

Load libraries

First, we need to load the following libraries:

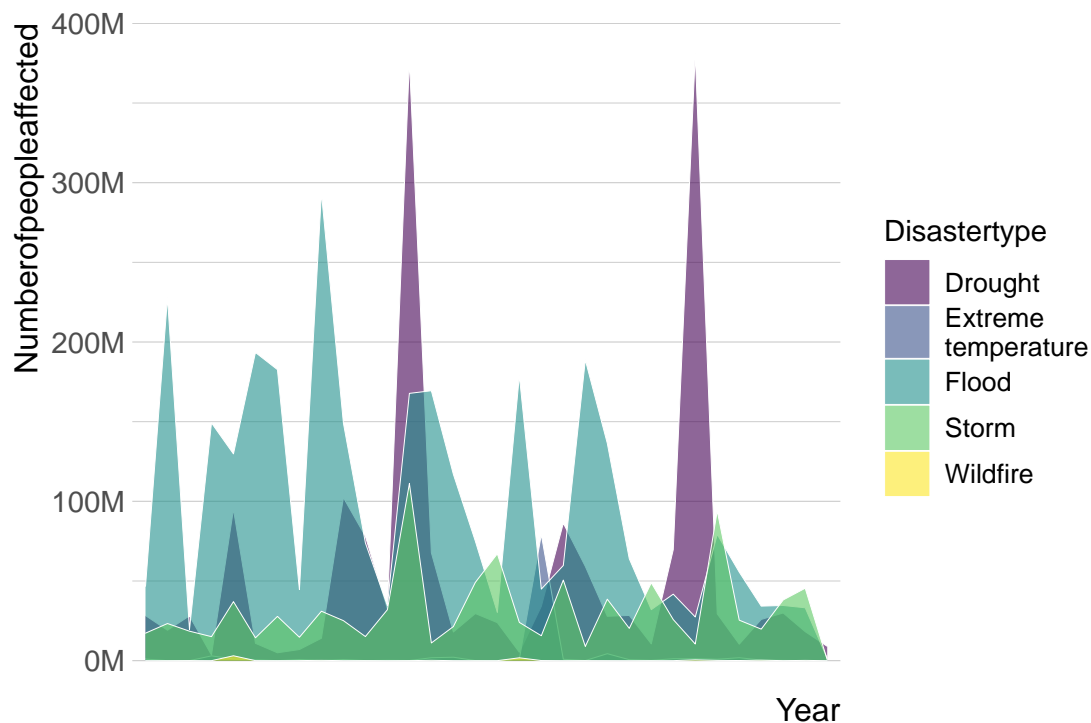
```
library(here)
library(readxl)
library(janitor)
library(dplyr)
library(stringr)
library(ggplot2)
library(hrbrthemes)
library(viridis)
library(scales)
library(extrafont)
loadfonts(device = "win")
```

Import dataset

```
em_dat <- utils::read.csv(here::here("scripts/cleaning/em-dat",
  "em-dat-clean.csv"), stringsAsFactors = TRUE)
```

Create visualization

```
em_dat %>%
  dplyr::select(-country, -iso) %>%
  dplyr::filter(as.numeric(year) >= 1990) %>%
  dplyr::group_by(year, disaster_type) %>%
  dplyr::summarise_all(funs(sum), na.rm = TRUE) %>%
  ggplot2::ggplot(aes(x = year, y = total_affected,
    fill = str_wrap(disaster_type, 15),
    group = disaster_type)) + ggplot2::geom_area(alpha = 0.6,
    size = 0.1, colour = "white", position = "identity") +
  viridis::scale_fill_viridis(name = "Disaster type",
    discrete = TRUE) + hrbrthemes::theme_ipsum(base_size = 11) +
  ggplot2::scale_y_continuous(labels = scales::unit_format(unit = "M",
    scale = 1e-06)) + ggplot2::ylab("Number of people affected") +
  ggplot2::scale_x_discrete(name = "Year",
    breaks = seq(1990, 2021, 5)) + ggplot2::theme(text = element_text(family = "Arial",
    size = 11), axis.title.x = element_text(family = "Arial",
    size = 12), axis.title.y = element_text(family = "Arial",
    size = 12), legend.text = element_text(family = "Arial",
    size = 10))
```



```
ggplot2::ggsave(here("images", "vulnerability-01.svg"),
  device = "svg", dpi = 300)
```

```
rm(em_dat)
```

Export as an R script for future use

Only run this chunk manually once within the .Rmd file. It produces an error when knitting it as a whole because of chunk label duplicates. As of May 12, 2021, there hasn't been a viable solution to run the code below when as part of the knitting process.

```
knitr::purl("em-dat-visualizations.Rmd",
  "em-dat-visualizations.R")
knitr::write_bib(.packages(), "packages.bib")
```

Software used

Firke, Sam. *Janitor: Simple Tools for Examining and Cleaning Dirty Data*, 2021. <https://github.com/sfirke/janitor>.

- Garnier, Simon. *Viridis: Default Color Maps from Matplotlib*, 2021. <https://CRAN.R-project.org/package=viridis>.
- . *viridisLite: Colorblind-Friendly Color Maps (Lite Version)*, 2021. <https://CRAN.R-project.org/package=viridisLite>.
- Müller, Kirill. *Here: A Simpler Way to Find Your Files*, 2020. <https://CRAN.R-project.org/package=here>.
- R Core Team. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing, 2021. <https://www.R-project.org/>.
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- Wickham, Hadley. *Ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York, 2016. <https://ggplot2.tidyverse.org>.
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- Wickham, Hadley, and Jennifer Bryan. *Readxl: Read Excel Files*, 2019. <https://CRAN.R-project.org/package=readxl>.
- Wickham, Hadley, Winston Chang, Lionel Henry, Thomas Lin Pedersen, Kohske Takahashi, Claus Wilke, Kara Woo, Hiroaki Yutani, and Dewey Dunnington. *Ggplot2: Create Elegant Data Visualisations Using the Grammar of Graphics*, 2020. <https://CRAN.R-project.org/package=ggplot2>.
- Wickham, Hadley, Romain François, Lionel Henry, and Kirill Müller. *Dplyr: A Grammar of Data Manipulation*, 2021. <https://CRAN.R-project.org/package=dplyr>.
- Wickham, Hadley, and Dana Seidel. *Scales: Scale Functions for Visualization*, 2020. <https://CRAN.R-project.org/package=scales>.
- Winston Chang. *Extrafont: Tools for Using Fonts*, 2014. <https://github.com/wch/extrafont>.