

The World Risk Index

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Abstract

The annual issues of the 2012 and 2021 World Risk Report focus on many critical topics as they relate to disaster risk management. A major topic is about the World Risk Index. The World Risk Index is made up of several components. These components are exposure, vulnerability, susceptibility, lack of coping and lack of adaptation. With this the World Risk Index provides an evaluation of the risk in which countries are to be confronted with disasters resulting from natural events. The scope of the comparison of 2012 and 2021 is to see how countries world risk index has changed.

World Risk Index (WRI)

World Risk Index = Exposure * Vulnerability

Exposure : Impact by natural disasters

Vulnerability : Comprised of susceptibility, lack of coping, and lack of adaptation.

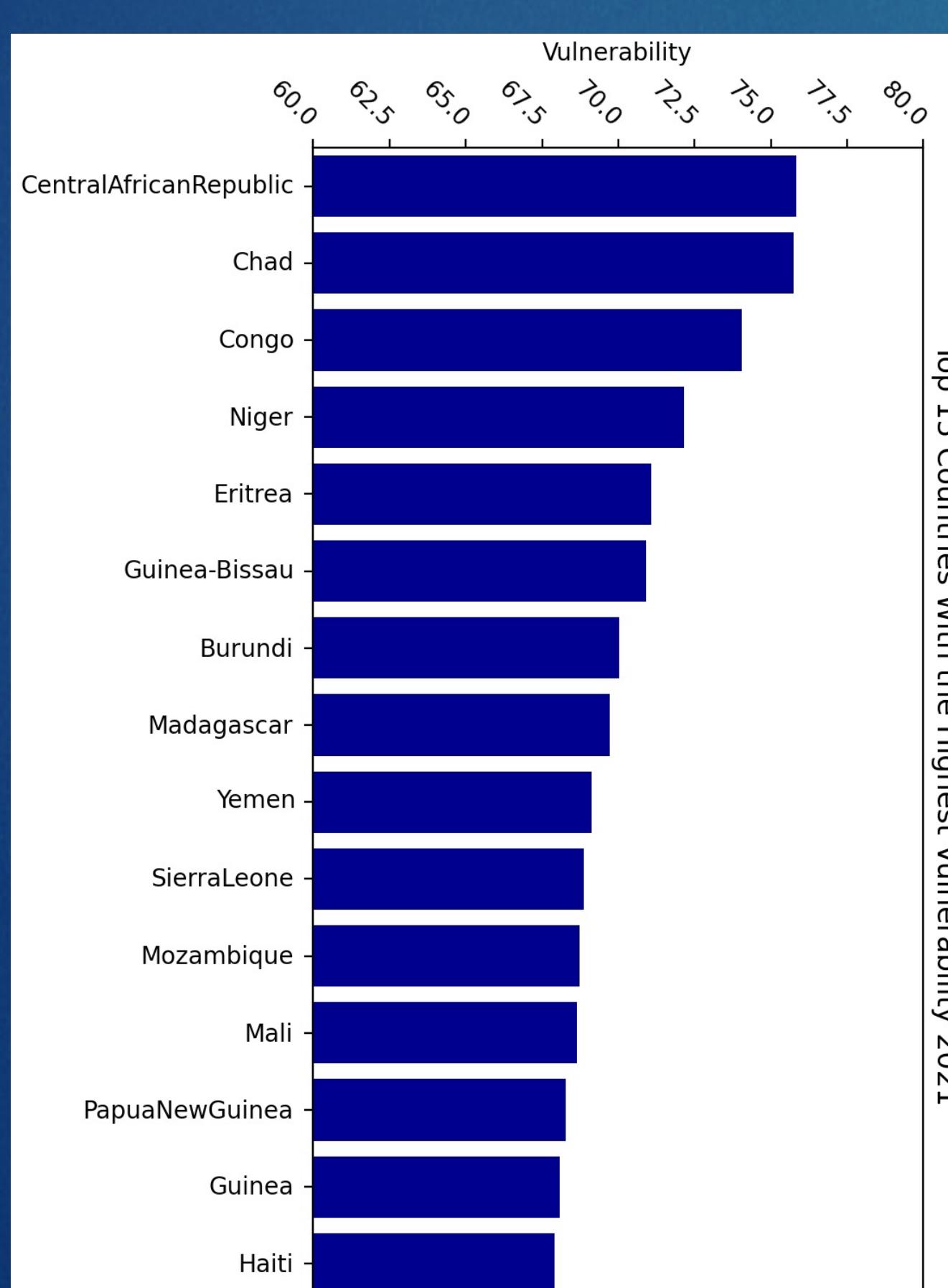
Susceptibility : Harm or loss from natural disasters

