



The New Mainstream

A SUSTAINABLE FOOD AGENDA FOR CALIFORNIA
FOR REVIEW BY THE ROOTS OF CHANGE COUNCIL
AND THE ROOTS OF CHANGE FUND

PRESENTED BY ECOTRUST
December 20, 2005



• From the Project Director •

December 20, 2005

Dear Roots of Change Council and Roots of Change Fund,

It is our pleasure to present you with the results of the Vivid Picture project, including this narrative and 22 accompanying research papers. Ecotrust is honored to have been your partner in this undertaking.

The Vivid Picture project team has been actively working since March of 2004. We began by interviewing you, the Roots of Change Council, and dozens of other food and agriculture leaders. We heard that it was time for the sustainability community to pull together a cohesive vision for a sustainable food system. This vision, you told us, must have more winners than losers. It must have broad appeal for all of California and yet be truly transformative in nature. You said the action plan needed to be flexible enough to accommodate grassroots strategies as well as statewide and national approaches.

In your own work you are personally committed to addressing some of the most challenging issues facing the food system: poor working conditions for farmworkers, dismal nutrition, declining environmental quality, and a difficult economy for fishers, farmers and ranchers. Yet your hope for the future is contagious. Your belief in the capacity of the next generation to extend the mission of sustainability has inspired us. The roadmap outlined in this document seeks to harness the energy of this emerging group of experienced leaders.

After 159 in-depth interviews, review of over 700 datasets, consultation with over 50 data managers, deep consideration of key food system topics and general review of dozens more, our proposals to you include:

1. A theory of change for moving the sustainable food system from niche to mainstream
2. A vision for a sustainable food system for California
3. An outline of an implementation strategy for achieving the vision
4. Indicators of success to evaluate progress

The recommendations made in this narrative are addressed to the Roots of Change Council and Fund. We have sought to equip you with ideas that can capture the imagination of a broad coalition of stakeholders, who in turn can work together towards a sustainable, prosperous, mainstream food system. For such a monumental transformation to take place, this project will have to stimulate the ingenuity of thousands. In order to gain their commitment the agenda must be fluid, not pre-determined. This bold agenda for change suggests a set of initiatives that can be taken to a larger audience for further development and action.

Specifically, the Vivid Picture project team, coordinated by Ecotrust, completed the following qualitative and quantitative consulting tasks to arrive at our proposals:

1. Interviewed and analyzed the interviews of 65 food system leaders in a first round of interviews to determine components of the food system, underlying values of the system and goals for the system.
2. Constructed a “food systems wheel” from the information gleaned in prior interviews and conversations.
3. Using the original 65 interviews, evaluated current theories of change for the food system.
4. Developed a new theory of change, diagramming the theory using systems thinking tools.
5. Developed an evaluation of core sustainability values and bridge values for a sustainable food system.
6. Reviewing literature and the 65 interviews, identified differences between sustainable “value chains” and conventional “supply chains.”
7. Distilled 22 goals for a future food system, first from the original interviews and then worked with the Roots of Change Council to refine them.
8. Identified and tested a mission for a sustainable food system with numerous individuals and groups.
9. Developed a scenario building tool to model statewide smart growth strategies for California with an emphasis on preserving farmland, comparing density results with “business as usual” projections.
10. Developed a foundational dataset of agro-ecological zones for the entire state of California to which agro-ecological practices can be applied.
11. Developed a toolset for distributing projected population demographics across the landscape with or without smart growth accommodations. This can be used for projecting where different types of food outlets are likely to occur.
12. Developed a toolset for projecting numbers of different types of food outlets that might exist in future scenarios using complex business rules that define each type (e.g. farmer’s markets, small food co-ops, large supermarkets, supercenters, and so on).
13. Developed a toolset, based on demographic distribution, for projecting the number of schools and restaurants that are likely to be required to serve future populations.
14. Developed toolset and accompanying datasets to evaluate how different value chain types might interact in the future.
15. Interviewed 27 sustainable producers in an attempt to fill in data gaps about how a sustainable food system operates.
16. Identified over 700 datasets for the above mentioned tools.
17. Investigated a number of topics in depth. 22 reports were produced, ranging from identifying current issues and trends related directly to the goals for a sustainable food system to an assessment of market viability for third party certification for agriculture (with the NRDC team).
18. Conducted an extensive set of second-round interviews with 84 food system leaders to identify strategies for moving towards a sustainable food system.
19. Assimilated and compiled qualitative and quantitative information into a “Bold Agenda for Change” using filtering mechanisms based on the project’s theory of change.
20. Undertook an extensive research effort to identify 77 indicators of success for a sustainable food system, gathering ideas from stakeholders and engaging in dozens of conversations with data managers. Finally, we winnowed a list of primary indicators, supplemental indicators, possible cross cutting indicators and ideal or “wish list” indicators.

I would like to acknowledge the tremendous contribution of all my colleagues who took part in this project, especially those who have worked from beginning to end with complete dedication, splitting their time between this and many other projects: Gail Feenstra, Mike Mertens, Howard Silverman, Katy Mamen, Analisa Gunnell and Celeste LeCompte.

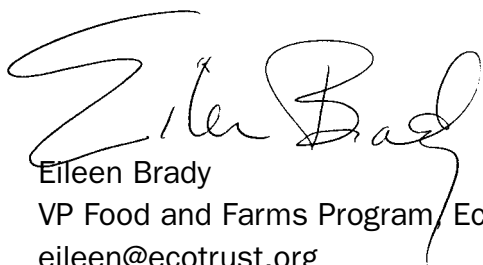
Likewise, I would like to extend my deep admiration to Jonathan Kaplan of NRDC and Michael Dimock of Ag Innovations for clearly demonstrating the power of dialogue, respect and strategic action.

Many thanks to the members of the Roots of Change Vivid Picture workgroup who were willing to wade into the details of the project and offer sound advice about how to see the forest for the trees.

And I couldn't close this letter without acknowledging my appreciation of Jamaica Maxwell, of the Roots of Change Fund, whose patient persistence and commitment to facilitating the development of a top-quality product kept us reaching for a higher bar.

