

# **Classification of World Countries according Civil Aviation Accessibility**

To determine the need of each member country in the ICAO technical support.



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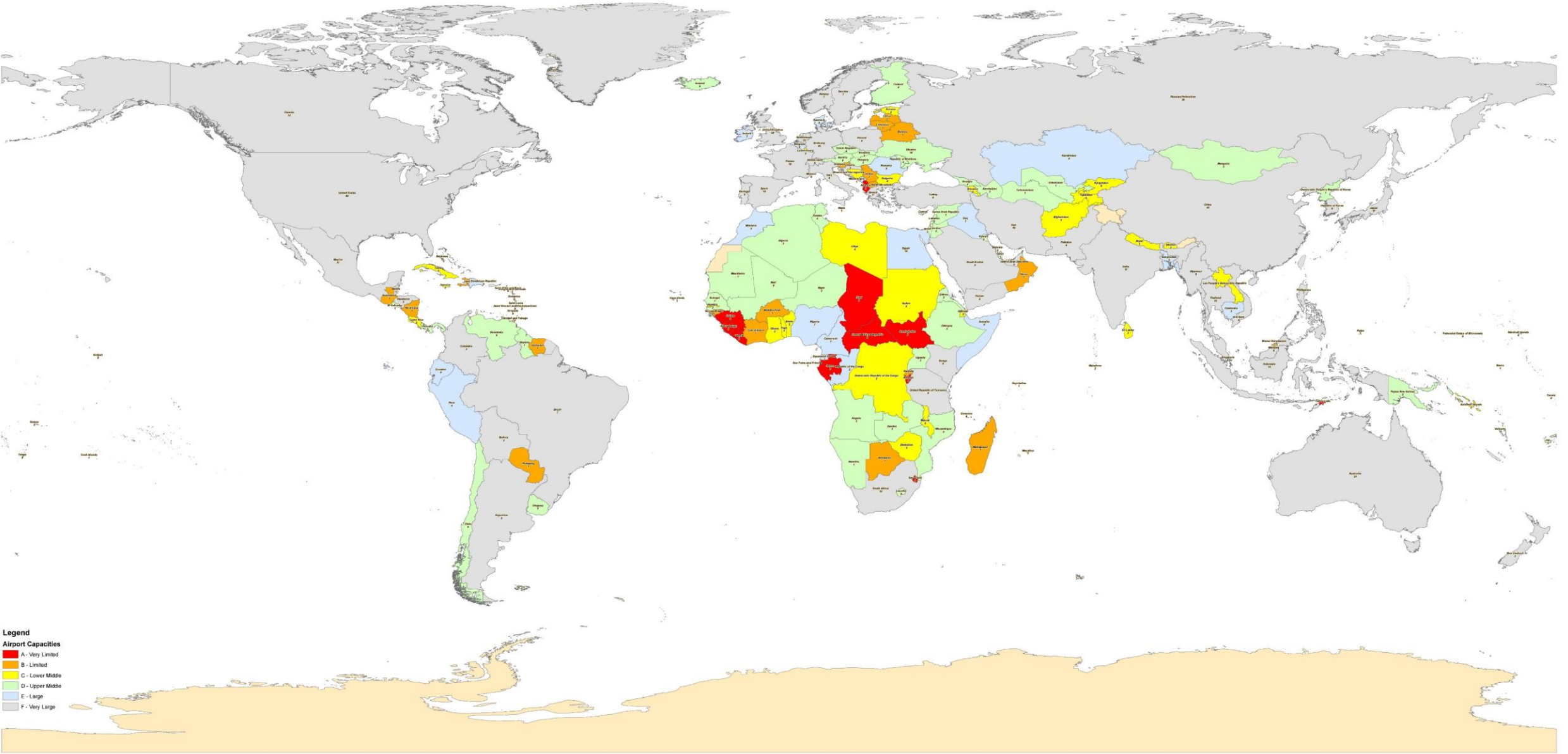
# Methodology

The categorization is based on the merger of two classifications :

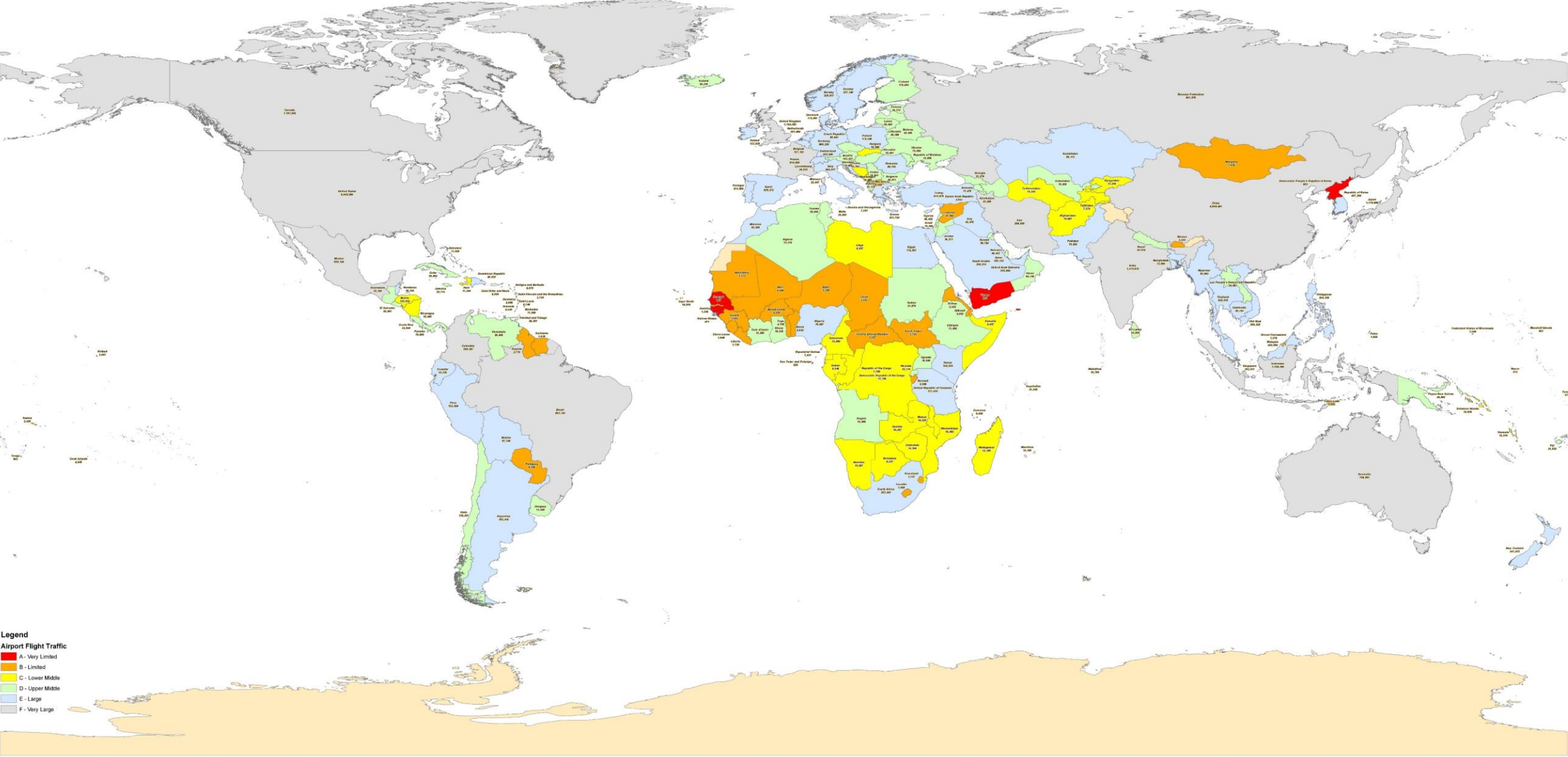
- A classification according the civil aviation facilities.
- A classification according the national flight traffic.

