

Dreaming Planet Earth™

Methods for Mapping Future
Food and Energy Systems at the Local Level

by Peter Warshall, Kenny Ausubel,
Arty Mangan & Nikki Spangenburg



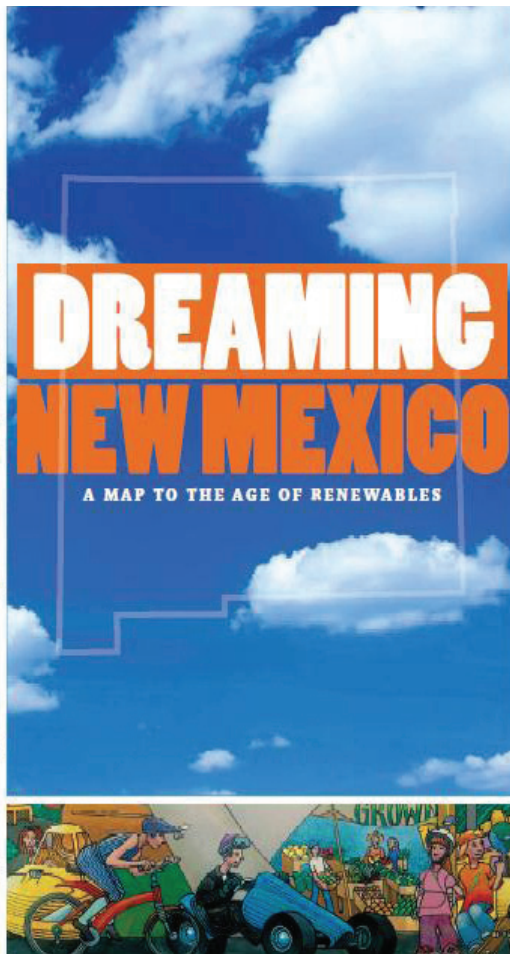
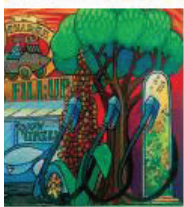
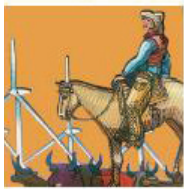
Dreaming the Future Can Create the Future

*Dreaming New Mexico brings together the tools of grassroots organizing
and community leadership with scientific know-how and political savvy
to both create a vision for the future and lay the ground work for getting there.*

2009 Buckminster Fuller Challenge Award Jury Statement, First Runner-up Award



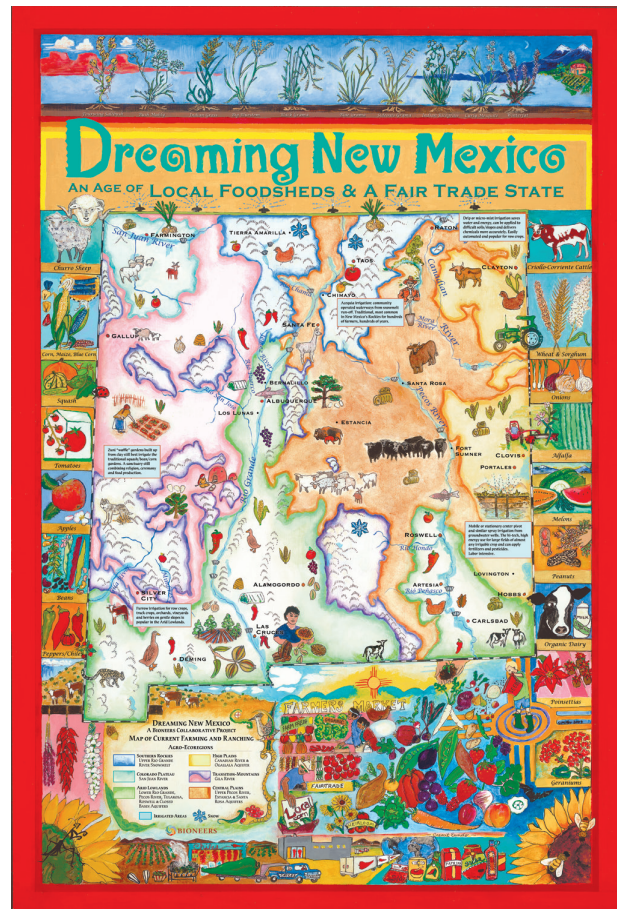
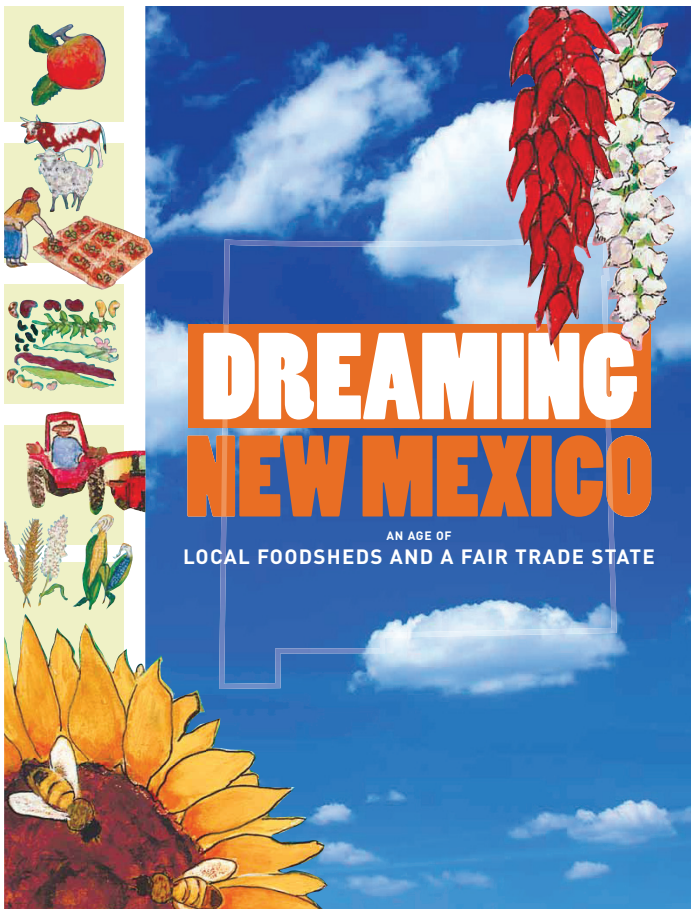
Dreaming New Mexico is a collaborative program
of Bioneers/Collective Heritage Institute
a 501(c)(3) non-profit organization.



This poster-map envisions New Mexico in the Age of Renewables. It displays the best areas for wind and solar energy, some of the “green grid,” existing biofuel areas, and vehicles which consume less fuel and lower carbon fuels and travel fewer miles. The back of the map displays all the more technical maps that appear in the booklet plus additional information, graphs and energy-related maps.

Contents

Introduction by Kenny Ausubel, Co-Director	6
Origins and Context by Kenny Ausubel	7
Executive Summary by Peter Warshall, Co-Director	11
 PART I	
Introduction by Peter Warshall	12
The Dreaming New Mexico Methods	12
Best Ways to Use This Report	
Whom Does This Project Serve?	
Scale of Project	
The Start: Our Actual World	
The Conservation Economy	14
An Economy of Specific Ethics	
DNM's Dream of Itself	
Systems Thinking	15
Three Cs: Components, Connections, Configurations	
Value Chains	
Sense of Places: Community and Constituencies	
Geography and Community	
Ecological Regions	
Celebrating a Sense of Place	
Communities That Need to be Created	
Summary	27
 PART II	
Approaches and Methods by Peter Warshall	28
What Is "Dreaming?"	28
How Does DNM Utilize Dreaming?	
Time Frames	
What About New Dreams?	
What About Nightmares?	
What do we know?	30
Data Issues	
Sources	



This poster map depicts today's agriculture: its major agro-ecoregions, water sources, crops, rangeland grasses and livestock. It shows the major forms of irrigation and the farmers' markets that have become the icon of the local food economy movement. The back side of the poster shows thirteen more technical and detailed maps covering topics from climate change to crops and livestock to New Mexico's trade.

DNM's Biocultural Dreaming Projects by Arty Mangan	34
Definitions, Facts, Concepts and Perspectives	41
Rethinking Geography	
Systems Thinking Concepts	
New Human Interactive Infrastructure	
Multi-Meaning Words	
What Can We Accept?	42
Do-able Dreams	
Kinds of Success	
Governance and Human Organizations	
Lay of the Political Landscape	
Summary	43
Observations on Practices and Tools by Kenny Ausubel, Co-Director	44
 PART III	
Deliverables: Putting Together the Materials and Tools by Peter Warshall	47
Deliverables	47
Poster Map and Informational Maps	
Constructing the Maps	
Human Skills	
Booklets and Targeted Reports	
Photos	
The Web	
 PART IV	
Social Entrepreneurship and Implementing the Project by Kenny Ausubel	54
Social Entrepreneurship	54
Organizations Are People: The "Who"	
Cultural Competency	
The Collaboration Continuum	
Money	
DNM Costs	
 EPILOGUE	
Growing Edges: Dreaming On	61
Acknowledgments	62
 APPENDIX	
Busier Than A Cat in a Roomful of Rocking Chairs by Kenny Ausubel	63
Valuable Sources	65

Introduction

by Kenny Ausubel, Co-CEO and Founder, Bioneers
Co-Director, Dreaming New Mexico

This “methodology” arose from requests from around the country and world about how we’ve gone about creating and manifesting the Dreaming New Mexico (DNM) project (www.dreamingnewmexico.org). At heart, DNM addresses the reconciliation of human organization with natural systems at the state level, grounded in values of justice, equity, diversity, democracy and the conservation economy. “Origins and Context” below describes the essence of the project and some of its context and genesis.

To use this report, it’s essential to read the maps and booklets. The web site also features many other related documents and media. For a running chronology of our actual activities, see the “DNM Accomplishments” document. (www.dreamingnewmexico.org).

For a variety of reasons, this document does not conform to conventional models of a methodology, but rather is perhaps more a field guide. One reason is that DNM is very specific to place. It’s also very specific to Bioneers, the nonprofit organization of which it’s a program, and to the talents and skills of the particular team who have worked on it. As such, we’ve chosen to focus here largely on the key innovations DNM has offered that relate to systems mapping and future mapping of energy and food systems at the state level.

We cover the core of the work - the dreaming concept, the technical mapping and research process - that best lend themselves to replication and adaptation. These parts of the thinking, approaches and tools can be universalized to apply in diverse kinds of communities and contexts. No doubt you’ll design or invent other approaches and tools (or already have), including ones unique to your conditions.

Section IV on “Putting the Project Together” does discuss some of the elements specific to our situation, organization and team. However, we offer this background solely as a modest case history, not in any way as a model for others. Each situation will be unique, as ours is.

We approach this methodology with humility. Since the inception, DNM has been an experiment, and is inherently a permanent work-in-progress. It’s a big vision with wide scope. The goals are ambitious and long-term. We’ve operated in a perpetual learning curve in a dynamic mode responsive to changing conditions, new learning, emergent opportunities and funding. Because money and capacity have been very limited, there’s much we could do that remains to be done.

We want to acknowledge several great U.S.-based initiatives that parallel DNM, and are further along in many ways and merit close study: TreePeople in Los Angeles, Re-Amp in the Midwest, and Ecotrust in the Pacific Northwest. (Other excellent groups also exist, such as the Leopold Center in Iowa, related to food systems.) Hopefully DNM has contributed some new thinking and tools to the mix.

Bioneers, as a de facto network of networks, decided in 2011 to engage with the deliberate cultivation of strategic action networks. We view DNM as part of an emerging national and global social ecology of place-based restoration initiatives. We are beginning to help build a national localization network that can advance the trend toward greater local self-reliance and decentralized infrastructure as a resilience strategy for the “Great Disruption” the world is entering. We hope the lessons of DNM will be useful as tools to support this emerging national community resilience network.

At the same time, we expressly take a “globalocal” view – local action can go only so far. A multi-scale approach is required that’s inclusive of the regional, national and global.

We hope some of our learning, tools, process and innovations will be of practical value to you – and inspire your dreaming. We invite your feedback and reports from the field.

Dream on....

Origins and Context

By Kenny Ausubel

Dreaming New Mexico arose from Bioneers, an environmental nonprofit I founded in 1990 with my partner and Co-CEO Nina Simons. Briefly, since the inception Bioneers has acted as a knowledge platform and hub of diverse social and scientific innovators with practical and visionary solutions for the world's most pressing environmental and social challenges. A celebration of the genius of nature and human ingenuity, Bioneers connects people with solutions and each other in a network of networks and movements. We produce a main annual national conference and local conferences, as well as a suite of media. We have several programs including a Place-Based Restoration program of which DNM has been a centerpiece. For more information on Bioneers, please see www.bioneers.org.

Bioneers was inspired by several key ideas and principles that also deeply inform DNM. Systems thinking has been at the core since the outset. We take a “solve-the-whole-problem” approach, in contrast to the “silo-ed” single-issue mode of most current “solutions,” thinking and policy. We operate from the recognition of the interdependence of natural systems, and the interdependence of natural and human systems.

The design science of biomimicry – “innovation inspired by nature” - also informs our thinking. Nature has done everything people want to do, but without mining the past, polluting the planet or foreclosing the future. Nature's 3.8 billion years of evolution provide the R&D we need to work our way out of the clash we've induced today between human and natural systems. When you fight nature, you lose. We have a lot to learn from nature's playbook. Although we are not specifically applying biomimicry technologies in the project, the underlying ecological principles inform the work. (See Biomimicry Institute: http://www.biomimicryinstitute.org/downloads/LP_list.pdf)

Bioneers has been equally shaped by Traditional Ecological Knowledge and the old-growth cultural wisdom of indigenous peoples, the original “bioneers.” In New

Mexico, indigenous societies are vital, living cultures, often more intact than elsewhere.

Convening has also been central to Bioneers. In 1990, when the field of “sustainability” was far smaller, we figured all these innovators must know about each other. We discovered that, even within the same fields, people often did not know about one another, much less across disciplines, cultures, classes and borders. Getting the right people in the room – a diverse suite of stakeholders and pollinators – is half the game. Along with rich cross-pollination, people start to see themselves as part of an interdependent system. Diversity produces novelty and synergy. Collaboration increases. Today's challenges are so huge and complex – and complex systems are so dynamic – that it takes a village to address them.

For Bioneers, our attention to greater localization arose in 2001 when we initiated an innovation called Beaming Bioneers where we broadcast the three days of conference plenary talks to community-based events across the country. They self-organized their own local Bioneers conferences, using the national content as a focal point to also feature local players and solutions (as well as national ones). The model seemed elegant because it distributed the activity across the country (and later globally) where people could build both community and solutions-based action at the local and regional level.

Nature builds from the bottom up. And as politician Tip O'Neil once said, “All politics is local.” Ecology gets hyper-local, as do culture and politics.

Beaming Bioneers was our first foray into the growing and very important trend toward localization. Many current systems – food, energy, water, finance – are too big not to fail. And fail they will, as we're witnessing regularly, on grander and grander scales. In today's epoch of radical environmental and social disruption, building resilience is the grail. One of the keys to resilience is more decentralized systems and infrastructure. [See Appendix]

The trend toward localization is a strategic imperative that will and must grow in years to come. Yet as DNM makes explicit, we live in a “globalocal” world that’s a “both-and” proposition, not “either-or.” We are all entangled in a wildly complex globalized world. Sometimes localization advocates get a bit carried away – “Let’s go 100% local!” In most cases, it’s simply not possible, and an over-emphasis on localization can also produce many unintended negative consequences. Do New Mexicans want to give up coffee, chocolate, rice and mangoes? Or put Mexican subsistence farmers out of business?

Dreaming New Mexico originated as a direct response to an emerging trend some of us were observing in the early years of the 21st century. In the absence of meaningful federal energy or environmental policy and deeds, empirically the real action was happening locally at the city and state level. Mayors and governors were rolling up their sleeves to try to address energy and environmental concerns. Cities in particular were becoming laboratories of sustainability (and democracy). But often they stumbled at the doorstep of “How?” Even when the intention and commitment were present, they faltered at moving to practical application, and seldom applied systems thinking.

In 2006, Bioneers held a retreat that included our staff, some board members, and a close circle of key allies and friends. I convened a smaller side gathering to look at these questions of building resilience through decentralization at the more local level. Among the participants was Peter Warshall, later to become DNM co-director. Peter at the time was editor of *Whole Earth Review*, the iconic magazine (and *Catalog*) that sadly expired a few years ago, as well as a Bioneers speaker and ally since the early 1990s.

Even for a polymath, Peter is unique. A highly trained ecologist, botanist, naturalist, anthropologist and self-described “infrastructure freak,” he additionally served for about ten years as the “mayor” of Bolinas, California, where he lived real-world local politics and all that entails. He understands not only the practical, but also the political. To boot, he’s a fine writer, editor and publisher, and he teaches systems thinking. He has worked with unusually diverse clients and constituencies, from indigenous communities in the U.S. and Africa (he studied with Claude Levi-Strauss in Paris), to Fortune 50 corporations, governments, international aid agencies, and on. He can oscillate

seamlessly from a 50,000-foot system view to being in the literal weeds – or deeper still in the soil microbes. In the course of the retreat dialogue, we landed on the idea of “Green Teams” as a possible strategy to support and assist local players with highly practical expertise and systems thinking. Because of the nature of Bioneers as a network of networks across many different disciplines and areas of expertise, we wondered if we might be in a position to develop a roster of “eco-SWAT teams” to help advise communities.

After the retreat, Bioneers commissioned Peter to do a White Paper expanding on the idea. Green Teams morphed into Dream Teams – because it all starts with a vision. Our imaginations unshackled, what do we really want? What’s the dream?

Although Bioneers did not have the resources to do anything with Dream Teams at that time, I continued to hold the idea dear to my heart.

In 2006, the town of Taos, New Mexico held a local Beaming Bioneers. Afterward I saw the list of speakers, projects and participants. I was astonished by the sheer number of projects and people doing good work. Although I’ve lived in New Mexico since 1974 and worked from here, I had not worked much locally. The Bioneers conference began in Santa Fe but moved to California after three years in 1993. Seeds of Change (the biodiversity organic seed company I co-founded in 1989) operated locally but was mainly focused nationally.

So, here I was promoting local action, and I did not even know what was going on in my own back yard. What’s wrong with this picture? I felt like an idiot. I wondered if Bioneers could contribute something locally in New Mexico. What might it be?

I resumed my dialogue with Peter, and, long story short, I floated the idea of Dreaming New Mexico. The basic and fairly vague idea was to try to shift the state to “green practices” grounded in social and economic justice and a love of place, using a systems thinking approach.

Peter was game. One of our visionary Bioneers donors, who has a deep family history and second home in New Mexico, provided a seed grant to bring Peter to New

Mexico a few times over the course of several months to do research and due diligence on the “state of the state.” The facts that Peter has lived in Tucson, Arizona for 20 years, has family in New Mexico and knows the Southwest well were major considerations. After the due diligence, we would decide whether to move forward.

I also needed to be clear about my own role and ability to implement the project. Having lived in New Mexico since 1974, I call it home. I know quite a few people and have a decent sense of some parts of the state (it’s physically big and wildly diverse, both geographically and culturally). The population is relatively small (about 2 million). Political access is easier than in larger states such as California, and I knew a number of people positioned to help the program politically. I sought their views and advice. The overall feedback was that the time was ripe for something like DNM and for Bioneers to engage locally.

Bioneers and I also had a degree of “street cred.” The Bioneers conference began in Santa Fe, and we’ve continued to engage many local folks as speakers and participants. Our radio series is widely heard here. There’s quite a bit of good will. My work founding Seeds of Change was also known and respected, including my close involvement with food and farming issues.

My relevant personal background is that, soon after I moved to New Mexico, I landed on a small farm in Chimayo in north of Santa Fe as one of six Anglo families in a Hispanic community of 5,000 whose roots there date back over 400 years to the Conquistadores. I lived the life for about six years, worked hard at farming, and was elected to the Acequia (ditch) Committee (a dubious honor, I learned, because it also meant getting roused at 5 am on Sunday mornings to grab my shovel and repair the community irrigation ditch).

In 1985 I met Gabriel Howearth, the master organic farmer and seed collector, while filming his biodiversity gardens at an Indian Pueblo near Santa Fe. I came to know Native farmers and other indigenous leaders who subsequently became involved in Seeds of Change, which we co-founded in 1989, and then in Bioneers in 1990 and ongoing.

The conclusion from our original DNM research on the state of the state was two-fold. First, in part because of

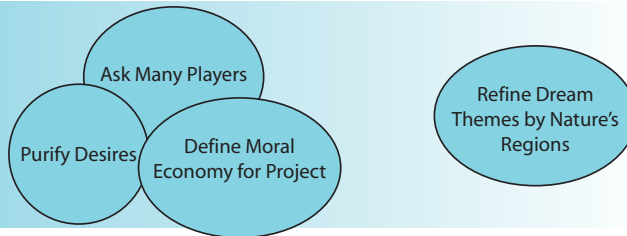
Governor Bill Richardson’s tenure, the political state of the state was conducive to the kinds of things we wanted to advance, especially clean energy. The Governor had put a good number of very smart, well-informed people in government, and set some modestly progressive policies and goals. He created a relatively favorable business climate for clean energy and some environmental initiatives. In addition, New Mexico has a dynamic NGO community, with many talented people doing really good work.

The second conclusion from our research was relational. Because Bioneers had not worked locally, would we be welcome? Or would we be regarded as an outsider or intruder, encroaching on local groups and turf? What we discovered was generally a warm welcome. People felt we could add capacity, and respected Bioneers. Clearly there were also turf issues and skepticism.

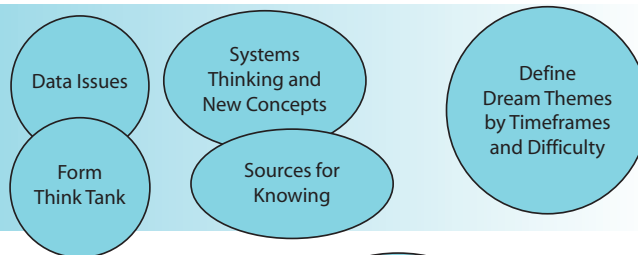
We decided to take the plunge and launch Dreaming New Mexico. Whatever that was...

Methods Bubble Map

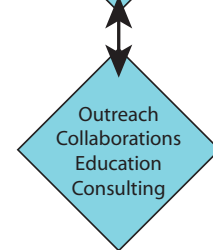
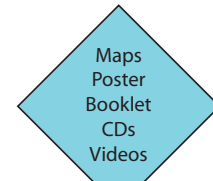
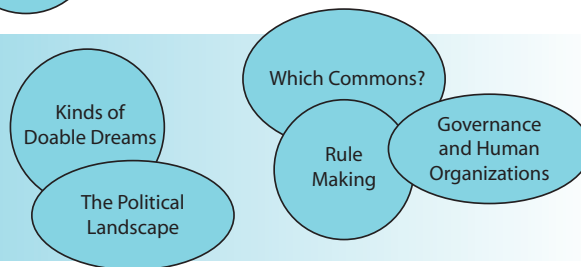
What do we want?



What do we know?



What wil we accept?
Doable Dreams



Executive Summary

By Peter Warshall, Co-Director
Dreaming New Mexico

Dreaming New Mexico is one of very few programs seeking to apply systems thinking at the state level as a pathway to reconcile human organization with natural systems. Dreaming New Mexico holds the premise that the governance of the future of energy and food is imperative at the state level to build greater local resilience. It's our further conviction that food and energy systems in particular have the greatest potential to engage citizens creatively and politically, and that citizen action is imperative to engender state action. The process quickly reveals an inescapable entanglement with regional, national and global influences.

At the core of DNM are a love of place and community. The program seeks to revive a sense of local pride that taps our unique geographic and biocultural virtues, potentials and abilities. At the core is the structural necessity to create a conservation-based economy — an economy that will be crucial to developing the future dominant green economy, jobs and markets, as well as to the wellbeing of people and lands.

This report is divided into four parts: the ethical background; the dreaming process; a few tips related to elements of putting the project materials together; and some context as a case history about organizational considerations and funding.

- **Part I** illuminates the ethics of the “conservation economy.” This foundational statement of ethics can be used as one of the checklists for success. Part I also provides a brief summary of what “systems thinking” adds to the dreaming process and consequent actions. Part I introduces crucial concepts such as value chains, distributed energy, and a wider understanding of governance. It discusses the project's sense of place and community.

- **Part II** explores the dreaming process: our approach and methods from start to the end of its first phase. It asks: *What do we want? What do we know? What will we accept?* It covers: assessing the “state-of-the-state;” the nesting of time frames; the dreaming process itself; the aggregation of dreams into themes; nightmares; data-gathering issues; tapping many sources of information; important concepts; kinds of success; governance and human organization; and assessing the political landscape. See the Summary Diagram for a flow chart of the dreaming process.

