# B1: Questionnaire for Human-carnivores conflict survey

Enumerator Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date

Respondent Name Village Name

**Predators Status:**

Did you sight any of the following species in the past 5 years (2009-2014)?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Snow Leopard | Common Leopard | Wolf | Brown Bear | Black Bear | Lynx |
| Numbers |  |  |  |  |  |  |
| Status (Common/Rare/Absent |  |  |  |  |  |  |

The population of which species you wish to increase/maintain/reduce /eliminate from your area:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Snow Leopard | Common Leopard | Wolf | Brown Bear | Black Bear | Lynx |
|  |  |  |  |  |  |

Which one is most dangerous for livestock, rate 1-4 (from low to high):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Snow Leopard | Common Leopard | Wolf | Brown Bear | Black Bear | Lynx |
|  |  |  |  |  |  |

Livestock Demography

**How much livestock your family owns?**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Livestock | Goats | Sheep | Cattle | Yak | Other |
| Number |  |  |  |  |  |
| Vaccinated |  |  |  |  |  |

**Livestock sold in 1 year:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Livestock | Goats | Sheep | Cattle | Yak | Other |
| Number |  |  |  |  |  |
| Total Income in Rs |  |  |  |  |  |
| Slaughtered for domestic consumption |  |  |  |  |  |

**Predation in 1 year:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Predator | Season/ month | Location | Prey type | Prey sex | Prey Age | Guarded (Y/N) | Circumstances |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

Seasons: Winter (Dec-Feb), Spring (Mar-May), Summer (Jun-Aug), Autumn (Sep-Nov)

**B2: Script of “R Program” used for running Poisson Regression Model**

rm(list=ls())

dat<- read.csv("khanbari\_data.csv")

summary(dat)

levels(dat$season)<- c("Summer", "Spring", "Summer")

levels(dat$habitat)<- c( "Forest", "Forest" , "Pasture", "Pasture")

levels(dat$Prey.type)<- c( "Goat", "Other", "Sheep")

levels(dat$Prey.sex)<- c("Female", "Male", "Mix" )

levels(dat$Prey.age)<- c("Adult", "Young")

levels(dat$Time)<- c("Day", "Night")

summary(dat)

dat$Prey.type<- relevel(dat$Prey.type, ref = "Other")

dat$Prey.age<- relevel(dat$Prey.age, ref = "Young")

dat<- dat[,c(-1,-2,-3)]

colnames(dat)<- c("Season", "Year", "Habitat", "Prey.Type", "Predation", "Prey.Sex", "Prey.Age", "Time")

summary(dat)

attach(dat)

mod <- glm(Predation ~ . , data=dat, family=poisson)

summary(mod)

cbind(exp(summary(mod)$coef[,1]),summary(mod)$coef)

st.mod<- step(mod)

summary(st.mod)

res<-cbind(exp(summary(st.mod)$coef[,1]),summary(st.mod)$coef)

colnames(res)[1]<- "Odds Ratio"

res<- round(res,3)

write.csv(res, "res.csv")

library(effects)

windows()

plot(allEffects(glm(Predation ~ Habitat, family=poisson)), xlab="Habitat", ylab= "Predation Count",main= "")

savePlot("PredvsHAbitant.pdf", type="pdf")

windows()

plot(allEffects(glm(Predation ~ Prey.Type, family=poisson)), xlab="Prey Type", ylab= "Predation Count",main= "")

windows()

plot(allEffects(glm(Predation ~ Prey.Age, family=poisson)), xlab="Prey Age", ylab= "Predation Count",main= "")

windows()

plot(allEffects(glm(Predation ~ Time, family=poisson)), xlab="Time", ylab= "Predation Count",main= "")