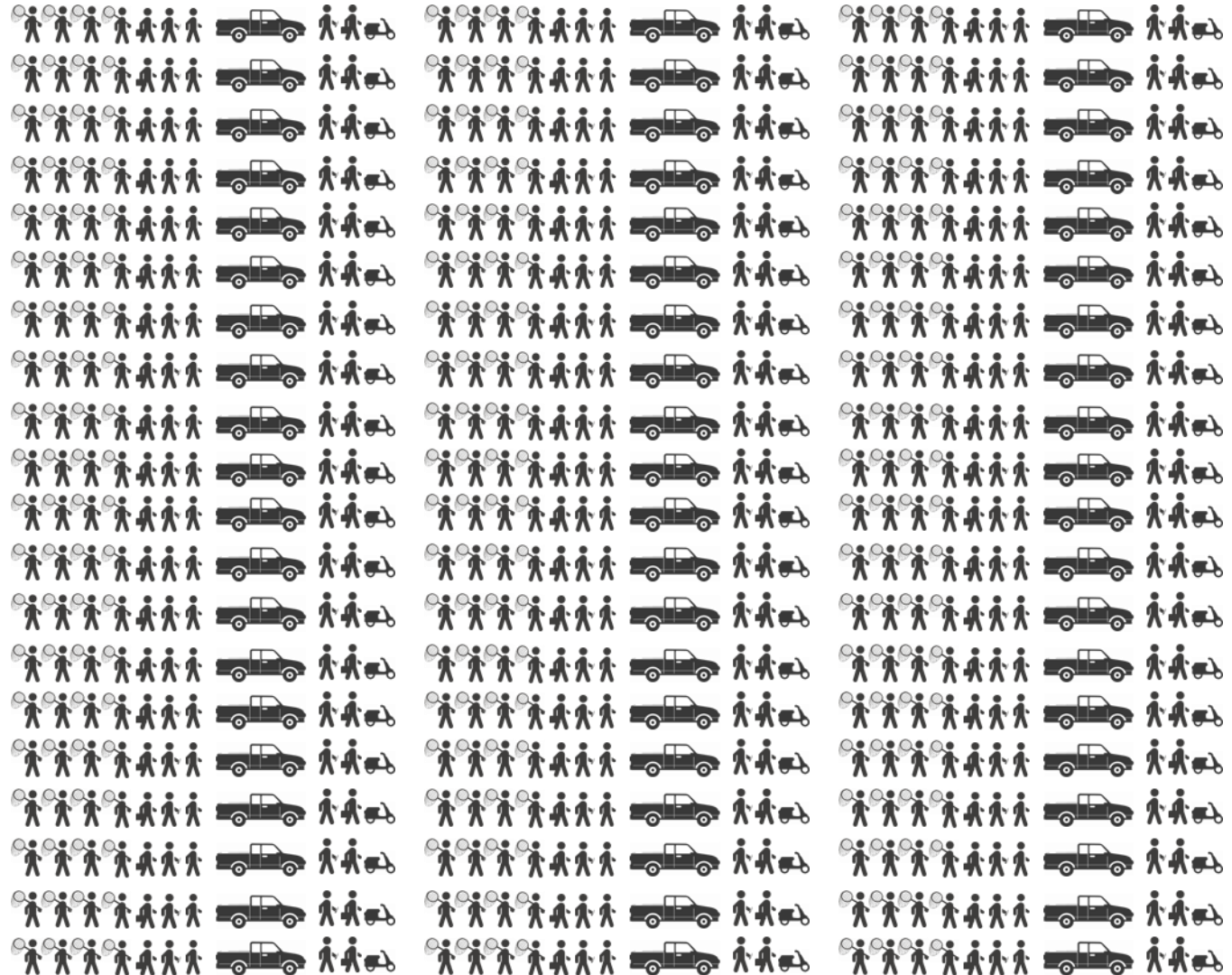
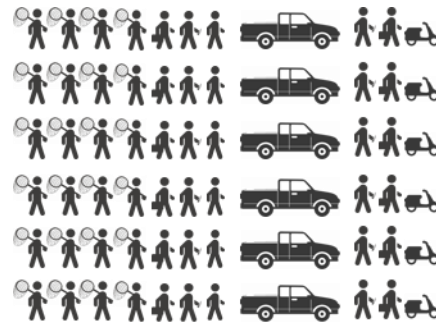


