



QUANTIFIED

JOE WHITWORTH

Redefining
Conservation
for the Next
Economy

Quantified

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REDEFINING CONSERVATION
FOR THE NEXT ECONOMY

Joe Whitworth



Washington | Covelo | London

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*For Liz, Ellie, Anna, and Henry.
And all others who build from here.*

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A Note to Readers

As president of The Freshwater Trust, I long ago committed to innovating beyond what was known in order to do what was needed. This led us to engage technology and create new methods to accelerate the pace and scale of restoration of freshwater ecosystems. Where some saw our commitment to experimentation and evolution as bordering on maniacal, others encouraged me to share these new tools with a broader audience by distilling them into a book. Having never written a book, I turned to Andrea Carlos, an accomplished journalist with an abiding interest in conservation, and despite having a farm remodeling project under way at the time, she agreed to help. A superb collaborator, she is a key reason why this project got done. This is how we worked together: After distilling the key elements of the book framework, I laid out the original thought line of how the economy and the environment must integrate in the face of twenty-first-century realities. Thereafter, Andrea and I figured out the right stories, research, and expert interviews needed to create the countless drafts, which we passed back and forth to hone the manuscript into its current state. Although I would not describe the work as easy, we both feel that the partnership rendered some great stuff; we hope you will agree.

Acknowledgments

I get paid to tell the truth—not necessarily an easy thing in a world that does not always want to hear it but something I feel compelled to do nevertheless. Our ability to do so depends on three basic factors: We need to want to do it, we need to know how to do it, and we need to be in a position to do it. Each of us is a composite of our experiences and relations—shaped greatly or slightly by every single interaction—and book writing is no different. Neither this work nor my perspective would be here without all the arguments, discussions, and learning graciously afforded to me throughout my life. My exceptional mom would say, rightly, that the events and people leading up to this publication are the real catalysts here, and I am forever grateful for what they have given me.

Before writing this book, I did not know what drove me. I did not have a singular, mind-blowing wilderness experience that propelled me into this work but rather a quiet and steady influence from my grandpa and dad, delivered over minutes, hours, days, and years. Neither of them will ever read this book, but both can clearly be read in me. In wrestling with this project, I gained a perspective on my relations with them that will forever guide my mind.

The people I work with provide me with more energy and insight than anyone has a right to, and I count myself fortunate to be able to work with such committed intellect. This includes the staff, top to bottom, of The Freshwater Trust since the day I walked in the door. As individuals and as

a group, we remain interested not in stuff that sounds cool or merely looks good; we need it to work for real. I hope to have the privilege of working alongside many of these colleagues for years to come. Those who directly helped inform and shape this project include Caylin Barker, Brett Brown-scombe, Matt Desmond, Joe Furia, Marley Gaddis, Tony Malmberg, Adrian McCarthy, Mark McCollister, Jason Miner, Gustavo Monteverde, Jim Myron, David Pilz, Karin Power, David Primozich, Erin Putnam, Nicole Spencer, Haley Walker, and Tim Wigington. The guy who gave me the final push to get it done was Alan Horton, a trusted colleague fully committed to changing the world for the better.

Because my vocation is the avocation of others, I meet folks in a unique head space: They want to bring their intellect and resources to bear on the big problems we face as a society. There have been many who helped along the way, but those who pushed me hardest, informed me best, and supported me unstintingly include Hank Ashforth, Roger Bachman, Reed Benson, Tim Boyle, Andy Bryant, Dave Chen, John Colosimo, Scott Demorest, Rocky Dixon, Matt Donegan, Gary Fish, Paul Fortino, Al Jubitz, Art Kayser, Mike Keiser, Don Krahmer, Randy Labbe, Dave Laurance, Lynn Loacker, Luis Machuca, Marty Myers, Jan Newman, Tim O'Leary, Brad Preble, Scott Sandbo, Bill Smith, Tony Trunzo, John von Schlegell, and David Willmott. I found myself returning frequently to discussions and scenarios with this group as I wrote, and I thank them for their good counsel.

Colleagues and friends both inside and near the conservation community provide a deep well of inspiration, but fixed in my mind are a group whose conversations I turned to repeatedly whenever I had difficulty navigating, which happens when you undertake a book project: Bill Bakke, Ricardo Bayon, Mike Blumm, Fred Boltz, Paul Brest, Alexandra Cousteau, David James Duncan, Marshall English, Peter Gleick, Robert Glicksman, Martin Goebel, John Goldstein, Bill Hatcher, Deb Hatcher, Kenny Helfrich, Rick Henslee, Dan Keppen, Jim Klug, Ben Koldyke, Gregg Lemkau, Ian Lombard, Patrick Maloney, Ned McCall, Nancy McKlveen, John Nordgren, Patrick O'Toole, Wendy Pabich, Dick Pedersen, Jim Prosser,

Andrew Purkey, Dan Rohlf, Jason Scott, Mary Scurlock, Susan Phinney Silver, Peter Stein, Robert Stubblefield, Gene Sykes, Dan Winterson, and James Workman. The beacons provided by this group of advocates, doers, innovators, scientists, and scholars truly kept me focused and the project on track in trying to describe the needed evolutions in accounting, agriculture, economics, and the environmental movement. Any errors, miscalculations, and other such failings are my own.

My editor, Emily Davis, was in many ways the best part of doing this project. Her accessibility and willingness to work through the daunting task of laying out a plan to redesign conservation and integrate it into a durable economy make her legendary in my mind. The most difficult thing I never knew existed—copy editing—was flawlessly tackled by Sharis Simonian. On the marketing side, Julie Marshall and Jaime Jennings made it their jobs to put this book in your hands—they not only did it, they made it look easy. This is my first book, and as publisher, Island Press nailed it.

In the end, I wrote this with not past but future generations in mind. Whenever I came to a point where I could honor those who got us this far while pointing out where we must go next, I did exactly that. But in all conflicts between what we used to need and what we need now, I intentionally sided with those who must face the complex problems ahead: you.