

John Fernández: Dematerializing multiple worlds

While some discussions about *dematerialization* elicit broad and multifaceted definitions of that term, this short essay adopts the conservative meaning of achieving a desired outcome with less material. Strategies to achieve that outcome are varied but for our purposes here, they should all lead to a reduction in the overall consumption of materials by society.

The Global Footprint Network claims we are already annually consuming more than our world can produce. This “overshoot” is cited as evidence that dematerialization is not just an important option for the future but also a critical need for the survival of the human species. In essence, we will need to dematerialize our currently unsustainable consumption of more than one world down to a goal of one, or less than one world for a population that will be expanding by at least two billion people in the coming decades.

We are also dematerializing multiple worlds in the sense that dematerialization in the developed north presents very different challenges from that of dematerialization in the less developed and less affluent global south. The 1st Holcim Roundtable for Sustainable Construction “De-Materialize Construction” settled on this question several times. Dematerialization under diverse conditions requires a diversity of goals and measures. How does one measure an appropriate and humane effort to dematerialize within a resource-constrained context? How does one attempt to reduce resource consumption on a per capita basis when access to water, sanitation, education, employment and health services has not reached acceptable levels for billions of people worldwide?

These issues surfaced during conversations at the Roundtable enough to prompt the thought that the *context* for dematerialization is one of the most important aspects of this effort toward sustainability.

If this is the case, then how much do we know about the context that we wish to influence? In addition, do we know how much material and what kinds of materials will be required to serve large scale and historically unprecedented demographic and societal shifts including urbanization? In some regions, especially developed regions, we know a great deal even at a sector-by-sector basis. However, in most regions and especially those in developing and rapidly urbanizing parts of the world we know very little.

Therefore, an initial step in ascertaining the future of urban resource needs is accounting for the current resource extraction and consumption on all continents, in every country and attributable to specific cities. We have begun to understand these material flows in the developed north but have a long way to go in understanding the same in the critical regions of the global south poised to experience the greatest urban expansion in human history. Once we understand the current state of material consumption we can begin the process of projecting resource needs for our future world and decide in what sense and how should we dematerialize.

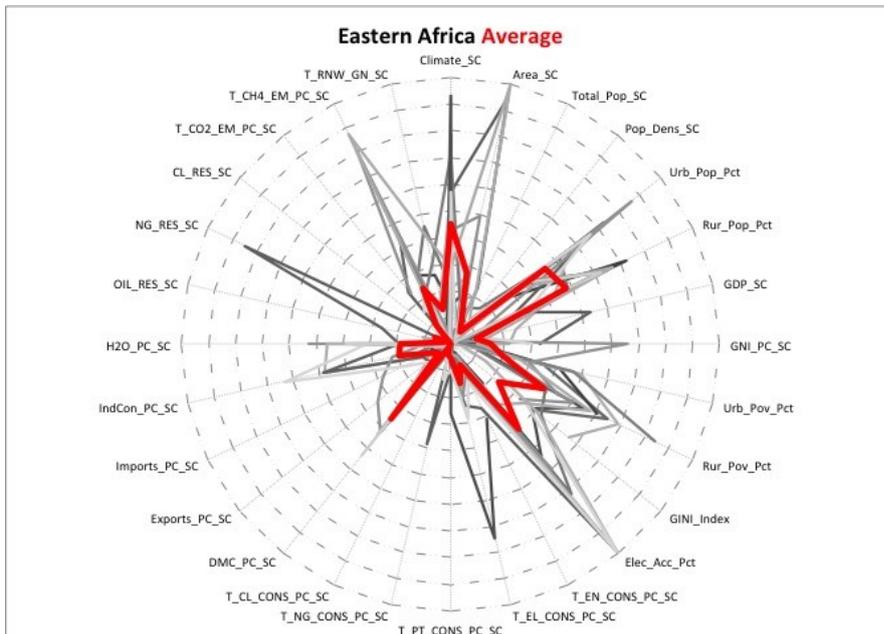


Diagram illustrating the resource consumption of several eastern African countries.