

Ending Global Dog (& Cat) Homelessness



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SOLUTIONS FOR PEOPLE, ANIMALS AND ENVIRONMENT

Outline

Introduction

Dog Homelessness: Success Stories

International Dog Populations and
Human Density

Approaches Used in Dog Management

Human Behavior Change: Examples

Global Dog Campaign Strategy

Vision & Conclusions



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Introduction

- **First** – Acknowledge achievements and level of dedication.
- **Second** – The VISION to end dog and cat homelessness worldwide is realistic; many individuals/organizations are already engaged, but there is no worldwide tracking of results/impact; funding has grown – perhaps 4-fold in 25 years.
- **Third** – Document successes, celebrate, and promote them.
- **Fourth** – Build partnerships with government authorities – international (e.g., UN & EU), local (especially municipalities), and veterinarians.

The goal may seem daunting (or even impossible) – but I hope that, by the end of this talk, you will agree with me that ending pet (both dogs and cats) homelessness is doable.



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The UNDP Story: UN embraces(?) animal welfare

- Many are probably familiar with UNDP's activities on dog management in Europe (partnering with the EU).
- A UNDP survey found that a top priority for many communities was a roaming dog issue and the problems associated with such dogs.
- IFAW worked with UNDP and local teams to address problems - the communities made the final decisions.
- There was a fascinating side effect to the project. Ethnic tensions in the participating Bosnian communities declined.
- The UNDP has continued supporting roaming dog projects in Eastern Europe and Ukraine.
- UN organizations are also urged to incorporate animal welfare in SDGs.



The Second Story: The USA – Slide 1

- In the USA's late 1960s and early 1970s, there was growing public angst about the problems associated with unwanted dogs and cats.
 - Editorial in Science
 - Article by the Birth Control Pill developer on dog and cat overpopulation.
- In 1974 and 1976, two national conferences were organized by stakeholders (e.g., animal organizations, the American Kennel Club, and the American Veterinary Medical Association) on the dog/cat overpopulation crisis.



The USA – Slide 2: In 1973, there were:

- Approximately 65 Million pet dogs and cats in American homes.
- Animal Shelters and Rescues handled 15-20M dogs and cats annually.
- Approximately 13 Million dogs and cats were being euthanized by shelters yearly.
- The head of a national animal organization stated at the 1974 national conference that it would not be possible to sterilize enough animals to address the pet homelessness challenge.
- This prediction was ultimately incorrect.



USA Dog & Cats: 1970-2019 – Slide 3

	1950	1973	1982	2011	2016	2019
US Pet Dogs & Cats (M)	52	65	92	146	135	140
Total US Dog Population (M)	32.6	35	46	69.9	76.8	80.3
Stray Dogs/Shelter Intake (M) (not Transfers & RTOs & Seizures)	10	10	4 to 5	1.74	1.34	1.14
% Stray Dogs (of all dogs)	30%	Ca. 24%	Ca.9%	2.4%	1.7%	1.4%
Stray Cat Shelter Intake (M)		10?		2.0	1.65	1.83
Shelter Euthanasia (M)		13.5	7.6-10	3.44	1.54	1.24
% American D&C Population euthanized in shelters		21%	ca.10%	2.4%	1.1%	0.9%



The USA – Slide 4

- No definitive cause was identified for the huge change in dog and cat sheltering, but speculated that sterilization reduced the production of puppies and kittens, leading to more evenly matched “demand and supply.”
- In 1970, around 10% of “licensed” dogs in Los Angeles were sterilized. Within ten years, 55% were sterilized; today, the figure is over 90%. Animal organizations established low-cost sterilization clinics, but probably 80% or more of all dog sterilizations in the USA were and are carried out by private clinics.
- Casual dog ownership (dogs allowed to roam streets during the day) was widespread in the USA in the 1950s and 1960s, but “responsible pet ownership” led to greater control of both dogs and cats this century.
- Increasing control may be a feature of evolving human-pet situations in other countries.



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Relative Dog Populations over time in Europe, North America, Australia & Japan

- Rates of dog-keeping in some other countries also remained relatively constant over the years.
- But we do not know why there would be 239 dogs per 1,000 in the USA, 120-130 dogs per 1,000 in the UK, and 80-90 dogs per 1,000 in Sweden.
- The stability of the RATE of pet dog keeping is a surprise!

