



UNITED NATIONS



United Nations High Level Panel on the Multi-Dimensional Vulnerability Index

By H.E Mr. José Luis Rocha

July 25, 2023

Why is an MVI needed?

- Wide agreement that poorer countries need and deserve assistance.
 - Country poverty often measured by GNI PC, which is a weak measure of material welfare or well-being.
- Downward volatility of well-being (risk) also problem – recovery costs can be high.
 - External shocks are a big risk.
 - Stressor such as climate change that lower or eliminate prospects for future income gain also.
- Countries with structural risk of lower well-being also deserve special assistance, especially if countries structurally lack resilience
- **No international, widely accepted, quantitative benchmark to measure structural vulnerability or lack of resilience across multiple dimensions of sustainable development at the national level.**

UN resolution: Develop and promulgate an MVI

(UNSG REPORT A/76/211)

Multiple use cases for an MVI – depends on stakeholder

- Identify main sources of structural vulnerability and lack of resilience in countries.
 - Example – long coastline, which increases risk of lower future well-being owing to climate change
- Assist in allocation of development finance by complementing other measures of country need (especially the GNI which does not have a risk adjustment).
- Assist countries in developing strategies to improve well-being by pinpointing their sources of vulnerability and benchmarking these across countries.
- Tool for research/analysis of vulnerability and development.



The MVI framework – Principles from UNSG report



Multidimensionality

- ***Indicators should be drawn from all three dimensions of sustainable development***

Universality

- ***the vulnerabilities of all developing countries must be included in the index.***
- ***the index needs to employ available, recognized, comparable and reliable data.***

Exogeneity

- ***only factors that are structural should be considered.***
 - *Structural: factors that are inherent or slow-moving, independent from current or recent policy choices*

Evidence-based

- ***There should be evidence relating index concepts to vulnerability***

Simplicity

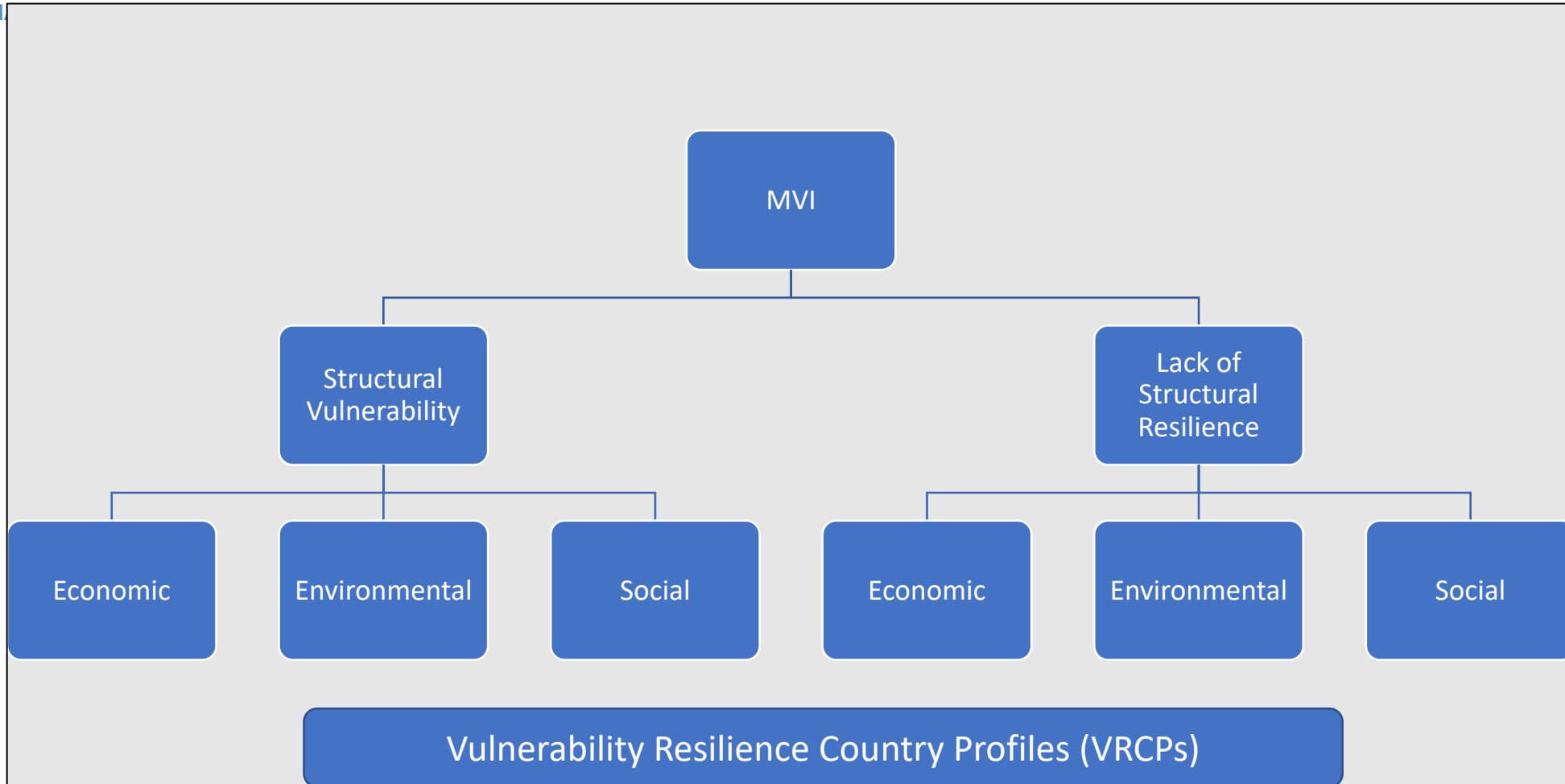
- ***the framework of the MVI should be based on a simple structure.***



