

Strengthening Social Protection for Pandemic Responses: Identifying the Vulnerable, Aiding Recovery and Building Resilience

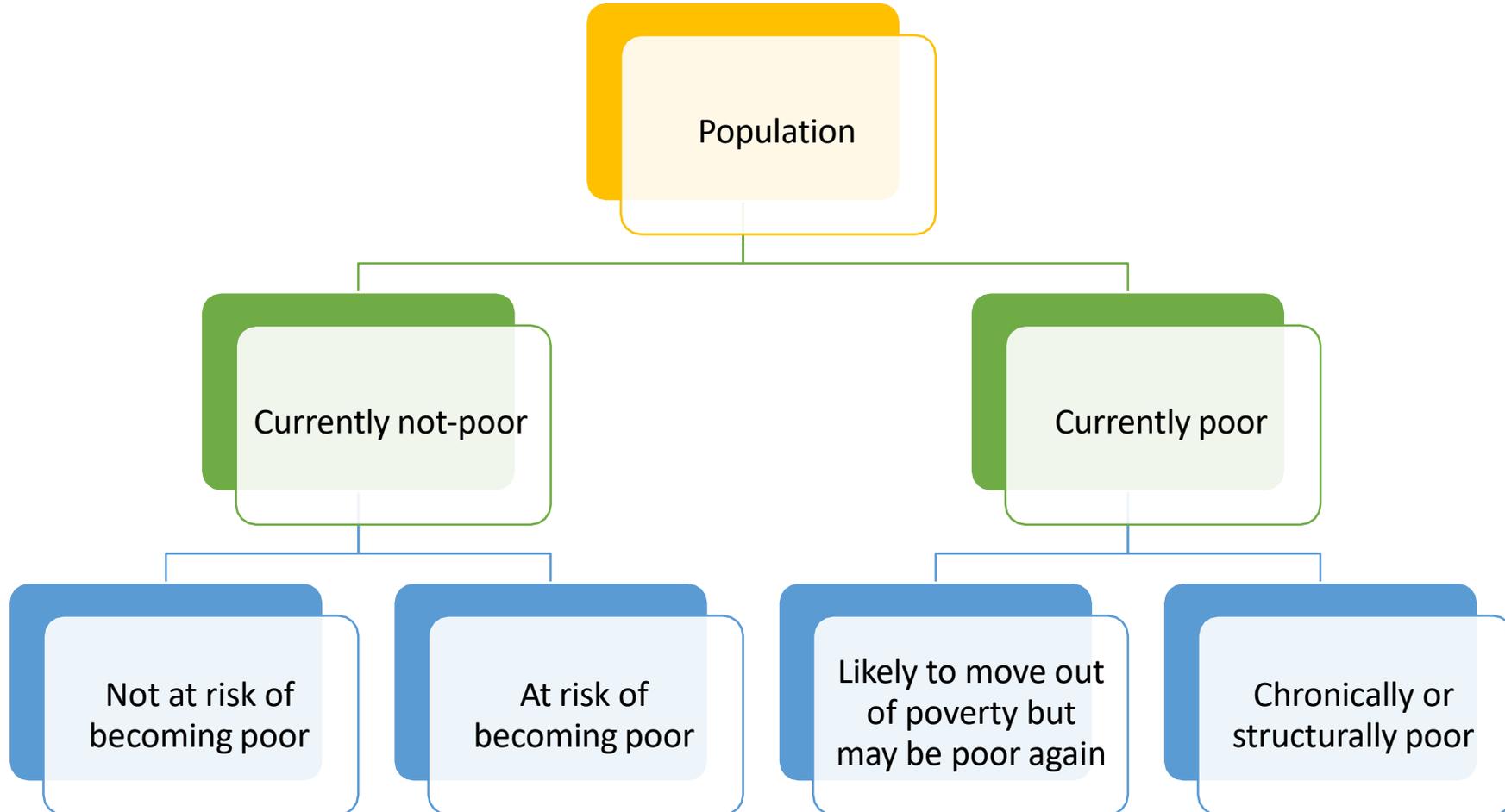
Objectives

- Build a **multidimensional vulnerability to poverty index (MVPI)** for African countries to assess the extent of vulnerability to poverty in the midst of the pandemic.
- A conceptual framework is developed in designing a risk and vulnerability index
- Two methodological approaches are used to estimate the MVPI for Africa
- The index is also tested on selected countries in this case Nigeriatao assess multidimensional vulnerability to poverty

