Data Processing:

Loading and preprocessing the data

```r
suppressPackageStartupMessages(library(dplyr))
suppressPackageStartupMessages(library(ggplot2))
Sys.setlocale("LC_ALL", "English")
```

```
## [1] "LC_COLLATE=English_United States.1252;LC_CTYPE=English_United States.1252;LC_MONETARY=English_Un
```

```r
rm(list=ls())
d<-read.csv("repdata_data_StormData.csv", header=TRUE, sep=",")
```

```r
d$total_health_harm<-as.numeric(as.character(d$FATALITIES))+as.numeric(as.character(d$INJURIES))
d$total_dmg<-as.numeric(as.character(d$PROPDMG))+as.numeric(as.character(d$CROPDMG))
health<-tapply(d$total_health_harm, d$EVTYPE, sum, na.rm=TRUE)
health<-sort(health, decreasing=TRUE)
dmg<-tapply(d$total_dmg, d$EVTYPE, sum, na.rm=TRUE)
dmg<-sort(dmg, decreasing=TRUE)
```

Analysis data, top harmful events for health are:

```r
head(health)
```

```
##         TORNADO EXCESSIVE HEAT      TSTM WIND          FLOOD      LIGHTNING
##           96979           8428           7461           7259           6046
##            HEAT
##            3037
```

```r
barplot(health[1:6], main="fatality+injury", las=2)
```