UNITED N



The MVI framework



Key definitions

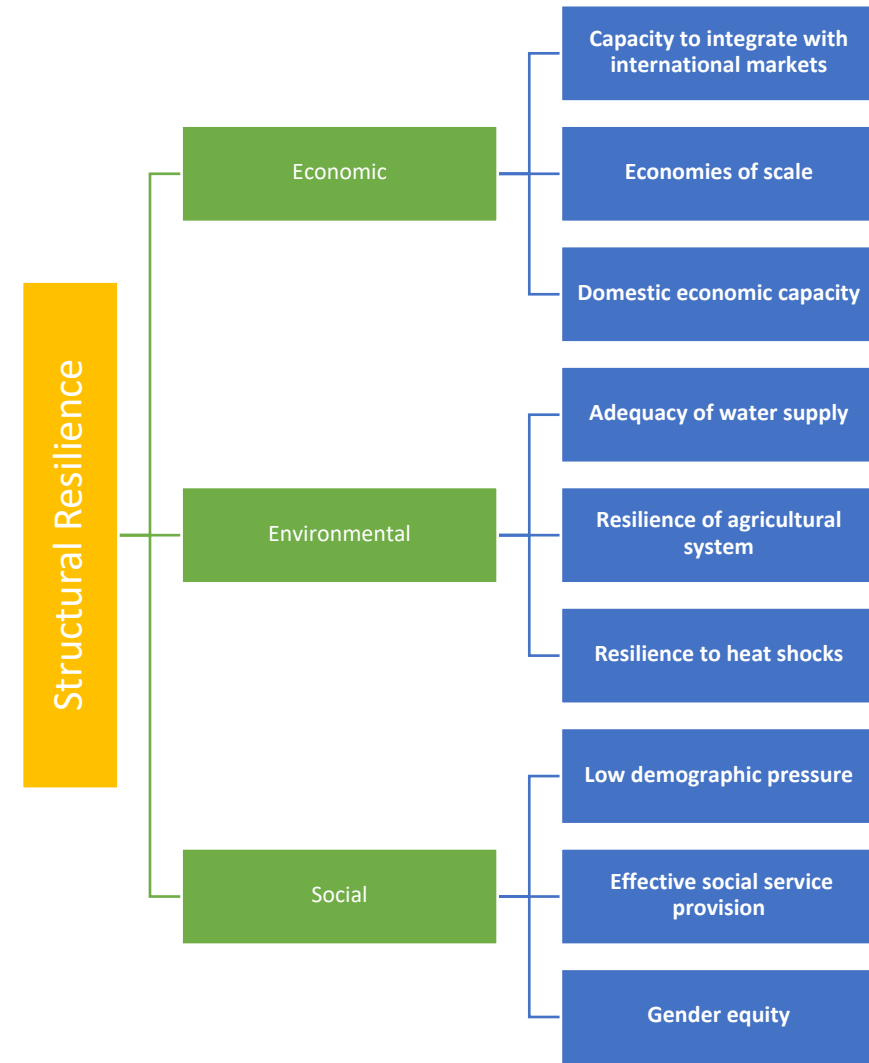
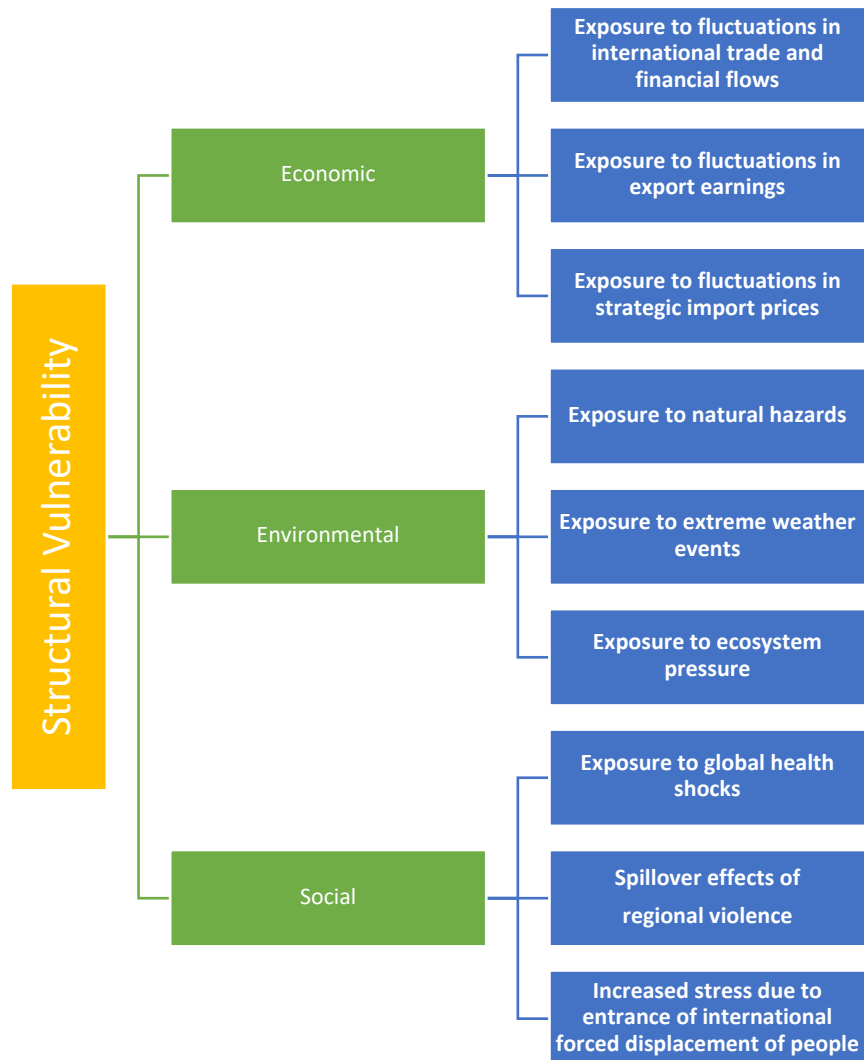
➤ Structural **vulnerability**:

- *the risk of a country's sustainable development being hindered by recurrent adverse exogenous shocks and stressors.*

➤ Structural **lack of resilience**:

- *Resilience = the inherent characteristics or inherited capacity of countries to withstand, absorb, recover from or minimize the adverse effects of shocks or stressors*

Identification of concepts based on thorough literature search, theory of change





UNITED NATIONS



Indicators choice – the criteria

1. Data availability

- *The selected indicators must have data publicly available on all developing countries.*

2. Data quality

- *The MVI should be based on data of the highest quality.*

3. Indicator selection transparency

- *the relationship between vulnerability, resilience and the selection of indicators has to be based on clear and detailed rationales.*

4. Indicator acceptability

- *the selection of indicators has to lead to an acceptable MVI.*

The four **criteria** ensure the credibility of the index and well as its robustness and stability across time.

Application of principles and criteria related to data need clear **rules**.



Indicators choice - Rules



Rule #1: The use of UN data must be prioritized.

Rule #2: The MVI will not be based on variables that present too many missing values.

- Missing data will not be estimated at this stage.

Rule #3: The MVI will be computed for every country even those with a limited amount missing data.

Rule #4: The MVI scores and ranks will NOT be computed for countries with too many missing values.



Application of the rules on indicator choice - Examples



Examples of indicators excluded:

- **Principle: evidence-based**
 - ***Share of agriculture in GDP (Economic vulnerability)*** – Lack of convincing and recent evidence linking the indicator to vulnerability to shocks
 - ***Share of remittances in GDP (Economic vulnerability)*** – Lack of evidence relating this indicator to vulnerability to shocks; weak evidence relating it to resilience
 - ***Trade openness (Economic vulnerability)***
- **Indicator Choice – Criteria: Data quality**
 - Debt
- **Rule #1: UN data must be prioritized**
 - ***Victims and damages from natural hazard (Environmental vulnerability)*** – Sendai Framework Monitor data was replaced by the EM-DAT database as the alternative source which is also used by the UN.
- **Rules #2: too many missing values**
 - ***(low) Income inequality (Social resilience)*** – Countries without reliable income or consumption surveys do not have reliable data.



Creating the Index - Aggregation



- Countries are vulnerable in different ways.
- How to aggregate the indicators in a composite index which properly reflects these differences?
- The MVI panel selected the **quadratic mean** as the appropriate method as it is better captures vulnerability by rewarding the largest differences in components.