- **Part III** focuses on: Can you put a dreaming project together or create the organization to perform the project? Our deliverables included: a poster map, more informational maps, a substantial booklet, targeted reports on specific issues, dozens of meetings with interested citizens, specific videos, media outreach, a web site and summit meetings with constituencies.

- **Part IV** focuses on: The role of social entrepreneurship and the specific case history of DNM as a program of Bioneers and the DNM team. The organization of any dreaming project is highly dependent on the people involved, their experience and the finances available. We outline the “who” of the organization and team. We address considerations of cultural competency related to our specific place of New Mexico. We offer perspectives on collaboration and its importance, as well as pitfalls or limitations. We address broad perspectives on money and fundraising. And lastly we outline a few specific immediate projects and longer-term dreams for DNM activities. This section tries to help clarify major opportunities and barriers to doing a project in another location.

Part I: Introduction

By Peter Warshall

The Dreaming New Mexico Program

Dreaming New Mexico is a program funded by donors to help the state achieve a conservation-based economy (Part III). DNM has been working in two arenas: New Mexico's energy futures and the futures of the agrifood "system" that feeds its citizens. These two arenas are of most urgent concern to New Mexican citizens. (Water resources management and the restructuring of the state government to increase its effectiveness are also of great concern.)

This report addresses our methods and approaches of the Dreaming New Mexico project. For DNM's purposes, "methodology" is basically a set of questions, a description of the process to answer the questions and/or, in its expanded form, a philosophically coherent collection of concepts, ethics or ideas. We will present below our hopefully coherent collection called the "conservation economy."

Our state, New Mexico is unique. Its spread-out populace, high poverty and food insecurity, rich wealth in coal, uranium and oil/gas, tricultural heritage (large bilingual population, 22 Native American pueblos and reservations), its border with Sonora and Chihuahua (Mexico) and its dependence on exports of energy, cattle, dairy, pecans, onions, chiles and other specialty crops give New Mexico its own flavor and burdens.

We have attempted to winnow some of those aspects of the project that are unique to the personality of New Mexico and have tried to offer more general guidelines that could work well in any State. However, this report will always emphasize and illustrate that there is no cookie-cutter approach or single method for inspiring and implementing societal change because of regional differences.

The project not only informed DNM but changed our thinking and the thinking of participants. The project was organic and flexible. An experiment. It accomplished and re-set some of its goals (described below) while attaining them. What we hope this document will do is provide enough direction, guides, ideas, vocabulary and practical advice to help others shape their own custom-designed approaches for their specific needs.

Best Ways to Use This Report

The report cannot be understood without first reading the booklets and looking over the poster maps for energy and food. The maps and booklets can be downloaded from the Dreaming New Mexico web site [www.dreamingnewmexico.org]. The food system web site (www.dreamingnewmexico.org/food) will also help clarify our intentions. When useful, the report highlights "tips" or reminders to emphasize our approach.

Whom Does the Project Serve?

The Dreaming New Mexico project supports any interested New Mexican government agency, NGO, funder, educator and student, entrepreneur, engaged citizen, private sector business or business group, investor as well as all workers along the value chain from production to transport to processing to wholesale/retail and consumption. DNM's premise is: no farmer, rancher, business-person or utilities official wants to deliberately harm another citizen or the environment. If they did, we did not talk to them as the underlying framework of this project is the promotion of an ethical and workable energy and agrifood economy. For instance, we talked to representatives of the concentrated animal feed operations (CAFO's) in eastern New Mexico - but only briefly, because they were resistant to accept fundamental ethical principles rooted in the conservation economy. Similarly, we talked only to those oil and gas companies that saw the leakages from pipes and plants as an opportunity to increase economic efficiencies and create new jobs.

The DNM program supports those citizens in all walks of life who try to live by an ethics that seriously take into account future generations and the productivity of the Earth. They did not necessarily have to agree with us but they did need to be open to new ways of thinking about energy and food. In short, DNM is primarily for those New Mexican citizens who are already comfortable with most of the ideals of the conservation economy (described below). It is not a fight to convince those who disagree. DNM's goals support a kind of "shadow" government or moral economy that is growing and needs nurturing and continual re-visioning. The two DNM efforts have gained some traction among many and

diverse constituencies because the turn-of-century has become complex with trade and infrastructure spanning the very local to the multi-national, sometimes violent with fast, massive changes. Organizations, businesses, lobbyists, and other groups have neither the time nor resources to back up from daily headaches and the onslaught of new issues. There is no time to remind themselves (renew their thinking and inspirations): Why did we get into the frying pan and what is it we really desire? The dreaming process is basically a refuge or time-out period to take stock and re-discover what one really wanted and wants. Part II goes into details.

Scale of Project

Compared to the geopolitics of the U.S. or the world, Dreaming New Mexico is a highly local endeavor. Compared to citizen activism in specific foodsheds or on specific energy efforts, DNM is huge. One of the great accomplishments of DNM (which received unqualified thanks) was placing individual efforts in the bigger picture of globallocalism without in any way diminishing the importance and dignity of locale-appropriate efforts. By doing so, the project has helped many groups re-think their future goals and understand where their leverage could be better applied. These in-state undertakings gained strength from people seeing themselves in the Big Picture, more or less aligned with others, and in varied time frames.

The Start: Our Actual World

In contrast with many projects that avoid the political context, DNM started with a clear understanding that it was working within a political geography (the state of New Mexico), and that governance was a critical aspect of success. Both co-directors (Peter Warshall and Kenny Ausubel) have had long experience in New Mexico and the southwest and felt the project should be a contribution to helping their home base. We understood that both the energy and agrifood endeavors have their own contemporary political contexts in which the dreaming process eventually has shaped and continues to re-shape itself. The *energy undertaking* entered a dynamic, competitive and entrepreneurial environment with many players desiring a place on stage in the emerging market for clean energy

and energy efficiency. New Mexico was rapidly poised to become a leader in solar and renewables with strong support under Governor Richardson, much less under Governor Martinez. The state has become an important player in decision-making focused on a national grid. Dreaming was exciting and easier with many opportunities opening in the energy sector. We had to guard against fantasy — far-fetched technologies, unobtainable timelines, and grandiose claims. We encountered one primary underlying political conflict: the dreams of the large-scale investor-owned private utilities differed starkly from the dream of decentralized generators and publicly owned power systems. The utilities (and many of the electric rural coops and the Navajo Nation) wanted to remain the price-setters and control supply with large-scale centralized power plants and land-extensive merchant grids. To preserve their current interests and fossil fuel holdings, they have advocated a very slow transition to renewables, hobbled even further by central station nuclear power and “clean” coal.

The alternative “people’s energy” dream — rooftop, localized and small power generators with short-distance grids and the ability to sell electricity back to the regional utilities — will have to struggle within the State for market share.

On the other hand, the New Mexico *agrifood* undertaking is deeply embedded in the State’s cultures and thousands of years of history. The DNM approach has been deeply respectful of very local history such as acequia water rights, cultivars of chiles, or the 1980s history of slaughterhouse closures. The “social mapping” has proven complex — ranging from food banks, farm-to-school programs, farmers markets, sovereign Native American nations, baroque irrigation infrastructures, river basin legal conflicts, institutional, state, regional, national and global markets, transitions from conventional to organic-conservation farms and ranches, as well as six distinct “agro-ecoregions” each of which brings different crops and livestock as well as economic, social and environmental issues. This diversity (all of New England can fit into New Mexico with room to spare) alerted us to be careful.

The complexity of the agrifood sector is far higher than the energy sector. There are many more players involved in the agrifood matrix. Citizens feel closer and more passionate about food than the more abstract energy policies. DNM attended far more meetings (both private and public) to get a clear “lay of the land.” We dedicated Bioneers’ agricultural director Arty Mangan as a key DNM associate to interface in depth with Native American and Hispano communities to understand their conditions, perspectives and desires.

The major agrifood concern has proven to be the lack of sufficient capital and seed funding to move the “local and healthy food sector” to increased market share. The dreams of each group were more disconnected from each other because of the vast complexity of the agrifood system and limited funding.

We offer these oversimplified vignettes of political and financial contexts to serve as both a reality check and caution.

Tip: The reality check is: always remember that citizen concerns center on security — food security and energy security — which are almost always tied to prices. How to achieve security is a concern that appealed to all walks of life.

Tip: Be cautious about “one solution” for the whole State. Focus on the State’s agro-ecoregions and energy regions as the basic units of change.

Tip: “Governance” exists in many arenas, not just electoral politics and legal institutions. The private sector governs the price and distribution of most commodities and complex private/public sector agreements govern the price of energy and the fiscal responsibilities for “externalities” such as health and environmental damage. In the private sector, there are also many organizations (e.g., clans, churches, NGOs, business groups) that govern the ethical directions of societal change.

Tip: Governance and how it operates are central to the dreaming process.

Tip: There is no cookie-cutter approach or single method for inspiring and implementing societal change.

The Conservation Economy

An Economy of Specific Ethics

The Great Dream DNM has proposed: a human economics respectful of the Earth. It is currently called “sustainability” and has been greenwashed, watered down and distorted — a good indication that “sustainability” is a dangerous and powerful idea. DNM prefers Paul Hawken’s “restorative economy” because it includes rectifying past sins such as New Mexico’s uranium mining pollution and soil erosion. However, we will use “conservation economy” because Ecotrust (www.ecotrust.org), more than any other group, has tried to make the phrase popular, and many New Mexicans seemed more comfortable with the phrase (e.g. conservation ranchers). Aldo Leopold, Donella Meadows, Herman Daley, Elinor Ostrom, Jane Jacobs, Peter Senge and others have laid the groundwork for the conservation economy (see Valuable Sources).

Here are DNM’s moral “commandments” for the conservation-economy dream as it applies to food and energy. They offer a checklist of ideals that guide DNM and can guide the dreaming process. They also provide a simple and honest way to make clear to others (funders, collaborative groups, agencies, businesses, government) our ultimate rationale.

Tip: Ethical transparency is crucial to the dreaming process and is rarely explicit in most methodologies.

The conservation economy:

- Extract minimal materials and elements from the Earth’s oceans and crusts. Employ them in ways metabolically harmless to our bodies and non-disruptive to ecological cycles.
- No new synthetic molecules are added to the planet’s cycles unless the planet can render them harmless before they harm humans and other creatures.
- No human actions are permitted that reduce photosynthesis, soil fertility, species diversity or destroy ecological governing structures such as watersheds, the ozone layer and aquifers.
- Celebrate a globalocal culture with a multi-scale sense of places (local, regional, national, global) — each producing conservation-based and locale-appropriate goods.

- Build a fair and enviro-friendly trade (commerce). Explore unintended consequences of all infrastructure development. Commit to track materials and energy inputs and outputs at each step of the value and commerce chain.
- Encourage the redesign of human organizations (industrial, familial, government, tribal, religious) that govern human actions to achieve these goals and restore previous damage.
- Employ strategies of change which are non-violent and custom-designed to various time lines.
- Recognize the wounds and burdens of history and the need for equity and justice to heal the harmful impacts of the past.

Dreaming New Mexico's Dream of Itself

Part of the grand dream was of course crystallizing DNM's own dream to advance our food and energy efforts. We did not come to our own dreams by revelation or acting alone. The project has been highly collaborative, and we are thankful to many groups and individuals who have informed and expanded our thinking.

Our dreams included:

- Use the dreaming process to widen citizen dreams, systems thinking, options, imagination, creativity and knowledge;
- Provide a holistic frame for concerned citizens and groups to see how they fit in the Big Picture, and help them clarify and revise their own programs;
- Literally re-map the state from the point of view of the conservation economy;
- Network NGOs, worker or industrial sector groups, lobbyists, lawyers, researchers, educational efforts, businesses, entrepreneurs and communities in similar situations both inside and outside New Mexico;
- Suspend immediate agendas and entertain the validity of new approaches, facts, concepts and ideas;
- Make dreams into do-able dreams by focusing on the central importance of human organizations and their capacity to generate and govern choices at each step of the value chain;
- Use holistic and systems thinking to help tease out environmental and cultural consequences of any proposed or on-going efforts to globallocal places

(home, neighborhood, workplace, watershed, river basin, bioregion, the state, nation and globe);

- Provide or help secure targeted funding and/or expertise to groups working on tasks that enhanced the conservation economy (more below).

Systems Thinking

One of the most useful tools that define the DNM project has been called "systems thinking." Systems thinking basically asks: What are the components of the project? How would adding any new components or eliminating any existing components change the direction of government, business or citizen behaviors? How are the components connected to each other? And, can the connections be configured in new and different ways that better serve the conservation economy?

There are lots of academic and policy makers who use computers and systems- thinking programming for everything from economics to climate change. DNM uses the term in a more activist manner and encourages each citizen to "channel surf" through the many schools of systems thinking.

We limited computer models to one targeted research report on import substitution of crops because any model can take extraordinary amounts of time to weed out assumptions hidden within the model and to decide how reliable the results are for prioritizing actions.

In contrast, DNM has sought out the know-how of local citizen experts, and how they viewed the "system" they worked within. At times, we went to conventions like the Las Cruces Chile Convention to better understand what farmers wanted and needed, or the East New Mexico Wind Power conference to hear what was pragmatically possible. Because our systems thinking is not for academic purposes (such as proving if one model is better or more comprehensive than another), DNM has looked for weak points in each "system" that each participant or DNM researcher identified as most important. We have looked for missing components and connections that could most effectively leverage the conservation economy.

BOX 1

Schools of Systems Thinking

- North American native peoples (principles of moral relationships)
- Social-engineering systems (components, connections and configurations) developed by Forrester, Meadows and others.
- “Value system” analysis developed from anthropology and economics (value chains, value networks, and value-added manufacturing; existence, opportunity and production values).
- “Greek/Hindu” system of looking at all actions from the points of views of their consequences to earth, air, fire (energy), water and ethics (ether).
- Elinor Ostrom’s view of human organization and the commons
- Scenario process developed originally by Shell oil (driving forces, critical uncertainties, etc.)
- Burdens of History approach to elucidate contingencies, barriers and opportunities that arise from the history of justice and equity, cooperative and revenge events, and shame and kinship-based politics within a specific region.

In short, DNM recognizes that *systems* is plural. There is no field guide to channel surf systems for the purpose of leveraging change. DNM could perform and offer this task because of Peter Warshall’s long experience with various schools of systems thinking and teaching “systems.”

Examples of seven schools of systems thought are outlined in BOX 1. For instance, there is a Native American “system” of thought that emphasizes sacredness, elders, humor, the equivalence of non-human and human species, strong connections to earth, sky and water, and the ultimate imperfection of human knowledge. In New Mexico, this coherent thought style appears at crucial moments in both Native American and Indo-Hispanic decision-making (more rarely in Anglo-European). Policies of food exchange (barter or gifts without money and therefore not in state databases) or protection of water bodies like Taos Blue Lake would make no sense without familiarity with this coherent logic.

Similarly, when addressing eco-friendly practices of farmers, ranchers or energy plans, the old Greek/Hindu system of “elements” provides a fine framework to track consequences of various actions. The Greek/Hindu system frames the thought system in terms of earth, air, fire (energy) and water and focuses on all the consequences of fiddling with any or all of these four “elements.” We

charted, for instance, how southwestern beef entered the national markets and the impacts on the four “elements” at each stage of the food chain.

Threes C’s: Components, Connections, Configurations
DNM paid particular attention to the “social-engineering” school of systems thinking of academics like Jay Forrester and Donella Meadows (see Valuable Sources). We custom-designed and simplified their thinking to New Mexico’s reality.

Essentially, we looked at every situation from the point of view of the “3 C’s:” components, connections and configurations. For instance, when we looked at pecan growers (the fourth or fifth largest agrifood industry in NM), we found that organic pecans sold at considerably higher prices than conventional and yielded more pounds per tree. Why did growers remain conventional? We found a missing component: easily obtainable organic fertilizers. Despite the abundance of cow manure from the dairy industry, there was no business that converted the manure into organically acceptable fertilizer. There was another problem with connections and configurations. There were fewer near-by shelling plants (plants were moving to Mexico), and there was a concern that organic and conventional pecans could not be kept separate at the same facility. The shellers needed a minimum volume to be enticed to clean their machines or switch.

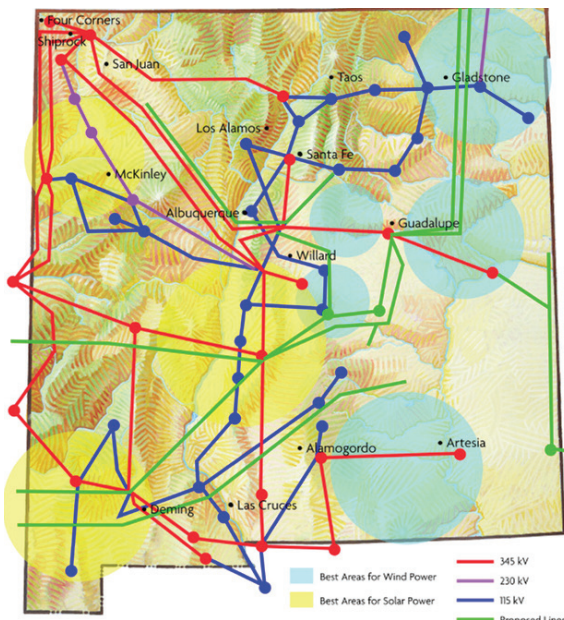


Figure I-A : DNM mapped the best areas for wind, solar and geothermal and then created a green grid that would best serve renewables. Green lines show dream grid for renewables.

Similarly, in the energy sector, a major barrier to renewables was the configuration of the grid. The existing grid is too far from high-production areas for wind, solar and geothermal. Dreaming a new geography for a green grid to access clean energy sources, while identifying clean energy sources near the existing grid, was a more crucial “first step” than advancing the components (renewable power plants). [Figure I-A].

Tip: Review all recommendations from the points of view of components, connections and configurations in order to make pragmatic recommendations.

Value Chains

DNM researched and spent time with citizens and collaborators tracking what we called the “value chain,” basically all the steps from start-to-finish for energy (mine to consumption to waste) and food (production to consumption to waste). We called this kind of flow chart a value chain in order to emphasize that, at each step, certain ethical values and consequent choices played a critical role and, at each step, the monetary value of the product changed.

Value chains can be drawn for everything from desired profit margins to saving sensitive species. [Figure I-B, I-C, I-D]. In some cases such as the value chain for beef, it was necessary to draw two value chains: one for conventional <http://www.dreamingnewmexico.org>

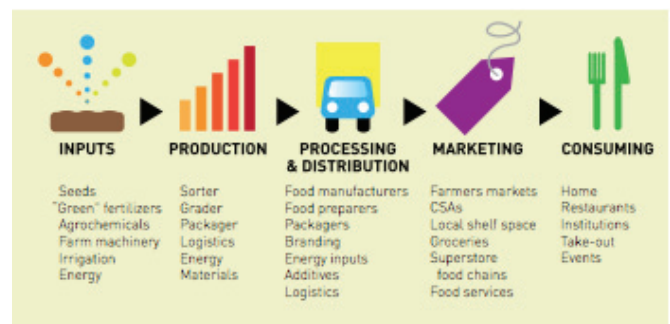


Figure I-B : DNM calls the flow chart from farm-to-consumer a “value chain” to emphasize value judgments and financial values which will change at each step. Others call this flow chart a “supply chain” or “food chain.” Each input or service listed under each step could also have its own value chain. This resulting, very complex flow chart is called a “value chain network.”

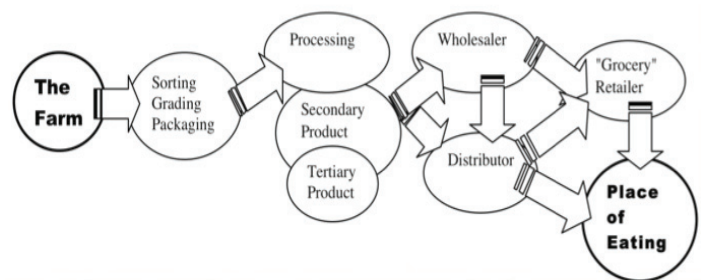


Figure I-C: A flow chart value chain for agrifood system without inputs.



Figure I-D : A value chain showing the outputs of greenhouse gases for the New Mexican agrifood system. A value chain can be made to illustrate changes and potential changes for many points of view: cashflow, ethics, energy, materials, pollution or human organizations.

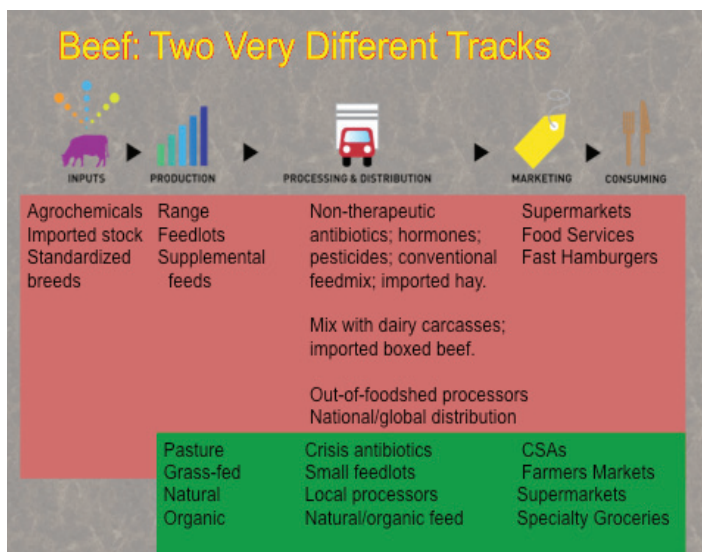


Figure I-E and I-F : The beef value chain contrasting conventionally produced beef with alternative methods that rely less on industrial products. By contrasting the two value chains, the dream of local processing, distribution and humane treatment of cattle can be visualized. In actual practice, sometimes these value chains are mixed.

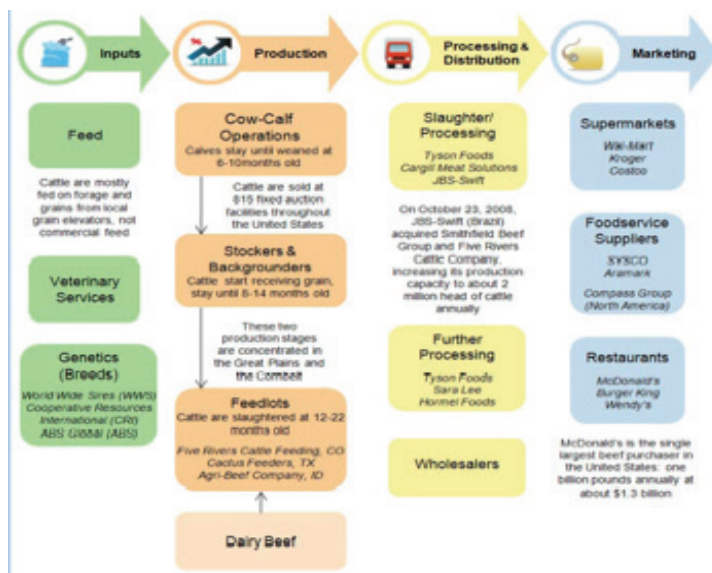


Figure I-F: A value chain showing the actual corporations and their market share. This complex value chain gives a more accurate picture of market share and opportunities and barriers to accomplish dreams in the livestock industry. (From: <http://www.cgic.duke.edu> Report on Value Chain Analysis of the U.S. Beef and Dairy Industries).