Coping : Ability for immediate mitigation of harm

Adaptation: Long term mitigation of harm

Figure below:

- 2021 Africa has 12 out of 15 countries with the highest vulnerability



Overview of Values of WRI

World Risk Index Value Ranges:

The World Risk Index 2012 : 0.10 - 36.31

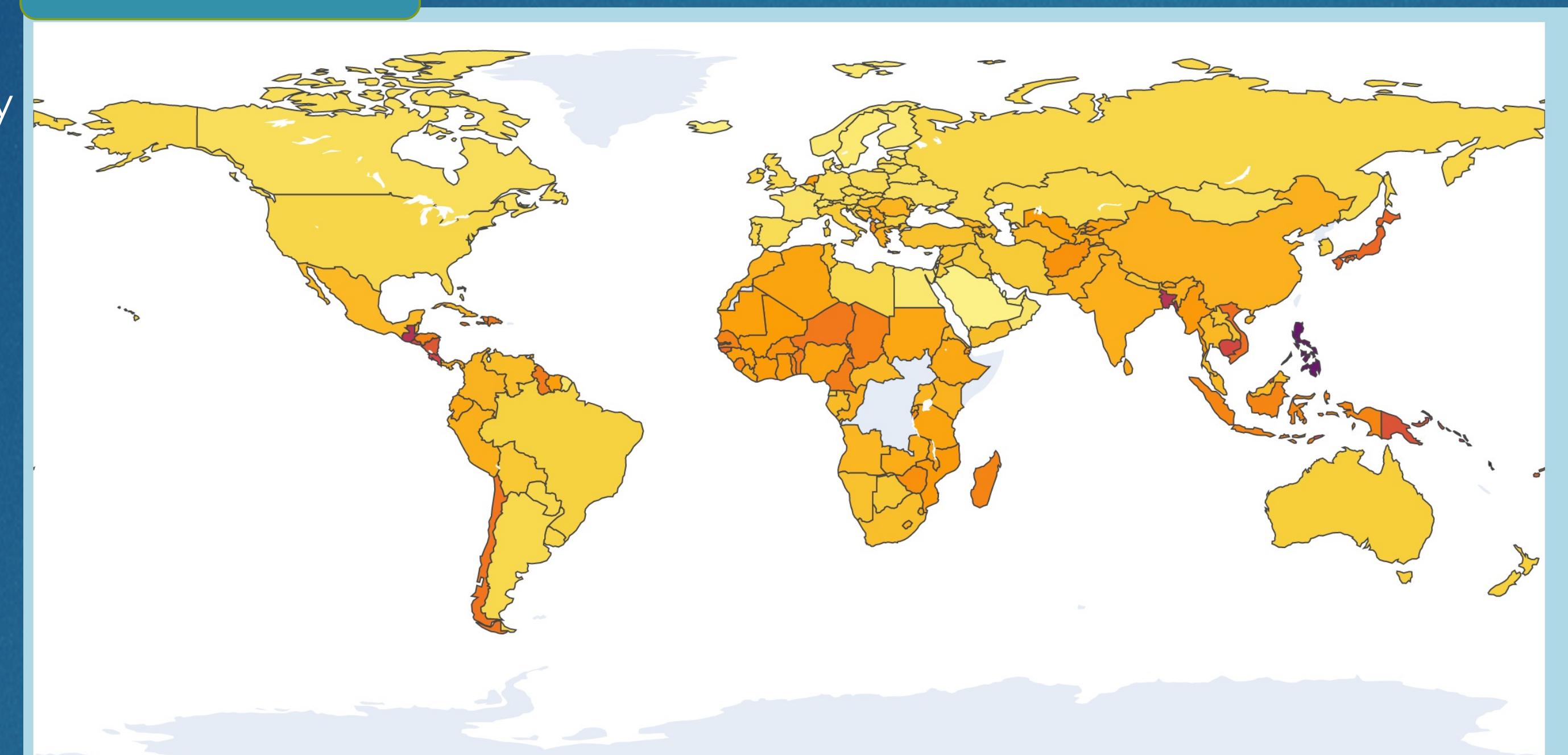
The World Risk Index 2021 : 0.30 - 47.73