During the course of this project, one food system leader, reflecting on his life's work, wondered, "Will this be a single generation revolution?" I think not. From the energy and commitment of the diverse set of stakeholders already working on these issues, it is apparent to me that you are participating in a burgeoning effort to position the principles of sustainability as the foundation for a New Mainstream food system.

Sincerely,

A handwritten signature in black ink, appearing to read "Eileen Brady". The signature is fluid and cursive, with a large initial "E" and "B".

Eileen Brady

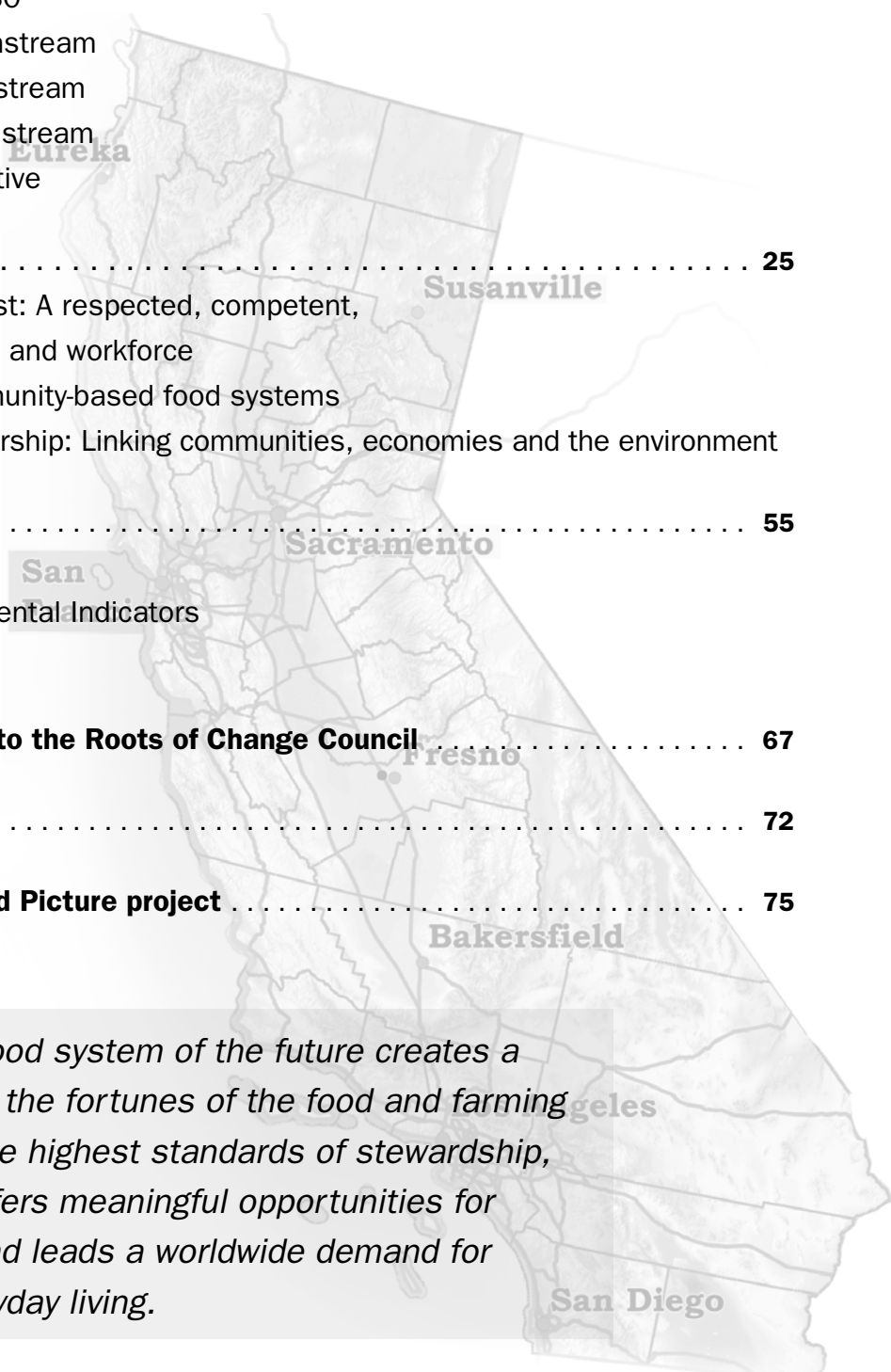
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California’s sustainable food system of the future creates a new mainstream that lifts the fortunes of the food and farming industry, demonstrates the highest standards of stewardship, creates pride of place, offers meaningful opportunities for workers in the industry and leads a worldwide demand for health and quality in everyday living.

● Introduction ●

The Vivid Picture project began with a conversation among a dozen national and California-based public and private grantmakers in 1999. The discussion focused on the following question:

“Why isn’t the food system sustainable?”

Over the past twenty years, many of these foundations have put considerable resources into helping spur sustainable food and farming objectives. While many acknowledged the strides that have been made and the growth of a successful niche industry, they were not satisfied with the pace of change.

In early 2001, the funders released *Roots of Change: Agriculture, Ecology, and Health in California*, a report that consolidated information from policy makers, farmers, scientists, and activists in the food systems field, as well as data from numerous state agencies. The report made the case that multiple environmental, social, and economic problems in California can be addressed simultaneously by a comprehensive transition to sustainable food systems.

Together, the grant-makers embarked on an ambitious collaborative funding experiment. Founding the Roots of Change Fund, they initially contributed \$2.4 million to pursue a strategy for food systems change. They formed a top-level group of food and farming experts, the Roots of Change Council, which recommended developing a bold, comprehensive, actionable vision for a new food system. The new vision would serve as an antidote to the focus on problem identification that has been typical of the movement toward sustainability in food and other sectors. In early 2004, the Fund commissioned the development of such a vision for California—the Vivid Picture project. With help from partner organizations and food system consultants, this effort was coordinated by Ecotrust, a non-profit organization helping communities on the West Coast improve economic, ecological and social conditions.

California was a significant target of this effort because its food and agricultural system is vast and plays a significant role both globally and nationally. As a known innovator, California is poised to lead the way to a new sustainable, healthy and robust food system.