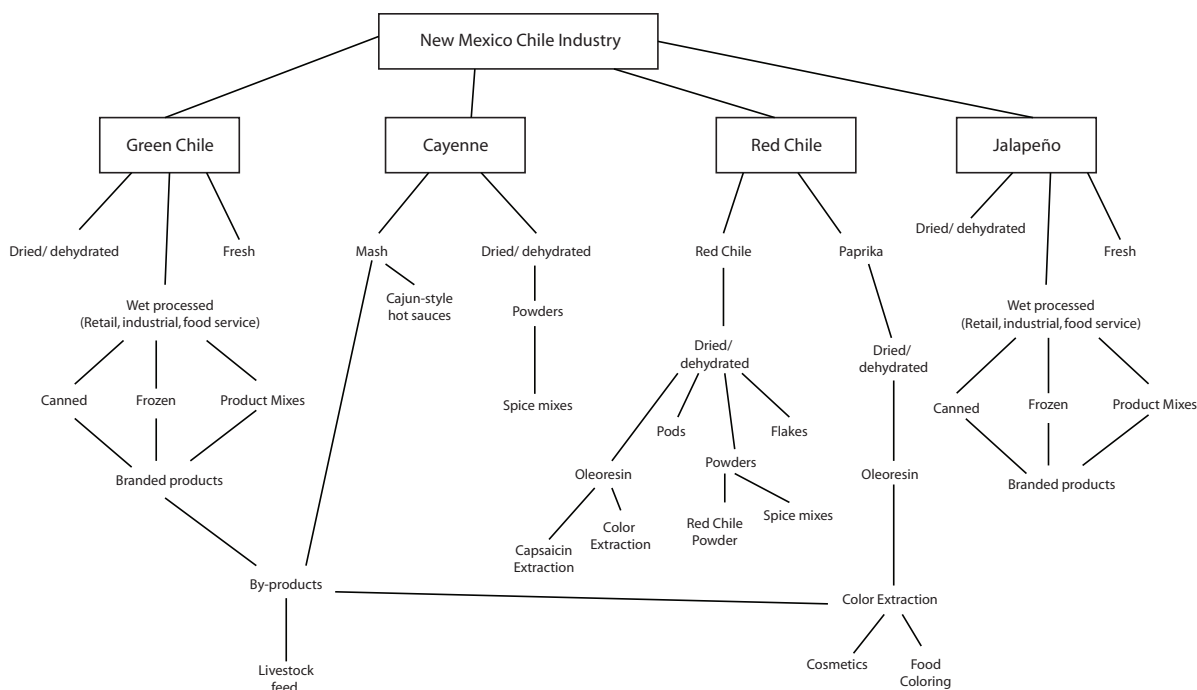


Figure I-G: This diagram shows how complex value chains can be done for crops. Green, red, cayenne and jalapeno chiles all have different production, processing, manufacturing, and wholesale value chains. Some chiles become cosmetics, salsas, decorative ristras, food coloring or fresh or canned goods. Imports from five or more nations (not shown) compete with NM chiles at various points in the food chain. DNM had to decide what level of detail was important at this phase of its work.

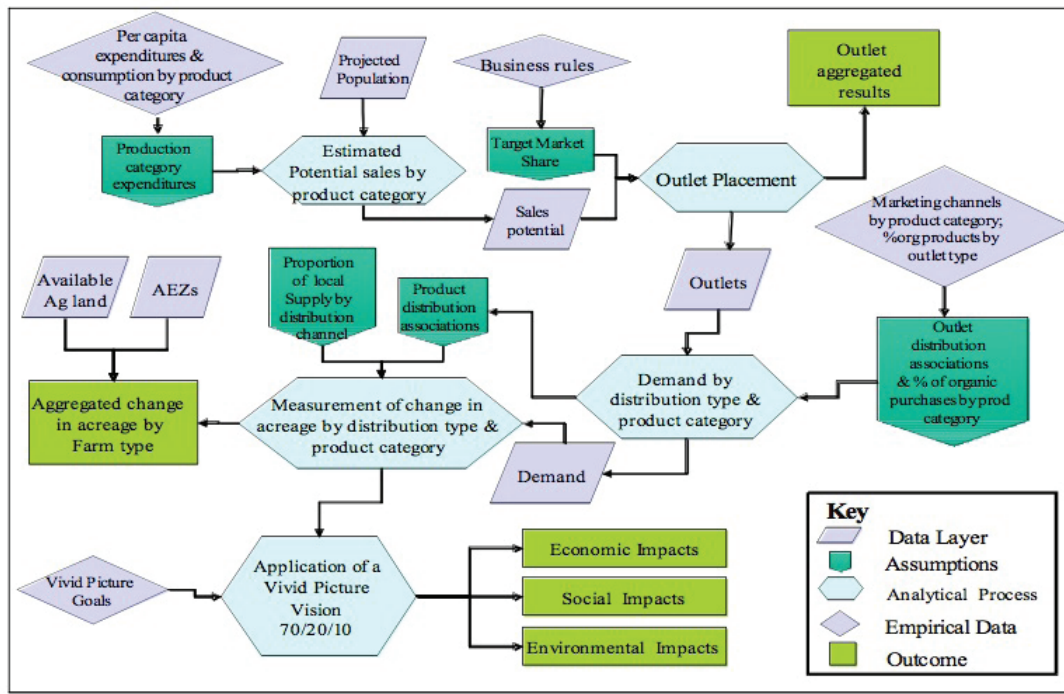


Figure I-H: Some groups use complex flow charts to analyze the “food chain” (i.e. value chain or supply chain). These “chains” are better conceived of as networks. DNM did not use these value networks because it was focused on state governance, did not have resources to obtain reliable data for individual crops or livestock, and wanted to highlight the weak points in the value chain(s) that required attention to build a conservation economy. Any group wanting more detailed and elaborate food chains and networks was referred to the Vivid Picture Project. (<http://vividpicture.net>).

beef (concentrated animal feed operations) and another for grass-fed or organic beef. [Figure I-E and I-F]. In other cases such as the agrifood system for sugar, rice, chocolate and tequila, which cannot be grown in New Mexico, the value chains had to include international trade.

Tip: “Fair trade” commodities that met our conservation economy standards exist only in very minimal or embryonic configurations. To scale up requires a major re-configuration of purchasing at the production and wholesale steps, as well as legal revisions for state purchasing.

In short, although the value chain analysis (the flow chart) is one thread in the huge networked system of globallocal economics, it can be the thread that informs. It can reveal what can become a do-able dream in the next five years or will require longer-term changes over twenty years.

Tip: Each time you diagram a value chain, certain components are left out or “aggregated” (“meat” is an aggregation of fowl, lamb and beef). It is crucial to first know your purpose in creating the value chain, then add or remove components that are more or less important. Showing that you know all components does not usually help translate the flow chart into dreams into actions. It’s too complex. DNM used the checklist under Conservation Ethics [page 14-15] and local circumstances to guide our efforts.

Strong qualifiers are important in using DNM’s value chain work and research concerning the 3 C’s. A crucial task was to budget time and resources that limit investigation of the 3 C’s. Each crop, livestock or energy-type can plunge a project into an almost bottomless investigation of the globallocal network of value chains.[Figure I-G and I-H].

First, we limited the geographic scope of the “system” (components, connections and configurations) to a “system” that was important to the state of New Mexico and its citizens.

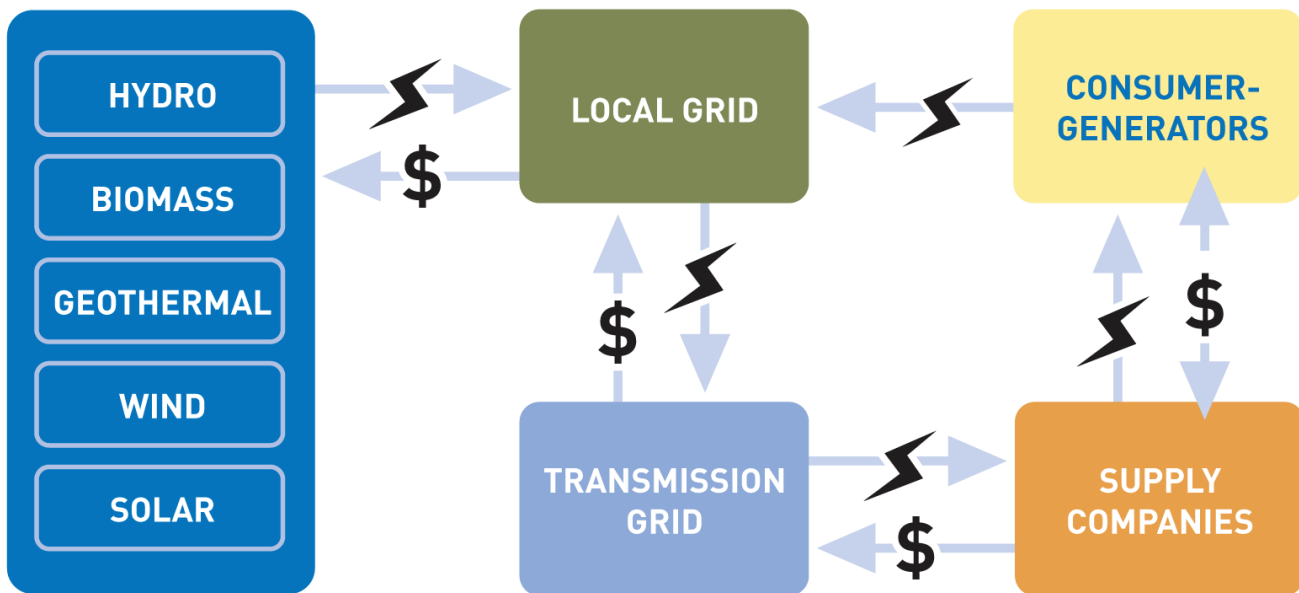


Figure I-I: THE NEW ENERGY ECONOMY: Two big changes are (1) nearby “renewable energy parks” (left column) that feed the local grid, and (2) consumers who are also generators of renewable electricity from their homes, businesses and vehicles. the consumer-generator feeds the local grid and receives credits or payments from the supply company.

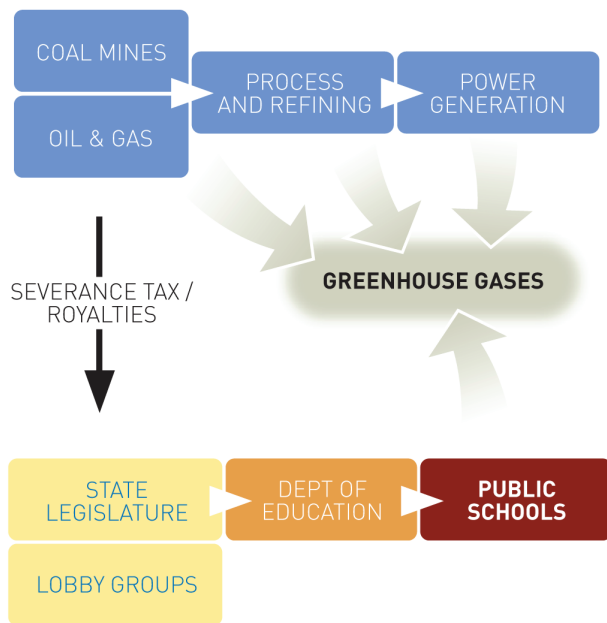


Figure I-J: A complex flow chart showing how oil, gas and coal revenues (as well as development fees) fund the public school system in New Mexico. This influence places the governing bodies in a weak position to demand reductions in greenhouse gas emissions. It is a flowchart of energy, financials and governance.

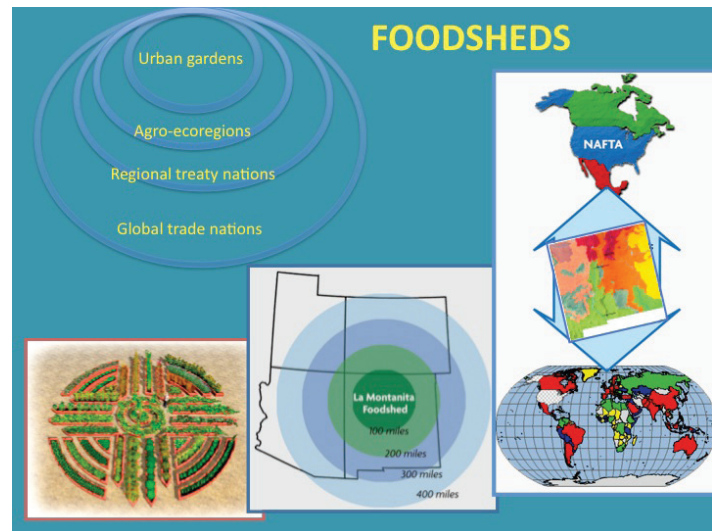


Figure I-K: PowerPoint slide illustrating different scales of communities all, at times, called foodsheds. Local foodsheds to global foodsheds provided for different needs (e.g. New Mexico does not produce rice or chocolate) and trade is crucial as over 95% of its food is imported.

Example: The energy system extends all over the world, and the Federal Energy Regulatory Commission, Congressional budgets, semi-sovereign tribal governments, three major private utilities and multiple regional energy authorities have a huge influence on what happens in New Mexico. Since energy export is a major income to New Mexico, the standards for renewables by other states are as important a driving force as in-state actions.

Tip: Make sure that state citizens can always connect visual maps and dreams to actions.

Second, limiting the system meant, at times, accepting a component without further research.

Example: Grain for cattle feed is a major imported component of the dairy industry. However, limited financing and a major focus on the dreams of local grass-fed dairy meant our value chains did not include the production of corn, soy and other supplements from the Midwest.

Tip: In-state and out-of-state components may require two different dreams.

Third, it was our task to limit complexity. Systems thinkers like to include feedback and feed-forward loops, multiple inputs or stocks, as well as the different rates at which the looping occurs and the stocks are replenished or depleted. [Figure I-H]. DNM rarely elaborated on simple value chains because the value chains were primarily for use by in-state organizations. Our level of complexity or simplicity focused on education, the imagining of alternatives and the steps of the value chain that needed attention on a state level. (After understanding the DNM value chain, each local group could then grab the baton and run more complex value chains.)

Tip: Design the value chain to do-able possibilities, not computer models.

Sometimes we broke with our own guidelines. Two of the more complex were diagrams of how the utilities' financial system and a distributed energy system worked together [FIGURE I-I] and how the energy system created feedback loops with New Mexico's public education system. [FIGURE I-J]. DNM felt both were central issues in the conservation economy and needed more PR.

Sense of Places: Communities and Constituencies

DNM found a fourth "C" that is very important to the citizens of New Mexico: "community" (or even a fifth C as in a Community of Constituencies). Community, which is very strong in many parts of the state, is a source of celebration, wealth, shared resources and pride for all stakeholders we interviewed. DNM introduced the 4 C's to educate and support in-state groups and their local efforts.

In general, a citizen belongs to many communities and the word indicates: time spent engaged; information, services, goods and money exchanged; and/or solidarity. New Mexico is somewhat unique. It is the home/s to many Native American, Hispanic and Indo-Hispanic cultures, each forming its own sense of community, and each having communities within communities. Within any economic sector, there are also many "constituencies - communities" such as chile growers who grow only non-GMO, traditional cultivars and provide a counterpoint to conventional growers whose focus is export and price margins; biofuels advocates who concentrate on future algal fuels rather than biomass; or ranchers who raise grass-fed beef in contrast to those who sell to feedlots.

Some virtual networks have no geography at all. They use "community" to describe their emails, blog, tweeters and web sharing.

Tip: Avoid spending too much time trying to define community. Simply list and become aware of communities with similar interests and tasks.

Geography and Community

The DNM sense of geographic community has been by definition, somewhat arbitrary. It stopped at or near the state's borders. Within the state, DNM based our project on natural regions (see Ecological Regions section) to ensure the conservation economy paid adequate attention to water, earth, energy and the atmosphere. Nevertheless, DNM allowed for exceptions to the "rule" that all endeavors must be in-state. For instance, we joined a collaborative effort that will help define the best locales for wind and solar power in the Navajo nation as an alternative to the expansion of coal production. The Navajo Nation occupies lands across both New Mexico and Arizona.

We found a strong citizen desire for local and healthy food and energy produced “nearby.” For instance, often the “community” would call this “nearby” source its foodshed. DNM was challenged: What is local? What is nearby? We found ourselves demonstrating to various groups that they were embedded in different scales of foodsheds. Each group could operate at one or more scales of foodshed, all called community.

The Chinese boxes of many community foodsheds include: urban garden, peri-urban farm, agro-ecoregion, regional agro-ecoregions (500 miles), the nation, NAFTA nations and fair-trade world commerce. Each group, working on different efforts, now had a sense of how their community fit with others. [Figure I-K].

Each foodshed needed to be considered to create a viable conservation economy. The dream is by 2020 to have 15% of all food grown in the state consumed in the state during the growing season. But, being an arid state, probably 85% or more of all food would come from trade. Purchasing from farms that follow the conservation-based ethics became a major issue that was only poorly addressed within New Mexico. The need for a Phase II project arose to examine NAFTA and global trade for rice, oceanic fish, coffee, tropical fruits, off-season tomatoes, tequila, tea and many more food items.

Finally, New Mexico is a border state with Sonora and Chihuahua, Mexico. The state has close connections through electric grids, energy pipelines, and agro-industrial exchanges (especially farm workers, beef cattle, seasonal organic and conventional crops). If the border did not exist, these regions of northern Mexico would be considered part and parcel of New Mexico’s foodsheds and/or energy sheds. In terms of miles, they are more local than many parts of New Mexico are to each other. We decided the “local” and “community” aspects of cross-border energy and food exchanges were beyond the project’s financial scope and resources, though we helped various groups understand the cross-border transmission lines and trade in organic food.

Tip: Occasionally review the ecological, energy and trade regions immediately adjacent to your state because similar issues will arise in all attempts to find a “sense of place” throughout the US.

Tip: Make sure fair trade is part of your project.

Ecological Regions

DNM had to decide how to become comfortable with the word “community” in its myriad dimensions. We decided to base the project on natural regions of the state to ensure the conservation economy paid adequate attention to water, earth, energy sources and the atmosphere. These *agro-ecoregions* [Figures I-L, I-M, I-N] and *energy regions*

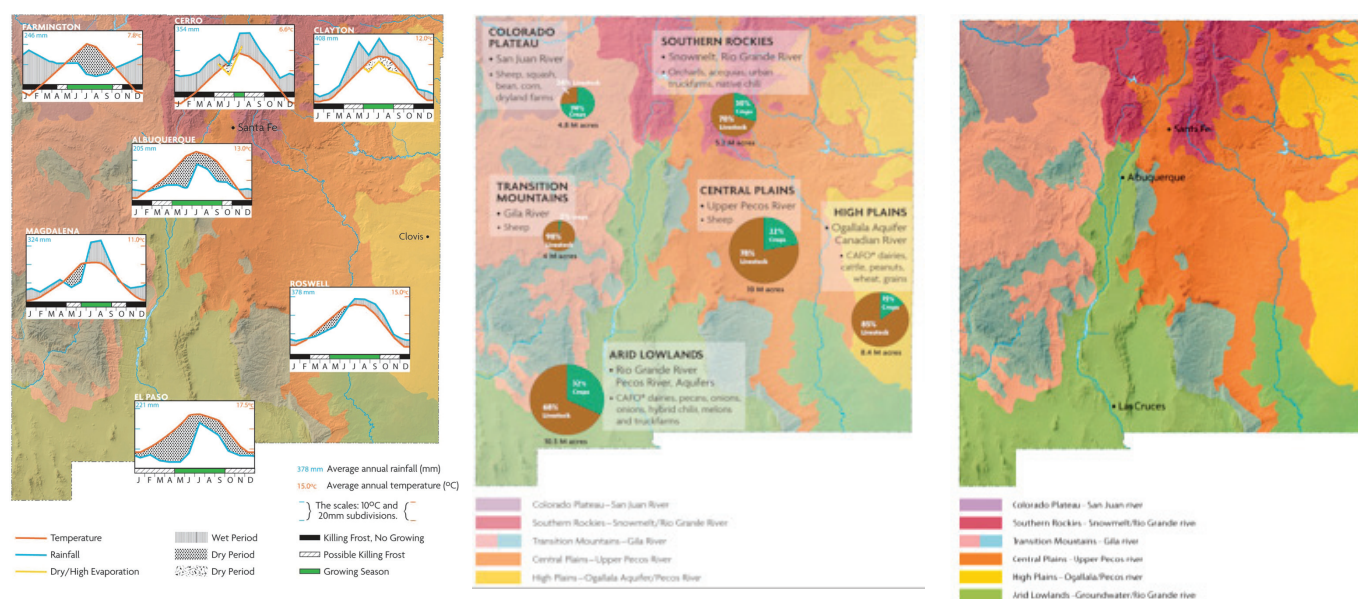
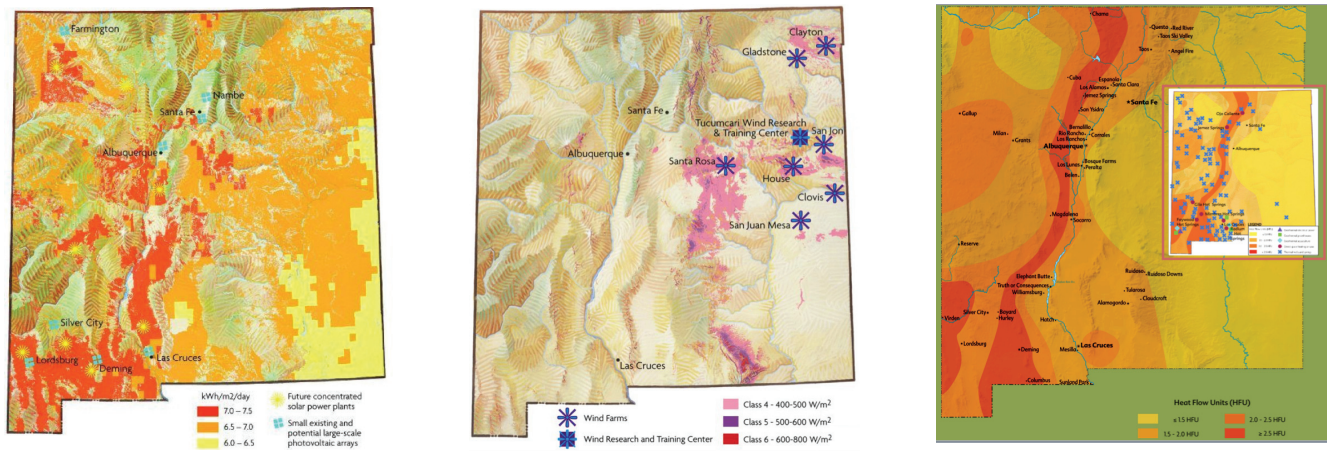


Figure I-L, I-M, I-N: Three of the informational maps from “Foodsheds” poster and booklet show agro-ecoregions and “climatograms” charting specific regional seasons, with graphs and boxes to show crops grown.



Figures I-O, I-P, I-Q: Energy region maps from “Renewables” booklet and poster show the best energy regions for solar, geothermal wind power. These maps are unique to New Mexico in their direct connection to the renewables economy. They proved instrumental in some state policy choices. No one had previously mapped the state’s renewable energy resources.

[Figures I-O, I-P, I-Q] gave coherence to the conservation economy and were one of the most talked about innovations of the project. (Part III discusses the how-to.)

From the base of these ecoregions, the various human communities could see what they held in common with both their natural community and other human communities. They could see where their interests needed to take into account natural differences such as rain, snowmelt, wind, seasonal temperatures, soil and fuel types, river flows, groundwater, major irrigation sources, and livestock vs. crop areas. Energy regions highlight maps of geothermal resources and existing pipelines, roads and the electric grid.

DNM used the agro-ecoregions of the agrifood effort to calculate how much wealth could be created by import substitution and local crop and livestock sales. For instance, we found that the Rio Grande region of southern New Mexico was oriented towards export crops, while the northern Rocky Mountain region had strong local sales. This ground breaking agrifood research educated people on the opportunities and do-able dreams in their agro-ecoregion community. The grounding in natural resources showed commonalities (e.g. similar grazing lands) that cannot be easily perceived using county borders. Similarly, DNM also indicated where energy import substitution was most promising by mapping energy regions.

Celebrating a Sense of Place

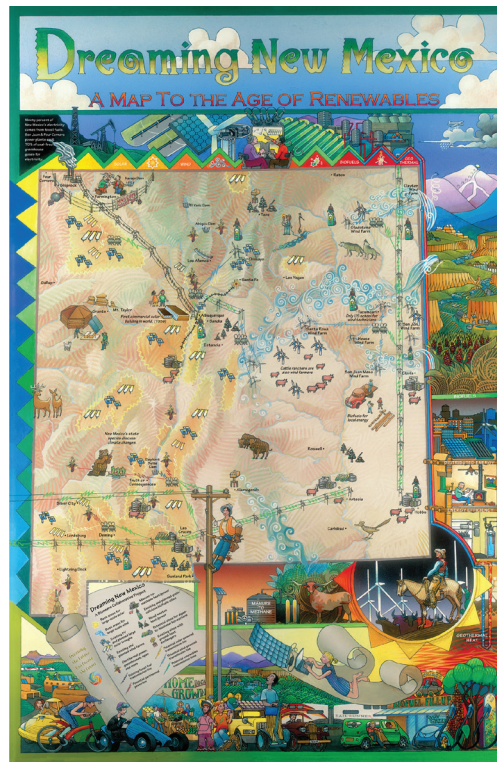
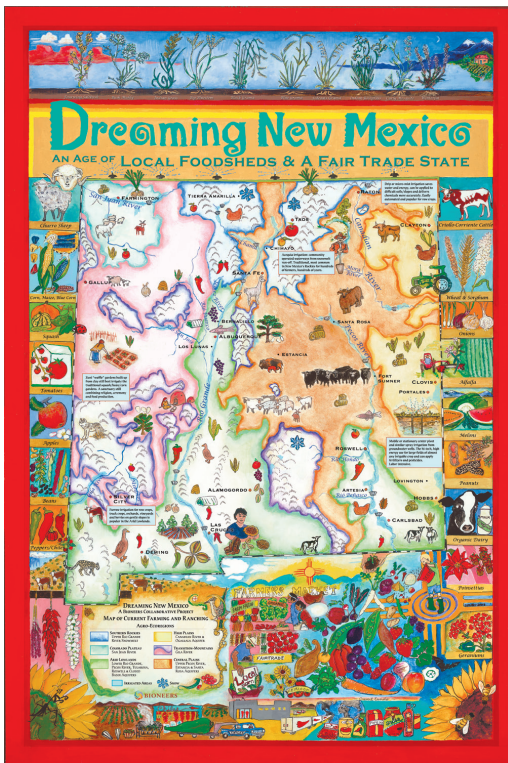
Given the glamorized hype for today’s global economy, one dream kept arising: celebrating a more local sense of

place, wealth and citizen pride. The poster [Figures I-R and I-S] is one deliberate “tool” to accomplish a local sense of place. DNM informational maps helped create a new kind of “locale-appropriate sustainability atlas” [see Figures I-T and I-U] as an additional way to promote identification with local geography.

