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Photo: Kyle Krause

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Going Down the Road With Hunter

My work as a global nomad continues.

Since the last report, I've logged 5 countries and 15 states and over 50 cities. All these airline miles are just one of the reasons that Natural Capitalism is a carbon neutral organization through its membership in Chicago Climate Exchange.

Early April, found me headed to St Louis to speak at Washington University, Principia College, and Southern Illinois University. I always try to accept invitations from student organizations, if I have the time. The Principia trip helped a group of students trying to convince their administration to implement more sustainable practices. The assertion by some of the college's facilities staff that they had exhausted all possible energy efficiency opportunities was disproved, quite to my annoyance, by entering my campus guest room to find 12 incandescent light bulbs burning, with the previous tenant gone for hours. It fueled my determination to help the students enable the college do a lot better.

After the three college events, I scrambled onward, barely making the flight to London en route to Naples and Capri. In London, waited a wonderful afternoon with my friend, Jason Elliot, at the new Front Line Club, a restaurant and club created by BBC journalists for their colleagues and NGO staff who work on the front lines of conflicts around the world. It felt marvelously like home.

Easter found me on a hydrofoil headed to the lovely Isle of Capri. At the invitation of Dr. Bron Taylor, I joined a group of international scholars revisiting the now 20 year-old Brundtland definition of sustainability.



Isle of Capri
Photo: Flickr

Gro Harlem Brundtland, the former prime minister of Norway, headed the 1987 UN committee that first defined sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their needs." When the resulting report, *Our Common Future* was issued,

it was assumed that sustainability was the responsibility of the world's governments. It led to the 1992 Earth Summit at Rio, and the first promulgation of the world's agreement to limit carbon emissions, which five years later was codified as the Kyoto Protocol.

Now, ten years on, the recent Fourth Assessment Report by the scientists of the UN's Intergovernmental Panel on Climate Change makes frighteningly clear just how little this approach or relying on the governments of the world has achieved.

In the Caprese sunshine, we enjoyed the gardens of the luxurious villa of Axel Mudi, high on the slopes of Mt. Solaris. My Natural Capitalism view that companies and communities are far ahead of governments in implementing the changes now desperately needed came as something of a surprise to the group. We have all the technologies needed to solve such problems as peak oil and climate change, and to implement sustainable ways of meeting our needs. But in the tripartite world of today the solutions will not come from national governments, alone. They have not, and now we are in a planetary climate crisis.

Nation-states obviously still matter, but half the largest economic entities in the world are no longer countries, they're companies, so businesses must be part of shaping the solutions. And in an internet-empowered world, a small group of people can de-legitimize any country or company.

My assertions made the European political theorists real uncomfortable: asking ‘who’s in charge here’ challenged their comfortable conventions. But I persisted. We’re not getting the job done. And as some of the largest companies start telling their Chinese suppliers to manage their carbon footprint, implementing a sustainable solution obviously has to occur within the messy triangular space of governments, businesses and civil society. Reporting on the enormous progress being made by local governments implementing community sustainability plans and businesses, small and large, that are driving the sustainability agenda in the United States even though the federal government has abdicated responsibility, I found the Europeans, Chinese, and African amazed. This word is not getting out. The rest of the world just looks at the inaction of the Bush Administration and despairs.

I also presented the Natural Capitalism approach to international development: meeting the needs of people at the base of the pyramid using world best practice in sustainable ways to provide energy, water, housing, sanitation, transportation, health care, etc. This is the work NCS is doing in Afghanistan, Honduras, Jamaica and other developing countries. It is, I believe, the only approach that can work fast enough solving the climate crisis. Unleashing a new energy economy based on energy efficiency and renewable energy is the only way to bring China and India into the battle to protect the climate.

Leaving Capri, I ran through airports, crossing the polar route to reach San Francisco in time to teach at Presidio. While there, I presented advances in green building to one of the city’s major architectural firms, then scrambled back to Boulder to speak at Step It Up’s national rally on climate change. After a day at home, I was gone again to Auburn University, speaking to students, classes and local officials on sustainability. Then back to San Francisco to speak to the Commonwealth Club on “Profit and the Planet: Can sustainable business renew our economy and save our planet?” and brief the community advisory board of one of the largest homebuilders in the country.

Then to Ventura, California, for the employee assembly at Patagonia, and on to Ojai to keynote a community climate event. I took a day of down time with my beloved godmother, Betty Williams, at her Buttonwood Farm in Solvang, talking and sipping Buttonwood’s spectacular wines before flying north again to teach at Presidio. Back in Denver, I joined the Mayor for his release of the Green Print Plan outlining programs the city plans to use to reduce its footprint, enhance its quality of life and reduce its carbon emissions. For over a year, I served on the advisory committee that drafted the Plan. Then it was on to Alberta, Canada to address the annual Alberta Association of Environmental Educators, and west for the Presidio School of Management’s third graduation ceremony.

You Tube interview after her presentation to the employees of the outdoor clothing company Patagonia.

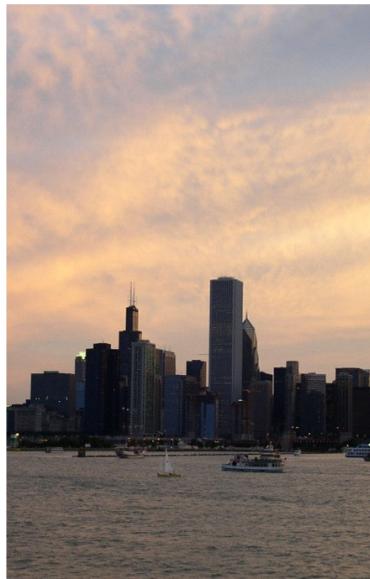
June found NCS' Director of Research Brianna Buntje and me joining experts in community action on climate change at the Wingspread Conference Center outside Racine, Wisconsin. Brianna has overseen all of the research and writing for this and the newly emerging Business Climate Protection Manual, which we presented, as well as serving as one of NCS' consultants.