Roots of Change Council

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ROC Funders

Arkay Foundation

Clarence E. Heller
Charitable Foundation

Columbia Foundation

Fred Gellert Family Foundation

Gaia Fund

Marisla Foundation

Richard and Rhoda Goldman Fund

William Zimmerman Foundation

W.K. Kellogg Foundation

The Roots of Change Council charged the Vivid Picture project team with creating the following proposals:

1. A vision for a sustainable food system for California
2. An outline of possible implementation strategies for achieving the vision
3. Indicators of success in achieving the vision

The Vivid Picture project team quickly recognized that in order for the state's entire food system to become sustainable, sustainability would have to be the dominant, mainstream paradigm, dramatically affecting the foundations of the current food system. In addition, the project team agreed that a small, imperfect, growing sustainable food system currently exists, but only as a "niche," on the edges of the conventional food system. It exists both as a marginal political concern and as a niche industry. Given this, the key question that has guided the project, or problem the project has addressed, is:

"How do we move sustainability from niche to mainstream?"

Asking this question allowed us to realize we were not proposing a vision for a demonstration or pilot project, but instead a vision that could help stakeholders in the food system see sustainability as central to their needs and desires, making sustainability the reigning paradigm in the system. The fulfillment of such a broad vision is, necessarily, dependent on a large number of stakeholders understanding that their interests are best served by shifting the whole system to a successful sustainable model. However, neither the sustainability movement nor the industry have previously attempted change of this scope, nor has the community of food and farming activists developed tools sufficient for transition of this nature. Therefore, the Vivid Picture project team added an additional component to the list of three above: a theory of change for moving sustainability in the food system from niche to mainstream. This change strategy was originally implicit in the project, but after guidance from the Roots of Change Council, we concluded that the theory of change must be a deliverable in and of itself.

The entire list of proposals we are now submitting is as follows:

1. A theory of change for moving the sustainable food system from niche to mainstream
2. A vision for a sustainable food system for California
3. An outline of possible implementation strategies for achieving the vision
4. Indicators of success in achieving the vision

The recommendations in this report do not propose ways of changing public opinion or consumer behavior. Our objective, instead, is to provide the Roots of Change Council with recommendations that can capture the imagination of one thousand key stakeholders, who together can galvanize the effort necessary to transform the food system into a sustainable, prosperous, mainstream system.

Navigating this Report

Each section of the report is organized into subsections titled "background," "findings," and "recommendations." The background segments provide a brief rationale for why the topic was undertaken. The findings present results of qualitative or quantitative analysis that emerged from the project. The recommendations suggest action for the Roots of Change Council. For convenience, all of the project team's recommendations are also collected in the last section of this report.

• 1 • The Project's Theory of Change

BACKGROUND

The sustainable agriculture and food systems movement over the last 35 years has produced many successes. The movement has created an awareness of how personal shopping, eating and voting choices impact health, the environment and our communities. It has helped to develop a strong and growing niche and culture. The next stage, however, involves expanding sustainability from niche to mainstream using the ideas that have been cultivated over the past three decades.

The Vivid Picture project team has operated with an understanding that the recent sustainable food and farming movement has employed three main ways of approaching desired change in the food system. These approaches can be best understood by the following exercise:

We can change the food system if we _____ (fill in the blank) _____.

The change agents of recent history have collectively answered this “fill in the blank” exercise with the following three strategies, or approaches, to change:

- a) *We can change the food system if we **educate the consumers.***
- b) *We can change the food system if we **stop the bad actors.***
- c) *We can change the food system if we **create an alternative food industry.***

Activists and sustainable business entrepreneurs have helped to build the sustainable food system by first educating consumers, believing that when consumers know where their food comes from and fully understand the environmental and health impacts of the production of their food, they will make the right eating and shopping choices. The new choices made by consumers drive demand for a sustainable food system, thus creating an engine for social change. Likewise, others have focused on eliminating bad actor behavior, for instance, by regulating or litigating farming practices that are harmful to the environment, farmworkers or eaters. Lastly, a set of enterprising individuals, sensing that the conventional food system will resist a shift to sustainable food and farming practices, opted to create a system outside the current system and began farming, retail and restaurant businesses that were initially disconnected from the standard food system.

These strategies can be credited with creating a new approach to food and farming and a new consciousness among many consumers. They have created a glimpse of what whole-system change could look like, creating a “niche” industry with an associated “niche” policy agenda.

“Systems thinking is a discipline for seeing the ‘structures’ that underlie complex situations, and for discerning high- from low-leverage change. That is, by seeing wholes we learn how to foster health.”

— **Peter Senge**

The Fifth Discipline, 1994

While there is evidence that these three approaches are supported by a growing number of people and are even influencing mainstream thinking and behavior, the Vivid Picture project team believes that such strategies alone are not enough to expeditiously make sustainability the underlying value of the mainstream food system. Many of the strategies employed to date are premised on the assumption that the current system must be changed from without or supplanted by a separate alternative. In fact, the change agents who pioneered the niche of sustainable food have often viewed themselves as outside the conventional food system and resist participation in and identification with a mainstream system.

However, to fulfill the promise of a Vivid Picture for the entire state, strategies for owning “the center of the system” must be developed. Change agents must see themselves as part of a mainstream system they can believe in. Growing a broad base of support for sustainability will require a new set of transformational strategies.

To this end, we have had the benefit of the experience of many of the farmers, fishers, ranchers, manufacturers, grocers, chefs, restaurateurs and of the public agency, university and non-profit partners who have nurtured the sustainability niche over the years. The Vivid Picture project team has often said that we could not have attempted the Vivid Picture project 40 years ago with much success. The life lessons and wisdom of these pioneers were the first place we looked to find the seeds for a new mainstream.

FINDINGS

Designing a vision for a sustainable food system and a change agenda for the entire State of California required developing a fundamentally different theory of change than the one the sustainable food and farming movement has employed to date. This theory must be one that can be publicly embraced by a broad coalition of influencers.

