



# natural capital PROJECT



*The pearly everlasting amongst other wildflowers in a Cascade Mountain meadow.  
Photo credit: Bryan Swan*

## Everlasting benefits from nature

*Mary Ruckelshaus, December 20, 2017*

The pearly everlasting (*Anaphalis margaritacea*) is a humble plant in the sunflower family found in the Cascade Mountains of the US with an inspiring lesson for us this holiday season. The pearly everlasting's flowers emerge in early spring across mountain slopes and their small, sturdy, yellow and white blooms are a striking contrast to the purples, deep scarlets, and pinks of lupines, columbine, and shooting stars. As the summer wildflower colors fade into fall, the red berries of mountain ash and muted purples of heather are accompanied still by the white heads of pearly everlasting dotted across the alpine meadows. The pearly everlasting has always stood out to me because of its persistence, a familiar shock of white as the colorful landscape around it changes throughout the growing season. Without its stable

presence, alpine wildflower communities would lack a reliable anchor for high-mountain soils and moth and butterfly pollinators would be without a key source of pollen.

In the Cascade Mountains and around the world, we're seeing daily evidence of the persistence required to support ecosystems and the people who depend upon them. Hard-fought policies, regulations, and investments in ecosystems and their human communities are being overturned, undermined, or made ineffective by changing social, political, and physical climates. It is particularly heartbreaking to see backsliding in the ability of communities to find common cause around shared visions for their future. In *#Republic*, Cass Sunstein talks about the public's obsession with narrowly tagged topics and the accompanying drop in appreciation for processes of discourse, from basic democracy to the scientific method.

NatCap and our network know that lasting benefits from nature will come through three main avenues to open up discussions, decreasing the likelihood of isolated thinking: (i) engaging in processes of open dialogue: to better understand science and the social/political/economic values that guide decisions; (ii) partnering strategically with people who live, work in, and care about specific places; and (iii) learning what works so we can make necessary adjustments as we go. These tasks take time, but we are seeing breakthroughs in solutions as a result, and the lasting outcomes for people and ecosystems can be spectacular.

The NatCap network is widely respected for fostering an open dialogue around a shared set of facts, to create better outcomes for people and nature. When ordinary people and policymakers from a particular locality get together to make decisions about resources in their place, they can come up with solutions that distant experts or locals alone haven't thought of. Shared visions emerge when the latest, greatest science is fed directly into a group that has both an intimate understanding of a particular landscape and a keen interest in what happens to it. Nothing serves a NatCap scientist better than having to listen first, and then to conduct and explain new research from first principles, without the typical jargon of the trade. And nothing does a group of citizens with disparate backgrounds and conflicting interests more good than coming together around a scientifically accurate picture of their home place.

Together, we help local experts and citizens put numbers and spatial details on the places and contributions from nature that they care about most. Our open data and software platform reinforces this transparency and encourages innovation regardless of where people sit.

Another way NatCap is creating durable, nature-based solutions is through partnering with influential institutions to increase the relevance and credibility of our network.

We are thrilled that the Chinese Academy of Sciences (CAS) joined the NatCap partnership this fall. Under the leadership of our dear colleague Professor Zhiyun Ouyang, the CAS has added greatly to both our research and implementation expertise over the past 8 years of collaboration. The natural capital science and innovative policies underway in China are breathtaking in their quality and scope, and we are now poised to harness their knowledge and experience more significantly

across our network to achieve shared outcomes.

When we truly co-develop science with decision makers and design nature-based approaches with a spirit of learning, the outcomes for nature and people are longer lasting and more likely to be mutually beneficial. The demand for rigorous, science-based approaches is growing as public and private sector interests increasingly work together to secure benefits from nature for people. NatCap is helping to meet this demand by bringing the scientific method into decision processes. Science helps stakeholders imagine brighter futures and evaluate strategies for getting there. Also, it allows for testing new approaches and their long-term impacts on biodiversity, ecosystems, and human wellbeing. NatCap's expanding network is allowing us to draw on impact evaluation methods from public health, computer science, and a host of social science disciplines to understand how human behavior and many other factors affect the uptake and success of policy interventions and investments.

As we head into this holiday season, think of the pearly everlasting. NatCap's drive to reinvigorate open exchanges—through science-based dialogues, partnering, and learning—is creating lasting change. More connected and informed communities around the world can build inspiration through a shared vision and secure better outcomes for people and nature, no matter the season.



Mary Ruckelshaus  
Natural Capital Project Managing Director



### Dive In.

We've built free, open-source tools to make science advances accessible and useful in real decisions. ROOT is a tool to perform optimization and tradeoff analysis. Check out all our software at [naturalcapitalproject.org/software](http://naturalcapitalproject.org/software).

## 2018 Natural Capital Symposium

Please join us for the **2018 Natural Capital Symposium** at Stanford University from **March 19-22, 2018**. This event is a major convening of leaders advancing the science and practice of incorporating nature's diverse values into decisions. Come hear thought-provoking



presentations, exchange ideas, interact with thought-leaders from around the world, learn to use natural capital approaches and tools, and expand your thinking about people and planet.

Stanford University, Stanford,  
CA, USA

Interactive sessions throughout the symposium will focus on two central themes: sustainable development planning and sustainable, livable cities. These themes will be complemented by sessions exploring the security of fresh water, fostering resilient coastal communities, and creating standards for the private sector.

