

## Software Tools



[InVEST](#) is a free and open-source software suite developed by the Natural Capital Project. You can download the latest version, 3.1.3 [here](#).



[OPAL](#) is NatCap's latest free and open-source software for mitigating development impacts. You can download the latest version of OPAL [here](#).



[RIOS](#) is a software tool that helps design cost-effective investments in watershed services. You can download the latest version of RIOS [here](#).

## Growing the Natural Capital Community

REFLECTIONS ON THE NATURAL CAPITAL SYMPOSIUM

I told Mary she was crazy, but she insisted on dedicating a significant chunk of the first morning of our Symposium last month to introductions -- passing the microphone around the Stanford conference room and getting each person to say their name, affiliation, and where they were from. We'd done it in the past and liked it. I thought that this year the meeting had gotten too big -- that we could pull that off with 100 people, even 200. Not more. The morning came, we did it, and I had to eat some crow. Mary was right (as usual). It was so inspiring to hear the diversity of institutions, geographies, accents, and voices in the room. It was a wonderful opportunity to put names to faces. And, perhaps most importantly, it was a way to put each person -- the individual members of the community we are working so hard to build -- in the spotlight. So, get ready, if I have any say, we'll be passing that mic around for years to come.



Anne Guerry, Chief Strategy Officer & Lead Scientist at Natural Capital Project

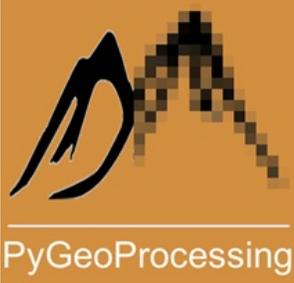
(Re)learning that Mary's instincts are generally spot-on was not my only take-home from the Symposium. In fact, I took home... [\[Click here to read the full article\]](#)

## Know Your Economics Like You Know Your Rare Bird Species

AN INTERVIEW WITH NATURAL CAPITAL PROJECT CO-FOUNDER TAYLOR RICKETTS

### What inspired you to pursue conservation as a career?

I've always liked being outside. After college I took a job as a guide and lecturer with an extreme nature tourism company. I spent five years living on a ship. We'd take people to the Amazon, Indonesia, the North Pole. I'd go back to places in the Amazon where we had led tours a few years earlier, and it would be just -- a field. In Antarctica I saw penguin colonies getting smaller and smaller. All the nests were visible and



[PyGeoprocessing](#) was developed at the Natural Capital Project to create a programmable, open source, and free GIS processing library to support the ecosystem service software InVEST. The latest version 0.2.1 fixes several bugs. Users can pip install pygeoprocessing, upgrade or download the package [here](#).

### NatCap Forums

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

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every year fewer and fewer were occupied. I realized that the cool parts of nature were changing really fast, and that's what motivated me to get into graduate school in conservation biology. I quit my ship job and had to come back to shore.

### Why did you decide to write this new book "A Field Guide to Economics"? (Roberts & Company, 2015)

The average conservationist has a shelf full of field guides, like "The Birds of South America." We (co-authors Brendan Fisher and Robin Naidoo) think economics is really, really cool, and that every conservationist should have a field guide to economics that they take down just as often, as part of their toolkit.

It's economics that drive a lot of... [\[Click here to read full interview\]](#)



Taylor Ricketts, a co-founder of the Natural Capital Project & Gund Professor and Director of the Gund Institute for Ecological Economics at the University of Vermont

## Recent Press, Publications, and Events

A new study [Get the science right when paying for nature's services](#), published in Science, presents a framework for integrating science into Payments for Ecosystem Services (PES).

Scientists, policy-makers, and practitioners from around the globe, including Natural Capital Project's Leah Bremer and Steve Polasky, analyzed 118 PES programs, creating 33 guidelines to help incorporate natural science and better inform decision making when developing PES programs and projects.



Credit: Global Water Partnership on flickr.com

"Integrating scientific knowledge and methods into PES is critical. Yet many projects are based on weak scientific foundations, and effectiveness is rarely evaluated with the rigor necessary for scaling up and understanding the importance of these approaches as policy instruments and conservation tools," the authors report. "Part of the problem is the lack of simple, yet rigorous, scientific principles and guidelines to accommodate PES design and guide research and analyses that foster evaluations of effectiveness."

"Recognising the value of ecosystem services and providing appropriate incentives to manage them has the power to transform our societies," said co-author Robert Costanza, Professor at Crawford School of Public Policy, in a [PHYS.ORG article](#). "We hope these guidelines will help PES programs to succeed."