At the beginning of the Vivid Picture project, the team conducted interviews with leaders vested in the sustainable food system, and used the findings of those interviews to develop a set of change criteria that were applied to every component of the project. Interviewees were asked, using a “backcasting” method, to imagine a sustainable food system for the entire state of California in

the year 2030. When interviewees were pushed to imagine a future where sustainability is prevalent, their responses described several key conditions that characterized a sustainable future. From these conditions, we extracted a set of criteria for the vision, the implementation plan and the indicators for the Vivid Picture project. We refer to these criteria as “opportunities-based.” An opportunities-based approach posits, ***“We are all in this together. All of us must benefit.”***

Systems Diagramming

In order to better understand how to influence the California food system, the Vivid Picture project team depicted its application of “systems thinking” through a technique known as “systems diagramming.”

Simple cause-and-effect models are often reductionist, ignoring the possibility of unintended consequences. Two basic principles underlying systems thinking are: 1) that an adjustment to one part of a system is apt to have more than one effect, and 2) that anticipating those multiple impacts is helpful in understanding a system and choosing a course of action to affect it. In the words of Peter Senge, systems thinking “is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static ‘snapshots.’”

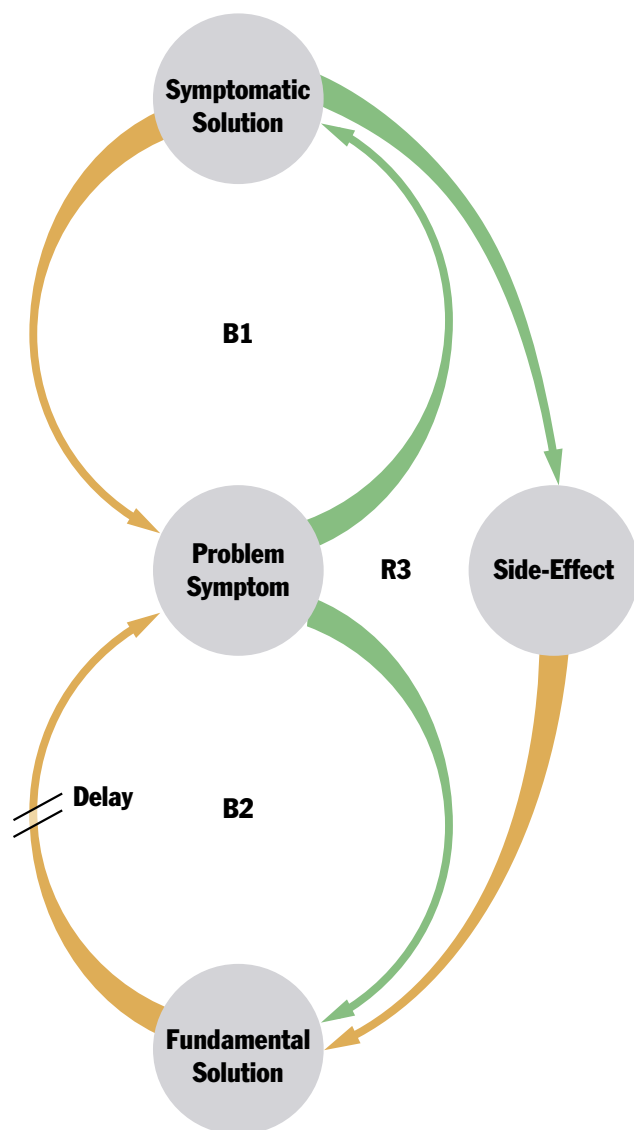
Systems diagrams are maps of those relationships. They depict how an increase in one factor can increase or decrease one or more other factors, and so on in a cascade of effects. Taken together, a series of impacts can amount to “reinforcing loops” that accelerate the growth of a system—or “balancing loops” that slow the growth of a system. By keeping these loops in mind, interventions in a system can be designed to increase the growth in beneficial outcomes, while decreasing unwanted side-effects. A simple example of a systems diagram is shown at right. In applying these techniques to the California food system, the Vivid Picture project team articulated a theory of change which recognizes that the stakeholders in the food system are interconnected. This approach is more powerful than any mindset that seeks simply to address a single issue or problem, such as minimizing synthetic pesticide use.

We drew on the work of Daniel Kim and Virginia Anderson, who have created a taxonomy of system diagrams and archetypes. Using the “Limits to Growth” archetype, we discuss the mechanisms that cap the expansion of both the conventional and the niche-sustainable food systems. Another—“Shifting the Burden”—informed our realization that expanding the sustainable food system will require strategies that highlight the opportunities which sustainability offers to actors throughout the food system.

See “Sustainable Food Systems: Working Towards a Fundamental Solution,” prepared for the Vivid Picture project by Howard Silverman, for a more complete analysis.

Shifting the Burden

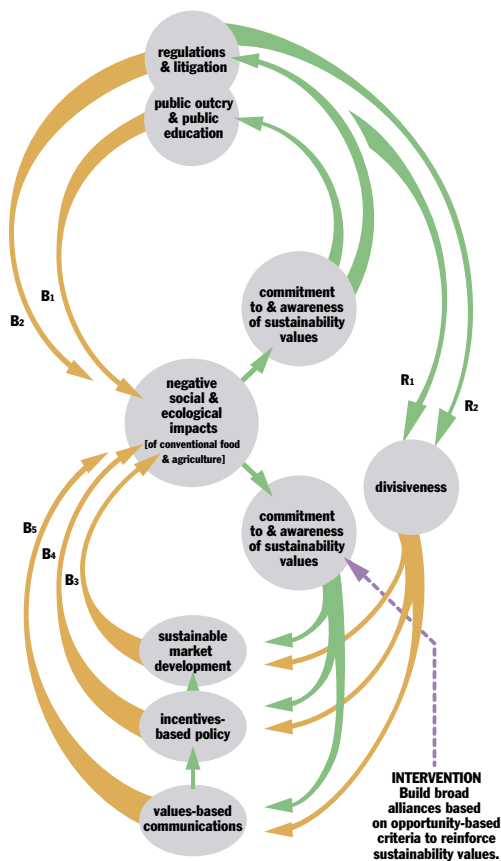
In this systems archetype called “Shifting the Burden,” a problem is addressed initially by a “fix,” or a temporary solution that addresses only the superficial symptoms of the problem—the balancing loop marked “B1” in the diagram. Eventually the “fix” may cause a side effect that aggravates the underlying problem (reinforcing loop “R3”). Lasting, profound change occurs only when a fundamental solution is applied, giving rise to balancing loop “B2.”



