

Malaria incidents

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```
library(malariaAtlas)
```

```
## Warning: package 'malariaAtlas' was built under R version 4.1.3
```

```
## Loading required package: ggplot2
```

```
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse 1.3.1 --
```

```
## v tibble  3.1.6      v dplyr   1.0.8
## v tidyr   1.2.0      v stringr 1.4.0
## v readr   2.1.2      v forcats 0.5.1
## v purrr   0.3.4
```

```
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
```

```
library(tibble)
library(scales)
```

```
##
## Attaching package: 'scales'
```

```
## The following object is masked from 'package:purrr':
##
##   discard
```

```
## The following object is masked from 'package:readr':
##
##   col_factor
```

```
theme_set(theme_light())
```

```
SOM <- as.tibble(malariaAtlas::getPR(ISO = "SOM", species = "BOTH"))
```

```
## Warning: 'as.tibble()' was deprecated in tibble 2.0.0.
## Please use 'as_tibble()' instead.
## The signature and semantics have changed, see '?as_tibble'.
## This warning is displayed once every 8 hours.
## Call 'lifecycle::last_lifecycle_warnings()' to see where this warning was generated.
```

```
## Creating list of countries for which MAP data is available, please wait...
```

```
## Confirming availability of PR data for: SOM...
```

```
## PR points are available for SOM.
```

```
## Attempting to download PR point data for Somalia ...
```

```
## Data downloaded for SOM.
```

```
SOM %>% arrange(year_start) %>%
  view()
```

```
SOM %>% arrange(year_start) %>%
  count(method, sort = TRUE)
```

```
## # A tibble: 2 x 2
##   method      n
##   <chr>      <int>
## 1 RDT        1642
## 2 Microscopy    22
```

```
SOM %>% arrange(year_start) %>%
  count(species, sort = TRUE)
```

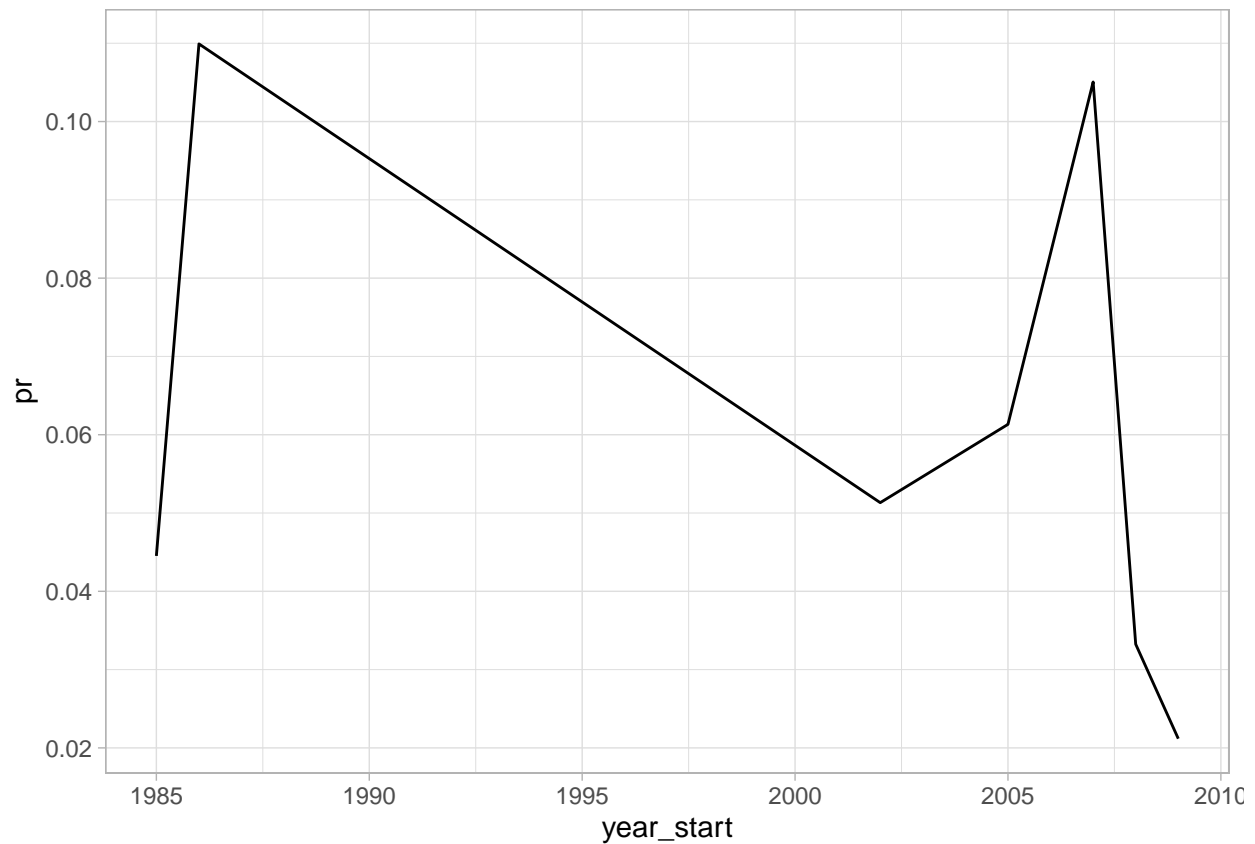
```
## # A tibble: 3 x 2
##   species      n
##   <chr>      <int>
## 1 P. falciparum 1590
## 2 Confidential    65
## 3 P. vivax         9
```