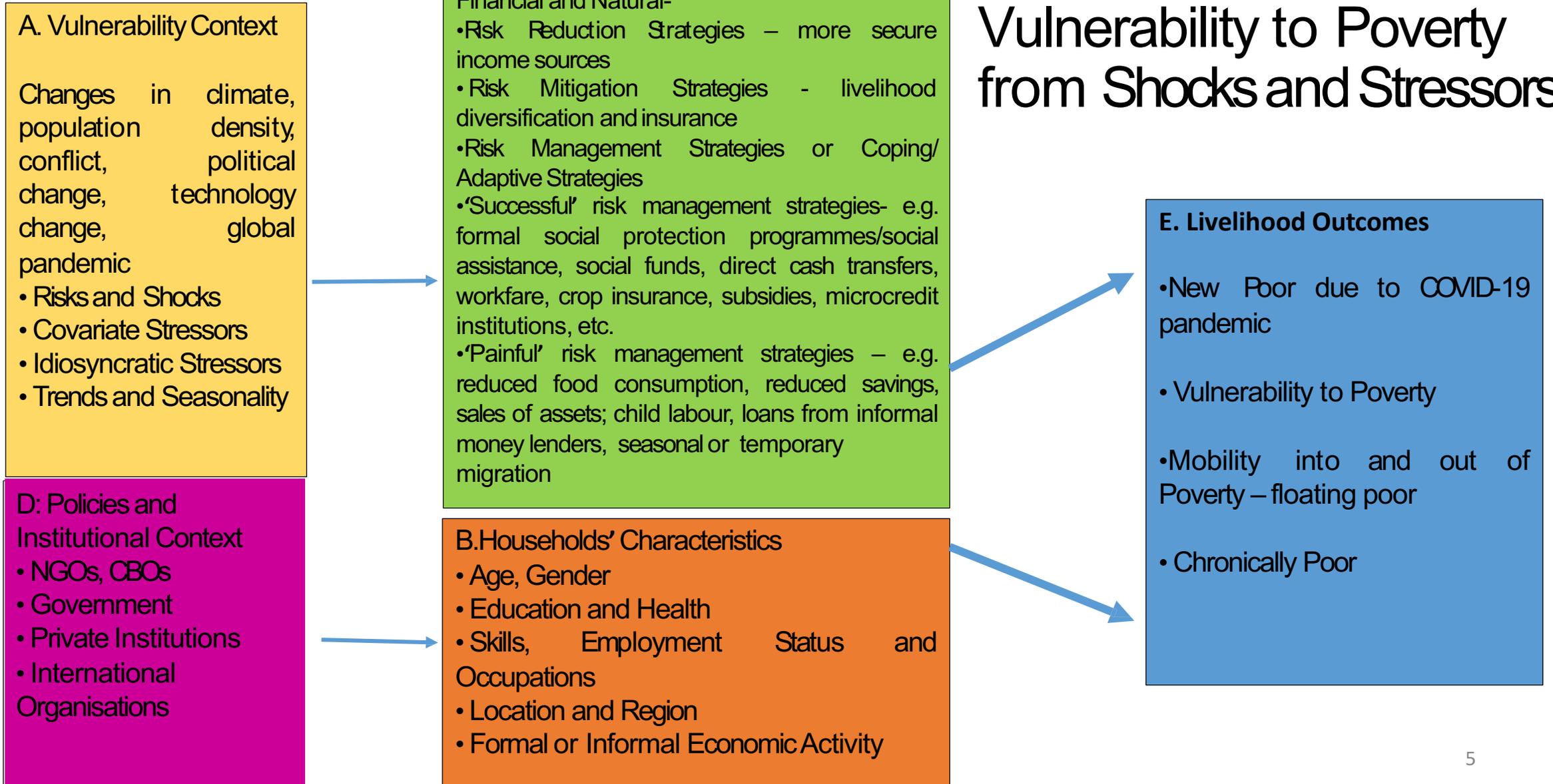
Rationale of the MVPI

- Create an index of overall vulnerability from a suite of indicators.
- The MVPI helps in capturing the complexity in measuring risk and vulnerability to poverty by combining multiple dimensions in one index.
- Depict the higher vulnerability to poverty of some countries compared to others in the context of the pandemic
- Enable a better comparison across countries and as such allow for an international ranking
- To design relevant policy options in different areas