Brianna returned to her work with our clients, while I headed south to San Antonio to brief the Mayor, City Council, and the City Utility on alternatives to building coal and nuclear power plants. Also there were representatives from the coal and nuclear industries who, when pushed hard enough, confirmed that building new plants, particularly if the coal plants are the so-called "clean coal," would be vastly more expensive than the renewable option now available. No one disputed that energy efficiency is far cheaper than conventional power plants. Even the promoters of the dirty plants agreed it would take at least 10 years for their options to come on line. In other words, they cannot solve the climate problem, which must involve reducing carbon emissions as soon as possible.

From San Antonio, I headed to Vermont to speak to an Executive MBA course at Norwich College, then on to Chicago to speak at the Chicago Climate Exchange's members meeting. As members of CCX all of NCS' flying is offset by the even greater energy efficiency of other members, whose factories had previously burned coal or other fossil fuels, and whose reductions more than equaled our emissions. It was a heart-warming joy to be with the CCX team that has built the world's largest live carbon market, proving that using market mechanisms to reduce greenhouse gas emissions can flourish even in a country with no law requiring it.

CCX now helps companies representing almost 20% of stationary emissions systematically reduce their use of energy and implement profitable climate protection programs.

From there I winged on to Portland, Oregon, and up to southwestern Washington to keynote a conference on sustainability and economy development, then east to Pittsburgh to address Goodwill Industry's Annual Meeting. Then back to Wingspread to join the national steering committee writing the President's Climate Action Project. This bipartisan effort will present the next administration, of whichever party, with a grounded, cost-effective program to immediately implement climate protection programs in every Federal Agency. I am writing the chapter on the Economic Case.



Chicago Skyline
Photo: Hunter Lovins

Mercifully, July went to writing, which kept me off of airplanes as I worked with the NCS staff drafting the Business Climate Protection Manual, companion to the Climate Protection Manual for Cities that is already available on the NCS website. The business manual should be out in early 2008, and like the Cities Manual, will be available for free download from the NCS website. I also wrote a chapter for the upcoming World Watch book, *State of the World on Sustainable Production*, describing how the Natural Capitalism principles blend with Janine Benyus' biomimicry and Walter Stahel's cradle-to-cradle approach to form the foundation of sustainability.

During the summer, I keynoted an array of conferences around Colorado, speaking at the Earthworks Conference in Denver, about the relationship between sustainability, and peace and justice; in Aspen on the Drivers of Change, to the Association of Land Use Planners; to Governor Dick Lamm's class at the University of Denver; to Boulder County Commissioner Will Toor's class at the University of Colorado; and many others.

By August the road called again: to San Francisco to speak to the Leadership America conference and to work with the Presidio School of Management faculty creating a new Executive Certificate Program in Sustainable Management to be offered in 2008. A distilled version of the MBA in sustainable management, it will take participants who already have the basic MBA skills through the principles of sustainability.

August also brought the return of students to the regular Presidio program. I marvel each term as the class swells with 50 or more bright, dedicated future colleagues. The proof is certainly in the achievements, and as the classes gave their term presentations this weekend, I swelled with pride that these MBAs-to-be have learned their lessons well. I'd be pleased to have any of them as colleagues. Gives me hope in my dark moments—this field is definitely not as lonely as it used to be.

Nancy Johnston, my devoted logistical genius of an Exec at NCS, now travels with me to California every month to handle the administrivia of delivering the ever-evolving field of sustainability to the growing class of new MBA students. Nancy's been with me since the RMI days, and is essential to making life on the road (and much else at NCS) possible. She handles all of my travel and scheduling, at the same time that she tracks student submissions, manages NCS' website and communications and retains our institutional memory. Thanks, Nance, could not do this without you . . .

While in California, I gave two lectures at West Coast Green, the largest green building expo on the west coast. Returning home, I spoke at several local town meetings called by a group of citizens working with the local utility to convince them to implement energy efficiency and renewable energy opportunities.

In September, I spoke at the University of Iowa Energy Conference, then on to the University of Florida where I teamed with Bob Willard, author of *The Next Sustainability Wave*, gave a public lecture, and meet with students, local political leaders and university officials. The Gators have a secret weapon now. Presidio's Dedee DeLongpre now heads the sustainability program at the University and is implementing an array of exciting programs.

From Florida, it was on to Hungry for the annual meeting of the Balaton Group.

This international group of thought leaders in sustainability was formed 26 years ago by Dana and Dennis Meadows, author of *Limits to Growth* and *Beyond the Limits*. This meeting focused on climate protection. I joined with Dr. Stephen Rayner, who runs the Martin Center (a policy center) at the Business School at Oxford in the UK, and Dr. Tariq Banuri of the Stockholm Environment Institute, to present the business case for climate protection.

Again, my European colleagues were amazed that businesses and communities in the United States are actually implementing climate protection programs. Government mandates would sure help and will come—I've a bottle of good whisky bet with the Executive Director of New Voice of Business that we will see a federal climate regime in this country before the end of the year. But it's not correct to say that the whole of the U.S. is ignoring the problem.



Hunter with Green Gorillas Protesting Nuclear Power at West Coast Green
Photo: Edward Worrell



Lake Balaton
Photo: Junko Edahiro

Tariq expanded the conversation by pointing out that the world much resembles a champagne goblet, ample at the top but tapering to the narrowest of stems. In the fat bowl is us: the 20 percent of the world's population that has 80 percent of the world's income. The remaining 80 percent of the world's population, the fragile stem, has only 20 percent of the world's income. Those at the stem's bottom have almost nothing at all.

Both Steve and Tariq called for a shift from government-mandated reduction programs that aren't going to work anyway and can not be brought into force in places like China and India, to a massive commitment by governments, companies and activists to deliver real development world wide. Such a program would focus particularly on those in the stem of the champagne flute. Steve, Tariq, and I argued that doing this would unleash the new energy economy that could dramatically expand prosperity and well being while reducing carbon emissions and other greenhouse gases with a entrepreneurial spirit that mandatory schemes, for political reasons, can't achieve. Some of our European colleagues insisted that, particularly in areas where government is responsive, mandatory programs are essential. I don't disagree, but relying on these alone will fail to solve any of the problems in the time available. No one disputed that time is very short.