```
SOM %>% arrange(year_start) %>%
  count(year_start, sort = TRUE)
```

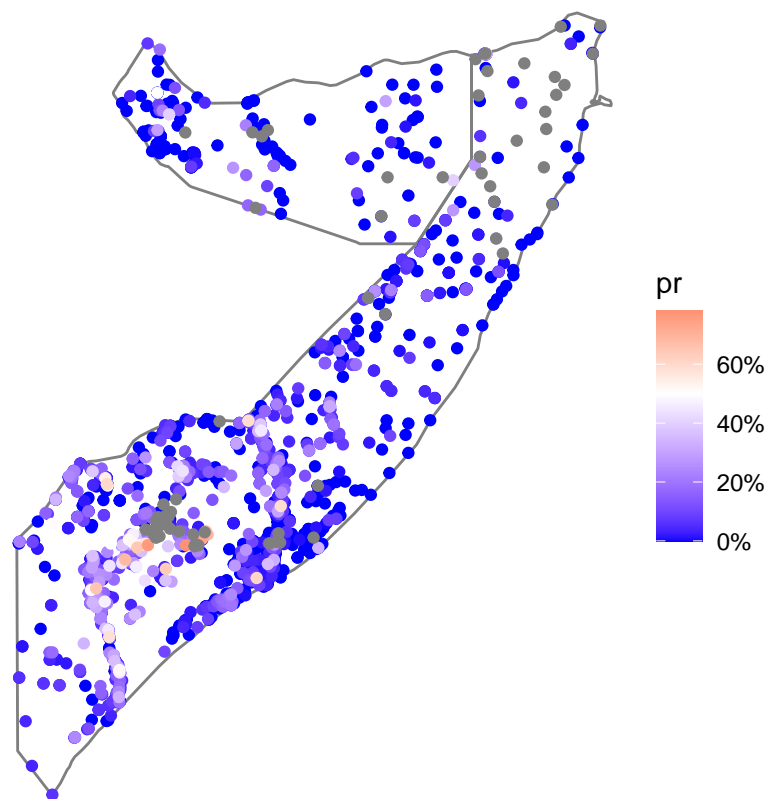
```
## # A tibble: 8 x 2
##   year_start      n
##   <int> <int>
## 1    2008    523
## 2    2007    443
## 3    2009    346
## 4    2005    277
## 5      NA     65
## 6    1985      4
## 7    2002      4
## 8    1986      2
```

```
SOM %>%
  group_by(year_start) %>%
  summarise(examined = sum(examined),
            positive = sum(positive),
            studies = n()) %>%
  mutate(pr = positive / examined) %>%
  ggplot(aes(year_start, pr)) +
  geom_line()
```

Warning: Removed 1 row(s) containing missing values (geom_path).



```
SOM %>%
  arrange(pr) %>%
  ggplot(aes(longitude, latitude, color = pr)) +
  borders("world", regions = "Somalia") +
  geom_point() +
  scale_color_gradient2(low = "blue", high = "red", midpoint= 0.5, labels = percent_format()) +
  theme_void() +
  coord_map()
```



```
SOM %>%
  mutate(decade = 10 * (year_start %/% 10)) %>%
  arrange(pr) %>%
  ggplot(aes(longitude, latitude, color = pr)) +
  borders("world", regions = "Somalia") +
  geom_point() +
  scale_color_gradient2(low = "blue", high = "red", midpoint= 0.5, labels = percent_format()) +
  facet_wrap(~ decade) +
  theme_void() +
  coord_map() +
  labs(color = "Prevalence")
```