Data from Messent, 1981, FEDIAF, AVMA & others

	Dogs/1,000 People					
	1981	2010	2012	2017	2018	2020
Austria	70	73	72	72	93	92
Belgium	115	122	119	115	115	114
Denmark	133	104	105	102	103	105
Finland	86	121	120	145	147	136
France	170	121	117	110	104	115
W. Germany	55	66	65	111	113	128
Italy	78	118	116	115	116	137
Netherlands	84	89	95	89	88	114
Norway	68	93	91	94	88	89
Sweden	96	80	76	86	86	88
Switzerland	62	57	55	59	59	58
UK	100	126	132	131	135	125
Australia	152	157	182		198	
Canada	130	183		206	220	
Japan	39	94	89	79		
USA	216	225		239		



Relative Total Dog Populations In Different Countries

Country	Dogs/1,000 People	Dogs (per K)	Country	Dogs/1,000 People	Dogs (per K)
UK	139	9	India	30-60	70
Sweden	72	0.7	China	80-100	120
Italy	127	8	Japan	91	12
Germany	69	6	Malaysia	11	0.3
Finland	121	0.6	Bangladesh	10	1.6
Turkey	15	1	Philippines	250-400	35
Israel	59	0.5	Australia	155	4
Canada	143	5	Brazil	180	40
USA	225	74	Argentina	223	10
Mexico	203	20	Colombia	89	4



Pet (“Controlled”) and Street Dogs in Different Communities

Country	“Pet” Dogs/ 1,000 people	Street Dogs/ 1,000 People	Total Dogs/ 1,000 People
Mauritius**	150	50	200
Haryana, India**	20	80	100
Bhutan *	91	67	158
Bhutan Urban *	57	89	67
Bhutan Rural *	109	55	91
Dhaka, B'desh**	?	2	10
Yucatan, Mexico	?	?	588
Mumbai, India**	?	7	10
Kathmandu	?	22	?
Italy	113	14	127

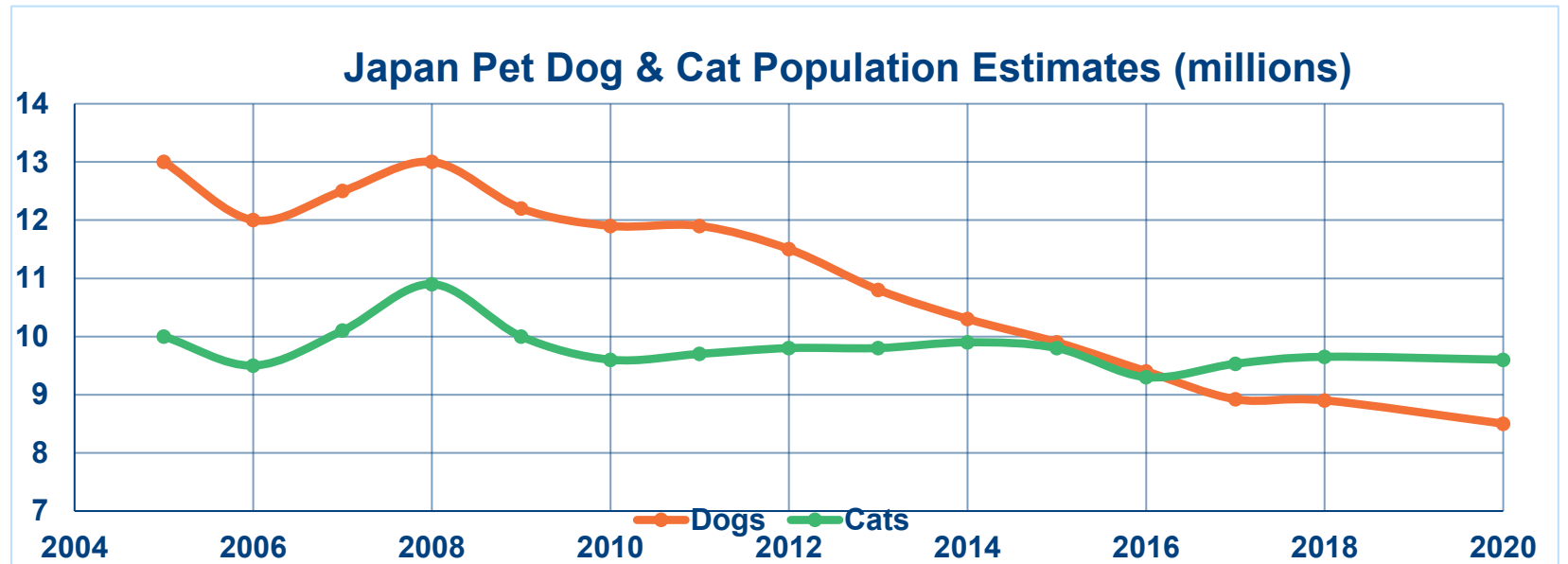
* Data from Rinzin et al, 2016; **HSI Surveys 2013-2015



Japanese Pet Trends (2005-2020)

- In 2006, the Japanese government introduced new dog breeder rules.
- Big change in dog supply.
- Big jump in puppy prices - \$1,000 to \$3,000.
- Source – H. Ishiyama, February, 2018.

