

**NatCap launches  
YouTube channel**



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

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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:**

**NatCap 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.

**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.



Dr. Belinda Reyers

# InVEST

Integrated valuation of  
environmental services  
and tradeoffs

[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.



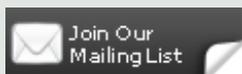
[RIOS](#) is a software tool that helps design cost-effective investments in watershed services. RIOS 1.0.0b11 was released on December 10, 2014.

For help using InVEST and RIOS, visit the [NatCap Forums](#), our online user community.

## Newsletter Archive

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## 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, where it's not really viable land anymore. The invasive trees are also water-intensive [in an area with little water], so we're partnering with the Working for Water program, which hires unemployed people to clear the trees.

[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.** [Click here](#) to register or submit a proposal.

## 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

## Recent Press and Publications

Taylor Ricketts co-authored a study published in the January issue of PLoS ONE, showing 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," said Ricketts.



### [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

### [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

## 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

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Thank you for your continued interest in the Natural Capital Project. If you have any questions, please feel free to contact us at [invest@naturalcapitalproject.org](mailto:invest@naturalcapitalproject.org).