Vulnerability to Poverty

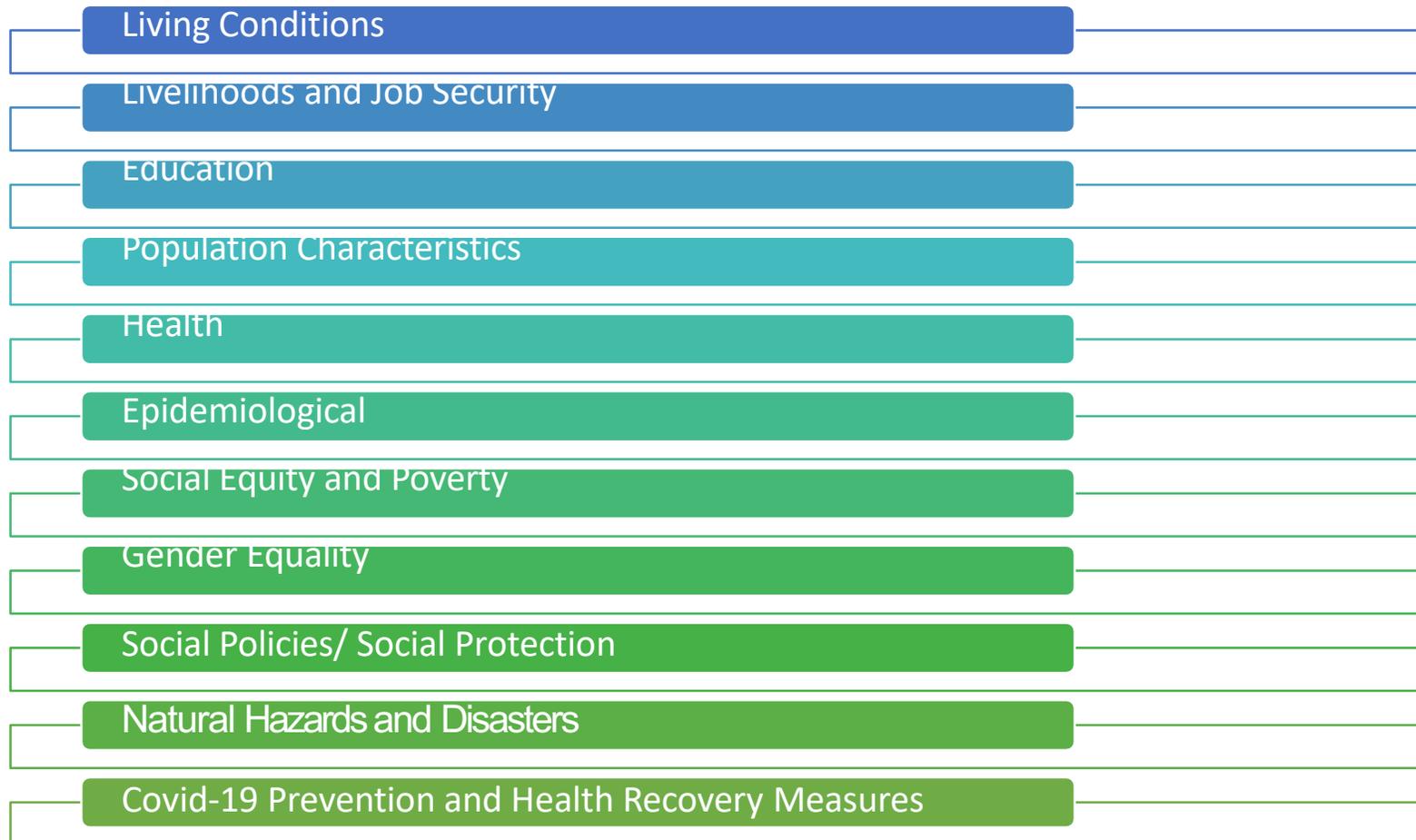


Conceptual Framework on Vulnerability to Poverty from Shocks and Stressors



Methodology: Measuring Risks and Vulnerability to Poverty

- The quantitative approach- construct a vulnerability index based on specific sets or combinations of indicators. MVPI is proposed based on 11 dimensions



Methodology: Measuring Risks and Vulnerability to Poverty

- Two different weighting methods are proposed :
- **The Arithmetic Mean (with equal weights):** The normalised indicators are used to compute the composite sub-indices by using equal weights. The sub-indices are then computed into the MVPI via arithmetic mean - equal weights to the 10 dimensions.

$$MVPI = \frac{LC + LJS + E + PC + H + EC + SEP + GE + SP + NHD}{10}$$

where LC - livelihood conditions, LJS - livelihoods and Job Security, E - Education, PC – Population Characteristics, H - Health, EC - Epidemiological Characteristics, SEP-Social Equity and Poverty, GE- Gender Equality, SP – Social Protection and NHD - Natural Hazards and Disasters.