fatality+injury
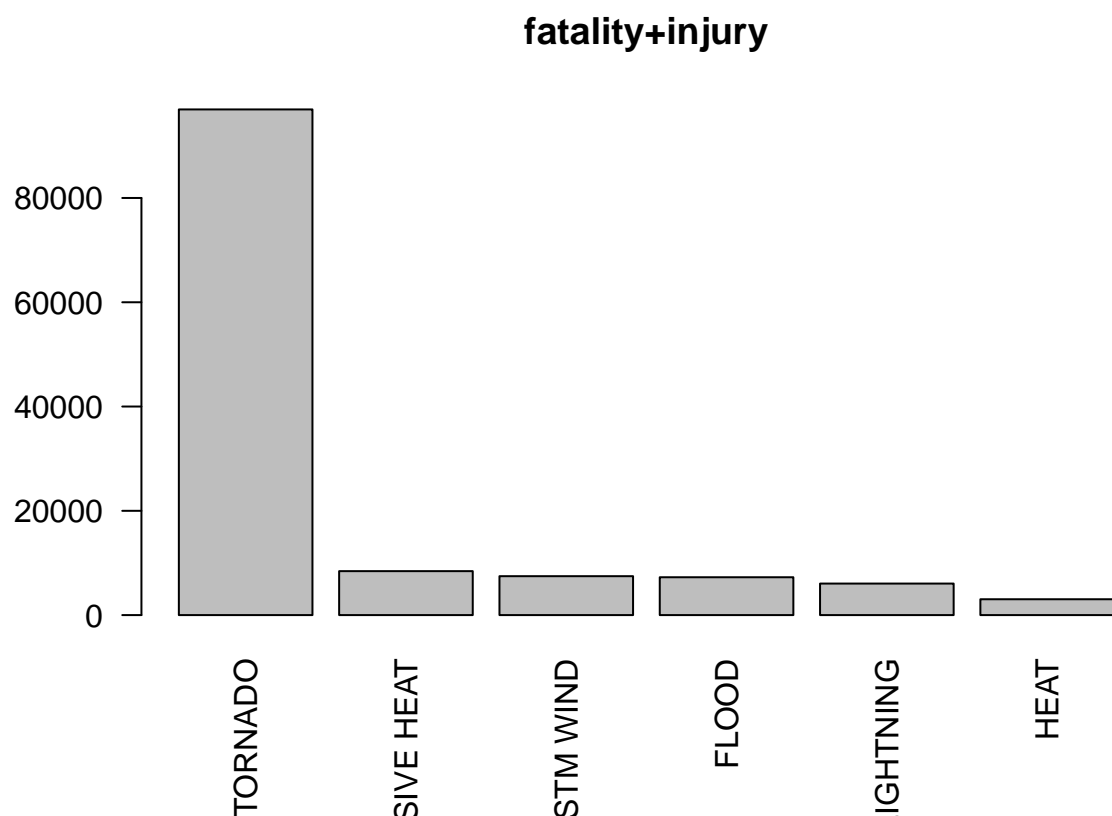
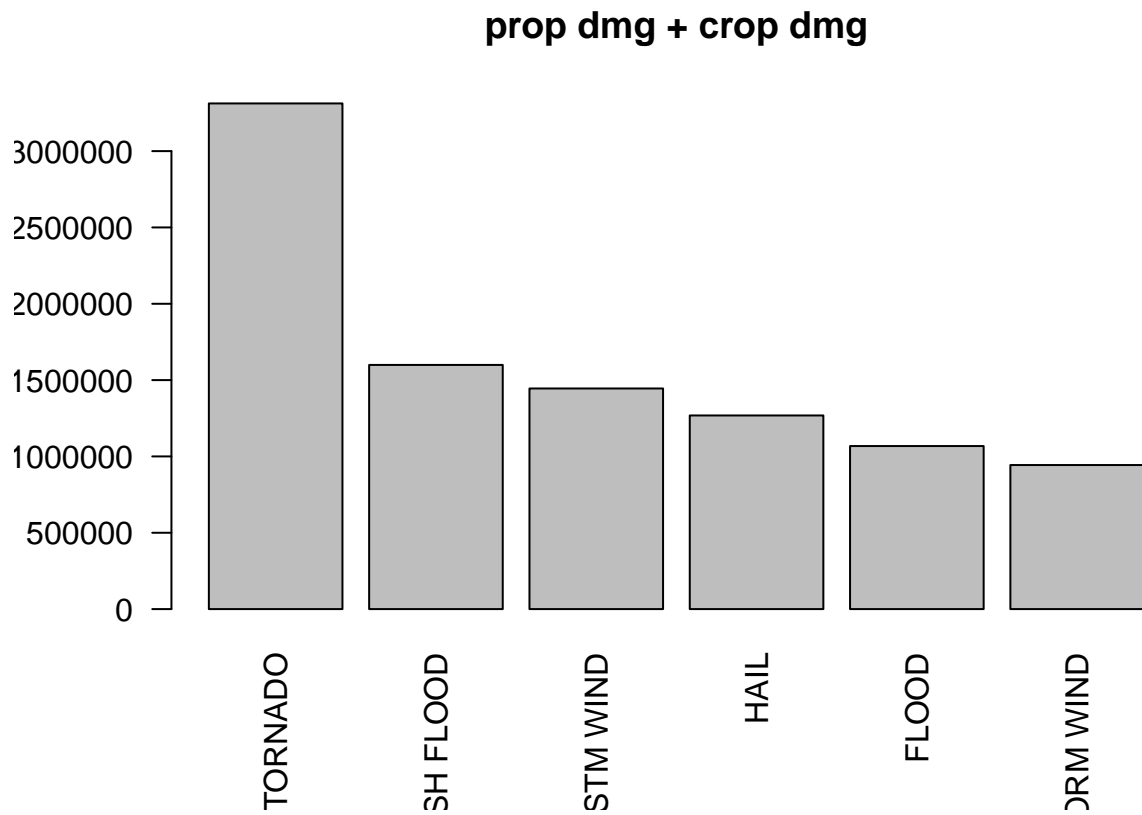# Analysis data, top harmful events for prop dmg are:

```
head(dmg)
```

```
##          TORNADO        FLASH FLOOD        TSTM WIND               HAIL
##        3312276.7          1599325.1        1445168.2          1268289.7
##            FLOOD  THUNDERSTORM WIND
##        1067976.4           943635.6
```

```
barplot(dmg[1:6], main='prop dmg + crop dmg', las=2)
```

prop dmg + crop dmg

Results:

1. By analysising storm data, TORNADO is the most harmful events for health.

2. By analysising storm data, TORNADO is also the most harmful events for damage.