

The background is a faded, semi-transparent image of a city street scene. In the foreground, a dark-colored dog is seen from the side, sniffing a puddle on a paved sidewalk. The background shows buildings, trees, and a street with a few people, all rendered in a light, hazy tone.

Dog population counting survey and setting indicators for dog population management

Aleksandra Hammond Seaman

Dunja Kovač

Tomislav Mikuš

Emilija Poposka

Dimitar Terzievski

Maruša Weitzer



It all started in 2008

- Western Balkan Veterinary Network (wbvn.net)
 - unique platform for the advancement of animal welfare in the Western Balkan region
- At the large meeting in Teramo, Italy, representatives of Western Balkan Veterinary Network concluded that there is a need to upgrade the existing Network:

Regional Animal Welfare Centre – www.RAWC.eu

RAWC – for Balkans



- A lot of relatively small countries with similar cultural and historical heritage.
- Lack in experts per country itself
- Specific topics for the region (i.e. stray dog problem)

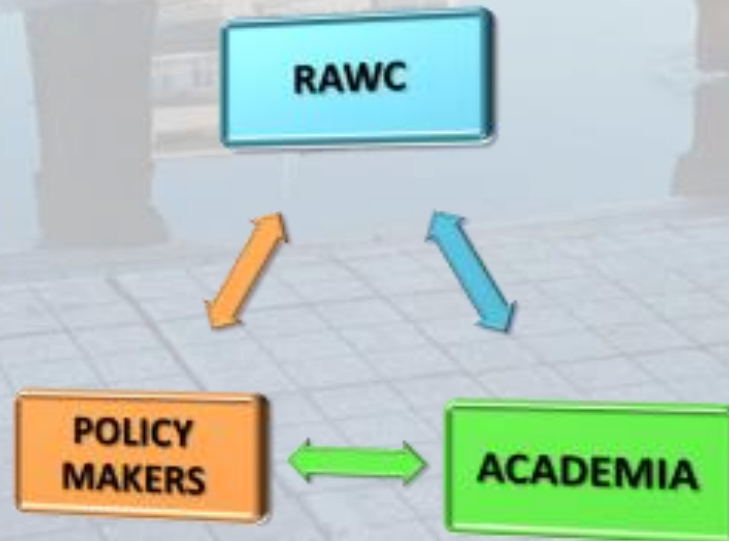
RAWC



- Hosted by Croatian Veterinary Institute in Zagreb;
- Chair appointed every year – prof Vlatko Ilieski, PhD (Macedonia)
- Steering Committee - Members of the Steering Committee are mixture of sponsors, Academia and Policy makers.

Overall strategy

to bridge over the gap between Academia and Policy makers in the region and to help them in the implementation of regional and international best practices in the field of Animal Welfare.



RAWC prioritize activities in the following areas



- **Training of business operators and stakeholders** (slaughter, pigs, broilers and transport) – coordination and dissemination of information and resources;
- **Experimental animals – implementation and training;**
- **Companion animals population management and stray dog control** – develop a regional approach and share best practice;
- **Raising farmer awareness** and engaging with **small scale farmers** to establish an effective and targeted regional approach and to explore new business models;
- **Improving efficiency and effectiveness of official controls.**

Training of business operators and stakeholders



- **Training trainers program for abbatoirs**
 - In cooperation with RSPCA, AWTraining and University of Bristol (*+50 trainers trained in Balkans and Turkey*)
- **Two day workshop**
 - Regional approach to the implementation and enforcement of Regulation 1099/2009 (*+50 participants, with a very wide range of background experience - Policy makers, Academia, Scientists and Industry*)

Experimental animals



- Members of the RAWC - *prof Ilieski and prof Vučinić coauthored a guidelines regarding the ethical issues of animal testings.*

O ETIČKOM VREDNOVANJU I NAČINU OBAVLJANJA
RETROSPEKTIVNE ANALIZE I ANALIZE KORISTI I
ŠTETA OGLEDA KOJI SE REALIZUJU NA
ŽIVOTINJAMA

Priručnik

Companion animals population management - DPM



- **Shelter Quality**

- Active participation of four regional experts on Shelter Quality project activities.



- **Be his hero!**

- Launched in 8 Countries of the region (Albania, Bosnia&Herzegovina, Croatia, Kosovo, Bulgaria, Serbia, Macedonia and Montenegro). RAWC collaborated with OIE on translation, printing and distribution of the materials, and a little bit more.



- **Training of trainers on ICAM dog population management indicators**

- five trainers trained

Be His Hero



YOU CAN TELL
YOUR DOG ANYTHING...
... EXCEPT GOODBYE.

This is a message from the World
Organisation for Animal Health
OIE / www.oie.int

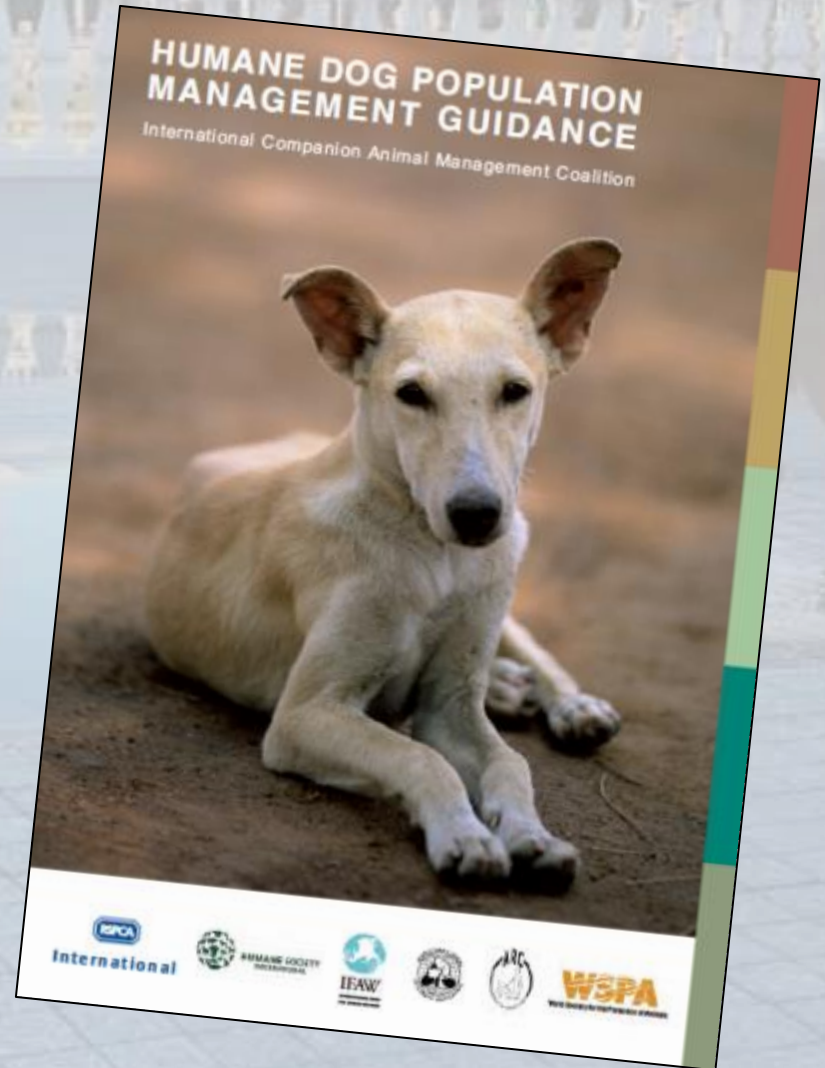
International Companion Animal Management (ICAM) Coalition

- ICAM Coalition formed in 2006
 - Discuss, share and learn...