- **The Principal Component Analysis (PCA):** Different Weights assigned to the varied dimensions

Data and Data Limitations

- Data for 54 African countries from 1990 to 2020.
- Data retrieved from different sources with the main database used being the World Development Indicators (2020), followed by the Demographic Health Surveys (DHS), Living Standards Measurement Study (LSMS) and the Multiple Indicator Cluster Surveys (MICS).
- Data from the Emergency Events Database - Université Catholique de Louvain (UCL) - CRED, D. Guha-Sapir (EM-DAT) is also used.
- Missing data on the different dimensions for different countries and years

MVPI Categories for Africa

- MVPI categories are used as a system of fixed cutoff points for the 11 dimensions of the MVPI.
- The cut-off points (COP) are the MVPI values calculated using the quartiles (q) from the distributions of the sub-indices averaged over 1990 to 2020.

$$COP_q = \frac{1}{11} (LC_q + F_q + E_q + R_q + H_q + EC_q + SP_q + GE_q + S_q + ND_q)$$

where q = 1,2,3.

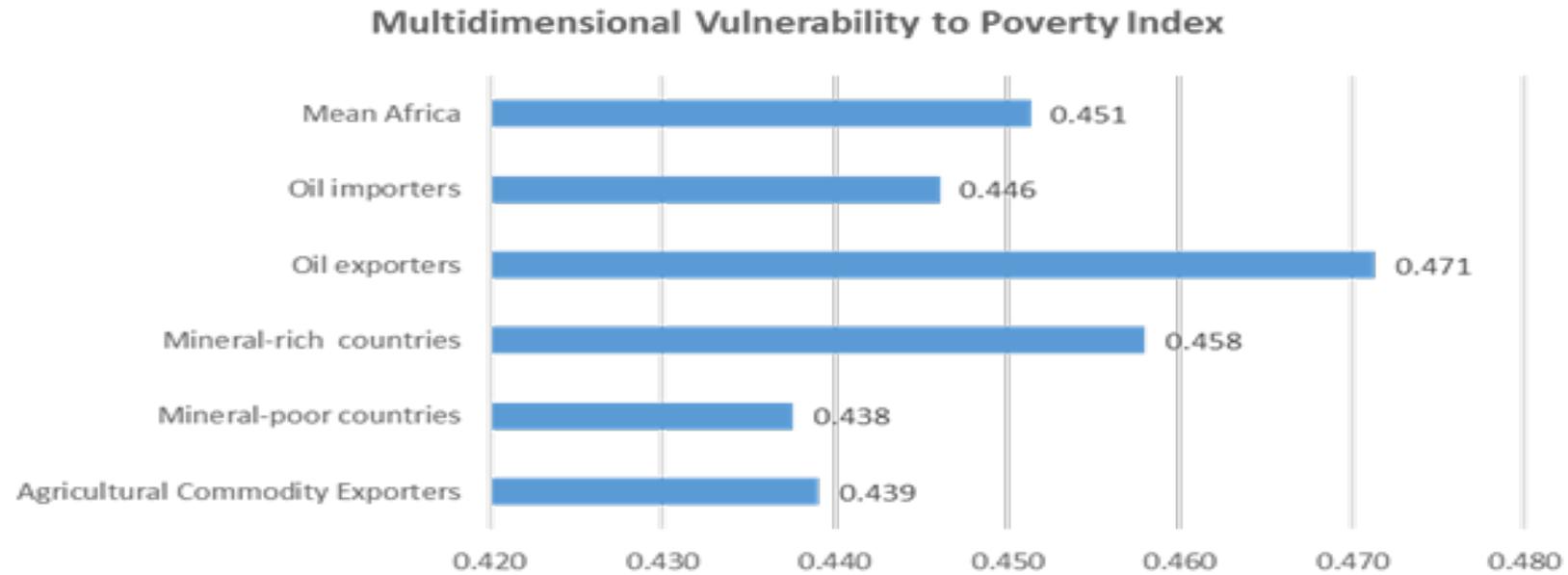
- e.g. LC₁, LC₂ and LC₃ represent three quartiles of the distribution of living conditions across

African countries.