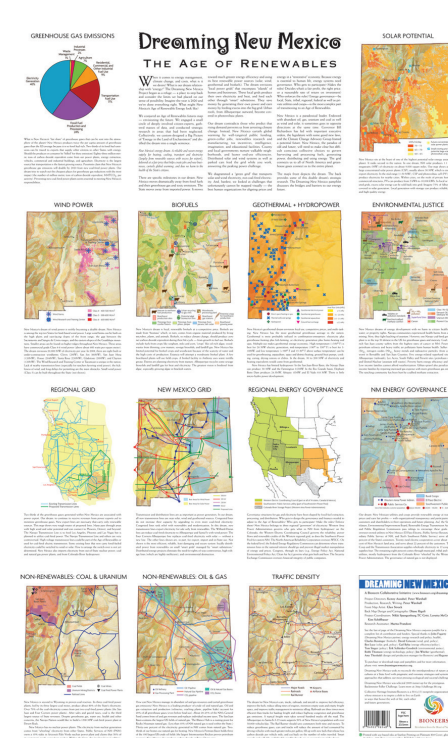
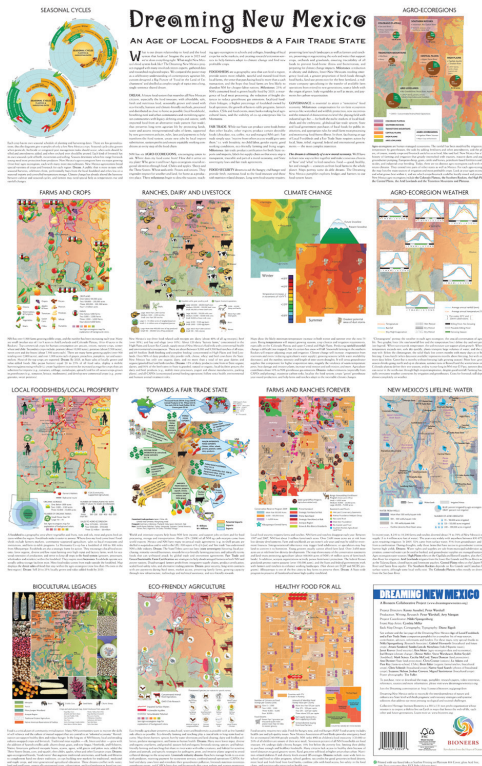
Although financial limitations prevented us from holding public events as we would have liked to do, We were asked to participate in sense-of-place celebrations and help shape them. For instance, we joined the Indian Pueblo Cultural Center and the National Hispanic Cultural Center to sponsor a day with music and traditional foods in Albuquerque. This event fit well with the cultural work and dreaming process.

DNM’s approach to community and senses of place has included:

- All efforts must be grounded within the state’s geography, and employ the state’s energy regions and agro-ecoregions as the base for all work on the conservation economy;
- A beautiful artist-inspired poster illustrating an integrated picture of the conservation economy and senses of place within New Mexico;
- Attractive, informational maps can teach new ways to look at the state from the point of view of the conservation economy;
- Public events, media, school curricula and other endeavors celebrate a sense of place based on eco-regions;



Figures I-R and I-S: These posters became effective engagement tools. They turned up on walls throughout New Mexico because they used eye-catching artistic locale-appropriate designs, and were seen as beautiful and provocative. They depict the present and future possibilities for the state. Young people gravitate to them instantly.



Figures I-T and I-U: The back sides of the poster maps display a small number of technical maps, the “full spectrum sustainability atlas” maps for energy and food. These maps became extremely popular as teaching tools and conversation-starters. More maps appear in the booklets.

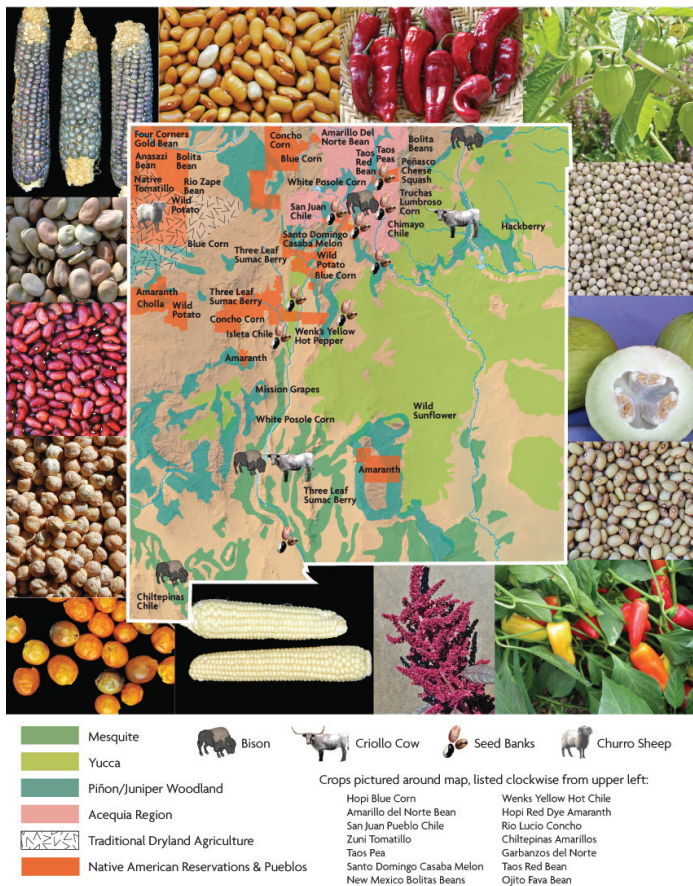


Figure I-V: The map on biocultural foods was popular and turned into a separate poster. New Mexico has many unique cultivars, meats, recipes and agrifood traditions.

- Suggestions for the creation of new or re-designed “communities” (interactive human networks and infrastructure) are necessary to achieve a conservation economy.

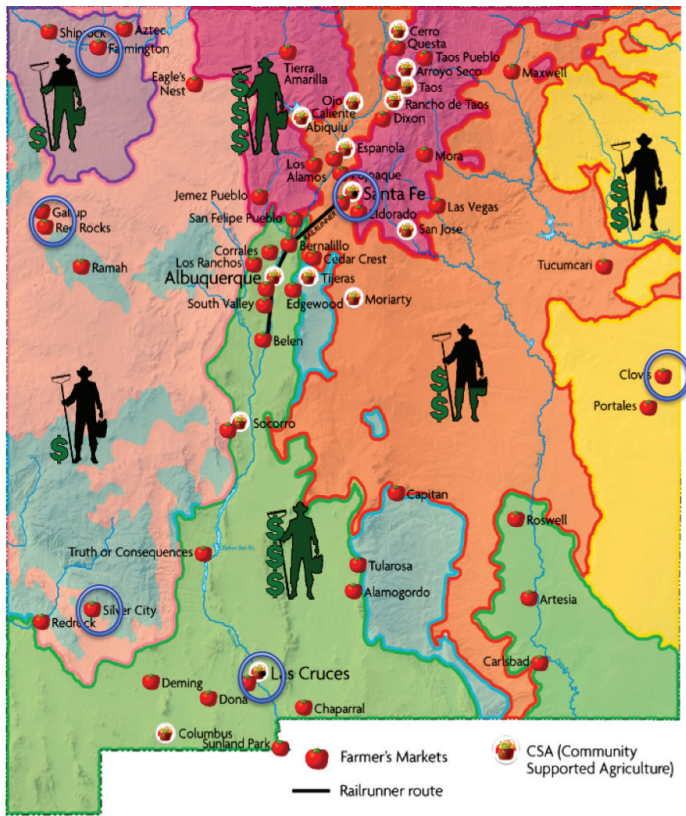
Every state must discover its own unique cultural identity to celebrate. Biocultural diversity is worthy of celebration in New Mexico. With 22 Native American pueblos and reservations, a 500-year-old Hispanic community dating back to the Spanish conquistadores, and a complex and rich history of Indo-Hispanic interaction, the senses of community have always been complex and dynamic, filled with contradictions: creative and stuck, fractured and cohesive, burdened and exalted, wounded and celebratory. They are so strong and important here that DNM dedicated major resources to focus solely on biocultural dreams [“Foodsheds” booklet pages 36-40], and worked with a respected local Hispano leader and group to help do so (Arturo Sandoval, VOCES). In addition, we teamed up with the New Energy Economy,



Figure I-W: The regions of New Mexico have been defined hundreds of years ago in sacred regions which are still honored and celebrated. This is Native American poster combining renewable energy, traditional sheep raising, new green jobs and other aspects of contemporary traditions.

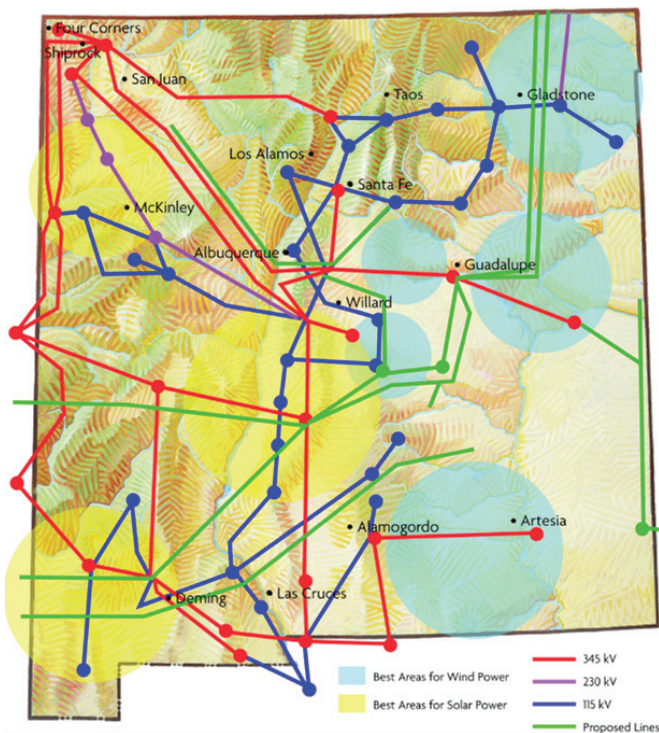
whose staff include Navajo Nation clean energy advocates, on designing dreams of renewable energy on Native American lands. A major section of the “Foodsheds” booklet [Figure I-V and I-W] is devoted to biocultural crops, and “Renewables” dreams include green jobs in the renewables sector for Navajo Nation.

Our work with New Energy Economy and members of Navajo Nation has continued with other projects including enlisting the team from Google Earth Outreach, part of Google, to map clean energy potential of the region and help gain traction to shift Navajo Nation to clean energy. Navajo Nation across New Mexico and Arizona has arguably the top solar potential in the country (as well as strong wind energy potential). Currently dirty coal power from the Nation supplies New Mexico and many western states, and there’s an egregious history of uranium and coal mining that has created devastating wounds to the landscape and to public health. If this shift to clean energy were to occur, it’s



Figures I-Y: An agro-ecoregion food hub with potential components from DNM PowerPoint.

Figures I-X: Map showing agroecoregions and local food sources. The blue circles were added after a Food Summit with many of the agrifood players. They are best locations for agrifood hubs.



Figures I-Z: Green Grid map. DNM mapped the best areas for wind, solar and geothermal and then created a green grid that would best serve renewables. Green lines show dream grid for renewables.

a good example of how the local can generate game-changing regional and national effects, positive or negative. (For information about the project, visit www.dreamingnewmexico.org and www.newenergyeconomy.org).

Communities That Need To Be Created

The regional base maps inspired new ideas about new communities — new components, players, connections and configurations. Groups already dedicated to local food production crystallized their focus on food hubs [Figures I-X, I-Y], explicitly adopting the agro-region concept. Communities interested in smaller (4kw to 40 megawatts) and mid-size power generation could draw up a new green grid over the map of energy regions [Figure I-Z: Green Grid Map]. Although all these kinds of undertakings (distributed energy, beginning of agro-food hubs, fair trade, walking communities) already existed at the time DNM entered the picture. The project provided the conservation economy framework and coherence to stimulate further imaginings.

Tip: Most DNM dreams require a re-design of human organizations or governance infrastructure (Part II), which is essentially the building of nurturing of new communities. Look for the focal points around which people can build or build on community.

Summary

Some of the specific DNM priority approaches have been: a transparent conservation-based ethical framework; an ability to channel surf through systems thinking appropriate to citizen desires; the introduction of the concepts of value chains and ecoregional-based thought; and the need to acknowledge and dream on many geographic scales into order to work toward a conservation-based economy.

The “system” we have favored could perhaps be seen as a radically modified bottom-up version of social-engineering thought. It engages people to become citizen designers. It explicitly includes ethics and morality that honor the commons and the common good. It acknowledges and celebrates the traditional Indo-Hispanic values as influences on fashioning a moral economy, and acknowledges the burdens of history in order to help heal them.

We have emphasized that “governance” and the everyday political context cannot be ignored or dreaming, or visioning becomes fantasy.

Part II addresses details of the process.

Part II: Approaches and Methods

By Peter Warshall

In addition to the core state-of-the-state research and system mapping, our most important “tool” is the dreaming process. In the simplest form, we asked three questions: What do you want? What do you know? What will you accept as success? In Part II, we elaborate on these three questions.

What Is “Dreaming?”

In the dreaming process, we met with any interested citizen of New Mexico from ranchers to farmers, agency employees to church food volunteers, non-profit activists to energy or agrifood entrepreneurs, Native American and Indo-Hispanic historians, activists or gardeners, academics to real estate brokers involved in saving or selling farm properties and, of course, many more. We asked for their dreams in the arena of their interest. We asked: What do you want? What would you need to know to accomplish your dreams that you cannot find? What would success look like? What do you really desire from your work? What was/is your original motivation and desire? What gives passion? What is it that inspires you to change any part of the world, and have you stayed in touch with that inspiration?

Dreaming is an exercise in vision and imagination. Step back and take a breath. Forget for the moment the daily trials and tribulations of trying to get things done. Put aside the near-term goals, be they political, charitable or commercial. In a sense, we’re invited to purify our desires and remind ourselves why we’re doing what we do. The dreaming process is a place of refuge. It is also one of the hardest things for many people to do. Indeed, most of us become so embedded in our assumptions about how the world is now that it can be deeply challenging to imagine something truly different being possible. Many of us also fear being mocked as “dreamers” – in other words, sure, but it will never happen.

“What do we want?” seems simple, but isn’t. Many citizens constrain their answers to what is reasonably possible given the present economic, cultural or political situation. They answer in terms of strategy, compromise and “realistic solutions.” Others may be very idealistic or fundamentalist,

ideologically frozen, too vague or diplomatically vague, or tied down by the next quarterly report or funder deliverable. We kept persisting that this was an exercise in dreaming or remembering what started the passion.

Perhaps the most powerful aspect of Dreaming New Mexico has been to open up and challenge citizen imagination, and help people reveal their own true passions, even if the dream seems impossible in the near-term future.

Tip: Keep careful notes. Notice language and wording – they tell important stories and the true values and feelings behind them. Look for patterns.

Tip: The dreaming process must navigate between fantasy and the reality-based requirements of the physical world and human behavior.

Tip: In the booklets, we highlighted dreams to insure that they stood out as dreams and not just objectives and goals of a strategic plan.

How Does DNM Utilize Dreaming?

Refining Dreams, Creating Themes

The team began to collect themes that emerged from our questions and research. For instance, we learned that there were many dreams about food security. Some thought of food security as making sure that a city or state had enough food reserves in case of disaster. Others thought it meant that all citizens would have enough food at an affordable price (more or less the narrow federal definition, with security related exclusively to poverty and hunger). Still others believed it meant dealing with long-term climate change and identifying what crops would be profitable and needed in the future. Others felt food security was making sure that there were enough farms and ranches within New Mexico so that the state’s citizens could feed themselves in the future. Still others focused on the need to reserve enough water for irrigation and limit the amount used by urban dwellers. It was the job of the project to accept all these points of view and see how they worked together or in parallel.

We began to lump these desires into bigger categories. We tried to keep the Big Dream themes to about five. For energy, we settled on five, and on seven for agrifood. The themes became the chapters of the DNM booklet and the place where the more refined dreams could be described. [Figure II-A, II-B].

What happens, in this dreaming process, is that the goals of the citizens as well as the project staff may shift, just from the conversations. For instance, many dreamed of “renewable energy” or “family farms,” but pushing the dreaming process surfaced that they were also dreaming for a new kind of utility that favored decentralized rooftop and municipal power generation, or a new relational infrastructure among farmer, distributor, wholesaler, retailer and banker. The dreams became “whole” and more precise.

The participants and the DNM staff fed each other’s visions, and clarified which dreams were most important and those that could be stated with the most precision. For instance, the amount of food that could be grown and consumed in New Mexico was of great importance to many citizens. Some still dreamed of 100%. To clarify this dream, DNM asked two or three experts to try out models or thought-exercises, and the dream became more realistic and precise (50% in season by 2020; 20% of annual total).

Tip: The role of DNM was to listen and to listen critically and ask questions from our own research to help discover the distance between the dreams and do-able dreams. This also helped establish time frames, and can ultimately lead to tangible goals and timelines.

Renewable Energy

Distributed Energy
(micro-powers and micro-grids)

Big Green Grid

Energy Efficiency

The Energy Commons
(governing what we share)

Figure II-A: Dream themes of energy project.

Agro-Ecoregions

Local Foodsheds and Local Value Chains

Saving Farms and Ranches

Biocultural Foods

Fair Trade

Food Security: safe food, enough food, easily
accessed

Governing a Restorative Agrifood Economy

Figure II-A: Dream themes of energy project.

Time Frames

We analyzed all the dreams and gave them approximate time frames. Some dreams could be accomplished in three years and were similar to the “objectives” of strategic planning. Others required a shift in American culture or Congressional intent, and might require twenty or more years. Understanding the timeline to make a dream into a do-able dream is important - to funders, investors and NGOs – and to realizing the dream.

Tip: One way to be inclusive of differing dreams is to discuss how long a dream might take to be realized.

Tip: Thinking about 20 years (our general framework) may be realistic but has difficult buy-in because most people simply do not think that far out. One central task has been to find some shorter-term do-able dreams to hold the interests of funders, investors and NGOs.

What About New Dreams?

The project team came up with dreams that no citizen mentioned. From our research, we discovered that New Mexico, for instance, would always require more than 70% of its food to be imported. It is too arid to be price-competitive for many seasonal crops; and some crops like rice, coffee and chocolate would never be grown in-state. In these cases, we created new dreams such as a Fair Trade state with sister states, nations or regions to build a conservation-based commerce and a more ethical globalocal agrifood economy. DNM understood that this was quite a long-term dream and some would laugh at it and see it as fantasy. But since imported food and the conservation economy had not been concretely addressed at the state level, we thought the Fair Trade State ought to be given a hearing.

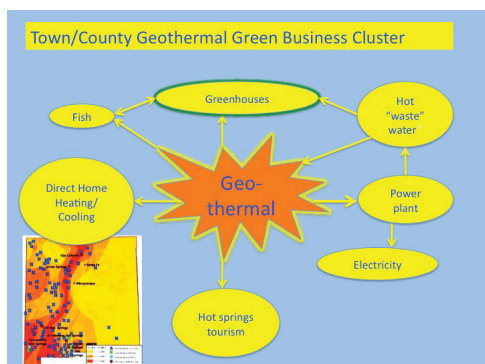


Figure II-C: DNM diagramed a new dream for towns and cities within New Mexico's geothermal belt. New dreams can become important inspiration and tools for mayors and county officials.

Similarly, New Mexico has no plans for the multiple use of geothermal energy in city or town for geothermal-heated greenhouses, spa tourism and other potential money-makers. [Figure II-C].

Tip: It's crucial to seed ideas even when they are long-term and may seem laughable now. In addition, other people in other places may be more ready for such an idea.

What About Nightmares?

Some participants were motivated by nightmares, not dreams. They saw a future of climate change, oil price increases, collapsed food trade, jobs and incomes, environmental injustices, biodiversity devastation, and other catastrophes that require immediate attention. DNM did not evaluate these scenarios nor analyze their reality in detail. We presented the nightmares as opportunities for harder-to-achieve dreams, always asking what might be the dream solution.

We included the nightmare climate-change scenario custom-designed just for New Mexico in order to highlight impacts on farming, ranching and heating/cooling needs of the state, and to help “contextualize” New Mexico's obligations to reduce greenhouse gases.

Specific “nightmares” arose in the course of our work such as the imminent collapse of the commercial chile industry and the still polluting uranium mines. While DNM did not have the funds or time to work on a “save the chile” or other targeted campaign, we did create boxes in the booklets to highlight potential crises for specific crops or energy issues, in hopes others would pick up on them.

What Do We Know?

What do we know about the agrifood or energy systems of New Mexico? How does what we know or don't know impact our dreams? Where are the gaps, the bottlenecks, and the opportunities to do further targeted research that will enhance do-able dreams? What concepts, definitions and perspectives on the facts and from systems thinking need attention? What do we know about how humans now organize ourselves to deal with harms to ourselves and the Earth? What are the opportunities to promote a conservation economy? How do we organize ourselves to govern natural, financial and human capital?

Tip: Before discussing dreams, always ask what additional information a person or group needs.

Tip: Before immersing in a discussion of how to handle cantankerous data, sources of information and the need for clarity when employing “big words” and new concepts, it is important to remember: What we know may not ultimately be important in decision-making.

Facts rarely change decision-making (see Meadows essay: *Ten Ways to Leverage the System*). There are many other forces or factors that can be more important than knowledge: votes, cash, judges, disinformation, emotions, compelling narratives, fear, prejudices and sometimes the coupling of protests and media. Facts are useful to public servants when they have to make a case for their decision (“after the fact”). But, the decision is more often not based on facts. Unfortunately, talking heads and dueling experts have increasingly become the standard in American policy and politics, a dynamic that tends to preserve the status quo.

Nevertheless, DNM worked with the premise that facts can be useful guides that limit the waste of human energy and allow a clearer vision of effective leverage points. Facts may also be crucial in the court system. Facts about water use have largely determined water allocations for agriculture and energy throughout the state.

Facts can also give rise to new or different stories. DNM has meticulously sought to gather the facts and represent them accurately, but more importantly to cohere them into a new and compelling story. We have also been transparent in saying what we don’t know, which is part of the story.

In gathering information, DNM did not work with any one existing NGO or educational institution. If an organization existed in New Mexico such as the Leopold Institute or a well-funded college or university department that worked on the conservation economy, we probably would have formed a collaborative alliance and eased the workload with student labor.

Tip: Since DNM has desired to educate, celebrate and inform, the gatherings of images (visual information) is as important as the gathering of facts. The images informed all deliverables, and have proven to be effective.

Data Issues

No data: Because DNM researched the future conservation economy, some data simply did not exist. When crucial data were not known, obtaining them became a dream within the dreaming process.

For instance, those interested in supplying local food will not find food consumption data by zip code. They will not find data on imports of food into the state in either state or federal statistics (just exports). They will not find data on transport distances of crops or livestock that remain within the state. (There are few data on the pueblos and reservations.) Since DNM focused on import substitution, this lack of data was glaring. Recording this kind of data is new to the US, and creating a new data collection system became one dream.

In the energy endeavor, no academic or private company has calculated the number of megawatts available by placing photovoltaic plates on the roofs of Albuquerque. A crucial question remained unanswered: How many megawatts of distributed photovoltaic can be generated in New Mexico’s largest city, and can it relieve peak demand?

Differing Data: As we ploughed through data, all too often we concluded that two agencies collecting the same data came up with different results. The research time needed to clarify the differences did not make economic sense for the project. These differences (e.g. USDA Census of Agriculture (2007) and New Mexico Agricultural Statistics (mostly 2006) we left unexplained.

Meager Data: In addition, some data were too meager to help. For instance, when a county has only a few specialty crop farmers (e.g. raspberries), the data are not reported in order to protect privacy. But, for local farmers’ markets or local grocery sales, the number of raspberry growers and anticipated yield helps buyers plan their orders. Similarly, the locations for wind and solar on the Navajo reservation are known only in general terms. For site selection, the tribe needs a more precise inventory. The data gap became a dream-in-progress: An energy NGO, a Navajo NGO, and DNM in collaboration with Google are preparing the beginnings such a map.