At Balaton, we heard from leaders from around the world: the chief climate scientists from Russia, a member of the IPCC from China, Austrians, Hungarians, Germans, Danes and Brits. Perhaps most sobering was the math done by the Hungarians showing that so far this year their country has lost one percent of its gross

national product (GNP) due to agricultural losses caused by climate change. The Austrians described how their skiing industry is facing extinction as the glaciers and snow pack melt in the dramatically warmer winters. They showed pictures of attempts to cover the glaciers with tarps to slow the melting. Other Europeans described major storms: the hurricane that hit Germany last year—the first in history—the 150-year flooding that swept across the U.K. and much of Europe, and the intense heat waves that scorched Greece and the southern tier.

From Balaton, I flew through Munich to San Francisco, once again having the opportunity to view the stunning loss of snow cover over Greenland.



Southern Tip of Greenland
Photo: www.solarviews.com

I arrived in time to teach my Principals of Sustainable Management, Implementation and Business, Government and Civil Society classes at Presidio.

While in San Francisco, I also took time to meet with Jim Thompson and Will Flemming of Cog Books, a web-based learning company that will be working with NCS to make our material available in much more effective teaching formats. Cog Books' approach to education is unique, using the best of cognitive science, good teaching techniques and tools that the web makes possible to present materials in ways that are much easier to learn and retain. I am now frantically raising the funding to let us put all our material into this format. It is not only the most exciting approach to education I have found, but one way to enable me to stay at home on my beloved ranch more and write.

But not yet . . . The road lay onward to the Wasatch Front of the Great Salt Lake, where my determination was reinforced by conversations with friends assembled by John Peterson of the Arlington Institute for a scenario planning exercise. All of the experts agreed that, given the myriad challenges the world is facing, distance learning will be key to implementing solutions fast enough.



In October, I returned to Wingspread for the final National Leadership Summit on Sustainable Development, helping finalize the President's Climate Action Project Plan.

Then on to D.C., speaking on the main stage at Green Festival and at the companion conference asking, "What is the Economy For Anyway?" I took the opportunity while there to meet with officers from USAID, continuing my efforts to find ways to implement more effective approaches to economic development in places like Afghanistan.

Then to Frankfurt, at the invitation of the German Foreign Minister, for a gala opening night of the Frankfurt Book Fair. There we launched a book in which I was interviewed, called *The German Dream*. Since prior German dreams have brought problems for the world, Germans have been encouraged *not* to dream. A

young German-American couple believes that nations, like individuals, perish without vision, and interviewed people from around the world who have had a connection to the country to see what a positive dream might be. I suggested that German engineering and other talents are vitally needed to unleash the new energy economy around the world. I described how work by German NGOs, in places like Afghanistan, is making a real difference for people in developing countries. A German commitment to serve the rest of the world with technologies that reduce carbon emissions and to develop approaches that help people build local capacity to solve their own problems, will allow Germany to dream once again. I also took the opportunity with the cameras flashing to plead with the Foreign Minister not to abandon Afghanistan. As I landed in London the next day I read that he had gone before Parliament and gotten the mandate for Germany to remain part of the international force working there.

From Frankfurt, I flew to London to a waiting car that raced me up to Cambridge to lecture to the Environmental Institute and the Institute for Manufacturing. Touring King's College Chapel I was able to see where Oliver Cromwell once stabled his horses, and where Newton and the other young iconoclasts founded science, the last time that society went through as fundamental a transition as the one we are now in to a sustainable world.

I met also with the Prince of Wales Business Leaders Forum, and my friend Rob Valli, one of the world's better entrepreneurs, now finishing his doctorate at Cambridge. I rejoined Jim Thompson of Cogbooks, whose doctorate is also from Kings College. Together we took the train to London to work more on translating our material into web-learning. Rather than hold discussions in stuffy hotel rooms, tho, we walked from Notting Hill to the Tower Bridge, soaking in a glorious autumn day in England, watching the changing of the Guard at Buckingham Palace, riding the London Eye, and lunching in a traditional English pub. And building a partnership to bring our Business Climate Protection Manual to a much wider audience through Jim's virtual learning system.

As much as I love London, the road called again and it was off to D.C., to help the UN Environment Programme draft their yearbook centerpiece on climate change. Working with Will Feretti of Chicago Climate Exchange, Executive Assistant to CCX founder Richard Sandor, I argued that the UN should focus on unleashing the new energy economy, and empowering genuine development at the local level as the most effective way of achieving carbon reductions and climate protection.

I flew on west to San Francisco to teach again. NCS CEO Jeff Hohensee lectured to both of my classes on the material that will be in our new book, *Natural Change*, on how to actually implement all of the sustainability principles that the students have been learning. Jeff and I also met with Elliot Hoffman, co-founder of New Voice of Business, and agreed to create a new business to help small- to medium-sized businesses implement climate protection. Elliot and I were then asked to join a meeting of the leaders from Silicon Valley for Clean Technology to educate presidential candidate John Edwards. At their request, I sent them NCS' work on climate protection, energy policy and development.

The pace then picked up—flying east to speak to the West Virginia Environmental Protection Agency, and the Greater Washington DC Board of Trade, back to Chicago to keynote the Association of Manufacturing Engineers. Then on to London, where with Al Gore and the Prince of Wales, I briefed some the largest institutional investors in the world. From the UK the road led to Michigan, to San Diego to keynote the Annual Conference of the Urban Land Institute, and on to San Francisco to teach. In the

Bay Area, I lectured at UC Berkeley, spoke for the Berkeley Mayor at the city's annual green business gathering, gave a talk to the community of Brisbane, meet with the leading green County Supervisor of Marin, Charles McGlashin, and a team he has assembled to serve as a strategy and brain trust for making Marin the model green county. I met with youth leaders at the EASE conference, in between teaching classes and spending quality time with my students at my favorite pub, Liverpool Lil's.