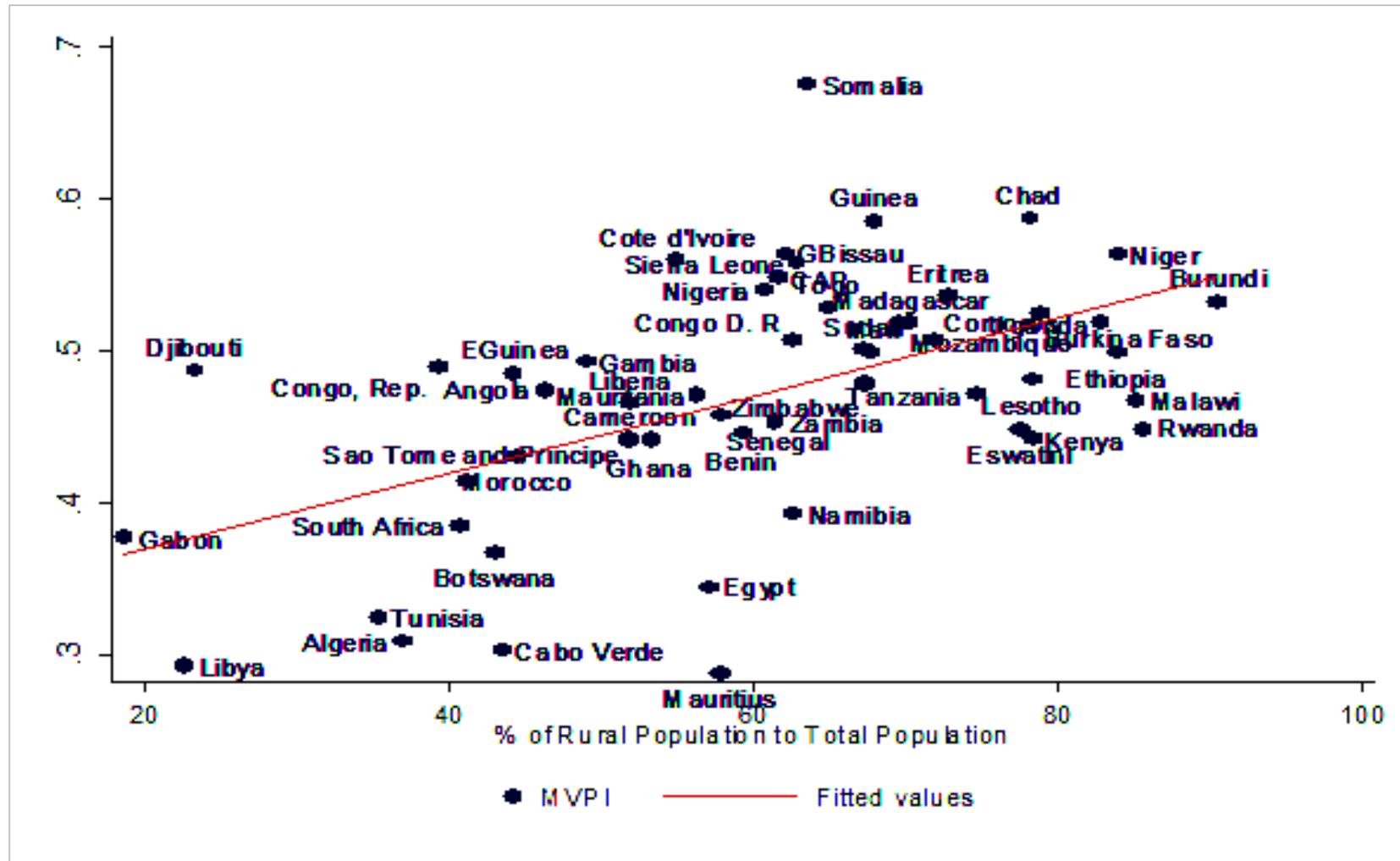
MVPI Levels	Cut-Off Points
Low MVPI	Below 0.455
Medium MVPI	0.456 -0.575
High MVPI	0.576 and above