# Puppies p.a.	Pre 2006				After New Regulations in 2006			
	# Breeders	%	# Puppies	%	# Breeders	%	# Puppies	%
1 to 10	25,171	73.9%	107,225	18.4%	4,984	51.7%	21,706	7.1%
11 plus	8,894	26.1%	455,488	81.6%	4,659	48.3%	284,732	92.9%
TOTAL	34,065		581,713		9,643		306,438	





Density Effects

- An inverse relationship between relative dog numbers (dogs per 1,000 people) and human density is found **worldwide** (USA, UK, India, Philippines, Mauritius, Pakistan, Afghanistan)
- Not sure if the density effect applies to cats, but in the USA, it applies to pet ownership.
- With surveys of just a few representative communities, developing an equation to predict dog ownership from human densities derived from census data would be possible.
- For example, using WVS dog survey data for Bangalore, India (S. Isloor, 2020, APCRI Journal 21(2):46-59), one can generate the following equation:

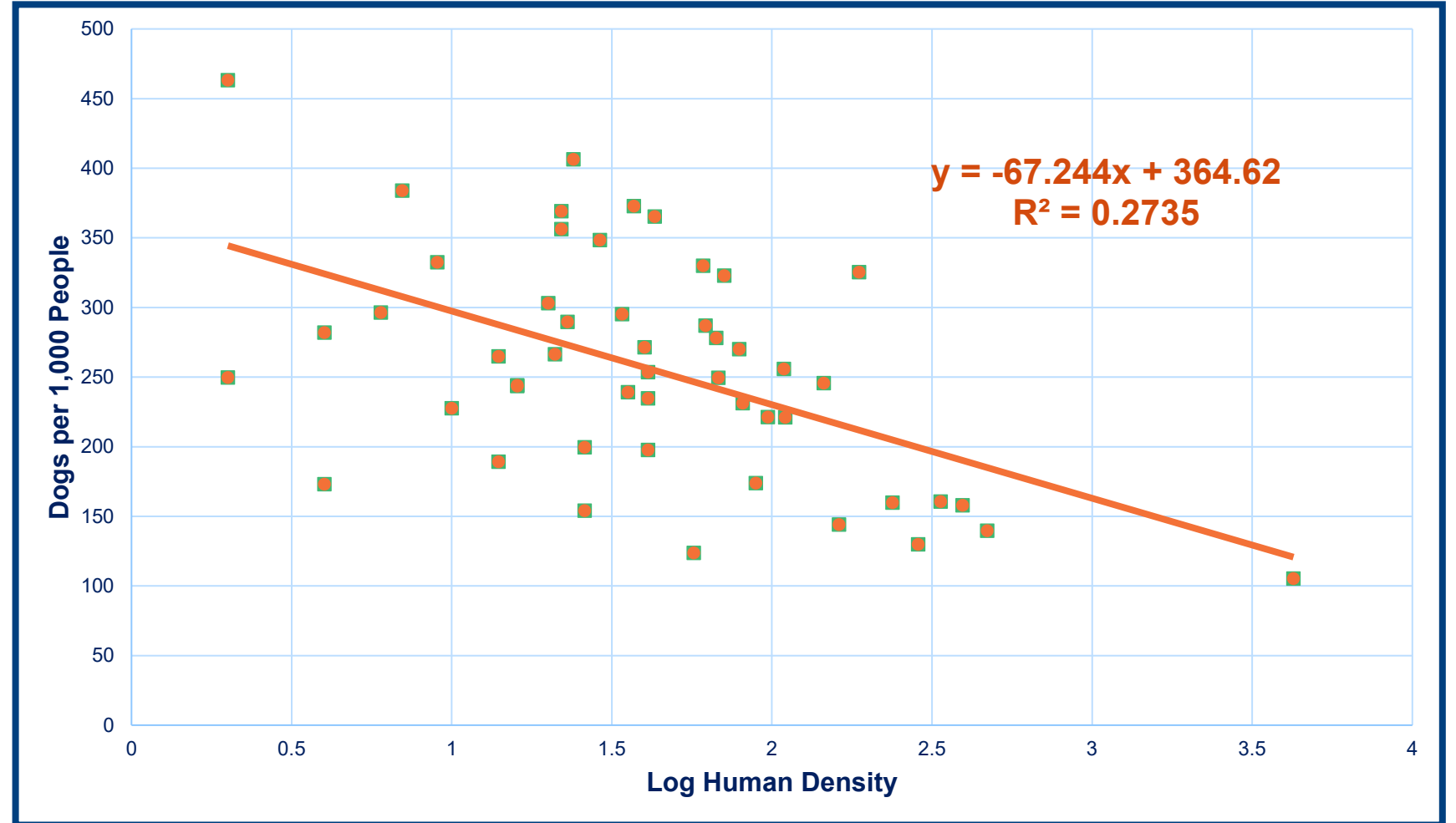
$$y(\text{dogs per 1,000}) = - 49.3X (\text{log human density}) + 250.$$