The World Risk Index Average:

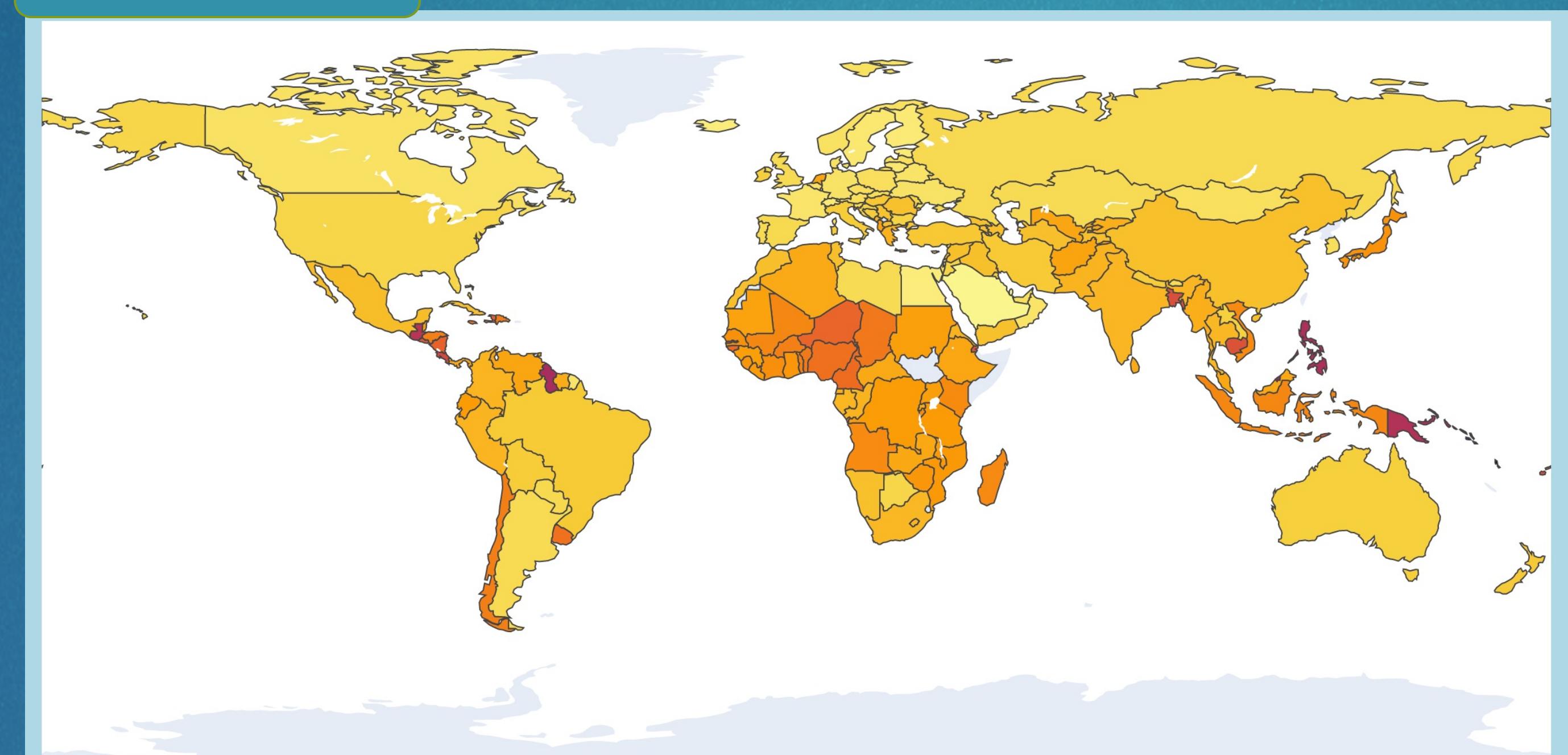
The World Risk Index average of 2012 : 7.46 ± 5.11

