NatCap launches YouTube channel

[Click here](#) for a video series offering guidance on how to use our approach and tools to map and value goods and services from nature.

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Introduction to the Natural Capital Project Approach

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Notable Quote

"If we take the global view, then this is clearly the world's principal longterm worry."

- Thomas Piketty, Professor at the Paris School of Economics, writing in **CAPITAL, In the Twenty-First Century** about "the possibility of deterioration of humanity's natural capital in the century ahead."

Software tools:

Natural Capital Symposium Preview: "Pathways to Impact" aren't linear, What to say when "environment" is a dirty word and other lessons from South Africa

Dr. Belinda Reyers is chief scientist of the biodiversity and ecosystem services research group at The Council for Scientific and Industrial Research (CSIR), South Africa. With two colleagues, Drs. Jeanne Nel and Nadia Sitas, she has organized a session featuring their innovative work at the [Natural Capital Symposium](#) at Stanford March 23-25. Dr. Reyers kindly gave us a preview of the session.

Your session is within the symposium's theme called "Pathways to Impact." We hear that phrase a lot in the context of influencing policy, financial, and social change, but what exactly does it mean?

"*What is your pathway to impact?*" is a phrase funders like to use, and it seems to suggest a linear process - that you start here and end with impact. All of us know that isn't true. We're still trying to figure out what those pathways are.

This panel will be a way of exploring the more nuanced experiences of change we are all having along these pathways to impact, and some of our frustrations.

Dr. Belinda Reyers

You describe your work as being about reconnecting people with their environment, and bringing the environment into decision-making. How are you going about that task in South Africa?

Each of the studies and projects we're working on is quite different, in that we're connecting decision-makers from the private and public sector at local to national scales, and across domains from water to food to rural livelihoods to disaster risk.

For example, South African government programs are giving land back as part of the redistribution following the process of democratization. Big lands have been given back, but we have infestations of non-native woody trees, mostly Australian acacias - we call them black wattle - which were introduced for timber and plantation forestry and have spread enormously.

How is your work helping to reconnect people with their environment in this case?

We're working with communities on these lands to identify where the trees are limiting grazing capacity,

InVEST is a free and open-source software suite developed by the Natural Capital Project. InVEST 3.0.1 was released November 20, 2014.

OPAL is NatCap's latest free and open-source software for mitigating development impacts. OPAL 1.0.2 was released on January 20, 2015.
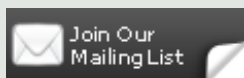

RIOS is a software tool that helps design cost-effective investments in watershed services. RIOS 1.0.0b11 was released on December 10, 2014.

For help using InVEST and RIOS, visit the NatCap Forums, our online user community.

Newsletter Archive

Check out NatCap's previous newsletters in our Newsletter Archive.

Follow Us Online

Click Here to read the full interview

Other featured Symposium speakers this year include **Mark Gough, the Executive Director of the Natural Capital Coalition,** *who will be talking about Generating Action in Business with the Natural Capital Coalition and Protocol,* **environmental economist Michael Verdone** *of the IUCN and* **Brandon Keim,** *a journalist for* **Wired** *and* **Conservation** *magazine. Go to the* Natural Capital Symposium *webpage to register or submit a proposal. This site is being frequently updated.*

Harnessing today's computing power to drive sustainability: NatCappers to lead AAAS Discussion

The annual AAAS meeting convenes Feb 12-16 in San Jose, and NatCap software architect Rich Sharp and Lead scientist Becky Chaplin-Kramer have organized a symposium called **Information Accelerators: Using Online Tools To Address Sustainability Challenges**

The AAAS Annual Meeting will be in San Jose, Feb 12-16

Over the past decade, the rate of online data storage has doubled every two years, internet connection speeds have increased 50% per year, and the price of computational hardware has halved every 14 months. With another two billion people expected on the planet by 2050 and mounting pressure on lands, waters, and all vital natural resources, information about how to steward the relationships between human and natural systems has never been more precious, and there is enormous untapped potential to use advances in computing power to provide better support for nearly every decision that affects our sustainability on the planet.

Taking place in the heart of Silicon Valley, this symposium will highlight online tools and initiatives designed to incorporate social and environmental science to support conservation and human wellbeing. In a discussion moderated by Kai Lee of the Packard Foundation, each speaker will share insights into opportunities and barriers to using data and tools to their full potential.

"Everybody wants their tool to change the world," said Sharp, who will speak about NatCap's efforts to create tools and a global data platform to incorporate nature's value into decisions. "Funding these tools provides an incredible opportunity for doing good for nature. But a deeper challenge lies not in the initial cost of development, but of the long term maintenance as the tool is used in practice to affect change," Sharp said. Sociopolitical barriers can also keep tools from meeting the goals of the original vision. "I feel like nobody ever really talks about that, and I wanted to bring developers together to share our experiences and ideas for breaking that cycle."

