## San Ignacio Humane Society



Applications of Sustainable Development<br>Galen University<br>Spring 2009

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## Table of Contents

Acknowledgements ..... 3
Introduction and Mission Statement ..... 4
Methods ..... 5
Project Results ..... 12
Recommendations ..... 17
Conclusion ..... 19
Appendix A - Project Proposal Sheet ..... 20
Appendix B - Full Literature Review ..... 24
Appendix C - Survey on Pets ..... 37
Appendix D - Results of Survey ..... 38
Appendix E - "Support SIHS" Flyer ..... 40
Appendix F - Adult Brochure ..... 41
Appendix G - Proper Pet Care Brochure ..... 42
Appendix H - Child Brochure ..... 43
Appendix I - Lesson Plan for Children ..... 44
Appendix J - Budget Spreadsheet. ..... 51
Contributions ..... 52

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## Introduction and Mission Statement

In San Ignacio/Santa Elena town, one of the main problems many tourists comment on is the number of stray animals roaming the streets. This is not only a problem in Belize, but in other less developed countries as well. Overpopulation, diseases, and cruelty to animals are very common in such countries. It is unsanitary to have stray animals running around town. These animals can affect not only the environment, but both other animals and humans as well.

The goals of the service-learning project were to work together with the San Ignacio Humane Society (SIHS) to promote the importance of spaying and neutering, get more stray animals off the streets, and prevent cruelty to the animals of Cayo, Belize. In order to achieve these goals, our first step was to survey the people of San Ignacio to gather information on what locals knew about basic pet care and if anybody was interested in learning more about proper pet care. Once that information was gathered, brochures were created based on the data for both adults and children about the SIHS and pet health. Flyers about the SIHS were also designed and placed around town. To promote humane treatment of pets in homes and to reduce strays, a presentation that could be delivered in a classroom setting was created and given to children at St . Barnabas Anglican School.

This project contributed to both UN millennium development goals six and seven, combating HIV/AIDS, malaria, and other diseases, and ensuring environmental sustainability, respectively. By getting strays off the streets, not only will the environment be healthier, but diseases that animals may carry, including Lyme disease and rabies, will not spread from animals to people. Since San Ignacio has neither a place
to house stray animals currently, nor many people to help in their cause, this project was greatly needed.

## Methods

Based on the local problem in San Ignacio and mission statement of the Humane Society, the SIHS group decided on various small projects that could be completed in order to achieve the objectives and overall goals. The service-learning project entailed creating surveys, brochures, flyers, and a presentation to be given to children. Each small project was designed in order to inform the public about the Humane Society and proper pet care.

## Surveying locals

When the project first began, the SIHS group came in with a goal of helping the Humane Society educate the public about their organization and proper pet care. In order to target the right audience and include the appropriate information, it was first necessary to find out how the local community felt about pets. For any project to successfully reach its target audience, it is necessary to understand the cultural norms associated with that topic. To accomplish this, a survey on pets was created and given to residents of San Ignacio. With this survey, it was possible to find out what kind of pets the people of San Ignacio have, why they have them, if they know about responsible pet ownership, and what they may or may not know about the Humane Society. The survey was entitled "Survey on Pets" to clearly inform the participants who took the survey what the topic of the survey was. The survey contained twelve questions on one side of a page; only the most important questions were asked so not to make the survey so long that people would be discouraged from taking part in it. The questions asked were intended to gather
information on how most people in San Ignacio treat their pets. [See Appendix C for the survey on pets].

After the surveys were created, they were handed out to a random selection of people in San Ignacio. In order to obtain a fair sample, the surveys were given out in more than one place and to more than one group type (age, gender, socio-economic status, etc.). Surveys were given to fellow students and staff members at Galen University, friends, people working at shops and stores in downtown San Ignacio, and other local community members. In total, thirty-two surveys were distributed and returned.

Many of the survey questions were simple "yes" or "no" questions. Other questions were open-ended or contained a "why or why not" component. The responses to these questions were grouped into categories. For example, for the question "Why do you have a pet?" each response was tallied under the following categories: protection, companionship, gift, animal lover, and other. Graphs appropriate for each question were then created based on the data collected.

All the other responses were made into pie charts so one could see how many out of the total responders selected a certain answer. Pie charts allow one to see at a glance how the majority, minority, and everyone in between responded. All the charts were titled with the question for which they represented information. [See Results section in Appendix D for the graphs].

## Creation of flyers

A flyer was created to notify people of the existence of the Humane Society and to get people to donate to the organization. The flyer included the primary objectives of
the SIHS, along with contact information so people could easily donate or inquire more details about the Humane Society. [See Appendix E for an example of the flyer].

## Designing Brochures

Three different brochures were created for the Humane Society. Two of them were aimed at adults and the third was geared towards children. The brochures targeted to adults had already been started by the SIHS but needed some editing before handing any out to people. The brochure titled "Do you love animals?" contained information about the importance and activities of the Humane Society, why it is unhealthy to have stray animals roaming the streets, and how to become a member. The "Pets need proper care" brochure contained information on how to properly care for a pet and what owners need to provide, including a schedule of when it is necessary to vaccinate and deworm a puppy. The brochure also explained the following topics: why care should be provided, spaying/neutering, fleas, mange, and a pet care checklist. [See Appendices F and G for full brochures].

The third brochure was designed for children and was created from scratch. This brochure contained information on food, water, proper containment of animals, and spaying/neutering. The main goal of this brochure was to cover the basics of pet care, while keeping the children interested. [See Appendix H for full brochure].

