

# Possible Development and Uses of Multi-Dimensional Vulnerability Indices

---

## Analysis and Recommendations

United Nations Network of Economic Statisticians  
Fifth Beyond GDP Sprint Meeting

Session 2 - Multidimensional Dashboards Approaches

Laurent Wagner  
May, 5th 2022

# The case for a new MVI

- The current architecture of access to concessional finance relies excessively on GNI per capita as the main criterion for eligibility.
- Many countries notably Small island developing states (SIDS) are much more vulnerable than their income level would suggest and the use of GNI per capita for eligibility purposes or as the only proxy for concessional finance hides a very large heterogeneity in terms of structural vulnerability between countries.
- **There is a strong case to be made to allow the most vulnerable countries in the world to access concessional finance** and other facilities notably related to debt as well as to allocate more resources to those vulnerable countries.
- Specifically targeting vulnerability for risk prevention is crucial to building long-term resilience in the face of major challenges.

# The purpose of the MVI

- The most vulnerable countries should be given a special treatment and the call for an MVI underlines this fact.
  - **The MVI should be seen as a tool fitting a specific purpose.**
  - The main purpose of the MVI is to help vulnerable countries get easier access to concessional finance (GNI+) or debt relief initiatives. There are also several other key uses
  - This purpose is the reason why certain criteria are necessary.
  - This purpose also makes it critical for the MVI to be based on a clear and coherent framework that represents a broad consensus on vulnerability.
- **This is not just a technical process, it is also a political one.**

# The approach of the report

- In December 2020, following the General Assembly Resolution A/RES/75/215 requesting the Secretary-General to provide recommendations for the development of a multidimensional vulnerability index relevant to SIDS, a report was prepared by OHRLLS, entitled "*Possible Development and Uses of Multi-Dimensional Vulnerability Indices. Analysis and Recommendations*".
- The report is based on an extensive round of consultations as well as an in-depth review of the various existing indices and academic literature on vulnerability indices.
- The report contains a set of guiding principles for the development of an MVI, endorsed in the Report of Secretary General (A/76/211).

# Some background

- The vulnerability of countries has been recognized since the beginning of development economics as a major challenge.
- The initial focus was on **vulnerability to exogenous trade shocks**.
- Growing concerns in recent decades with the increasing consequences of other types of shocks and global challenges (covid-19, climate change, War in Ukraine, etc.).
- SIDS, traditionally vulnerable to trade shocks, are presently particularly vulnerable to climate change.
- The UN General Assembly has repeatedly underlined this vulnerability of SIDS and called both for an appropriate measurement of vulnerability and for international action to tackle vulnerability.
- Vulnerability is related to exogenous shocks, and even if it considered as a structural handicap to sustainable development, **all development handicaps cannot be considered as “vulnerability” and the MVI shouldn’t be a general index reflecting development (or structural development limitations)**.

# Key definitions

- This report, while acknowledging differences in existing frameworks and definitions of key concepts, follows the definition of vulnerability used by the UNCDP, as its theoretical foundation corresponds to a common understanding among economists and is shared by most of the vulnerability indicators.
- Vulnerability is defined as **the risk for an economy to be harmed by exogenous shocks**.
- Vulnerability indices are mainly composed of three types of factors reflecting:
  1. the structural exposure of the economy to such shocks.
  2. the size of past shocks, the recurrence of which (reflecting volatility) implies higher vulnerabilities.
  3. the (lack of) capacity to cope with the shocks, including the capacity to adapt, or resilience.

# Guiding principles for the development of an MVI

1. The MVI must be ***multidimensional***
2. The MVI must be ***universal***
3. The MVI must be ***separable*** in its components
4. The MVI must be based on ***available and reliable data***
5. The MVI must be ***readable and transparent***
6. The MVI must be ***acceptable within the UN system and beyond***

# 1. The MVI must be multidimensional

- **Three essential dimensions corresponding to the three dimensions of sustainable development: economic, environmental and social.**
- The three dimensions and their perimeters should be clearly defined and redundancy among components should be avoided.
- At the same time, the indicators should reflect the specific vulnerability of each country and aggregating the three dimensions should allow for limited substitutability.
- For each of the three dimensions of vulnerability, the index should aim at capturing both the exposure to exogenous shocks and the likelihood of their occurrence.
- The index should take resilience into account to allow for a better understanding of the structural handicaps faced by developing countries, and also to better capture the vulnerability of population to exogenous shocks and not only their economic impacts.