The symposium will bring some of the best thinkers and environmental software developers together to figure out how tools can harness today's computing power to

inform decisions with better outcomes for people and the planet.

Recent Press and Publications

A study co-authored by Taylor Ricketts and published in the January issue of PLoS ONE, shows how lower pollination rates can contribute to human malnutrition, especially in mothers and children.

"Pollinator declines can really matter to human health, with quite scary numbers for vitamin A deficiencies, for example, which can lead to blindness and increased death rates for some diseases, including malaria," Ricketts said.

Do Pollinators Contribute to Nutritional Health?
Ellis, Alicia M.; Samuel S. Myers; Taylor H. Ricketts.
PLoS ONE. January 9, 2015. Vol. 10(1): e114805.
doi:10.1371/journal.pone.0114805

Anthidiellum notatum
(Florid Mini Bee)
USGS Bee Inventory and Monitoring
Lab

Loss of honey bees and other pollinators could mean malnutrition for millions around the world
PBS Newshour, January 28, 2015, by Adelyn Baxter

A Hidden Hunger: How Bee Decline Can Hurt Humans Too
Nature World News, January 26, 2015, by Brian Stallard

Research shows loss of pollinators increases risk of malnutrition and disease
PHYS.ORG, January 26, 2015

Analyzing photos posted to the online photo-sharing site Flickr, NatCap researchers and collaborators found that Minnesota and Iowa lakes with better water quality receive more visits than dirtier lakes, and that swimmers are willing to travel further to visit those clean, clear lakes - in some instances 56 minutes farther (equivalent to US$22 in travel costs) for every one meter increase in water clarity.

Recreational demand for clean water: evidence from geotagged photographs by visitors to lakes
Keeler, Bonnie; Wood, Spencer A., Polasky, Stephen; Kling, Catherine; Filstrup, Christopher T.; Downing, John A.
Frontiers in Ecology and the Environment, Jan 29, 2015
doi:10.1890/140124

Online photos offer evidence for the value of clean water
University of Minnesota Institute on the Environment, Feb. 3, 2015, Bonnie Keeler

Other Press and Publications:

Network structure beyond food webs: mapping non-trophic and trophic interactions on Chilean rocky shores. Ecology, 2015, 96:291-303.
Kéfi, Sonia; Eric L. Berlow, Evie A. Wieters, Lucas N. Joppa, Spencer A. Wood, Ulrich Brose, Sergio A. Navarrete

Private incentives for the emergence of co-production of offshore wind energy and mussel aquaculture
Griffin, Robert; Bela Buck; Gesche Krause.
Aquaculture. January 20, 2015, Vol. 436, pp 80-89.
doi:10.1016/j.aquaculture.2014.10.035

Techno-Ecological Synergy: A Framework for Sustainable Engineering
Bakshi, Bhavik R.; Guy Ziv; Micheal D. Lepech.
Environmental Science & Technology. January 5, 2015. doi: 10.1021/es5041442

Should we put a price on nature?
High Country News, January 19, 2015, Ben Goldfarb

Can cities lead the way in maximizing nature's value?
GreenBiz, January 13, 2015 , by Glenn Prickett

OPAL software aims to restore ecosystems
GreenBiz, January 5, 2015, by Michael Ansaldo

Sensitivity analysis of a sediment dynamics model applied in a Mediterranean river basin: Global change and management implications
Sánchez-Canales, M.; A. López-Benito; V. Acuña; G. Ziv; P. Hamel; R. Chaplin-Kramer; F.J. Elorza.
Science of The Total Environment. January 1, 2015, Vol. 502, pp 602-610. doi: 10.1016/j.scitotenv.2014.09.074

A Field Guide to Economics for Conservationists
Fisher, Brendan; Robin Naidoo; Taylor Ricketts.
Roberts & Company Publishers, (2014). ISBN: 9781936221509

Perception, acquisition and use of ecosystem services: Human behavior, and ecosystem management and policy implications
Asah, Stanley T.; Anne D. Guerry; Dale J. Blahna; Joshua J. Lawler.
Ecosystem Services. December 2014, Vol.10, pp 180-186. doi: 10.1016/j.ecoser.2014.08.003

Affecting change on the ground: an interview with Anne Guerry of the Natural Capital Project
Leopold Leadership 3.0, December 8, 2014, by Josh Lawler

Stanford collaboration helps governments offset damage caused by development projects
Stanford Report, December 4, 2014, Rob Jordan

A full list of news stories and publications are available on our website. Access to full articles may require library access.

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To provide feedback or ideas for the newsletter, write to slsolie at stanford.edu.