



Second OIE Regional Workshop on stray dog population management for Balkan countries (SDB2), Tirana, Albania, 14-16 June 2016

EVIDENCE-BASED DOG POPULATION CONTROL AT THE LOCAL LEVEL: AN EXAMPLE OF GOOD PRACTICE FROM SERBIA

Organisation for the Respect and Care of Animals – ORCA

ABOUT ORCA

Mission:

- Improvement of policy, legislation and practice related to animal welfare, environmental protection and rural development in Serbia and the Balkan region, through research, education, advocacy and monitoring.

Our work:

- Supports EU integration process – chapters 11, 12, 13, 27
- Leading organisation in the regional network “Sustainable agriculture for sustainable Balkans” (long-term project, European commission, DG NEAR, 1 million EUR)
- Building capacities of CSOs in the Western Balkans (sustainable agriculture, including animal welfare)
- Connecting science, government, CSO’s - a regional platform



RESEARCH ON DPC IN MUNICIPALITIES IN SERBIA 2015: VETERINARY DIRECTORATE AND ORCA

Conclusions:

- **66%** of municipalities stated that problem is pronounced
- **65%** do not have DPC programmes
- **81%** lack initial estimations of dog population.
- **90%** has no monitoring systems in place
- **96%** of municipalities stated they need assistance!

Serbia is missing:

- Research on the state of DPM – at both national and local levels
- A national DPM strategy
- Examples of good practice



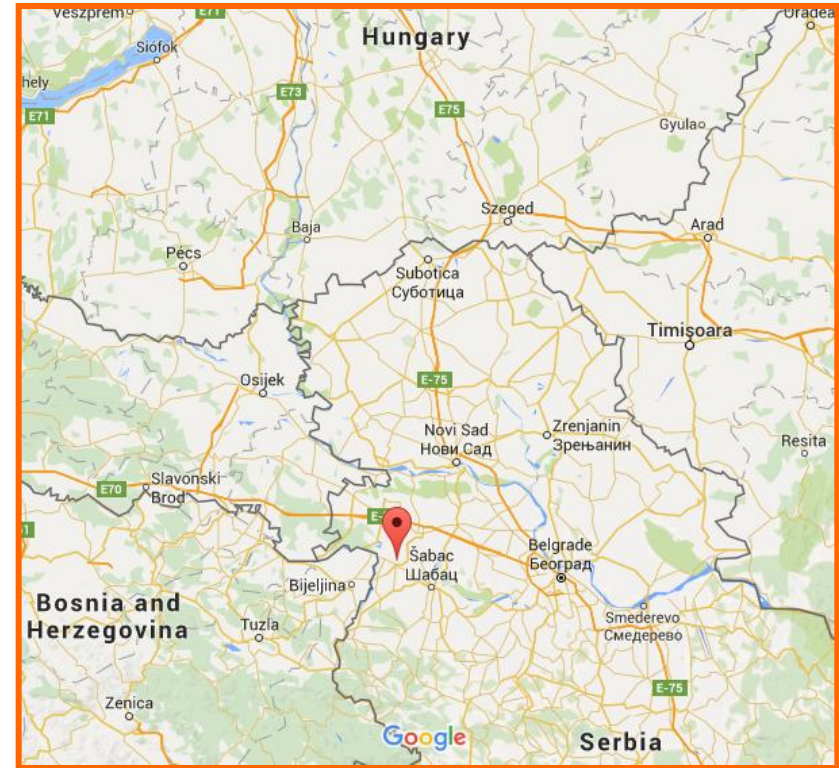
SUPPORTING NATIONAL AUTHORITIES IN ESTABLISHING DPM SYSTEM IN SERBIA

- ORCA is working with World Animal Protection to establish a baseline for development of a national DPM strategy:
 - deeper research into the state of DPM in local self-governments in Serbia
 - identifying needs and constraints for solving the problem of stray dogs at the local and national levels
 - research on capacities and attitudes of key stakeholders
- Research activities coordinated with the Veterinary Directorate