ICAM Coalition

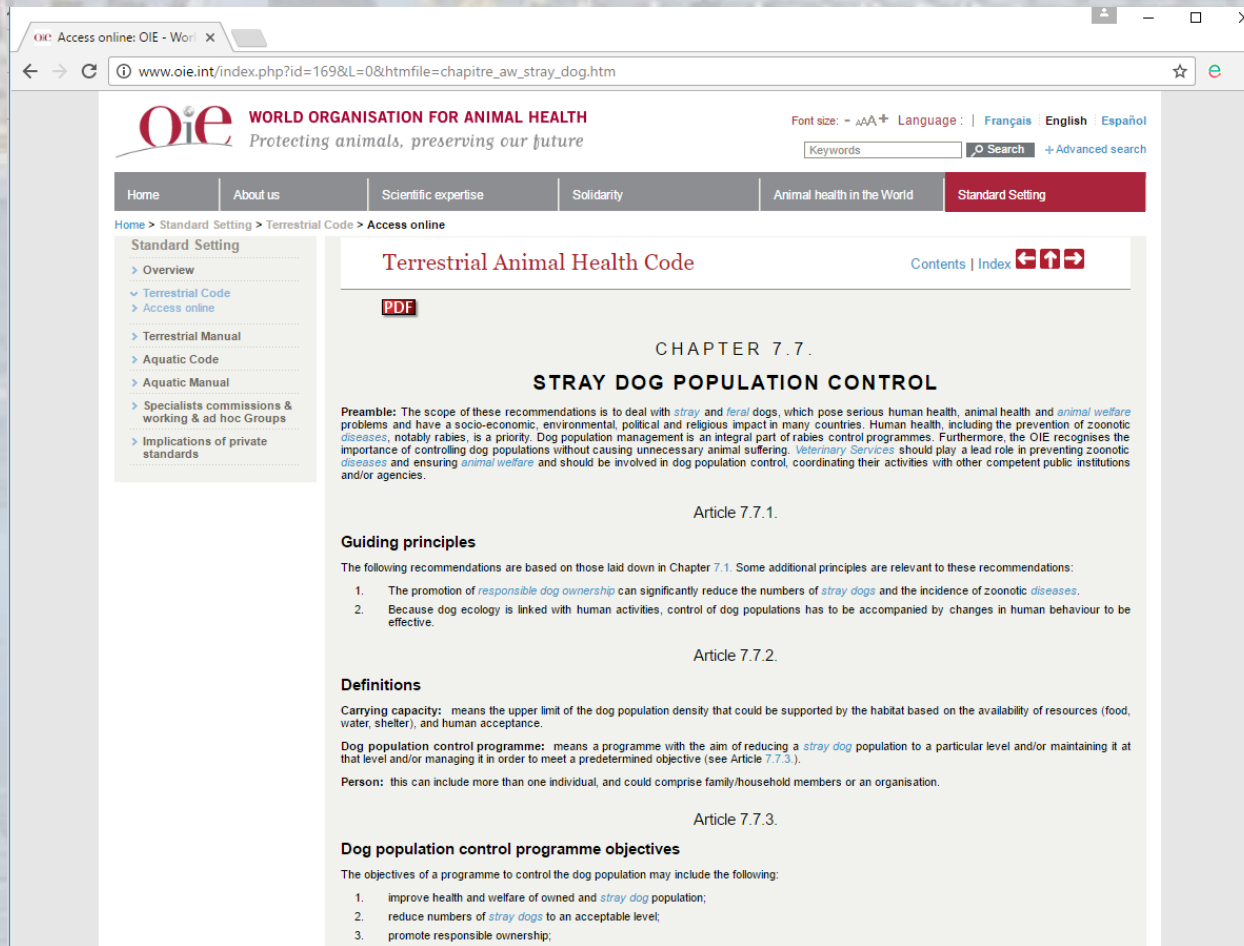
- ICAM Coalition formed in 2006
 - Discuss, share and learn...
 - Humane DPM guidance
 - Initial assessment prior to planning
 - No 'one size fits all'
 - Match intervention to local dog population dynamics



Background

- ICAM Coalition formed in 2006
 - Discuss, share and learn...
 - Humane DPM guidance
 - » Initial assessment prior to planning
 - » No 'one size fits all'
 - » Match intervention to local dog population dynamics
 - But what do we mean by 'working?'
 - No shared definition of success/failure

Implementing OIE standards



The screenshot shows a web browser window displaying the OIE website. The browser's address bar shows the URL: www.oie.int/index.php?id=169&L=0&htmlfile=chapitre_aw_stray_dog.htm. The OIE logo and name are at the top left, with the tagline "Protecting animals, preserving our future". The navigation menu includes "Home", "About us", "Scientific expertise", "Solidarity", "Animal health in the World", and "Standard Setting". The "Standard Setting" menu is expanded, showing "Overview", "Terrestrial Code", "Access online", "Terrestrial Manual", "Aquatic Code", "Aquatic Manual", "Specialists commissions & working & ad hoc Groups", and "Implications of private standards". The main content area is titled "Terrestrial Animal Health Code" and "CHAPTER 7.7. STRAY DOG POPULATION CONTROL". A PDF icon is visible. The text includes a preamble, guiding principles, definitions, and objectives for a dog population control programme.

Font size: - AA+ Language: | Français English Español

Keywords Search + Advanced search

Home About us Scientific expertise Solidarity Animal health in the World Standard Setting

Home > Standard Setting > Terrestrial Code > Access online

Standard Setting

- > Overview
- > Terrestrial Code
- > Access online
- > Terrestrial Manual
- > Aquatic Code
- > Aquatic Manual
- > Specialists commissions & working & ad hoc Groups
- > Implications of private standards

Terrestrial Animal Health Code Contents | Index

PDF

CHAPTER 7.7.
STRAY DOG POPULATION CONTROL

Preamble: The scope of these recommendations is to deal with *stray* and *feral* dogs, which pose serious human health, animal health and *animal welfare* problems and have a socio-economic, environmental, political and religious impact in many countries. Human health, including the prevention of zoonotic diseases, notably rabies, is a priority. Dog population management is an integral part of rabies control programmes. Furthermore, the OIE recognises the importance of controlling dog populations without causing unnecessary animal suffering. *Veterinary Services* should play a lead role in preventing zoonotic diseases and ensuring *animal welfare* and should be involved in dog population control, coordinating their activities with other competent public institutions and/or agencies.

Article 7.7.1.

Guiding principles

The following recommendations are based on those laid down in Chapter 7.1. Some additional principles are relevant to these recommendations:

1. The promotion of *responsible dog ownership* can significantly reduce the numbers of *stray dogs* and the incidence of zoonotic diseases.
2. Because dog ecology is linked with human activities, control of dog populations has to be accompanied by changes in human behaviour to be effective.

Article 7.7.2.

Definitions

Carrying capacity: means the upper limit of the dog population density that could be supported by the habitat based on the availability of resources (food, water, shelter), and human acceptance.

Dog population control programme: means a programme with the aim of reducing a *stray dog* population to a particular level and/or maintaining it at that level and/or managing it in order to meet a predetermined objective (see Article 7.7.3.).