Some Results

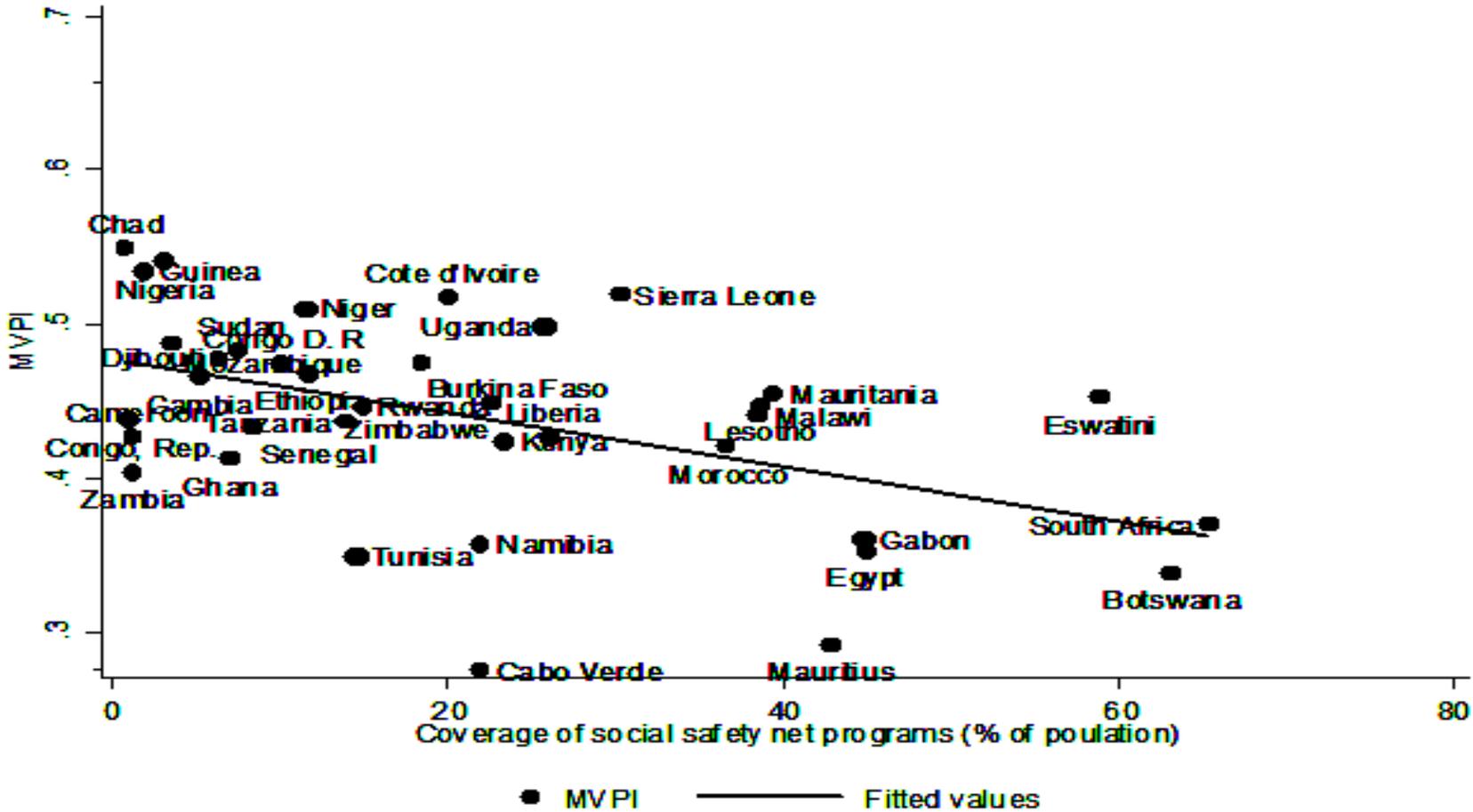
MVPI across Economic groupings in Africa



