figures

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## R Markdown

library(dplyr)

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':  
##   
## filter, lag

## The following objects are masked from 'package:base':  
##   
## intersect, setdiff, setequal, union

library(rlang)  
#library(tidyverse)  
library(readr)  
library(viridis)

## Warning: package 'viridis' was built under R version 3.6.2

## Loading required package: viridisLite

library(hrbrthemes)

## Warning: package 'hrbrthemes' was built under R version 3.6.2

## NOTE: Either Arial Narrow or Roboto Condensed fonts are required to use these themes.

## Please use hrbrthemes::import\_roboto\_condensed() to install Roboto Condensed and

## if Arial Narrow is not on your system, please see http://bit.ly/arialnarrow

library(ggsci)

## Warning: package 'ggsci' was built under R version 3.6.2

library(gridExtra)

## Warning: package 'gridExtra' was built under R version 3.6.2

##   
## Attaching package: 'gridExtra'

## The following object is masked from 'package:dplyr':  
##   
## combine

library(ggplot2)  
library(RColorBrewer)  
  
rlang:::rlang\_is\_string

## $name  
## [1] "rlang\_is\_string"  
##   
## $address  
## <pointer: 0x0000000013d863d0>  
## attr(,"class")  
## [1] "RegisteredNativeSymbol"  
##   
## $dll  
## DLL name: rlang  
## Filename:  
## C:/Users/v.r.saccomanno/Documents/R/win-library/3.6/rlang/libs/x64/rlang.dll  
## Dynamic lookup: FALSE  
##   
## $numParameters  
## [1] 2  
##   
## attr(,"class")  
## [1] "CallRoutine" "NativeSymbolInfo"

###Making allocation bar charts on trends

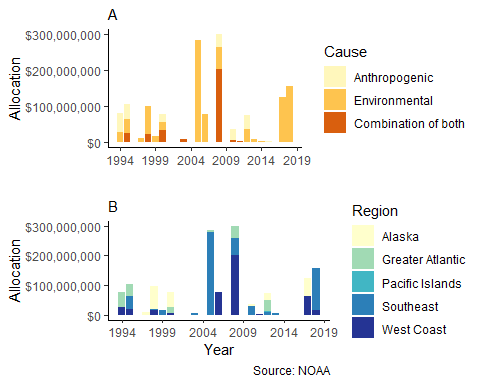
allo\_cause <- read.delim("By Cause/Allocation\_by\_cause.txt")  
allo\_region<- read.delim("By Region/Allocation\_2019USD\_1989-2019.txt")  
#View(allo\_region)  
  
#Changing legend order  
levels(allo\_cause$Cause)

## [1] "" "Anthropogenic" "Combination of both"  
## [4] "Environmental"

allo\_cause$Cause<- factor(allo\_cause$Cause, levels = c("Anthropogenic", "Environmental", "Combination of both"))  
  
  
#allocation by cause  
cause\_p0 <- ggplot(allo\_cause, aes(fill= Cause, y=Allocation, x=Year))+  
 geom\_bar(position = "stack", stat= "identity")+  
 scale\_y\_continuous(labels = scales::dollar)+  
 scale\_x\_continuous(breaks=seq(1994,2019,5))+  
 labs(x="", y= "Allocation", subtitle= "A")+  
 scale\_fill\_brewer(palette = "YlOrBr")+  
 theme\_classic()  
  
  
#allocation by region  
region\_p0 <- ggplot(allo\_region, aes(fill= Region, y=Allocation, x=Year))+  
 geom\_bar(position = "stack", stat= "identity")+  
 scale\_y\_continuous(labels = scales::dollar)+  
 scale\_x\_continuous(breaks=seq(1994,2019,5))+  
 labs(x="Year", y= "Allocation", subtitle= "B", caption = "Source: NOAA")+  
 scale\_fill\_brewer(palette = "YlGnBu")+  
 theme\_classic()  
  
  
grid.arrange(cause\_p0, region\_p0)

## Warning: Removed 1369 rows containing missing values (position\_stack).

## Warning: Removed 121 rows containing missing values (position\_stack).



###Making frequency and state-year bar charts on trends

#By Region  
freq\_region <- read.delim("By Region/Frequency\_1994-2019.txt")  
styr\_region<- read.delim("By Region/StateYears\_1989-2019.txt")  
#View(freq\_region)  
  
#By cause  
freq\_cause <- read.delim("By Cause/Frequency\_by\_cause.txt")  
styr\_cause<- read.delim("By Cause/State-years\_by\_cause.txt")  
#View(styr\_cause)  
  
#Changing legend order  
levels(freq\_cause$Cause)

## [1] "Anthropogenic" "Combination of both" "Environmental"

styr\_cause$Cause<- factor(styr\_cause$Cause, levels = c("Anthropogenic", "Environmental", "Combination of both"))  
freq\_cause$Cause<- factor(freq\_cause$Cause, levels = c("Anthropogenic", "Environmental", "Combination of both"))  
  
  
#Frequency by Region -A  
region\_p3 <- ggplot(freq\_region, aes(fill= Region, y=Frequency, x=Year))+  
 geom\_bar(position = "stack", stat= "identity")+  
 ylim(0, 10)+  
 scale\_x\_continuous(breaks=seq(1994,2019,5))+  
 scale\_fill\_brewer(palette = "YlGnBu")+  
 labs(x="Year", Y= "Frequency", subtitle= "A")+  
 theme\_classic()  
  
#Frequency by cause -B  
cause\_p3 <- ggplot(freq\_cause, aes(fill= Cause, y=Frequency, x=Year))+  
 geom\_bar(position = "stack", stat= "identity")+  
 ylim(0, 10)+  
 scale\_x\_continuous(breaks=seq(1994,2019,5))+  
 scale\_fill\_brewer(palette = "YlOrBr")+  
 labs(x="Year", Y= "Frequency", subtitle= "B")+  
 theme\_classic()  
  
  
#Stateyear by Region - C  
region\_p5 <- ggplot(styr\_region, aes(fill= Region, y=StateYears, x=Year))+  
 geom\_bar(position = "stack", stat= "identity")+  
 ylim(0, 12.0)+  
 scale\_y\_continuous(breaks=seq(0,12,2))+  
 scale\_x\_continuous(breaks=seq(1989,2019,5))+  
 scale\_fill\_brewer(palette = "YlGnBu")+  
 labs(x="Year", y= "State-year", subtitle= "C")+  
 theme\_classic()

## Scale for 'y' is already present. Adding another scale for 'y', which will  
## replace the existing scale.

#Stateyear by cause - D  
cause\_p5 <- ggplot(styr\_cause, aes(fill= Cause, y=StateYears, x=Year))+  
 geom\_bar(position = "stack", stat= "identity")+  
 ylim(0, 12.0)+  
 #scale\_y\_continuous(breaks=seq(0,10,2.5))+  
 scale\_x\_continuous(breaks=seq(1989,2019,5))+  
 scale\_fill\_brewer(palette = "YlOrBr")+  
 labs(x="Year", y= "State-year", subtitle= "D", caption = "Source: NOAA")+  
 theme\_classic()  
  
  
grid.arrange(region\_p3, region\_p5, cause\_p3, cause\_p5)

## Warning: Removed 84 rows containing missing values (position\_stack).

## Warning: Removed 88 rows containing missing values (position\_stack).