The merger is based on the ranking by wealth provided by the VWorld Bank, based on the GNP per capita.

## Airport Capacities by Country



Airport Flight Traffic by Country



Legend  
Airport Flight Traffic  
A - Very Limited  
B - Limited  
C - Lower Middle  
D - Upper Middle  
E - Large  
F - Very Large



# Indicators used for each Classification

For the classification according the civil aviation facilities :

- 1) Number of Major Airports,
- 2) Maximal Number of Runways in an Airport,
- 3) Number of National Airlines.

For the classification according the national flight traffic :

- 1) Number of Big Airports ( $> 10,000$  yearly flights) – 16%,
- 2) Number of Average Airports (between 1,000 & 10,000 yearly flights) – 43%,
- 3) Number of Small Airports ( $< 1,000$  yearly flights) – 41%.



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# Algorithm

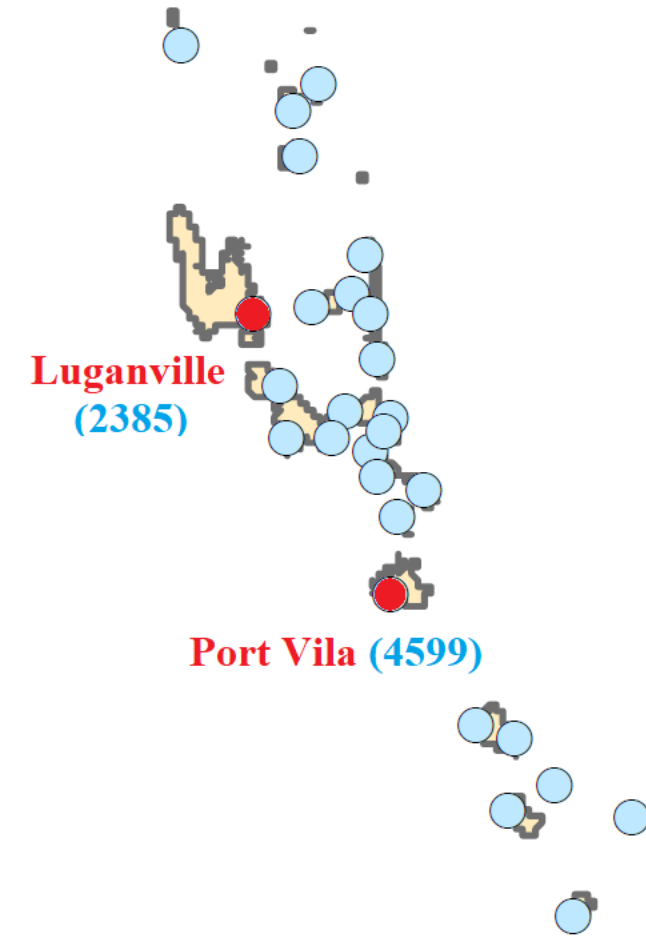
Gather countries according the value of the first indicator, then examine each set one by one :

- If there are too many countries, restart the algorithm with the next category.
- If there aren't enough countries, merge the set with the next one and examine again the new one.
- If the country number is acceptable, keep the set as category in the classification.

# Example

| Category         | Description            |
|------------------|------------------------|
| A – Very Limited | "1/1/0"                |
| B – Limited      | "1/1/1"                |
| C – Middle Low   | "1/1/(2-6)"            |
| D – Middle High  | "1/(2-3)/(0-10)"       |
| E – Large        | "2/(1-3)/(0-6)"        |
| F – Very Large   | "(3-113)/(1-6)/(1-78)" |

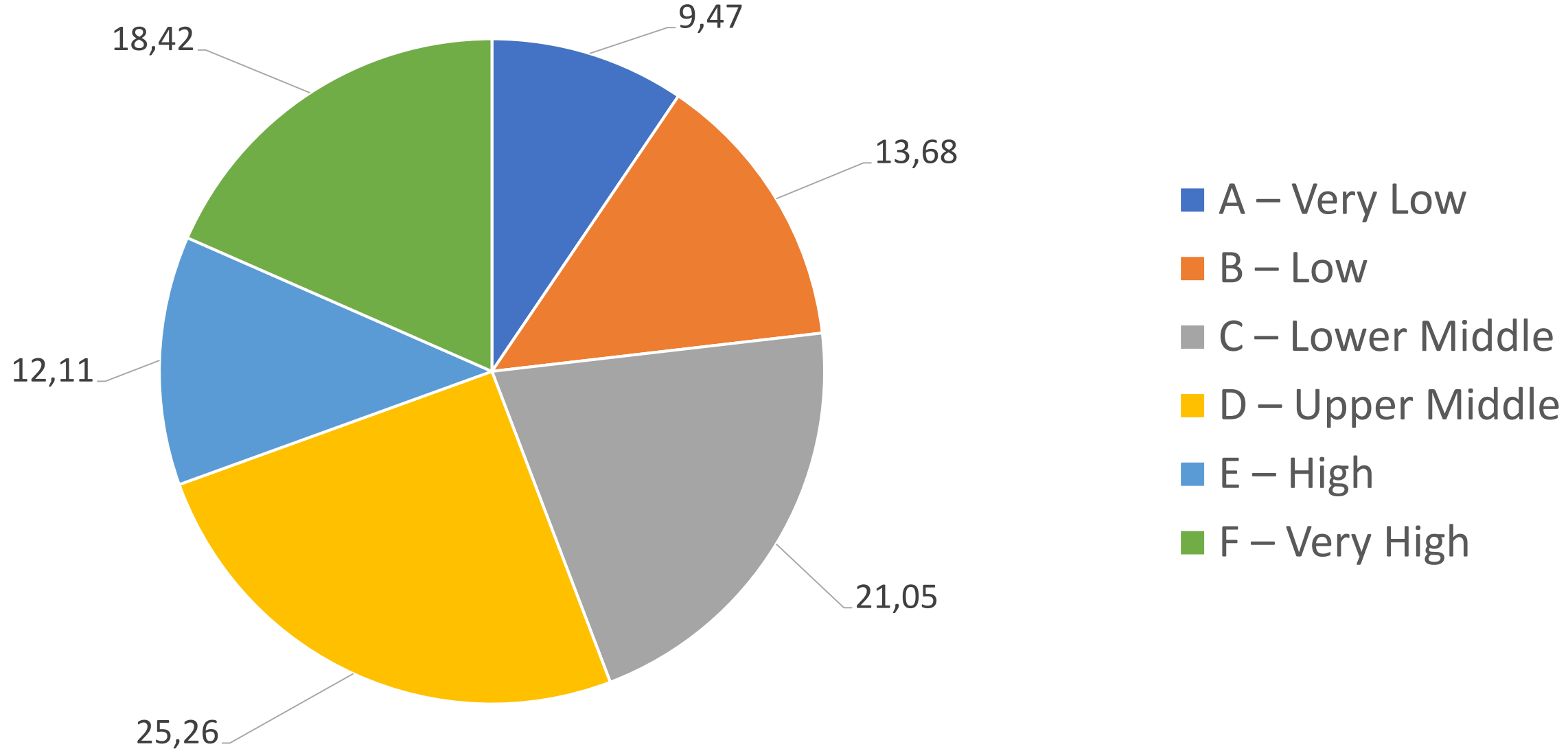
| Category         | Description                   |
|------------------|-------------------------------|
| A – Very Low     | Only small airports           |
| B – Low          | Only one average airport      |
| C – Lower Middle | More than one average airport |
| D – Upper Middle | Only one big airport          |
| E – High         | More than one big airport     |
| F – Very High    | More than 50 airports         |



- 1) 2/1/1, so category E.
- 2) More than one airport, so category C.
- 3) Lower Middle Income, so I keep category C.