CREATING EXAMPLES OF GOOD PRACTICE

- Municipality of Bogatić
- Western Serbia, Mačva District
- Rural municipality
- 14 settlements, 384 km²
- Population 30,430 (2011 census)
- Border crossing to Bosnia and Herzegovina
- OIE questionnaire:
 - problem very pronounced
 - no initial assessment
 - no programme
 - some measures sporadically implemented
 - paid 111,455 EUR in compensations (2011-2014)
- Shown political will to commit to DPC, decided to fund research



EVIDENCE-BASED DPC PROGRAMME IN THE MUNICIPALITY OF BOGATIĆ

- Project co-funded by Bogatić municipality and ORCA
- Coordinated with the Veterinary Directorate
- Goal was to support the Municipality of Bogatić to develop humane and effective DPC programme in line with Serbian legislation and OIE standards
- Activities:
 - comprehensive initial assessment of Bogatić municipality, related to the state of DPC
 - develop DPC programme



DPC IN BOGATIĆ: SETTING THE INDICATORS



Impact	Indicators	Methods of measurement
Reduce dog abundance	Dog density along surveyed streets, Litters per female, Mortality and age structure	Street survey, Distance sampling, Mark-resight
Improve care provided and responsible ownership (resource-based measures)	Dog care-giving behaviours in dog owners, Resources available to the dog	Questionnaire survey
Improve dog welfare (animal-based measures)	Body condition score, Skin condition, Injuries, Lameness Cleanliness, Female:male ratio, Thermal comfort, Human/dog interactions, Abnormal behaviour, Diarrhoea, Coughing, Ear cropping, tail docking	Questionnaire survey, Street survey, Behavioural observations
Reduce risks to public health	Dog bites, Zoonosis	Secondary sources of information, Questionnaire survey
Improve public perception	Attitude toward dogs, Spaying and neutering, Adoption of dogs	Attitude assessment
Reduce negative impacts of dogs on wildlife	Presence of dogs in wildlife areas Predation events and impacts	Survey in wildlife areas, Camera traps, Secondary sources of information
Reduce negative impacts of dogs on livestock	Livestock predation by dogs	Secondary sources of information

DPC ASSESSMENT OF BOGATIĆ MUNICIPALITY

- Goal was to measure the set indicators in order to design intervention and establish baseline for later monitoring
- Team of 12 people was involved in the research
- Dr Elly Hiby, dog welfare and behavior, ICAM Coalition Scientific Coordinator and independent consultant (method for the street survey and questionnaire)
- Prof. Dr Arpat Ozgul, population ecology, University of Zurich (distance sampling method, survey in wildlife areas)
- Pilot conducted in October 2015.
- One settlement selected, survey conducted during 5 days (questionnaire, street survey, interviews with stakeholders)
- Outcome: estimate of the % of dog owning households, idea on how long the questionnaire takes, whether it works, whether owners will agree to collar dogs for the mark-resight experiment, how easy/difficult it is to photograph dogs, etc.

DPC ASSESSMENT OF BOGATIĆ MUNICIPALITY



- Five researches conducted in May 2016:
 1. Research of the 'culture of keeping dogs' and citizens' attitudes toward dogs
 2. Roaming dog population survey (on streets and in wildlife areas)
 3. Research of dog welfare
 4. Research of environmental factors influencing the roaming dog population (carrying capacity of the environment)
 5. Research of key DPC actors/ stakeholders

INSTRUCTION COURSE FOR RESEARCHERS

- Organised for the researchers prior to going out to the field
- 3-day instruction course on:
 - how to follow the assessment protocol
 - how to approach and communicate with house owners as dog population researchers
 - how to fill in questionnaires
 - how to ask attitude questions
 - how to assess dog welfare
 - how to conduct distance sampling
 - how to use mobile apps and fill in databases
- Field practice in Belgrade and Bogatić



1. RESEARCH OF THE 'CULTURE OF KEEPING DOGS' AND CITIZENS' ATTITUDES

- Goals:

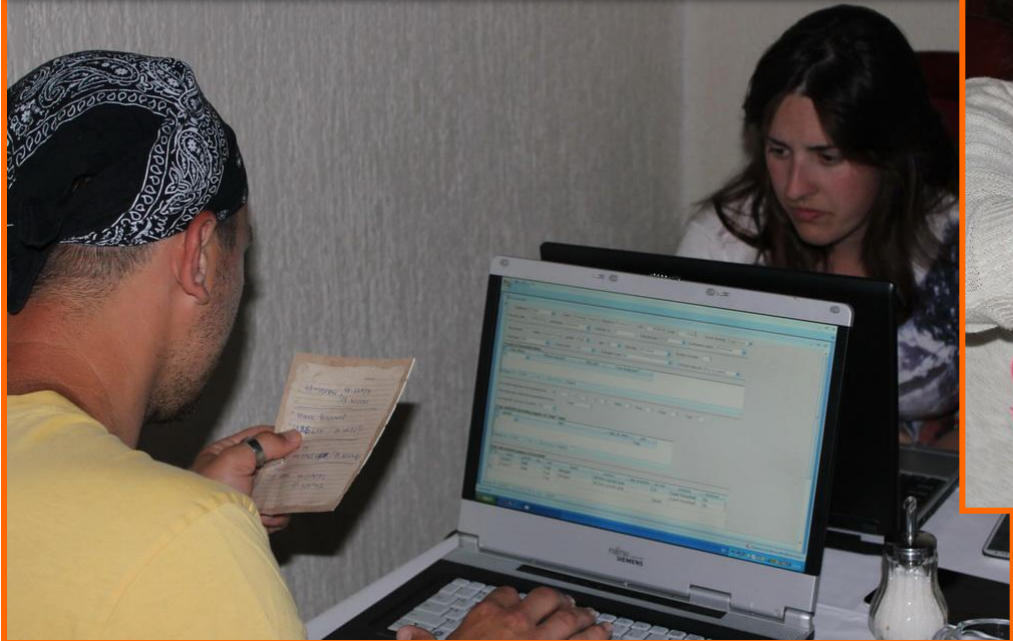
- estimate population size of owned dogs
 - understand ways in which the dogs are kept
 - detect behaviours/ habits related to dog ownership, that could influence the population of stray dogs
 - assess willingness of dog owners to be involved in the intervention
- Used household questionnaire and citizens' attitudes questionnaire.
 - Five villages selected for research, 600 households visited in total.
 - Households were visited by researchers along the routes selected and drawn in advance.



1. RESEARCH OF THE 'CULTURE OF KEEPING DOGS' AND CITIZENS' ATTITUDES

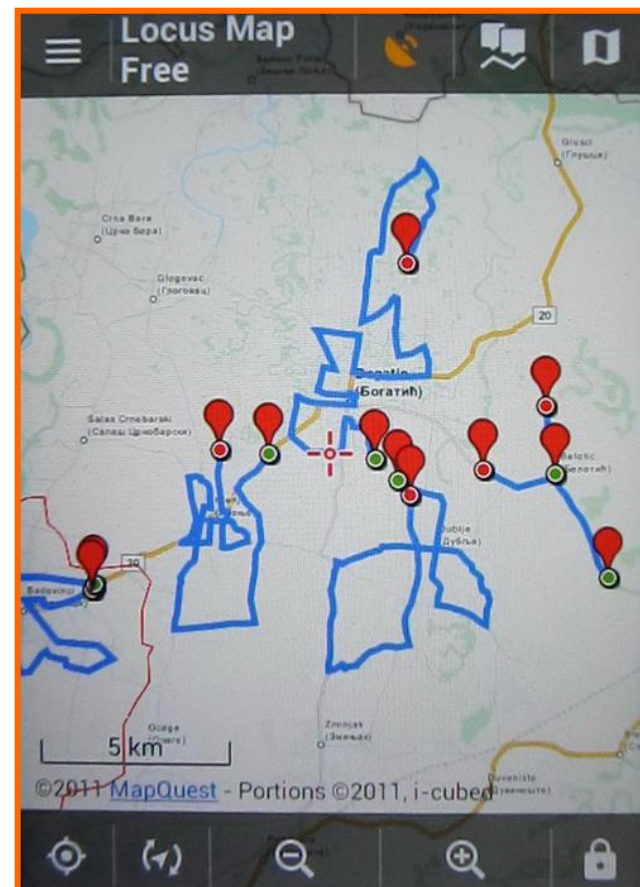
- Research important for intervention planning because dog ecology is closely linked with human activities, attitudes and behaviours.
- Expected outcomes:
 - an estimate of the owned dog population size
 - owned but allowed to roam dog population
 - an estimate of the population growth in the owned dog population
 - annual dog bite information including ownership of biting dog
 - dog care including sterilisation and vaccination
 - citizens' attitudes toward dogs, including roaming dogs