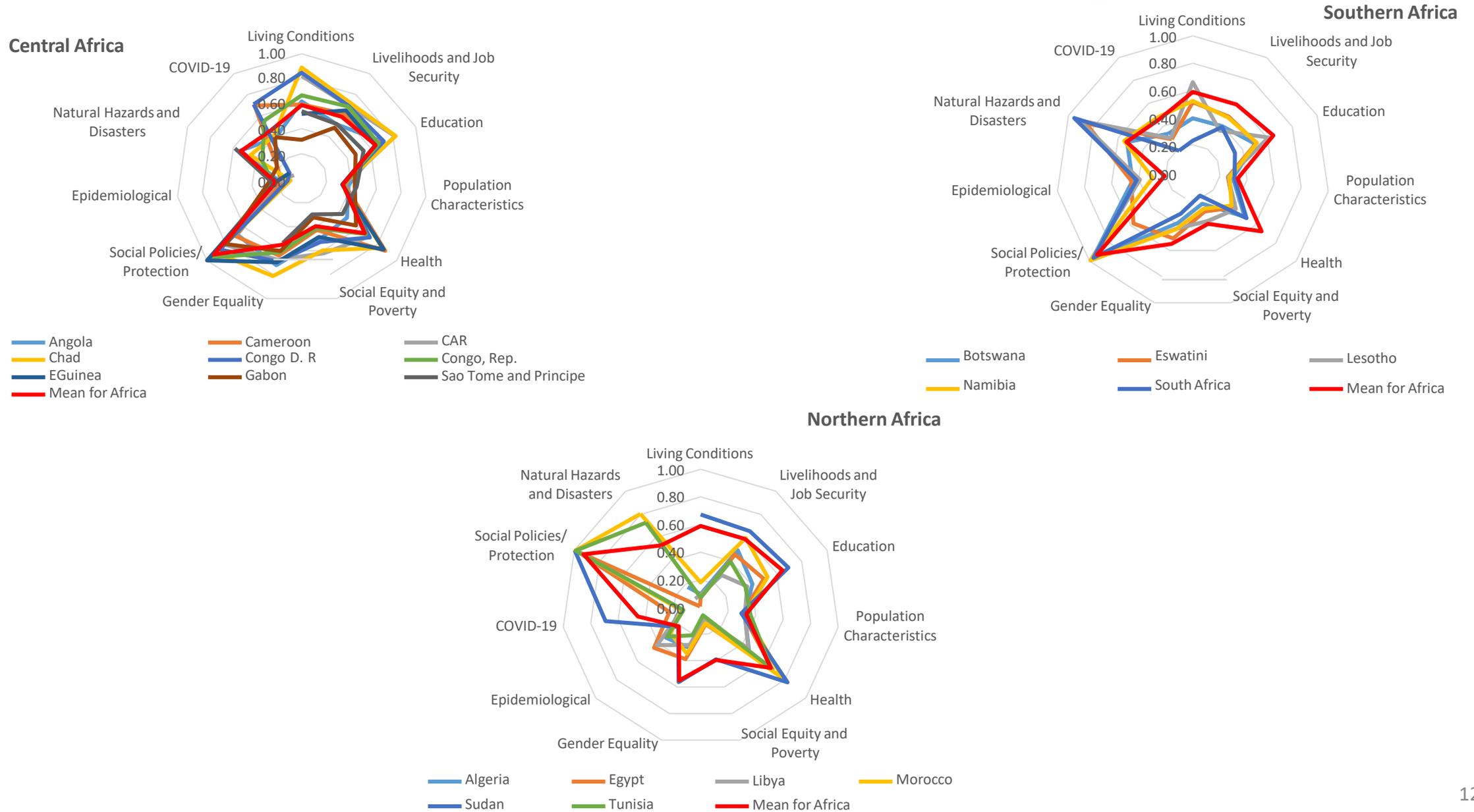
MVPI across urban and rural areas



Social protection and MVPI

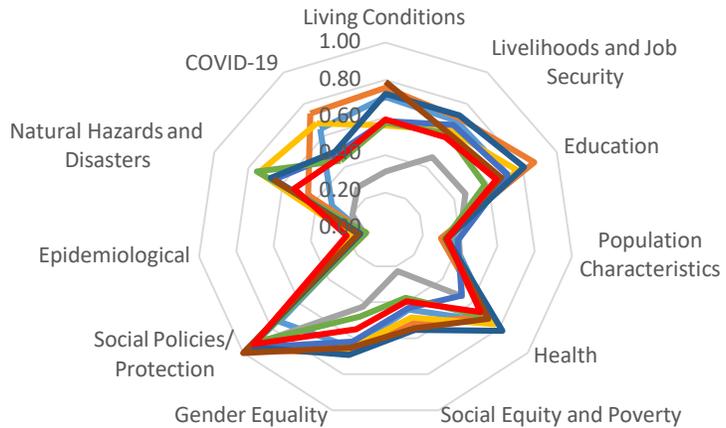


MVPI Compared Dimensions across Regions in Africa



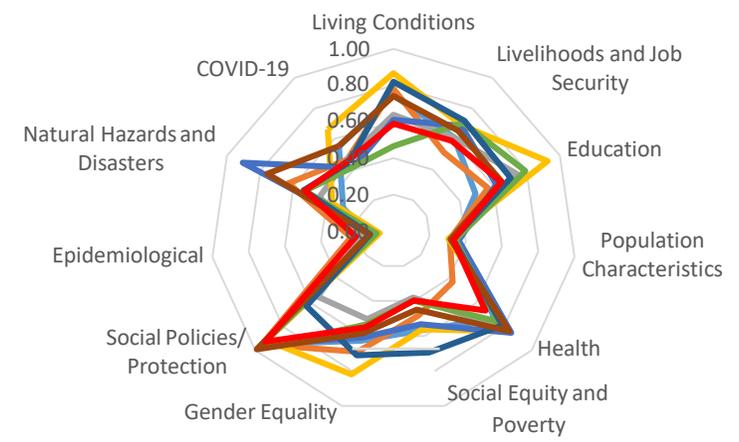
MVPI Compared Dimensions across Regions in Africa

