

Taking the Earth's pulse: Scientists unveil a new economic and environmental index

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A growing world population, mixed with the threat of climate change and mounting financial problems, has prompted University of British Columbia researchers to measure the overall 'health' of 152 countries around the world.

Encompassing both economic and ecological security, high-income countries were ranked among the least healthy overall. Many countries in South America performed well, offering [future generations](#) better financial, food, water, and [energy security](#).

The top five performing countries are [Bolivia](#), [Angola](#), [Namibia](#), Paraguay, and Argentina, while the bottom five performers are Jordan, the Republic of Korea, Israel, [Kuwait](#), and Singapore.

"We hear that countries are suffering financially every day in the news," says Rashid Sumaila, director of the UBC Fisheries Centre, "but that only tells half the story. Piling up ecological deficits is just as concerning as piling up financial deficits – both have consequences for future generations."

Sumaila is presenting his work at the Annual Meeting of the American Association for the Advancement of Science (AAAS) on Feb. 20.

Using data collected between 1997 and 2007, researchers from the UBC Fisheries Centre and the Global Footprint Network created what they call the Eco2 Index.

Economic figures for the Eco2 Index come from the World Bank and take into account financial deficits, national debt and Gross Domestic Product. Ecological figures come from the Global Footprint Network and measure resource consumption and waste produced by a country in comparison to its carrying capacity as expressed in locally available resources such as agricultural land and energy.

Globally over the course of the decade, the index shows that scores fell steadily, caused by growing ecological deficits in many countries.

According to Sumaila's ranking, many high-income countries such as Japan, the United States, several European nations and the oil-rich Middle East, performed the worst - mostly due to high ecological deficits.

Singapore – a country that looks good economically – ranked last out of the 152 countries sampled. Despite recording a surplus of 28 per cent of GDP in 2007, "its ecological deficits are the worst in the world," says Sumaila,

Spurred by the desire for higher short-term consumption, low and middle-income countries are following the lead of high-income nations, liquidating their ecological and economic capital.

Sumaila says, "our actions today may have even greater consequences later on. It is concerning that both our financial and our ecological security are deteriorating."

Canada, Australia, parts of southwestern Africa and South America were among the top performers in Sumaila's rankings, due to large ecological surpluses.

"The Eco2 Index should help countries in planning for the future – they

can use this information to identify what they need to work on, whether that's financial or ecological productivity," says Sumaila.

Provided by University of British Columbia

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