

Planetary boundaries

Portland State University's Robert Costanza searches for **thresholds** within which **civilization can thrive.**

BY LUCIA MARTINEZ

EARTH, OUR BIG BLUE MARBLE FLOATING in space, is finite, with nowhere to expand. Finding the planet's boundaries or thresholds within which our civilization can live and thrive is the chief work of Robert Costanza, who directs the Institute of Sustainable Solutions at Portland State University.

This is essential work, since already in 2006, the Stern Review on the economics of climate change showed the impact that raised temperatures would have on food production, water supplies and extreme weather events. Of course, this varies according to the degrees of increase. Dealing with these issues and keeping the temperature increase below 2° C, for example, will require 1% of Global Gross Domestic Product (GGDP). According to the report, the cost of allowing higher temperatures would be 5–20% GGDP.

Quality of life issues

Rather than focus on GGDP, though, Costanza says we should start “maximizing sustainable human wellbeing” by looking at what contributes most to our quality of life. At the last Greenaccord media forum, he called for a more ecological approach to the economy — the current model of continued growth is unsustainable — and an integrated method to find solutions.

Humans do not just need material goods for their wellbeing but also security, leisure time and affection, for example. Scientists have proved that there is a leveling point in which more GDP or material wealth does not translate directly into greater life satisfaction once our survival needs are met. Countries with large differences in their GDP may have the same percentage of people who are satisfied with their lives.

“We may want to reduce consumption in the over-consuming economies to allow more consumption in the countries that need to improve wellbeing,” said Costanza.

“Even if this means a lower GDP in nations where consumption decreases.”

Social capital is important for wellbeing too. It includes the web of interpersonal connections, institutional arrangements and the rules and norms that facilitate human interaction.

It is also important to recognize the benefits from “natural capital” services, such as air and water purification, waste management, food and climate regulation.

Costanza has been a pioneer in this field. In 1997 he estimated the price of those services as twice the GGDP. Recent estimates put a cost-benefit ratio of 1:100 on conserving natural assets.

Growth at all costs?

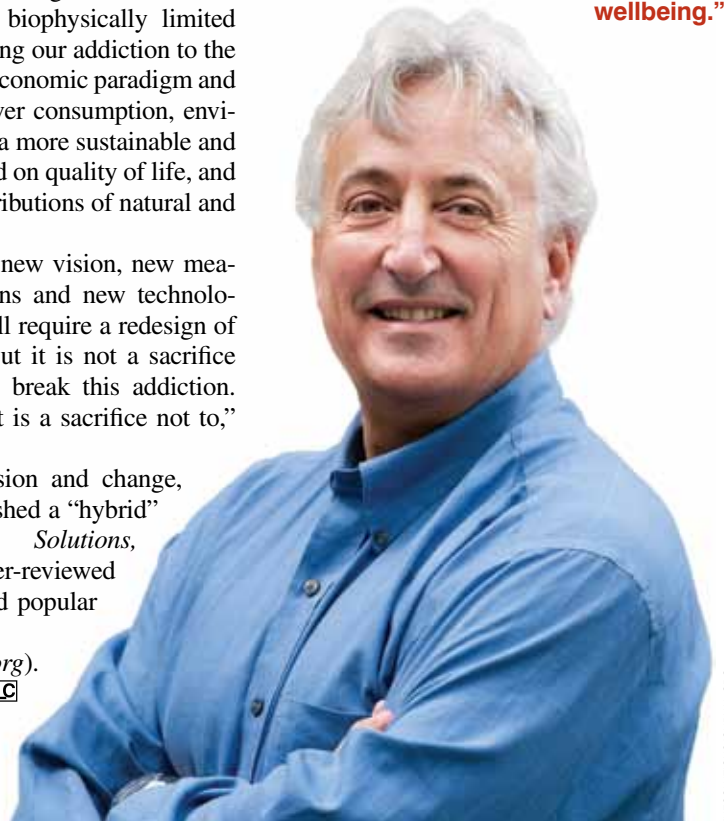
For Costanza, the long-term solutions to flourishing on a biophysically limited planet include breaking our addiction to the ‘growth at all costs’ economic paradigm and to fossil fuels and over consumption, envisioning and creating a more sustainable and desirable future based on quality of life, and recognizing the contributions of natural and social capital.

“It will require a new vision, new measures, new institutions and new technologies,” he says. “It will require a redesign of our entire society. But it is not a sacrifice of quality of life to break this addiction. Quite the contrary, it is a sacrifice not to,” he concluded.

To foster this vision and change, Costanza has established a “hybrid” magazine called *Solutions*, which is both a peer-reviewed academic journal and popular magazine (see thesolutionsjournal.org).



Robert Costanza



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