This equation permits one to predict the relative dog population of any community in Bangalore (and similar Indian cities?) if one knows the human density per sq km.



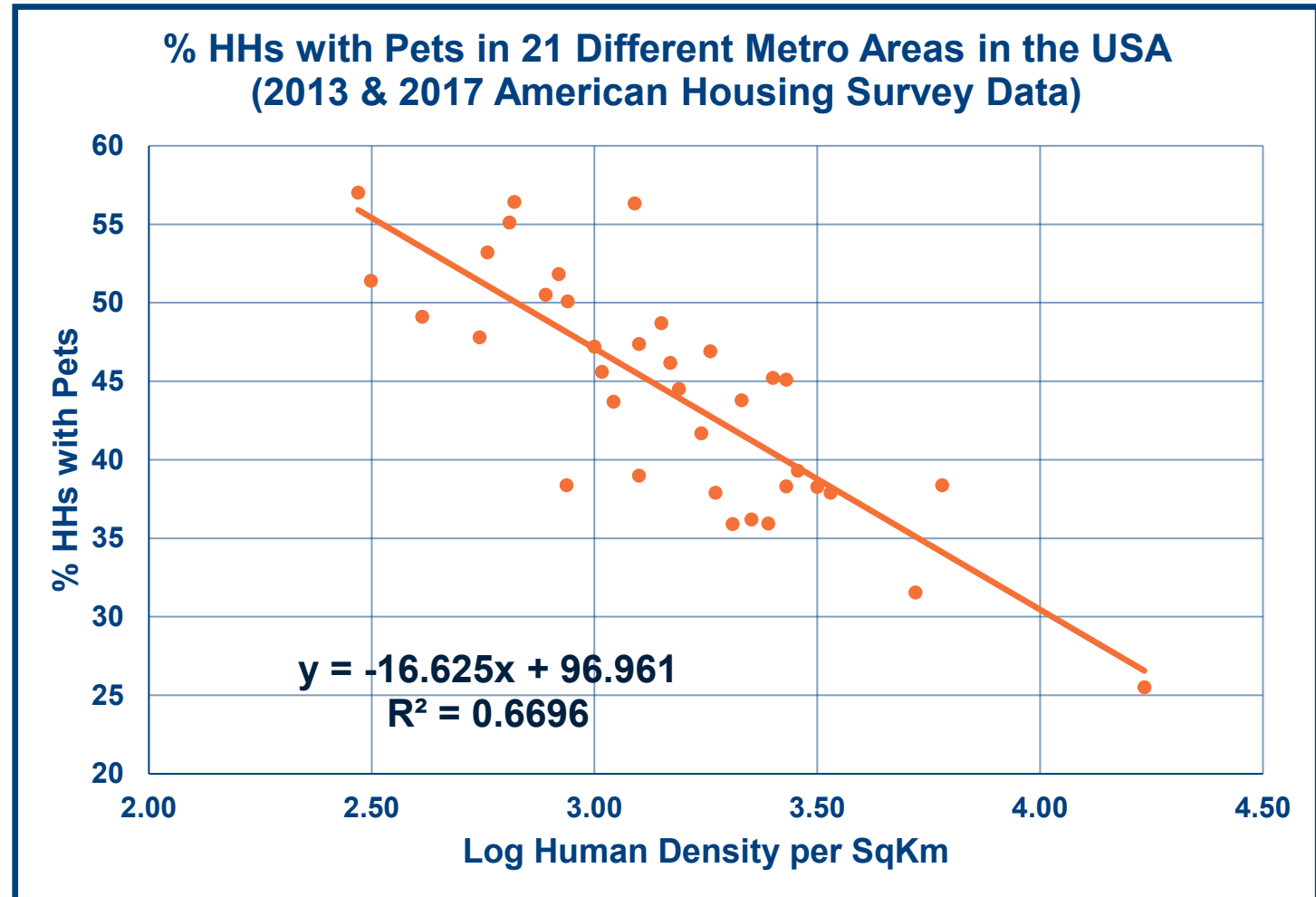
Relative Dog Populations & Human Density

An inverse relationship between relative dog populations and human density in the United States. High in Montana and low in Washington DC.