Silo'ed Data: Facts were often “silo'ed” or came as isolated pieces of information. Connecting the dots in the value chains, embedding infrastructure by ecoregions and integrating sectors with systems thinking are major tasks.

For instance, the data collected in New Mexico's agricultural reports did not conform to DNM's agro-ecoregional approach. The agencies used county borders that did not conform to agro- or energy-ecoregions. [FIGURE II-D]. DNM made the best of it by looking at the main sources of crop or livestock production income within each county, and placing the county within the ecoregion in which it provided the most wealth (see <http://www.dreamingnewmexico.org/food/ff-local-foodshed/ff-foodshed-reports> on web site).

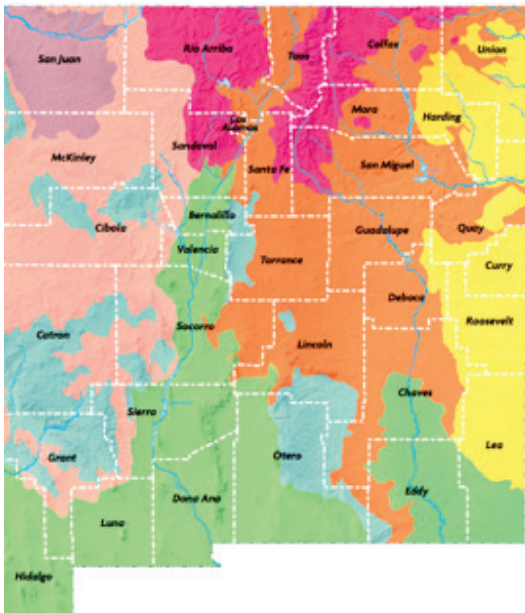


Figure II-D: County borders do not conform to agro-ecoregion boundaries. To mesh the data (reported by County) with agro-regions meant determining which areas were least and most important to agricultural income. After determining this sub-County geography, the County was assigned to the agro-ecoregion where it contributed the most wealth. This process (luckily) turned out to be fairly straightforward with no flips of a coin.

In short, when a data issue (silo'ed data, conflicting data, data gaps, inadequate data or too-time-consuming-to-unearth data) is severe and impacted the dreaming process, DNM turned significant data issues into data dreams and tried to identify the person, agency or university that could address the gap.

Tip: DNM remained comfortable with words and phrases like “about,” “approximately,” “in the range of,” “guesstimate” or “he thought, but she thought.” Arguing about numbers and precision of data can become a major distraction. Usually it is not the precision of the data but either the total lack of information or the interpretation of the data that is controversial.

Sources

Sourcing information basically requires a set of questions and a description of the process that helped to answer the inquiries. DNM searched out as many sources as possible for both textual and visual information given our time and resources (below). The search for information had two phases: an overview of the state as a whole; then, specific targeted research on the themes that emerged.

Tip: It was crucial not to lose sight of the main purposes for the inquiry and project and become overwhelmed by facts, theories or agendas.

Tip: Getting the questions right (even if unanswerable) can be more informative than new facts.

The sources for information and wisdom have included: citizen informants, think tanks (“dream teams,” we sometimes call them), books, crucial documents, maps and atlases, targeted commissioned research papers, newspapers and other media, academic studies, and the web. Specific reference material can be found on the DNM web site.

Tip: When working on a state level, each type of meat/crop and each specific energy type require targeted research to avoid bland, cookie-cutter generalities.

Citizen Informants: Many were experts in their field and were the most productive sources for DNM. Over 30 citizens of New Mexico helped us find, verify or evaluate information that contributed to the energy endeavor, and over 50 to the agrifood endeavor.

Examples: Local funders played an important role as they had been tracking the progress of energy and agrifood NGOs for many years and knew the particular details

of working within New Mexico. Individuals within state government were also crucial sources of information because they had long experience with governance, grants, agency directions and their own area of expertise. New Mexican NGO and Indo-Hispanic citizen-experts in food and energy were the sources for most of the work on various futures of their community's conservation economy and the push for equity. Academic, grower, buyer and seller knowledge provided reality checks to value chain writings.

Dream Teams: Especially for the energy effort, DNM was able to form a “dream team” to bounce off facts and ideas with individuals who had long experience within the state. For instance, DNM returned numerous times to local experts on geothermal, biofuels, photovoltaic solar, and wind generation, as well as to individuals with overall understandings of state and Native American economic and energy policies. The energy dream team was a crucial participant to both the success and financial efficiency of the project. Virtually all these kinds of people generously contributed their time and attention pro bono. In a very few select cases, we commissioned and paid for targeted research papers. Without the pro bono contributions, the project would not have been financially viable.

For the agrifood endeavor, a dream team became too unwieldy because of the diverse agendas of dozens of organizations (e.g. irrigation infrastructure, food security priorities, marketing and capitalization). Our exploratory and organically changing approach confused some groups, and at times engendered some skepticism. (These concerns were resolved at the Food Summit, where we presented our results.) Because the Indo-Hispanic sub-cultures of NM had dreams that did not always mesh with state policy, DNM did assemble a special “agrifood think tank” to address indigenous concerns.

Tip: During the dreaming exercise, try to determine if any individual might be part of a dream team.

Tip: If possible, a small dream team of the most passionate and knowledgeable greatly facilitates the dreaming process. Academia is one source for participants, but often the most knowledgeable people come from diverse professional backgrounds.

Special Citizen Projects: In New Mexico, there are 22 sovereign Indian nations within the state and dozens of areas of the state that have strong Hispano or Indo-Hispanic cultures that govern much of daily life. DNM has great respect for these groups as independent decision makers and we did not have the finances to work with each group (and all the internal subgroups) on this project.

We decided to explore one agrifood dream that our highly experienced Bioneers farming director Arty Mangan had identified: increased local production and distribution of the food on select pueblos; and one energy project in cooperation with the New Energy Economy and Google Earth Outreach — the identification of the best locations for solar power on the Navajo Reservation. DNM also offered for free all our materials for school and government education to any of the interested communities.

Tip: Methods must be modified to fit the moral/religious and kin-based frameworks of each community.

Sources continued on page 38.

DNM's Biocultural Dreaming Projects

By Arty Mangan, Bioneers Food and Farming Director

“The tradition teaches that food is in part the story that goes with it...”

— Peter Warshall

The biocultural foods segment of the DNM work falls in the fourth “C” category, Sense of Places: Communities and Constituencies. NM has the fourth largest Native American population in the US, almost 10%. Hispano people trace their roots back 500 years in NM and are 44% of the population of the majority-minority state. 36 % of New Mexicans — the highest of any state — speak a language other than English at home. There are multiple native languages spoken — Tewa, Tiwa, Towa, Keresan, Zuni, Diné, Mescalero, Jicarilla — and a colonial form of Spanish unique to NM.

In initiating an intentional dreaming process, some of the questions that we explored concerning biocultural foods are: Where is New Mexico today and where has it come from in regards to food self-sufficiency and food sovereignty? What uniquely New Mexican cultural and historical information and stories can help inform a dream that calls for “Food that nourishes all New Mexicans, especially the food insecure, with affordable, safe, culturally appropriate food?”

Every locale has its own unique story shaped by its history, natural history, natural patterns, the cultural identity of that place and how all of that expresses itself on the local landscape.

Prior to Spanish conquest and subsequently, native crops and wild plants along with wild game, cultivars and breeds brought by the Spanish, traditionally and still to this day have a significant impact on the cultural identity of New Mexico. Chile, a perennial crop from Mexico brought to NM by the Spanish and adapted to a shorter growing season by both Hispano and Native farmers, is New Mexico's iconic crop.

One of the challenges for DNM was how to include into our process an understanding of what Arturo Sandoval, director of the Center For Southwest Culture, refers to as the “confluence and conflict of cultures.”

In the early stages of the project, DNM internally considered how to deal with what Peter Warshall refers to as the “burdens of history,” the sometimes brutal historical interaction of Hispano and Native people and the scars and conflicts that persist.

For the purpose of “revitalizing local traditional food systems and food traditions,” we decided that our interest and emphasis was clearly on the confluence of those cultures. The design challenge for this aspect of the project was how to include the voices, ideas and concerns of traditional New Mexicans without implying that DNM in any way represent those communities.

As Peter explained in the booklet: “It would be presumptuous for DNM to dream for 22 sovereign tribal nations and hundreds of Hispano communities. In addition these communities are very diverse with different languages, histories, agro-pastoral practices, stories and ecoregions.”

We distilled our inquiry into this specific question: “How do biocultural crops and traditional farming and husbandry practices inform the dream of a local foodshed for all citizens of NM?”

We were interested in gathering information on the principles, strategies, and practices, which have been successfully used traditionally — but rendered obsolete by an industrial, global agrifood system — that may be important and useful in a vision of re-localization.

DNM is a project of Bioneers, and Bioneers has long developed cross-cultural dialogue and relationships, and our collaboration with indigenous peoples is long-standing (www.bioneers.org). Since the inception of the Bioneers conference in 1990, traditional indigenous knowledge has been a central and influential element to the Bioneers core values of the wisdom of nature, the connection of all living beings, and the practical and spiritual relationship between people and their environment.

The main barrier to gathering information on biocultural crops and traditional farming practices from indigenous and traditional peoples is a legitimate historical distrust by Native Americans toward people of European ancestry related to the Conquest and the burdens of history. Respect for and protection of traditional knowledge is a serious issue with indigenous peoples. Bioneers’ considerable experience with building relationships and working with native peoples gave DNM some upfront credibility and a network with which to work and expand upon, including many long-term and respected indigenous allies.

Tip: Respect and honor cultural and ethnic sensitivities, differences and boundaries. Do you have the life experience and personal maturity to enter into cross-cultural communication and collaboration? Honor the living wounds from the burdens of history, and the fact that it’s not remotely a level playing field of opportunity. Listen more than you speak. Ask for feedback and guidance.

Tip: Interaction with Native people takes time. Good intentions should be combined with the patience to build relationships. References from trusted allies and/or funders can help facilitate the process.

In order to answer the question, “How do biocultural crops and traditional farming and husbandry practices inform the dream of a local foodshed for all citizens of New Mexico?” I conducted a series of video interviews with a variety of individuals — academics, community activists, historians, tribal leaders, a chef, farmers, a government official, a director of an NGO, and a plant breeder. The people interviewed did not speak representing an organization or a tribe, but spoke for themselves and in doing so expressed, in some cases, the conjunction and, in other cases, the diversity of values and dreams for a community-based, local food system. The edited interviews have aired on three community TV stations and at other public events, and are available on the Dreaming New Mexico web site.

Tip: Double-check any potentially sensitive issues. Better safe than sorry.

As part of the title for one of the interviews, for instance, I initially used a Keresan word spoken in the interview. When I sent out a preliminary copy of the video, I was asked to change the title because that word was politically charged in regards to a water rights lawsuit.

As mentioned earlier, we were invited to collaborate with the Indian Pueblo Cultural Center, the National Hispanic Cultural Center, and the Center for Southwest Culture on an event that incorporated the DNM materials, music, poetry, and a panel discussion on biocultural crops and local food. NM Cabinet Secretary of Indian affairs, Alvin Warren, who was interviewed for the project and became an ally, addressed the DNM Food summit and met with the DNM team to discuss which aspects of the DNM work he could help support.

I think Native communities could participate more and benefit from a more local food economy because that is our tradition. Our communities stem from centuries upon centuries of living within and using the natural resources around us. For us it's not about collecting a resource. It's about a relationship to place and a relationship to who we are as Native people and to our ancestors as they go back. It's our relationship that is spelled out in our songs and in our prayers and in our traditions...

Former New Mexico Cabinet Secretary of Indian Affairs, Alvin Warren of Santa Clara Pueblo

Biocultural Crop Data Base

The research-intensive aspect of the DNM biocultural work was creating a database for the biocultural crops of New Mexico. In addition to the interviews, I used the following sources to gather information: University of Michigan Native American Ethnobotany database, RAFT (Renewing American Food Traditions by Gary Nabhan), Slow Food's Ark of Taste, the USDA listing of endangered and threatened plants of NM, as well as local and regional experts Gabriel Howearth of Siempre Semillas, Suzanne Nelson of Native Seed Search, Brett Baker of NM Organic Commodity Commission, Josh Cravens of Arid Crop Seed Cache, and Miguel Santistevan of the University of New Mexico.

With that information compiled, we mapped the points of major cultural significance of traditional crops on the DNM biocultural map [Figure II-E], which also includes culturally significant wild plants, acequia regions, traditional dryland agriculture, Native American reservations and tribes, seed banks, and key cultural livestock such as Criollo cattle, Churro sheep, and Bison.

Native people generally do not want to get specific about naming crops of cultural importance to their tribe or how they are used in ceremony. Respecting that cultural sensitivity, we did not probe deeply for that information, as it may have been interpreted as an exploitation of indigenous intellectual property. Instead we used what was generally in the public domain or offered voluntarily in an interview.

As a result we do not present the final mapping of these crops as a definitive expression of place of origin, because the reality is more complex, overlapping and confidential, but rather to provide a sense of the importance of the relationship among plants, animals, people and place.

Tip: Make clear agreements upfront about what topics will be discussed. Keep the agreements. Err on the side of caution. When in doubt, ask.

Our approach was one of inquiry and exploration. Our purpose for this area of the work was not to synthesize the compilation of information from the interviews, nor to write dreams for any specific pueblo, tribe or Hispanic community, but to have it inform and inspire our own thinking. Producing the videos of the interviews and offering them publicly as a distinct component of the work allowed the voices of traditional people to be heard in their own right.

At the Food Summit where several Native American and Hispano leaders participated, a desire crystallized to gain official state recognition for the rich living legacy of indigenous and traditional food and farming. We were able to coordinate a vetted process to create a State Proclamation signed by Governor Richardson designating a Traditional Food and Farming day in June 2010.

We also at times serve as a go-between for various groups where dreams overlap. These overlaps in dreams have included: healthy foods and nutrition-related diseases, more education on energy and food, more specialty crop farming for local markets, modifying farmers markets to become more like traditional markets, reducing health damages from coal and uranium, expanding better grocery access into food “food deserts,” seed banks for traditional cultivars, potential multi-species slaughter houses on Native American lands, and protection of local cultivars from contamination by conventional or GMO cultivars.

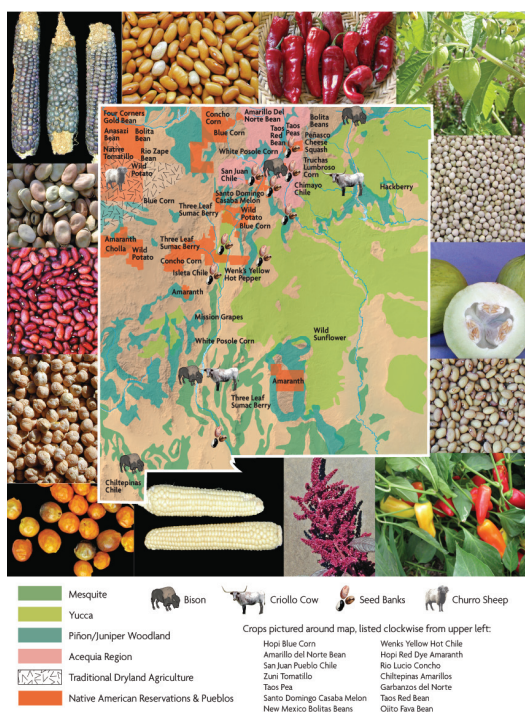


Figure II-E: The map on biocultural foods was popular and turned into a separate poster. New Mexico has many unique cultivars, meats, recipes and agrifood traditions.



Figure II-F: The regions of New Mexico were defined hundreds of years ago as sacred lands which are still honored and celebrated. This Native American poster combines renewable energy, traditional sheep raising, new green jobs and other aspects of contemporary traditions — a vision that overlapped with DNM's dreams.

Crucial documents have included state reports and task force or working group reports. Many times, parallel reports from similar states (California, Montana) helped ensure that all topics were addressed with the most up-to-date thinking. Federal agencies that report state data are especially important for trade, regional issues such as NAFTA or grid development, and agricultural production. state agencies, state agricultural universities and commodity groups contained many technical reports on specific topics such as carbon sequestration or the chile industry.

These reports do not usually address issues relevant to the conservation economy. Major time was spent gleaning state and federal reports for relevant information. At times, it was best to read a report and then contact the author/s with questions.

Examples of questions raised in documents: Even though there are organic milk farms in New Mexico, why is organic milk imported? What needs to be done to keep pecan shellers in state? Where can one find more information about the State Land Office leases for grid and renewable development? Which species are threatened by farming or ranching? Which superfund sites are relevant to state energy policy?

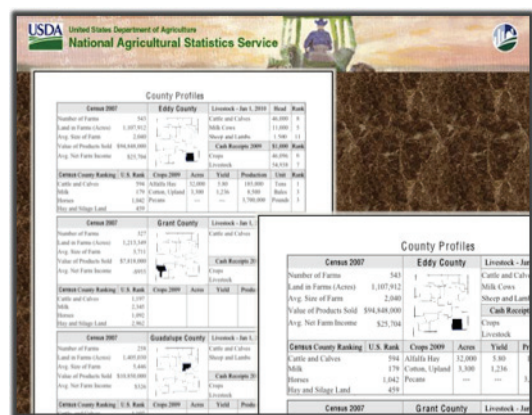


Figure II-G: The National Agricultural Statistics Service data by county is an example of an essential document. The data were re-aggregated by agro-ecoregions for DNM's goals.

Books helped ensure that DNM was aware of the themes for our energy and agrifood endeavors. We could not find any atlases or specific books solely dedicated to state energy or agrifood. Books (and reports) on the European food and energy systems were especially useful in opening the imagination. Many of the publications of Ecotrust (www.ecotrust.org) provided sturdy ideas and thoughts.

Web-based information was erratic and, in many instances, could not be traced back to its source. Its validity was speculative. Research based solely on web surfing was the least productive approach. Exceptions were specific PowerPoints by specific citizen-experts, and information that only existed on the web. Some information (NAFTA food trade or regional energy management) could be found only on the web. Re-working the data from government web sites for DNM's purposes took a great deal of time.

Maps came from many sources and required substantial time to ferret out. State atlases may be the best point of departure. However, very few maps could be used directly. They did not portray the dream themes adequately or vividly, or emphasized extraction, or were out-of-date.

Tip: See if NRCS maps are available for your state. Check their coverage and qualities as a starting point.

To construct a Dreaming New Mexico map that worked well with the conservation economy frequently required the collating of pieces of three to five maps. Example maps used in the collation are shown in [Figure II-G].

Unique to the state-level dreaming process are maps that spell out the jurisdiction of governing bodies such as utilities, electrical coops and food coops. Few projects map out "governance." For instance, utilities partially govern the cost and kind of energy delivered to citizen-customers [Figure II-H].

Tip: DNM re-designed the technical maps for the dreaming process, essentially creating our own mini-atlas. We worked with the artist/designer Diane Rigoli to create them in a similar style. The coherent style aided citizens in visualizing a coherent conservation economy [Figure II-I]. This work proved to be very complex.

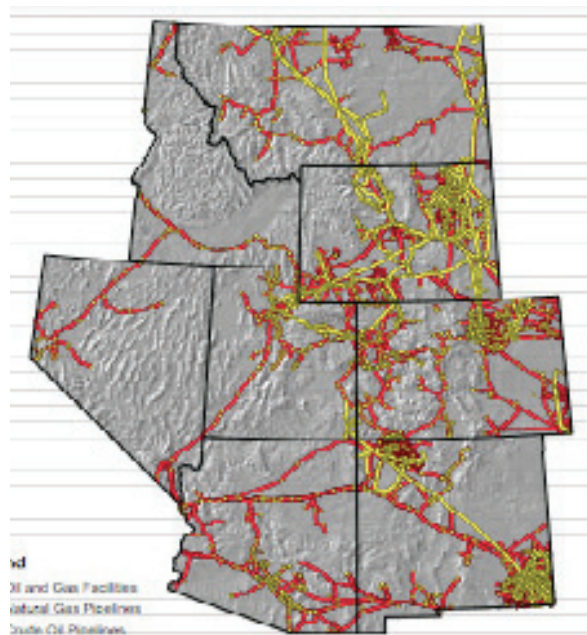
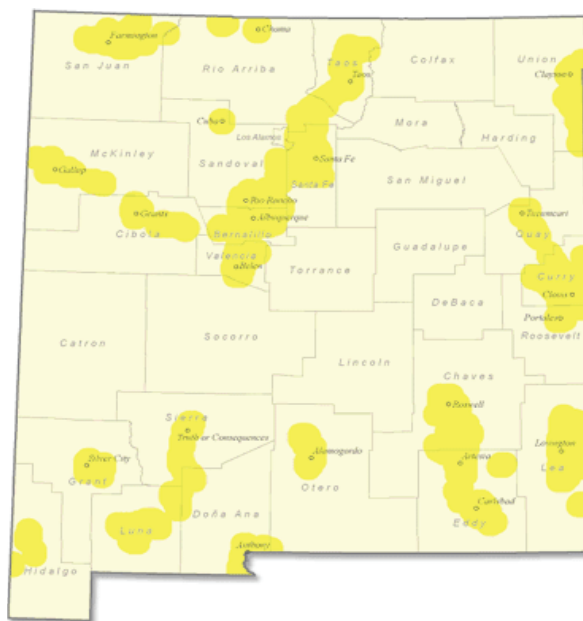
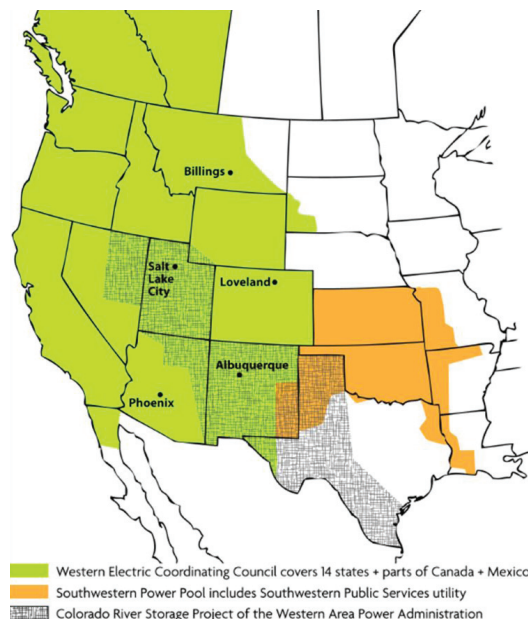
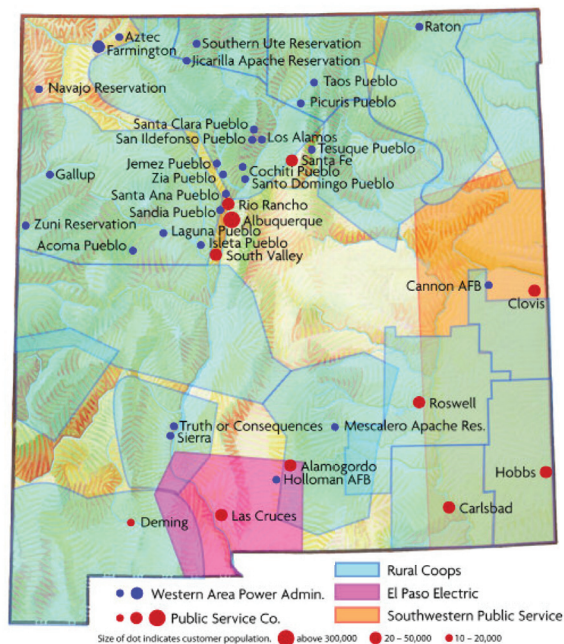


Figure II-H Governance by the private and public sectors illustrated by various maps. A. In-state governance of electricity supply by a rural coop, private utilities and one federal “utility.” B. Governance of supply and price by three regional utilities. C. Governance of natural gas supply and costs by local utility. D. Governance of oil and gas pipeline distribution by private companies.

