

Which countries are most likely to make the deep sustainability turn?

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A new study has shed light on the transformative potential of countries in achieving sustainable development. The research, conducted by a team of researchers at the University of Tartu, challenges conventional

wisdom by suggesting that a country's ability to enact transformative change is not solely determined by its wealth or environmental impact.

The current interlinked and escalating socio-ecological crises have necessitated a deep [sustainability](#) turn, requiring the rethinking of many currently taken-for-granted assumptions, norms, and practices related to the natural environment, science, and technology. This challenge raises the question of where a shift of such magnitude is more likely to occur.

Drawing on the recent Deep Transitions framework, the authors employ a multi-dimension and multi-domain approach to construct a theory-based composite indicator. The index combines data on attitudes toward the natural environment, beliefs about science and technology, institutional quality, [environmental regulations](#), material input, [energy supply](#), land use, vehicle density, scientific publications, and patenting.

Top five countries for deep sustainability turn

Contrary to many established sustainability and welfare metrics, the results from 63 countries show that the top-performing group cross-cuts the Global North/South divide, with Sweden emerging as the overall best performer and Kuwait as the worst performer. The study also highlights five countries—Spain, Brazil, Slovenia, Peru, and Nicaragua—that exhibit high relative potential for transformation in all measured dimensions.

The findings also reveal stark differences in the countries' willingness to enact a deep sustainability turn that is relatively independent of their GDP. For example, some countries with current high environmental impact are characterized by supportive public attitudes and high-performing institutions to change this situation.

In contrast, many countries currently having a low environmental impact

also strongly prioritize [economic growth](#) over environmental protection, thus signaling that their situation might deteriorate in the future.

"This paper provides a new method for measuring and understanding transformative potential of countries," states Anna-Kati Pahker, the leading author of the study. "Based on the results, we propose that the ability of a country to enact transformative change is not solely determined by its wealth or [environmental impact](#). Instead, countries with a balance between supporting [public attitudes](#), institutional capacity, and current practices were more successful."

The authors further emphasize the need for policymakers to reconsider how societies think about, regulate, and develop science and technology.

The findings of this study offer valuable insights into the potential for deep sustainability transitions across the globe. The authors encourage the integration of this index with other relevant metrics, such as adaptation readiness or indicators for transformative niches, to provide a more comprehensive overview of transformative potential. By understanding the factors that contribute to successful transformative change, policymakers can make informed decisions to drive sustainable development.

The paper is [published](#) in the journal *Technological Forecasting and Social Change*.

More information: Anna-Kati Pahker et al, Where is the deep sustainability turn most likely to emerge? An Industrial Modernity Index, *Technological Forecasting and Social Change* (2024). [DOI: 10.1016/j.techfore.2024.123227](#)

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