The World Risk Index average of 2021 : 7.89 ± 6.29

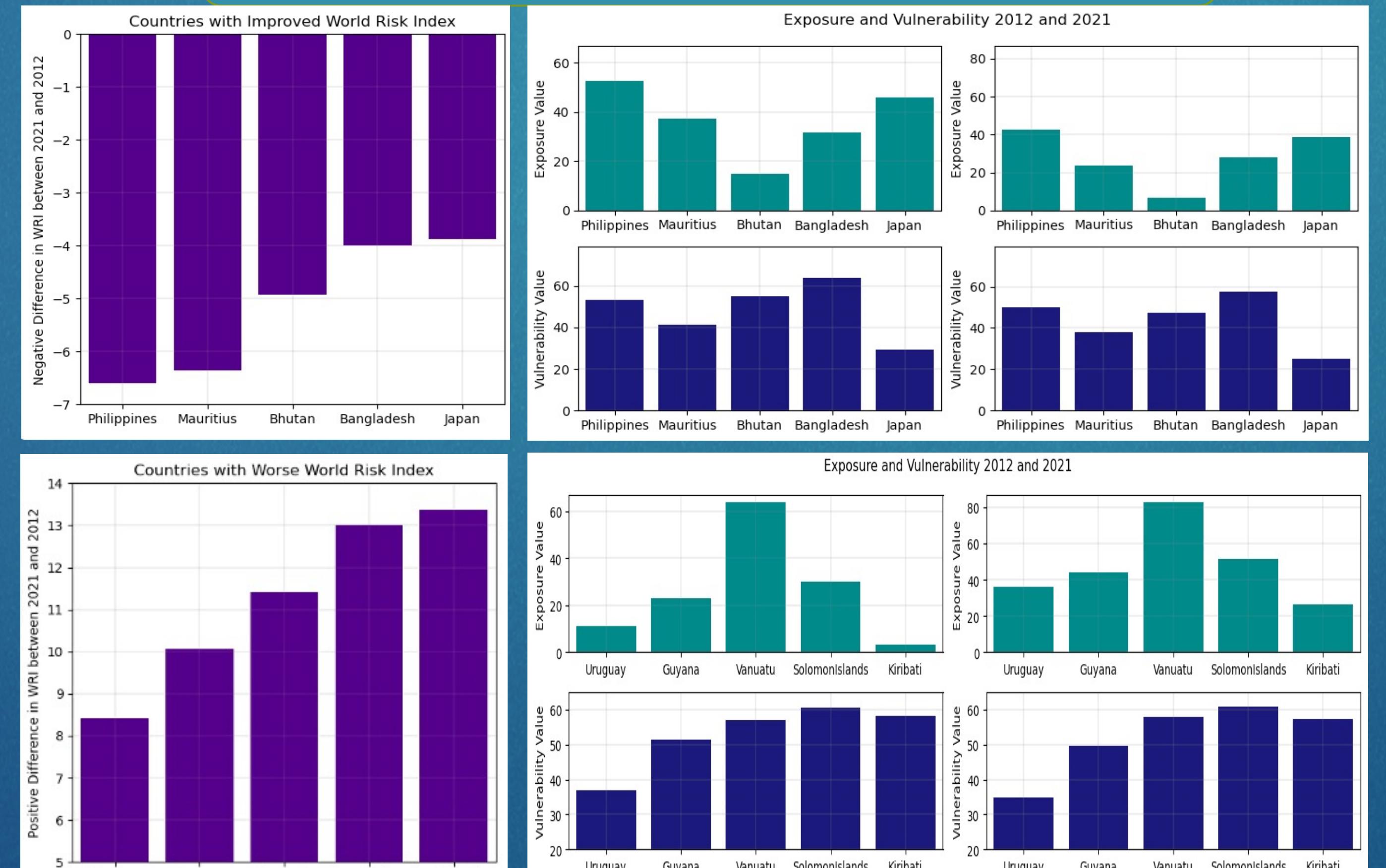
2012



2021



Who is improving? Who is not?