4,300 dogs/day

66 CVR

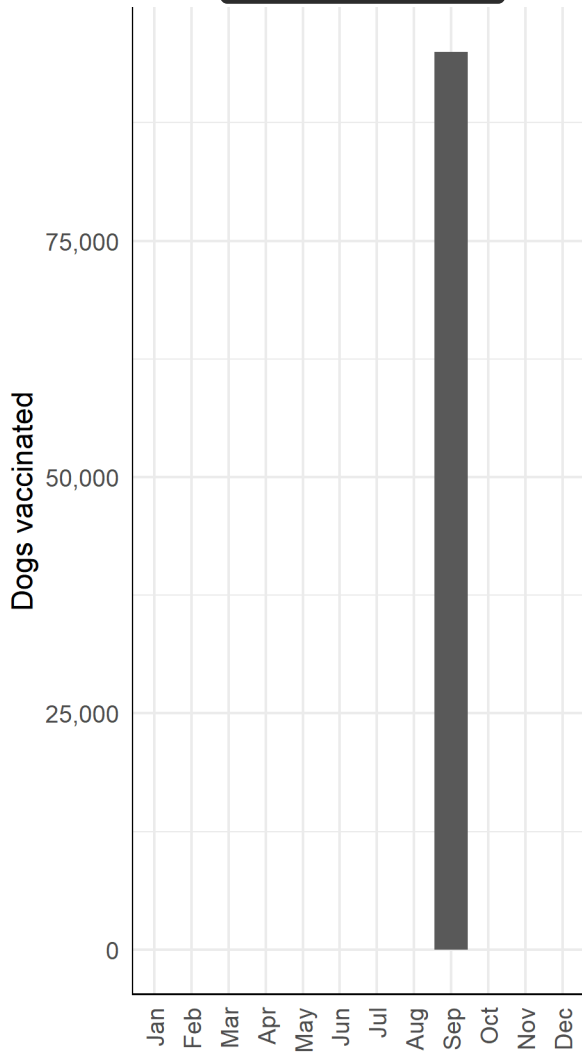
66 DD

589 staff

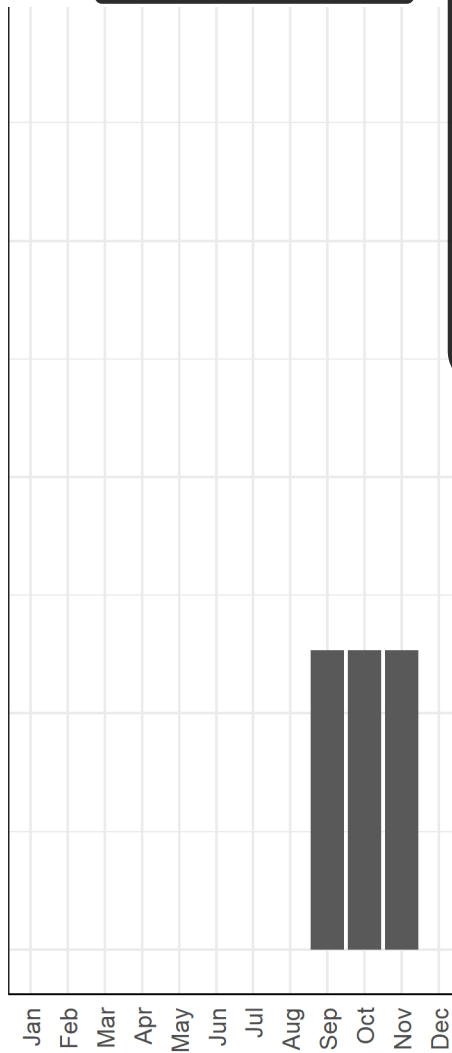


Campaign duration

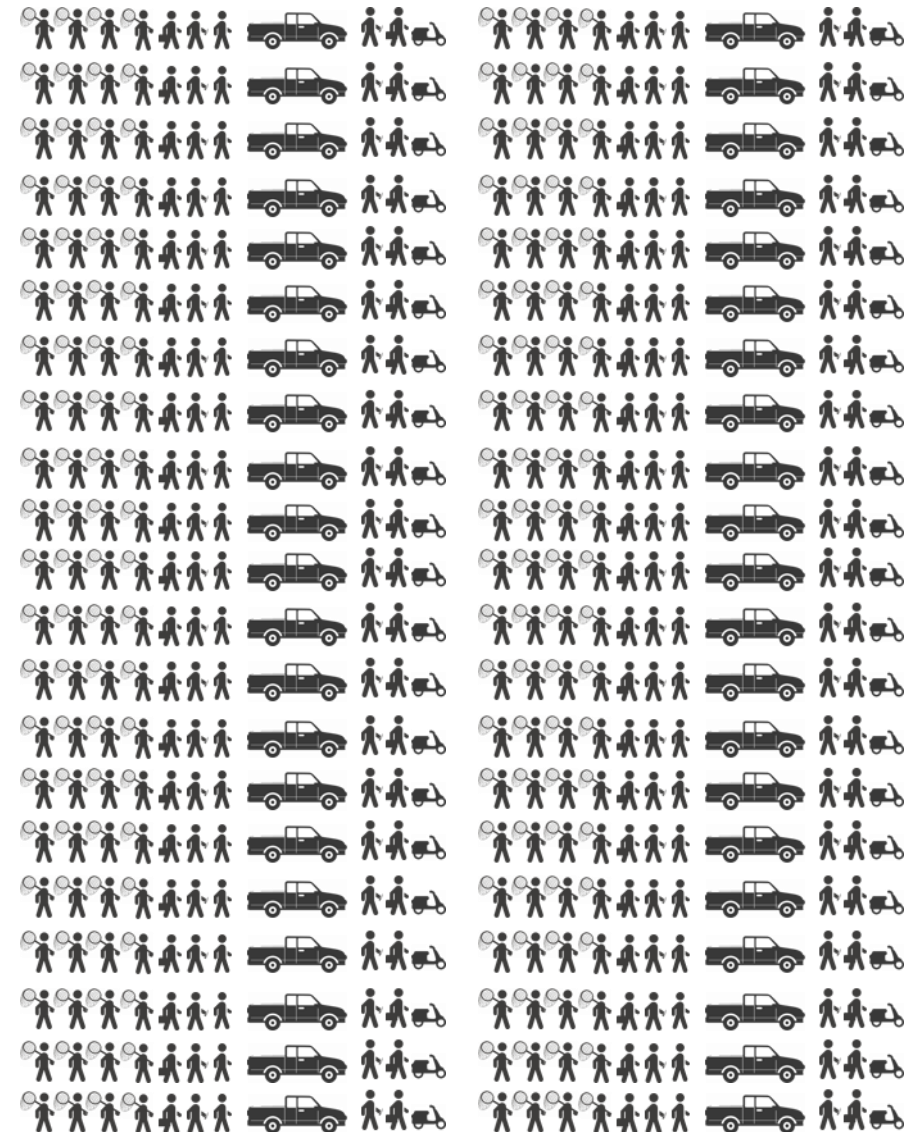
1 month



3 months