### [Get the science right when paying for nature's services](#)

Naeem, S.; J. C. Ingram; A. Varga; T. Agardy; P. Barten; G. Bennett; E. Bloomgarden; L. L. Bremer; P. Burkill; M. Cattau; C. Ching; M. Colby; D. C. Cook; R. Costanza; F. DeClerck; C. Freund; T. Gartner; R. Goldman-Benner; J. Gunderson; D. Jarrett; A. P. Kinzig; A. Kiss; A. Koontz; P. Kumar; J. R. Lasky; M. Masozera; D. Meyers; F. Milano; L. Naughton-Treves; E. Nichols; L. Olander; P. Olmsted; E. Perge; C. Perrings; S. Polasky; J. Potent; C. Prager; F. Qu  tier; K. Redford; K. Saterson; G. Thoumi; M. T. Vargas; S.

[Get the science right to value nature](#)  
*PHYS.ORG*, March 13, 2015

## Other Press, Publications, and Events:

[A framework to assess the health of rocky reefs linking geomorphology, community assemblage, and fish biomass](#)

Aburto-Oropeza, Octavio; Exequiel Ezcurra; Jerry Moxley; Alexandra Sánchez-Rodríguez; Ismael Mascareñas-Osorio; Carlos Sánchez-Ortiz; Brad Erisman; Taylor Ricketts.

*Ecological Indicators*. May 2015, Vol. 52, pp 353-361.  
doi:10.1016/j.ecolind.2014.12.006

[Fight Less, Collaborate More: How to Solve the World's Greatest Environmental Challenges](#)

April 3, 2015. In a recent talk at the Stanford Graduate Business School, President and CEO of The Nature Conservancy Mark Tercek championed The Natural Capital Project's solution-oriented approach to sustainable development, as well as the general idea of natural capital - valuing nature for its own sake as well as for the services it provides for people, such as clean air and water, productive soils and a stable climate. The event was held in collaboration with the Stanford Woods Institute of the Environment.

[Reviving the Ocean Economy: The Case for Action 2015](#)

The World Wide Fund for Nature published a special report citing the ocean as a major contributor to the global economy, generating \$2.5 trillion annually. The report mentions the Natural Capital Project's collaboration with the government of Belize, to create a sustainable coastal development plan, allowing for tourism expansion while preserving natural capital like mangrove forests and reefs, which buffer the coast from storms and support the fishing industry by providing habitat for sea life.

[Social media fueled research could help protect the environment](#)

by Allison Kronberg, *Minnesota Daily*, April 7, 2015

[7 things we learned about social media & environment](#)

by Anya Moucha, *University of Minnesota's Institute on the Environment*, April 1, 2015

[Are conservation organizations configured for effective adaptation to global change?](#)

Armstrong, Paul R.; Eric R. Larson; Stephen T. Jackson; Dov F. Sax; Paul Simonin; Bernd Blossey; Nancy Green; Mary L. Klein; Liza Lester; Taylor H. Ricketts; Michael C. Runge; M. Rebecca Shaw.

*Frontiers in Ecology and the Environment*. April 2015, Vol. 13(3), pp 163-169. doi: 10.1890/130352

[Model development for the assessment of terrestrial and aquatic habitat quality in conservation planning](#)

Terrado, Marta; Sergi Sabater; Becky Chaplin-Kramer; Lisa Mandle; Guy Ziv; Vicenç Acuña.

*Science of the Total Environment*. Available online March 30, 2015. doi: 10.1016/j.scitotenv.2015.03.064

[Climate change: The debate now is about how we adapt](#)

by Josh Lawler & Mary Ruckelshaus, *The Seattle Times*, March 23, 2015

[Kenya launches Africa's first water fund to combat shortages](#)

by Katy Migiro, *Reuters*, March 20, 2015

[Water Fund to benefit conservation](#)

by Alberto Leny, *Sci Dev Net*, March 20, 2015

[Assessing the Effects of Multiple Stressors on the Recruitment of Fruit Harvested Trees in a Tropical dry Forest, Western Ghates, India](#)

Varghese, Anita; Tamara Ticktin; Lisa Mandle; Snehlata Nath.

*PLoS ONE*. March 17, 2015, Vol. 10(3): e0119634. doi:10.1371/journal.pone.0119634

[Peter Kareiva on "What's Good for Nature is Good for Business"](#)

by Bob Lalasz, *Cool Green Science*, March 11, 2015

[Which baseflow metrics should be used in assessing flow regimes of urban streams?](#)

Varghese, Anita; Tamara Ticktin; Lisa Mandle; Snehlata Nath.

*PLoS ONE*. March 17, 2015, Vol. 10(3): e0119634. doi:10.1371/journal.pone.0119634

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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).