LEGEND
 R = reinforcing process
 B = balancing process
 ■ = change in same direction
 ■ = change in opposite direction

Working Toward a Fundamental Solution

Archetype: Shifting the Burden



LEGEND

- R = reinforcing process**
- B = balancing process**
- = change in same direction**
- = change in opposite direction**

This application of the previous page’s “Shifting the Burden” archetype to California’s food system illustrates how a judicious intervention can remove barriers that limit fundamental change toward sustainability.

Negative impacts of the conventional food system arouse a commitment to sustainability values. These in turn engender public outcry, regulation and litigation, which reduce the negative impacts that sparked the cycle (balancing loops B1 and B2).

At the same time, however, that outcry and the resulting adversarial atmosphere promotes divisiveness among actors in the food system, hampering values-based communication, blocking policies based on carrots instead of sticks, and restricting the growth of sustainable markets. Because these processes would shift the system toward sustainability, reinforcing loops R1 and R2 limit progress toward that end.

Adopting an opportunities-based approach can build strong alliances for change, capturing a broad commitment to sustainability values to increase the three sustainability-engendering processes at the bottom of the diagram. This effort would amplify balancing loops B3, B4, and B5, hastening fundamental change in the system.

The Opportunities-based Criteria

All components of the Vivid Picture project must:

- **Be incentive-based:** They must motivate using incentives, not fear or penalties.
- **Be values-driven:** They must conform to the values of sustainability.
- **Be transformative at the core and at the same time have broad appeal:** Both of these elements are required to create real and lasting change. While it is very difficult to satisfy both criteria, this is where the power lies.
- **Have more winners than losers:** They must lead to greater economic and social returns for more people than the current system provides.
- **Address mutual vested interests:** They must clearly offer concrete benefits for people’s lives and livelihoods. Altruistic appeal is not enough.
- **Provide energy, momentum and suggest direction:** They must inspire people to identify with and join in the work ahead.
- **Solve more than one problem or create more than one opportunity:** Affecting key leverage points will be the most efficient and lasting avenue of change, affecting multiple realms simultaneously.

An opportunities-based perspective has more winners than losers, reinforces sustainability values, appeals to a large number of people and organizations that are vested in the outcome and provides energy and direction. Opportunities-based approaches focus on incentives for a healthy sustainable food and agriculture system. This orientation overcomes divisiveness and provides momentum for building new alliances that have the capacity to re-engineer the entire food system, and at the same time re-define the meaning of the term “mainstream.”

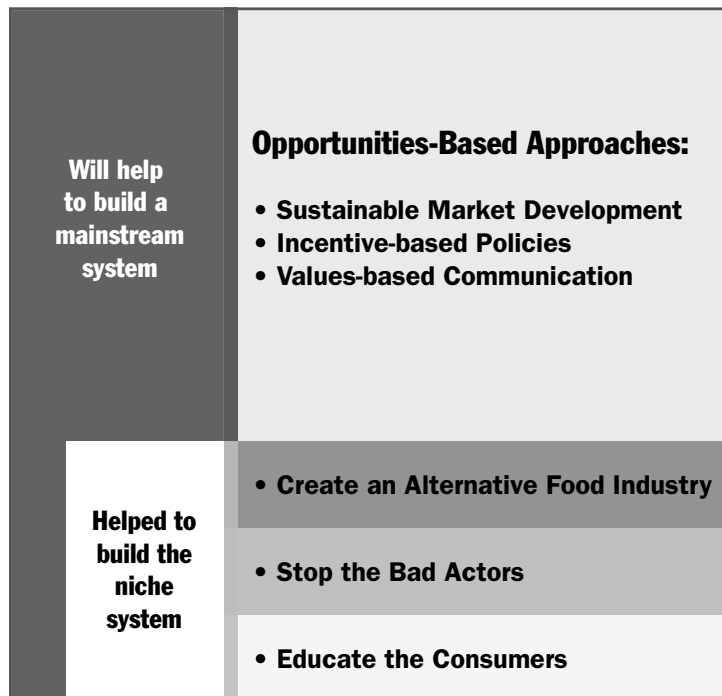
The opportunities-based criteria have been applied to every component of the Vivid Picture project, including: identification of core and bridge values, the mission, the goals, the strategies for change, and the indicators. The vision and other elements of the project should provide a glimpse of a future that meets economic, social and environmental needs through opportunity.

After gathering the qualitative information about an approach to transformative change from our first round of interviews, we were encouraged by the Kellogg Foundation to diagram our theory of change using a systems diagramming set of tools designed by Peter Senge and his team at MIT. The diagramming process enabled

the team to explicitly state the underlying assumptions about what strategies have shaped the development of a niche sustainable system and which strategies might help to transform the entire system to one with a sustainable foundation.

“An opportunities-based perspective has more winners than losers.”

Further, the Vivid Picture project team and its advisors on the Roots of Change Council have conferred and agreed that the current change strategies mentioned in the background section above continue to be extremely important. An opportunities-based approach should add to, not replace, the existing strategies. Indeed, the opportunities-based approach would likely not be effective without the other strategies in place.



The opportunities-based approach of the Vivid Picture project sets a positive tone and provides the basis for developing a shared vision that will motivate and engage a large group of stakeholders and influencers. As long as the core sustainability community is assured that sustainability values are not being compromised and that the opportunities-based strategies are a complement to existing strategies, we expect that this approach will bring together an interested, motivated and powerful alliance of partners.

RECOMMENDATIONS TO THE ROOTS OF CHANGE COUNCIL

- Adopt an opportunities-based approach, using the opportunities-based criteria described above to complement current approaches to change.
- Accept the three opportunities-based approaches as a promising theory of change to shift California’s food system toward sustainability.

• 2 •

A Vision for a New Mainstream, Sustainable Food System for California

What comprises a vision? What elements are most useful when describing one? Over the course of the project, these questions have been the subject of many conversations by Vivid Picture project team members and our advisors on the Roots of Change Council. Some individuals feel that a list of goals best describes a vision. Some feel that quantitative details such as exact number of acres that will be conserved, the number of jobs preserved or the capital needed to launch a new business best meet their needs for a “vision.” Others imagine a less concrete, more inspired narrative that illuminates a vision. Still others truly understand a vision only when they see a list of action items.

