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Capstone Project Biodiversity

Content

- Introduction

Introduction

- species_info.csv dataset

  - Including scientific name, common names and conservation status of each species.

  - There are total of 5541 unique scientific names in 7 categories.

  - Approximately 97% of species do not have any intervention plan

  - In each category, the number of species are being protected is much less than the total species are not being protected.

    - Mammal has 17% of its species are being protected, being the most protected category

    - Only 1.07% species in Vascular Plant are being protected, being the less protected category

Endangered Status
Mammal vs All

- Performed two significant test to evaluate the endangered status between mammal and different categories

  - Chi2 Square test is selected

    - There are data for each category with available contingency tables.

    - Mammal vs. Bird

      - p-val is 0.687

    - Mammal vs. reptiles

      - p-val is 0.03

  - In comparison, there is a significant of endangered status between mammal and reptiles. Mean while, mammal and birds comparison does not yield much significant.

Protection Recommendation

- While mammal is being the most "protected" among all categories; however with mammal is still being the category with greatest endangered status, the protected ratio in this category is still relatively low

- Stronger enforcement to ensure most mammal species are being protected

- Evaluate the number of endanger vs. recovery conservation status to evaluate the protection plan.

Sample Size Determination

- Defined the baseline which is recorded value from last year incident, 15%

- Defined the minimum detectable effect which is 33.33%
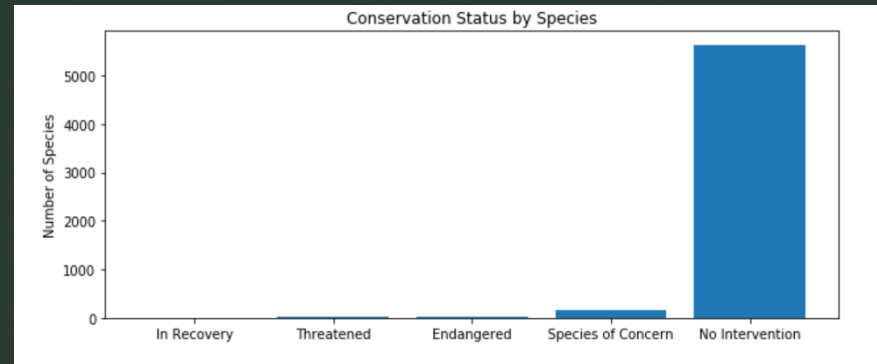
- The calculated sample size is 870

Baseline conversion rate:	15		%
Statistical significance:	85%	90%	95%
Minimum detectable effect:	33.33		%
Sample size:	870		

Supported Graphical Analysis

- Conservation Status by Species

- Observations of Sheep per Week