Pet Ownership and Human Density

US Census Bureau's 2013 and 2017 Housing Surveys asked about pet ownership to develop data for disaster planning. Data indicates a strong, inverse relationship.





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Global Dog Challenge

- Can we replicate the US (& European) success globally?
- There are an estimated 800M – 1 Billion dogs across the globe, of which around 300-400M are street dogs.
- There are relatively FEW “un-owned” dogs!





Welfare of 300-400 Million Street Dogs

- Street dogs suffer from disease (particularly mange and TVT's – Transmissible Venereal Tumors) and injury.
- In Haryana survey, 2-3% of street dogs are visibly ill, mangy, or injured
- Methods of municipal control are often brutal and cause considerable suffering

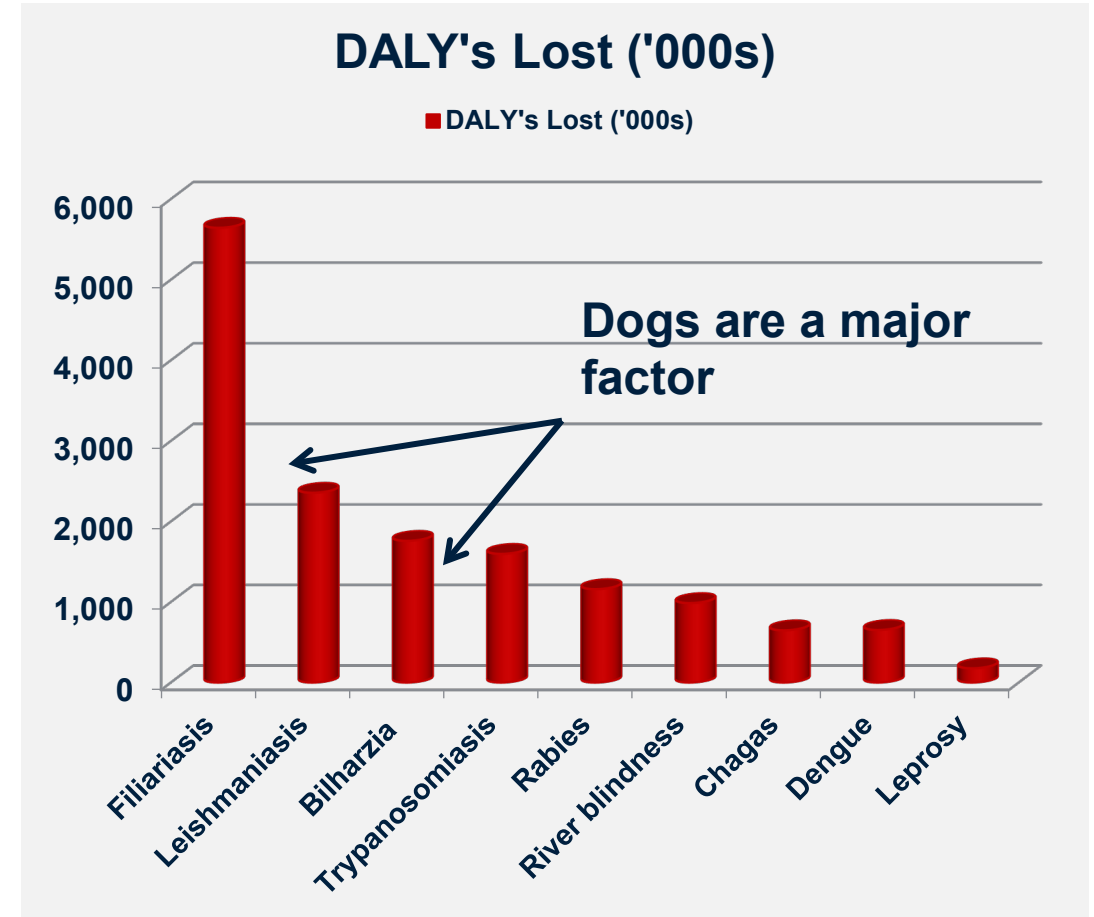




Human Health Issues

Public health issues associated with street dogs:

- **Dog bites and dog attacks** – are a significant cost (e.g., 17M people are treated for dog bites annually in India)
- **Rabies** has terrified people for millennia; (global cost \$8.6B per annum)
- **Car accidents** caused by street dogs
- **Leishmaniasis & Hydatidosis**



DALY = DisAbility Life Year - Standard measure of disease impact used by WHO.