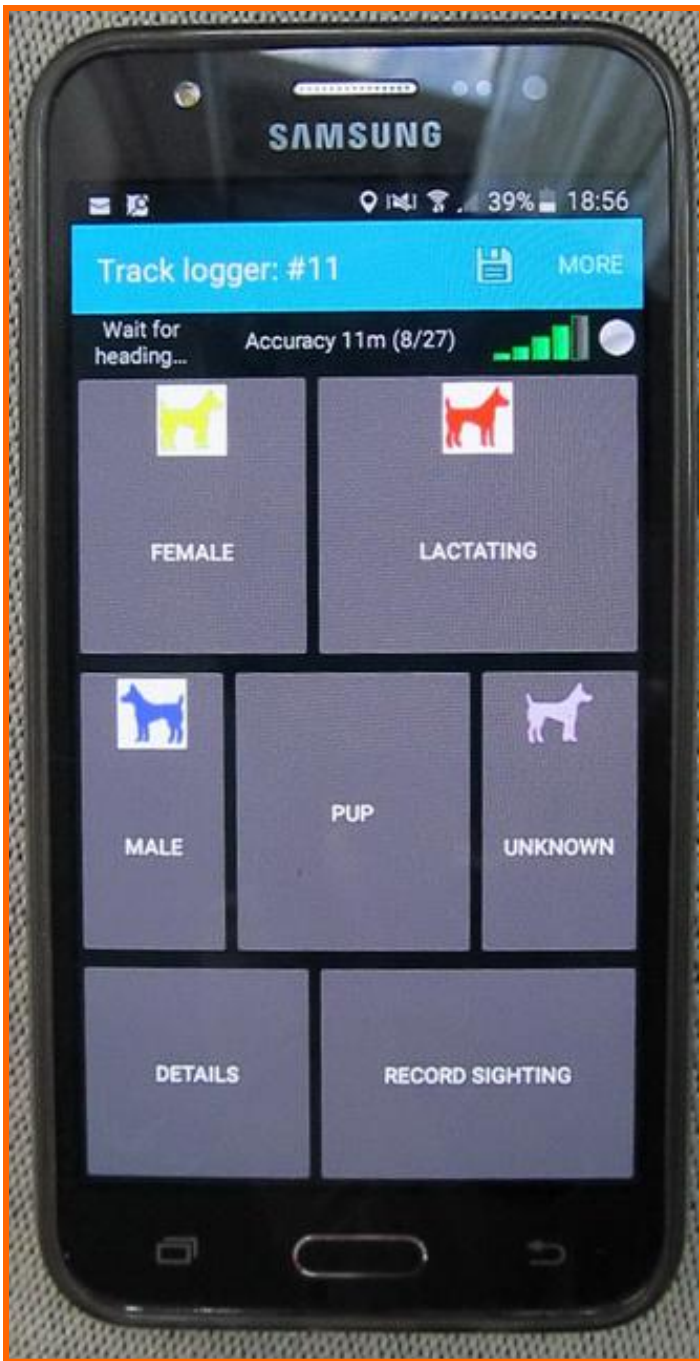
2. ROAMING DOG POPULATION SURVEY ON STREETS AND IN WILDLIFE AREAS

- Goals:
 - measure roaming dog density
 - estimate population size
 - assess basic welfare measures
- Street survey assumes dogs are associated with streets – not always the case in rural Bogatić
- Needed to conduct survey outside of household areas (arable land, forest).
- Same routes as used for household questionnaire with addition of the routes in wildlife areas
- Dog population size is difficult to estimate – used two different methods (mark-resight and distance sampling)



