



CULLING- WHY IT IS NOT WORKING

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Culling Does Not Decrease Dog Populations



DOG POPULATION DYNAMICS

- Dogs IN (Immigration)
 - Birth of puppies
 - Migration
 - Owner brings them
 - Lots of food/water/shelter
- Dogs OUT (Emigration)
 - Death
 - Migration
 - Owners move
 - No food/water/shelter



HOW DO WE DECREASE DOG POPULATIONS?

- Decrease number of dogs being born
 - Surgical or chemical sterilization
 - Enforce leash laws/animal confinement- especially during females heat cycles
- Decrease influx of new dogs
 - Remove garbage from streets
 - Rubbish bins with lids
 - Don't feed community dogs



CURRENT DPM TOOLS

◦ Reproductive DPM Tools

◦ Surgical Sterilization

- Benefits
 - Life-long solution
 - Reduce aggression
 - Longer lifespan
- Barriers
 - Qualified veterinarians
 - Drugs
 - Facilities
 - Recovery time
 - More effective in females
 - No large-scale success in developing-world setting

◦ Contraceptives

- Zeuterin
 - Intra-testicular injection
 - Male dogs only
 - Swelling / infection
- Progestins
 - Female dogs
 - Last 6-months
 - Associated with cancer
- Suprelorin (implant)
 - 6 – 12 month
 - Male or female (cancer)
- Oral
 - Not widely used, little data

◦ Physical Restraint

- Benefits
 - Effective
 - Cheap
- Barriers
 - Requires a change in owner behavior
 - Must be able to recognize oestrus



REPRODUCTIVE DPM BARRIERS TO SUCCESS

- Veterinary expertise required
- Many tools not licensed
- Many tools not tested / limited data
- Require responsible owner management of the dog or the contraceptive
- Cost and the feasibility of reaching enough dogs to have a measurable population-level reduction must be carefully considered
 - 30 years to achieve population-level impact (Frank, 2004)
 - >80% of females need to be reached (Blanton, 2016, *in press*)