Attempts To Fix The Dog “Problem” - 1

Killing Dogs

- Madras (Chennai) culled dogs from 1860 to 1994 – by the 1990s, they were culling more dogs than ever.
- Bali (2010) responded to a rabies outbreak by poisoning dogs (strychnine) – people moved with their dogs to avoid poison and spread rabies across Bali.
- Chinese (2009) responded to increased rabies incidence by beating dogs to death.



The World Health Organization has concluded that culling is an ineffective control measure!



Attempts To Fix The Problem - 2

Catch and Remove (to “shelter”)

- **Bhutan** (2007/2008) caught street dogs and put them in mass shelters where they fought, contracted diseases, and suffered. RGOB decided something else had to be done. Contracted with HSI to implement CNVR.
- **Bulgaria** – Sofia authorities focusing on building a city shelter
- **Italy** – State-supported “no-kill” shelters for millions of dogs
- For shelters in the **developing world** – where there are many street dogs and shelter adoption is low – the shelters are always full to capacity.



Attempts To Fix The Problem - 3

Sterilization & Vaccination as the Solution

- **USA** – 1970s – even the large humane groups said that the USA could not solve dog/cat overpopulation via surgical sterilization – this prediction was incorrect.
- **Global** – *TODAY* – many organizations argue that surgical sterilization is too labor intensive and expensive for 300-400M street dogs. I suspect that, as in the USA, this argument will be incorrect.
- **ABC** – Animal Birth Control – is already significantly impacting India (and many other countries) even though its overall volume is still relatively low.
- **Chemical sterilization** for females is probably at least a decade from implementation. (Female cat sterilant development is looking very promising. Male dog (and cat?) sterilant is already available but relatively labor intensive and has a high “ick” factor. Female sterilization is the main focus.)



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Dog population size (800-fold range) is a function of human behavior

- Humans determine whether a community has 1 dog per 1,000 humans or 800 dogs per 1,000 humans.
- Dogs (whether roaming or controlled) are almost always closely associated with human households and communities.
- Controlling dog populations is a function of understanding the behavior of humans (particularly the “feeders”) and their interaction with dogs.
- Culling dogs (shooting, poisoning, trapping) usually has little impact on the overall dog “problem” because such efforts are episodic and because dogs reproduce to fill the “human tolerance niche” left open when some dogs are removed.
- CNVR is associated with increased dog care (and more veterinary income!)



Human Behavior Change

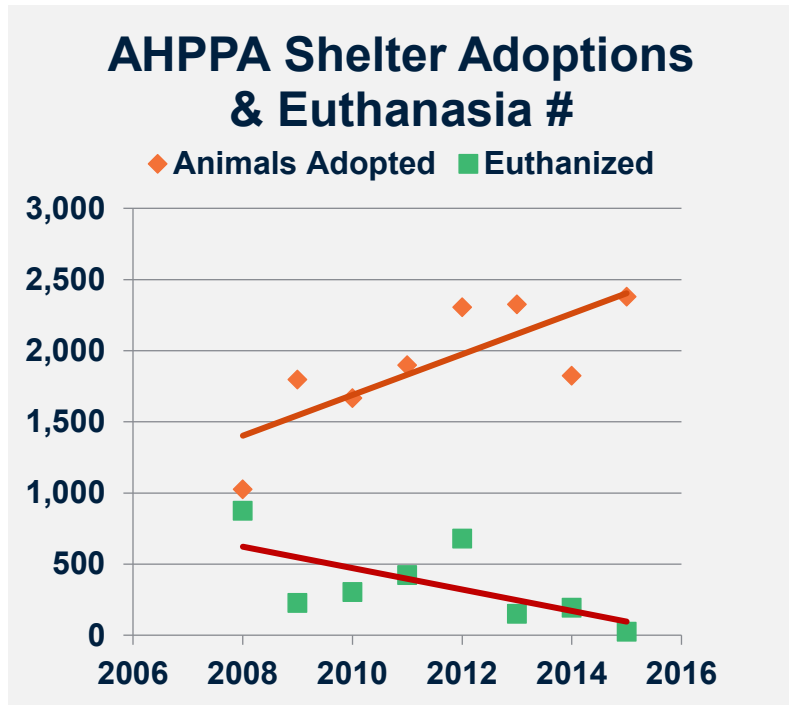
Sterilization programs appear to be associated with a change in human behavior towards dogs in a community.