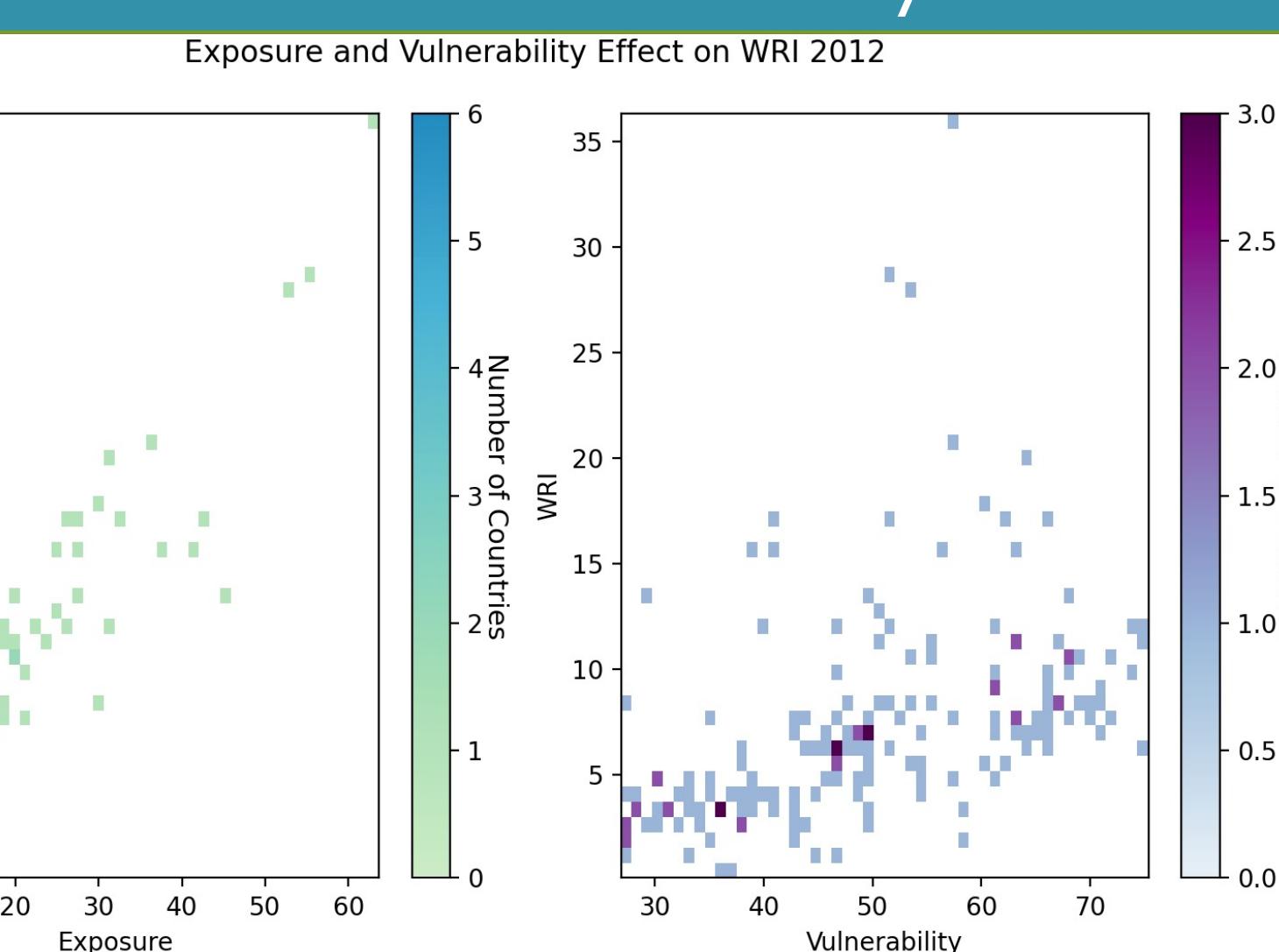
Looking at figures above: the left two in purple show WRI changes. The plots to the right show the changes in vulnerability and exposure to the corresponding countries

Highest and Lowest 15 Countries WRI 2012

Bar graph on left in purple:

- Countries with highest and lowest WRI values for 2012
- 2d histogram below:
- 2012 comparison of exposure and vulnerability and the effect on the world risk index