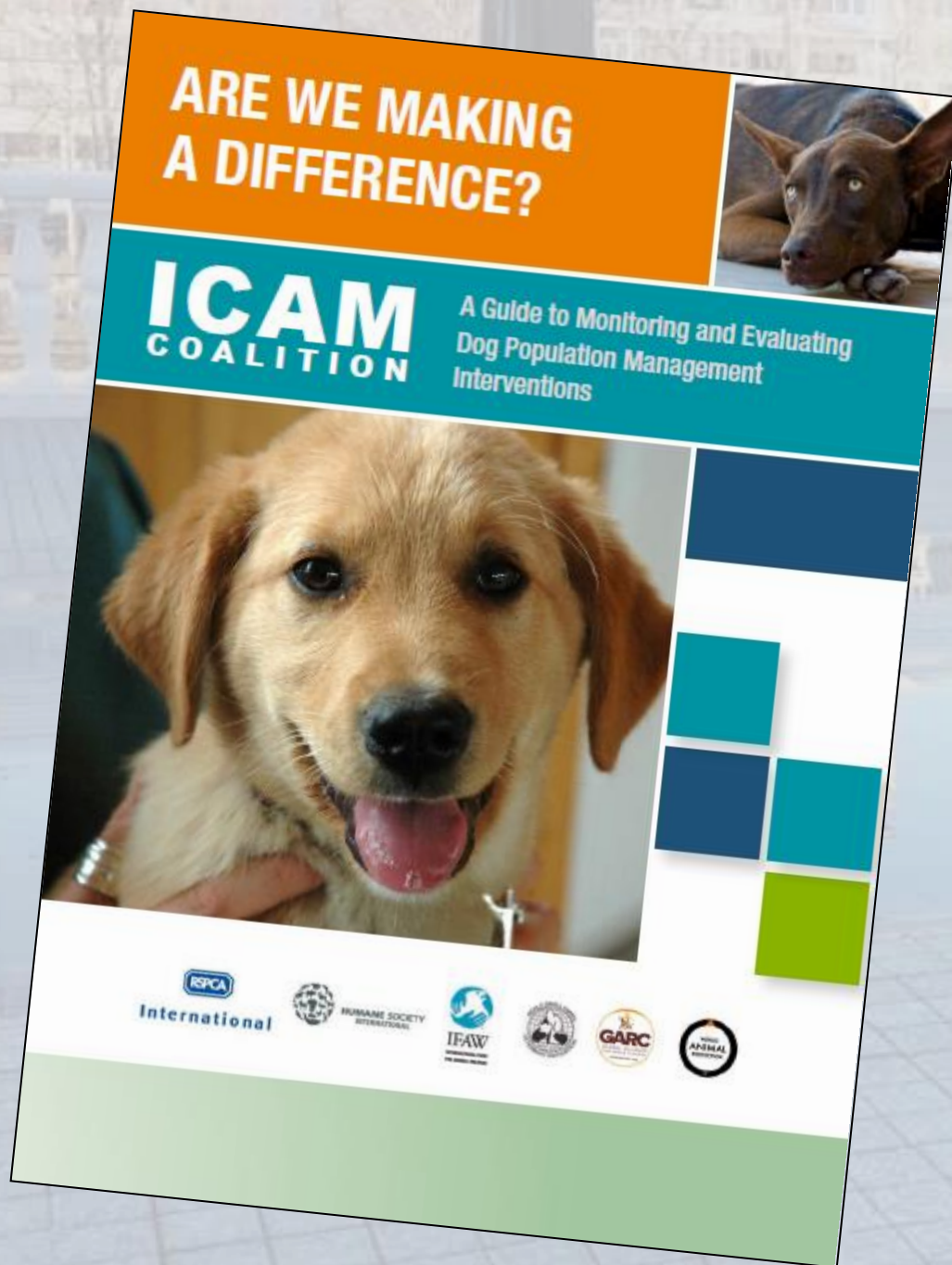
Person: this can include more than one individual, and could comprise family/household members or an organisation.

Article 7.7.3.

Dog population control programme objectives

The objectives of a programme to control the dog population may include the following:

1. improve health and welfare of owned and *stray dog* population;
2. reduce numbers of *stray dogs* to an acceptable level;
3. promote responsible ownership;



- Launched 2015
- Collaborating partners
 - Boyd Orr Centre, University of Glasgow
 - JMICAWE, University of Edinburgh
 - Animal Welfare and Behaviour group, University of Bristol
 - Department of Veterinary Tropical Diseases, University of Pretoria
- Many subject experts and DPM implementers

What is monitoring and evaluation (M&E)?

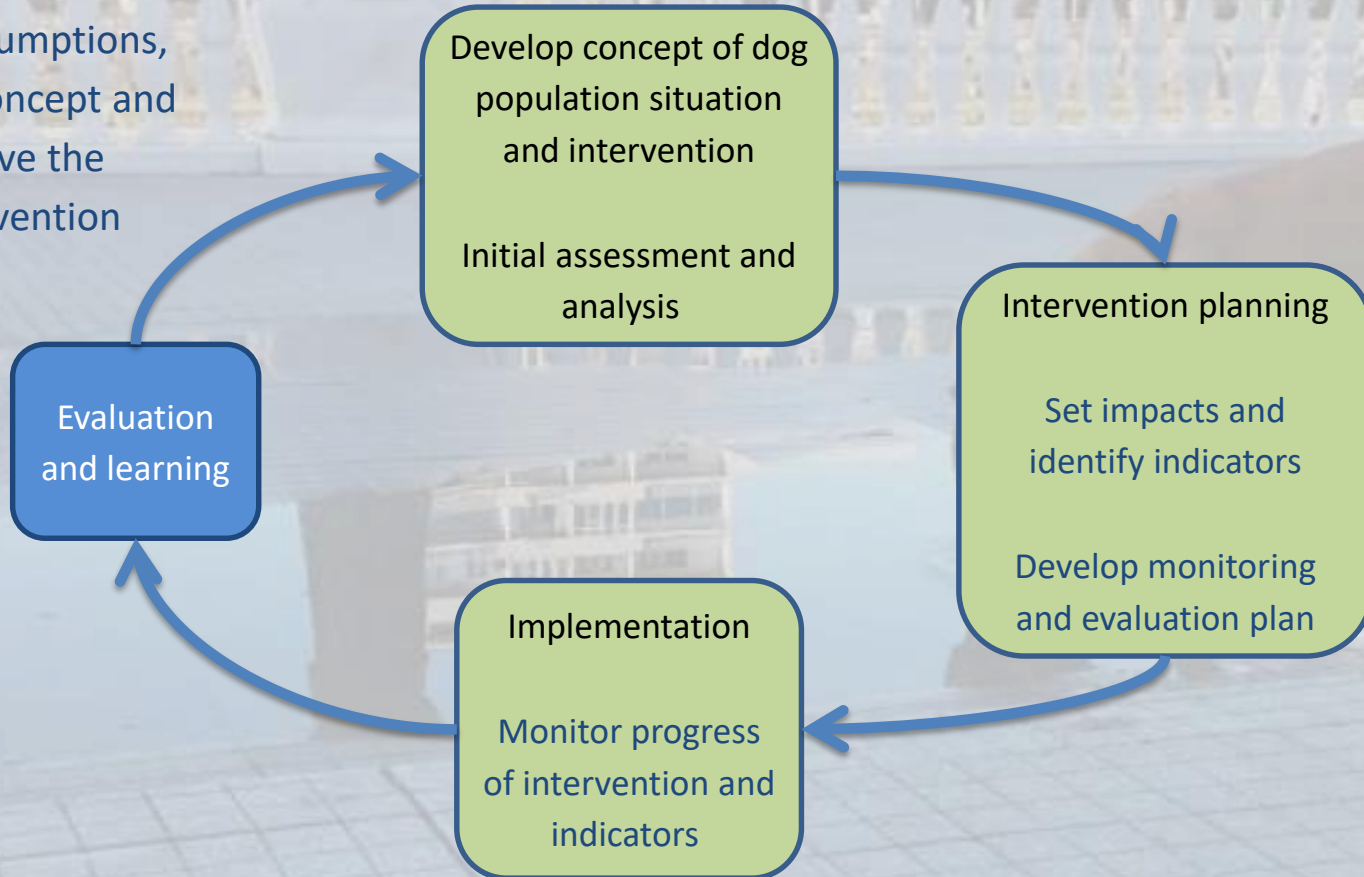
- **Monitoring** is systematic and routine data collection measuring intervention progress and indicators of impact.
- **Evaluation** uses data collected through monitoring to answer questions about “what difference did this intervention make?”. It is conducted regularly but not frequently and is also known as ‘**Impact assessment**’

Why invest in M&E?