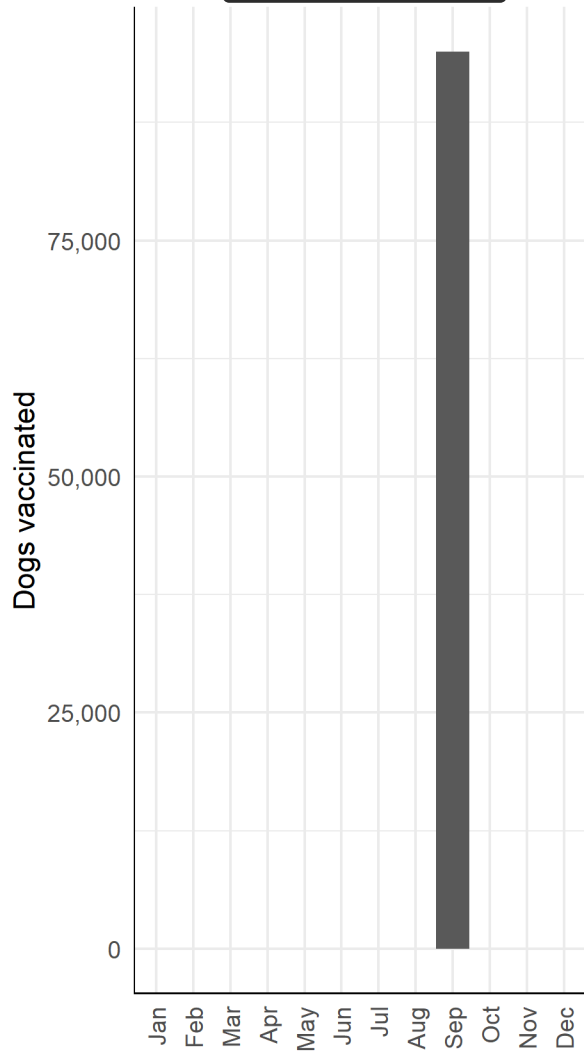


1,400 dogs/day
22 CVR
22 DD
200 staff

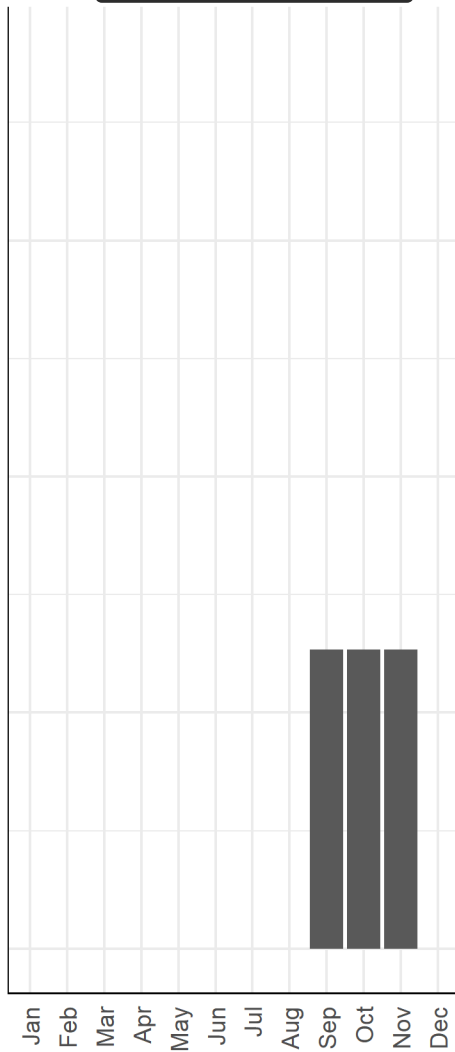


Campaign duration

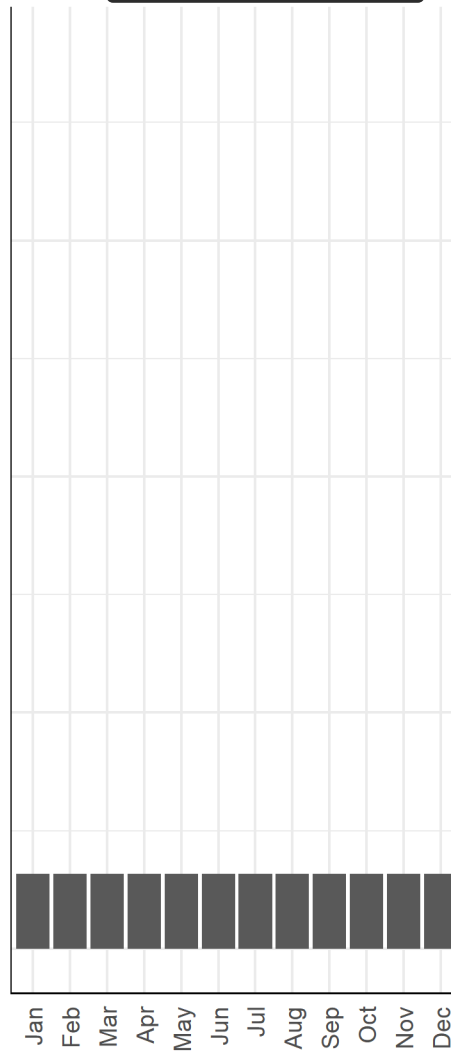
1 month



3 months



