KUEHNE FOUNDATION

HELP LOGISTICS

Country Logistics Resilience Indicators

BACKGROUND

Organisations today face a multitude of increasing operational and environmental risks that can result in supply chain disruptions, as highlighted by the COVID-19 pandemic.

Considering the high stakes involved in the humanitarian and development context, there is a clear need to ensure that commodities such as food and medicines can be quickly delivered to people in need in spite of risks and disruptions.

The path towards more flexible and resilient supply networks[1] is usually embedded in wider risk management and preparedness strategies and starts with screening for potential risks and understanding which vulnerabilities are most critical in a given context.

Before conducting a more time-consuming, detailed assessment of organisation- and supply chain-specific risks, organisations can benefit greatly from understanding their operating environment and the contextual factors that drive performance and make them susceptible to disruptions.

We use a combination of 26 indicators[2] across five dimensions to help our partners identify context-specific vulnerabilities, some of which are logistics-specific (transport infrastructure, logistics performance) and others that are directly or indirectly linked to the vulnerability and resilience of supply networks in a given country.

HOW TO USE THE TOOL

The indicator data set can be explored through four dashboards that allow selecting and comparing countries of interest. All scores are normalised on a 0-100 scale, with equal weightings for each indicator. Low scores, particularly in comparison to regional and global averages, can point to vulnerabilities for supply networks operating in the country. The indicators can be a useful tool for humanitarian organisations that manage and operate supply chains, for development actors, for government agencies and for academia.

[1] Supply chain resilience is the ability or capacity to anticipate, absorb, accommodate, and recover from the effects of a disruptive event, in a timely and efficient manner.

[2] Indicators measured and published by World Bank, FAO, the World Economic Forum, UNCTAD, IMF, and the Economist Intelligence Unit.

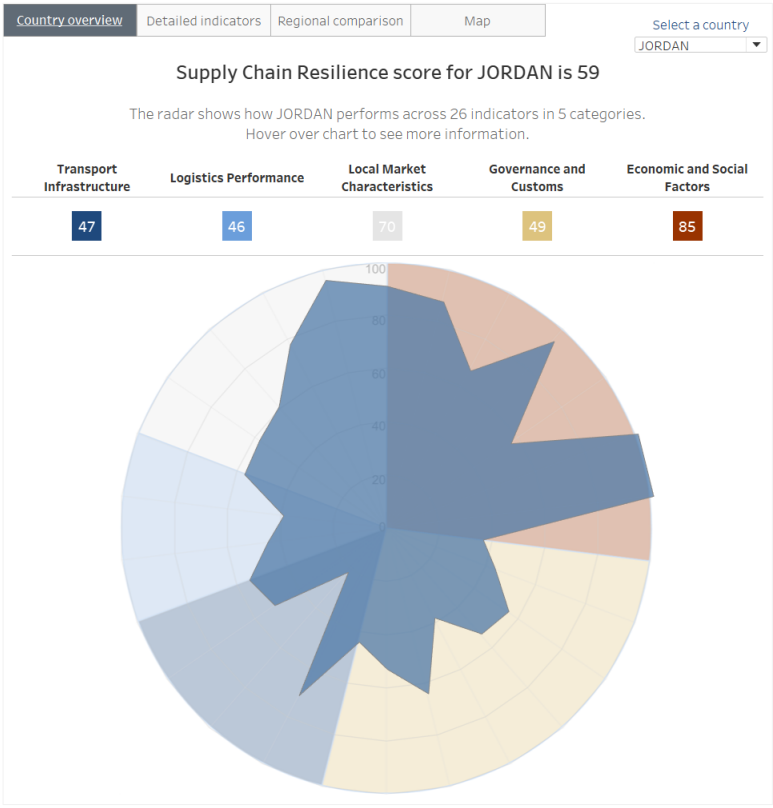
The first dashboard (*country overview*) can be used as an entry point to explore the data and identify the overall country score as well as strong and weak scores for indicators across five dimensions. The "select country" tool can be used to jump between countries.