In addition, there exists a great deal of debate about how much detail a vision should have before additional stakeholders are brought into the process. One widely held belief suggests that if decisions about a future vision are made without stakeholder input, the vision will not be fully embraced by the influencers who need to institute it. Therefore a “less is more” approach is best if a large group of stakeholders are to accept it. These and other considerations were used in deciding what to include in the vision portion of this project.

The team developed the following components of a vision that provide a general sketch of the vision with a modest amount of detail, but not so much as to dissuade stakeholders from participating in its development or implementation. The parts of the vision are as follows:

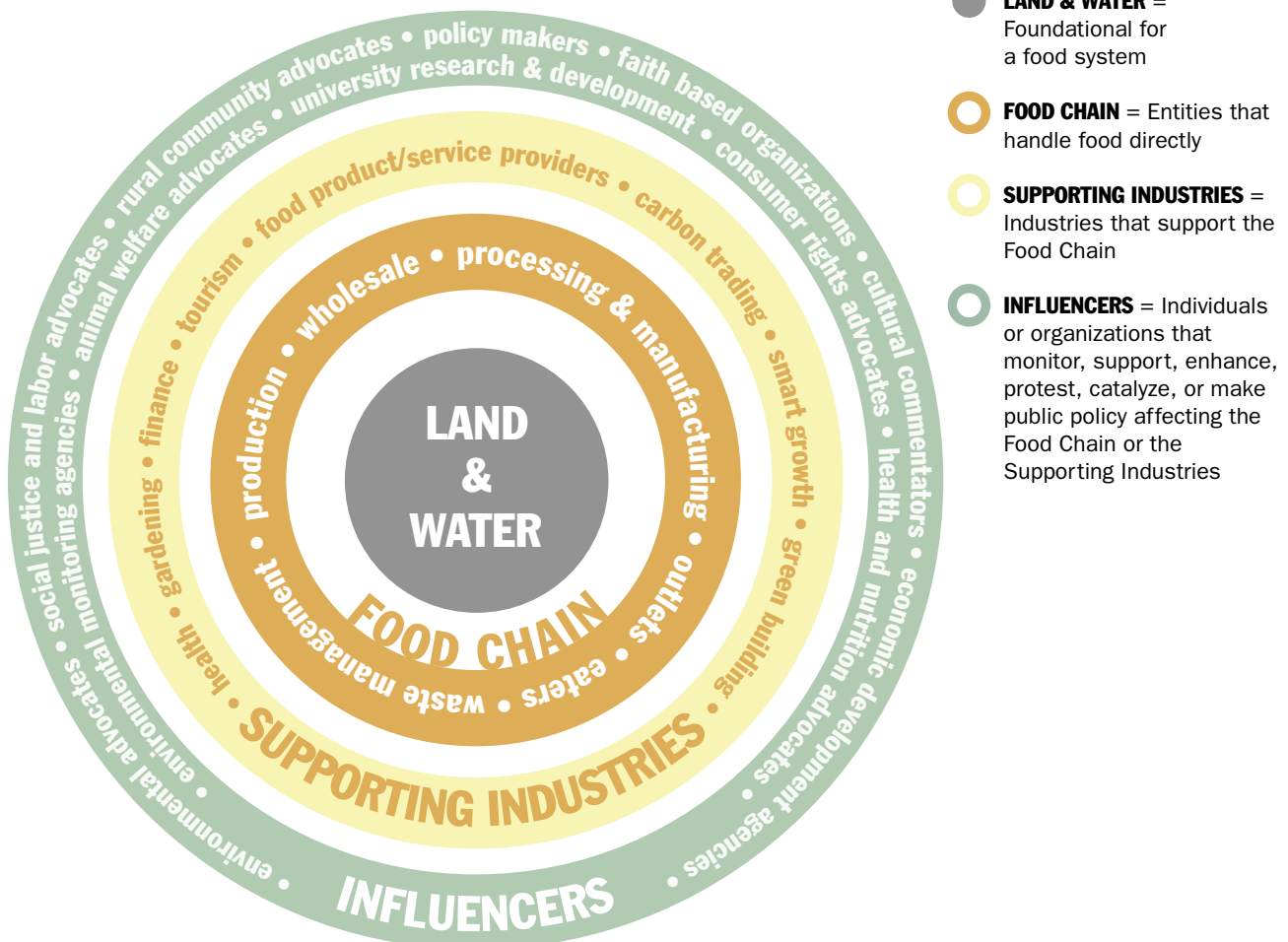
- a. The food systems wheel: actors in a food system
- b. A year for the vision: 2030
- c. 11 values for a new mainstream
- d. 22 goals for a new mainstream
- e. A mission for a new mainstream
- f. A new mainstream narrative

The Food Systems Wheel: Actors in the Food System

BACKGROUND

The term ‘sustainability’ was first applied to agriculture in the 1970s as a production system designation that generally ran counter to the technologies of the Green Revolution. The focus of sustainability in food has recently shifted from “sustainable agriculture” to “sustainable food system,” expanding beyond the farm to include the rest of the food chain, from fertilizer makers to jam factories and supermarkets. Food system interests have coalesced into a broad, yet loose, movement linking disparate components of the system. The underlying theory is that all parts of the food system, not just agriculture, must be made sustainable. Indeed, many contend that the act of linking the parts together is in itself a move towards sustainability. Today, unique partnerships composed of food banks, food research organizations, farmers, wholesalers, chefs, grocers, gardeners, teachers, nutritionists, food policymakers, institutional food purchasers, environmental monitoring agencies and others are beginning to collaborate to address a host of food-related issues.

Vivid Picture Food Systems Wheel



While many members of the Roots of Change Council are concerned primarily with “sustainable agriculture,” the Council decided to request a vision for a “sustainable food system.” This broad vision would, of course, include agriculture but was also meant to describe how key components of the food system would interact when operating sustainably.