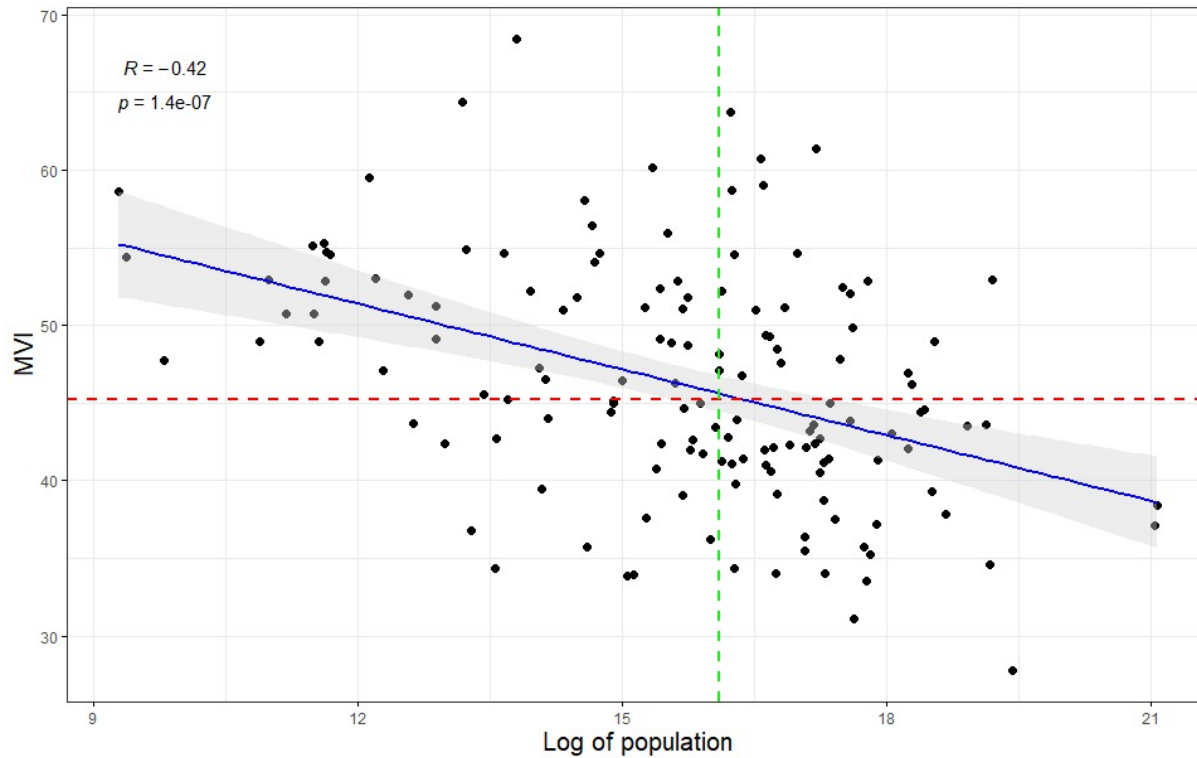


UNITED NATIONS

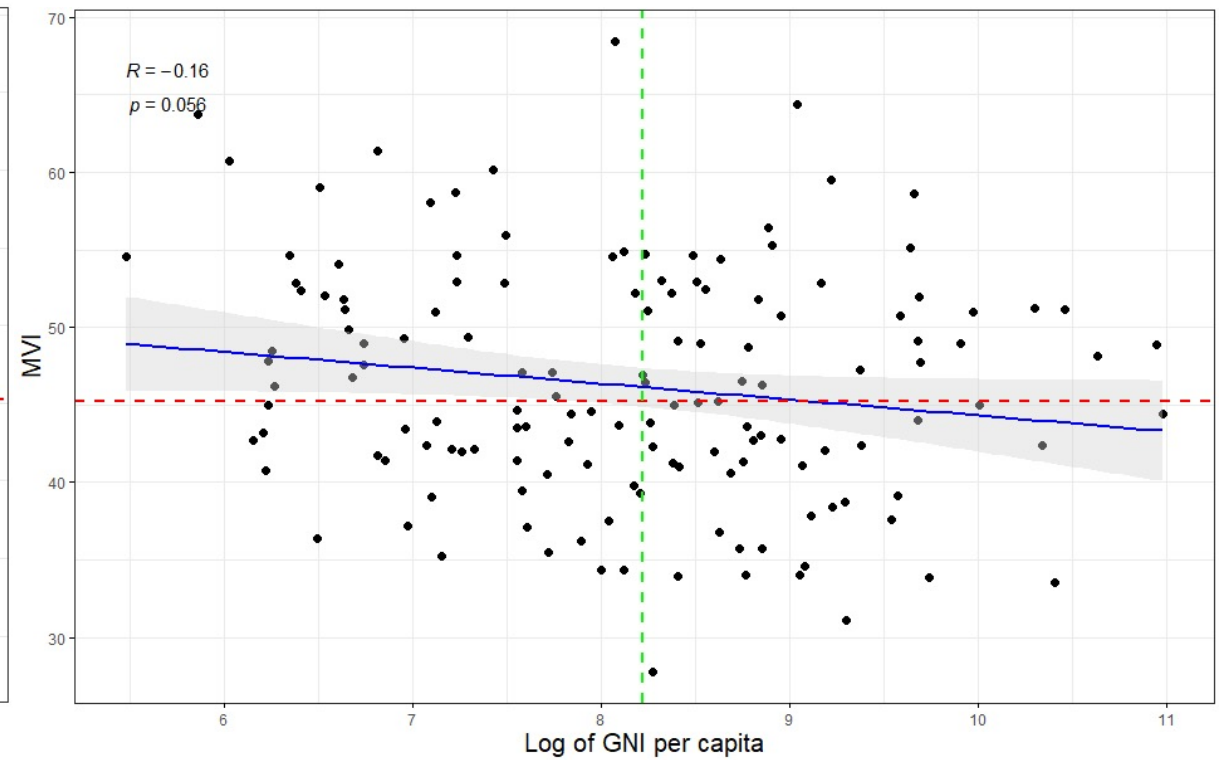
MVI – SENSITIVITY ANALYSIS



Scatter plot of MVI and population (log)



