# 01\_question-info-box DEMO

## 01\_question-info-box\_DEMO\_ ANNE

### 00\_notes-for-anne

* Only those assigned to you for the demo are here (first round, there are still LOTS to do)
* Eventually, we’ll need info for everything under “rec\_sample-design” and “mod\_approach”, but suggest we start with those in this table
* All **full text references** should now go in the ”06\_references.docx” file with the in-text citation left in the “references” box within the question. Could ignore for now, may be easier to address all at once. If you add a reference for something that’s not likely to be in the survey guidelines, perhaps add a comment with the full-text reference for now. No need to dig through survey guidelines though, if you’re not sure, can leave without or add comment with reference and I can address later.
* Don’t worry too much about formatting (styles, text size etc.) all will need to be converted to markdown anyways. EXCEPT, superscript should be formatted
* Some sections may not make sense for the topic (i.e., may not need images for some concepts), **just leave these blank or add “NA”**
* If you copy any text from the survey guidelines/metadata standards that contains links, **leave the links IN**

##### **Assignments -** [**01\_question-info-box DEMO**](https://docs.google.com/document/d/1DonTklgmf4FP56TuyIZzLsDmaZ5JghFh/edit#heading=h.gjdgxs)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **info\_type** | **app\_page\_name** | **question\_code** | **who** | **status** |
| questions | 13.1\_sp\_info | i\_sp\_info | Anne |  |
| questions | 16.1\_sp\_occ\_restr | i\_sp\_occ\_restr | Anne |  |
| questions | 47.1\_cam\_independent | i\_cam\_independent | Anne |  |
| questions | 6.1\_cam\_strat\_covar | i\_cam\_strat\_covar | Anne |  |
|  |  |  | Anne |  |
| questions | 10.1\_sp\_asymptote | i\_sp\_asymptote | Cassie | In progress |
| questions | 17.2\_sp\_hr\_size | i\_sp\_hr\_size | Cassie | In progress |
| questions | 18.1\_sp\_size | i\_sp\_size | Cassie | In progress |
| questions | 19.1\_sp\_rarity | i\_sp\_rarity | Cassie | In progress |
| questions | 2.1\_objective | i\_objective | Cassie | In progress |
| questions | 20.1\_sp\_detprob\_cat | i\_sp\_detprob\_cat | Cassie | In progress |
| questions | 8.1\_surv\_dur\_min\_max | i\_surv\_dur\_min\_max | Not sure info box needed ? ANNE, THOUGHTS? |  |
| questions | 3.1\_num\_cams | i\_num\_cams | Not sure info box needed? ANNE, THOUGHTS? |  |

### (#i\_sp\_occ\_restr)=

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Question:** Is the distribution of the Target Species highly restricted? | | | | |
| **Overview** | | | | |
| **Advanced** | | | | |
| **Figures & Videos** | | | | |
| Image | | | File name | |
| Example…A sign with text on it  Description automatically generated | | | Mccomb\_et\_al\_2010\_Fig10.1.png | |
|  | | |  | |
|  | | |  | |
|  | | |  | |
| **Analytical tools & resources** | | | | |
| **Name** | **Link** | **Reference** | | **Additional\_info** |
|  |  |  | |  |
|  |  |  | |  |
| **References** | | | | |

### (#i\_cam\_independent)=

**Question:** Will each camera location be treated as an independent sample?

### (#i\_sp\_info)=

Related to recommendations in survey guidelines for species inventory

**Question:** How well is the biology about of the Target Species known?

### (#i\_cam\_strat\_covar)=

# Stratified habitat covariates

how this will impact site selection considerations

**Question:** Do you plan to strategically place camera locations to include multiple habitats or otherwise differing categories (e.g., different land cover types, or near vs. far from a disturbance)

If so, how many covariates? (e.g., 5 different habitat types would be 5 covariates)