- To inform donors of the impacts created through their funding
- To inform the public of any impacts on them and/or their dogs as beneficiaries of the intervention
- To provide evidence for lobbying to sustain or replicate an intervention
- To compare interventions and their relative impacts
- **To learn and improve our impact (the most important)**

Why assess our impact?

Test assumptions,
refine concept and
evolve the
intervention



Why assess our impact?

“Success depends on knowing what works”

Bill Gates

- Quoted in the Centre for Global Development’s 2006 report ‘When will we ever learn? Improving lives through impact evaluation’ (Savedoff et al., 2006)

Definitions of key terms

- An **Intervention** is a combined set of activities with specific changes or impacts in mind
- **Impacts** are the changes we hope to contribute towards through our interventions
- **Indicators** are measurable signs of impacts (also known as metrics); they are the things we would see or hear if our desired impact was occurring
- **Methods of measurement** are the techniques we use to measure our indicators



Working groups

Take 5 minutes to identify main welfare indicators regarding the problems from your country.

8 Impacts

1. Improve dog welfare
2. Improve care provided to dogs
3. Reduce dog density/Stabilise turnover
4. Reduce risks to public health
5. Improve public perception
6. Improve rehoming centre performance
7. Reduce negative impacts of dogs on wildlife
8. Reduce negative impacts of dogs on livestock

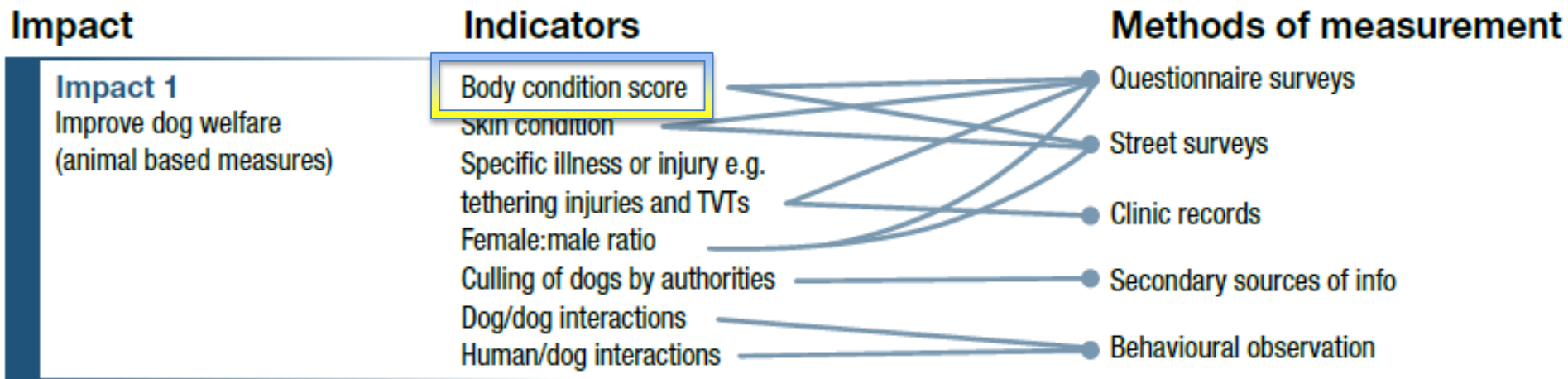
Indicators

- Each impact has a list of indicators
 - *Recommended*
 - *Suggested*

Impact	Indicators	Methods of measurement
Impact 1 Improve dog welfare (animal based measures)	Body condition score Skin condition Specific illness or injury e.g. tethering injuries and TVTs Female:male ratio Culling of dogs by authorities Dog/dog interactions Human/dog interactions	Questionnaire surveys Street surveys Clinic records Secondary sources of info Behavioural observation

Indicators

- Each impact has a list of indicators
 - *Recommended*
 - *Suggested*



e.g. Body condition score –
recommended



e.g. Body condition score – *recommended*

- Yoak et al (2014) Disease control through fertility control: Secondary benefits of animal birth control in Indian street dogs. *Prev Vet Med, 113; 152– 156*
 - Compared untreated dogs in Indian cities with and without current CNR (ABC) interventions
 - Untreated dogs in intervened cities had improved body condition
 - Potential mechanism; reduced dog density led to increased resource availability for all dogs
- Sankey et al (2012) Change in public perception of roaming dogs in Colombo City. *Presentation at 1st Int DPM conference*
 - Compared treated and untreated dogs in Colombo, Sri Lanka during comprehensive management intervention
 - Treated dogs had improved body condition
 - Potential mechanism; reduced breeding behaviour led to improved body condition

Indicators

- Each impact has a list of indicators
 - *Recommended*
 - *Suggested*

Impact	Indicators	Methods of measurement
Impact 1 Improve dog welfare (animal based measures)	Body condition score	Questionnaire surveys
	Skin condition	Street surveys
	Specific illness or injury e.g. tethering injuries and TVTs	Clinic records
	Female:male ratio	Secondary sources of info
	Culling of dogs by authorities	Behavioural observation
	Dog/dog interactions	Behavioural observation
	Human/dog interactions	Behavioural observation
		Questionnaire surveys

e.g. Dog-dog interactions – *suggested*



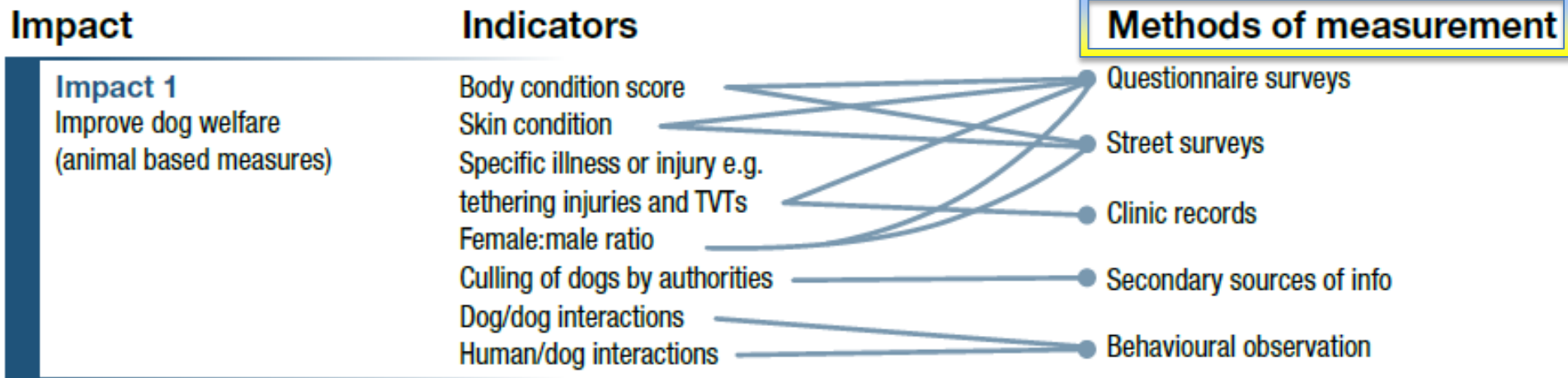
Image from www.flickr.com, available under creative commons licence, credited to Nazly Ahmed