The field of food systems is nascent, and, as such, there has been no shared agreement on which components constitute a food system. One of the basic descriptions of a future food system must, the Vivid Picture project team reasoned, include a vision for who is a part of the system itself. So, to identify which organizations, individuals or other elements might be considered part of a food system, the Roots of Change Council members were interviewed in an open-ended format in which they were asked to describe the food system.

FINDINGS

Out of these interviews, we constructed the Vivid Picture Food Systems Wheel, which identifies, for purposes of this project, the four realms of system components: land/water/population, the food chain, supporting industries, and influencers. Each of these segments has a set of actors associated with it.

The center of the wheel recognizes that the land and water on which we live is foundational for a food system.

The food chain circle of the wheel is one of the main focuses of the Vivid Picture project vision. It includes any person or entity that actually handles food, from producers to wholesalers, manufacturers, restaurants, retailers, farmer’s markets, food waste handlers, and finally, to eaters.

Supporting industries, which are not a central focus of the current Vivid Picture project, include those that are vested in or support components of the food chain and depend on a healthy food system to thrive.

The influencers circle includes individuals or entities that support, monitor, enhance, protest, catalyze, or make public policy affecting the food chain or the supporting industries.

RECOMMENDATIONS

TO THE ROOTS OF CHANGE COUNCIL

- Accept the food systems wheel and its segments as the Roots of Change Council’s official diagram of food system components with the understanding that it may be revised over time.
- Use the wheel in a stakeholder development process to explain the components of a food system and help stakeholders to see how they fit into the food system.
- Engage stakeholders in refining the wheel.

A Year for the Vision: 2030

BACKGROUND

A time frame as part of a vision allows stakeholders to truly imagine the vision unfolding towards a specific end. If chosen correctly, the year of the vision encourages out-of-the-box thinking and suggests a path for implementation.

FINDINGS

We concluded that 25 years from 2005 (the year the Vivid Picture project concludes) would serve as a reasonable and useful time frame for several reasons. 2030 is far enough in the future to imagine that significant changes could take place, yet it is close enough for people to imagine the change occurring within their own lifetimes. As we were told by members of the organic community, numerous social change movements, including the organic movement, have matured and created significant change within a 25-year time frame. Furthermore, a wealth of population and landscape data projections exists for this time period, allowing us to describe some of the key givens for the year in question.

The Vivid Picture project team first used the year 2030 for the vision during the initial round of interviews. In these interviews we needed to create a time in the future from which the interviewees could imagine the new system. This year helped to give substance to the vision so that the interviewees could begin to describe what a future food system might look like.

In presentations the Vivid Picture project team has given in the past year, the year 2030 has been used as part of the vision. We have encountered no resistance to the choice of that year.

RECOMMENDATIONS

TO THE ROOTS OF CHANGE COUNCIL

- Select the year 2030 as the date for the vision. We do not expect stakeholder controversy around this date, nor the rationale for its selection.

Values for a New Mainstream

FINDINGS

Values, for purposes of this project, describe beliefs about what is important to a group of people engaged in a sustainable food system.

Dissecting the transcripts from the initial round of interviews, we identified two sets of values: “core sustainability values” and “bridge values.” The five core values are those that spoke most clearly to actors’ commitment to sustainability. The six bridge values are often used to describe the underpinnings of the conventional food system, but are now coming to be seen as integral to the success of sustainable food systems. In most cases, the sustainability community has embraced bridge values by applying core sustainability values to conventional system models. These bridge values may provide a clue about how to build a broader coalition for sustainability.

Core Values

- **Interconnectedness**
- **Diversity**
- **Regeneration**
- **Social Equity**
- **Health**

Bridge Values

- **Profitability**
- **Innovation**
- **Efficiency**
- **Safety**
- **Ownership**
- **Competition**

Core Sustainability Values

The Vivid Picture project interviews revealed five “core sustainability values” that form the foundations of stakeholders’ visions of a sustainable food and farming system. These values are deeply held and resonate with many of the core “dyed-in-the-wool” stakeholders. Similarly, these values are often associated with the current natural foods and organic farming industries and progressive political movements by those outside. The quality of each value is described below with an iconic quote from one of the interviews included for further understanding. The paper “Values for a New Mainstream,” by Celeste LeCompte, provides a more detailed description of the findings.

■ **Interconnectedness**

Almost without exception, stakeholders described a vision of 2030 that related shifting the food and farming system towards sustainability using partnerships and personal relationships. For stakeholders, a sustainable food system is one which both recognizes and embraces connections across the system in terms of the relationships between people and the relationships in the natural environment. Conceptually, for many stakeholders, “a chain is only as strong as its weakest link.”

“Where’s your breadbasket? Who do you have a relationship with? Am I accountable to you? Who’s taking care of whom?”

■ **Diversity**

When stakeholders describe their vision for California’s food and farming system, they want more diversity to support their vision of an abundant future. More wildlife species, more varietals, more local specialty items supplied through more shops, more business. Diversity represents more choices.

Additionally, diversity of ownership and products matches California's growing cultural and ethnic diversity. This abundant diversity is held in stark contrast to the present and nightmarish futures dominated by sameness, lack of real choices, and consolidation in the food and farming industry.

“By having diverse people with diverse perspectives, you come up with better solutions. You have more creativity and innovation.”

■ **Health**

Health was an extremely robust value, applied to numerous parts of the food system. Personal nutrition, community economic stability and a general sense of well being were all associated with health. In fact, stakeholders clearly equate a sustainable system with a healthy system. Personal health is often seen as linked to healthy environments and healthy communities. In addition, a sustainable system must provide for working conditions that do not degrade workers' personal health.

“All parts of the food system are justified by placing healthy relationships, particularly personal health and the health of the environment, first—acknowledging that the value of personal health and the health of the environment always outweigh any other factor or budgetary restrictions.”

■ **Regeneration**

For stakeholders, sustainable systems do more than preserve themselves, they generate the resources to enhance themselves over time, using techniques ranging from waste-reduction to renewable energy and recycling. Many stakeholders expressed the belief that regenerative management of resources and investment in human potential can lead to great abundance, and took great joy in that world-view. They want things to get better. The status quo is not enough.

“Sustainability also means lots of great care-taking of the soil and an on-going process of innovation to create productive and self-regenerating natural systems.”