## 01\_question-info-box\_DEMO\_ CASS

### (i\_objective)=

### Objectives/State variable

|  |  |  |  |
| --- | --- | --- | --- |
| **def\_key** | **key** | **Objective** | Definition/Notes |
|  | **(#survey\_objectives)** | **Objective** | The specific objectives of the study, including the Target Species, the state variables (e.g., occupancy, density), and proposed modelling approach(es). Objectives should be specific, measurable, achievable, relevant, and time bound (i.e., SMART). |
|  | **(#state\_variable)** | **State variable** | A formal measure that summarizes the state of a community or population at a particular time (Wearn & Glover Kapfer, 2017), e.g., species richness or population abundance. |
| **d\_obj\_inventory** | **obj\_inventory** | **Species inventory** | a rapid assessment of species present in a given area at a given point in time; there is no attempt made to quantify aspects of communities or populations (Wearn & Glover-Kapfer, 2017). |
|  |  | Species diversity & richness - | Note that there are multiple “levels” to species richness (**α-richness [alpha], γ-richness (gamma), and** **β-diversity (beta)**); refer to (Models - Species diversity & richness)(#i\_mod\_divers\_rich) for more details. |
| d\_obj\_divers\_rich | obj\_divers\_rich | Species diversity & richness - Species diversity |  |
|  | obj\_divers\_rich | Species diversity & richness - Species richness | the number of species found in the community/area measured (Pyron, 2010) |
|  | obj\_divers\_rich | Species diversity & richness - **α-richness (alpha richness)** | species richness at the level of an individual camera location |
|  | obj\_divers\_rich | Species diversity & richness - **γ-richness (gamma richness)** | species richness across a whole study area |
|  | obj\_divers\_rich | Species diversity & richness - **β-diversity (betadiversity)** | the differences between the communities or, more formally, the variance among the communities |
| d\_obj\_occupancy | obj\_occupancy | Occupancy | the probability a site is occupied by the species {{McKenzie et al., 2002}}. Occupancy is also highly suitable for evaluating broad-scale patterns of species distribution {{Wearn & Glover-Kapfer, 2017}}. |
|  | obj\_rel\_abund | Relative abundance | Is an an indirect measure of abundance  Relative abundance can be evaluated via “indices”  When observational data is converted to a detection rate (i.e., the frequency [count] of independent detections of a species within a distinct time period). An index can be a count of animals or any sign that is expected to vary with population size (Caughley, 1977; O’Brien, 2010). |
|  | obj\_rel\_abund | Relative abundance - Intensity of use | “the expected number of use events of a specific resource unit during a unit of time” (i.e., “how frequently a particular resource unit is used”) (Keim et al., 2019).  “Intensity of use differs from probability of occupancy, selection or use, which can remain constant even when the intensity of use varies” (Keim, DeWitt, & Lele, 2011; Lele et al., 2013). |
|  | obj\_rel\_abund | Relative abundance - Probability of use | “the probability of at least one, use event of that resource unit during a unit of time” (i.e., “would a particular resource unit be used at least once) (Keim et al., 2019). |
|  | obj\_pop\_size | Population size | number of individuals in a population (irrelevant of area). |
|  | obj\_abundance | Absolute abundance | number of individuals in a population (Wearn & Glover-Kapfer, 2017; pg 64). |
|  | obj\_vital\_rate | Vital rates | (e.g., survival probabilities and recruitment rates) |
|  | obj\_density | Density | The number of individuals per unit area (Wearn & Glover-Kapfer, 2017). |
|  | obj\_behaviour | Behaviour | behaviour focused objectives vary greatly; they may be qualitative or quantitative (Wearn & Glover-Kapfer, 2017) (e.g., diel activity patterns, mating, boldness, predation, foraging, activity patterns, vigilance, parental care [Caravaggi et al. 2017; Wearn & Glover-Kapfer, 2017]). |

### (#i\_sp\_low\_density)=

# Does the Target Species occur in low density?

Provide guideline of what constitutes "low density" (e.g. < x/ km2)? scale - in the area of interest? The difference between this question nd "how rare or common..." may not be readily apparent

* “low density populations (6 or 16.5 bears/100 km2)” ([Fuller et al., 2022, p. 14](about:blank)) ([pdf](about:blank))