Western Africa - First Set of Countries



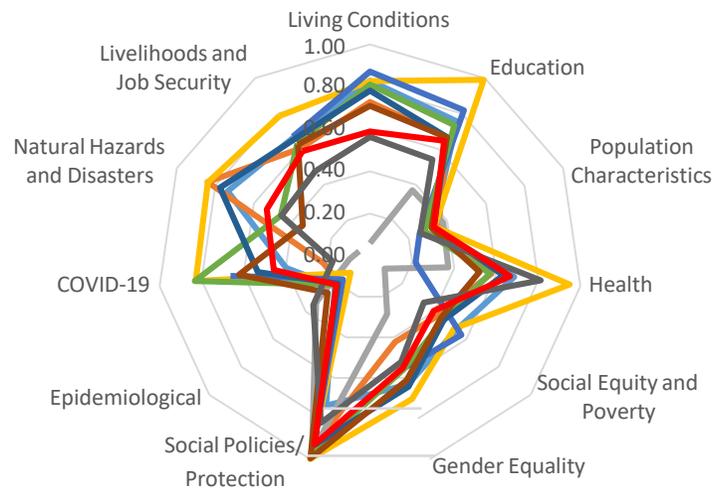
- Benin
- Burkina Faso
- Cabo Verde
- Cote d'Ivoire
- Gambia
- Ghana
- Guinea
- GBissau
- Mean for Africa

Western African -Second Set of Countries



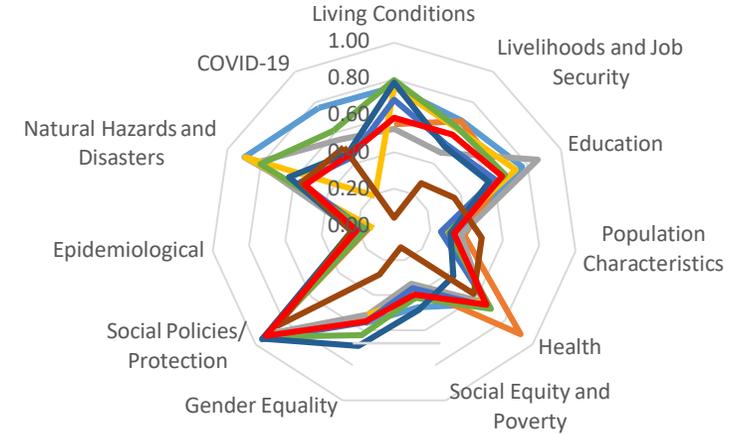
- Liberia
- Malawi
- Mauritania
- Niger
- Nigeria
- Senegal
- Sierra Leone
- Togo
- Mean for Africa

Eastern Africa - Second Set of Countries



- Mozambique
- Rwanda
- Seychelles
- Somalia
- South Sudan
- Tanzania
- Uganda
- Zambia
- Zimbabwe
- Mean for Africa

Eastern Africa- First Set of Countries



- Burundi
- Comoros
- Djibouti
- Eritrea
- Kenya
- Madagascar
- Malawi
- Mauritius
- Mean for Africa

MVPI Categories for Africa

- Countries in the high MVPI group, have high sub-indices across most dimensions.
- **Social policies and protection, health, education as well as living conditions and livelihoods and job security dimensions** (5 sub-indices) seem to drive vulnerability across African nations.
- This set of **5 core pillars** can further be extended to include the natural hazards and disasters sub-index, making a total of 6 most potential factors leading to greater vulnerability across African countries.
- Almost all countries within the low MVPI category have a high epidemiological sub-index.

Policy considerations

- The granular data by sub-region provides for better targeted policy interventions and indicates common policies at sub-regional level.
- The analysis of dimensions that lead to vulnerability of falling into poverty and therefore an ex-ante analysis is an important component of poverty reduction
- Poverty reduction strategies require also hedging against risks of transient poverty and differ by sub-region and country
- Social protection programmes need to be enhanced but form part of an overall idea of smart social investments. also

Thank You