Scatter plot of MVI and GNI PC



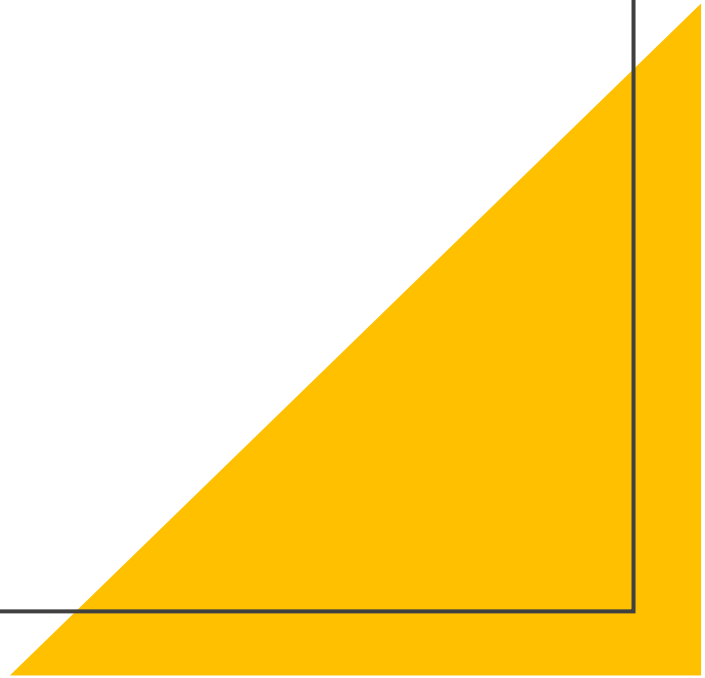


UNITED NATIONS



Consultative Process and Feedback

- Consultations with Member States
- Consultations with IFIs
- Consultations with research institutions





UNITED NATIONS



Results

Multi-Dimensional Vulnerability Index

Reset Model

Country

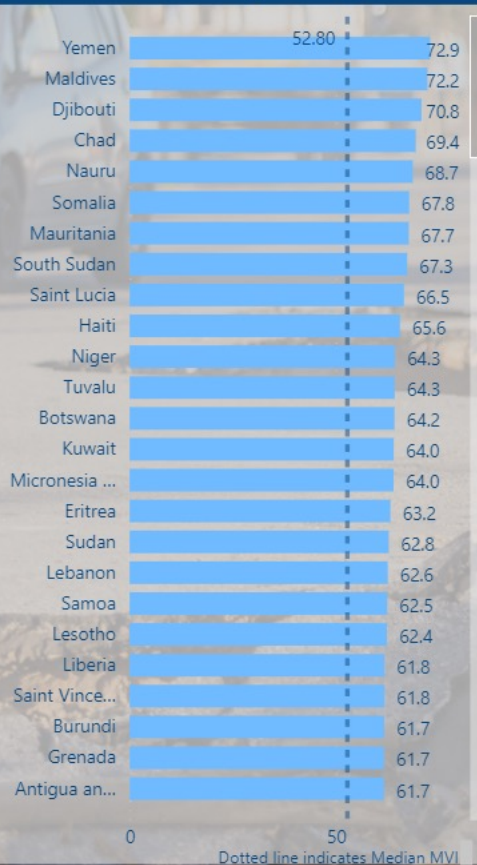
(Press Ctrl + Click to select multiple countries)