Image from www.flickr.com, available under creative commons licence, credited to Godo Godjo

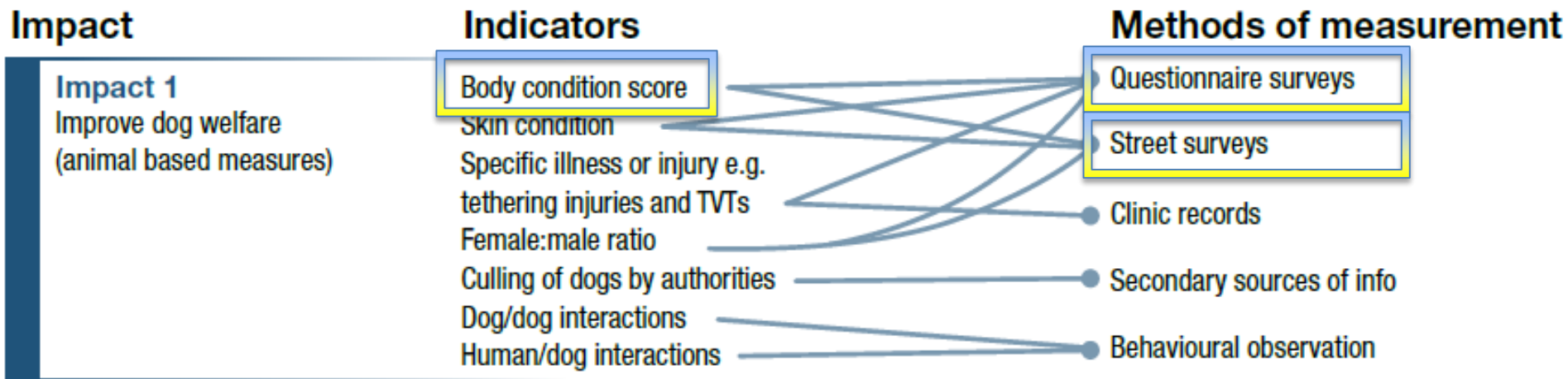
Method of measurement

- Each indicator is accompanied by at least one suggested method of measurement



Method of measurement

- Each indicator is accompanied by guidance for at least one method of measurement



e.g. Street surveys



You choose...

Impacts
Indicators
Method of measurement

You choose...



M&E theory

Impacts
Indicators
Method of measurement

Making your impact assessment robust

Navigating the guidance

www.icam-coalition.org/resources.html

Home | About | Tools and Resources | Indicators Project

Practical tools and resources

On this page you will find a selection of resources that aim to provide guidance on the practical tools required for humane dog population management. These documents are written by individual members of the ICAM Coalition and reflect the views of those individual members and not necessarily of the entire Coalition, however all members of the Coalition have approved that these documents should be made available through this site.

We hope that you find these a useful supply of practical solutions to accompany the concepts and approaches described in the Humane Dog Population Management Guidance. We plan to add to this area of the website with further resources that offer practical guidance and are happy to receive any documents that you feel will fulfill this purpose.

Initial data collection and assessment

- [Surveying roaming dog populations - guidelines on methodology.pdf](#)

Influential factors in dog population management

Components of a comprehensive dog population management programme

- [Non-surgical methods for controlling the reproduction of dogs and cats.pdf](#)
- [Identification methods for dogs and cats.pdf](#)
- [Shelter guidelines.pdf](#)
EN | ES
- [Methods for the euthanasia of dogs and cats: English.pdf](#)

Designing the intervention

These are draft versions of tools that accompany our new Guide to Monitoring and Evaluating Dog Population Management Interventions. Please let us know what you think by emailing info@icam-coalition.org

- [DRAFT Dog Population Management Impact Assessment Tool](#)
- [DRAFT Dog Body Condition Scoring Training](#)
- [DRAFT Dog Body Condition Scoring Quiz](#)

Downloads

Humane management of dog populations

- [Humane Dog Population Management Guidance \(PDF\)](#)
Language: EN | ES | CH | FR | PT | RU | TH | TR | AR | BA
- [Are we making a difference? A Guide to Monitoring and Evaluating Dog Population Management Interventions \(PDF\)](#)
EN

Developing a euthanasia policy with an animal welfare basis

- [The welfare basis for euthanasia of dogs and cats and policy development \(PDF\)](#)
Language: EN

Humane management of cat populations

- [Humane cat population management guidance \(PDF\)](#)
Language: EN

The ICAM Coalition produces factsheets and publications on companion animal population management.

www.icam-coalition.org

Use our online impact assessment tool

- Sign up as a user
- Choose your impacts
- Series of questions
- → creates guidance.pdf including only impacts, indicators and MoM tailored to your intervention

M&E plan - commitment

Impact	Indicator	Method of measurement	Frequency and baseline	Budget implications	Lead person
Improve welfare of roaming dogs	% of roaming dog population with body condition score 1 (emaciated) or 2 (thin)	Street survey along 6 standard routes	Bi-annually, Jan and July Baseline measured Jan 2016	2 staff X 12 mornings 5-8am Fuel for car Data analysis = \$ 4,000	Colonel Mustard (Community volunteer working on street surveys)

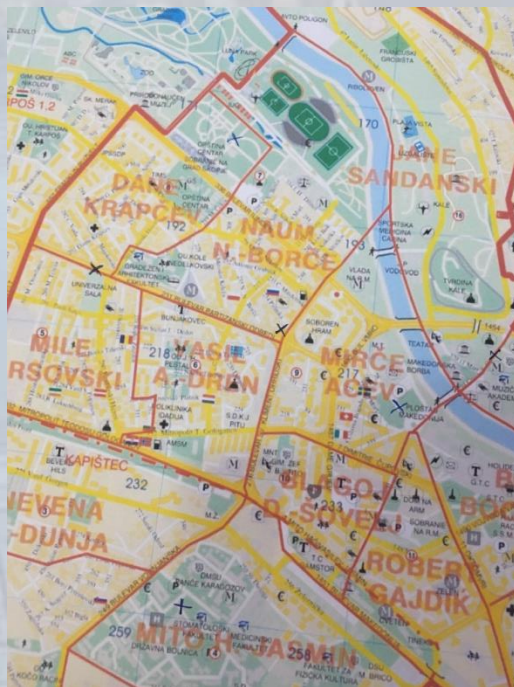
M&E plan - commitment

Impact	Indicator	Method of measurement	Frequency and baseline	Budget implications	Lead person