As I write, I am winging to New York City for meetings at the UN seeking to reframe the climate debate.

Tomorrow morning, with Dr. Tariq Banuri and a star-studded cast of people from around the world who are devoting their lives to finding the solutions while there is still time, we will again call for unleashing the new energy economy.

If the fates be kind, I return to Colorado late Wednesday night, and actually get to spend Thanksgiving at home, and you will receive this thereafter.

Down all the miles, through all the talks and meetings, I ride with the comment one of my students made after I addressed the whole of the Presidio School of Management Community last night about the seriousness of the new IPCC report on the climate crisis. He said, *"Hunter, we all count on the fact that you still believe that there is hope, that we can solve these crises.*

Thank you for going so hard, and for carrying the dreams of us all. We're with you."

Can't tell you, Graham, how much that meant to me.

And that you, as you read this, are with us at Natural Capitalism as we work to create a vision all living things can share.



Tall Grass
Photo: www.NormClasen.com

Solutions at the Speed of Business

Since its inception, NCS has worked with companies, communities and countries to implement effective sustainability solutions. In January of 2007 this work hit warp drive, as Hunter asked Jeff Hohensee to join NCS as our CEO. Jeff is a dynamic presence, helping staff to identify core competencies, evaluate past efforts and develop high leverage approaches to fulfilling our mission.

Jeff brought his skill in conducting targeted strategic planning sessions to NCS. The results now underpin a renewed commitment to offering sustainability implementation/ consulting services to high leverage clients. NCS has been active throughout the year helping those serious about implementing profitable sustainability identify and implement pragmatic strategies to improve their organization's performance. From some of the world's largest companies to our neighboring town of Golden Colorado, NCS helps organizations develop sustainability baselines, create action plans to expedite implementation and integrate change management models that actively engage decisions makers at all levels.

In the last six months the NCS staff approached, secured contracts and delivered high quality sustainability services to seven corporations and one local city. These companies include media groups, large retailers, food producers and other manufacturers. While this work remains private, it will likely touch your life in numerous ways in the years ahead.

The extensive NCS network of business experts work with companies to integrate cost effective sustainability programs throughout a company's value chain to deliver enduring competitive advantage.

Jeff Hohensee and NCS Director of Research, Brianna Buntje manage the business projects using the process steps (illustrated below):

- **Set the Compass:** This step enables a company to set boundaries, define priorities and goals, and establish indicators of success.
- **Assess the Opportunities:** A baseline assessment of a company's situation allows the team to identify key opportunities to leverage.
- **Set Measures:** NCS works with clients to determine appropriate systems to use as measurement tools to track and/ or quantify results.
- **Integrate and Implement:** This step determines the best ways to integrate and/ or implement the findings from the assessment.
- **Evaluate and Communicate Success:** Ensure that the successes and lessons learned from the process are evaluated and communicated to appropriate audiences.

The process is iterative, allowing a company to take a first, high altitude pass, then return to drill into details it identifies as most important, while retaining a whole systems perspective. After the first cycle, which is generally focused on direct operations, the NCS team uses the same process to evaluate the entire value chain and dig deeper into the corporate culture. This tool allows organizations from small businesses to

governments to multi-national corporations to implement a comprehensive approach to making its operations more sustainable and competitive.

If you know of any businesses that might be interested in working with Natural Capitalism Solutions to take advantage of sustainability opportunities, have them contact us at info@natcapsolutions.org.



Climate Protection Manual for Small Businesses

While companies like DuPont and Wal-Mart hire leading sustainability consultants to help green their operations, small businesses, the economic and job creation engine of the American economy struggle along with little or no help. Until now.

NCS created the Climate Protection Manual for Small Businesses to provide companies in your community with a way to implement energy efficiency programs in ways that they can afford and improve profits. A companion to NCS' Climate Protection Manual for Cities, the business version is written for busy store-owners who want to join the Wal-Marts of the world in cutting waste and costs.

Climate change is an urgent issue that all individuals, businesses and governments need to address and by doing so now, businesses will be better positioned for the future. A Climate Strategy, just like a sales or marketing strategy, is an essential tool to enable businesses to prosper in today's world.

NCS' Manual is for small businesses that want to reduce their energy use, save money and lower their carbon footprint.

The manual sets forth the tools and knowledge needed to plan, take action, measure results and follow-up on your climate strategy. It introduces two tactics and more than twenty programs that can be used to determine a company's individual path to achieving a successful climate strategy. You decide what programs make sense for your business.

The first tactic outlines best bets or practices that apply to all businesses. These include low hanging fruit, practices that any businesses can implement, regardless of their industry. The second tactic consists of specific best practices that apply to selected industries.

The Business Manual will join the Climate Protection Manual for Cities website (www.climatemanual.org), available for free download by early in 2008!

The screenshot shows the Natural Capitalism Solutions website with a yellow header bar. On the left, there is a logo for "NATURAL CAPITALISM SOLUTIONS". Below it, there are four small images: a factory interior, a city street, a row of houses, and a factory exterior. To the right of these images, the text "for cities" is displayed with "[enter site]" below it. In the center, the text "Climate Protection Manuals" is prominently displayed in large black letters. Below this, a message reads: "14 Jun 2007: This site was moved to a new server. Please [contact](#) us if you find problems." To the right, there is another set of images: a factory interior, a city street, a building, and a factory exterior. The text "for businesses" is displayed with "[coming soon]" below it. At the bottom of the yellow bar, the text "Natural Capitalism Solutions © 2007" is visible.

Summer in Eldorado Springs with NCS

As June arrived and the warmth of summer settled into Eldorado Canyon, sustainability enthusiasts from Missouri, Illinois, Minnesota, and right down the street in Boulder migrated to Natural Capitalism to begin their initiation as Natural Capitalism interns. The first day began a summer long discussion on sustainability and how to implement the sorts of changes the world needs. It was exciting to receive our summer project assignments. I could tell right from the start that this would be a talented and fun group to work with.

