

# Evaluating Development Given Our Obligation to Future Generations



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The National Environmental Policy Act opens with a charge to the government to “use all practicable means” so that the “nation may fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.” This embodied the ethic of sustainability in law, but raises important questions about interpretation and implementation. Once the idea of preserving the entirety of the global environment untouched for future generations is recognized

as infeasible, then trade-offs emerge. How should society evaluate whether and how to undertake development given this obligation to future generations?

To inform such evaluations, NEPA requires Environmental Impact Statements to characterize projects undertaken by or subject to the approval of government agencies. The public, other stakeholders, and policymakers would then be aware of the impacts of a proposed project across many environmental, resource, energy, and economic dimensions. These detailed statements, however, do not explicitly assess the trade-offs. This ambiguity often results in an eye-of-the-beholder problem: two people could agree that they each support sustainability, but differ in whether a given project based on these assessed impacts would be consistent with such a concept.

About two decades ago, the Nobel laureate Robert Solow provided “an economist’s perspective” on sustainability. In highlighting that sustainability focuses on our obligations to future generations, we can consider a broad definition of capital. This would include physical capital — factories, power plants, computers, etc. — as well as other forms of capital, such as natural capital, social capital,

and human capital and knowledge. These additional types of capital may not be valued appropriately in markets, but the well-being of any generation will depend on the benefits it derives from this broader conceptualization, not the narrow, market-oriented definition.

With this more inclusive definition of capital, one generation serving as the trustee for future generations would meet its obligation if it bequeaths at least as much capital as it inherits. Given the various types

**It’s time to revise measures and means of environmental valuations**

of capital, substitution opportunities exist and indeed could be pursued to increase the aggregate amount. For example, with the failure of markets and

governments to adequately price climate change risks, future generations would very likely be better off with more climate-related capital and less coal-fired power plant capital. Taken to an extreme, however, such as banning the use of all capital relying on fossil fuels effective tomorrow, could make future generations worse off.

Investing in one type of capital will typically mean forgoing either investment in another type of capital or current consumption. In the case of non-renewable resources, if we exploit them and generate returns that are then invested in other forms of capital, then we may be able to ensure that consumption and well-being increases over generations even as the stock of such resources declines. On the other hand, if these returns are consumed by the current generation instead of invested in other forms of capital, then the use of non-renewable resources would yield a near-term increase in consumption followed by a decline over time.

These insights hold three implica-

tions for policy practice that can build on NEPA’s legacy. First, as Solow emphasized, we need to recognize the importance of choosing robust policies to avoid potentially catastrophic errors. This appears all the more important today with the growing risks posed by climate change, which could reduce the value of natural, physical, and social capital.

Second, accounting for the full social value of the impacts of projects — not just the profits a firm realizes, but also the stream of environmental benefits or costs — can help implement this vision of sustainability. If the full spectrum of the benefits to society of a project exceeds its social costs, then it would make a good investment. Rigorous benefit-cost analysis can serve as a guide at the micro level on a project-by-project and policy-specific basis. This would represent a new step forward in the transparent provision of information that would build on the foundation of the EISs.

Third, expanding the narrow and incomplete manner in which we measure economic activity can provide a more accurate macro-level evaluation of progress on sustainability. Gross domestic product implicitly prices clean air, a stable climate, and a vast array of ecosystem services as zero. Incorporating how people value these elements of our environment can ensure a more thoughtful consideration of the trade-offs when decisions are made about future development and public policy.