12 months



360 dogs/day

6 CVR

6 DD

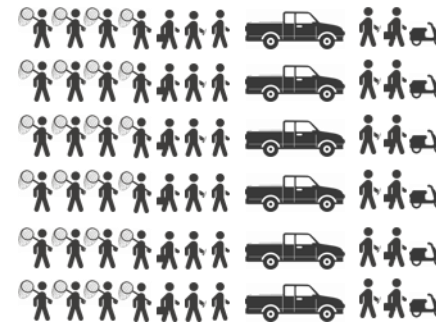
50 staff



51,000

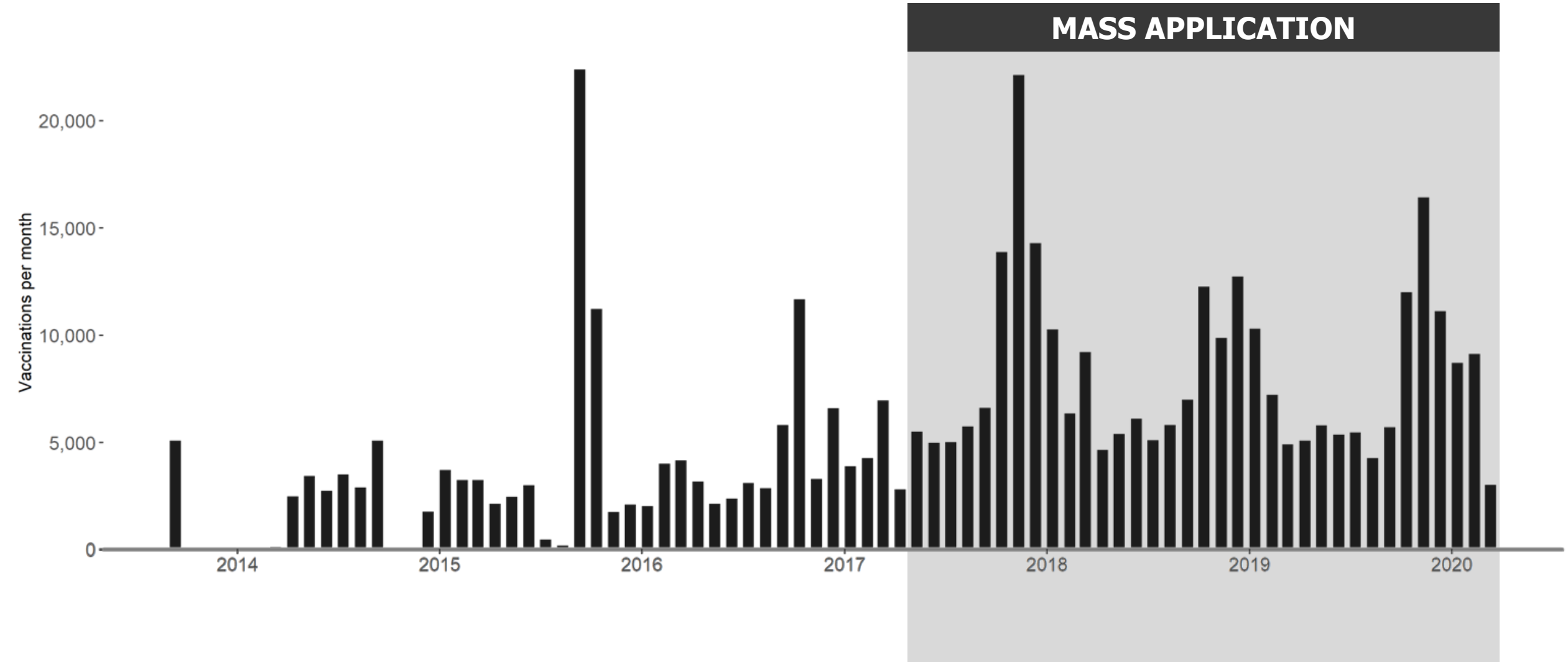


43,000



54 field staff

Pathway



State coverage