## Presentation \& Activity Development

The last aspect of the project detailed designing a presentation and activity that could be used to teach children the basics of pet care. The presentation was targeted towards children between the ages of five to ten. The power point template and colors used were chosen based on their appropriateness for children. After the presentation was
given to the children at St. Barnabas Anglican School, some of the children had confused and blank faces. In particular, the children did not fully understand what spay/neuter meant and why it is important for a pet to have this operation. To make things more clear, the information was repeated back to the children and they were quizzed at the end of the presentation about the important concepts.


The presentation was designed to give the children the most basic and important information about pet care. However, children usually learn better when actively participating in an activity, so an activity was created to get them excited about proper pet care. The presentation was given as St. Barnabas Anglican School to a classroom of twenty-six children, which combined both standards two and three. The children were first divided into four groups. Each group was a different category; food, water, shelter, and dogs. The food, water, and shelter groups stood separated from one another and they
each had a position/motion that symbolized their group. The food group stuck out their cupped hands as if holding food in their hands for the dogs, the water group curled up in a ball, and the shelter group held their arms out in the air, symbolizing a dog house or other forms of shelter. For the activity, scenarios were called out and the dog group would have to run to the correct group. For example, if the phrase, "it's starting to rain" was said, the dogs would have to run and get under the arms of the shelter group. If "dinner time" was said, then the dog group would have to run to either the food or water group. Each group then took turns being each category. The game forced the children to think about the needs of dogs and how similar their needs are to people's needs.



When the activity was finished, the children were brought back into the classroom, where a question and answer session took place. Questions asked to the children included not only basic pet care needs (food, water, and shelter), but also questions about pet health in general. For instance, the children were asked what should be done if their pet developed fleas or was itchy due to mange. This portion allowed the incorporation of the importance of taking the pet to a vet when it is sick. It also allowed the children to come up with their own responses. A coloring page of a dog was then handed out to all of the children. The children were to take the coloring page home, color it, write four things that are essential to pets on the back of the page, and bring it back to school by the end of the week. This was to allow the children to think back to the presentation and activity. To give the children an incentive to go home and do this, they were told they would receive a goody bag at the end of the week. Each child received a
small zip lock bag of animal crackers and mini m\&m's for coloring the page and listing four essential pet care needs on the back. [See Appendix I for full lesson plan].

The power point presentation, along with detailed notes on what was said and done, was then given to our project partner in the hopes that the presentation would be used by the SIHS members to present to other groups of people in the future.

## Results

From the survey given to the people in San Ignacio on pets, basic information was collected. This information was necessary to acquire in order to incorporate the appropriate information into the brochures and to make sure the brochures were targeting the right audience. The results of the survey are presented in Figures 1-4.
[See Appendix D for more graphs].


Figure 2: Why Do You Own a Pet?


# Figure 3: Where Do You Get a Pet? 



Explanation: It is important to know where most residents receive their pets to see if they are aware that the SIHS provides for adoption of healthy pets. This data also informed the group as to what people do when their own pet has a litter. The majority answered they received their pet from a friend; this suggests that once a pet gives birth, the owner then either sells or gives away the litter to friends, family members, or other people wanting a pet.

## Figure 4: Reasons Not to Adopt



The information from the survey was important to know in order to better understand the local community and their views on pets, what pets are used for, and how pets are treated. By having a basic understanding of how locals perceive animals, it allowed the SIHS to develop the appropriate strategies needed to disseminate pet care information efficiently and in a way that would appeal to residents.

During the activity portion of the presentation to the students at St. Barnabas Anglican School, the children were actively engaged in learning about basic pet care. By the end of the activity, all the children were able to name several different basic pet care needs and some children even came up with needs that were not mentioned in the lesson.

When the post activity coloring pages were collected three days later, all the children were able to recall four basic pet care needs. Thus, the presentation and activity were a success and the children learned in a fun and stimulating way that was rewarding not only to the children, but to the SIHS group as well.

## Recommendations

The Humane Society group has had a successful semester but there is always more work that can be done. An important task for all groups is to propose changes that can be made and maintained after the group is gone. This is necessary to make our project sustainable. A project that has no plan for the future will become forgotten and will not accomplish the goals it set out to meet. There are several suggestions the SIHS group would like to make in order to improve the chances for success of future groups.

After giving one presentation to a group of children at St. Barnabas Anglican School, the SIHS group felt this activity was more rewarding to the group than creating brochures and flyers. Although the brochures and flyers provided great value to the community, working with children provided the opportunity to observe tangible results of children learning from the knowledge the group presented to them. It would be a great addition to the project to see a continuing development of the children's presentation and activities and certainly further work educating children. The presentation could be enhanced by creating different presentations for different age groups. Since different age groups have distinct learning abilities, modifying the presentation would be necessary to make it as effective as possible. The presentation could also be improved by involving props or prizes to better hold the children's attention. Creating other activities that could be done outside would be useful as well. Both the presentations and the activities need to be given with more frequency so the children can better retain the information.

It is important to consider various options for increasing the number of presentations to children. An adult workshop on pet care could be a good way to do this. A workshop could be created to teach the basic information to adults so that they learn
the information and can then reinforce the ideas to children. It would also be productive to give the workshop to teachers. The teachers could then form their own lesson plans to give to the students. This would be a good way to sustain the project without any student groups present. Children are the target audience because they are more inclined to go home and inform their friends and family of what they learned. However, it is important to educate adults as well because they are the ones who will be able to make changes in the present.

By having three group members from the United States, it was easy to notice the difference between operations of the SIHS and a Humane Society in the United States. Based on these differences, our group came up with ideas that could greatly improve the effectiveness of SIHS with appropriate funding. Currently, the SIHS does not have an office space that they can use solely for SIHS work. Right now their operations are being run out of the members' homes and any expansion to the SIHS would require that it have its own space. It would be very helpful if in the future a space could be located that would be appropriate for the use of the SIHS. This would require research and a funding plan based on what the SIHS can afford. The SIHS also does not have a kennel to house dogs that need to be rehabilitated. This significantly limits the number of animals they can take in and care for at a time. The SIHS has discussed plans for building a kennel but no definite plans have been made. Great progress could be made if the SIHS had a kennel to use in order to take care of more animals.