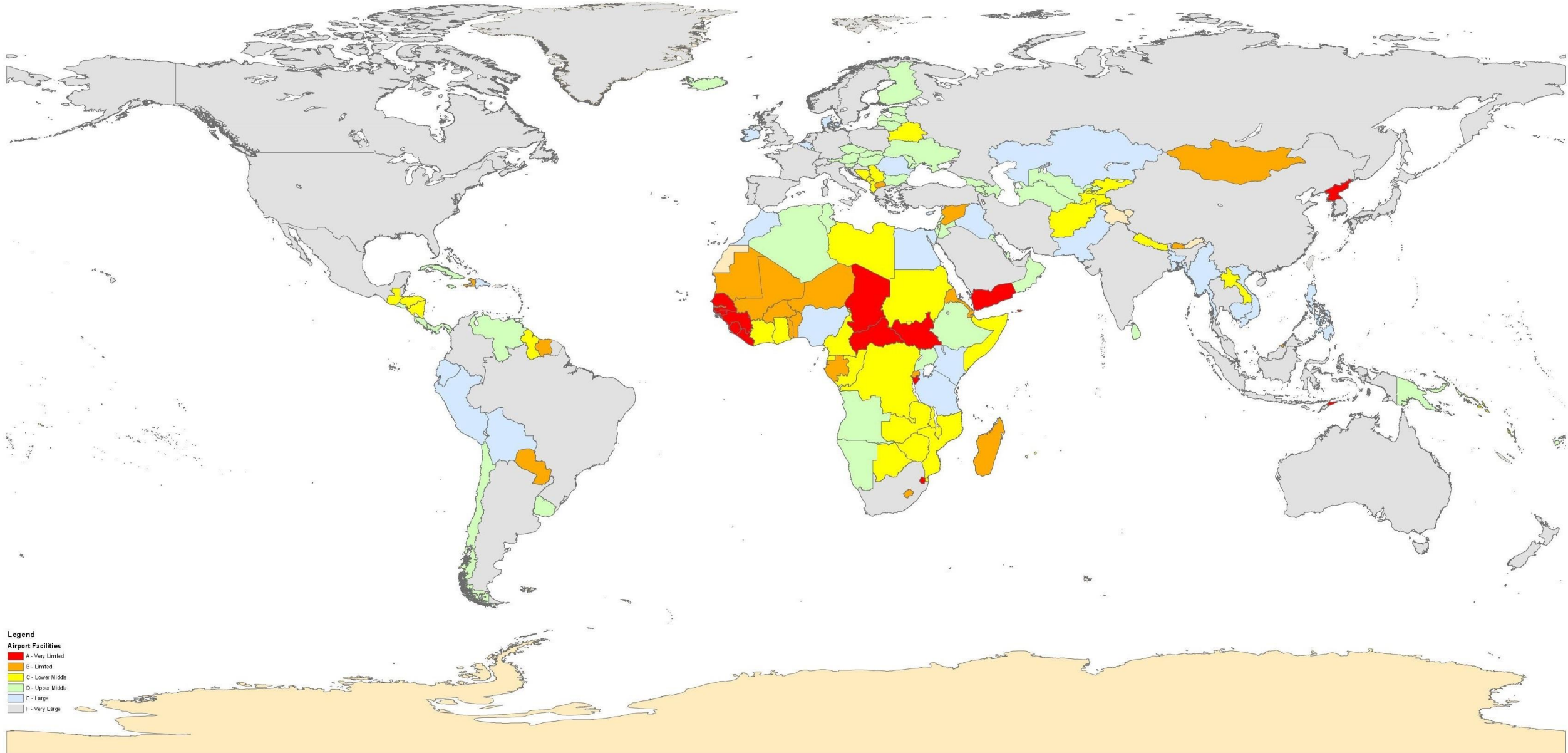
| Country Name | World Bank Income Category | Number of National Airlines | Maximum Number of Runways by Airport | Number of Flights In & Out | Global Number of Airports | Number of Small Airports | Number of Average Airports | Number of Big Airports |
|--------------|----------------------------|-----------------------------|--------------------------------------|----------------------------|---------------------------|--------------------------|----------------------------|------------------------|
| Vanuatu      | 2) Lower middle income     | 1                           | 1                                    | 12314                      | 27                        | 24                       | 3                          | 0                      |