Apr 2017 – Feb 2018

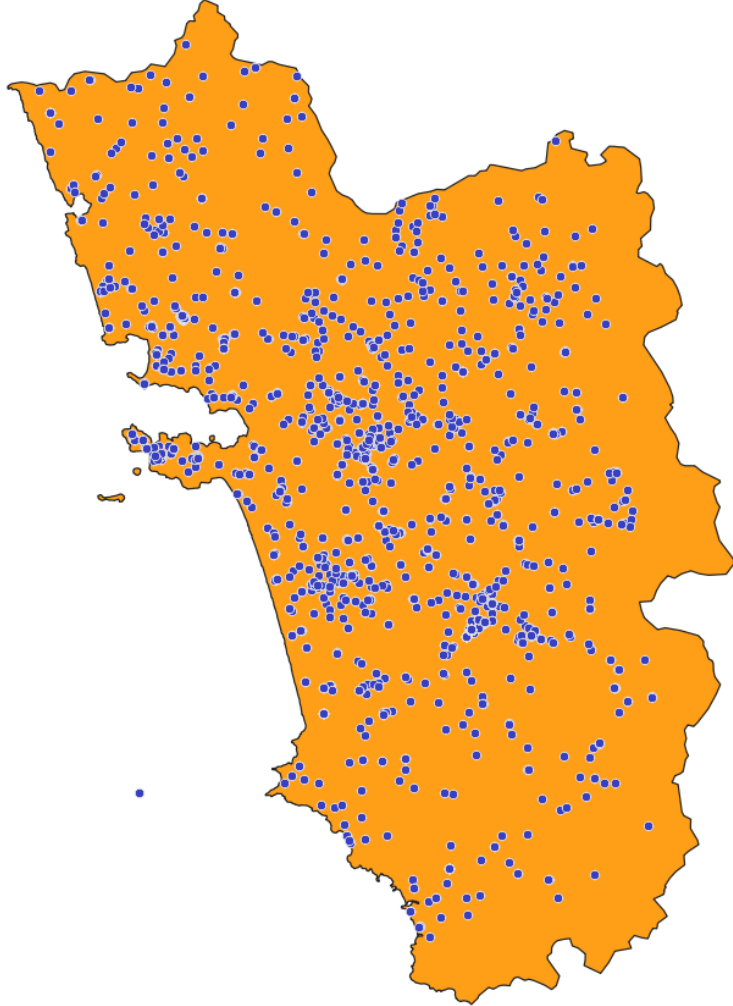
Feb 2018 – Mar 2019

Mar 2019 – Mar 2020

420,000
doses delivered to date





Education



Education classes in schools 2019

1 	2 	3 
बेगोबेग घावों साबू लावन १५ मिण्टां नळाचेर व्हांवल्या उदकात धुंवप	घाव्याचेर डेटॉल, बेडाटीन वा स्पिरीट लावचे. घावो बांदून दवरचो न्हय.	आवय/बापायक व घरच्यांक रोकडेच सांगून बेगोबेग दोताराकडेन व्हरून वांसीनाचो पुराय कोर्स घेवचो