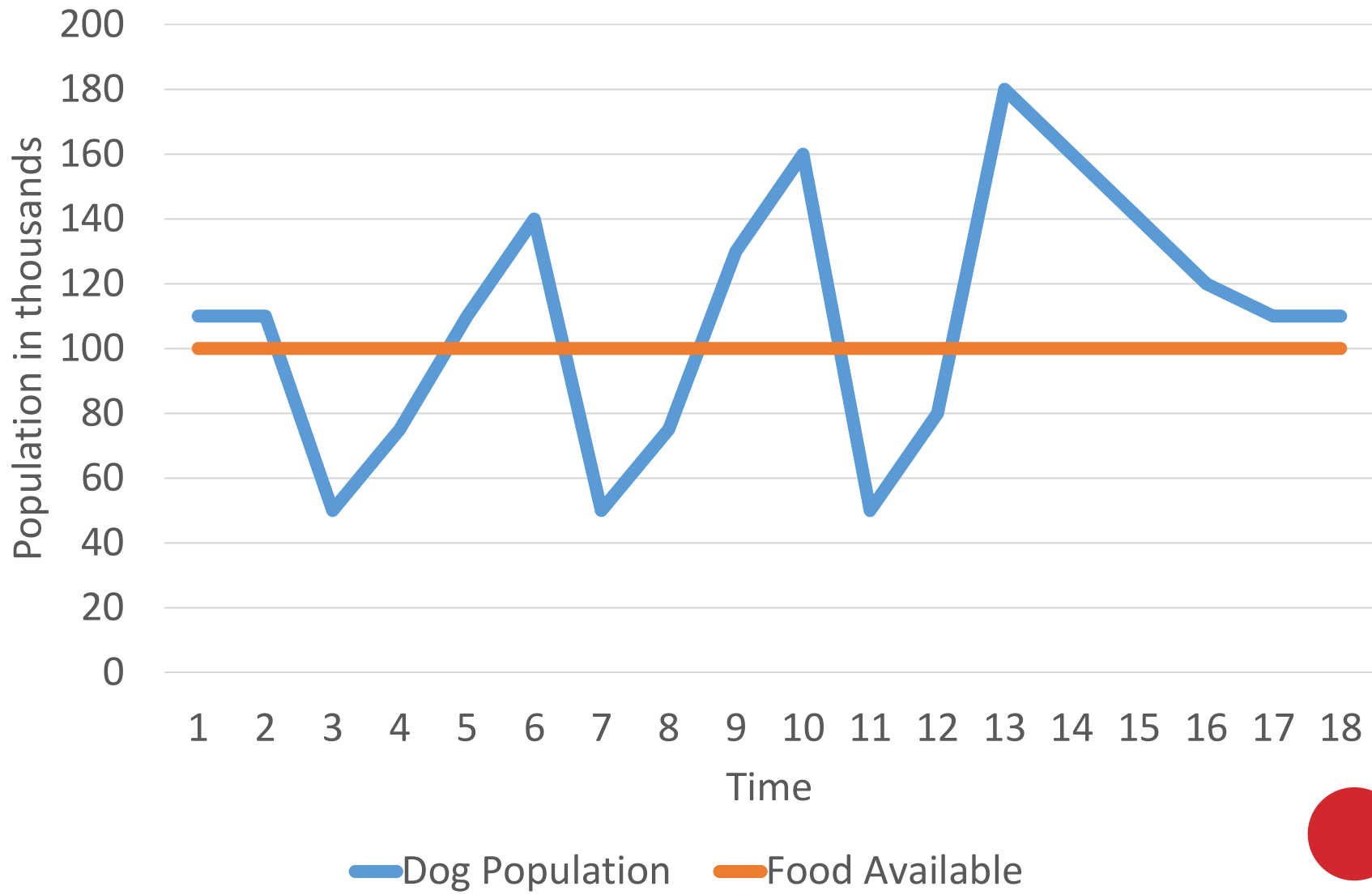
CURRENT DPM TOOLS

◦ Controlling access to food

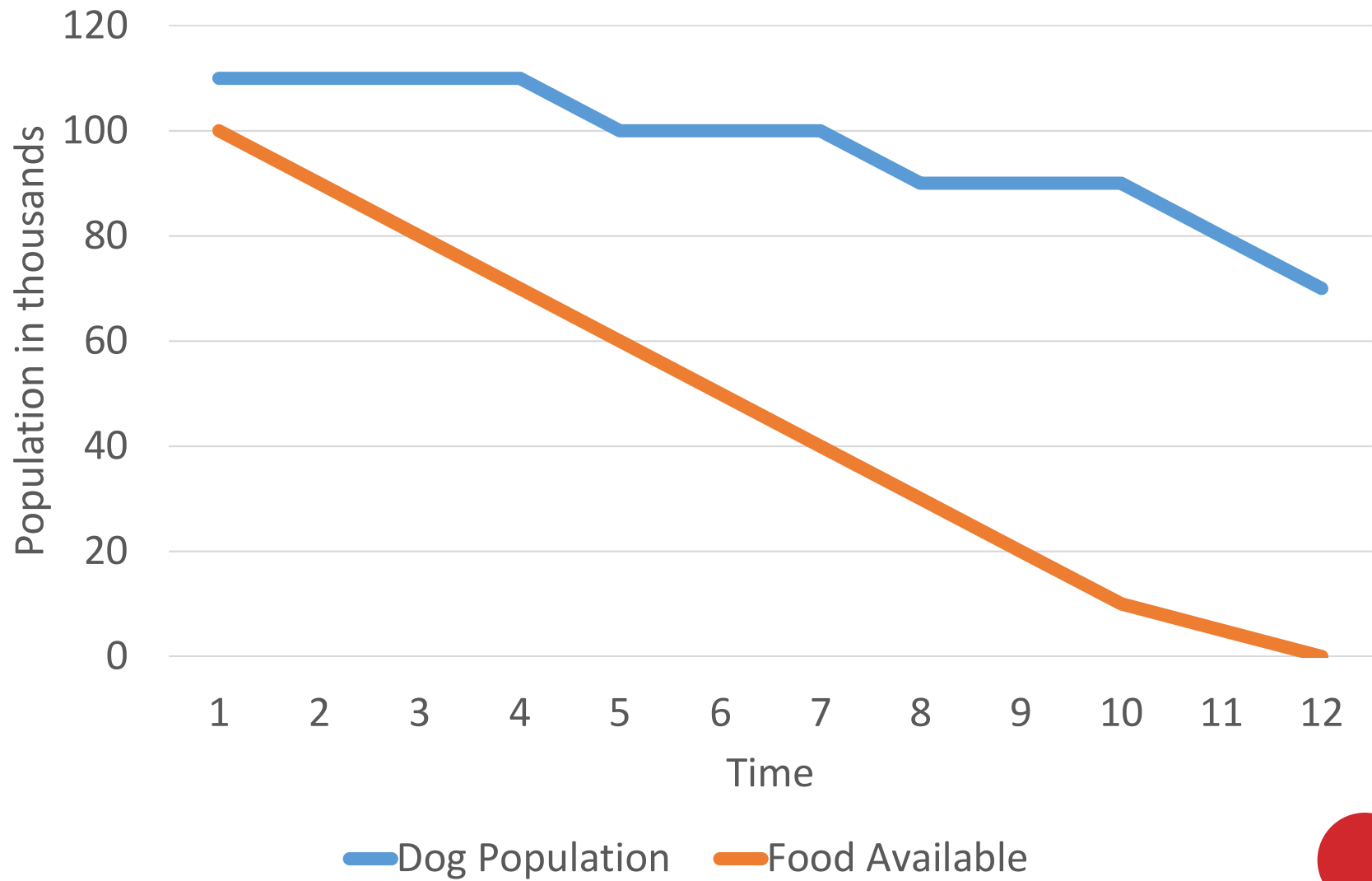
- Carrying capacity of an environment heavily dependent on food, water and shelter resources
 - Limit food resources = reduce street dog populations
- Street food resources associated with:
 - Bites in Nigeria (Olugasa, 2014)
 - Rabies in Yemen (Al-Shamahy, 2013)
- Barriers
 - Changing human behaviors
 - Costs associated with sanitation services
 - Must be conducted gradually to reduce aggression / competition
 - May not work where feeding dogs is a cultural practice