All

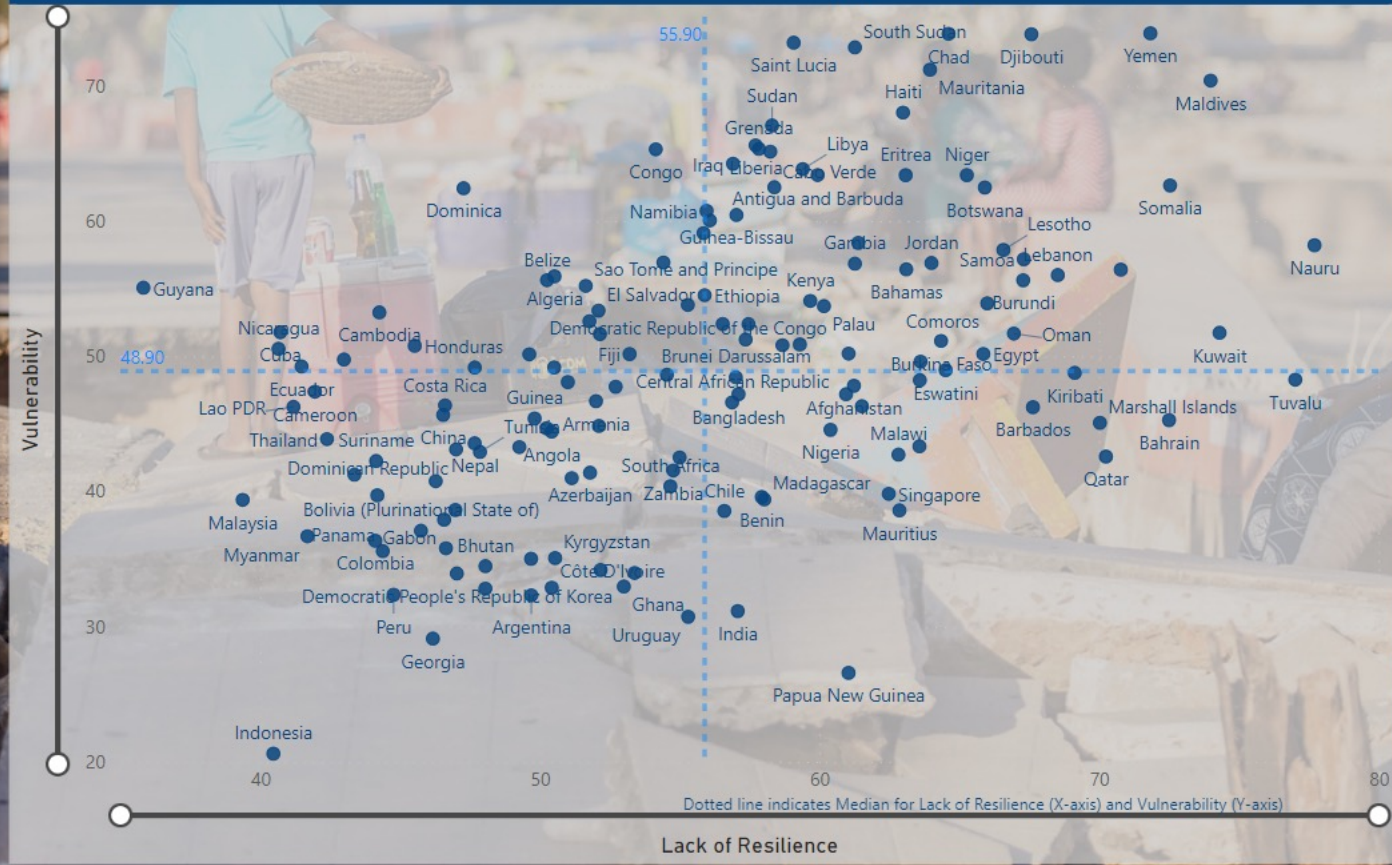
Income Group (World Bank)

All

MVI Score by Country



Lack of Resilience and Vulnerability by Country





See the following websites for more information



- <https://www.un.org/ohrlls/mvi/documents>
- <https://sdgs.un.org/topics/small-island-developing-states/mvi>