

InVEST



[InVEST](#) is a free and open-source software suite developed by the Natural Capital Project. Version 2.5.6 was released on September 6, 2013. [Click here](#) to download the latest version.

For help using InVEST, check out [NatCap Forums](#), our growing online user community.

InVEST Trainings

Annual Meeting & InVEST Training
March 26-28
Stanford, CA

Our annual meeting is the perfect opportunity to learn how to incorporate ecosystem services into decisions, network with other scientists and practitioners, and receive personalized help from our scientists, engineers and policy experts on how to use our software and approach for your own work. We also hope you will share your work with us by participating in the poster session.

[Register Today!](#)

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Measuring Nature's Intangible Benefits

Greetings!

Nature provides such necessities of life as food, water, and shelter, and underpins and controls the conditions in which people live. Nature also provides important intangible benefits that contribute culturally and psychologically to human well-being in non-material ways. Two new studies from NatCap and collaborators present a new way to measure where and how people use nature for recreation and discover that exposure to nature can make us happier and healthier people.

Social Media for Science

NATCAP SCIENTISTS MAKING GOOD USE OF THOSE VACATION PHOTOS YOU POSTED ONLINE

NatCap scientists have found a way to use the photo-sharing website flickr to measure where and when people are using natural areas for recreation and tourism. This information can help estimate the benefits and value that these areas provide to society.



Tourism is big industry, contributing \$6 billion a year to the world economy, and it's expected to grow to \$10 billion over the next 10 years. While a great deal is known about how developed tourist destinations, such as Disneyland, contribute to local economies, until now, it has been hard to figure out the contribution of natural areas such as parks and beaches.

Tapping into big data collected by social media sites, we utilized information from 1.4 million geo-tagged images in flickr, and the user profiles associated with them, to see the places people visit and where they travel from to get to those places. Comparing this information to visitation data from on-site surveys at 836 recreational sites around the world, we found that the information from flickr can serve as a reliable indicator of how many people visit a tourist attraction each year and when they are visiting. This research was recently published in [Scientific Reports](#).

The research shows how "information from crowd-sourced social media is revolutionizing the way we study people and understand their choices," said lead author Spencer Wood. This new approach provides the chance to clarify what attracts people to natural areas, and to determine if changes in ecosystems lead to changes in visitation rates.

"No one has been able to crack the problem of figuring out visitation rates and values for tourism and recreation - until now," said Anne Guerry, lead scientist at the Natural Capital Project. Previously, researchers had to rely on local surveys and head counts to get this type of visitation information. Using social media to discover where people are visiting, and where they are coming from, is faster, less expensive, offers greater information in more places, and is better for looking at changes over time.

[information about our upcoming trainings.](#)

Work with NatCap!

NatCap seeks a creative individual for a post-doc working on climate-habitat-fisheries models and their application.

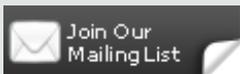
We are also looking for an economist for a post-doctoral research position to advance the development, testing, and application of terrestrial and freshwater ecosystem service models.

[See full position descriptions online.](#)

Newsletter Archive

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Humans in Nature

HOW KNOWING AND EXPERIENCING NATURE
AFFECT HUMAN WELLBEING

A [new study](#) has found that knowing and experiencing nature generally makes us happier and healthier people. After reviewing hundreds of papers in several different fields, the authors summarized the intangible benefits that contribute culturally and psychologically to human wellbeing in non-material ways. For example, clinical trials have shown that patients recovering from heart attacks recover more rapidly when they can see trees outside their hospital room windows. Cultural ecosystem services represent psychological, philosophical, social and spiritual links between people and ecosystems. NatCap author and lead scientist Anne Guerry says that despite "significant gaps in empirical research, the weight of the literature shows clearly that connections to nature contribute positively to our health and happiness," and hopes that more work will continue to be done on the impact nature has on human health and happiness.



Recent Press and Publications

[Using social media to quantify nature-based tourism and recreation](#)

Spencer A. Wood, Anne D. Guerry, Jessica M. Silver & Martin Lacayo
Scientific Reports 3, Article number: 2976

[Vacation pics mined for vital data: Who went where, when?](#)

NBC News October 18th, 2013
by Devin Coldewey

[Humans and Nature: How Knowing and Experiencing Nature Affect Well-Being](#)

Roly Russell, Anne D. Guerry, Patricia Balvanera, Rachelle K. Gould, Xavier Basurto, Kai M.A. Chan, Sarah Klain, Jordan Levine, Jordan Tam
Annual Review of Environment and Resources. Review in Advance first posted online on August 2, 2013.

[What factors influence participation in payment for ecosystem services programs? An evaluation of Ecuador's SocioParamo program](#)

Leah Bremer, Kathleen Farley, David Lopez-Carr
Land Use Policy, in press

[Climate change's impact on key ecosystem services and the human well-being they support in the US](#)

Erik J Nelson, Peter Kareiva, Mary Ruckelshaus, Katie Arkema, Gary Geller, Evan Girvetz, Dave Goodrich, Virginia Matzek, Malin Pinsky, Walt Reid, Martin Saunders, Darius Semmens, and Heather Tallis
Frontiers in Ecology and the Environment 11: 483-493

[Climate-change impacts on ecological systems: introduction to a US assessment](#)

Nancy B Grimm, Michelle D Staudinger, Amanda Staudt, Shawn L Carter, F Stuart Chapin III, Peter Kareiva, Mary Ruckelshaus, Bruce A Stein.
Frontiers in Ecology and the Environment 11:456-464

[UCSB's NCEAS Take First Steps in Documenting the Intangible Effects of Nature on Human Well-Being](#)

Santa Barbara Independent

[Ecosystem Services: Recognizing the Inseparability of People and Nature](#)

in: Grzimek's Animal Life Encyclopedia 2nd Edition, Extinction
Anne Guerry
N. MacLeod, J.D. Archibald, and P.S Levin, eds.
Gale Cengage, 2013

A full list of [news stories](#) and [publications](#) available on our website. Access to full

articles may require library access.

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.