करूं नाकात

		
सुण्या फूडल्यान 'फास्ट' धांवप ना.	सुण्याक दोळ्याक दोळे दिवप ना.	सुण्याचेर फातर वा हेर मारप ना



Canine surveillance



Reporting

RABIES HOTLINE
If you see a dog that may have rabies
(biting, aggressive, salivating)

Phone this number :
7744029586

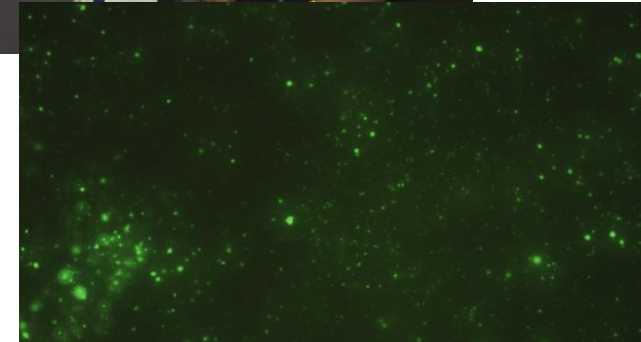
RABIES FREE GOA
www.missionrabies.in DogsTrust



Investigation



Diagnosis



Rabies Epidemiology and Case Tracker App

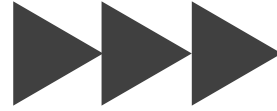
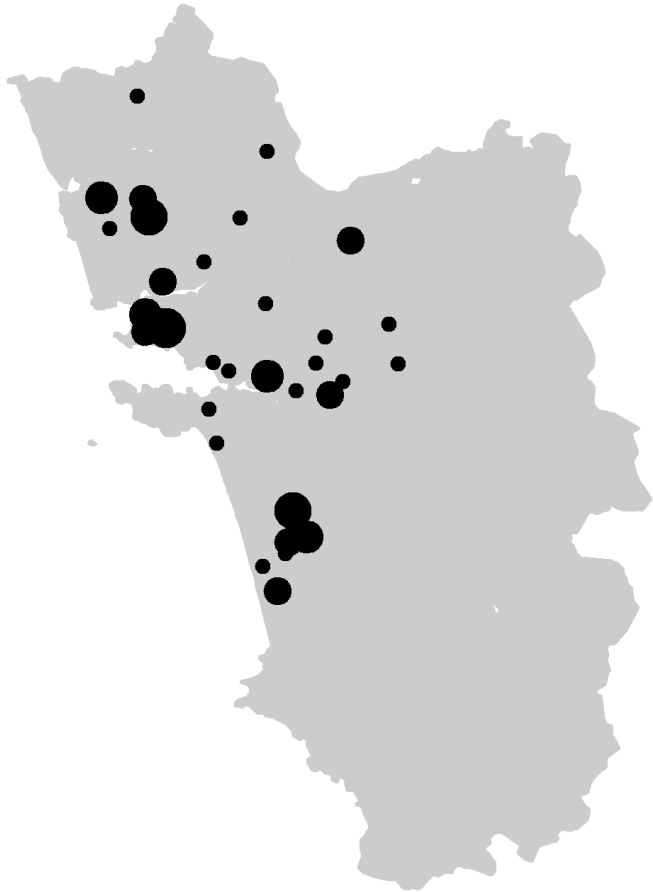