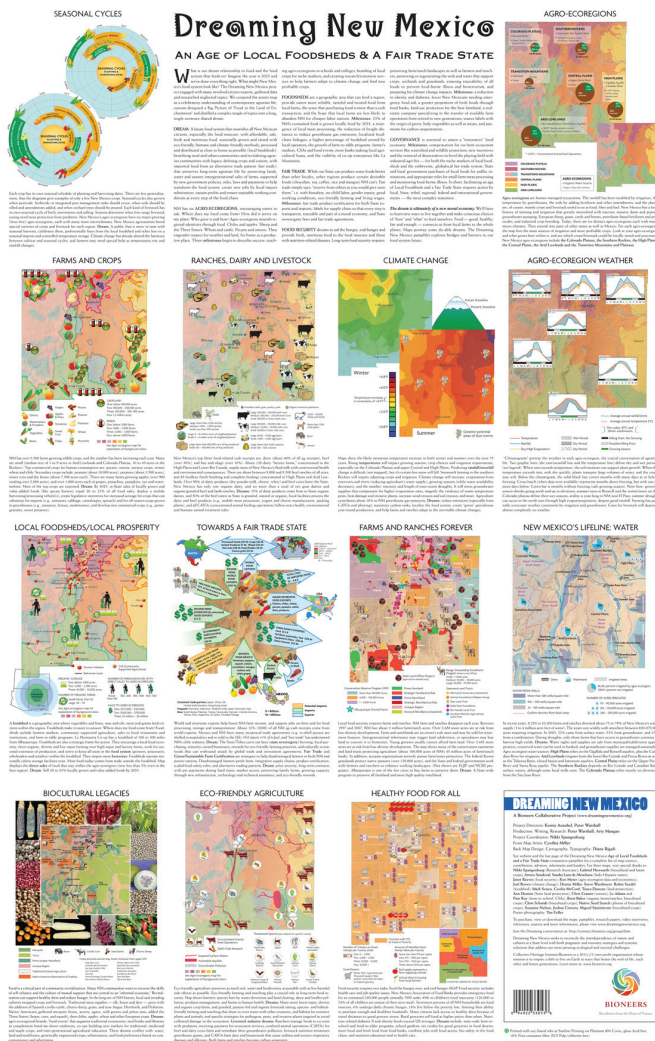


Figure II-I: Back of poster formed a “mini-atlas” for the conservation economy.

Newspapers and media play an important role in assessing citizen and government interests and highlighting specific efforts that provide examples (good or bad) of how the state is moving toward or away from the conservation economy.

Examples: During the project: Ranchers began fighting coalbed methane producers over surface rights vs. mining rights and the pollution caused by miner’s “waste” water; a major irrigation settlement occurred with the Navajo nation changing the direction of agro-ecoregional crop production; EPA began to tighten its regulatory authority over confined animal feed operation pollution; a major hub for the national grid was proposed in Eastern New Mexico that would change the location incentives for large-sale renewables; and cheap imports of dried chile powder continued to undermine conventional chile grower incomes.

Targeted research papers: Some topics needed special attention. DNM developed a series of specific questions and searched for the best people to research and write their thoughts.

The energy endeavor included a single paper on New Mexico energy politics as the oil, gas, coal, and, to a lesser extent, uranium lobbies have such an influential role in regulations (as well as through taxes and public relations). Their relationship to private utilities and electrical rural co-ops needed explication.

The agrifood endeavor sponsored five papers such as Poverty and Healthy Foods, Agro-ecoregional Economics [Figure II-J], Import Substitution Potentials for Foods, and Indo-Hispanic Concerns. The most popular paper [Figure II-K] was the Top Fifty Future Crops to grow in New Mexico. All the agrifood papers became available on the DNM web site.

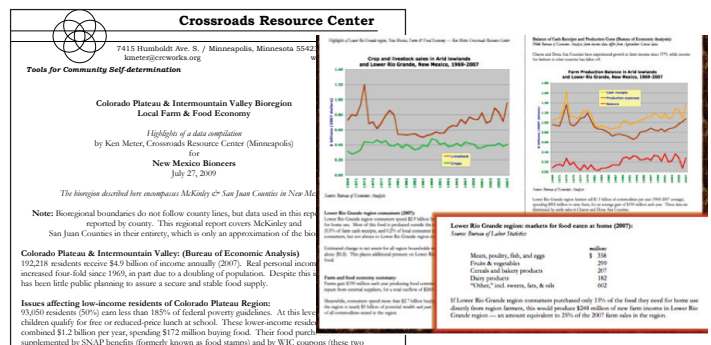


Figure II-J: Ken Meter’s report on agro-ecoregions and agrifood economics provided the technical basis for many of the foodshed, crop and livestock dreams.



Figure II-K: Page of the most popular report on the fifty best crops to grow in New Mexico. It includes agro-ecoregion, origin, growing season, days to maturity, yield, water needs, pest resistance and potential problems, cash return, cultural significance and nutrition highlights.

Tip: Some papers helped enormously and some hardly at all. All were worth trying.

Two crucial criteria made for good papers. Did the researcher fully understand the targeted nature of the dreaming process and orient his/her investigations to benefit the DNM inquiry's goals? The weaker papers tended toward inventories or web surveys rather than investigations. And, was the researcher open to challenges from the readers and willing to take the time to change his/her investigation to answer the concerns of various citizen-experts?

Tip: The papers did not automatically become part of the dreaming process. They stimulate discussion among DNM staff, select NGOs and business experts. Their results were incorporated when appropriate.



Figure II-L: The three geographic scales for Dreaming New Mexico. PowerPoint for agrifood systems.

Definitions, Concepts, Facts and Perspectives

What we want to know is not just facts. DNM tried to increase knowledge with elementary systems thinking, re-thinking geography, carefully outlining human organizational needs, and avoiding overly simplistic gloss words such as “farm” or “biofuels.” In fact, DNM has never used the much-belabored word “sustainability.”

Re-Thinking Geography

DNM tried to increase knowledge by re-thinking geography. We have introduced ecoregional thinking for agro-ecoregions and energy regions, and foodshed geography at four different globallocal scales [Figure II-L]. In each case, we explained the limitations as well as the opportunities of applying these concepts. For instance, the limitations of local foodsheds include seasonal availability, inability to grow major crops such as rice, chocolate and coffee, and the inability to expand to meet population needs.

Systems-thinking Concepts

The primary new concepts have been “the conservation economy,” “the value chain” (agrifood), “distributed energy,” “the green grid,” and a globallocal understanding of “foodshed” and “governance.” When introducing a new or relatively unknown concept, it is crucial to go beyond a glossary and elaborate on its utility. We did this by “boxes” and multiple examples in the booklets and on the web site.

New Human Interactive Infrastructures

DNM tried to increase knowledge by carefully defining new organizations, institutions that might nurture the conservation economy such as water banks, agifood hubs, and energy parks. These require new human interactions and infrastructure, and are as important as farming equipment or energy facilities.

Multi-meaning Words

Even words that seem most obvious had to be employed with care and locale-appropriate thought. “What is a farm?” is surprisingly complex and the varied definitions significantly change on-farm income (see page 3 of Foodsheds booklet). What “biofuels” means is not clear when discussing agriculture (see page 11 of Renewables booklet). The federal definitions of “hunger” and “food insecurity” may be important for food banks to receive funding and food, but are surprisingly elusive. DNM became very sensitive to and aware of all abstract or semi-abstract phrases.

Part III addresses how the deliverables, the form of the final information as it appeared in maps, targeted reports, booklets, media, etc.

What Can We Accept?

The Do-able Dreams

In the dreaming process, there comes a point when desire hits up against the reality of resources and power. What can we accept as “success?” Some specific actions take a few months to implement; others may take ten or twenty years. Many may fail and then succeed or succeed and then be undermined. Do-able dreams confront a pragmatic world, which can only be pushed so far in any given time frame. Given a time frame, what will make us feel that enough of our desires have been fulfilled? What are the do-able dreams?

Kinds of Success

In New Mexico, citizens belong to five major “commons” which they must share, whether they like it or not. The shared resources of these five commons need to be governed. They easily become “contested arenas.” They are the:

- Atmosphere of the planet;
- Globalocal financial system and import/export patterns;
- Rapidly changing influence of technologies, such as GMOs and renewables energy generation;
- Future of the land, water and biological resources of the state, especially rivers, groundwater basins and public lands;
- American commitment to democratic decision-making and honorable ethics.

We reviewed these “contested arenas,” and, at the very end of the process, identified some of the do-able dreams. We asked: What kind of specific action would help the conservation economy? The “field guide” to actions within contested arenas includes:

- Stop a scheme (such as an irrigation dam, more factory farms, a transmission line or coal-fired power plant);
- Stop with an Alternative (organic vs. conventional agriculture);
- Alter, Modify or Re-design an on-going effort (such as food distribution);
- Design a Future! with a new organization (such as urban farms, agro-regional food hubs, ecoservices certification, a biofuels gas station complex, a county geothermal multipurpose public/private entity);
- Offset harms, such as water banks for agricultural pollution management or methane control at factory farms;

- Nurture the conservation economy culture (e.g. a state traditional farm day).

To transmute a dream into a do-able dream means picking one of the above and giving it a time frame. We sought out local efforts, offered them any information we had developed, and explored the possibility of partnerships.

The “dreaming” role of the project can be the most important moment in a conflict (e.g. between saving the commercial chile industry by GMOs vs. machinery) as it sets out the best results possible from conflicting dreams and expresses the deep heart.

Tip: The earlier the dreaming process can take place, and with as many of the players as possible, the better the chances of resolving conflicting dreams.

Governance and Human Organizations

DNM also inquired: Are the various endeavors governed well, in harmony with the ethics of the conservation economy? The governance inquiry specifically asked questions about decision-making and the kinds of rules that framed a specific effort. Rule-making includes everything from the rules for selecting public and appointed officials, open and closed meetings, financial reporting and contract conditions, ethical behavior and ordinances, law, and regulations and laws written by government agencies and the legislature.

The rule-making set of questions is:

- Who is allowed or invited into decision-making? Who gets a seat at the table?
- Who makes the rules of how the commons will operate and be designed? Who makes the rules that allow or encourage the changing of the rules?
- Are the rules incentives to nurture the conservation economy? Or, disincentives to limit actions that hurt the conservation economy? Or are they perverse incentives that encourage behavior that undermines the conservation economy?
- Who insures the transparency of the decision-making process, especially in private/public agreements?
- Who monitors the rules? Who will enforce the rules? Are there penalties for violation of the rules?

- Who monitors the accounting when accounting is crucial to any endeavor, such as carbon emissions or carbon sequestration?

The results sometimes were unexpected, New Mexico state governance, for instance, encouraged many groups to sit at the table and work out a common future for energy or food security. But these working groups were not given the authority to write legislation, or re-design the agencies so they would work more effectively to accomplish a new economy. At times, they were not allowed to even review information crucial to setting goals (e.g. carbon emissions in the production and transport of natural gas). In short, they had a seat at the table but no real power to act on their conclusions.

By asking the above questions, DNM proposed a dream: That all task forces and working groups be given the power to write draft legislation for the state legislature. There were many other examples that highlighted the weak points in value chain and overall governance rules and decision-making.

Lay of the Political Landscape

To consider do-able dreams, we also started with a series of strategic inquiries about information and power. We offer this approach or method as the most pragmatic way to see when dreams should be prioritized and how funding needs to be allocated.

- Can skepticism or counter-truth be created? Are the populace or decision-makers impervious to the ideas and ethics of the conservation economy? Can they be persuaded to take an interest in, or at least adopt one part of the DNM project?
- Are there cash flow leverage points? Costs, jobs and increased wealth may be most persuasive. Occasionally, scandals or crises can be leveraged into new rules.
- Are there crucial decision points — electoral or bureaucratic? If there is none, can we invent new ones by such actions as recall votes, petitions, personal lobbying or media exposure? (Do we know someone?) Can we switch the level of decision-making to another, more favorable level of government? To another agency?

- Is a legal strategy profitable? Can we “invent” a new decision point with a lawsuit and a judge that will lead to helping the situation?
- Is there a potential for new precedents? In other words, is the conflict embedded in unique circumstances, or can it set a new precedent? The context may bring in addition local or national funding and networking.
- Is there a human or humans with charisma that can rally support? Attract the media?
- Is there a celebratory “totem” to rally support such as a state crop or livestock breed or sensitive species? Attract the media? Will a celebration of sense of place or totemic icons help gain support?

Summary

This section looks in detail at: What is dreaming? How does it mesh with what we know? How to find out what we want to know? And when do facts even matter?

We then provide an approach, a series of inquiries, on how to turn dreams into do-able dreams. First, it's important to be able to recognize success in an imperfect world. Then, it's important to recognize and emphasize the “commons” among the citizenry. Finally, it's important to try to custom-design actions to accomplish the dreams – don't do the wrong thing for the right reasons. We end with a series of questions/tools to help navigate dreams into the political landscape.

A major barrier (perhaps the largest) is human organizations that cannot be or have not been designed to do the job. A series of questions to spot dysfunction in human organization is suggested.

The next section lays out details of the actual deliverables of the DNM projects.

Observations on Practices and Tools

By Kenny Ausubel

Peter covers many key underlying practices and tools, so I'll add just a few perspectives.

The Dreaming Process

Imagination is more important than knowledge," said Einstein. The "dreaming" process has proven to be transformational. (The designer Buckminster Fuller used the term of the "preferred state," which is analogous to the concept of dreaming.) Few people have allowed themselves to step back and ask what we really want – the dream. We've witnessed lifelong change-makers break down in tears once they opened the inner floodgates of possibility and desire.

Strategic Research, Facts and Story

Strategic research is key. In assessing the "state of the state," it was astounding to discover that hardly anyone was working from the same data or had a coherent picture of the entire system. In many cases, the data were not there, or had not been assembled in systemic ways that allowed meaningful insight. Having the same data and facts is a good start. Reality is consensual.

Tip: Providing a rigorous fact-based foundation is an essential underpinning. Otherwise dreaming becomes fantasizing and a Tower of Babel.

Tip: Invite diverse responses to the data. Different people spot different cues and clues from exactly the same information.

Now comes the paradox. People are meaning-making creatures. Our brains are hard-wired for story and metaphor. We are also emotional creatures, and underlying emotions drive the narratives we adopt. At the end of the day, for most people it's more about the story than the facts.

As a result, facts have to tell a story. It's the story that sticks. In fact, people use the same facts to tell very different stories all the time – just watch politicians. We've tried to tell compelling narratives that accord with our best understanding of the data and facts.

Networks and Convening:

Shadow Think Tank > Shadow Government

A rough working model arose that began with the creation of what Peter calls a "shadow think tank," an informal (and almost entirely unpaid) network of people with expertise in key areas across sectors and walks of life. Many people hold pieces of the puzzle and have highly targeted expertise. For instance, arriving at the master energy "dream" in part resulted from extensive consultation with this network to arrive at something everyone could agree with.

Once the research and mapping were largely complete, we synthesized what we'd hunted and gathered – and we added our own views, analysis and dreams.

The next phase consisted of a strategic convening. In effect, as Peter sees it, the shadow think tank expands into a network that can evolve into a "shadow government," both inside and outside the system.

Across the system map, what we're looking for is key leverage points. The mapping also allows people to identify their place and role in the system, both current and other possible strategic options.

Once we created the maps and booklets (and ancillary papers, reports and other research), DNM supported two convenings. The first was a Green Jobs/Renewables Summit organized by our energy partner group New Energy Economy (NEE). Since NEE was doing it, it made no sense for us to organize another one (and they did a great job). Subsequently we did organize and design an invitational Food Summit on Age of Local Foodsheds. Each was different. (The "DNM Accomplishments" log gives more detail.)

The core (generic) goals of this kind of convening include:

- Develop a consensual fact-based picture of the system;
- Develop a system map that allows people to see where they fit;
- Identify key transformational leverage points in the system;

- Help people and energy move to leverage points in an action orientation.
- Foster collaboration.

Our convenings served multiple more specific and place-based purposes:

- Provide a factual and visionary basis for a consensual reality and desires;
- Assemble a diverse spectrum of key players, including from out-of-state where appropriate, so that people can see themselves as a system, break down silos and widen the possibilities for collaboration and synergy;
- Create the seeds of a “shadow government” – a network and sub-clusters that can begin to take on a life of their own to influence, populate or transform the larger system.

For the Age of Renewables convening, we sponsored our partner group, New Energy Economy, with its invitation-only Green Jobs/Renewables conference with about 55 stakeholders across government, business, the NGO sector and some philanthropists. NEE did the heavy lifting, and assembled an excellent group. We provided some financial backing, made a few invitations, and Peter gave a central presentation.

The stars aligned in that Obama had just taken office with a green jobs agenda that would soon be sending money to the states. Suddenly there was heightened interest, and was momentum to put projects and policies in place. There was a great need for reliable information and astute analysis.

The DNM presentation proved to be a highlight of the event, and we were able to leverage it in several ways. One of our funders participated, and at the closing action-steps segment, he offered a grant for the next meeting of a core team to advance the agenda, which gave momentum to the process and work.

Governor Richardson’s newly formed Green Jobs Cabinet used the energy summit to formally announce and present itself. The synchronicity led directly to DNM meetings and

briefings with the Green Jobs Cabinet, the Governor’s two top energy advisors, the new state Green Jobs Manager, and others. In addition, one of our key allies, Gay Dillingham, who worked closely with Governor Richardson and chaired the state’s Environmental Improvement Board, was able to open doors or open them wider, including with the Governor himself.

Tip: Timing is crucial. Ride the momentum. People forget and energy dissipates fast.

We organized the Foodsheds convening ourselves, working closely with input, especially on the invitation list, from another key ally, Farm To Table, a first-rate local food systems NGO, as well as from others. Above all, we wanted to make sure we had the right people in the room. We included some out-of-state people, for their expertise and in some cases as donor-partners.

We worked with a facilitator who did a good job, and we helped design some of it. Our main design contribution was to aggregate “Dream Teams” around discrete categories of the food system to evaluate opportunities in specific sectors or arenas. It worked well.

It’s important to say that we are not skilled in convenings of this nature (others are, and we’re learning).

Tip: Convening the “system” is essential. “Who” is the system? Who decides? Who will the system be in its “preferred state?”

Tip: The invitation list is critically important. Reach out to key allies and players for their A-lists. Dig for a sense of the possible human dynamics. Existing clusters of people who already work with each other? Rivalries? Tensions? Cultural issues? People who don’t play well with others? Who should not be in the room?

Tip: Invite key groups and players to become visible co-sponsors to honor their work and deepen their engagement.

We invited people not just to kick the tires and refine what DNM was presenting – which was a near-final draft of the booklet and a completed map – but also to elicit new thinking and dreams, course corrections, and factual revisions. All this informed the final booklet in significant and specific ways. The gathering surfaced a lot of good thinking and deepened or created relationships.

Tip: Seek feedback actively and transparently. People are really smart and often have a very specific and unique perspective or area of expertise.

Tip: Be clear about your role. Be transparent as to whether you're purely reflecting a synthesis of thinking from the community, or also putting your fingerprint on it or trying to advance a specific agenda.

Tip: In a convening, Dream Teams work well to align specific expertise with components of the system. There's tremendous knowledge and wisdom in the group. Invite it and create a structure to receive it.

Perhaps the most important outcome was that people truly experienced themselves as a system. The “system” had never been in the room together before, and many did not know each other.

Another outcome was the activation of memes. The “agro-ecoregion” idea caught on and is being actively used and developed. It helps provide an even more localized sense of identity, as well as an organizing framework for building food and economy clusters at the very local level.

Other direct outcomes resulted, including new or deepened collaborations and the founding of a Finance Group that continues to meet and work to address specific steps such as a micro-loan fund. However, we have not had the resources to follow through sufficiently.

Because of a positive buzz afterward, we were invited to provide input at the state level to the Department of Agriculture and its imminent report and recommendations to the Governor. DNM had a significant influence on its thinking and recommendations.

Several key indigenous and Hispano groups and people participated in the Food Summit, and provided key insights and positive feedback. (The state Secretary of Indian Affairs participated in a limited way, and became an ally. One symbolic outcome was a Governor's Proclamation for a Traditional Agriculture Day to honor native and traditional Hispano food and farming, an idea that arose at the convening and which DNM helped orchestrate. After the Summit, we were contacted by The Indian Pueblo Cultural Center and National Hispanic Cultural Center, with whom we went on to work.)

Educators became more engaged as well. The materials have made their way into schools, which has become a central focus of DNM.

Tip: Have appropriate donor-partners in the room, notably those actually working on projects. They can add insight and experience. They can act to further the process. They can gain a far better perspective on the living system and how it interacts (or doesn't). It's also a potentially dangerous situation. You will be exposed. A convening can reveal flaws, conflict and weaknesses.

Tip: Share all the information with everyone soon afterward. Invite further feedback.

Tip: Track outcomes. It's hard to do. You have to reach out, and reach out again and again, over time. We created the DNM “Accomplishments” document in which we try to chronicle outcomes and accomplishments, updating it regularly. It's a lot of work to try to track.

Tip: Educating the next generations — as well as educators themselves — is a key leverage point in the system. Designing educational materials for project-based learning in the field unleashes a student work force to address the issues, while also researching and studying them.

Part III: Deliverables and Putting Together the Materials and Tools

By Peter Warshall

Deliverables

DNM has had six major content deliverables (as well as an assortment of ancillary and support materials and the convenings):

- A educational poster map created with beauty and culture by an artist;
- A series of more informational/technical maps that show the paths to do-able futures;
- A booklet with the dreams and information that map and give details of the future;
- Targeted reports on specific topics that need to be addressed for the dreaming process to become effective;
- Various media outreach such as videos, CDs, movies, radio programs, talks at conferences and meetings and strategic briefings;
- A presence on the web.

These deliverables do not include the project-specific partnership projects that have arisen during the four plus years of the project, such as the Google Earth work.

Poster Map

A major DNM deliverable project was a poster that would celebrate and instruct the conservation economy — an attractive poster that citizens would hang on the wall in schools, NGO offices, agency hallways and homes to attract their “audience” [Figures III-A and III-B]. The poster provides a cultural, if not state-patriotic, feel for the project.

Our task was to find inspiration that came from local art and to diagram a draft or series of draft posters emphasizing the overall dream, or what exists that informs the dream, or both. The poster needed visual “hooks” that were optimistic and playful [Figure III-C]. The directors searched for a local artist and worked closely to combine DNM’s dream with the artwork [Figure III-D].



Figure III-A: Food and farming poster map by local artist in collaboration with DNM (right), and informational maps on back. Size 25 x 38. The food poster could not easily depict a future. It was difficult, for instance, to illustrate rangeland improvements or changes from conventional to organic farms. DNM felt it was most important to vividly depict agro-ecoregions, irrigation styles, wild species of importance to the agrifood industries, and existing crops and rangelands. It needed to give PR to New Mexico’s food providers. In hindsight, the portrayal and celebration of a dream network of agrifood hubs would have enhanced the vividness of our dream. Downloadable versions at www.dreamingnewmexico.org.

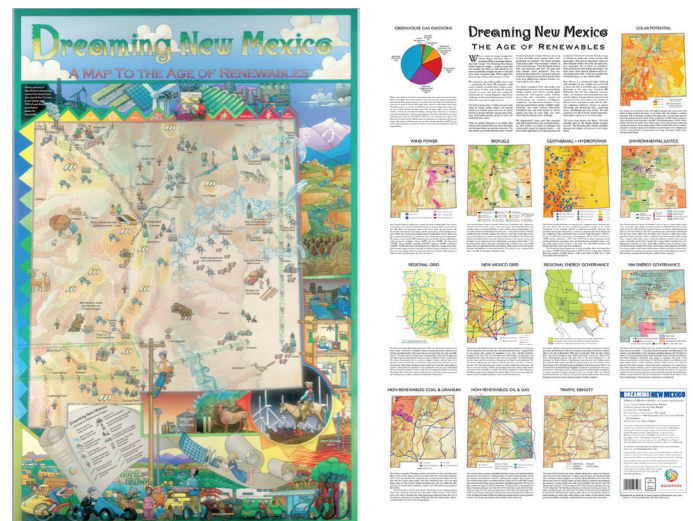


Figure III-B: Energy poster map (left), and informational maps (right). Size: 25 x 38. The energy poster easily showed DNM’s renewables dream by coloring the state with the best regions for solar, wind and geothermal as well as drawing the “green grid” required to transmit the electricity. The poster included a small “dark corner” with coal-fired power plants to signal to viewers that this was not fantasy.



Figure III-C: Joe Mora, a Santa Fe artist, had many artworks that served as an inspiration of local design and art for DNM posters.



Figure III-D: Draft pieces of energy poster. At three or four stages, a dialog balancing art and content occurred.



Figure III-E: Detail of energy poster map showing best wind areas and proposed green grid to connect wind farms. Existing wind farms, proposed solar farms and biofuel stations are shown.

Tip: Finding visual source material and explaining each image's importance to the artist is a highly collaborative process. Not all artists have a desire to depict the detail or compromise their artistic design with the project's informational needs. The process can be time-consuming. Artistic license will not fly beyond a point when there is a real imperative for factual or editorial accuracy. Establish a clear sign-off process with the artist and the clear understanding that the project has final decision-making power. Work with an artist who is reasonably reliable on deadlines, and who is flexible as the collaboration unfolds.

The back of the poster displays small versions of the many technical maps described in the next section. The “mini-atlas” made the project concrete and has drawn attention to the many facets, paths and ways to engage in the future dream. Many citizens have wanted two copies of the poster/map so they could display the front poster as well as back of the poster with its technical maps.

