Building a Metaframework for Sustainable Transport Indicators: Review of Selected Contributions

Several recent papers presented at the annual meeting of the Transportation Research Board, Washington, D.C., and elsewhere have reported on efforts to make sustainability manageable. To this end, the papers suggested the use of indicators and performance measures to help conceptualize and operationalize sustainability for transportation-related planning and decision making. Often these studies presented frameworks that would allow sustainability indicators and measures to be included in, for example, agency strategies and practices. Moreover, some papers suggested criteria for the selection of individual indicators and performance measures. The studies, however, did not always agree on the definition of a framework or how to use one to make sustainability-based decisions, and they tended to differ on underscored aspects and concerns. The current study addressed the issue of frameworks more generically and explored what was termed a "metaframework" with a set of associated criteria to guide the framing of indicators for sustainable transportation. On the basis of an explicit framework theory, the three functions of conceptualization, operationalization, and utilization were found to provide a logical structure of complementary features with which to build indicator frameworks. Characteristics of robust indicator frameworks were evaluated in terms of their significance for the three key functions, and they were collected in a list of criteria. A review of the Brundtland Report provided an example of how a more finely grained understanding of sustainability can inform the conceptualization criterion ranking of sustainability impacts. The metaframework was intended primarily as a basis for empirical analysis and for meta evaluation of existing practice frameworks with respect to the strength of the level of sustainability that they are likely to provide.
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