# Extent of each Category

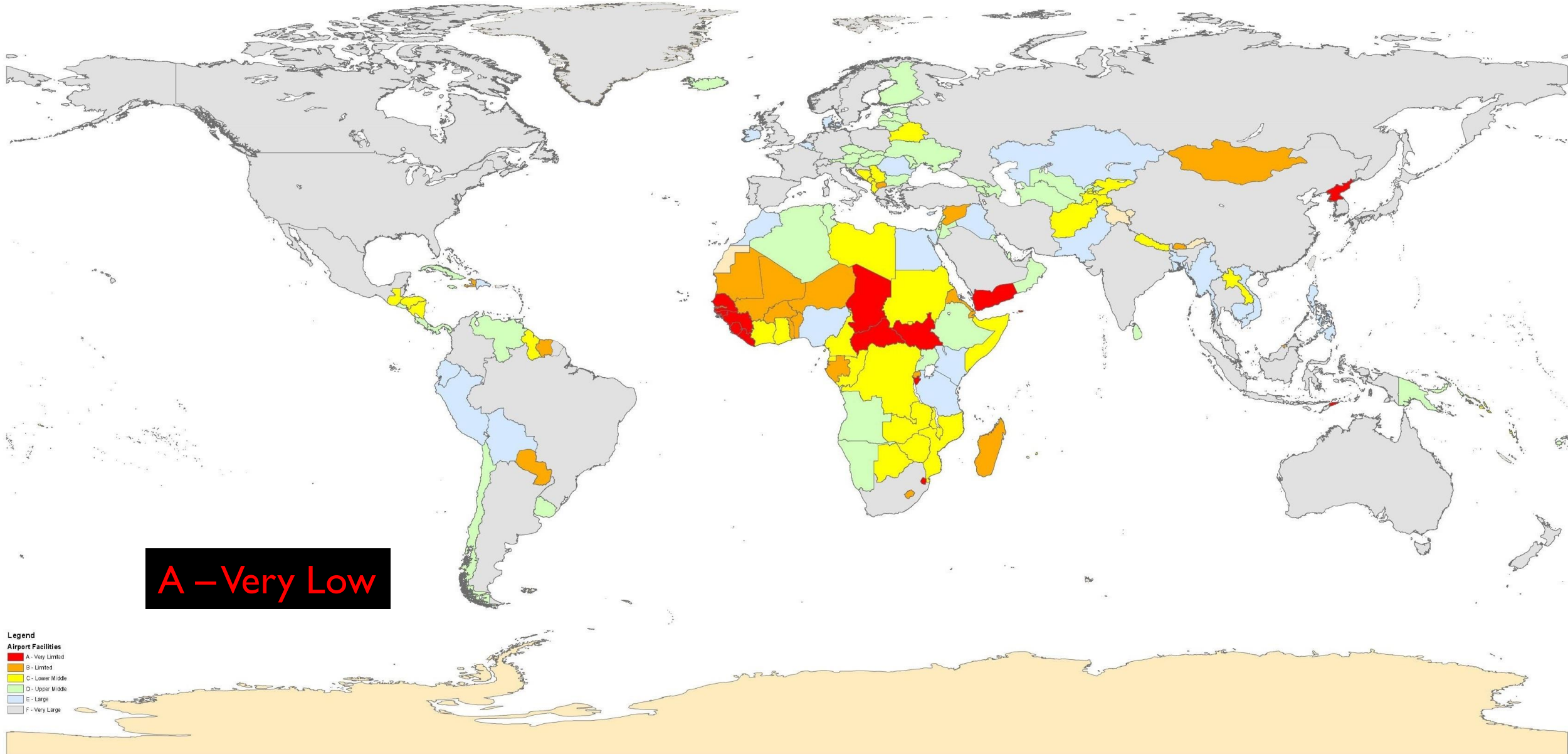




# Airport Facilities by Country



## Airport Facilities by Country



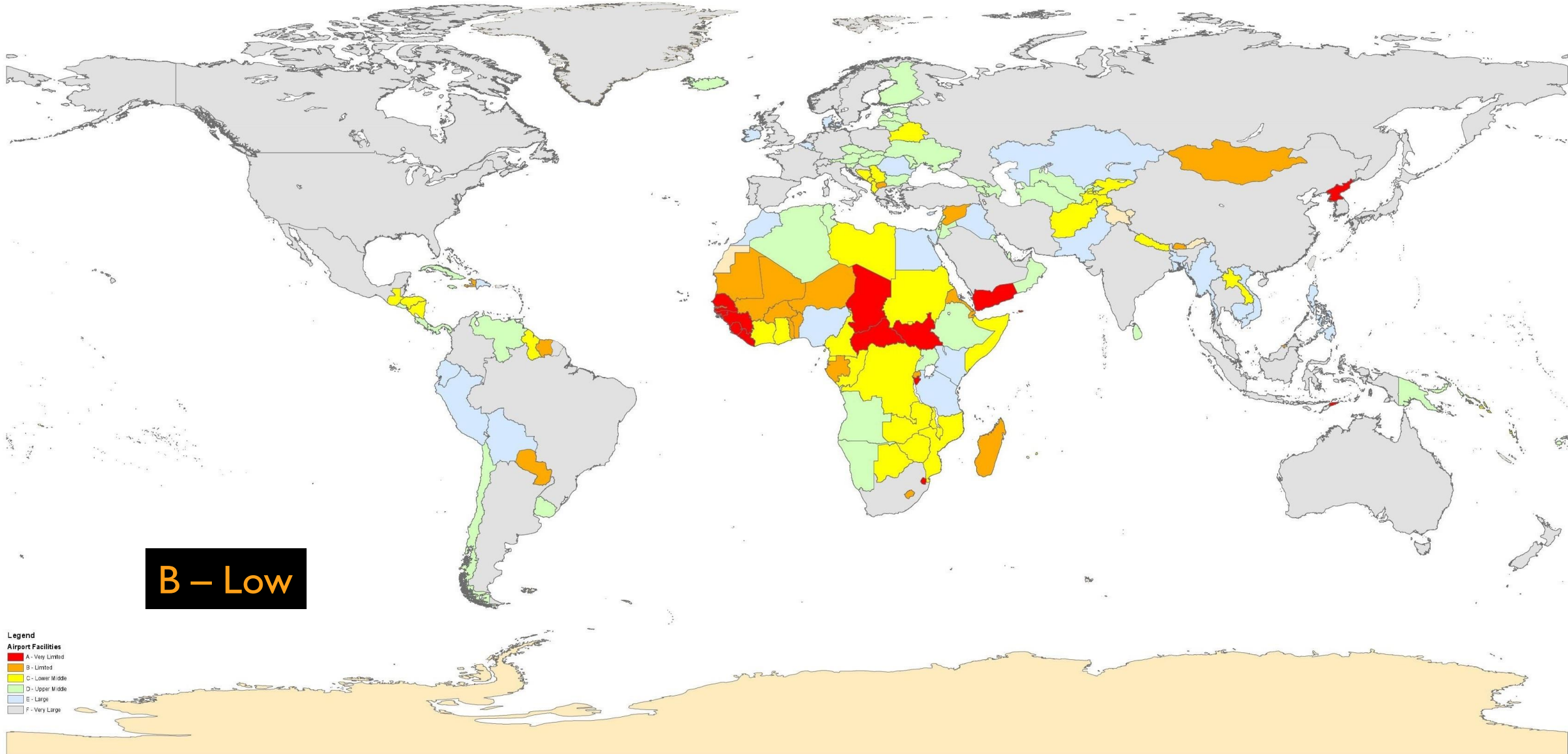


## A – Very Low (18, 10%)

- No big airports and less than 5,000 flights per years in the whole country.
- Mainly Sub-Saharan African Countries with a low income.
- **More likely to need any technical support from the ICAO.**