DNM Informational Maps

The DNM “technical maps” played a central role on the project. They appeared in the booklet, on the back of the poster and on the web site. They are downloadable in an 8 x 10 format. They provided a kind of mini-atlas for state sustainability and were reproduced in government documents, local newspapers, NGO newsletters, and many educational classes. We presented them in meetings with state and municipal officials, and in several cases they had tangible influence on state policy determinations. The maps also provided a context for individual, group, agency and funder undertakings. Revealing where and how one's interests or role fit into a map became a central benefit of the project.

In many cases, specific areas had never previously been mapped. These included the renewable energy resources (solar, wind, geothermal, biofuels), and environmental justice harms.

The DNM food and energy projects each composed about 15 to 20 new maps each. About 13 were selected for the back of the posters. Others appeared in the booklet.

DNM has used the word “map” loosely. The seasonal crop cycles became of map of timing and farming (Figure III-F). The in-and-out diagram of imports/exports of cash and food groups is a map of New Mexico’s overall agrifood economy [Figure III-G]. As mentioned previously, there were no data on what food the state imports, a crucial variable if a goal is to substitute local food production for imported food. We had to guesstimate that number.

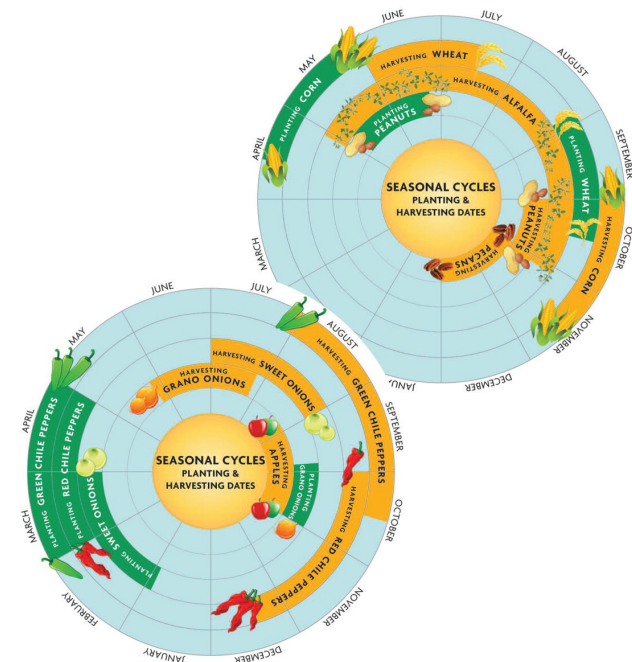


Figure III-F: A “time” map of a few of New Mexico’s major crops helps illustrate the need for seasonal imports and storage in order to increase locally grown and eaten foods.

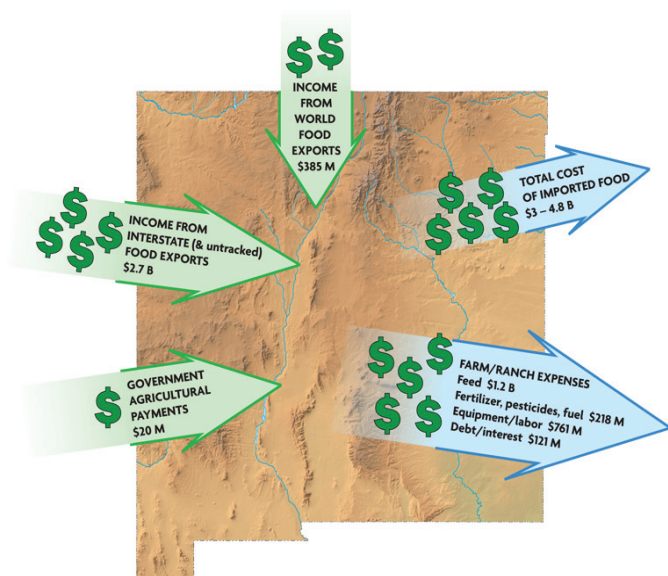


Figure III-G: A schematic map of cash in and cash out of agrifood system for NM. Simplified for public presentation as a PowerPoint. Complex map is in booklet.

Constructing the Maps

Old and many existing maps were important in research, but they were not configured or drawn to give citizens a portrait of the conservation economy, nor a glimpse of the state’s future. DNM re-did or created new maps and had them all done in one style to provide coherence to the project.

If possible, the base map for the technical maps was the ecoregional map. Sometimes the ecoregional map had little relevance (e.g. food bank distribution districts, [Figure III-I], and sometimes the data only made sense by county. Nevertheless, whenever possible, DNM employed the ecoregional or energy-base map.



Figure III-I: Food banks are based on counties, not agro-ecoregions, because most of the food comes from out-of-State and highway routes dictate the distribution. A dream: more local food and more awareness of agro-ecoregional food hubs to feed the food insecure.

The agro-ecoregional and energy regional maps took time and discussion. Should geothermal be portrayed by heat flow units? What was the best way to portray groundwater — by depth, usability (quality), depletion rates, remaining volumes, etc.? How many agro-ecoregions made pragmatic sense compared to natural ecoregions? What to do about microclimates within an agro-ecoregion? [Figure III-J] gives a taste for the kinds of maps available and the final decisions on boundaries.

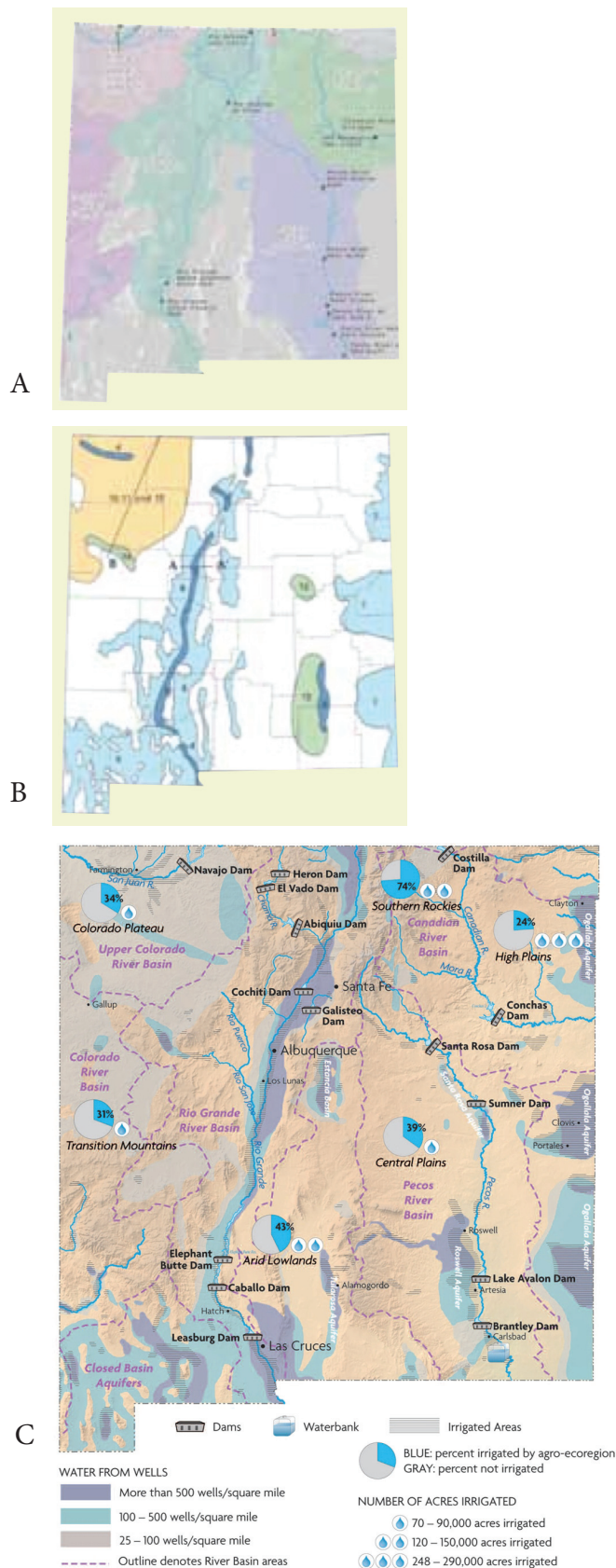


Figure III-J: Various maps of ways to look water management in New Mexico. “A” is major river basins and is crucial for surface runoff and inter-basin transfers. “B” shows major groundwater bodies. “C” is aquifers, surface water and data by river basins. Note: Agro-ecoregions are not shown because of complexity.

On some maps, DNM decided to portray *existing conditions* such as locations of concentrated animal feed operations, oil/gas production and transport, utilities and electrical coops, or ranches with agricultural easements. These maps were not available to the public in a user-friendly format (or at all), and provided the starting point for all future thinking.

Other maps portrayed a *conservation economy future*. The green grid and agrifood hub centers are examples. Many of the “nightmare” maps (e.g. climate change, hunger, nutritionally-related disease, food deserts, water depletion or endangered species) were easier to map than the more positive dreams. It was harder to guess, for instance, where future local slaughter and packing houses should be located; and what field and greenhouse crops should be grown in twenty years. Some aspects of the conservation economy defy visual portrayal (e.g. eco-services payments).

Human Skills

They best way to gain skills in this kind of cartography is to study the DNM maps and ask: For my project, how would this map help? If not, what map would be better? How much detail can the map contain for state-level dreaming? How should it be modified if the scale is a local foodshed or requires connections to the nation or world?

Tip: The skill in arranging data, the clarity of the map’s relevance, funds and the skill of the graphic artist determine the amount of time for each map. They are time-consuming, and can be brain-teasers.

Tip: DNM reviewed the drafts of maps with outsiders because intelligent mapping balances information and readability.

Tip: In PowerPoint presentations, it is crucial to reduce the map to its simplest form because the viewer has only seconds to absorb the information. DNM found, for instance, that our ranch preservation map (the first ever produced in the state) had an overwhelming number of groups involved and became too crowded for most map readers [Figure III-K]. Those already committed to land-saving perused the map in detail.

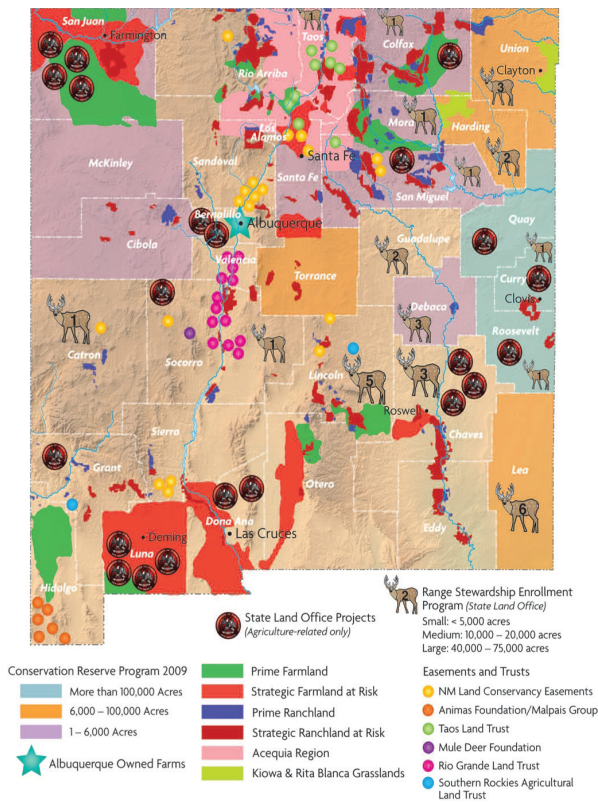


Figure III-K: Map of saving ranches and ranchland and farms and farmland that is too complex for PowerPoints and perhaps too complex for casual reader. These more complex maps were completely new to New Mexico and useful for those involved in actual land conservation and envisioning a future. Full map downloadable at www.dreamingnewmexico.org/food/ff-save.

Booklet

Booklets were the central written deliverable that summarized the dreaming process results for the energy and agrifood sectors. The energy booklet is 32 pages; the agrifood 64 pages. They were deliberately highly illustrated with informational and discussion sidebars, as well as informational and factoid boxes.

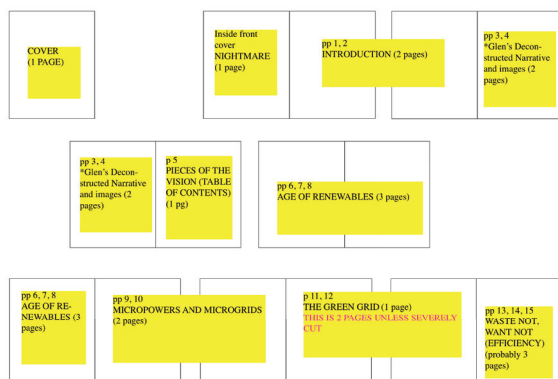
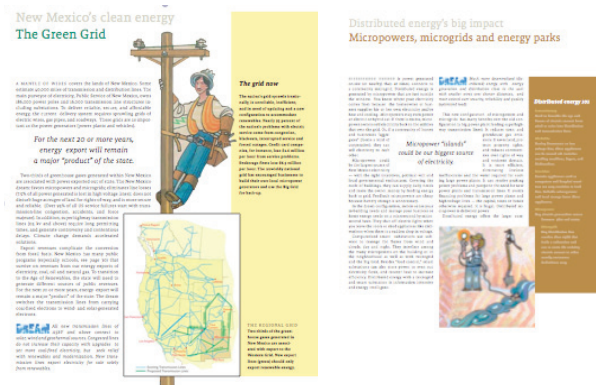


Figure III-L: A map of booklet pages so that designer can estimate if graphics and text will fit and designer can design by spreads and sections. The map may change to accommodate more text or special graphics.

In the project, one project co-director and the booklet designer collaborated on the final design. (The co-director had been an editor and knew the page layout design process.) The collaboration included: (1) design of cover with review by directors and key staff [Figure III-L]; (2) a dynamic map of the booklet that changed with amount of content and needs for graphics [Figure III-M]; (3) a page-by-page discussion of the photos, graphs, figures, boxes, callouts and sidebars; (4) check-off agreements on fonts, callouts, sidebars, and other elements (5) final reviews of draft layouts for copyediting and proofreading that were managed by a single co-director (Peter) who worked with the designer, with extensive copy editing and some comments by the other co-director (Kenny).

Tip: Sidebars and boxes keep the narrative from burying dreams in a long fact-filled text. The text should highlight dreams and provide just the crucial information to explain the need for the dream.



Tip: The dreams should stand out with italic type and a colored drop heading so that they can be scanned readily by the reader.

DREAM All new transmission lines of 115kV and above connect to solar, wind and geothermal sources. Congested lines do not increase their capacity with upgrades to yet more coal-fired electricity, but seek relief with renewables and modernization. New transmission lines export electricity for sale solely from renewables.

Tip: The booklet may read best if one author writes the whole text and is given final say over comments and proposed revisions.



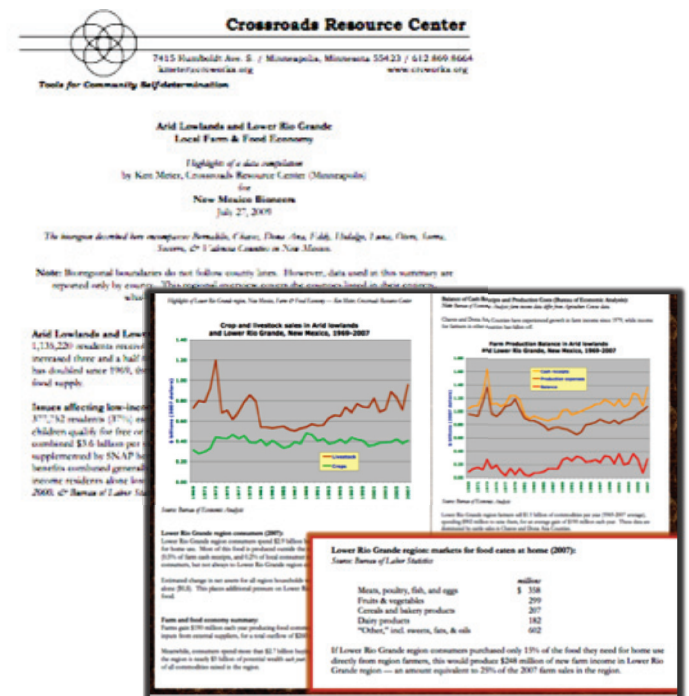
Figure II-M: Cover and layout design are highly intertwined to balance information with attractiveness. Directors and key staff worked with designer on final choice of cover. Examples of possible covers shown above.

Targeted reports

The format and contents of the targeted reports were left up to the independent contractors who wrote the reports. They were given a fixed fee and a series of very specific questions to answer in their reports [Figures III-N, III-O].



Figure III-N: The most popular targeted reported (by Gabriel Howearth) was an inventory of the fifty best future crops to grow, with information on growing, cultural properties, economics etc. The above image is from a PowerPoint, not actual text.



Figures III-O: Ken Meter's papers re-arranged agrifood and agri-economic data by agro-ecoregions. They were the foundational papers for crop and livestock issues and self-sufficiency for the DNM food project.

Photos

Photos were part of the booklet, PowerPoints, web site and promotional materials. They were important reference images for the poster. DNM tried to use locally specific images whenever possible. Local photographers, local newspapers and NGOs were the best sources. At times, it was necessary to use more generic images, some obtained from the web.

PowerPoints

Co-director Peter Warshall created numerous PowerPoint presentations for a variety of presentations such as the energy and food convenings, briefings with state and municipal officials, and other speeches and presentations. Each was custom-designed for the specific event. They proved invaluable, and many people download them or grab them on flash drives after the presentations. One notable example is a taxonomy of “green jobs” that details the kinds of green jobs the renewable energy future could generate for New Mexico, including an assessment of the better kinds of jobs (versus low-wage ones), and the kinds of energy or efficiency sectors that could generate more or fewer jobs on specific time frames. These PowerPoints also often draw on the core work in the booklets and maps.

The Web

The DNM web site is the most used everyday tool as a knowledge platform and for networking and outreach. It contains current events related to each project, contacts, ways to purchase or download posters, maps and booklets, downloadable videos and PowerPoints, abbreviated versions of all the themes, complete versions of the targeted reports, some comments or additional information on these reports as well as the references, Valuable Sources and links that supported the project.

PART IV: Social Entrepreneurship and Implementing the Project

By Kenny Ausubel

“A social entrepreneur recognizes a social problem and uses entrepreneurial principles to organize, create and manage a venture to achieve social change (a social venture). While a business entrepreneur typically measures performance in profit and return, a social entrepreneur focuses on creating social capital. Thus, the main aim of social entrepreneurship is to further social and environmental goals. Social entrepreneurs are most commonly associated with the voluntary and not-for-profit sectors, but this need not preclude making a profit.” —Wikipedia

The term of art these days is social entrepreneurship. That has been the role of DNM.

Social entrepreneurship begs larger questions we won't dwell on here, but in many ways the civil society (nonprofit) sector in the U.S. is by necessity filling the gaping gaps created by a government that often fails to protect the commons, and has diminished its service delivery of basic public functions (health care, education, infrastructure, social services, environmental protection). The business sector generally does not act as a respectful societal partner or good “corporate citizen” (not that a corporation is or should be a citizen). As a result, civil society has become the main driver of progressive social change to protect the commons and common good, a kind of sectoral super-social entrepreneur.

Organizations Are People: The “Who”

Organizations are people. The “who” is crucial. The people make or break a project. The correct alignment of highly specific skills and management abilities determine what is do-able.

Like everyone's situation, ours is unique and we offer it as a modest case history, not a model. However, it may be useful to know who we are and the basic jobs of our core team of four. We've received a great deal of pro bono consultation and assistance from a wide circle of players, too, without whom the project literally would not have been possible. We've also contracted for a variety of tasks, from artists and designers for the poster and technical maps to a variety of researchers for specific reports.

In our case, the “who” of Bioneers is central. For many reasons, the project simply would not have been possible without Bioneers. DNM benefits from a track record, infrastructure, funding network and reputational capital. Bioneers serves as an amplifier to promote and connect the project. We have a Rolodex of outside expertise and allies built over 20+ years, and have drawn on those human resources.

On the downside, Bioneers also has presented two challenges. Although we began as a small grassroots volunteer organization, today we are larger (\$3.2 million budget, about 25 staff). In the context of New Mexico, we can be seen as an 800-pound gorilla.

Secondly, as Peter Drucker pointed out in his masterpiece “Innovation and Entrepreneurship,” starting a new venture inside a mature organization or company presents serious challenges. Start-ups move at a very different pace (faster). They need flexibility and the ability for nimble response. They need to experiment consistently and to fail and learn. They are much less predictable.

For these kinds of reasons, Bioneers initially served more as an incubator. At the beginning, we kept the project as segregated as possible from the rest of the organization. The situation created some confusion and tensions, as well as functional glitches. After about three years, we were able to begin to successfully integrate it into the organization, but we still maintain a very high degree of autonomy.

Tip: If you're part of a larger, more mature organization, insulate the project and retain a high level of autonomy.

The “who” of Peter Warshall as DNM co-director also has presented virtues as well as organizational challenges. First, I would not have undertaken the project without him. He is uniquely fitted to the diverse needs of the project, and exceptionally gifted as a polymath (and maniacal worker). He has played the roles of what ordinarily could take 3-6 people. It has allowed us to minimize the size of the team, reduce costs, and thereby travel light to engage in an organic, rapid-response flow navigating often uncharted territory.

However, Peter has acted in the capacity of a contractor, not a staff member, which has at times created mutual tensions with staff, and confusion about the boundaries of decision-making. The situation has at times created tensions on both sides.

Both my and Bioneers' roles in DNM have been as a social entrepreneur. With Peter, I originated and co-developed the idea. I obtained money and resources to put it into action. I catalyzed and helped manage the team. Along with Peter (and later others), I made and have advanced many of the connections and relationships in New Mexico. I do a great deal of writing, primarily of grant proposals and reports in this case, although I have also helped extensively with editing Peter's writing on the booklets. With Peter and our two other teammates, I represent the project publicly as a speaker and communicator. In truth, the great majority of my time has necessarily focused on fundraising.

Bioneers has lent organizational and infrastructure support in various ways including fundraising, and has helped promote the project nationally through the Bioneers conference and media, and globally through participation in other events and conferences.

As co-directors, Peter and I play distinct roles. His is primarily as researcher, writer and designer of the substance of the research and analysis, as well as a political "operative" and public representative. We share strategic direction (to move forward, we must agree). As Co-CEO of Bioneers, I have final decision-making authority at large on matters of budget, personnel and impacts on Bioneers.

Tip: Define roles closely and explicitly. Be clear where decision-making lies. Consider carefully how to bifurcate editorial matters from business and political affairs.

The project management position is key. As the project progressed, we brought on Nikki Spangenburg as Project Manager. She has first-rate organizational, administrative, communications and social skills. She is the hub for all the work, and helps with fundraising. In Nikki's case, she rose

to become Program Manager because she is a very clear and effective communicator, and skilled at managing and developing high-level relationships with keen discernment and judgment. She also carries the vision and has helped co-create it.

Tip: It's crucial to have a project or program manager with both high-level organizing skills as well as social, communications and relational talents.

When we began the Age of Local Foodsheds phase, we brought in Arty Mangan, the Bioneers Food and Farming Director, as we discuss below, for highly specific components of the project.

It's important to note that all of us have worked part-time, with the exception of Nikki. Peter has worked about ¾ time, Arty about half-time, myself about one-fifth time at the most.

Cultural Competency

Tip: your team must have specific cultural competency appropriate to your culture shed.

When we began phase two with the Age of Local Foodsheds, I enlisted the Bioneers Food & Farming Director Arty Mangan for about half his time on DNM. We've worked together for about 15 years. Part of Arty's uniqueness is that he has very wide-ranging knowledge about food systems, and has also done extensive cross-cultural work with indigenous, Latino and African-American communities, including prior work with Bioneers on two major projects with indigenous and African-American farmers and food entrepreneurs.

New Mexico is a majority minority state where the Hispano and Native American populations outnumber the Anglos (the New Mexico term for white people). Arty's participation has been very focused on cross-cultural (biocultural) relationships, and specifically keyed to some of his greatest talents, without which we could not have undertaken these aspects of the work.

As a majority minority state with ancient-modern living cultures, New Mexico is a harbinger of the future demographics of the country. Building lasting working relationships in the Hispano and Native American communities here requires a high degree of cultural sensitivity, humility and patience (including a very different perspective on time). Because Bioneers has a fairly long and respectful history with members of the indigenous community, we've been able to build on that.

At the same time, these communities bear the "burdens of history" of colonialism, racism, a historically white power structure, inequity, and conflict with each other as well as with the Anglo population. These communities want and deserve self-determination, and it's inappropriate for DNM to insert itself. The relationship must be consensual and invited. Even then, there are clear boundaries, discussed later.

What's also true today and is reflected in the DNM materials is that traditional cultures are under severe threat. Like everyone else they need to reinvent themselves to adapt to today's radically morphing world, and are doing so. Many recognize the need for allies. None of us can successfully make this transformation alone. It's crucial to learn to work together and establish common ground, as well as sovereignty. It's easier said than done. People have a lot of experience at conflict, and not much at cooperation.