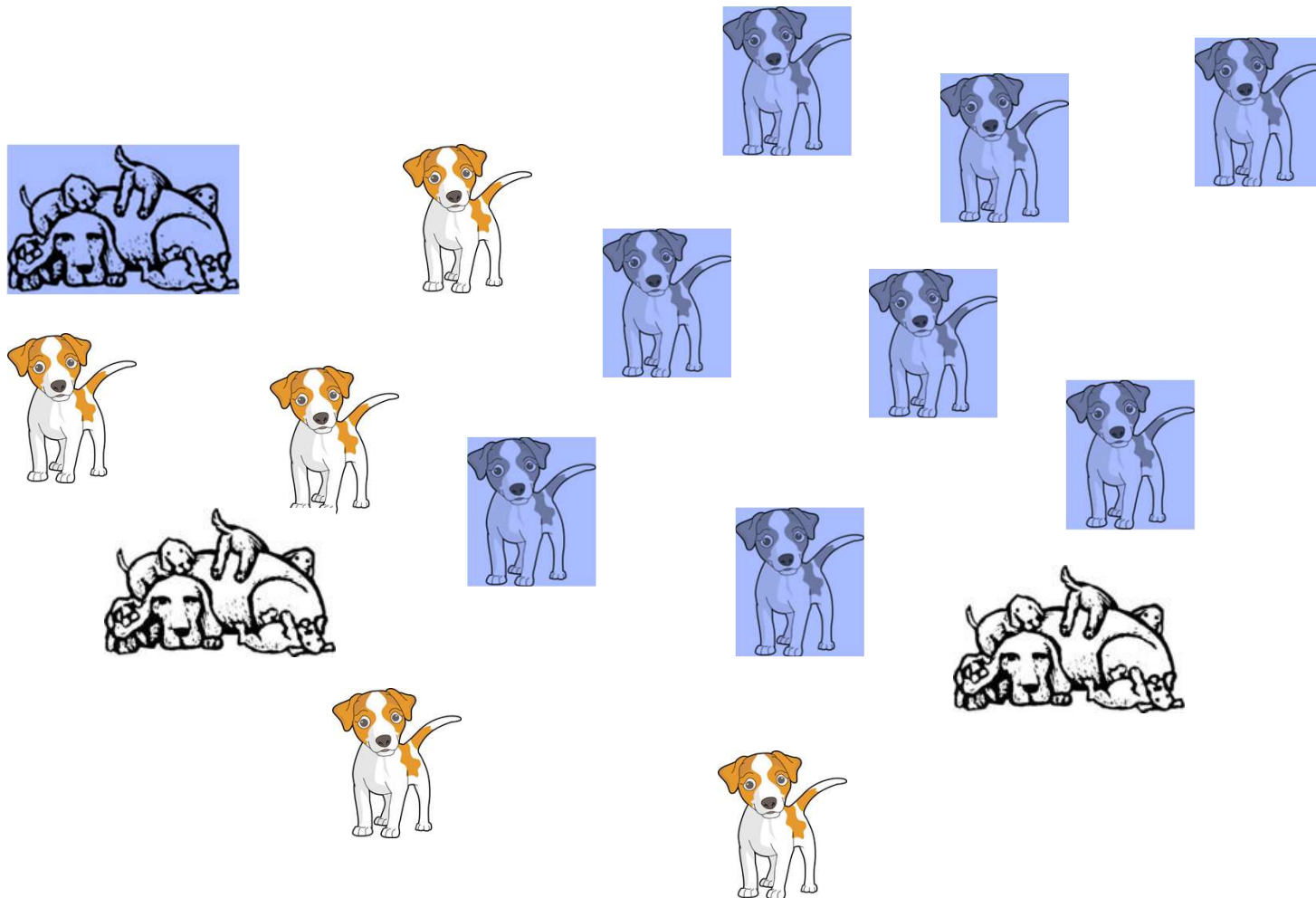
Population dynamics with culling and no change in food resources



