



## ROAMING DOG POPULATION

### COUNTING PROTOCOL

The objective of this protocol is to establish a standardised technique for undertaking street dog population assessments as part of the Mission Rabies international initiative. For the sake of simplicity, individuals conducting the surveys are hereby referred to as 'counters' throughout the guideline steps below.

Please note – the phrase roaming dogs means exactly that – it makes no distinction whether a dog is owned or stray. It is simply the dogs that are on the streets and roaming freely. If a dog is chained or tied in a yard – it is not roaming. If it is free in a yard and has direct open access to the street, then it is a roaming dog.

#### Preparation before you go out

- **Acquire a street map of the city.**

Knowing your area of proposed survey is crucial. Most cities have wards (boroughs) and a map showing the ward borders is required. These maps can be found online. Check with the city council / municipality that they are up-to-date and accurate.

- **Colour the wards.**

Sounds basic but visually divide up the map. Take 4 coloured pencils. Colour each ward with a different colour from its adjacent wards. If you have split any wards, treat them as two different wards. Start from a ward that is roughly at the centre of the city and work outwards. Colour all wards around the first one, then move to the ones surrounding the coloured wards and so on.

If your city doesn't have wards – you will need to select appropriately sized areas and make your own. Blocks of streets are fine for this – the rule is to make sure the areas don't overlap yet there are no gaps between them. You need equal lengths of street and an area about 5km square which takes about 2 hours to cover (on foot) is perfect.



- **Choose one colour randomly.**

Select all the wards of this colour. If the number of wards is achievable with the team and time you have available – then that is your sample. However, it is more likely that this number of wards is still excessive. In this instance, number the wards consecutively and pick every other (or every 4<sup>th</sup>).

The reason for this is that the selection of the areas you count needs to be random, and that these areas represent a fair spread of regions within a given city. The total population of dogs in a given city will be calculated from the wards counted. For example, a city has 200 wards and 20 are counted as part of the random survey. The number of dogs in those 20 wards is totalled and then multiplied by a factor of 10 (i.e. 200/20) to give the total dog population estimate.

- **Print a detailed street map of each separate ward selected for your final sample.** Use Google maps as they are universally available and usually relatively updated. If this is not an option, record the reasons and use an alternative street map. If there are no detailed maps of the ward draw a sketch of the area.

## Logistics

- **Itinerary**

Study the sample wards. Start logically in one corner and work systematically across the ward (either a zig zag pattern or up and down each street), spending time looking in areas such as landfills or woods. Draw your route out on your map and follow it.

When counting dogs at ward boundaries, any animal inside the centre line of a road boundary for example would be in the count. You need these rules in place and keep it constant throughout the city count.

Try to avoid following the dogs. Make a note if they are running ahead of you. This way you will minimize the risk of counting the same dogs twice. In many cases there may be no obvious pattern of dogs movement.

- **Choose your way of travelling.** It is preferred to travel on foot. A silent means of transport such as a bicycle could also be used. Motorised vehicles may disturb dogs movement and it is best to avoid them. However, there are areas where roaming dogs



are very used to vehicles and they are generally not disturbed by their presence. If this is the case, a tuk-tuk or moped may be ideal.

- **Choose the time of counting.** The time of the day when dogs are going in search for food is preferred. This is usually at dawn before garbage collection and before the start of heavy traffic. Another time of dogs' activity and search for food is at sunset, before night falls. As good visibility is essential, choose a time of ample daylight. The best time to count is early hours of daybreak and in the evening (twilight). You need to be able to see what you are doing but dogs will come out when the weather is cool, there are less people and they feel safer.
- **Choose a suitable day for counting.** Avoid days when dogs are likely to hide away such as days of heavy rain, extreme heat, extreme cold, very strong winds, heavy traffic, protesters on the streets, road works, etc. Count all sample wards in as short a time period as possible. The ideal is to plan to do the same count on three consecutive days of each ward but realistically this could be difficult depending on the number of wards, size of the city and number of people in the team! It is important to at least do a few wards twice though to ensure you are getting an accurate representation of dog population and that your counts are consistent.

### Counting with pen and paper

Take the following MATERIALS with you.

- Clipboard (supplied)
- 2 pens and 1 pencil (in case it rains)
- Blank printed tables to fill in (supplied). Take at least as many copies as the streets intended to cover.
- Street maps
- Camera if possible ( to record any geographical changes to the ward pre and post intervention)

### Counting with smartphone

Take the following with you.



- Smartphone (check that the app EpiCollect is downloaded that it has GPS and photo camera)
- Street maps
- Back-up pen and paper and a few copies of the table!

### **Counting procedure**

- **Complete the tables/records as you go along.** Count all roaming dogs of any age. Class them in one of the following categories: Adult Male, Adult Female, Adult Unknown, Puppy. Include dogs that are approximately under the age of 3 months in the puppy category. If using a **Smartphone** record your data in the project named **DogcountsIndia (type it as you see it with no gaps and capital D and I)**.

### **Important points to keep in mind when counting roaming dogs.**

- Every effort should be made to count all roaming dogs on the street. Look at possible hiding places e.g. under cars, inside drains, inside bins, inside doorsteps.
- Don't include dogs that are owned in your count (dogs on leash).
- Go at your own pace and don't change it in order to catch dogs that are moving away from or towards your field.
- Be consistent. For example, if you decide not to look inside garbage bins unless you see a tail or hear a puppy, then follow this rule every time. Keep a record of such rules. You may find that you need to decide on such little rules to help you go on with your work effectively without doubting yourself every time you face a dilemma. Don't forget to have these rules written down and follow them EVERY TIME.
- Any anomalies must be recorded e.g. inaccessible areas, road blockages, unexpected attack by dogs to counter. Use your rough papers to write all your comments. Don't throw them away at the end of the count. Identify places of interest on your street maps, write comments that will help you remember any important details.

### **Summary records**

On return from counting fill in the summary records on the correct table (supplied). Try to fill all shaded boxes with a number, this will help processing data with Excel and STATA. Give a reason for any gaps e.g. not recorded.



### Health and Safety Points

- It is the responsibility of the volunteer / employee to take every reasonable step to protect her/his own health. Follow our volunteer guidelines, the instructions of the team leaders and be sensible. Work in pairs, keep your charged phone with you and make sure the team know exactly where you are going and when to expect you back.
- It is a requirement that all people working on the field in this program are vaccinated against rabies – if you aren't vaccinated, we will arrange for this to be done BEFORE you start. It is an absolute must.
- We recommend appropriate clothes for the weather and skin and eye protection from the sun. Take a hat, wear sunscreen etc.
- If the weather conditions are extremely treacherous work on the field should be postponed. The dogs won't be about anyway.
- If there is civil unrest or other foreseeable risk to human safety work on the field should be postponed or altered accordingly. Avoid protests and any potential trouble.
- Take breaks, drink lots of water and if it is an exhausting area to cover, it can always be broken down in half as long as you pick the same time of day consecutively to tackle it.

Any further enquiries about the protocol please contact:

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