The Collaboration Continuum

Collaboration is part of the design of DNM. To achieve genuine systems change, you need many diverse players.

The complexity of today's world is such that command-and-control systems are giving way to webs with many players, none of whom is "in control." The goal becomes influence rather than control, collaboration and reciprocity rather than unilateral self-centered behavior. It's critical that people see themselves as part of a larger system with many interests that must be addressed, balanced or satisfied. (See the "Megacommunities" book and web site.)

In addition, the hardest thing in transforming systems is changing paradigms. Inherently it requires many hands with diverse expertise and responses.

Networks are nature's most basic unit of organization, (communication, food and energy webs). Building, connecting and cross-pollinating networks is a DNM

collaboration goal. However, very limited resources have restricted us from implementing networks on the scale that's needed.

We have also employed emphatically non-collaborative methods. We have authorship of certain ideas and visions, and have put those forth. In some cases, they also drew on extensive consultation and input. The point is not that they are our ideas per se, but that they are not the result of collaborative process or consensus.

At times, we've undertaken specific interactions in the political system on our own. However, at all times we tried first to understand who else might be working in that space, and to communicate first with them about our intention. We tried to understand if our actions could cause distress to their efforts, and adjusted accordingly.

Because Bioneers has collaborated widely over the years, we offer some perspectives learned independently of DNM as well.

Collaboration for DNM has meant a broad yet realistic view of who needs to be at the table, from the NGO sector to government and public servants, educational systems, philanthropy, elements of the business community, Native American and Hispano communities, youth and engaged citizens. For obvious reasons related to energy and food systems, we included technologists, farmers, ranchers, economists and so forth.

Some qualifiers, however. In some cases, the group or person had no interest or had conflicting interests (the Cattlegrowers Association). In others, they did not grasp or like the idea of the dreaming process. In yet others, the institutional barriers were too steep (such as university bureaucracies).

For DNM, the first collaboration came with funders, and we'll discuss fundraising later, but must mention it here.

One of our very first donors was a California-based family foundation and Bioneers funder that was doing work in New Mexico around water at that time. (Peter had also worked with them putting together water "blue teams.") They emphasized to us the critical need to create collaborations from the outset. It would show we were not parachuting into the state and disrespecting the local

folks and their longstanding work. It would also leverage our ability to deliver. As grantors, they were invaluable in illuminating parts of the local playing field and pointing us to or away from specific groups and people.

This foundation connected us with the McCune Foundation in New Mexico, which is deeply embedded in the community and is the largest local foundation. We received invaluable insight about who's who, and where and how to interface. Actual lasting partnerships resulted.

In both cases, the funders were entirely respectful toward DNM and our own decision-making process. They provided insight, coaching, connections and guidance, not mandates or agendas.

Collaboration is a continuum from a little to a lot. Getting in too deep, too soon can result in confusion, bad feelings or worse. Many people are doing great work, but collaborating may not be great for any number of reasons.

Tip: Often it's wise to start small and build collaboration from there.

In our experience, collaboration is best carried out working rather than each other's organizations. DNM has provided an umbrella or big tent where we can jointly agree on specific goals and deliverables specific to each organization. We don't get inside each other's operations.

Even then, collaborations can falter or combust based on cultural differences. Groups may be more focused on process or product, or have different ways of going about things, or move at different speeds. There may be fundamental philosophical differences, for instance about a "top-down" versus "bottom-up" strategy (an unfortunate polarization - in our view both are needed). The intangible of chemistry is crucial. Sometimes people just don't get along, despite mutual respect for the work.

We also contracted on a case basis with various experts to commission specific research and reports. We retained final say over the use or publication of these materials.

Tip: Define the benefit of collaboration. Is there real synergy? Is it sufficient to justify the attention and time collaboration requires?

Tip: Collaborations must genuinely be a win-win proposition. Assess how each party benefits and if it's sufficiently reciprocal. Optimize the virtues and assets of each group. Ask what's of most value for you from the other party, and vice versa.

Tip: In assessing potential collaborators; pay close attention to functional issues and past history. Do they generally do what they say they're going to do? Do they meet timelines and deadlines fairly reliably? Do they communicate clearly? Are they personally mature in terms of a manageable ego and emotionality? Do they have a history of conflict with past partners? When the chips are down, are they problem-solvers or blamers? Ask the same questions of yourself and be honest.

Tip: Collaborations are work. They take attention, management, and care and feeding.

Tip: Work alongside rather than inside each other's organization or entity. Establish clear goals, deliverables, timelines and accountability. Have a clear Memorandum of Understanding (MOU) or contract. Revisit it periodically and revise as needed.

Tip: Collaboration may optimize one piece of common ground, yet there may be real divergences of views or goals in other areas. Can you viably restrict the collaboration to one area?

Tip: Establish honest feedback loops. Address problems and glitches as forthrightly and promptly as possible. Notice what's working and celebrate it together.

Tip: Don't try to change a collaborator's organizational culture. Either accept it and work with it, or work with other culturally compatible partners instead.

Tip: Be clear where you are on the collaboration continuum, and manage expectations accordingly. Be clear about time frames, and whether short- or long-term.

Tip: Be flexible. Collaborations may morph into a preferable new space.

Tip: Before going public with a dreaming project, know who else may feel competition or upstaged. Work with them to ensure that, at a minimum, you will not subvert each others' goals and, maximally, can help each other find funding.

Tip: If a collaboration goes south, end it peacefully and respectfully. Don't blame. Especially at the local level, it's a small world. Peaceful coexistence is essential when you're working toward similar goals.

Tip: Honor your partners and acknowledge them publicly and often. It's easy to feel slighted by a simple lack of recognition, unintended or not. Be generous always.

Money

This subject could fill a book, so we'll provide just a few perspectives and tips. Also see earlier comments related to collaboration with donors on page 56-57.

Obviously money is essential. Fundraising allows you to do amazing things and meet some fantastic people. Be grateful. Embrace it.

I've been the principal DNM fundraiser. The great majority of my time on the project has been focused on fundraising. After starting DNM three years before the Great Recession, the funding landscape has become dramatically more challenging, not that it was ever easy.

In our case, we had advantages through the existing donor base of Bioneers as well as many years of fundraising experience on my part and infrastructure support from skilled professionals in Bioneers.

As brief background, I became a fundraiser as an independent filmmaker in the early 1980s. In truth, you're a dependent filmmaker – on funding. The film was structured as a for-profit investment. As such, the terrain was “qualified” (high net worth) individual investors, not foundations. The same was true for my next (for-profit) venture, Seeds of Change.

The result was a primary orientation toward individual funders. When we started the Bioneers conference in 1990 as a non-profit (initially under the wing of a nonprofit fiscal sponsor and Seeds of Change), it was largely on a volunteer and in-kind basis and did not require much cash or

fundraising for several years. In addition, foundations did not fund conferences anyway. To make a long story short, my primary orientation has remained toward individual donors, who bring many advantages. (For an excellent book about fundraising from individuals, see “The Soul of Money” by Lynne Twist.)

Individuals, who comprise 94 percent of US philanthropic giving, present a much less cumbersome proposition than foundations. They can act quickly and decisively without lots of hoops. They often stick with you for a long time or forever.

Fundraising from individuals, as Lynne Twist points out, is a garden of relationships. Above all, it pivots on relationships and chemistry – and delivering on a vision. If you tend them and feed them, they can grow and flourish. I've met some of my most important and beloved friends and colleagues from what began as a donor relationship.

Small and medium-sized “family” foundations are essentially “individual” donors because it's one or two people who make decision, and with whom you can have a direct personal relationship.

Tip: Individual donors and family foundations where decision-making resides in one or two individuals are the best profile at large.

In no way do we suggest against foundation funding. It just tends to be much more cumbersome, inflexible, and a much harder sell for a start-up or “visionary” project (such as DNM). Also, many foundations have short attention spans and don't stick with projects beyond two or three years. Rigid annual funding cycles can also preclude the continuity of funding that will fit your annual work cycle (gaps and breaks in funding between cycles).

Tip: Start-ups and innovative new ventures are a tough sell. Seek out visionary private donors who “get” what you're doing and accept risks worth taking.

Tip: It helps to work with or through an existing organization(s) with a track record, and have significant fundraising experience. A project of this nature is a tough sell under any conditions.

Tip: They say time is money, but money is time, too. Fundraising takes a lot of time and energy. Embrace it.

From a cost-benefit perspective, the dysfunctional philanthropic “system” that requires NGOs to spend disproportionately large amounts of time on fundraising is not efficient or cost-effective. At various times, we’ve had a dozen or more DNM funders. Several have required unique grant proposals (often for a different specific part of the project) and subsequent reporting, all on different timelines. It’s a lot of time, work and attention. (Although individuals often require little or nothing, it’s important to report anyway and to keep them solidly informed and in touch.)

Would my time be better spent manifesting the project directly? It’s a matter of proportion, and yes, if I were a funder, I’d rather see the project maximizing its time delivering the goods than writing an endless stream of individual proposals and reports. But there’s no reason to believe this overall system will change anytime soon. We try to educate donors about these dilemmas.

Tip: Grant writing and reporting are essential, and writing and communication skills can make or break you.

Tip: Develop authentic and respectful relationships with your donors. Cultivate them as you would a garden you love. Communicate with them periodically, not just when you’re coming back for more money. Share good news, and even challenges, if you feel safe to do so.

Tip: Where appropriate, tap your donors for insight, advice, connections and strategic help.

Tip: Communicate with donors in ways they prefer. Some like phone calls, others emails or written executive summaries. Most appreciate in-person visits. Everyone’s different. Don’t be a pest and beware of over-communicating.

Tip: Expect that funders will cycle through or out at various times.

Although some funders may stay with you for long periods or permanently, most do not. Sometimes their priorities change, or their fiscal fortunes. Sometimes they like start-ups only, or specifics aspects or targeted short-term goals.

Tip: General operating support is best (maximum freedom and flexibility), yet many funders will support only one aspect or phase of the work.

General operating support gives you maximum flexibility and freedom. Yet many funders want to focus on one aspect of your work. Be clear about this. If a funder who supported a specific piece drops out, that piece of the work may go away, unless and until you find other funders. It’s very disruptive and can cause real harm.

Tip: Opportunistic funding is a double-edged sword.

If the funding is available, it can drive activity in a given area. Do you really want to do this work? Or is it taking you off point? Often things happen because the money is available, not because it’s a top priority. On the other hand, great things happen solely because someone is willing to fund it. You figure it out!

Tip: Be resourceful and limit costs.

Money saved is money you don’t have to raise. Especially as we enter increasingly turbulent and economically unstable times, it’s crucial to create a culture of resourcefulness at large. As the venture capitalist’s mantra goes, “Focus, focus, focus — cash, cash, cash.”

Tip: Assess the potential funding landscape and scope of your efforts. Is it big enough pool of possible funding within the geographic scope of your efforts? Will you need to go outside your community?

DNM would never have happened if we had to rely on local funding. New Mexico is a very poor state with an undernourished philanthropic sector, much of which is focused on the arts. Many local NGOs depend on a large portion of out-of-state funding. In the case of DNM, the prospect of creating a template that could be adapted by other communities nationally was part of the design, and has been compelling to donors not interested per se in New Mexico.

Tip: There are other sources of funding such as government agencies, though with the Recession most state and municipal budgets have vaporized. In some cases, federal funds still exist for these kinds of efforts. The tide will turn at some point, likely when no other choices are left and restoration becomes a national and business competitiveness imperative.

Tip: Systems approaches invite new collaborative funding models.

One important strategic and systemic funding model we've used is what we call "cluster grants" that foster collaboration. The New Mexico Community Foundation was willing to fund DNM plus two partner groups to work alongside each other to achieve specific goals and deliverables. The funding flowed through Bioneers and we were responsible and accountable for the other groups. (We would have preferred direct funding to the other two groups and independent reporting, but the Foundation wanted one group to be accountable, which is understandable.)

In our view, funders ought to use this "cluster" model far more. From a strategic viewpoint, it's essential to bring coherence by funding a systems approach. You need several players for something to work. Co-funding several groups under one umbrella encourages both collaboration and a systemic approach.

We were invited by the New Mexico Association of Grantmakers to do a conference call briefing for a subgroup of its members interested in mobilizing around the food system. The current reality for the most part is that funders operate largely in isolation from one another, and miss many opportunities to bring a focused, coherent "war room" strategy to bear on a given system. The Re-Amp project is perhaps the most advanced model, creating systemic coherent collaboration among donors and their grantees on a significant scale. Bravo. More.

Tip: Recognition helps raise money. Awards and press make a difference.

We got a boost early on when we received a second-place award from the Buckminster Fuller Challenge Prize from over 200 global entries. It gave the project added credibility and visibility, including in New Mexico where naturally people root for the home team. It was a lovely affirmation for donors and the local community.

In today's media world, being in the news or press can help your efforts. It's important to know how to work with the press and the media. The press is also a double-edged sword. It can hurt you. There's no license for journalism, and often the quality of reporting, even of basic facts, is appalling.

Tip: Collect outcomes and testimonials. Results and endorsements count.

If you're seeking genuine systems change, it's ultimately about results. Chronicling and evaluating outcomes is very important. Celebrate large and small advancements and successes. And for better or worse, people care a lot about what other people think. Getting formal endorsements and testimonials from influential people has more of an impact than you might imagine.

Good luck!

DNM Costs

For a variety of reasons including DNM's being part of Bioneers (where the organization has absorbed certain overhead costs or contributed general operating support), we cannot give precise figures on aspects of the project.

Our annual budgets have ranged from \$225,000 to \$400,000.

Epilogue

The Growing Edges: Dreaming On...

Since we initiated Dreaming New Mexico, some of our thinking and perspectives have evolved. In particular, “resilience thinking” has become central. A brief essay is attached that outlines the bones: “Busier Than a Cat in a Roomful of Rocking Chairs: Resilience and Regime Change.”

At this time, we’re working on several specific projects, with an eye on strategic leverage points and game-changing ideas:

- Completing and distributing this Methodology!
- Adapting the core DNM materials into lessons plans and study guides for New Mexico schools, with an emphasis on project-based learning and systems thinking, and continuing to engage with educators and schools. We plan to adapt these materials for national use in schools as well. The lesson plans will be available for download from www.dreamingnewmexico.org.
- Collaborating with other groups and leaders to support a transition by Navajo Nation to clean energy, including the use of Google Earth mapping and training Native American youth in Google Earth visualization technology. Visit www.dreamingnewmexico.org or newenergyeconomy.org.
- Developing an Ecoservices Management curriculum or MBA program to help farmers and ranchers create an ecoservices portfolio directly enhances their income by adding or changing behind-the-gate practices that may lead to a price advantage for their goods at the same time it enhances the overall health of natural capital and land. We see this as a game-changer that widens the destructively narrow conventional view of “production” and rewards the conservation of nature’s services.
- Through Bioneers, helping organize a national network of resilient communities and localization efforts.

As we suggested earlier, DNM is designed as a comprehensive and long-term project. It’s still at a relatively early stage, hampered by very limited resources and capacity constraints. There’s much we’d have already done if we had the money, and there’s much yet to do that are further dreams. Below is a short list of top-line dreams to come.

Dreams to Come:

- **Map Food Security Zones.** This project would map a now concept - food security zones” - in NM to protect the most arable soils and most reliable irrigation sources, and to protect farm lands from losses from urbanization, mining or other land disturbances. It can be a template nationally and globally.
- **The Age of Local Watersheds map and booklet.** Food, energy and water are the three basic ecological underpinnings of any mapping, and obviously are closely interconnected. This work would complete the ecological mapping trinity of Energy, Food and Water for DNM.
- **The Age of Ecological Governance map and booklet.** Mapping the preferred state of nature-based, democratic governance is also key. What would appropriate governance look like that respects both nature and people?
- **Dreamcatcher Grand Challenge Prizes.** There are grand challenges for which no one currently has an answer (such as how to decouple oil and gas royalty funding from supporting the educational system). Offering public cash prize awards for solving grand challenges elicits the wisdom of crowds and engages and educates the public as well as policy makers, technologists and so forth. It can be a valuable model for many places.

Acknowledgments

Dreaming New Mexico gratefully thanks Grant Abert for the funding to make this document possible. Huge thanks to DNM Program Manager Nikki Spangenburg, without whom this document could not have been created.

As always, we thank the countless people who have been instrumental to DNM, including our many partners who are acknowledged in the booklets.

Appendix

Busier Than a Cat in a Roomful of Rocking Chairs

By Kenny Ausubel

An overrun resource base is visibly shrinking at the same time our population keeps growing. Honey, we shrunk the planet. The bottom line, of course, is we're living beyond our means. Nearly two thirds of the life-support services provided to us by nature are in decline worldwide and the pace is quickening. We can't count on the ability of the planet's ecosystems to sustain future generations. This is new territory.

The big wheels of ecological governance are turning. "Regime shift" is the technical term some ecologists use - for instance, when the climate flips from one state to another. It can be irreversible, at least on a human time frame. These evolutionary exclamation points unleash powerful forces of destruction and creation, collapse and renewal.

We do have a compass of sorts during these cycles of large-scale creative destruction. As Charles Darwin observed, "It is not the strongest of the species that survive, nor the most intelligent, but the ones most responsive to change."

Change is not linear, and sudden shifts sometimes remake the world in the blink of an eye. We know we're approaching mysterious thresholds that mark the tipping points of ecological regime change, and we may have already crossed some. The closer we get to each threshold, the less it takes to push the system over the edge, where the degree of damage will be exponentially greater. Societies slide into crisis when slammed by multiple shocks or stressors at the same time. Climate change is propelling both natural and human systems everywhere toward their tipping points.

When huge shocks transform the landscape, structures and institutions crumble, releasing tremendous amounts of bound-up energy and resources for renewal and reorganization. Novelty emerges. These times belong to those who learn, innovate and adapt. Small changes can have big influences. It's a period of creativity, freedom and transformation.

We stand at the threshold of a singular opportunity in the human experiment: to re-imagine how to live on Earth in ways that last.

The name of the game is resilience. It means the capacity of both human and ecological systems to absorb disturbance and still retain their basic function and structure.

Resilience does *not* mean just bouncing back to business-as-usual. It means assuring the very *ability to get back*.

But if ecological regime change happens, resilience means having sufficient capacity to transform to meet the new management. A network of ecologists and social scientists called the Resilience Alliance outlined some of the rules of the road in their book "Resilience Thinking."

The first principle of resilience thinking is systems thinking: It's all connected, from the web of life to human systems. "You can only solve the whole problem," says Huey Johnson of the Resource Renewal Institute. Manage environmental and human systems as one system. Taking care of nature means taking care of people, and taking care of people means taking care of nature. Look for systemic solutions that address multiple problems at once. Watch for seeds of new solutions that emerge with changing conditions.

Resilience thinking means abandoning command-and-control approaches. We're not remotely in control of the big wheels of ecological governance or complex human systems.

Complex systems by nature are unpredictable, nonlinear and cannot be controlled. The key to building resilience is to foster the system's capacity to adapt to dramatic change. As Dana Meadows observed, "A diverse system with multiple pathways and redundancies is more stable and less vulnerable to external shock than a uniform system with little diversity."

Greater decentralization can provide backup against the inevitable failure of centralized command-and-control structures. Think decentralized power grids, more localized food systems, and the Internet. Redundancies are good failsafe mechanisms, not the waste portrayed by industrial efficiency-think.

The heart of resilience is diversity. Damaged ecosystems rebound to health when they have sufficient diversity. So do societies. It's not just a diversity of players; it's "response diversity," the myriad adaptive strategies for responding to myriad challenges. Each one does it slightly differently with specialized traits that can win the day, depending which curve ball comes at you. Diverse approaches improve the odds. Diverse cultures and ideas enrich society's capacity to survive and thrive.

Ecological governance is also operating on much grander time frames than quarterly reports and mid-term elections. Think dozens, hundreds, even thousands of years. Sustainability means staying in the game for the long haul.

We know some other keys to resilience.

- Build community and social capital. Resilience resides in enduring relationships and networks that hold cultural memory the same way seeds regenerate a forest after a fire.
- Empower local communities to solve their own problems. Governance usually works best when it's closest to the ground and includes all stakeholders across all levels.
- Beware of systems being *too* tightly connected, because one shock to the system can cause them all to crash at once.
- And above all - learn, experiment and innovate.

A paradigm is the hardest thing to change in a system, but it can happen fast. As Meadows advised, "Keep pointing at anomalies and failures in the old paradigm. Keep speaking loudly and with assurance, from the new one. Insert people with the new paradigm in places of public visibility and power. Don't waste time with reactionaries; work with active change agents, and the vast middle ground of open people."

Ecological regime change demands political regime change. As Lester Brown wrote, "Socialism collapsed because it did not allow prices to tell the economic truth. Capitalism

may collapse because it does not allow prices to tell the ecological truth. We are in a race between tipping points in nature and our political systems."

Just as economics is driving the destruction, it needs to power the restoration. The charge is to transform the global economy from a vicious cycle to a virtuous cycle.

As the Archbishop of Canterbury said, "The economy is a wholly owned subsidiary of the environment." Real wealth creation is based on replenishing natural systems and restoring the built environment, especially our infrastructure and cities. It's based on investing in our communities and workforce. It's been shown to work best when done all at once. Restoration is an estimated \$100 trillion market. There's plenty of work to do, plenty of people to do it, and abundant financial incentive. Every dollar we spend on pre-disaster risk management will prevent seven dollars in later losses.

The rules of virtuous engagement aren't that complicated. As Fred Block wrote in "The Moral Economy," "The essential idea was brilliantly expressed in the title of a 1980s best seller, *All I Really Need to Know I Learned in Kindergarten*. The guiding principles are familiar rules such as: don't hit - take turns - play by the rules - listen to the teacher - don't waste food and art supplies - and be prepared to share. These principles produce order in the elementary school classroom, and they can also assure order and prosperity in our nation's economy."

At the core of resilience is the transformation to a restoration or "moral" economy.

The one non-negotiable is to face our vulnerabilities clearly and collaboratively. Windows of opportunity are finite and fleeting. As Yogi Berra said, "I knew I was going to take the wrong train, so I left early."

We're going to be busier than a cat in a roomful of rocking chairs.

Valuable Sources

Dreaming New Mexico: The Age of Renewables (2008)
Dreaming New Mexico: Local Foodsheds and a Fair Trade State (2010)

Food Sovereignty Assessment Tool by Alicia Bell-Sheete, First Nations Development Institute. 2004. Fredericksburg, VA.

Governing the Commons: The Evolution of Institutions for Collective Action By Elinor Ostrom. Cambridge University Press, 1990.

Overview of Processes and Tools Developed In Support of the Quantitative Analysis for the Vivid Picture Report by Mike Mertens. 2008. EcoTrust. www.VividPicture.net

The Sacred: Ways of Knowledge, Sources of Life by Peggy Beck, Anna Lee Walters and Nia Francisco. 1977. Navajo Community College.

Thinking In Systems: A Primer by Donella Meadows. 2008.

Value Chain Analysis of the U.S. Beef and Dairy Industries. February 16, 2009, Center on Globalization, Governance and Competitiveness, Duke University, <http://www.cggc.duke.edu>.

Dreaming New Mexico Web Site

The Dreaming New Mexico web site (<http://www.dreamingnewmexico.org>) is an excellent source for additional information and contains downloadable versions of the booklets and maps.

The Food and Farming portion of the Dreaming New Mexico web site includes:

- Downloadable versions of “An Age of Local Foodsheds and A Fair Trade State” maps and booklet.
- Peter Warshall’s presentation at the 2010 Bioneers Conference (video).
- Commissioned reports for the “Age of Local Foodsheds and A Fair Trade State” including:
 - “Hunger and Food Insecurity in New Mexico” by Janet Reeves
 - “Agricultural Statistics and Profiles by Agro-ecoregion by Ken Meter
 - “Food Localization in New Mexico” by Michael Shuman
 - “50 Top Future Crops for New Mexico” by Gabriel Howearth
- Video series on Biocultural Crops and Traditional Farming in New Mexico.

The Energy portion of the web site includes:

- Downloadable versions of “An Age of Renewables” maps and booklet.
- PowerPoint presentations by Peter Warshall

Dreaming New Mexico was selected as first runner-up
for the 2009 Buckminster Fuller Challenge and semi-finalist
in the 2011 Buckminster Fuller Challenge.

The Dreaming New Mexico program seeks to reconcile nature and cultures
at a State level with pragmatic and visionary solutions, using systemic approaches
that address our most pressing ecological and societal challenges.



BIONEERS
Revolution from the Heart of Nature

www.bioneers.org

© 2012 Bioneers/Collective Heritage Institute
Bioneers/Collective Heritage Institute is a 501(c)(3) nonprofit
whose mission is to inspire a shift to live on Earth
in ways that honor the web of life, each other
and future generations.