## Conclusion

Our project successfully accomplished our preliminary goals and in the process of doing so our group discovered that the most effective way of decreasing the number of stray animals and preventing improper treatment of animals is through education and awareness. It is possible to make a difference here in San Ignacio if people became more aware of basic pet care needs and the problems that arise due to pet overpopulation. By learning background history about the conditions of animals in Belize, it is evident there was a need for this service-learning project. Despite the differences in attitudes towards pets between Belize and the United States, there are still many Belizeans who are willing to listen and learn. Those people are the ones that will make a difference in the fight against pet overpopulation and cruelty to animals in San Ignacio.

## Appendix A - Project Proposal Form

1. Group Information: Who is in your group? What is their contact information and when do you plan on meeting?

2. Project Concept: Write a one-paragraph description of the problem. What is the nature of the problem? Why is it a problem?

The problem here in San Ignacio and many other less developed countries is cruelty to animals and the abundance of strays roaming the streets. This is something not only many tourists comment on when walking through the streets, but it is a true health problem as well. Many animals are abandoned every day by their owners because the owner either is ignorant of how the animal can be treated or just do not want to pay or have the money to pay for treatment. It is also unsanitary to have these animals running around the town and can affect both human and environmental health as well.

## 3. The Desired Ends

Briefly describe the desired ends. What does your group envision as the solution to your problem (goal)? How will your project contribute to realizing a MDG objective?

1. Eradicate extreme poverty and hunger education
2. Promote gender equality and empower women
3. Improve maternal health other diseases
4. Ensure environmental sustainability development
5. Achieve universal primary
6. Reduce child mortality
7. Combat HIV/AIDS, malaria, and
8. Develop a global partnership for

The mission statement of the San Ignacio humane society is to prevent cruelty to the animals of Cayo, through education and awareness. Our primary goals include remodeling the adult brochures, developing a brochure geared towards children, and developing a presentation that can be taught to primary students and used in the future by other humane society members. The information will include general pet care, vaccination schedules, reasons for sterilization, and the importance of spaying/neutering your pet. By doing so, we hope to educate the people in Cayo and get more strays off the streets.

The solution to the problem is not easy and will take a lot of time to accomplish, but educating people about the problem is the first step. The project contributes to both MDG 6 and 7, combating HIV/AIDS, malaria, and other diseases and ensuring environmental sustainability, respectively. By getting strays off the streets, not only will the environment be healthier, but diseases that animals may carry will not spread from place to place.

The objectives of the humane society include: organize activities and services that promote responsible pet care, rehabilitation and placement of homeless pets in adoption programs, reduce the homeless pet population through an affordable spay/neuter programs, provide temporary shelter for animals in need, increase care and civic responsibility through participation with other organizations, reform San Ignacio/Santa Elena town board euthanasia programs to more humane methods, and offer education about care and treatment of pets and promote a bond of caring between humans and animals, domestic and wild.

## 6. Potential Partners

List potential partners (this can be government, non-government or private industries interested in the triple bottom line), and what their role will be.

| Organization | Contact information <br> (address, phone, name <br> of contact person) | Description of <br> project <br> tailored to <br> mission of <br> partner | Status |
| :--- | :--- | :--- | :--- |
| St. Barnabas School | Ms. Shaw | Presentation to <br> children on <br> animal health | Complete |
| Mr. Greedy's | Mr. Greedy | Build a kennel <br> area for stray <br> dogs | Underway |

6. Timeline

| Estimated <br> date | Activity | How objectives will be <br> met | Person(s) <br> responsible | Complete <br> $?$ |
| :--- | :--- | :--- | :--- | :--- |


| Feb. 10 | Project proposal due | -Identify why it's a problem <br> -think of alternatives <br> -Meet with group | Group | Yes |
| :---: | :---: | :---: | :---: | :---: |
| Feb. 11 | Meet with project partner | - Discuss other ideas for project and go over partnership agreement | Group | Yes |
| Feb. 12 | Partnership Agreement due <br> Group meeting | -make agreements with project partner and everybody involved <br> -discuss research and assign work to each member | Group | Yes <br> Yes |
| Feb. 19 | Group meeting | - compile information gathered for brochures and put it together | Group | Yes |
| Feb. 26 | Literature Review due | - read and write a report | -each member is responsible for article | Yes |
| Mar. 2 | Group meeting | - make surveys and discuss brochures | Group | Yes |
| Mar. 10 | Group meeting | -Edit and sign literature review -compile all surveys -Discuss presentation | Group | Yes |
| Mar. 17 | Preliminary Presentation due <br> Group Meeting <br> Meeting with Meg Ashman | - design a power point on what has been accomplished so far <br> -Discuss brochures <br> -Discuss child and adult brochures | Group <br> Group <br> Jen and Kourtney | Yes |
| Mar. 19 | Group Meeting | - Editing brochures, compiling data from surveys, organizing presentation | Group | Yes |
| Mar. 20 | Meet with project partner | -Show adult brochures and survey to project partner <br> -Discuss kennel, flyers, and presentation | Jen | Yes |
| Mar. 24 | Group Meeting | -Put together presentation, finish brochures and flyers, | Group | Yes |


