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SCIENCE + ETHICS = CONTEXT

Science-based metrics, while very useful, do not paint the full picture of how sustainable individual organisations are. Context-based metrics do. It's helpful to know the difference, as Mark W. McElroy explains.

As the importance of sustainability measurement and reporting grows, it's helpful to clarify the distinction between so-called science and context-based metrics.

These terms are not synonymous, although they do overlap. More importantly, science-based thinking is by no means adequate for setting goals or measuring performance in an individual organisation's sustainability – necessary, perhaps, but still inadequate.

THRESHOLDS AND ALLOCATIONS

To really understand that distinction you need to start by understanding the difference between thresholds and allocations.

A threshold is a limit in the carrying capacity of a resource, which can either be an upper limit or a lower limit.

So a threshold of water in a watershed, for example, is an upper limit that should not be crossed. By contrast, a liveable wage threshold is a lower limit that should at least be met. Both thresholds must be respected if society's impacts on water and wages are to be sustainable.

↑ Science-Based Goals/Metrics
 These are grounded in scientific or factual knowledge of the world's vital resources and how human activities can and/or should affect them. But they do not fully reflect a fair and proportionate share of the burdens to abide by them.

↑ Ethics-Based Goals/Metrics
 These are grounded in moral or ethical rather than scientific knowledge of vital natural resources and how human activities can and/or should affect them. But, again, they do not fully reflect fair or organisation-specific allocations of the burdens to abide by them.

← Context-Based Goals/Metrics
 These are science- and morality-based goals or metrics that fully reflect fair and organisation-specific allocations of the burdens to maintain or produce vital resources at levels required to ensure stakeholder wellbeing. Context-based environmental metrics developed by the Center for Sustainable Organizations and the MultiCapital Scorecard developed by Thomas & McElroy make it possible to set goals and measure performance in fair and organisation-specific ways. Companies using such tools include Biogen Idec, Ben & Jerry's, New Chapter, Agri-Mark, EMC, Autodesk, BT and Lockheed Martin.

Allocations, by contrast, are fair, just and proportionate shares of the burdens required to abide by thresholds and which are assigned to individual actors, such as companies.

Once limits in the availability of water resources in a watershed have been determined, for example, allocations can then be made to individual users. In the case of water, this will typically involve allocations to multiple parties, the sum of which should not exceed the available upper limit (or threshold) of supplies.

Where liveable wages are concerned, allocations are typically made to a single party (i.e. to an employer relative to its own workforce). So some thresholds are defined while others are exclusive. Once defined, allocations can be regarded as goals or targets, since they tell us what an organisation's impacts on vital forms of capital must be to be sustainable.

SCIENCE AND FAIRNESS

This explains why science-based goals and metrics are by themselves insufficient for setting targets or assessing performance in individual organisations. In order to be useful, thresholds must be fairly apportioned to individual actors.

And all of that must be done in a way that adjusts for changes in an organisation's size over time or other changes that occur and have an impact on the world. This is systems thinking at its best and nothing less will do.

This is what the allocation side of context-based thinking is designed to do. It adjusts for changes in the facts and acknowledges differences in accountability, even if we are, simultaneously, still striving to abide by science-based thresholds at the macro level. Context-based goals and metrics do that well; science-based measures alone do not.

ETHICS-BASED METRICS

Some sustainability standards are not science-based at all and are perhaps better described as purely normative or ethics-based. They express duties or obligations organisations have to act with like fairness, justice, integrity and respect. Respecting racial and gender equality come rushing to mind here.

Such purely normative thresholds, however, are no less germane to sustainability performance and must be taken into account.

Context-based metrics, as indicated, always bring allocations to the table and are otherwise science- and/or ethics-based. Only context-based measures, therefore, make it possible to set goals for, and assess performance against, organisation-specific sustainability standards of performance. Neither science- nor ethics-based measures do this on their own.

Of course, there are other metrics that are not science-, ethics- or context-based at all and which focus instead on, say, the beneficial effects or good deeds of a firm, such as levels of employment or philanthropic contributions.

These should not be confused with measures of sustainability performance.

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