Green growth that works

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Stanford researchers say we don't have to sacrifice environmental priorities in order to achieve economic prosperity. Green growth offers nature-based approaches for the future. Credit: djedj/Pixabay

Economic development plans often overlook a crucial detail—ecosystems that provide essential services to people. Increasingly, though, leaders in academia, finance, sustainable

development and the private sector agree that nature is a key engine of economic prosperity. Now, they're looking for reliable tools and guidance to implement green growth.

Gretchen Daily and Lisa Mandle of Stanford's Natural Capital Project talk about the importance of recognizing real-world, science-driven success stories in this growing field of sustainable development. From green infrastructure in Washington D.C. to coastal watershed investments in the San Francisco Bay Area, Daily and Mandle collected these success stories from around the world to create "Green Growth That Works: Natural Capital Policy and Finance Mechanisms from around the World." To meet the needs of those leaders wanting to implement green growth strategies, the guide is full of proven techniques for planning and carrying out economic development that makes environmental sense.

What does "inclusive green growth" mean?

Mandle: It means improving the well-being of people and nature, at the same time. It means implementing approaches that reduce poverty and increase access to education, health care and infrastructure, while investing in the natural assets on which our livelihoods, health and economies depend—our natural capital. We know that focusing on economic growth alone or on conservation alone doesn't yield long-term success. To reach a future with shared prosperity, we really need to incorporate all sources of capital—including natural and social—into our economic development plans.

What are some examples of successful nature-based solutions that also benefited people's livelihoods or wellbeing?

Mandle: Water funds are one great example. Downstream water users—such as municipalities, businesses and hydropower producers—pay people upstream to restore forests and improve farming practices. This system acts as a reliable income for the upstream community while improving water quality and flow for everyone. Over the past decade, dozens of water funds have been established in major cities across Latin America and around the world, and even more are being developed.

Daily: China is implementing some of the most innovative policies in the world today, pursuing its national goal of creating an "ecological civilization" in the 21st century. They're deploying a new metric of performance, called Gross Ecosystem Product (GEP), using science and software on the Natural Capital Platform. Reported alongside Gross Domestic Product, GEP tracks the total value of ecosystem goods and services produced in a place over a year. It is being used widely, in part to guide financial transfers, like in the case of water funds. It's a pretty straightforward idea: consumers of ecosystem benefits, such as flood protection and clean water, pay for ecosystem conservation and restoration to keep those benefits flowing.

Mandle: Also, in the U.S., we have notable policies that require mitigation of development impacts, by restoring wetlands, streams and other ecosystems. These policies support an ecological restoration industry that employs over 125,000 people. That's more jobs than in coal mining, logging or steel production.

Inclusive green growth requires buy-in from a lot of different sectors. What are some of the challenges with a cross-sector approach like this, and where do you see bright spots?

Daily: A key challenge is finding a space for integrated, science-informed planning. Where this is supported, it's exhilarating to see people come together in even competing sectors. Belize is a prime early example, with their 20-year coastal development plan that integrates climate resilience and other ecosystem objectives together with those of shipping, oil and gas, fishing, on-shore infrastructure, tourism, agriculture and other sectors. Their planning process serves as a model, replicated by other countries, and now supported by the Inter-American Development Bank.

What do you see as the essential next steps in science that are needed to propel these kinds of sustainable development approaches forward, to a place where they're standard practice?

Mandle: To me, the critical next step is making the science and knowledge we already have more accessible and actionable for policymakers, investors, city planners and other decision-makers. At the Natural Capital Project, we're doing this by working directly with those stakeholders to address their questions and needs, and through our open-source software platform, which makes the tried-and-true science available to everyone. A big motivation behind writing our book was to show how many well-established policy and finance mechanisms for securing ecosystem service benefits already exist, underpinned by ecosystem service science.

Daily: We really want to show how these policy and finance mechanisms can be used in a real-world context. We need to bring everyone along on this pathway, and a key way to do that is by providing a resource that demonstrates that "this can be done and has been done—with great success."

Explore all the case studies from the book, detailing the specific finance and policy mechanisms, in this online viewer.

Provided by Stanford University