## 2. The MVI must be universal

- **The MVI should reflect the vulnerability of all categories and groups of developing countries**, even if it is designed at the request of and for SIDS.
- There are two major reasons for this:
  1. It is not possible to show how vulnerable SIDS are if there is no way to fairly compare them with other countries. In other words, to be useful to SIDS, the index must not be specific to these countries.
  2. if the indicator is to be used to allocate concessional funds, it must be able to equitably capture the various kinds of vulnerability faced by developing countries, regardless of their geographical location and characteristics.
- The MVI should avoid as much as possible narrow concepts reflecting the specificity of SIDS (i.e. Tourism receipts over GDP) but rather look for common factors (*i.e* concentration of exports of goods AND services).
- Similarly, this balance should be clearly reflected in every dimensions (*i.e.* sea-level rise vs increasing aridity).

### 3. The MVI must be separable

- Namely between factors that are structural or independent from the current policies and factors dependent on current policies.
- **Vulnerability is said “structural” when it results from factors beyond the present control of the countries’ governments.**
- It may reflect the long lasting consequences of past policy choices that the present authorities have inherited and cannot be reversed or altered in the short-term, or rather the inherent features causing the occurrence of shocks rather than its manifestations or consequences.
- This requirement of separability is essential if the indicator is to be used by donors to allocate concessional resources between countries, or even to give access to concessional funds (eligibility) as Moral Hazard is a central concern.
- When the vulnerability of countries is independent of their current policies, and constitutes a structural handicap to their development, it provides a justification for special support from international community, in order to make development opportunities between countries more equal.

## 4. The MVI must be based on available and reliable data

- With regard to the universality criterion the need for available and reliable data covers all developing countries.
- This may raise a difficulty particularly in the case of small and very poor countries.
- It is also difficult to assess the reliability of the statistics collected.
- It may lead to give up a relevant component which relies on a poor statistical basis and/or coverage.
- This possible trade-off has been often considered by the CDP, precisely because the EVI was to be used (as well as the Human Asset Index (HAI)) for the inclusion and graduation of LDCs.
- **Data quality and availability is a strong limiting factor for vulnerability indices.**

# 5. The MVI must be readable and transparent

- **The financial implications of its use require simplicity and transparency.**
- The transparency should first be the result of a clear conceptual framework where the dimensions are well defined.
- However, it is also key that the MVI remains simple despite the heterogeneity of vulnerability profiles.
- It is not the objective of the MVI to reflect the precise vulnerability profile of each individual country or the vulnerability of a specific population to a specific hazard. Already existing indices, notably in the DRR/DRM world, are providing this kind of information.
- The MVI must reflect the extent of countries structural vulnerability in a clear and simple way to be of use. It has to come down to one comparable number, likely to be considered above or below a threshold value.
- The MVI should focus on factors that contribute meaningfully to the index (in a statistical sense) while avoiding redundancies and high correlations among components.

## 6. The MVI must be acceptable

- In welcoming the Secretary General's recommendations, the General Assembly decided to establish a representative high-level panel of experts to carry forward the work to finalize the MVI by December 2022.
- Accordingly, the President of the General Assembly has appointed a 12-member High Level Panel, Chaired by H.E Prime Minister Gaston Browne of Antigua & Barbuda and H.E. former Prime Minister Erna Solberg of Norway. The Panel, appointed in February, began its work in March 2022.
- For the MVI to be broadly accepted and used, **the work of the High-Level Panel on the MVI will be critical.**
- Panelists will have to agree on the definition and scope of each component or sub-component of the MVI to formalize its theoretical framework.
- Panelists will also have to selected the most appropriate combination of variables reflecting those definitions based on the best available data.
- Panelists will also have to agree on the statistical specificities of the MVI.
- Considerations will also be given to how to promote the use of the MVI by the international financial institutions.

Thank you for your attention