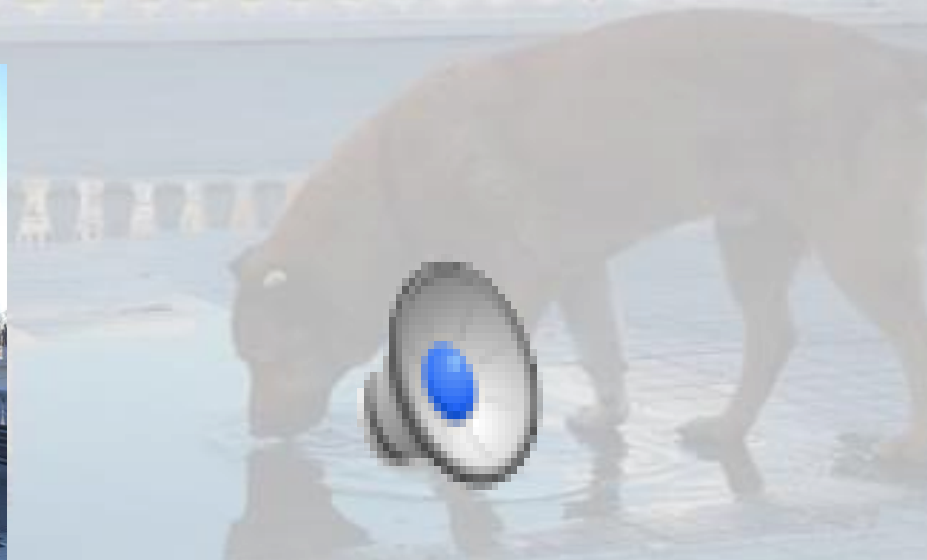
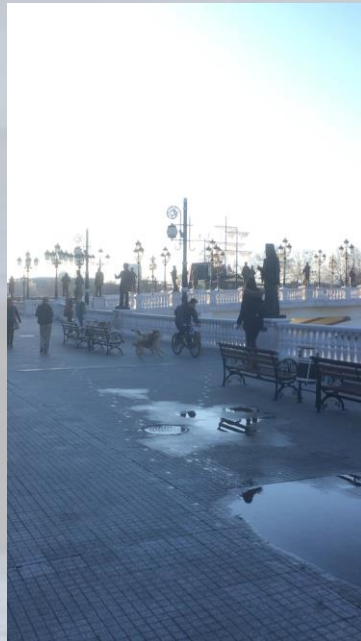
- M&E plan helps make M&E a reality; feeds into action plans, funding proposals, job objectives
- Prioritisation of methods; start with prioritisation of indicators, for all stakeholders
- Commit to 'evaluation events'

Example – Skopje, Municipality Centar

- Why Skopje?
 - Due to the stray dog problem and very proactive local government.



Mornings in Skopje



Skopje

- Who trained us?
 - Training was conducted by Elly Hibby, PhD, an Independent Animal Welfare Consultant and Scientific Coordinator to the International Companion Animal Management (ICAM) Coalition



P.S. Thanks Elly!

Indicators identification

Step 1

<http://www.icam-coalition.org/indicatorsproject.html>

Dog Population Management Impact Assessment Tool **ICAM**
INTERNATIONAL COMPANION ANIMAL MANAGEMENT COALITION

To start a new assessment, click the 'Begin evaluation' button. Tomislav Mikus [Logout](#)

[Begin evaluation](#)

Essential Guidance
The following documents are essential for every project.
Background
Making Your Impact Assessment Robust

Your tailored Impact guidance
Click on the result to access the summary of recommendations for your project.

Date	Results	Delete?
13. 03. 2018.	Impact 1 Results	X



Step 2

Answer the questionnaire

Online Tool Summary PDF 1 / 47

Indicators

Dog density along surveyed streets	Dog population estimates	% of lactating females
Annual survival of roaming dogs	Age structure of roaming dogs	Litters per female
Annual survival of owned dogs	Age structure of owned dogs	% pregnant

Methods of Measurement

Household questionnaires	Street surveys
Clinic records	Secondary sources of information
Behavioural observation method	Sales figures from local vendors
Participatory research methods	Data submitted by rehoming centre
Street surveys and questionnaires for measuring vaccination coverage	Collaboration between wildlife and dog stakeholders for data collection



Step 3

Receive the summary of the recommended Indicators and Methods of Measurements based on your answers.

PDF comes with summary and all detailed explanations of the Indicators and Measures.

Online Tool Summary PDF

Indicators

Body condition score	Skin condition	Specific disease or injury
Canine transmissible venereal tumours (TVTs)	Female: male ratios	Culling of dogs by authorities
Dog-dog interactions	Human-dog interactions	

Methods of Measurement

Household questionnaires	Street surveys
Clinic records	Secondary sources of information
Behavioural observation method	Sales figures from local vendors
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Street surveys and questionnaires for measuring vaccination coverage	Collaboration between wildlife and dog stakeholders for data collection

IMPACT 1

IMPACT 2

IMPACT 3

IMPACT 4

IMPACT 5

IMPACT 6

IMPACT 7

IMPACT 8

Before the streets...

- **Route identification:**
- **Unbiased** (randomly selected streets)
 - Should be planned by somebody who does not know anything about the abovementioned hot spots.
- **Hot spots** (route with most dogs)
 - Should be planned by somebody who knows where and when dogs are there.



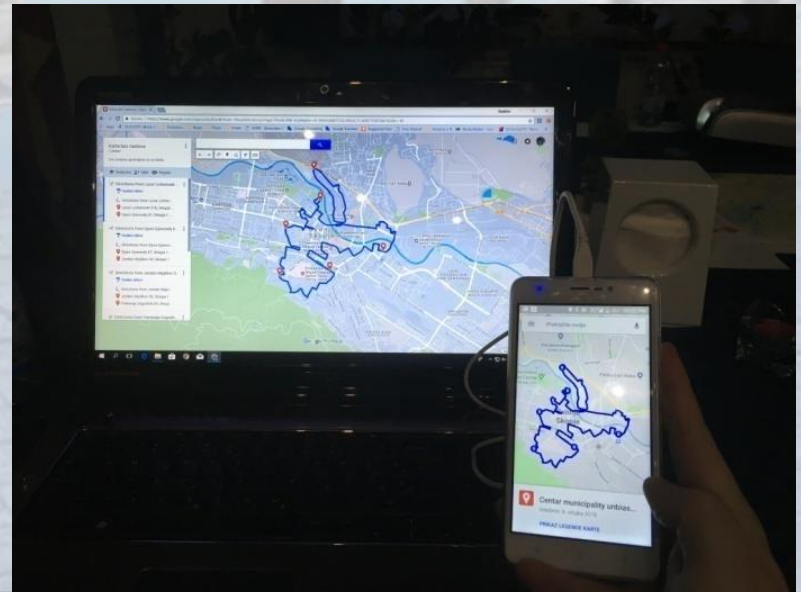
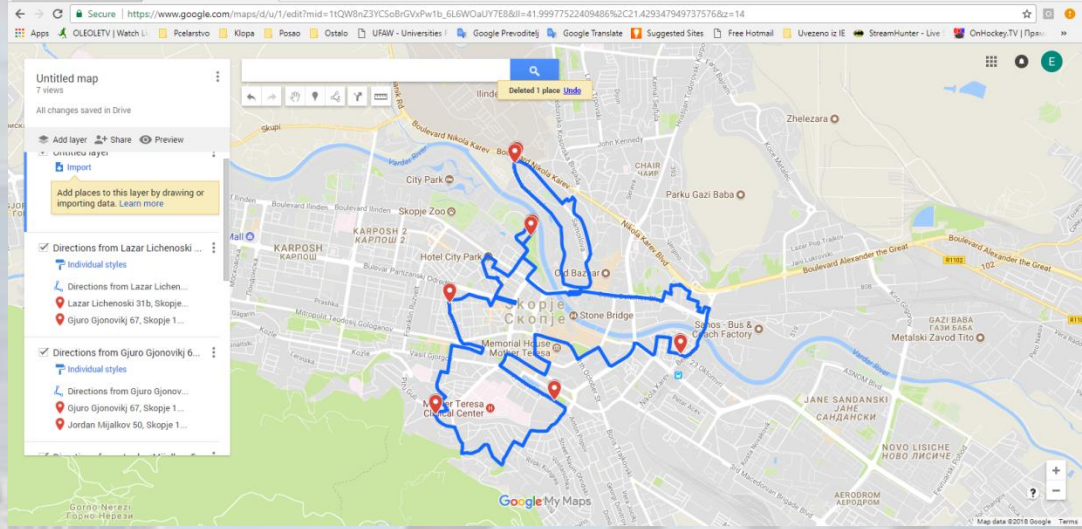


Working groups

Take 5 minutes to identify unbiased and hot spot route.