Population dynamics when food removed



COMMUNITY OF DOGS

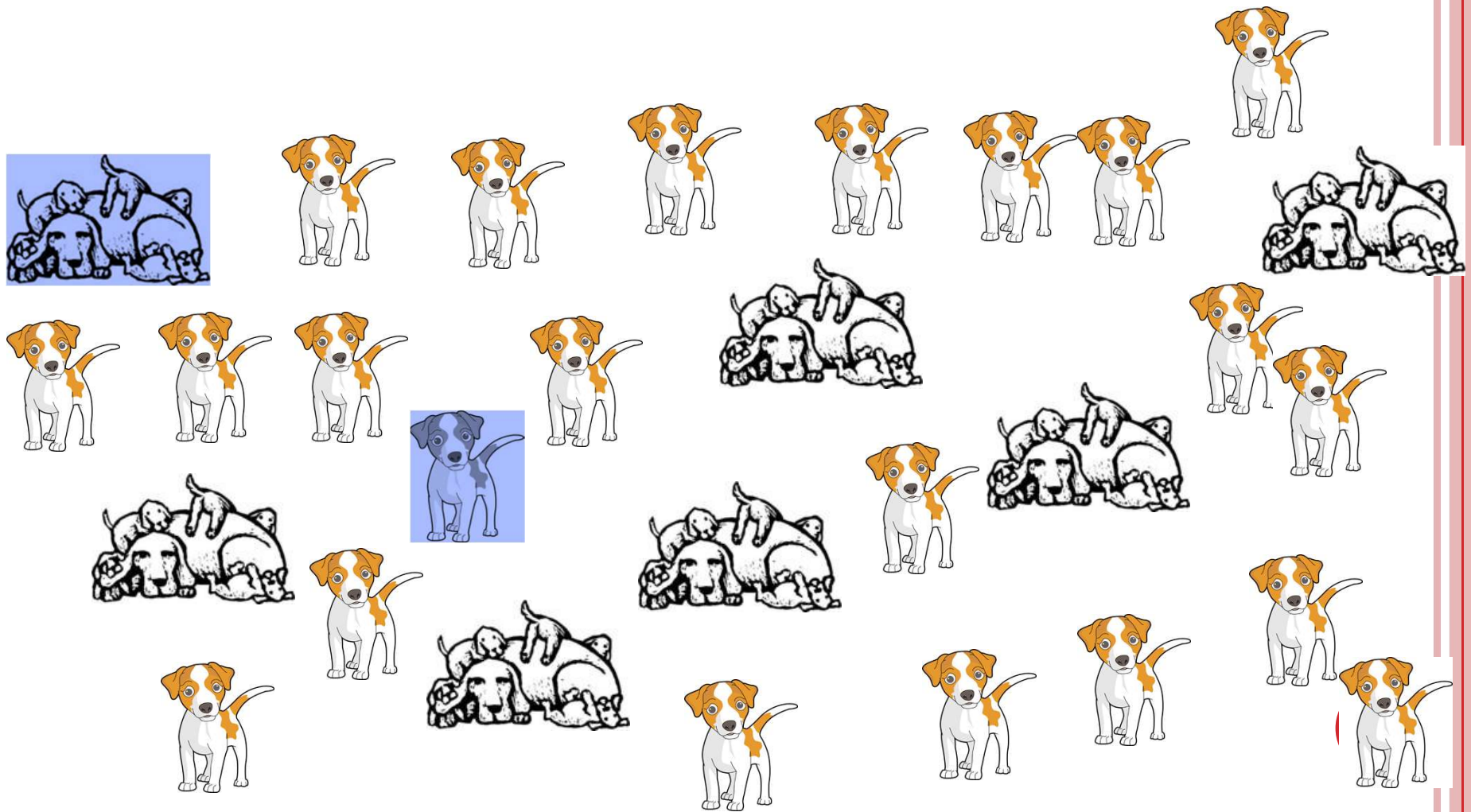


DOGS CULLED BUT FOOD RESOURCES REMAIN



DOGS HAVE PUPPIES

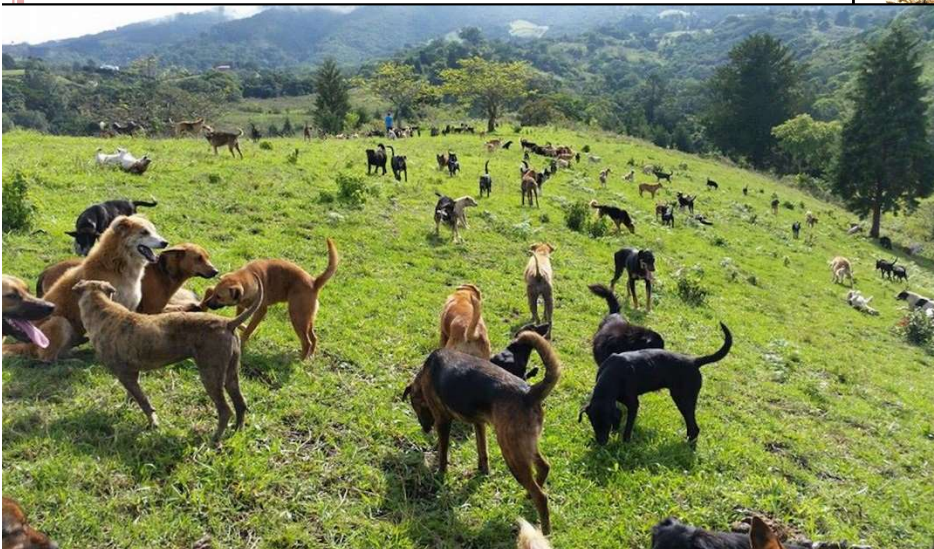
DOGS MIGRATE INTO COMMUNITY



CURRENT DPM TOOLS

○ Other components

- Education
- Shelters / Rehoming Centers
- Identification and Registration
- Legislation
- Euthanasia



WHAT ARE THE BEST DPM STRATEGIES?

- Depends on:
 - Cultural considerations
 - Resources available
 - Relationship with dogs
 - Dog population
 - Free-roaming v. confined
 - Veterinary Infrastructure



Photo credit: GARC



ACKNOWLEDGEMENTS

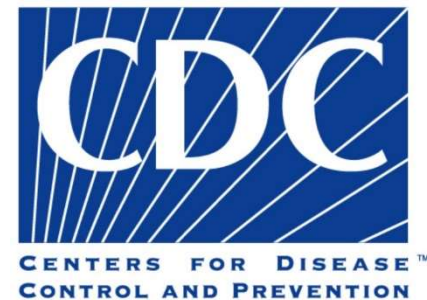


HUMANE SOCIETY
INTERNATIONAL



IFAW

International Fund for Animal Welfare



ANIMAL WELFARE IN RABIES CONTROL

Animal
Welfare



Poor Canine Welfare

- Economic issues
- Lack of education
- Cultural stigma against dogs
- Animal mistreatment

**Rabies!!!
Bites!!!**

Poor Canine Health

- Lack of veterinary care
- Lack of rabies vaccination
- Overpopulation
- Lack of conventional ownership



- Fearful dog populations
- Unhealthy dog population
- Increased risk for bites
- Increased risk for rabies

*“Nothing will change until
responsible animal ownership
is addressed in Haiti”*
- Director of Health, Haiti