My name is **Stephen Mannhard**. Recently graduated from the University of Dayton with a degree in geology and business, I joined NCS to work on the University Chapter of the Business Manual. The intern team also included Linda Bilsens, Kendall Olsen, Alex Green and Justin Kushik.

Linda Bilsens, a natural resources and environmental studies major at the University of Illinois, worked particularly closely with Brianna, marketing the Climate Protection Manual for Cities. Linda is now back at the University of Illinois finishing her last semester of school. She then hopes to return to Colorado.

Kendall Olsen, recently graduated from the University of Colorado at Boulder with a degree in environmental studies. She began her internship in January, working on the employee transit chapter of the Climate Protection Manual for Businesses. Kendall is currently in Steamboat Springs, working and waiting for the snow to fall.

Alex Green, another environmental studies major at the University of Colorado worked on the Office Measures Chapter of the Climate Protection Manual for Businesses. Alex is currently finishing one more semester before graduating in December.

Justin Kushik joined NCS after graduating from the University of Colorado, to produce the Energy Sourcing Chapter of the Business Manual. Working on the chapter stirred Justin's excitement for the renewable energy market and led to his current position as a sales associate at Renewable Choice Energy, a Boulder-based carbon offset provider.

Throughout the summer, the range of projects helped all of us develop a holistic understanding of this industry, gain a working knowledge of sustainability and the principles of Natural Capitalism. Our work included, carbon offsets, proposal writing, non-profit outreach and development, green building and environmental career development. We were privileged to be a part of such a talented and knowledgeable team. The NCS staff worked closely with us, helping build our knowledge and skills. As the summer progressed we became a very close group, making it a point to eat lunch together nearly everyday to discuss the things we were learning about and were catching our interested.



Imagine my delight to learn that I had been chosen to join the NCS team as a research associate. My job now is to conduct research and produce reports to support a variety of NCS projects. I also help with NCS' marketing, outreach and administrative duties. This means I may answer the phone when you call, or may be called upon to meet Hunter at the airport and accompany her to speeches around the Front Range.

I owe particular thanks to our great internship coordinator, Brianna Buntje, and the rest of Natural Capitalism Team for providing an internship program that is challenging, fun and a very effective learning experience. Contact us today if you are interested in our year-round volunteer internship program.

New Staff Join NCS

Rachel Hohensee

Rachel comes to Natural Capitalism Solutions with a wide array of work experience in education, community outreach, staff development and office management. With a Master's Degree in Education, strong organizational skills and drive for excellence, she has taken the NCS office firmly in hand and is dramatically improving office effectiveness. Rachel brings over 16 years experience of management within large group settings, a strong sense of community building balanced with efficient systems thinking to her role as Office Manager.



Before coming to NCS Rachel served as an executive assistant for a start-up sustainable wellness resort in Michigan. Previous to that she worked for the Detroit public school system in the inner city. Committed to social justice, education and lifelong learning, Rachel is excited to join the Natural Capitalism team.

Martha Larson

Director of Client Services and Marketing Martha has over 25 years experience in strategy, communications and organizational development. Her experience in sustainability spans research and advocacy around energy efficiency and renewables, as well as communications/ marketing for public environmental awareness events such as Earth Day.



Notable NCS Associates

Associate Paul Sheldon recently moved from

 San Francisco to Durango, Colorado, to become the Senior Manager of Policy and Research, for Ecos:
www.ecosconsulting.com. Paul will supervise Ecos' world-leading research on electricity

using products such as light bulbs, TVs, cable TV set top boxes, power supplies and battery chargers. Based largely on Ecos' research and advice, many jurisdictions are beginning to set performance standards for light bulbs and other electricity using products, which, if adopted will eliminate some of the "need" for new coal-fired power plants.

Paul is nearing completion on a report detailing alternatives to the proposed Desert Rock coal fired power plant, on the Navajo Nation in the Four Corners region, near Burnham, New Mexico. The \$2.5 billion plant, to be financed through the Sithe Global subsidiary of Blackstone Group, would provide 200 much-needed jobs for local Navajo residents. But similar investments in available solar, wind and

biomass resources would produce hundreds, or perhaps even thousands more jobs, with better working conditions and greater economic development for the Navajo Nation. Conditions on the Navajo Nation are similar to those in Afghanistan, with many of the same solutions possible.

Natural Capitalism and Ecos Consulting are exploring various options for collaborative projects. Welcome back to Colorado, Paul!



Debbie Edgar Fox, an old colleague of Jeff Hohensee's from Tree People days, moved to Boulder this summer and we were lucky enough to have her work with NCS on several consulting projects. Bringing 13 years of experience in Los Angeles on project management, stakeholder development and education, Deb has worked with academic institutions, non profit organizations, government agencies, and businesses. We wish Debbie the best successes in her new career in Boulder.

NCS Alum goes to The Gambia

Kate Curl, our former Operations and Development Officer, arrived in The Gambia 27 September, 2007 to join the Peace Corps as a NGO Development Officer in The Gambia. Kate will work with rural community groups to enhance their skills at small enterprise development using non-timber forest products and locally produced resources such as honey and beeswax. She will draw on the skills she learned at NCS working with our LASER project to transfer knowledge and skills about rural business development to individual farmers, communities and other village groups. She will also help them sustainably manage their natural resource base and will work with rural NGOs on organizational development and capacity building issues. Kate writes:

Over the past few months, many people have asked why I decided to join the Peace Corps, but I always feel that my answer falls short. Yes, I want adventure; yes, I want to help; yes, I want to experience the developing world; but there's so much more than that, and I have a hard time articulating the true depth of my feelings. Hunter often uses a quote in her speeches that she gives around the world that always speaks to me: "Find what it is you care about, and live a life that shows it." I think that's about the best advice that anyone can follow. I guess the bottom line is that I've found what I'm passionate about, and I intend to live my life showing it.