Exposure & Vulnerability effect

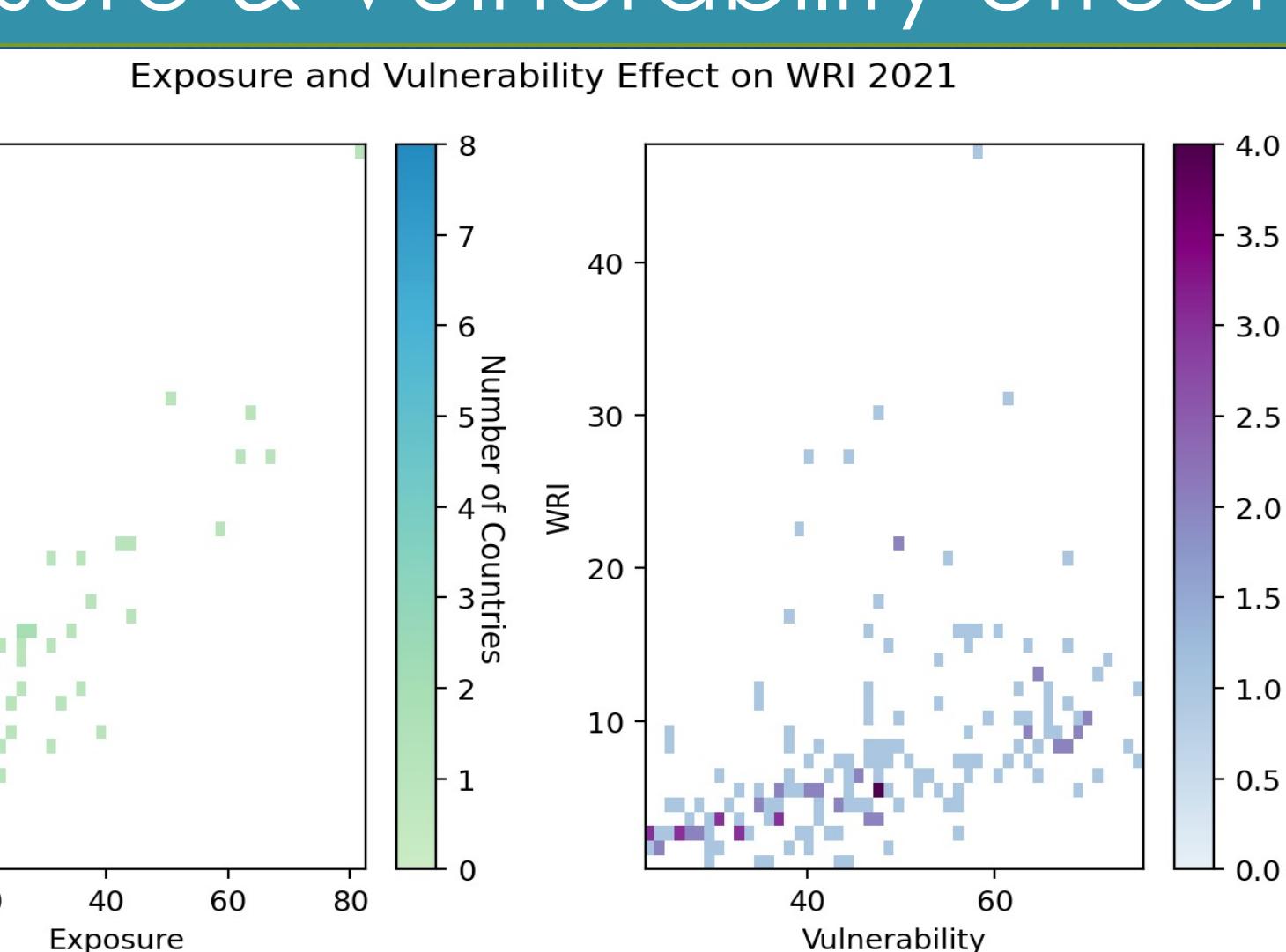


Highest and Lowest 15 Countries WRI 2021

Bar graph on left in purple:

- Countries with highest and lowest WRI values for 2021
- 2d histogram below:
- 2021 comparison of exposure and vulnerability and the effect on the world risk index

Exposure & Vulnerability effect



Summary

In summary, looking at 2012 and 2021 most of the top 15 countries with the highest world risk index values remained within the top 15, likewise those with the lowest world risk index remained in the bottom 15. Through the use of the World Risk Index people can see the countries that are in higher risk compared to others, and how each country's world risk index has changed for either better or worse.