Digitalisation

- After the route identification, and due to the accuracy of the each next repetition it was needed to transfer the route to the GPS tracking program.
- In our case – Google Maps



- As long as you always do it in the same way, you can choose whatever type of street survey would you like to do (walking, bicycle, motorcycle, car or combination)
- In our case – the Dogmobile and walking



Survey

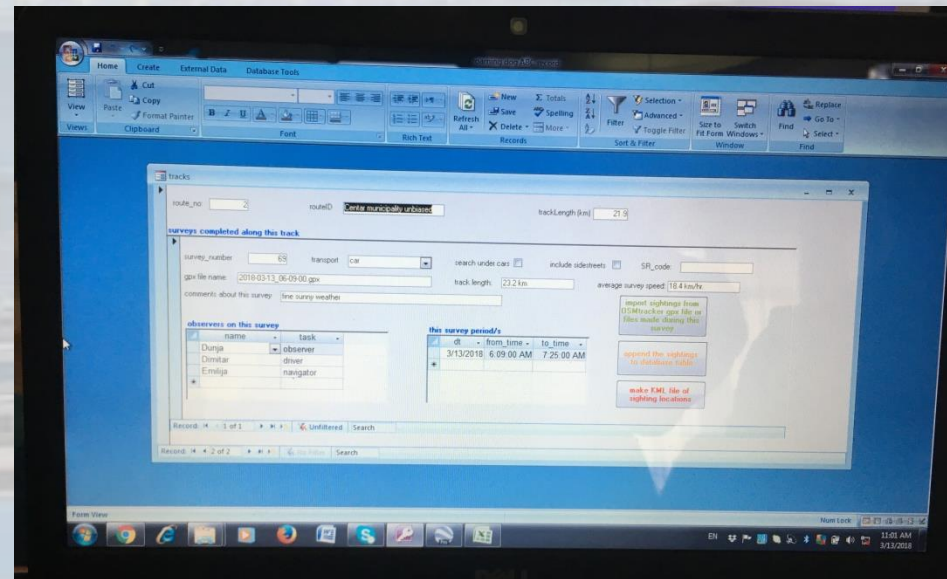
For dog counting keep in mind that you have to go on the streets before the morning rush starts, because if you go later it will be harder to spot the dogs.

Dogs in Skopje, being Balkan dogs, were mostly sleeping at that time.

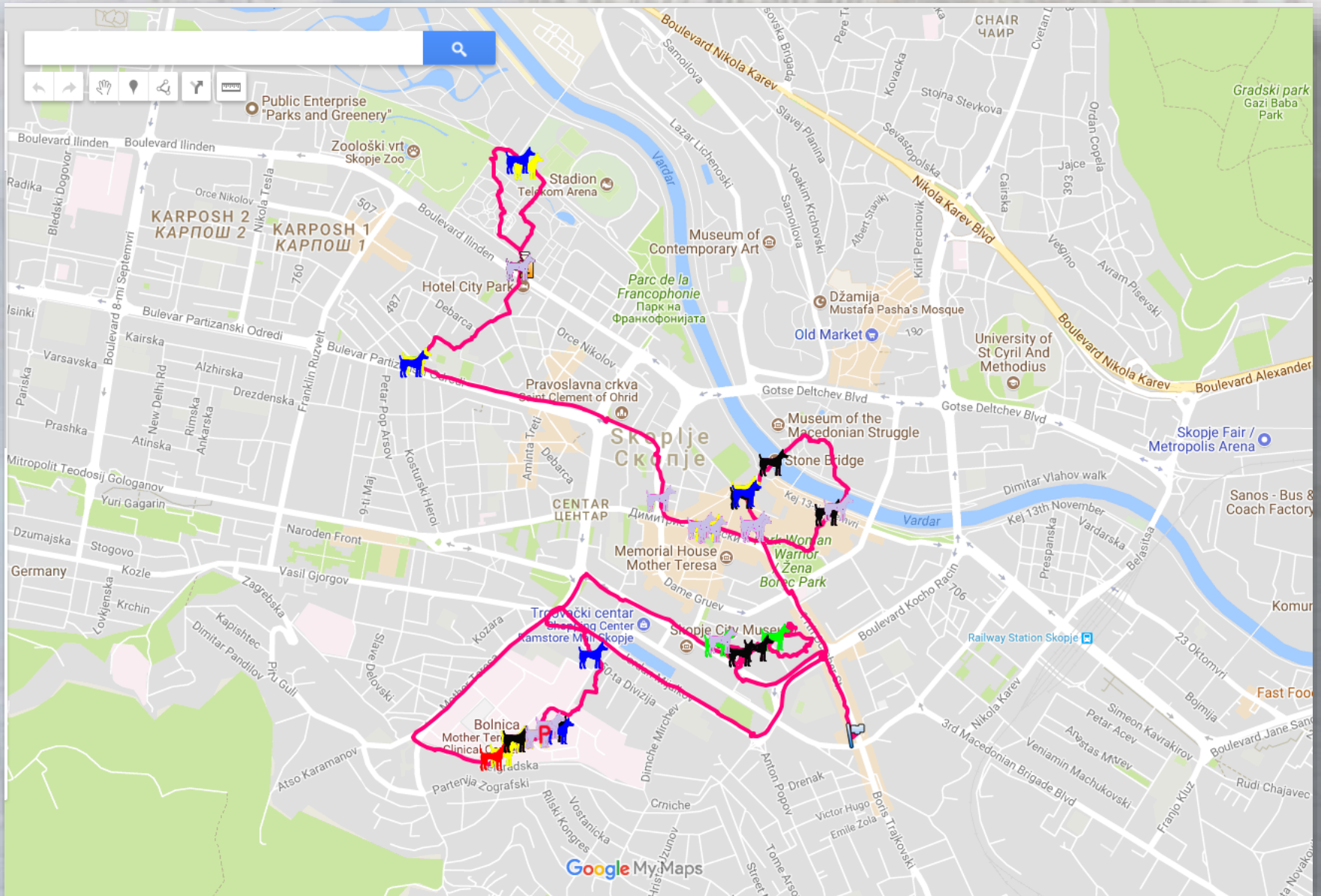


Data processing

- After the collection, data needs to be evaluated and processed.
- In our case – Microsoft Access form, with preordered formulas for calculation.



Results?



Socio-demographic survey

KoBo Collect

- Free program for questionnaire survey.
- Easy to question development, easy to use with a very proactive customer support.