2. ROAMING DOG POPULATION SURVEY ON STREETS AND IN WILDLIFE AREAS

- Two mark-resight experiments with two different marked populations:
 - marking unconfined owned dogs with a red collar
 - photographing roaming dogs of unknown ownership status along the route
 - Marked dogs were checked during street counts.
 - Distance sampling: using Location app for recording GPS coordinates of the observer, distance from the line to the dog and angle between the line and the position of the dog
 - Camera traps – to indicate dog presence in forested areas
 - Expected outcomes:
 - a measure of roaming dog population density
 - a measure of roaming dog welfare (indicators: BCS, skin condition)
 - a measure of reproductive activity (indicator: lactating females)
 - a measure of female:male ratio
 - detecting presence of dogs in forested areas via camera traps
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3. RESEARCH OF DOG WELFARE

- Goal: assess the state of welfare of both owned and roaming dogs (resource-based and animal-based measures)
- Measures selected based on time available for assessment and feasibility of implementation
- Worked to select appropriate measures with a veterinary inspector trained in using animal-based measures for farm animals by Dr Siobhan Mullan, University of Bristol, UK.
- Welfare assessment carried out after conducting household questionnaire if allowed to see dogs
- If allowed, dogs and their living conditions were photographed.
- Basic welfare assessment conducted also during street survey.
- Expected outcomes:
 - impact of dog's living conditions on its health and welfare
 - checking truthfulness of owners' statements about dog care provided



4. RESEARCH OF ENVIRONMENTAL FACTORS RELEVANT TO DOG POPULATION

- OIE TAHC: “The important factors relevant to the dog carrying capacity of the environment include food, shelter, water and human attitudes and behaviour”
- Pilot clearly indicated the importance of this aspect as controlling resources is important for the intervention.
- Goal: map resources such as food and shelter, assess their availability and their impact on presence of dogs
- Hot spots for dogs: landfills and dumps, graveyards, abandoned properties, overgrown yards, schools, rubbish bins, local coffee shops, bakeries or fast food restaurants, open markets, gravel separation along the river bank
- Recorded their GPS coordinates via Location mobile app
- Expected outcomes:
 - a measure of resources available to dogs (food, shelter)
 - map of locations that are ‘hot spots’ for stray dogs.







5. RESEARCH ON KEY DPC ACTORS/ STAKEHOLDERS

- Goals:
 - understand the perception of stakeholders about stray dogs and related problems
 - assess capacities of stakeholders and willingness to participate in the intervention
 - use them as secondary sources of information
- Meetings and interviews with identified stakeholders:
 - those responsible for DPC policy development and implementation (municipality officials, settlement administrations)
 - those with key importance for implementation (zoohygiene departments, veterinary organisations)
 - those who can significantly contribute to implementation (schools, local CSOs, local hunting and tourist organisations, local health clinic, media, etc.)

5. RESEARCH ON KEY DPC ACTORS/ STAKEHOLDERS

- Particular emphasis put on schools as they have special importance in a process of changing people's behaviours and habits related to dog ownership
- Looking into school plans and programmes to see whether they include content on dog care/welfare
- Expected outcomes:
 - perceptions of stakeholders about the problem
 - capacities of stakeholders and willingness to participate in the intervention
 - information on dog bites/zoonosis
 - impact of dogs on wildlife
 - impact of dogs on livestock
 - impact of dogs on tourism



CONCLUSION

- Bogatić research and programme – answer to the need of Serbia to create an example of good practice for the process of developing evidence-based DPC programme in line with Serbian legislation and OIE standards.
- Research aimed to be comprehensive, in order to provide true insight into the current state so that the programme can be adapted to local needs
- Model for other Western Balkan countries to apply in their own rural areas and useful tool for the implementation of their national action plans
- Goal to achieve shared OIE vision to ensure compliance with the OIE standards related to stray dog population control by 2025

THANK YOU FOR YOUR ATTENTION!

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