- In **Costa Rica**, dogs sleeping inside the home at night grew from 27% in 2003 to 66% in 2021. The percentage of homes with a sterilized dog tripled.
- On **Koh Tao island (Thailand)**, the percentage of dogs claimed to be owned doubled from 40% to 80% following a sterilization program (but the dog population did not change).
- Dog bite rates in **Jaipur** declined significantly following sustained street dog sterilization programs. Human rabies incidence drops to zero or near zero in cities where sterilization and vaccination programs are implemented.
- In a **South African** township, the percentage of dogs that were provided with water went from fewer than 20% to more than 80% following a sterilization project.



Human Behavior Change in Costa Rica

Changes in Animal Sheltering and Human Behavior in San Jose, Costa Rica.



Question	2003 (% responses)	2011 (% responses)	2020 (% responses)
Dogs aged 6 or higher	17.5%	27.6%	n/a
Households letting dog(s) sleep inside	26.5%	54.2%	65.9%
Households permitting dogs on street without supervision	34.0%	17.0%	n/a
Households with sterilized dog	18%	36%	61.5%



Jamshedpur, India (HSI Project)



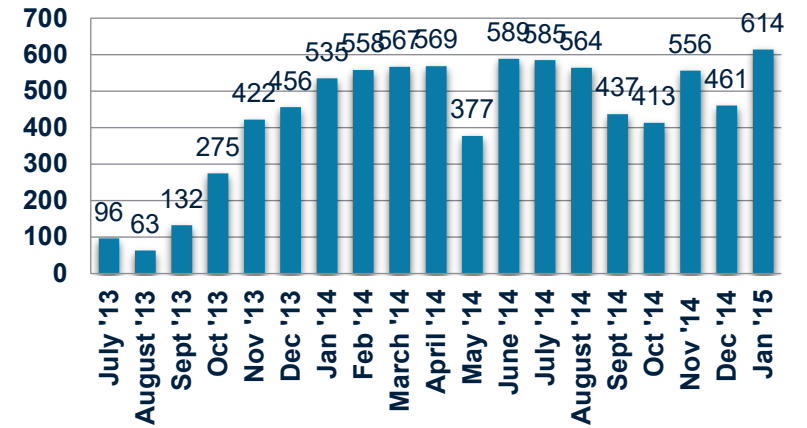
Seeing this – leads to this



2013-2015

25,000 dogs
(ca. 16.7 dogs/1,000 people)

21,000 dogs sterilized and vaccinated in 4 years, set up dog “complaint” system to address concerns





Jaipur, India Benefits – Help in Suffering ABC Project

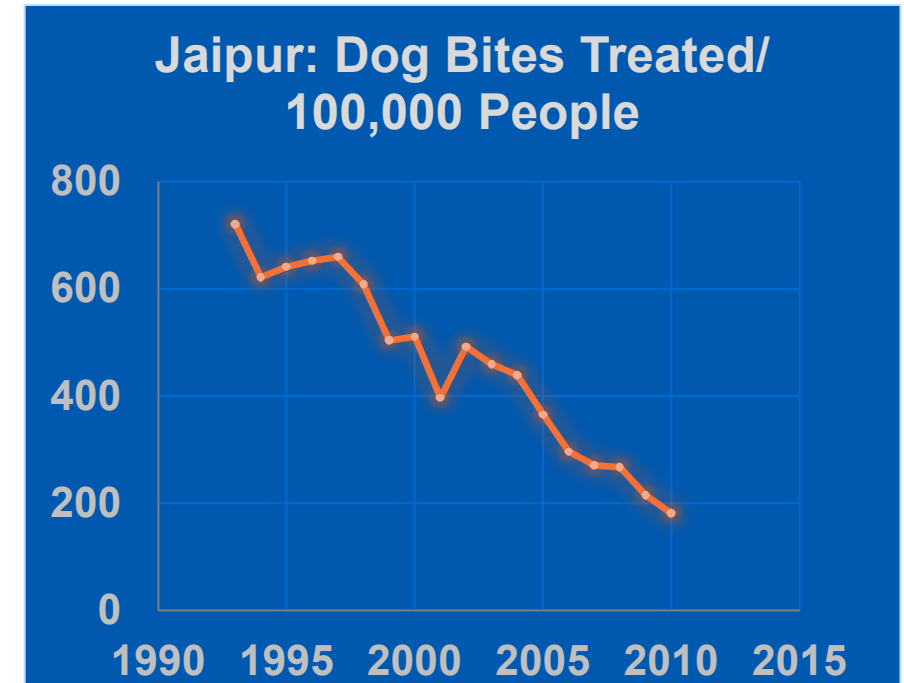
Sterilization project began in 1994, Street Dog Counts on same Routes

Rabies & Dog Bites Down

India experiences around 17 million dog bites annually; Dog bite and anti-rabies treatments cost about \$50-100 million p.a. Sterilization and vaccination **reduced rabies risk to zero or near zero** in Jaipur, Chennai, and several other Indian cities. **Reduced incidence of dog bites in Jaipur (see chart).**

Dogs Healthier, Better Welfare

Sterilized street dogs have a lower incidence of disease, live longer, and are regarded as more “friendly” by humans. **Street dog numbers in Jaipur have fallen by 50%.**



The dog bite rate started to fall in 1997 and is now nearing US value of 100 dog bites/100,000 people annually.