|  |  | finish graphs on excel |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Mar. 25 | Meet with Ms. <br> Shaw | -Discuss time and date <br> for presentation | Group | Yes |
| Mar. 29 | Group Meeting | - Prepare for <br> presentation at St. <br> Barnabas School <br> -Discuss report | Group | Yes |
| Mar. 30 | Presentation at St. <br> Barnabas School | -Give presentation to <br> children | Group | Yes |
| April 1 | Meet with project <br> partner | - Give Heather all <br> brochures, surveys, and <br> presentation | Jen | Yes |
| April 2 | Sections 1-5 and 8 <br> due for final report <br> Return to St. <br> Barnabas School | - write and edit draft of <br> final report | Group | - collect coloring pages <br> and give prizes to the <br> children |
| Group | Yes |  |  |  |
| April 8 | Group meeting | - Discuss final report <br> and presentation | Group |  |
| April 15 | Group meeting | - Finalize presentation <br> and paper | Group | Yes |
| April 16 | Final report and <br> presentation due | -finish writing and <br> editing final report <br> -give final presentation | Group | Yes |
| April 21 | Presentation of <br> final report due | -Give final presentation | Group | Yes |

## 6. Proposed Budget

Identify anticipated expenses, including transportation, copying, purchases of equipment, and possible contribution to project partner.

| Category of expense | Anticipated expense in <br> $\$$ | Justification | Running Total |
| :--- | :--- | :--- | :--- |
| Miscellaneous | $\$ 45.75$ | Prizes for <br> children | $\$ 45.75$ |
| Printing | $\$ 220$ | Brochures to <br> hand out at final <br> presentation | $\$ 265.75$ |

## Appendix B - Literature Review

San Ignacio Humane Society
Galen University
21 April 2009

## Table of Contents

Introduction ..... 26
Role of Humane Societies ..... 26
Global attitudes towards pets ..... 28
Pet overpopulation and spay/neuter ..... 31
The local problem ..... 33
Contributions ..... 36

## Introduction

This literature review covers information in the following order: the role humane societies play and how they operate, the attitudes towards pets in different parts of the world, pet overpopulation and the importance of spaying/neutering, and the local problem here in Belize and why there is a need for this project in the first place.

## Role of Humane Societies

A humane society is a group of members trying to make a difference in the world by preventing cruelty to animals, providing food and shelter, and rehabilitating stray animals as needed. The main objective of a humane society is to promote the welfare of animals. Humane societies in a community provide specialized services to the animal by attempting to improve the animal's quality of life (Ripley, 1989).

Animal use varies in different countries and regions. The policy of the Society for the Prevention of Cruelty to Animals (S.P.C.A) states that it "...condones the use of animals only in such a manner which will protect the animal against cruelty, avoid pain and suffering and treat them humanely; cultivate an attitude of compassion and kindness towards them; respect their dignity, their liberty, and sphere of existence; and spare their lives as much as possible." Although humane societies differ across cultures, places, and periods of time, humane societies have always served as advocates and protectors of all animals. In action, a humane society manages an animal shelter and places animals up for adoption. Humane societies also provide leadership opportunities for their members and are determined to transform any negative attitudes towards pets to a positive outlook for the future (Ripley, 1989).

Locally, the major humane society is the Belize Humane Society and Animal Shelter (BHSAS). BHSAS was founded in November of 1996 by a small group of Belizeans and two Peace Corps volunteers who were disturbed by the horrible conditions of animals in Belize City. They sought to create an organization to protect these animals by providing shelter and other resources for them. Over the years, the mission of the society has transformed into more than just providing shelter for these animals. The goals of BHSAS are: provide shelter for unwanted, sick and injured animals until they are rehabilitated, provide low-cost spaying and neutering and a place for humane euthanasia, organize services and activities promoting responsible pet care, and create an education program for Belize City schools (Belize Humane Society, 2008).

BHSAS states that sterilization, or spaying and neutering, is the only solution to solving the problem of pet overpopulation. They assert that education and awareness is the key to decreasing the number of animals on the streets and pet owners must be better informed of the services provided by veterinarians and humane societies. To accomplish this, the society offers subsidized pet sterilization and also educates the public about sterilization at rabies clinics, dog shows, the market, and other local events (Belize Humane Society, 2008).

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## Global attitudes towards pets

In the United States and other developed countries, the way animals are treated is significantly different from what one would most likely observe in less developed countries. In the former, some animals sit in the lap of luxury as members of the family in a household, while in the latter, pets are not so lucky and wind up being beaten, abandoned, or malnourished. Dogs are almost like family to many Americans and Europeans, while in Asia and other parts of the world they are used as food and labor sources (Serpell, n.d.).

In the United States there are approximately 48 million pet dogs and 27 million pet cats (Serpell, n.d.). In Europe, the numbers are 26 million and 23 million, respectively (Serpell, n.d.). In 1995, Americans purchased over $\$ 9.3$ billion worth of dog and cat food within the United States (Sherman, 2002). This amount greatly surpassed the total annual gross national product for 1995 of over 80 countries worldwide (Sherman, 2002). These animals are smothered with affection and love by their owners. To Americans, a pet is "an honored institution in our society" and most pet owners treat their animal like their own child (Serpell, n.d.). Sherman (2002) stated: "pet keeping is so strongly established in affluent western cultures that it has come to be perceived as the natural order of things by those who embrace it." However, pet keeping is not universal and many people in less developed countries do not share the same affection for their pets (Sherman, 2002).

In less developed countries, animals have many uses to humans, and being a member of the family is typically not one of them. Many people are in fear of these animals and have
a strong dislike for them. This is because dogs are commonly used to serve as protectors and to intimidate people. Since rabies is a worldwide problem and control programs are nonexistent in many countries, people are also in fear of getting attacked or bitten. In Pakistan it is common to observe children throwing stones at stray animals. In Islam, children are taught that dogs are unclean animals and are to be used for herding and guarding, not pets. Many people in less developed countries also have a hard time understanding how Americans spend as much as they do on their pets, especially when they themselves can not afford to spend that much on their own human family members (Sherman, 2002).