Working at NCS, and with great minds like Hunter Lovins, I learned that ordinary people can make extraordinary change. You just have to believe in yourself and in your cause passionately... and never give up. The challenges in the world are indeed daunting. Today, we face the major challenges of climate change, the dramatic decline and loss of ecosystems and species, population growth,

poverty and inequality, just to name a few. Somehow, the common perception is that by putting our heads in the sand, the problems don't really exist. But our chances for success increase dramatically when we face these challenges, and work towards solutions. It's in the struggle to find solutions that we find the good in ourselves, in humanity and in the world.

I know that I will face challenges while in The Gambia that I cannot even yet imagine. But I also know that I am following my passion, and that will give me the strength to meet those challenges when I am finally faced with them. Besides, I have a whole team of extremely bright, creative and inspiring experts in the sustainability field at NCS that will be there to support me. My experience working with these great people has prepared me for the challenges that I will face better than anything else I can imagine.

Jama (peace),

Kate



Life-Cycle Analysis and Management Tools

In 2006 Natural Capitalism Solutions worked with Clif Bar to engineer a full company life-cycle performance evaluation—the first of its kind, we think.

Life Cycle Management of materials and energy is a core competency of Natural Capitalism's that we use to enhance sustainability performance in organizations. Managing the life cycle of a company's materials and energy helps companies see "behind the curtain" to understand the full impacts of its activities. Natural Capitalism helps companies better manage their use of resources with a tool called Life Cycle Assessment. This analyzes raw materials (creation and delivery), direct operations, product distribution and recovery systems.

NCS' Life Cycle Analysis tool *credibly* estimates natural and human capital impacts upstream and downstream of a company. Too often life-cycle tools are neither cost-effective nor time-effective for businesses. People, the world over, are working to improve life-cycle tools to support make better decision-making at the speed of business.

To help advance the state of practice, NCS Consultant Christopher Juniper, presented on NCS' recent success with Clif Bar & Co. at the 3rd Annual Life Cycle Management Conference at the University of Zürich this summer. We were proud to verify that the NCS system contains many of the best practices in the field, as articulated by conference keynoters.

In the work Christopher profiled, Clif Bar took a comprehensive look at its operations, "from wrapper to rice fields." NCS helped the company assess both quantitative and qualitative measurements. The process enabled Clif Bar to weigh the total "ecological rucksack" of its ingredient list, and gain a better understanding



of the present and future sustainability potential of all the companies in its value-chain. The object was to streamline the flow of goods and services to the customer with an eye towards cutting cost. Given that profit depends on a customer's willingness to buy Clif Bars at a price that exceeds the cost of making them from all the items in the value chain (i.e. components, production, marketing, R&D, human resources, etc.), a sustainability analysis must show how to deliver a superior product at a price that the market will support.

This project revealed 12 'HotSpots' for further focus. In the process we developed credible, repeatable methodology that Clif Bar can use every year to compare their overall 'Foodprint.' Yearly re-assessments will provide Clif Bar with the ability to gauge the success of various strategies and allow them to continue the process on their own. This meets NCS' criteria of leaving clients able to implement the enhanced sustainability by themselves after we are gone.

The NCS system combines qualitative and quantitative sustainability performance assessments that include both present and expected future performance of suppliers and industries. Once installed (approx. 6 months to one year) quick comparisons can be made between substitutable products (including, in this case, organic vs. non-organic ingredients) and between specific suppliers of the same product. Total sustainability impacts can easily be annually estimated as Sustainability 'HotSpots' change.

Natural Capitalism Solutions is proud of its contribution to Clif Bar's journey towards sustainability. And we've moved on to applying the Life Cycle Management approach to Ft. Carson Army Post and beyond.

Natural Change—HOW to Implement Natural Capitalism

In 2006 Hunter made several trips to Michigan to keynote events, offer advice and educate community and corporate leaders.

During her trips she was recruited to serve as an advisor for the Deep Lake Wellness Center, which is seeking to become the Midwest's first sustainable destination educational center.

It was during these travels that she met Jeff Hohensee, who was working with Deep Lake and volunteered to serve as Hunter's host on her trips to the Great Lakes. In subsequent Midwest travel Jeff and Hunter made a point of getting together to discuss sustainability, change management and the straits of the world. Walking through the woods one day, Jeff's wife asked Hunter if she would be interested in writing her long-awaited sequel to *Natural Capitalism* with Jeff. He had been framing chapters for a treatise on social movement and leadership, and had just sketched a framework for change management on the back of a picnic napkin that Hunter thought was brilliant. Somewhere between the forests of Kalamazoo County and the prairies of Colorado Jeff and Hunter agreed to work together to write what they feel is a missing piece in the pathway towards sustainability.

The working title of Hunter and Jeff's book is "*Natural Change: Brining the Sustainability Revolution to Scale.*" A roadmap to guide readers in navigating one of the largest opportunities of our generation, *Natural Change* will describe the dramatic increases in green business practices that have occurred since the 1999 publication of *Natural Capitalism*, and lay out the practice aspects of making sustainability, one of the biggest movements in human history, real. Books like *Natural Capitalism*, *Cradle to Cradle*, and *Biomimicry* developed huge readerships making the business case for sustainability. *Natural Change* picks up where



Goose Lake, MI
Photo: from Deep Lake

they left off and describes how to implement sustainability. *Natural Change* incorporates the human dimensions of change and delivers the tools necessary to take sustainability to scale.

Hunter and Jeff's book will invite its readers to care enough to lead, and lead well enough to succeed.

Starting with an overview of today's opportunities portrayed in real life terms it will establish the business model for re-tuning the practice of free enterprise. *Natural Change* will provide its reader with the inspiration and tools necessary to become a change agent at whatever level the reader wishes to play.

The book will explore such human dimensions of the sustainability revolution as: How do good people inside giant corporations implement values driven change to increase sustainable bottom lines? How do thoughtful government employees employ sustainable practice to better fulfill the mandates they are charged with implementing? How do concerned individuals influence the business they depend upon and reconnect with the government they ignore?