REACT

Canine surveillance

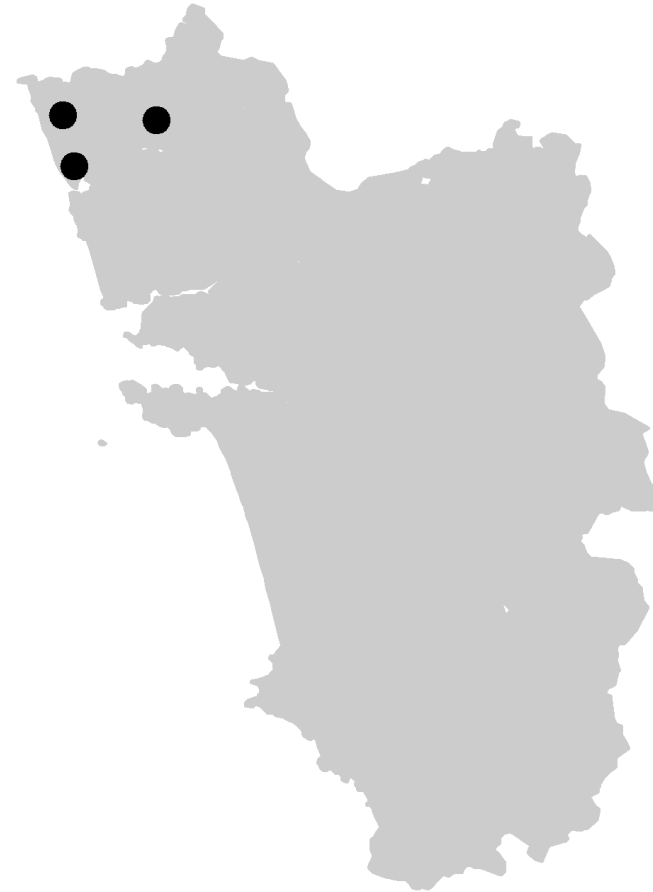
2014

10.6 cases/month



2019

0.8 cases/month



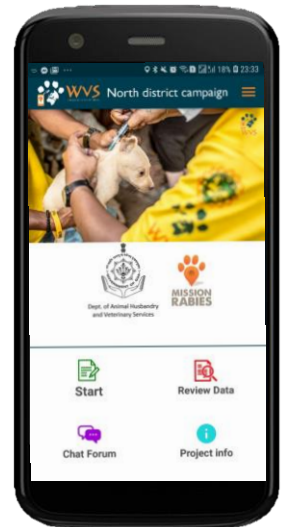
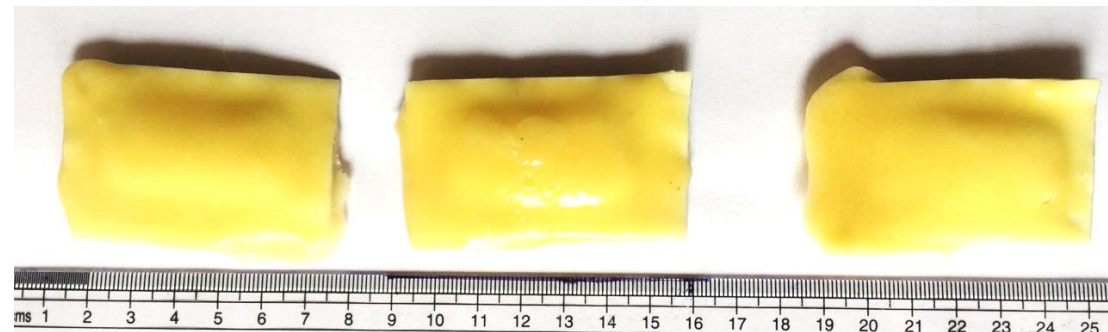
Human deaths



2014		17
	▼ ▼ ▼	
2018		0
2019		0
2020		0



- Border control systems
- Enhance open-access training materials
rabiestaskforce.com
- Share technical tools with other regions
- Improve vaccination efficiency of inaccessible dogs



Thanks to



Govt Goa

- Dr Santosh Desai
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- Dr Niceta D'Costa



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- Gareth Thomas
- Julie Corfmat
- Murugan Apuppillai
- Praveen Mathapati
- Gowri Yale
- Praveen Ohal
- Karlette Fernandez



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- Dr Ad Vos (CEVA)

Uni of Edinburgh

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- Prof Mark Bronsvort
- Dr Ian Handel
- Dr Stella Mazeri



Thank you



andy@missionrabies.com

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