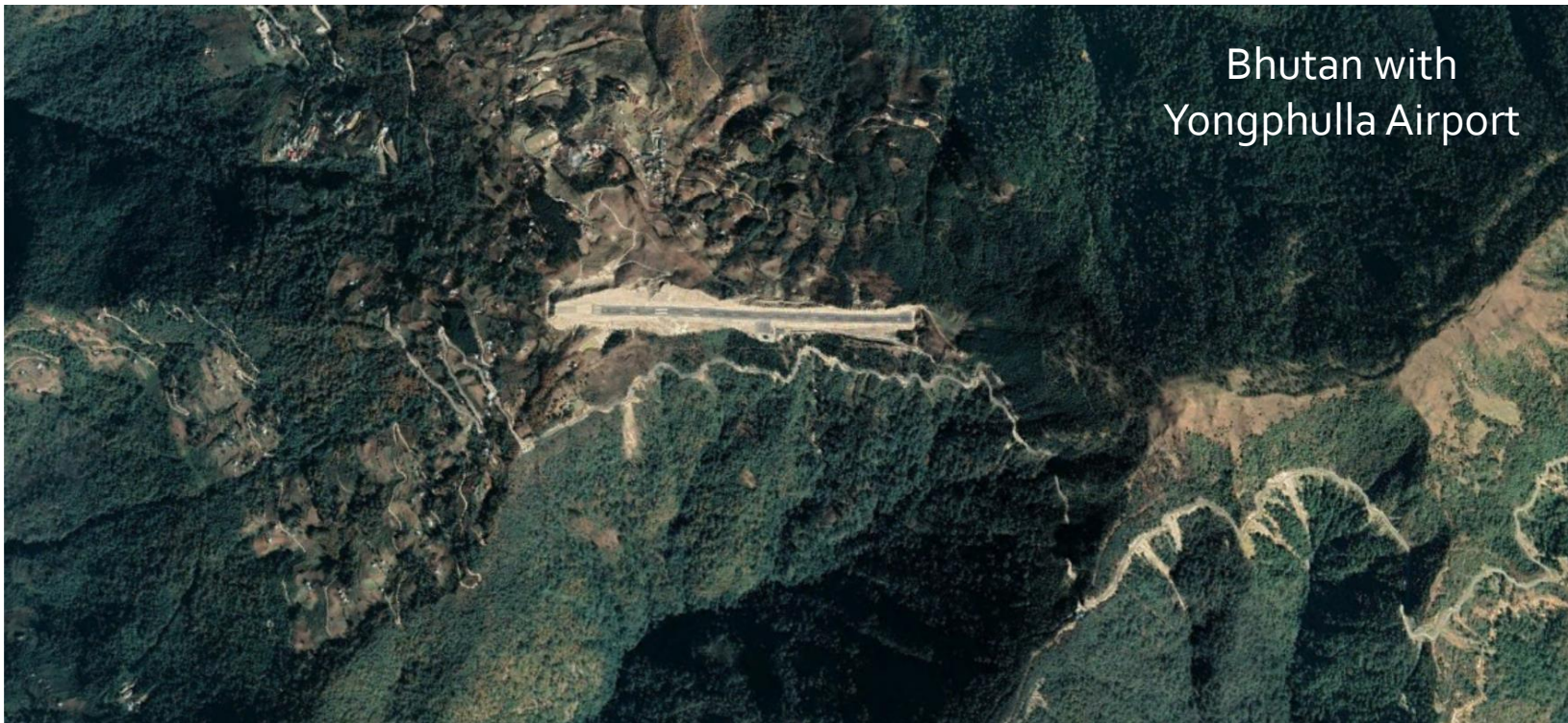
## Airport Facilities by Country





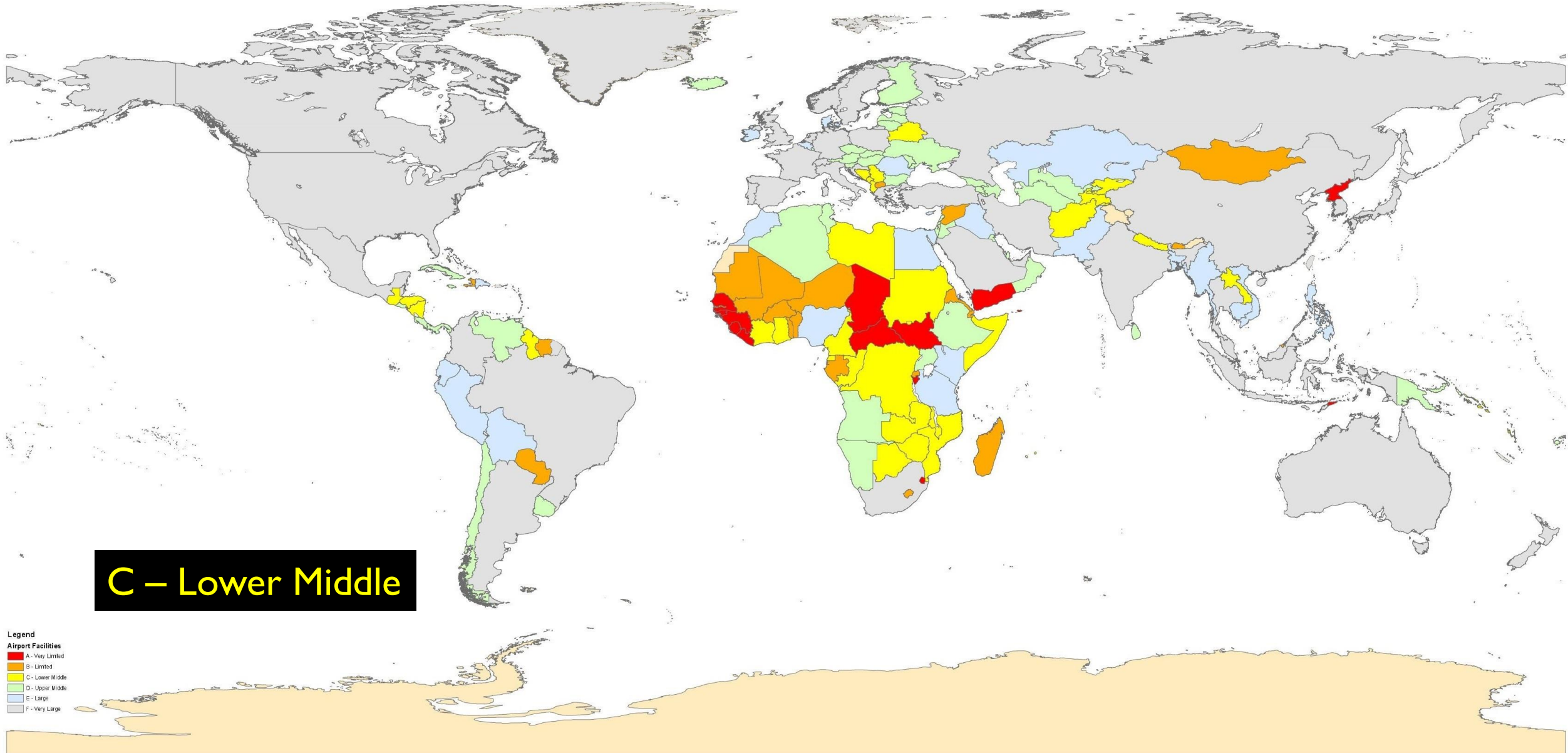
## B – Low (26, 14%)

- No big airports and a flight traffic about an average airport.
- Better distributed around the world with three high income countries.
- **Prone to need the ICAO technical support.**





Airport Facilities by Country





An aerial photograph of the Marshall Island International Airport, showing a long runway and taxiway extending along a narrow strip of land adjacent to the ocean.