Cruelty to an animal includes ill-treatment, beatings, and general neglect, such as not providing food, water, and adequate shelter. In Belize, if a person is found guilty of cruelty to an animal, that person may be charged with civil fines, damages, or may even be arrested. Although Belize recognizes the importance of humane animal treatment, proper pet care is both challenging and expensive in many areas. For example, Placencia has no local veterinarian and people must either travel to San Ignacio or Belize City for treatment or wait until a veterinarian comes to them. It is also very difficult to purchase basic pet care items due to it being too expensive or hard to find locally (Toy, 1999).

In San Ignacio and Santa Elena, most owners prefer to have a dog, rather than a cat (Y. Hegar, personal interview, February 23, 2009). Dogs are mainly used as a means of protection and security, while cats serve more as pets and keep the rodent population down (Y. Hegar, personal interview, February 23, 2009). When dogs start to bark and make noise, owners become alert and are able to assess the situation outside (M. Aird, personal interview, February 22, 2009). This enables people to sleep more soundly knowing that their dogs will
alarm them if there is an intruder (M. Aird, personal interview, February 22, 2009). Most of these dogs spend their lives in the yard, since protection is their main purpose, but are kept in enclosed areas and given plenty of clean water and are fed once a day (M. Aird, personal interview, February 22, 2009). In San Ignacio, there are two main veterinarians that are open several days a week and provide the services needed for proper pet care (M. Aird, personal interview, February 22, 2009). Some pet owners also take their dogs on walks and to parks for exercise (M. Aird, personal interview, February 22, 2009).

Although there are pet owners who care for their animals, many people in San Ignacio do treat their pets cruelly by not feeding them and leaving them exposed for long periods in the sun or rain (Y. Hegar, personal interview, February 23, 2009). These owners simply chain their dogs to a post and yell at them to be quiet (Y. Hegar, personal interview, February 23, 2009). Instances have also been reported where dogs have been beaten with sticks if they jump on people and soil their clothes or destroy something in the yard (Y. Hegar, personal interview, February 23, 2009). Furthermore, illegal street dog fights still occur (M. Aird, personal interview, February 22, 2009). Owners vigorously train their dogs to become tough and instigate them to fight other dogs (M. Aird, personal interview, February 22, 2009). This is not only done for entertainment, but for economic incentives and bragging rights as well (M. Aird, personal interview, February 22, 2009).

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## Pet Overpopulation and Spay/Neuter

Every day millions of dogs and cats are born because of uncontrolled breeding of pets. If the number of offspring of stray and abandoned animals is added to this, the total becomes even more shocking. In the U.S. alone, the number of cats and dogs placed in shelters each year is between 6-8 million, while the numbers of animals euthanized in shelters due to no space or being an unwanted pet reach 3-4 million (HSUS, 2009). The conditions in less developed countries are even worse.

Stray animals pose a serious threat to not only the health of the environment, but to other animals and people as well. Stray animals get into garbage containers, defecate along the streets and people's lawns, and may irritate people who do not understand the animal's needs (HSUS, 2009). They may also scare children, prey on wildlife, and contribute to motor vehicle accidents (ASPCA, 2009). The Humane Society of the United States (2009) stated: "Living creatures have become throwaway items to be cuddled when cute and abandoned when inconvenient. Such disregard for animal life pervades and erodes our culture." The truth is that there are more dogs and cats entering shelters and roaming the streets than there are people willing to take care of these animals. The only viable solution is
to take responsibility for these animals by educating ourselves and our communities, and getting the animals spayed/neutered.

By preventing unwanted, unplanned, and unexpected births, sterilization can improve the health of our pets and environment; it is humane and highly cost-effective. The cost to spay or neuter a pet is significantly less than it would cost to have and take care of a litter (ASPCA, 2009). It also lessens the cost of clean-up and treatment when an nsprayed female stains the carpet when in heat, or when an unneutered dog escapes and gets in a fight with other unneutered strays (ASPCA, 2009).

Spaying and neutering an animal is an important part of basic health care. Female pets that have been spayed will not go into heat and neutered males tend to be less aggressive and territorial (HSUS, 2009). An nsprayed or unneutered pet faces many health risks. The main ones of concern are pyometra, breast cancer, and testicular/prostate cancer. Pyometra is the infection of the uterus that usually affects nsprayed, older female dogs in the six weeks following heat (VeterinaryPartner, 2009). If a puppy is spayed before her first heat cycle, she will never develop a mammary tumor of any kind (VeterinaryPartner, 2009).

Many humane societies work with their local veterinarian and other clinics to offer subsidized and affordable spay and neuter services. Thus there is no excuse not to have a pet spayed/neutered. If people are educated on this topic, the problem of pet overpopulation can be solved one spay or neuter at a time (VeterinaryPartner, 2009).

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## The local problem

Based on the data already provided and traveling to different places throughout Belize, it is easy to identify the problems San Ignacio and neighboring towns face when it comes to dealing with animals. One of the major issues in San Ignacio is the abundance of stray dogs roaming the streets (The San Pedro Sun, 2006). These dogs are typically not spayed/neutered and roam the streets freely. Because these dogs are not sterilized, they are more likely to get into dog fights over territory, food, and mates (The Welfare of Stray Dogs, 2008). In the course of fighting, many dogs may redirect their aggression unintentionally towards people walking by, causing many people to be subjected to being bitten or attacked (The Welfare of Stray Dogs, 2008). This can cause severe negative health effects for humans.