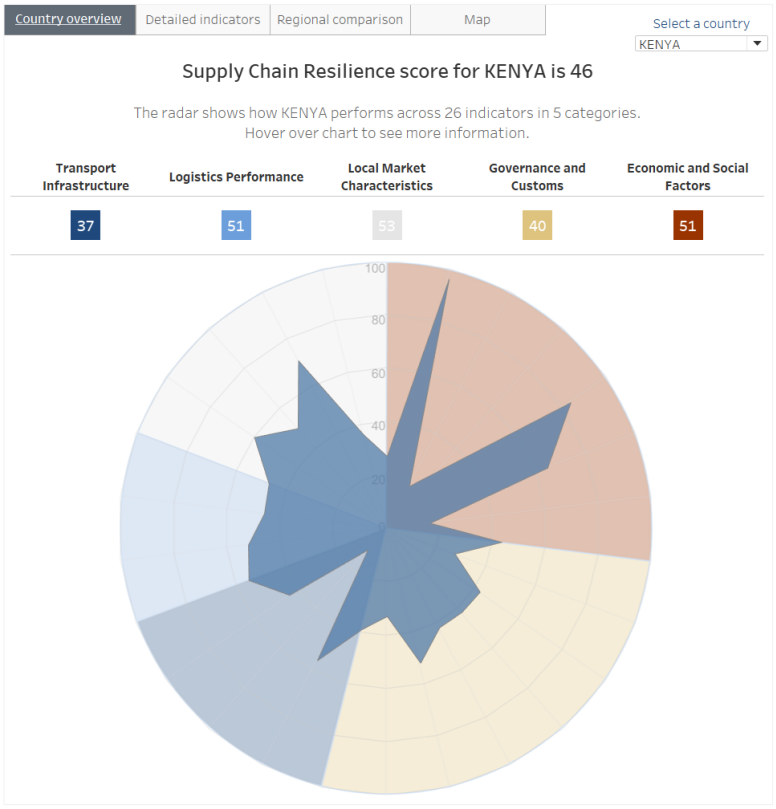
In the radar chart, each point of the polygon represents an indicator with a score between 0 (centre of the radar) and 100 (outer edge of the radar). Hovering over the point will show more information about the particular indicator. Higher scores indicate less vulnerability and higher potential resilience of a supply chain operating in the country.

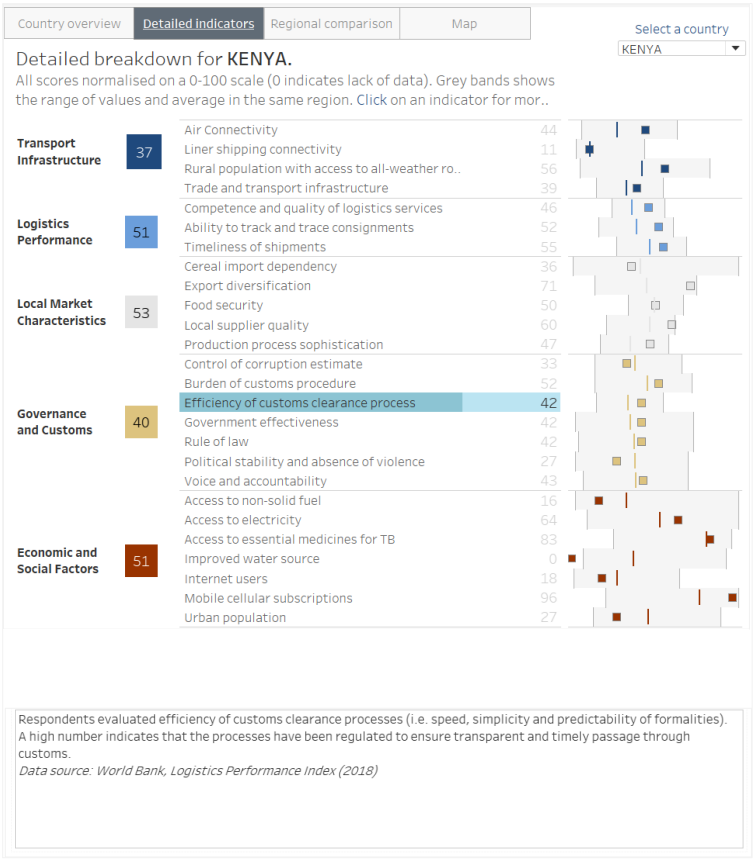
The example on this page shows the charts for Jordan and Kenya. The radar for Jordan suggests that *Local Markets* function well and *Economic and Social Factors* create a favourable environment. However, scores for *Logistics Performance* and *Transport Infrastructure* appear to be mediocre. A different picture emerges for Kenya, which shows comparatively low scores overall and for *Local Markets* and *Economic and Social factors* in particular.

Which of the dimensions and indicators are relevant depends on the context. An organisation might solely procure internationally, in which case a low score for *Local Market Characteristics* would not point at potential supply disruptions. However, efficient *Governance and Customs* processes would be very relevant for the same organisation, as might *Economic and Social factors*.

Deciding which scores are relevant in a certain context and which ones aren't requires better understanding of the indicators.