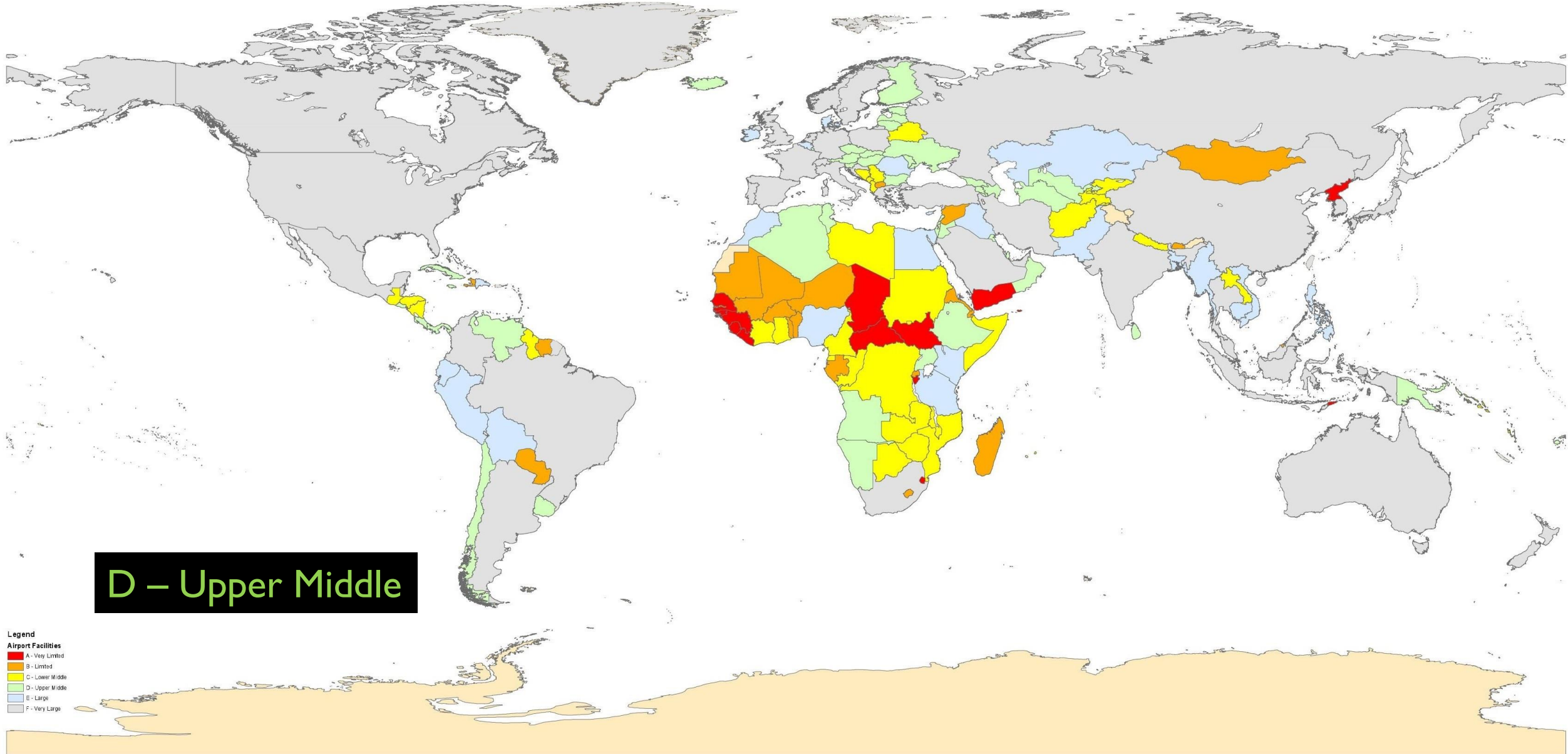
Marshall  
Island  
INTL  
Airport

## C – Lower Middle (40, 21%)

- More than 10,000 flights per year in mostly small or average airports.
- The rest of Sub-Saharan African countries and small-size countries in every continent.
- **Low-priority user of the ICAO technical support.**



## Airport Facilities by Country



D – Upper Middle



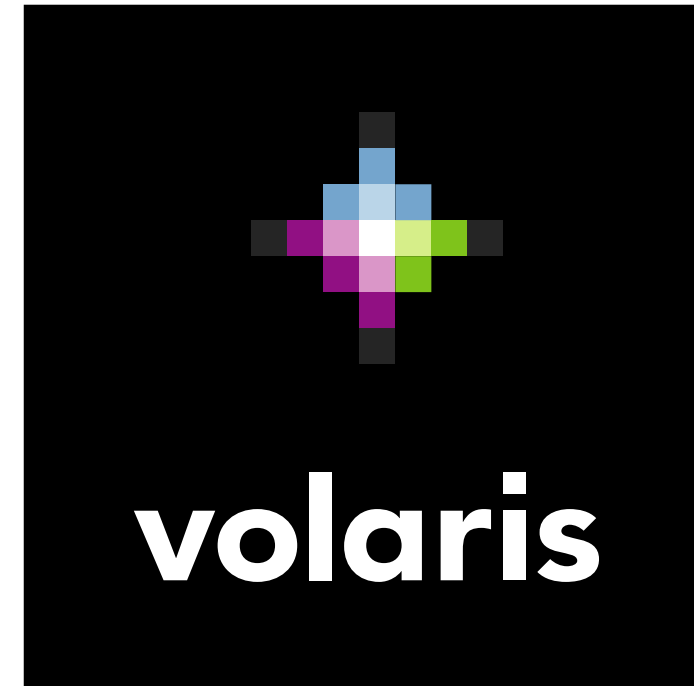
## D – Upper Middle (48, 25%)

- A big airport and a medium traffic around 50,000 flights per year.
- Mainly small-size countries with a high income for the half.
- **More a support for the integration in their civil aviation environment.**



Azerbaijan  
with Baku  
INTL Airport

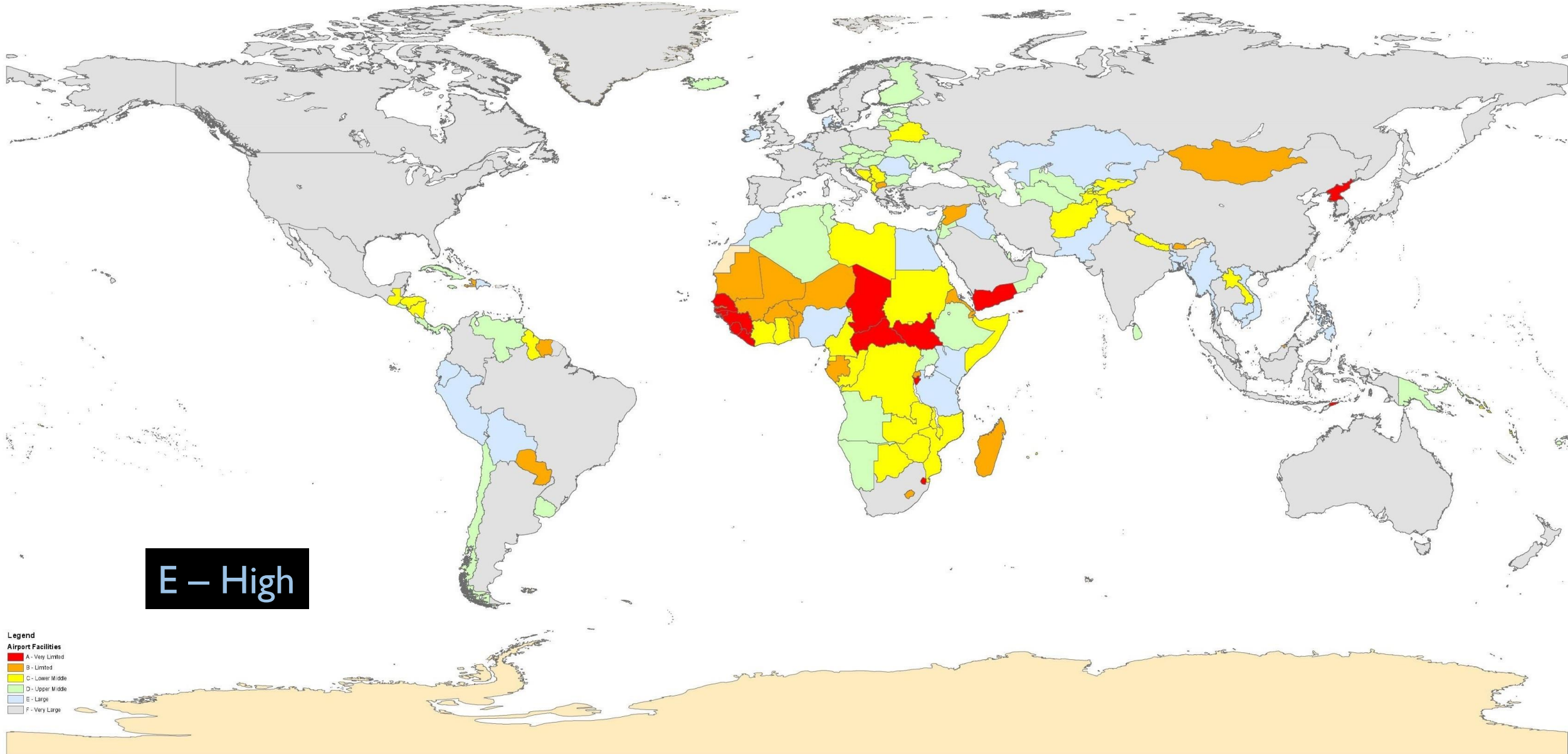
Costa  
Rica  
with its  
three  
National  
Airlines



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## Airport Facilities by Country