From the simple to the complex, *Natural Change* will be a one-stop-shop for corporate leaders, community change agents and concerned individuals, providing them with the inspiration and tools necessary to align their hopes of a healthy caring world with the policies and practices of their everyday life.

The response to the prospect of this work has been revolutionary! The biggest challenge now is making the time amidst Jeff and Hunter's booming practice of the ideas to write down what they know. Currently Hunter and Jeff spend much of their time employing what they know to help companies, communities and countries to engage the work of *Natural Change*. *Natural Capitalism* is now seeking support to keep Hunter and Jeff off the road for the two months it will take to finish their manuscript

Boulder's Green Heart Institute partners with Shanahan Ridge Neighborhood

(by Diane Dandeneau, Executive Director Green Heart Institute, www.greenheartinstitute.org)

The Green Heart Community Initiative was established by The Green Heart Institute (Institute) (formerly the ConservED Project) to help communities reduce their carbon footprint. The Institute customizes educational and mentoring programs to support individuals, organizations and communities to conserve energy, achieve increased efficiency and apply renewable energy in their homes, businesses, and places of worship. The Green Heart Community Initiative utilizes LCL Tools™, an energy and carbon analysis software, which provides on-going energy use tracking and feedback for individuals and the community as well as a forum for education and community sharing.

In the fall of 2006, a group of people in the Shanahan Ridge Neighborhood of Boulder started an organization called, "[Shanahan Neighbors for Climate Action](#)," a



neighborhood group committed to "changing the world, one step and one household at a time." These visionary community leaders were looking for a way to measure their carbon emission reductions and provide an in-depth program for their neighborhood. The Institute began working with a subgroup, the Shanahan Carbon Cutters, to support their commitment target of a 25% reduction in CO₂ emissions to reduce their collective environmental impact.

The Institute partnered with Shanahan and developed a volunteer committee to promote the program and to enlist volunteers to learn to perform the Eco Audits™. In March 2007, the Institute provided training for two Shanahan volunteers for this community effort.

Eco Audits™ include an analysis of historical energy used to prioritize conservation measures, education to the homeowner, and recommendations. Volunteers are trained in sustainability education, focusing on supporting individuals and the process of change and recommendations and consulting on conservation, efficiency and renewable energy.

Each family is tracking their data online monthly to see the results of their efforts. Reports are available to Shanahan Neighbors for the community and for their individual households. This table was from 17 October 2007.

As of 25 November 2007 they are at 14% and 20% reductions respectively.

Project Summary					
Program Name:	Shanahan Neighbors for Climate Action	Number of Projects:	23	Number of People:	50
	Full Prior Year Data:		Partial Prior Year Data:	Partial Current Year Data:	Average Number of Months To Date:
	Lbs CO2		Lbs CO2	Lbs CO2	% Change
Prior Year CO2, No Flights:	1,045,536	Partial Year CO2, No Flights:	210,180	187,253	-11%
Prior Year CO2 With Flights:	1,686,930	Partial Year CO2 With Flights:	344,720	281,126	-18%
Offsets Purchased:		Partial Year Offsets Purchased:			N/A
CO2 Footprint:	1,686,930	Partial Year CO2 Footprint:	344,720	281,126	-18%
CO2 Footprint per person per year:	33,739	Partial Year CO2 Footprint per person per month:	2,440	1,990	-18%

Presidio Rising

Hunter Lovins' work at Presidio School of Management continues to expand. Last spring, a team of her students from the Principles of Sustainable Management class won the new "Urban Re:Vision, Re:Volt" prize for innovative design of urban energy systems. Details at http://www.urbanrevision.com/results_volt.html

Another Presidio student, Sheila Samuelson, responded to a call for help that Hunter passed along from the tornado devastated town of Greensburg, KS. She spent the summer working to provide resources and ideas for redeveloping the town using the principles of sustainable management.



Stephen Davies, one of Hunter's students in Implementing Sustainable Business Practices course has accepted a position with Tesla Motors, and is helping to bring forth the new, all electric Roadster.

With nearly 200 MBA students in the program, and a Executive Certificate starting in the Spring, Presidio continues to develop a world-class reputation as a resource for implementing sustainability in business.

Upcoming Events

All NCS events are published online in a public google calendar. You can access it here:
www.natcapsolutions.org/Calendar.htm

- Monthly Trips to San Francisco for Presidio School of Management Residencies & new Certificate Program
- 1/31/2008 Orlando, FL Focus the Nation
- 2/6/2008 Houston, TX APQC Conference
- 2/12-13/2008 Flagstaff, AZ Northern Arizona University
 Prescott, AZ Ecosa Institute
- 2/22/2008 Albuquerque, NM Xeriscape Conference
- 3/5-7/2008 Oklahoma City, OK University of Oklahoma

Take Action: Make a Little Sense of Carbon Offsets and Energy Credits

You want to be a responsible part of implementing the solutions to climate change, but there are aspects of your life that you just can't yet change. **What can you do?**

First, remember it is always best to not emit greenhouse gasses (GHG)! So first examine your life and take an action every week to reduce the energy you use, or the other releases of climate damaging gasses you may be responsible for. To join the movement get and read the book, *The Low Carbon Diet, a 30 Day Program to Lose 5,000 Pounds*. Published by the Empowerment Institute, the book is a fun way to involve your whole family in this vital effort <http://www.empowermentinstitute.net/lcd/index.html>

For the rest of your emissions, consider offsetting the carbon that your lifestyle demands that you emit.

A carbon offset is a way to remove the negative greenhouse gas (GHG) emissions one person, (or company) puts into the atmosphere by investing in projects that either help reduce existing GHG emissions or help create new sources of energy that do not contribute GHG emissions. The sale of the positive environmental attributes (ie: clean energy) basically cancels out the “bad” emissions of one activity (ie: emitting carbon dioxide by driving your car) by buying equivalent GHG reductions from another “good” activity (ie: development of a wind farm).