Since stray animals do not receive veterinary care, many are carriers of zoonotic diseases (Eddi et al., 2005). A zoonotic disease is an infectious disease that can be transmitted from animals to humans, or visa versa. Cysticercosis, echinococcosis, rabies, and Lyme disease are all significant diseases that dogs can carry that have the ability to greatly affect humans (Eddi et al., 2005). Cysticercosis is the most common parasitic infection of the nervous system worldwide in humans, causing up to 50,000 deaths per year (Eddi et al., 2005). It affects muscles, subcutaneous tissues, and eyes and may be associated with
epilepsy (Eddi et al., 2005). Echinococcosis is another parasitic tapeworm that causes cysts to develop (Eddi et al., 2005). Rabies severely affects the central nervous system and causes acute encephalitis in both animals and humans (DHPE, n.d.). Once symptoms develop, it is usually fatal (DHPE, n.d.). Lyme disease is spread most commonly through ticks (Trotman, n.d.). Dogs and other animals can carry ticks around with them and when the ticks fall off they can attach to people. These diseases are all commonly carried by stray animals. By allowing so many to roam the street, humans are putting themselves at a greater health risk.

Besides affecting human health, stray animals also have environmental and economic impacts. Since stray animals must scavenge for food and shelter, they are often in competition with wildlife and other animals. Both dogs and cats have the ability to eat smaller animals, which then impacts natural ecological processes (Trotman, n.d.). The public image of the environment is a factor in attracting and keeping tourists coming to these more pristine, less developed destinations. If the streets are polluted with stray animals and waste, the tourists are less likely to return to the same area (Trotman, n.d.). Many less developed countries, like Belize, depend on tourism to support their economy; if tourists are bothered by the pet overpopulation, the economies of those countries will greatly suffer.

Currently, Belize's strategy for dealing with stray animals and overpopulation has been proven ineffective. The eradication program that had been established made use of strychnine poison, which is extremely potent and can kill the animals in less than twenty minutes (The San Pedro Sun, 2006). This form of mass euthanasia is inhumane and painful to the animals (The San Pedro Sun, 2006). The use of this poison also poses great risks, since it can easily be ingested by other wildlife, pets, and humans, particularly children (The San Pedro Sun, 2006). It has also been banned by the World Health Organization for several
years because it is so lethal (The San Pedro Sun, 2006). The removal of dogs from crowded areas has also been shown to be ineffective (The Welfare of Stray Dogs, 2008). This is because when the animal is removed, that space becomes available for another dog to take its place (The Welfare of Stray Dogs, 2008). The dog that takes over continues to breed and fight other dogs and diseases continue to spread (The Welfare of Stray Dogs, 2008).

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## Contributions to the literature review

Chris Cal - Researched and reviewed "The local problem."
Signature $\qquad$

Jennifer Haber - Researched "Pet overpopulation and spay/neuter" and "the local problem," wrote and re-wrote each section.

Signature $\qquad$

Cara McCauley - Researched and reviewed "Global attitudes towards pets." Signature $\qquad$

Kourtney McGrath - Researched and reviewed "Role of Humane Societies."
Signature $\qquad$

## Appendix C - General Pet Survey

1. Do you have any pets?

Yes No
2. If yes, what kinds of pets do you have?
Dog Cat Other
3. Why do you have a pet?
4. Would you adopt a pet? Why or why not?

Yes No
5. Where would/do you get your pet?
6. Would you spay or neuter your pet?

Yes No
7. What kind of food do you feed your pet?
8. What would prevent you from owning a pet?
9. Would you vaccinate your pet?

Yes No
10. Would/Does your pet wear a collar or have identification?

Yes
No
11. Would/Do you provide your pet with medications (Ex. Ivermectin)? If not, why? Yes No
12. Would you be interested in learning more about Pet Care?
Yes No

Appendix D - Results of Survey
Figure 5: What Kind of Pet Do You Own?


Explanation: Other pets, consisting of $14 \%$ of the sample size, included birds, rabbits, turtles, and horses.

Figure 6: What Do You Feed Your Dog?


Figure 7: Reasons for Adopting


## Help Support the San Ignacio Humane Society!!!

## With Your Help We Can:

- Promote animal well-being through education and awareness
- Rehabilitate and place homeless pets in adoption programs
- Reduce the homeless pet population through affordable spay/neuter programs
- Provide temporary shelter for animals in need
- Increase civic care and responsibility through participation with other organizations
- Reform San Ignacio/Santa Elena town board euthanasia programs to more humane methods

Donate Today to:
San Ignacio Humane Society c/o PAWS Veterinary Clinic
(Right next to Sacred Heart College)
Joseph Andrews Drive
San Ignacio, Cayo

Telephone: 672-1011
E-mail: Slhumanesociety@gmail.com


Help those that cannot help themselves.

Animals cannot tell us when they are being mistreated or need help. They depend on people who care to stand up for their rights.
The San Ignacio Humane Society is a voluntary organization actively working for the health and humane treatment of all animals.

## Healthy animals and Community

 prideIn our twin towns of San Ignacio and Santa Elena, we have countless homeless animals on the streets and households with mistreated and neglected animals. For our health, their health, and for community pride, we need to humanely address this problem

Unhealthy and homeless animals can pose health risks to humans. Worms, rabies, bites and attacks can be caused by mistreated or abandoned animals.

Stray pets and homeless animals can also be a nuisance when they get into trash containers, defecate in public areas, and frighten or anger people who do not understand their needs.


Help us help them by becoming a member of the San Ignacio Humane Society.

Fill out the membership form, cut, enclose your membership fee, and mail it to or drop it off at:
San Ignacio Humane Society c/o PAWS Veterinary Clinic (Right next to Sacred Heart College) Joseph Andrews Drive San Ignacio, Cayo

Telephone: 672-1011
E-mail: SIhumanesociety@gmail.com

 love animals?

## Join the San Ignacio Humane Society Today!

SIhumanesociety@gmail.com


## San Ignacio

 Humane Society

Mission:
To prevent cruelty to the animals of Cayo, through education and awareness.