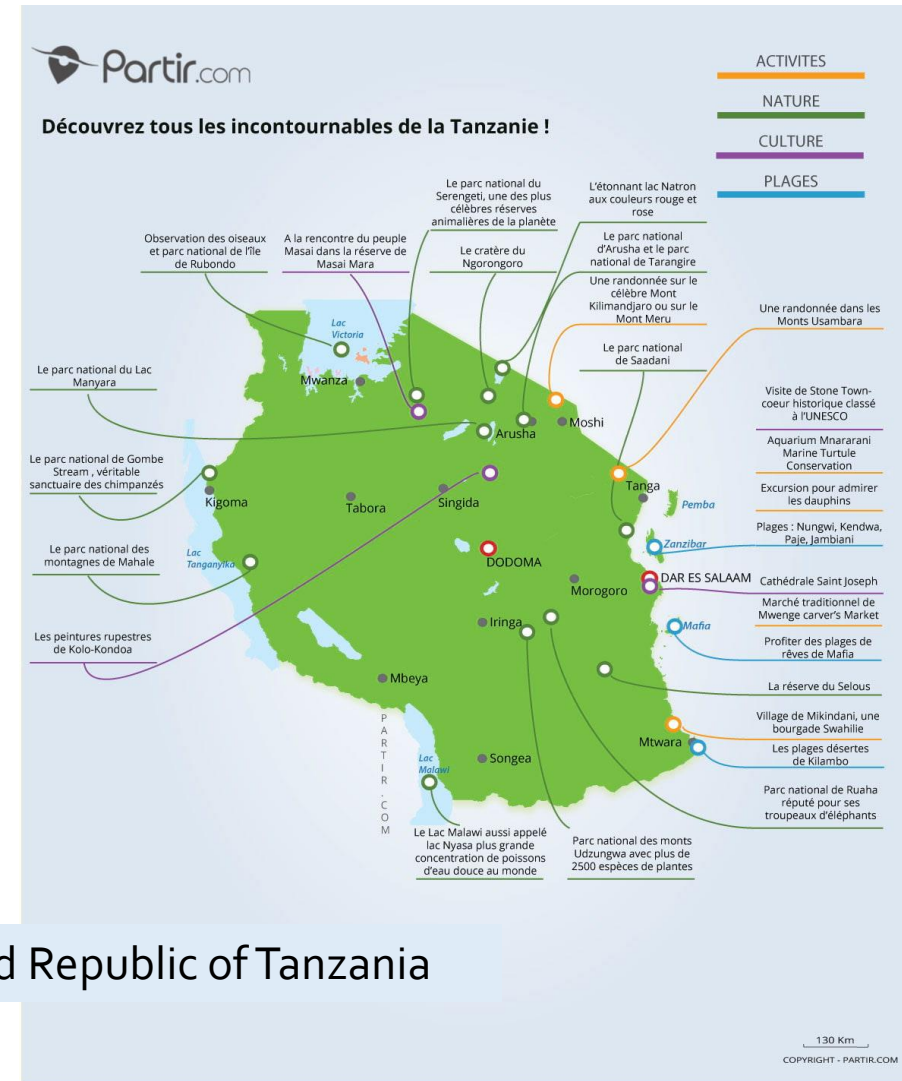


## E – High (23, 12%)

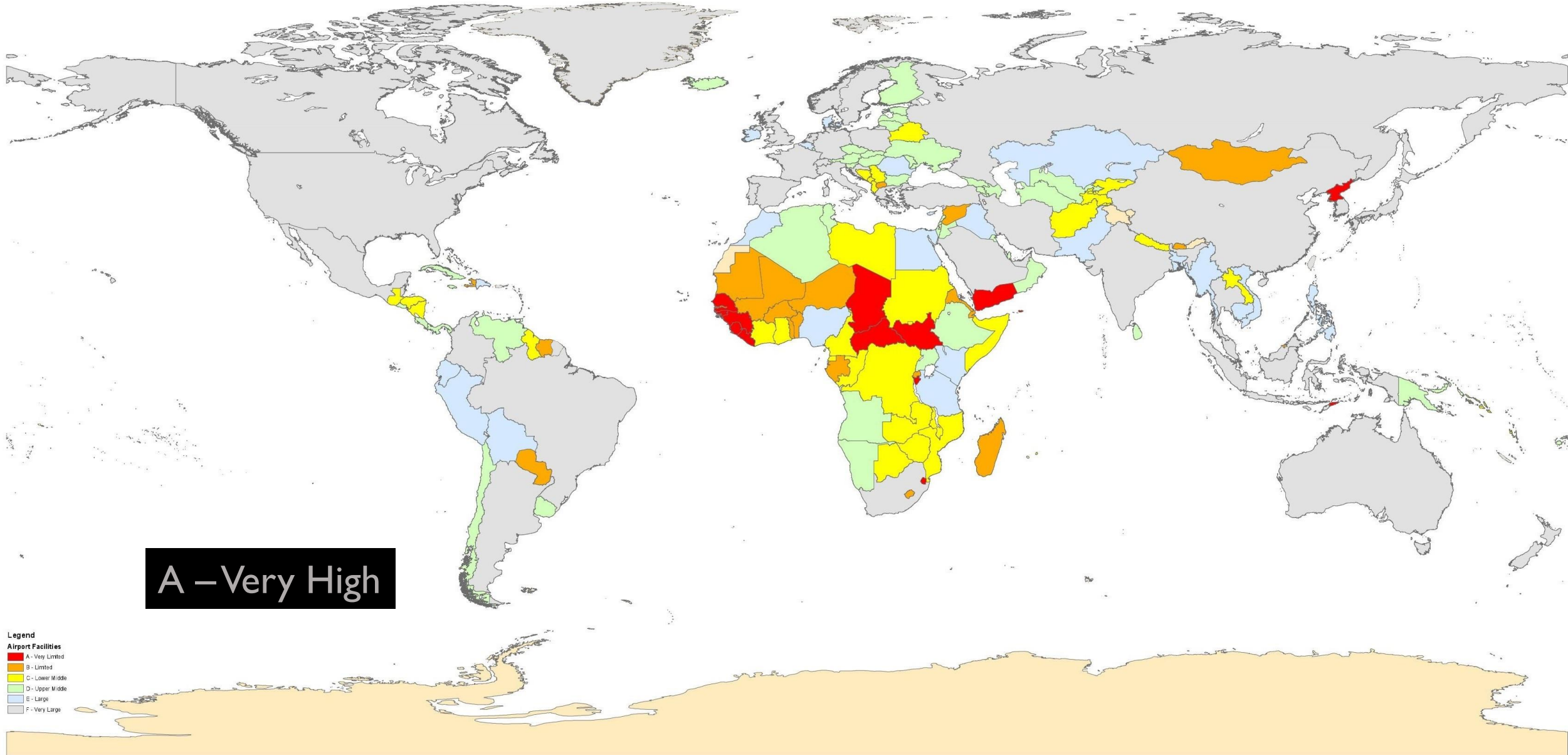
- More than one big airport and a medium traffic around 100,000 flights per year.
- Mostly wealthy small-size countries or very touristic countries with a low income.
- **Not really need the ICAO technical support.**

Peru with Jorge Chavez INTL Airport (Lima)

