# Assignment 1 - Plotting Basics
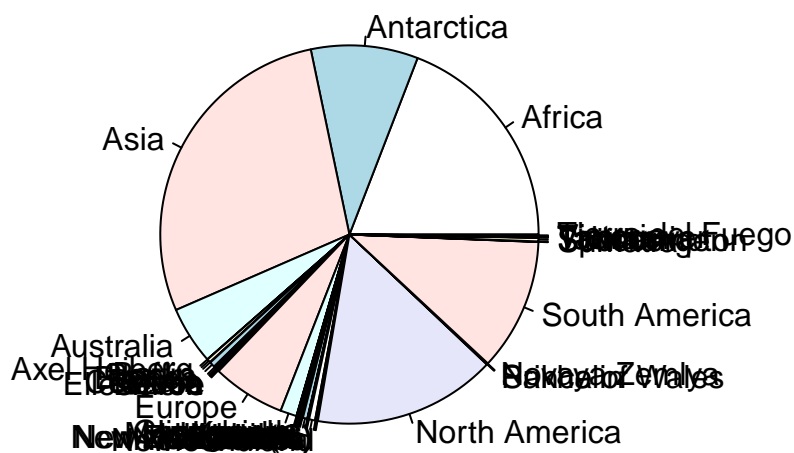
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使用 **R** 語言內建的「**islands**」資料庫，繪製每個島嶼面積的圓餅圖（**pie**）。請將面積過小的島嶼全部歸為「**Others**」，以使得所繪製的圓餅圖不會發生標籤重疊不易閱讀的情形。

讀入資料並先觀察初始情形

```r
pie(islands)
```



```r
summary(islands)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    12.0    20.5    41.0  1252.7   183.2 16988.0
```

```r
head(islands, 10)
```

```
##        Africa   Antarctica        Asia   Australia Axel Heiberg
##         11506         5500       16988        2968           16
##        Baffin        Banks      Borneo     Britain      Celebes
##           184           23         280          84           73
```

```r
names(islands)
```

```
##  [1] "Africa"         "Antarctica"       "Asia"
```

```
##  [4] "Australia"         "Axel Heiberg"      "Baffin"
##  [7] "Banks"             "Borneo"            "Britain"
## [10] "Celebes"           "Celon"             "Cuba"
## [13] "Devon"             "Ellesmere"         "Europe"
## [16] "Greenland"         "Hainan"            "Hispaniola"
## [19] "Hokkaido"          "Honshu"            "Iceland"
## [22] "Ireland"           "Java"              "Kyushu"
## [25] "Luzon"             "Madagascar"        "Melville"
## [28] "Mindanao"          "Moluccas"          "New Britain"
## [31] "New Guinea"        "New Zealand (N)"   "New Zealand (S)"
## [34] "Newfoundland"      "North America"     "Novaya Zemlya"
## [37] "Prince of Wales"   "Sakhalin"          "South America"
## [40] "Southampton"       "Spitsbergen"       "Sumatra"
## [43] "Taiwan"            "Tasmania"          "Tierra del Fuego"
## [46] "Timor"             "Vancouver"         "Victoria"
```

```r
sort(islands)
```

```
##        Vancouver           Hainan   Prince of Wales            Timor
##               12               13                13               13
##           Kyushu           Taiwan       New Britain      Spitsbergen
##               14               14                15               15
##     Axel Heiberg         Melville       Southampton Tierra del Fuego
##               16               16                16               19
##            Devon            Banks             Celon         Tasmania
##               21               23                25               26
##         Moluccas         Sakhalin        Hispaniola         Hokkaido
##               29               29                30               30
##    Novaya Zemlya          Ireland          Mindanao          Iceland
##               32               33                36               40
##            Luzon             Cuba      Newfoundland  New Zealand (N)
##               42               43                43               44
##             Java  New Zealand (S)           Celebes        Ellesmere
##               49               58                73               82
##         Victoria          Britain            Honshu          Sumatra
##               82               84                89              183
##           Baffin       Madagascar            Borneo       New Guinea
##              184              227               280              306
##        Greenland        Australia            Europe       Antarctica
##              840             2968              3745             5500
##    South America    North America            Africa             Asia
##             6795             9390             11506            16988
```
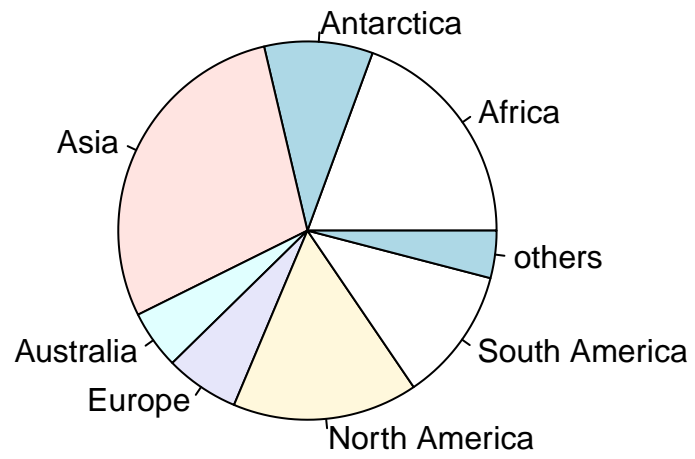
為確保歸類為 `Others` 的總值為最小，將前八名隔開

```r
islands.trimmed <- islands[islands>sort(islands,decreasing=T)[8]]
#To make sure that the value of others doesn't exceed any of the rest
islands.trimmed[length(islands.trimmed)+1] <-sum(islands[islands<sort(islands,decreasing=T)[8]])
names(islands.trimmed)[length(islands.trimmed)] <- "others"
islands.trimmed
```

```
##        Africa     Antarctica           Asia      Australia         Europe
##         11506           5500          16988           2968           3745
## North America  South America         others
##          9390           6795           2399
```

```
pie(islands.trimmed)
```



經修正後視覺化效果變佳