## What does SIHS do?

The San Ignacio Humane Society rehabilitates and places homeless pets in adoption programs, reduces the homeless pet population through affordable spay/neuter programs, and provides temporary shelter for animals in need.

We offer education about care and treatment of pets and promote a bond of caring between humans and animals -- domestic and wild.

Our members can receive discounted veterinary services for their pets with participating Cayo clinics.

SIHS also plans to raise sufficient funds to start a kennel for the strays of San Ignacio and Santa Elena. In the meantime, members foster pets until adoptive homes are found.

## With your help we can:

- Promote animal well-being through education and awareness.
- Rehabilitate and place homeless pets in adoption programs.
- Reduce the homeless pet population through affordable spay/neuter programs.
- Provide temporary shelter for animals in need. - Increase care and civic responsibility through participation with other organizations.
- Reform San Ignacio/Santa Elena town board euthanasia programs to more humane methods.


## Volunteer

If you want to help but do not have time to be an active member, sign up to be a volunteer. As a volunteer you can help with specific events such as fundraisers, clinics, and educational programs.

Start helping us help animals.
Join the San Ignacio Humane Society!


If you would like to become a member, fill out this form (see back panel for mailing details)
Name:

Business Name:

Mailing Address:

Email:

Membership (tick one and enclose appropriate amount)


Please check here if you are interested in:
$\ulcorner$ Silent member (Support the SIHS through membership fees and receive only notifications about special events.)

Volunteer (Pay no membership fee, do not attend meetings but volunteer for special events)
$\Gamma$ Active member (Receive all e-mails, attend meetings, participate in events as atten

- Other Cut along dotted line.


## Appendix G - Proper Pet Care Brochure

| Healthy Puppy Schedule | Contact SIHS for Help | - |
| :---: | :---: | :---: |
| Puppies take a lot of patience and also need regular visits to the animal doctor (veterinarian or vet) for worming and vaccinations. If you have a puppy, check out the list below to make sure you are giving it a healthy start in life by following the healthy puppy schedule below. | The San Ignacio Humane Society assists pet owners in getting their pets spayed/neutered and getting other medical treatment at a reduced cost. Our members can receive discounted veterinary services and we also organize spay and neuter clinics. | Pets need |
| 2 Weeks: Deworm. | For information on: |  |
| 4 Weeks: Deworm. Introduce commercial puppy food* - moisten with water or milk. | getting help, <br> volunteering, | 60 |
| 6 Weeks: First puppy vaccination (DHLPPCV**) and deworming. Wean puppy. Offer dry or canned commercial food. Feed three times per day. | becoming a member, <br> or |  |
| 8 Weeks: Deworm. | clinic dates, |  |
| 9 Weeks: $2^{\text {nd }}$ puppy vaccination (DHLPPCV). <br> 10 Weeks: Deworm. | contact us at: | Find out how to take care of |
| 12 Weeks: $3^{\text {rd }}$ puppy vaccination (DHLPPCV) and deworming. | San Ignacio Humane Society c/o PAWS Veterinary Clinic | your dog or cat |
| 4 Months: Deworm. Rabies vaccination. Place on heartworm preventative and give at monthly intervals for life. | (Right next to Sacred Heart College) <br> Joseph Andrews Drive San Ignacio, Cayo |  |
| 6 Months: Heat cycle begins - Spay or neuter if not intending to breed. Begin feeding twice a day. | Telephone: 672-1011 E-mail: SThumanesociety@gmail.com | SIhumanesociety@gmail.com |
| 1 Year: Feed once a day. |  |  |
| 15 Months Annual Vaccination: Give for life. | 17304 |  |
| * Some breeds may require different diets. <br> ** Distemper, Hepatitis, Leptospinosis, Parainfluenza, Parvovirus, Coronavirus. | $8$ | San Ignacio Humane Society |


| Animals need care | Pet care checklist | Can you feed your pet properily? |
| :---: | :---: | :---: |
| Dogs and cats have been a part of the lives of people for about 15,000 years! They offer us their companionship and protection, or help us by eating rats and mice. We have made the choice to have them in our lives, and we need to make sure that they are cared for properly. Animals cannot tell us when they are being mistreated or need help. They depend on people to take care of them. | If you are considering getting a pet, first stop and think if you an ready for a pet. Animals meed to be carrd for and need to be | more than just a couple bones or a piece of bread or tortilla to stay healthy. |
|  | treated mben tho are sick. Ary you rady to commit to a pert? <br> Can you afford it? <br> Can you afford the cost of regular worming, vaccinations | You don't have to buy expensive foods for your pet, but you do need to make sure they are fed properly according to their size. Alternatives to store-bought |
|  | and spay/neutering? If not, maybe you should wait until you can afford to properly care for an animal. | Does your pet have a collar? |
|  | Does your pet have a proper living space? <br> A dog needs a fenced yard, a long running line (a leash or rope attached to an overhead cable) or to live in the house. Dogs should not be permanently housed in cages | Get a collar for your pet so that people know that it <br> has a home. Make sure the collar is not too tight. You should be able to easily insert two fingers under the collar. |
|  | or kept on short chains or ropes. | What will you do with your dog or cat in the event of an emergency? |
|  | shady place when it is hot. They also need access to clean drinking water. <br> Cats and dogs need a clean living space. Cats need to be | Remember to include your pet in your hurricane evacuation plan and have a neighbor, family member or friend that can care for your pet if you have to go away for any reason. |
|  | able to go ousside to go to the bathroom or they need to have a litter box that is kept clean and changed regularly. | When your pet is sick or injured, call a vet for help. |
|  | Do you have time for a pet? <br> Dogs and cats need attention and play time. If they live inside, they need regular walks. Dogs also need time off of their leash and plenty of exercise. | If you already bave a pet and cannot afford to care for it, do not neglect it. Instead, contact the San Ignacio Humane Society for assistance. |
| The greatness of a nation and its moral progress can be judged by the way its animals are treated. <br> - Mahatma Gandhi | Keep your dog or cat tick-free and flea-free, cheaply and easily | Don't throw a good dog away! |
| Spay or neuter your pet | There is a once a month injectable treatment that keeps your pet free of worms (except |  |
| Pet overpopulation is a problem for you, your pets, and your community. Prevent the problem before it starts by having your cat or dog spayed or ncutered. | tapeworm), heartworm, ticks and fleas (Ivermectin). Best of all, it can be purchased for $\$ 5$ a shot or less if you buy by the bottle. Ivermectin is sold at Prosser, Jiron, Paws, |  |
| Spaying female dogs and neutering male dogs prevents them from having puppies. Vets perform these operations, which are permanent birth control methods. This helps dogs and cats live | Western Vet Clinic and many other pet care locations. See your vet about what dosage you should give to your animal. | Mange is a parasitic infection of the skin of animals. It is caused by a mite and usually associated with hair loss, itching and inflammation |
| longer, healthier lives. It also eliminates or reduces the incidence of a number of health problems that can be very difficult or expensive. If you cannot afford to have your pet spayed or neutered, contact the Humane Society. | - | Most mange treatments involve only a few washes and/or injections (some in injections as cheap as $\$ 5$ each). If you honestly can't afford to treat your dog, contact the San Ignacio Humane Society for assistance. |