This year, we will be joined by keynote speakers Jane Lubchenco, (University Distinguished Professor, Oregon State University, and former Administrator, National Oceanic and Atmospheric Administration (NOAA)), Harini Nagendra (Professor of Sustainability at Azim Premji University, India , and author of "Nature in the City: Bengaluru in the Past Present and Future"), Mark Tercek (President and CEO of The Nature Conservancy and author of "Nature's Fortune: How Business and Society Thrive by Investing in Nature"), and Jerry Yang (Founding Partner, AME Cloud Ventures, co-founder of Yahoo!).

Last year's symposium drew over 300 people from 31 countries, representing universities, NGOs, businesses, governments, and other institutions. We heard from 100 presenters about advances in science, the development of tools, and how natural capital understanding is being used to inform decisions around the world.

It has been exciting for us to watch this event grow over the last several years, and we're looking forward to spending time with an even bigger and broader community at the 2018 Symposium. Please come join us, as we all work together to ensure that nature's contributions to society make their way into smarter decisions for a more sustainable future.

The early bird deadline is fast approaching--**register before December 22nd for lower rates.**

Register Today

*More information about the 2018 Natural Capital Symposium is available on our [event website](#).*

## Recent Press & Publications

[Distilling the role of ecosystem services in the Sustainable Development Goals](#)

Wood, S. L. R., Jones, S. K., Johnson, J. A., Brauman, K. A., Chaplin-Kramer, R., Fremier, A., Girvetz, E., Gordon, L. J., Kappel, C. V., Mandle, L., Mulligan, M., O'Farrell, P., Smith, W. K., Willemen, L., Zhang, W., DeClerck, F. A.

*Ecosystem Services*. 2018. Vol. 29, Part A, 70-82, doi: 10.1016/j.ecoser.2017.10.010.

[Curve Number Approach to Estimate Monthly and Annual Direct Runoff](#)

Guswa, A. J., Hamel, P., Meyer, K.

*Journal of Hydrologic Engineering*. February 2018. Vol. 23, Issue 2. doi: 10.1061/(ASCE)HE.1943-5584.0001606

[Watershed services in the humid tropics: Opportunities from recent advances in ecohydrology](#)

Hamel, P., Riveros-Iregui, D., Ballari, D., Browning, T., Céleri, R., Chandler, D., Pan Chun, K., Destouni, G., Jacobs, S., Jasechko, S., Johnson, M., Krishnaswamy, J., Poca, M., Vieira Pompeu, P, Rocha, H.

*Ecohydrology*. 27 November 2017. doi: 10.1002/eco.1921

[A new NatCap software tool supports landscape restoration around the globe](#)

By Bonnie Keeler. *Institute on the Environment*. October 31, 2017

[Global Kids Study: More Trees, Less Disease](#)

By Basil D.N. Waugh and Sarah Tuff Dunn. *University of Vermont*. October 6, 2017

[How to reach a mature Anthropocene](#)

By Perrine Hamel and Leah Bremer. *Future Earth*. October 4, 2017

[Mainstreaming ecosystem services in state-level conservation planning: progress and future needs](#)

Noe, R. R., B. L. Keeler, M. A. Kilgore, S. J. Taff, and S. Polasky

*Ecology and Society*. September 2017. 22(4):4. doi:10.5751/ES-09581-220404

[Estimating Cost-Effectiveness of Hawaiian Dry Forest Restoration Using Spatial Changes in Water Yield and Landscape Flammability Under Climate Change](#)

Wada, Christopher A., Leah L. Bremer, Kimberly Burnett, Clay Trauernicht, Thomas Giambelluca, Lisa Mandle, Elliott Parsons, Charlotte Weil, Natalie Kurashima, and Tamara Ticktin

*Pacific Science*. September 28, 2017, 71(4):401-424, 2017. doi:10.2984/71.4.2

[Assessing ecosystem service provision under climate change to support conservation and development planning in Myanmar](#)

Mandle, Lisa, Stacie Wolny, Nirmal Bhagabati, Hanna Helsing, Perrine Hamel, Ryan Bartlett, Adam Dixon, Radley Horton, Corey Lesk, Danielle Manley, Manishka De Mel, Daniel Bader, Sai Nay Won Myint, Win Myint, Myat Su Mon

*PLOS ONE*. September 21, 2017 12(9): e0184951. doi:10.1371/journal.pone.0184951

[Inequitable vulnerability to heat across Minneapolis' 87 neighborhoods](#)

By Manisha Rattu. *Institute on the Environment*. September 14, 2017.

[Upstream watershed condition predicts rural children's health across 35 developing countries](#)

Herrera, Diego, Alicia Ellis, Brendan Fisher, Christopher D. Golden, Kiersten Johnson, Mark Mulligan, Alexander Pfaff, Timothy Treuer & Taylor H. Ricketts

*Nature Communications* 8. July 27, 2017, 811 (2017). doi:10.1038/s41467-017-00775-2

[A geofinancial engineering initiative: using real-time environmental data from satellites to move financial markets and improve climate outcomes](#)

Kriss, M. R., J. J. Hellmann, E. Lonsdorf, N. Springer, P. H. Kriss, M. Horster

*Journal of Environmental Investing*. 2017. 8: 129-159. PDF with [Commentary](#) on *Environmental Research Web*.

[A Tool for Selecting Plants When Restoring Habitat for Pollinators](#)

M'Gonigle, L. K, Williams, N. M., Lonsdorf, E., Kremen, C.

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