

Creative Creatures

The ideas and the work of the American and European painters, songwriters, photographers, fiction and non-fiction authors, musicians, film makers, architects, designers, poets, and dreamers I met during my 20 years in America.



43 / Dr Elisabeth Holland, climate change scientist, Tuva, Fiji

Nowadays, she is a cluster leader. That doesn't sound very exciting. But she is a cluster leader at the University of the South Pacific in Tuva, in Fiji. Now that sounds a lot better, don't you think? It is getting even more interesting: she is a professor of Climate Change and the director of the Pacific Center of Environment and Sustainable Development (PACE-SD) under the EU-Global Climate Change Alliance project based at PACE-SD. A Leopold Fellow and co-recipient of the 2007 Nobel Peace Prize, she served as a Lead Author and German representative on the Third and as a Lead Author and US representative on the Fourth Working Group 1 Assessment Reports of the IPCC, the Intergovernmental Panel on Climate Change. Working Group 1 focuses on the Physical Science Basis. What more could there be to say? Oh well, she was a founding professor of the Max Planck Institute of Biogeochemistry in Jena, Germany, one of the new Max Planck Institutes formed in former East Germany following German reunification.

And Beth Holland is lovely and beautiful. An athletic, easy-going and funny woman devoted not only to climate change research but to the great outdoors. When living in Boulder, Colorado, and working at the National Center for Atmospheric Research where she directed NCAR's Biogeosciences Program, she had the Rocky Mountains as a backdrop to roam around in, wild rivers for her kayak, and snowy slopes to ski down from. Now there are endless white beaches and a deep blue, almost bottomless ocean to draw her out whenever she can. Before she traveled to the paradisiacal side of the planet, Beth bought land near Cañones on a spectacular ridge with astonishing views of canyons, mesas and mountains, where she was planning to build her hide-out and future home—and where she would find enough new trails to hike to last her a lifetime. Yet she couldn't say "No" to the offer the Fijians made her, could she? She chose for the exotic, for a culture (of the Lapita people, ancestors of the Polynesians) even older than that of the Anasazi Indians of the Southwest, for a life side-by-side with descendants of old Melanesian tribes not much different from New Mexico where she strongly connected with the Navajo population. In other words, she chose for sitting in a string bikini under a palm tree in the hot sand with as only sounds the breaking of the waves—at least, that's the stuff I am dreaming of.

Beth was already interested in climate change before most of us could figure out what the deal was if someone talked about global warming. She received her PhD from Colorado State University in Fort Collins and focused her science on using models and observations to understand how earth systems work. She has worked on carbon and nitrogen cycling; land surface, agricultural, and atmospheric chemistry; and earth system modeling. She is widely recognized as an international scientific leader in understanding the global nitrogen cycle and its interactions with the carbon cycle and the earth system. She—now the Pacific voice for climate change and sustainable development—is not one to be patient with the people who deny climate change and call global warming a fabrication, and who all too often are much easier to get convinced of the earth being created barely 6,000 years ago.

The South Pacific, in all aspects, is much larger than the musical Rodgers and Hammerstein created on Broadway and was put on the big screen by Hollywood (remember its great songs, 'I'm Gonna Wash That Man Right Outa My Hair' and 'There Is Nothing Like a Dame'?). Fiji, with its 350 islands and 500 islets measuring 1,000 clicks from east to west, is surrounded by fifteen other independent and self-governing (island) states. Together they form the Pacific Islands Forum where mutual issues, including climate change and sustainability, are discussed. The other members are Australia, Cook Islands, Federated States of Micronesia, Kiribati, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands ("I love the Solomons," says Beth. "They send me their best students to train"), Tonga, Tuvalu and Vanuatu. They own more white beaches and warm, clear-blue ocean waters than the rest of the world. And if these aren't enough exotic names, New Caledonia and French Polynesia were granted associate membership and Forum observers include Tokelau, Wallis and Futuna, as well as American Samoa, Guam and the Commonwealth of the Northern Marianas, with Timor Leste as special observer. Not all populations of the member countries are happy today with their prime tropical ocean-front real estate. There are islands in danger of disappearing; there have already been evacuations. The physical threat of rising ocean levels raises the awareness of the Forum countries—and as a consequence PACE-SD at the University of the South Pacific is a science center with a clientele that takes climate change research rather seriously.

"Fiji is better placed than developed countries in terms of adapting to the effects of climate change," said Beth at Fiji's first national climate change summit. "There is a tremendous resilience already in present day Fiji. The rural communities rely on traditional knowledge that is sustainable, and these include ways on how to preserve food and safeguard root crops in the event of an impending severe weather event." Fijians do have power over their destiny if they accept the weaving of local knowledge with scientific knowledge. "Locals understand climate change in a way that climate scientists cannot know, but just depending on what the ancestors have known will not be sufficient." Recently, Beth helped launch 'Moana: The Rising of the Sea', a theater and dance performance describing the heartbreak of land loss and the resilience of coming together in one voice to speak out.

Rainfall patterns in the South Pacific will continue to change. The southern hemisphere's most expansive rain band is expected to move northwards to the equator by 1,000 kilometers. Such occurrences could lead to extreme droughts, raging floods, and uncommon tropical cyclones with a devastating impact on the countries in the South Pacific... and to the end of Beth hanging out on romantic beaches. Well, she'll be the first one to know when it's time to move back to her New Mexico property, safe at 7,100 ft.