Appendix H - Child Brochure


## Care for your pet

## Doghouses

- Dogs that are kept outside need doghouses to protect them from bad weather.
- Dogs should always have access to plenty of shade and never be left in the sun.


## Tieing Up

- Dogs should not be tied up for long periods of time.
- Heavy chains should not be used because they do not let your pet move around properly.
- Tieing up your pets causes them to be mean instead of to protect you.
- They should also never be tied on a rope too short.


## Fences

- Dogs should be kept in their yards by a secure fence, which will prevent them from:
- Being hit by cars
- Getting into fights with other animals
- Getting into garbage and harmful things


## Food and Water

- No matter where you keep your pets they should always have plenty of fresh water.
- Your pet also needs the right food - mostly dry pet food (and not too many food scraps).


Veterinarians spay or neuter cats and dogs to prevent them from having babies. If your pet has not had this operation, talk to your parents and explain why it is so important. Spay surgery is done on female animals, and neuter surgery is done on male animals.

Why prevent pets from having babies?

- Your dog or cat will live a longer, healthier life.
- Your male cat or dog will be better behaved and less likely to leave home.
- It's good for the community: pets are less likely to...
- Get into trash containers
- Go on other people's
property
- Bite or attack
- Scare children
- Cause car accidents



## Appendix I - Lesson Plan for Children

## Lesson Overview

The lesson will start out with a 10-15 minute power point presentation on proper pet care. The remaining time will be spent outdoors playing an activity reiterating the essentials that all pets need to live a long, healthy life. The lesson will end with the children being brought back inside and asking them questions about what they just learned, followed by handing out a coloring page for each child to take home.

## Lesson Objectives

- Teach children the importance of food, water, and shelter for an animal
- Teach about mange, tumors, and parasites
- Educate about spaying/neutering your pet and why it is important
- Talk about importance of vet visits


## Materials Needed:

- Projector
- White paper to project the power point on
- Laptop


## Power Point Presentation:







## Activity Outside:

Divide children into four groups -
Group 1: Food
Group 2: Water
Group 3: Shelter
Group 4: Dogs

- The shelter group forms "shelter" by extending their arms out to symbolize a dog house.
- The food group forms "food" by cupping their hands like a bowl for the dogs.
- The water group forms "water" by crawling into a ball on the ground for the dogs to drink.
- The dog group runs to the appropriate group when a specific word is stated.
- Each group will take turns being each category.

Dog group runs to shelter group when the following words or phrases are stated:

- "It's raining"
- "It's a hot, sunny day"
- "There is a mean dog coming"

Dog group runs to food group when the following words or phrases are stated:

- "Dinner time"
- "It's the end of the day"
- "Something you give your adult dog once a day"
- "Something you give your puppy two to three times a day"

Dog group runs to water group when the following words or phrases are stated:

- "It's a hot, sunny day"
- "Something your dog always needs at all times"
- "After eating, a dog would want this"

Wrap up activity -
Q: What do all dogs need?

A: Food, water, shelter.
Q: If your pet was losing hair or itchy due to fleas, what would you do?
A: Take your pet to the animal doctor (veterinarian).

- Hand out coloring page to take home and tell them to list four things on the back that your pet needs to stay healthy
- Have the children color the page at home and bring it back to school when finished - Return at the end of the week to hand out prizes for coloring the page

Color Me


Appendix J - Budget Spreadsheet

| Date | Item | Cost (BZE) | Running Total |
| :--- | :--- | :--- | :--- |
| April 2, 2009 | Animal crackers, <br> m\&ms, and zip lock <br> bags | $\$ 45.75$ | $\$ 45.75$ |
| April 20, 2009 | Printing brochures | $\$ 220$ | $\$ 265.75$ |

## Contributions to the final report

Chris Cal - wrote parts of the methods and results sections.
Signature $\qquad$

Jennifer Haber - edited and re-edited the paper, wrote the acknowledgements, introduction, part of the results, and conclusion sections.

Signature $\qquad$

Cara McCauley - wrote the methods and recommendations sections.
Signature $\qquad$

Kourtney McGrath - edited and re-edited paper, designed the presentation.
Signature