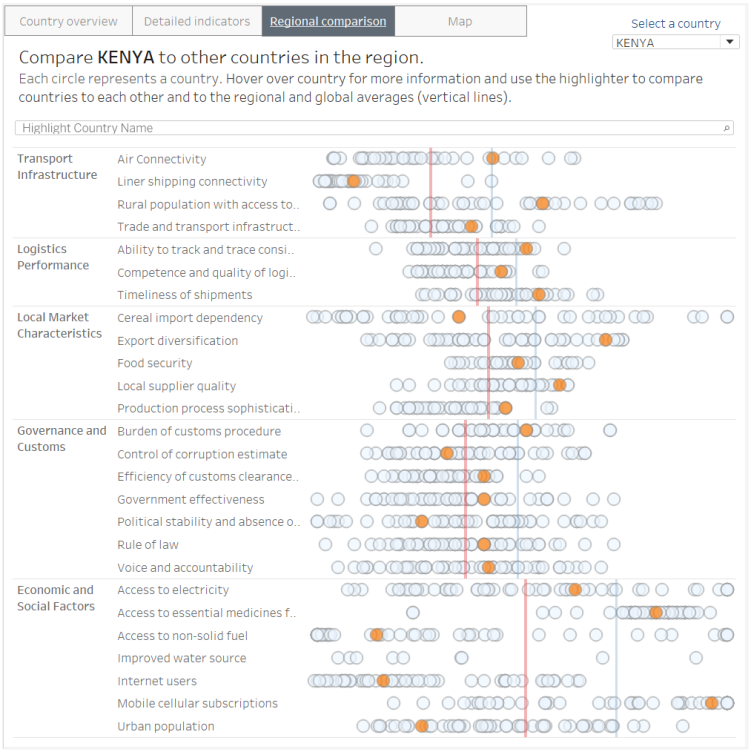




The second dashboard (*detailed indicators*, see left) presents each indicator in more detail and helps understand its implication on the vulnerability and resilience of supply networks operating in the country. Clicking on an indicator shows its definition, data source and explanation as to why it could be relevant.

For example, the *efficiency and burden of customs procedures* are measured by the World Bank and are relevant for supply chains that import or export goods. Efficient customs processes can decrease the likelihood and impact of disruptions in the form of delays by ensuring predictable and timely passage of goods.

The chart also compares the score for an indicator (small square) to the range of scores (grey bands) and the average in the region. This is helpful to determine whether a score is high or low in absolute and in relative terms.



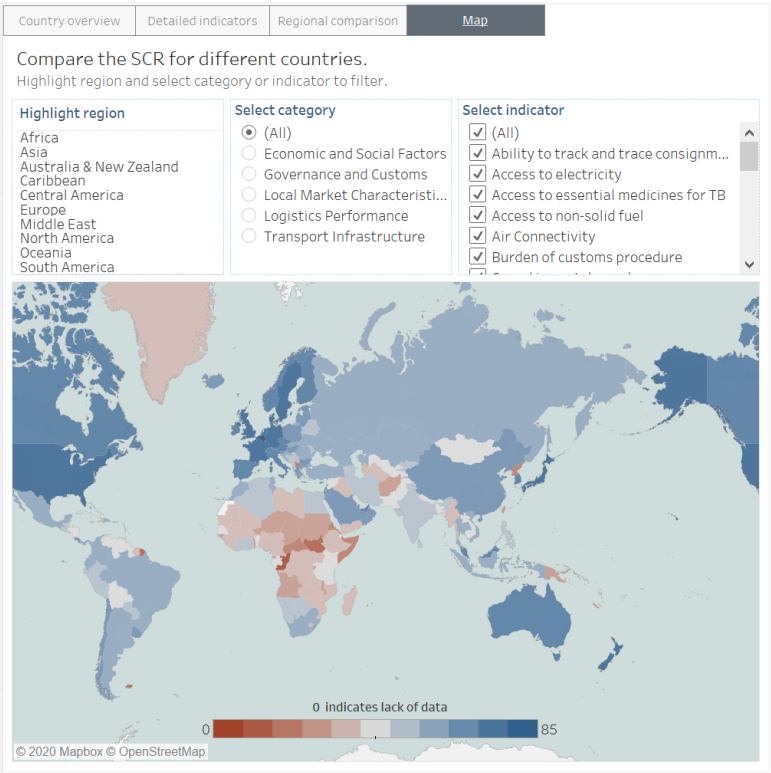
To further assist with contextualising the scores for each indicator, the third chart (*regional comparison*, left) expands the grey bands of the previous chart and allows a comparison between two or more countries in the same region. The orange circles represent the selected country (Kenya in the example) and each of the other circles represents a country in the same region.

The red and blue lines indicate the regional and global averages for each category. Scores well below the regional and global averages can point at particular vulnerabilities of a country in comparison to its peers.

The last dashboard shows a map that allows a comparison of indicators for different regions and countries. Clicking on a region shows and highlights the relevant part of the map.

By default, the map shows an average score of all indicators for each country (hovering over a country reveals its score). This can be customised by selecting one of the five categories, or by selecting and deselecting individual indicators.

The legend shows the range of values for the selected region and indicators. Not every indicator is measured for all countries (e.g. food security) and the lack of data is indicated by a score of zero.



ABOUT THE TOOL

This tool was originally developed in 2017 by WFP and supported by Kuehne Logistics University as part of the DFID-funded 'Ready to Respond' initiative with the objective to improve supply chain resilience and disaster preparedness. The tool consists of two components: the indicator tool shown here, which was originally Excel-based, and a System Dynamics model that allows quantifying bottlenecks, identifying gaps and prioritising investments for specific supply chains.

HELP Logistics uses a holistic approach that uses both tools to guide our partners through the transformation of their supply chains for better resilience, efficiency and sustainability.

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