Some Current Initiatives

- Currently, approximately \$200M or more is devoted to dog sterilization projects globally – also millions of dollars on cat management. However, except for NZ, Australia, and some islands, cat management is a much lower priority than dog management.
- Successful dog sterilization and vaccination programs are being implemented by **Soi Dog Foundation** in Southeast Asia, **Dogstar** in Sri Lanka, **Mayhew** in Afghanistan and Georgia, **Dogs Trust Worldwide** and **Worldwide Veterinary Services** in India and Africa, **HSI** in India and Latin America, **Brigitte Bardot Foundation** globally, **Edgard Cooper Foundation** globally and too many other local initiatives to mention.
- The various Mars Corporate Entities and their Ending Pet Homelessness initiative is also an important component.



The Context for a Country Project: e.g., India

- Approximately 30-50M street dogs, 15-25M females – maybe 2-4M already sterilized.
- \$50M/year for five years is an estimated cost to sterilize 70% of female street dogs in India.
- \$1,000M – approximate annual expenditure by 35 of India's largest cities annually on health and sanitation.
- \$50-100M – annual expenditure on dog bite and post-exposure rabies treatment in India.
- Indian Government promised \$5M in 2016 – 3-yr program to sterilize/vaccinate 500K rural dogs in Haryana.
- States of Uttarakhand and Sikkim – contract with NGOs to manage dog sterilization.
- Goa, Ranchi, Ooty, Jamshedpur, Ahmedabad – various other projects by international NGOs (HSI, Mayhew, BBF, WVS) and Municipalities.
- ABC programs by 100's of Indian NGOs – Delhi, Bangalore, Chennai, Hyderabad, et al.



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Strategies for Global Street Dog Project

- Emphasize/illustrate the critical importance of dog population studies/tracking
- Identify the optimum approach required for different (street, pet) dog populations
- Build sterilization/vaccination capacity
- Conduct sterilization/vaccination programs
- Change local dog care “culture” – e.g., Costa Rica
- Document/demonstrate outcomes - for humans & dogs

WellBeing International's

Global Dog Campaign - Approach to Country Progress Status

Overall Country Progress Indicator



No Progress



Some Progress

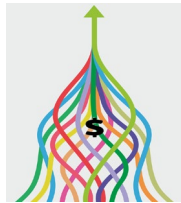


Good Progress



Outstanding Progress

Primary Factors for Country Status and Progress Consideration



Resources

- GDP Per Capita, GINI
- Small Animal Vet. Capacity
- Animal Orgs & Shelter Capacity
- State, Municipal & Community commitments



Culture/Attitude

- Attitudes
- Behaviors
- Culture Influence
- Legislation, Laws & Policies



Countries at Risk

- Disasters:
 - Humanitarian
 - Economic
 - Natural
- Conflicts



Homeless Dogs

Data to determine:

- Total dog population
- Total homeless dog pop.
- Homeless/Total Dogs %
- Homelessness % Change



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Vision

Creating and fulfilling a vision requires recognition that challenges encountered can be met and overcome.

While it may appear that ending dog and cat homelessness globally is just too daunting, I am convinced that reaching such a vision requires embracing the following:

- Address and emphasize the connections between people, animals, and the environment. UNEP's animal welfare Nexus and UNDP dog management are steps in this direction. Link human health impacts to improve human-animal interactions, which brings animal welfare benefits to the fore of the global stage for municipalities, state & national governments.
- Create a global community and promote global awareness supporting the goal/vision of ending global pet homelessness, improving the well-being of dogs and cats, and identifying benefits for people, animals, and the environment.
- Encourage and promote individual and organizational actions and document and publicize the many successful projects and benefits already in place;
- Document the well-being impacts of homelessness on dogs and cats and on human and environmental health through systematic, long-term tracking of data (collect, analyze, use, report) for strategic decision-making.

"I alone cannot change the world, but I can cast a stone across the waters to create many ripples."

~Mother Teresa



[CLICK HERE FOR A 1-MINUTE VIDEO TO END THE TALK](#)