**Drive your Car → Emits Carbon in Atmosphere →
PURCHASE AN OFFSET →**

**Fund a company to implement energy efficiency it otherwise would not have done →
Reduces the equivalent (or greater) carbon from atmosphere**

**Organization uses coal energy to power building → Emits Carbon in Atmosphere →
PURCHASE AN OFFSET →**

**Support development of wind farm →
New “green” energy supply is brought into the grid to meet energy demands
instead of traditional fossil fuel based energy supply**

The goal of purchasing an offset is becoming GHG neutral.

Simply put, carbon offsets create, at least, an equal exchange between carbon emissions and carbon reductions (see CCX below). The unit of trade is a ‘carbon credit,’ which represents one metric ton of carbon dioxide (CO₂) equivalent. Carbon is used as a metric for exchange because it is the most abundant GHG.

The type of “good” activities and projects that qualify for these exchanges vary depending on the offset provider. Some represent reductions of direct emissions of carbon greater than the

credit that you purchase (CCX credits). Some represent new renewable energy that will be paid for with your money. Some represent keeping tropical forests standing (a good thing). Some represent planting trees that may not live (a questionable offset). It is therefore very important to KNOW your offset provider and their projects.

There is a lot of misinformation in the press about offsets, carbon credits and renewable energy credits. What follows is NCS’ advice on how to reduce greenhouse gas emissions, including some of the subtleties of buying carbon offsets.

- 1. Use less energy—emit less carbon!** The very best offsets are the actions you take to reduce existing carbon emissions in your own life or in your community. The quickest way to do this is to get an energy audit and fix up your own house or building so it uses less energy. Doing this will also save you real money. The best way to begin to become carbon neutral is to determine your overall footprint and find where (besides the home/ building) real reductions in carbon emissions can be made.
- 2. Use renewable energy!** Install renewable energy on your house or business. This includes installing renewable technologies (solar electric, solar thermal, geo thermal, home wind-turbine) or purchasing them through your utility company. If you do the latter, you are really just buying a renewable energy credit through your utility.
- 3. Help pay companies that are reducing their direct emissions, or installing renewable energy.** Individuals can do this through the companies that buy and retire carbon credits offered by the Chicago Climate Exchange (CCX, in which well over 90 percent of the carbon credits are created through direct energy efficiency implemented by CCX members who must first reduce their own emissions 2% each year. If they reduce even more, they can sell these extra reductions). Check out www.LiveNeutral.org for a site from which you can offset your car, home, travel or other activities.
- 4. Buy credits that help pay for future renewable energy.** This is also the best choice for those who want to promote renewables, but cannot afford to put a whole system in their own house. If you don't own a house to put renewables on, you can still encourage the transition away from dirty dangerous coal to wind and solar, the energy of today and the future. Again, it is important to know your offset company. Some offset companies sell green features of wind-power yet to be built. When the provider is very clear about this, there is nothing wrong with it. If sufficient renewable energy is purchased and built, future coal plants, like the Comanche III plant we are now fighting here in Colorado, can be rendered unnecessary. Without such purchases, plants like Comanche III will be built and more carbon emitted.
- 5. Buy renewable credits from companies that invest in helping communities in developing countries implement renewable energy.** In some ways, this may be even better than buying future renewables in the North, as renewables in villages in places like Afghanistan are likely to replace existing use of kerosene or diesel, thus resulting in real reductions of existing emissions.
- 6. Help pay to keep tropical forests standing.** This is a good thing and badly needed. The rampant cutting of the world's rainforests is a very serious contributor to the changing climate. Rainforest Alliance is, like Natural Capitalism, a member of Chicago Climate Exchange.
- 7. Help replant forests** in programs like Hunter's friend Wangari Mathai, the recent winner of the Nobel Peace Prize for her work with Kenya's Greenbelt Movement. This is truly God's work and a program you can be proud participating.

Beware of the increasing number of programs that ask you to help pay for trees that may be planted in places where they may not live or that were going to be planted anyway.

Be very clear that efforts to support what is inaccurately called "clean" coal, or nuclear

projects are neither carbon neutral, nor cost effective. These are very bad ideas masquerading as a part of the answer to climate change. They will only take money away from real solutions, and delay the unleashing of the new energy economy—the only true solution to global warming.

Additional Resources

- Voluntary Carbon Markets: An International Business Guide to What They Are and How They Work (Environmental Markets Insight Series) by Ricardo Bayon (Author), Amanda Hawn (Author), Katherine Hamilton (Author), Al Gore (Foreword), Earthscan Publications Ltd. (March 2007), ISBN-10: 184407417X.
- Reducing Impacts of Continued Emissions (Chapter 5: Local Action Plan of the Climate Protection Manual for Cities, www.climatemanual.org)
- EPA calculators.
<http://yosemite.epa.gov/OAR/globalwarming.nsf/content/ResourceCenterToolsGHGCalculator.html>
- There are several individual carbon calculators
http://p2ad.org/toolkit/resources_environmental_calculators.html:
 - Al Gore's <http://www.climatecrisis.net/takeaction/carboncalculator/>
 - Fight Global Warming <http://www.fightglobalwarming.com/carboncalculator.cfm>
 - Carbon Fund's <http://www.carbonfund.org/site/pages/calculator/>
 - Carbon Footprint <http://www.carbonfootprint.com/calculator.html>
- *My Climate* video on the carbon offset concept:
www.myclimate.org/film/film_en.php
- Consumers' Guide to Retail Carbon Offset Providers
Clean Air-Cool Planet has released a new report designed to help organizations and individuals that are considering purchasing offsets to help achieve carbon neutrality. The report evaluates 30 providers selling offsets in the US market on seven criteria and explains some of the key attributes that consumers should look for when purchasing carbon offsets. The survey and report were undertaken by Trexler Climate + Energy Services, Inc. of Portland, Oregon.
www.cleanair-coolplanet.org/ConsumersGuidetoCarbonOffsets.pdf

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