Touristic Map of United Republic of Tanzania



## Airport Facilities by Country

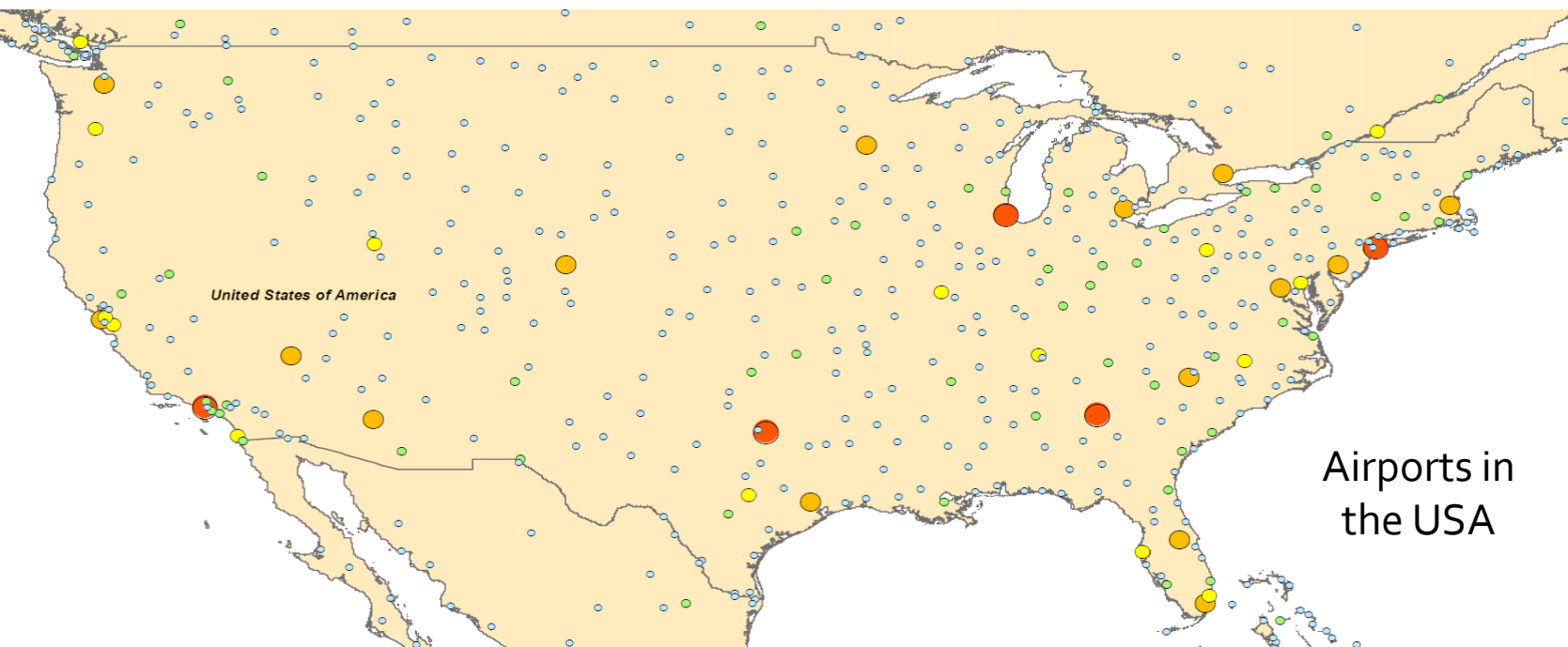




## F – Very High (35, 18%)

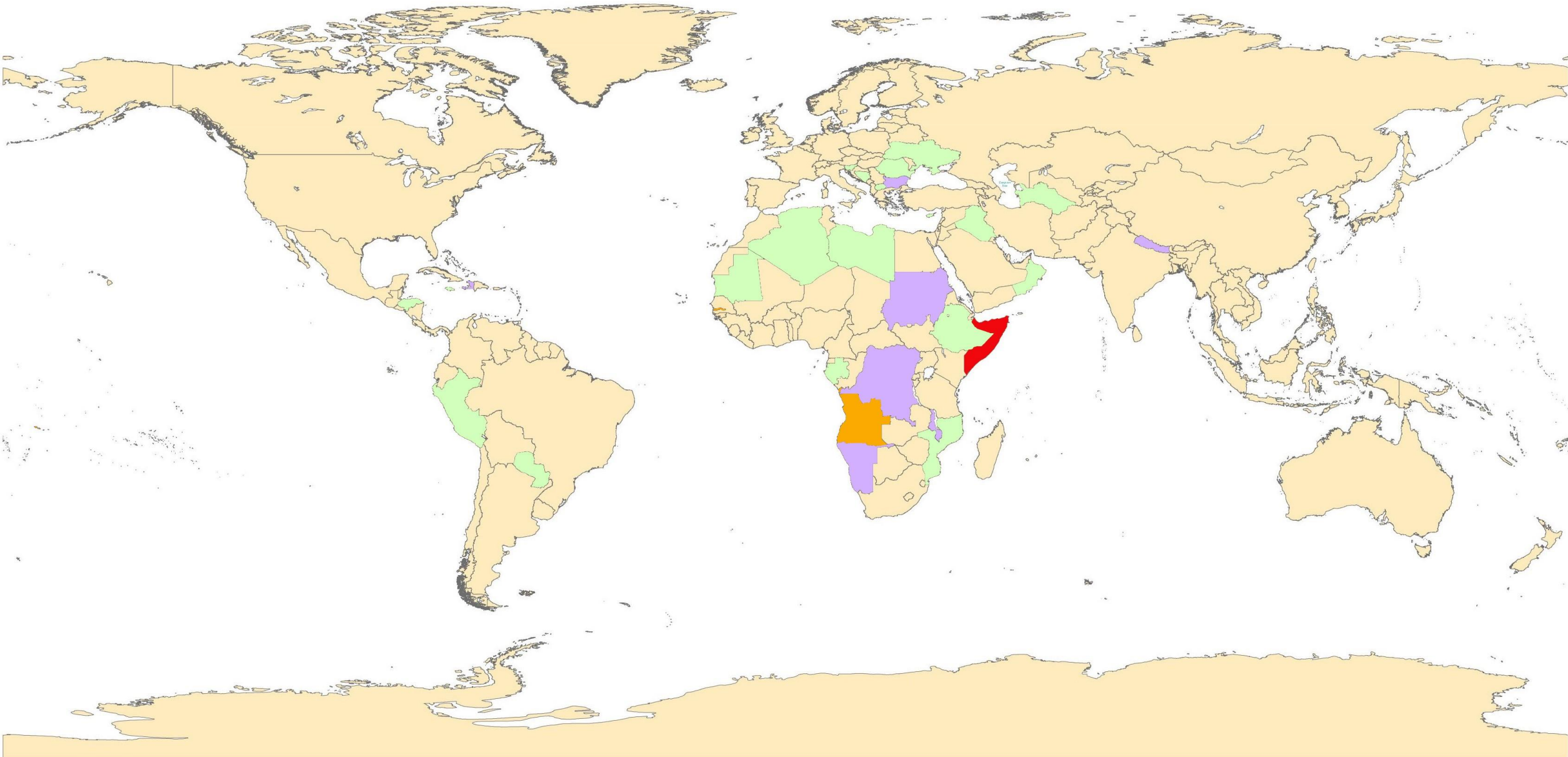
- A medium number of airport around 75 and between 100,000 & a few million of flights per year in the whole country.
- All the world great powers or very wealthy average countries (mostly in Europe).
- **More susceptible to provide technical support to the ICAO than to receive some.**

USA with Detroit Metropolitan Wayne County Airport



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# ICAO

**North American  
Central American  
and Caribbean  
(NACC) Office**  
Mexico City

**South American  
(SAM) Office**  
Lima

**ICAO  
Headquarters**  
Montréal

**Western and  
Central African  
(WACAF) Office**  
Dakar

**European and  
North Atlantic  
(EUR/NAT) Office**  
Paris

**Middle East  
(MID) Office**  
Cairo

**Eastern and  
Southern African  
(ESAF) Office**  
Nairobi

**Asia and Pacific  
(APAC) Sub-office**  
Beijing

**Asia and Pacific  
(APAC) Office**  
Bangkok



## THANK YOU