Android phone – one folder



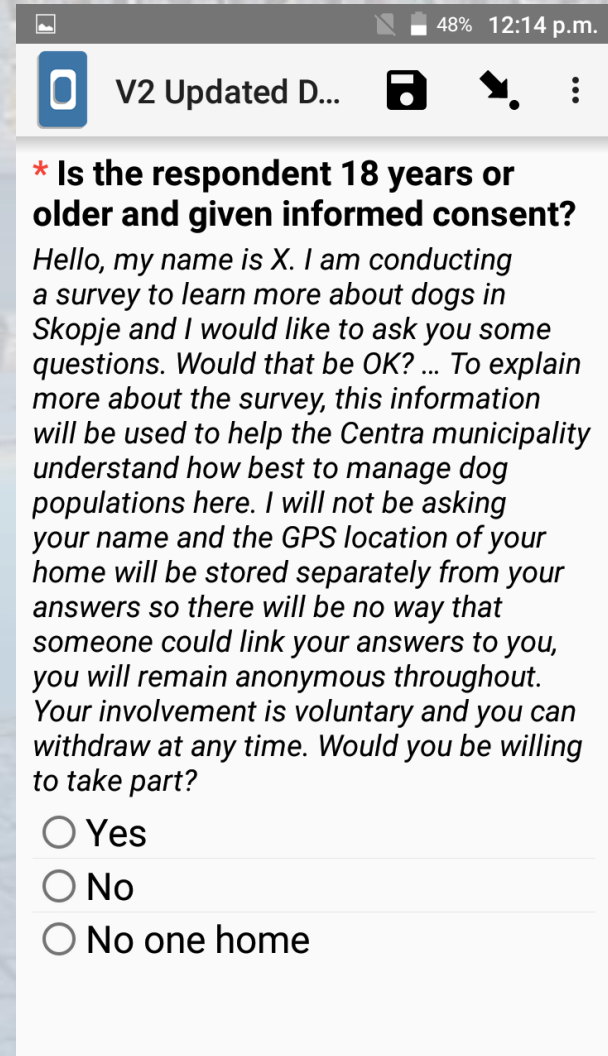


Working groups

Take 15 minutes to identify main questions which you would ask on public survey regarding the problems of stray dogs.

Do not forget – ethics!

- The data we collect, the way in which we collect or use it may cause harm
- Harms may be direct or contingent
- Immediately evident or only apparent in the future
- Graded in severity – mild/moderate/severe



48% 12:14 p.m.

V2 Updated D...

*** Is the respondent 18 years or older and given informed consent?**

Hello, my name is X. I am conducting a survey to learn more about dogs in Skopje and I would like to ask you some questions. Would that be OK? ... To explain more about the survey, this information will be used to help the Centra municipality understand how best to manage dog populations here. I will not be asking your name and the GPS location of your home will be stored separately from your answers so there will be no way that someone could link your answers to you, you will remain anonymous throughout. Your involvement is voluntary and you can withdraw at any time. Would you be willing to take part?

Yes

No

No one home

On the field

- When entering properties, backyards or apartments, keep in mind:
- IF IT'S WIERD – LEAVE.



General questions

59% 1:59 p.m.

V2 Updated D...

In the last month, have you been annoyed or troubled by a dog or dogs in your neighbourhood?

Yes

No

59% 1:59 p.m.

V2 Updated D...

Over the last 12 months, do you think there has been a change in the number of roaming dogs in your community, and if so, in what direction?

Decreased

Stayed the same

Increased

General questions

59% 1:59 p.m.

V2 Updated D...

Do you know anyone in your neighbourhood whose dog had puppies in the last 12 months? This can include puppies born within your own household.

Ensure the respondent can answer "yes" whilst still remaining anonymous, if it is their household who had the puppies

Yes

No

59% 1:59 p.m.

V2 Updated D...

Do you or anyone in your home currently offer regular care, such as food, to a street dog that doesn't have an identifiable owner? ('regular' care means at least once per week)?

Yes

No

Specific questions

59% 1:59 p.m.

V2 Updated D...

Household dog (1)

How did you acquire this dog?

- Pup of own dog
- Purchased from within this town
- Purchased from outside this town
- Gift from within this town
- Gift from outside this town
- Adopted off the street
- Adopted from a shelter
- Other
- Don't know

59% 1:59 p.m.

V2 Updated D...

Household dog (1)

What is the main role of your dog in your household?

- Pet
- Guard
- Shepherd
- Hunting
- Breeding

Dog identification and health

59% 1:59 p.m.

V2 Updated D...

Household dog (1)

Is your dog microchipped?

Yes

No

Don't know

59% 1:59 p.m.

V2 Updated D...

Household dog (1)

Is your dog sterilised?

Yes

No

Dog identification and health

59% 1:59 p.m.

V2 Updated D...

Household dog (1)

Was your dog rabies vaccinated in the last 12 months?

Yes

No

Don't know

59% 1:59 p.m.

V2 Updated D...

Household dog (1)

Has your dog been given parasite medication in the last 4 months?

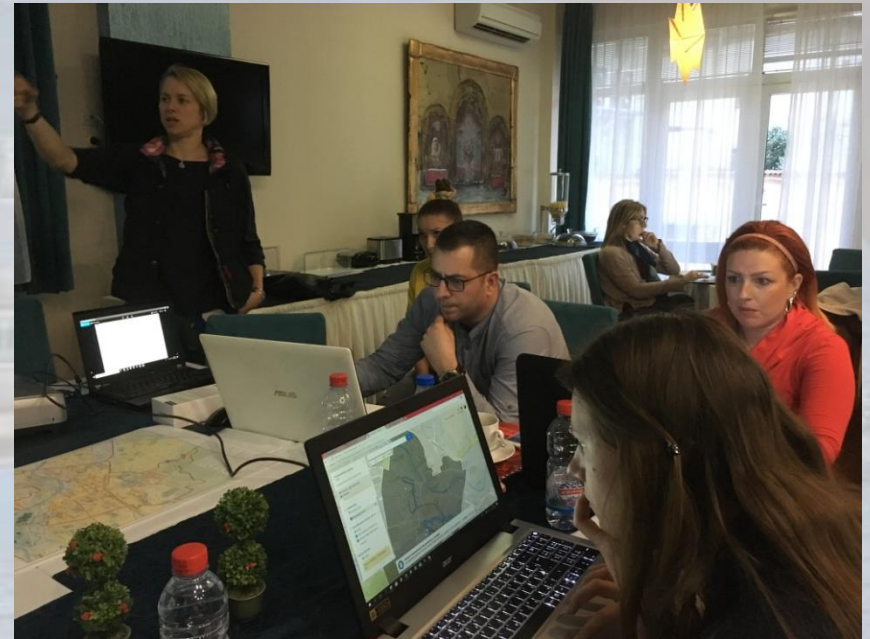
Yes

No

Don't know

Data processing and results

- Face to face interviews gives us very good look at what is going on in specific area.
- What are the people toughs, and what mindset is on the streets.



- And of course, where are the sources of dogs, and can we count on the local support.
- Dog on the left – Milanče – is a stray dog (yellow tag), but he has some very nice owned friends.



SDB3

Belgrade, Serbia
13-15 June 2018



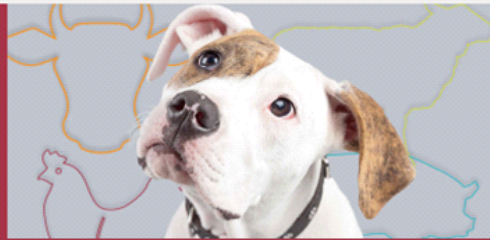
OIE Platform
on Animal Welfare
for Europe



WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

**IMPROVING
ANIMAL
WELFARE
IN EUROPE**

by empowering Veterinary
Services to take actions



Third OIE Regional Workshop on Stray Dog population management for Balkan countries (SDB3)

Invitation

**Thank you for giving us the opportunity to present our
work, hope to see you soon!**



Thank you for your attention!

Aleksandra, Dimitar, Dunja, Elly, Emilija, Maruša and Tomislav