Backcasting and the Interviews that Fueled It

As its name suggests, backcasting is the converse of forecasting. Where forecasting starts from the present situation and looks ahead, backcasting starts with a desired condition at some given point in the future, and attempts to imagine what it would take to get there. In the words of Roots of Change Council member Paul Dolan, backcasting allows us to “stand in the future and look back at the way we came.” Forecasting is predictive, while backcasting is a tool for understanding how to steer the future in a direction we seek. By starting from a sufficiently distant future benchmark, backcasting makes it possible to transcend present-day problems in a search for creative innovations. That search for sufficient perspective is, in part, what led the project to focus on 2030 as the year from which to backcast the transformation of the California food system.

The substance of this backcasting process—a description of the future state of affairs—came from interviews with 65 key players in the food system as it stands today, including twelve members of the Roots of Change Council. Of the 65 participants, 36 were business advisors, working at some stage of food production, processing, and distribution. The other 29 represented the public interest, drawn from the sustainable agriculture, labor, health, and food security sectors. All interviewees were leaders in their field and described themselves as having a vested interest in sustainability. The interviews themselves proved to be a potent entry point for many of the business people, influencers, and social change advocates that the project intends to galvanize.

In conducting these interviews, the team organized its research through the “grounded theory” approach, a system developed by Dr. Barney Glasser in the 1960s. Practitioners of grounded theory don't attempt to test a particular predetermined hypothesis. Instead, they allow the key themes of their interviews and observations to emerge from the bottom up, through analysis of the data. Furthermore, they adjust their methodology and their template for categorizing the data as they proceed, using each piece of research to refine further steps in the inquiry.

The Vivid Picture project employed a semi-structured interview process that allowed for focused, conversational, two-way communication. The 90-minute-long interviews included an overview of the goals of the Vivid Picture project, the history of the Roots of Change Council, and an introduction to Ecotrust. The interviewees were then asked to imagine a sustainable food system for California in the year 2030, to define what “sustainability” means to them, to describe their food system nightmare, and to offer any further thoughts or opinions. From transcripts of the interviews, the project team gleaned a list of sustainability values for the conventional and sustainable systems, goals for the sustainable food system and components of the future food system. In analyzing the data, the team sought to identify convergent responses, contradictory visions, and unique ideas and solutions, perhaps mentioned only once, that could be modeled as part of the backcasting process. Ultimately, the list of goals that emerged from the interviews was reviewed, edited and approved by the Roots of Change Council.

■ **Social Equity**

Stakeholders view a sustainable food system as one that meets the needs of all. Stakeholders believe that fair labor practices provide the economic foundation that enables all people to have access to fresh, healthy foods, regardless of class, race, or other social differences. Though some stakeholders hold a very clear definition of true social equity, many stakeholders often described their view of equitable systems in vague terms, indicating that they have limited ideas about what equity looks like in practice and how it can be achieved.

“A sustainable food system in California in the year 2030 is one that provides for everyone in the state. There is a system of checks and balances that insures that no one goes to bed hungry and that everyone has a bed. There is equitable distribution.”

Bridge Values

The Vivid Picture project interviews revealed six “bridge values” that are held closely by the sustainability community, even though these values are not always explicitly or regularly associated with them. The sustainability community appears to have updated these values from their common understanding of the conventional food system, perhaps positioning these values as the key to a new, robust economy in the coming decade.

■ **Profitability**

The new marketplace ensures profitability at all points in the value chain and respects social and environmental limits for stakeholders. Interviewees envisioned opportunities for early adopters and innovators to gain greater profitability, providing an incentive to adopt sustainable paradigms. In the new system, companies will use profitability as an opportunity to provide good wages rather than slashing wages to achieve higher profits.

“It is OK to run an economically viable company. We have stopped apologizing for that.”

■ **Efficiency**

Efficiency is recognized as important at all levels of the system. Rising oil prices, degrading environmental quality, and the success of highly efficient “economies of scale” have all taught stakeholders valuable lessons in the importance of using resources efficiently. However, where conventional concepts of efficiency attempt to minimize labor and capital inputs while maximizing outputs, the stakeholders’ quest for efficiency seeks to produce the highest-quality product with the least natural resource use. In addition, stakeholders often cite the efficiency of natural systems as an underused model for human systems and technology.

“The amount of the land the vineyards here use is inefficient. Farmers need to use the land, really use it to feed the people: Companion planting, utilizing the land more effectively, more intense with our farming.”

First-Round Interviewees: Who Were They?

All individuals were leaders in their field and described themselves as having a vested interest in sustainability.

BUSINESS ADVISORS: 36

Farming/Fishing/Ranching: 19

Wholesale: 3

Processing/Manufacturing: 6

Food Outlets: 8

PUBLIC INTEREST CONTRIBUTORS: 29

Sustainable Ag/Environment: 11

Health/Food Security: 7

Labor: 7

Other: 4

■ Innovation

Innovation has been a linchpin of the modern conventional food and farming system and has traditionally focused on technological solutions that replaced human labor with mechanical labor, biological cycles with one-way industrial throughput, and so on. Stakeholders expressed reservations about this type of innovation, yet passionately pointed out innovative solutions driven by a quest for sustainability, ranging from biological pest controls to creative educational programming. Many stakeholders believe that their current systems are on the cutting edge of innovation. They believe new players will use innovation as their leverage point to enter the marketplace.

“How do we change the system without system collapse?...Innovation in the marketplace.”

■ Safety

Notions of health and safety have taken on new implications in the 21st century, as the fears of the generations have shifted. In stakeholders' view, the new food system is less vulnerable to accidental contamination and terrorist attacks, and also inspires trust that the food system is free from contamination by pesticides and toxins.

“What we have to do is link terrorism and farming with our national security. It is a real issue that is not being addressed. I think half the value of maintaining rural communities is for national security reasons. Rice production is a national security issue. Somebody has to provide rice.”

■ Ownership

The new model of the American Dream for California is not just about consumer ownership (homes, cars, material goods) but also about access to the means of production and control over them. The new system allows for diverse ownership structures in which workers have access to ownership as an employee benefit. Higher local ownership rates bring with them myriad community benefits. Stakeholders insist that ownership of the new mainstream must be transparent and accountable.

“The issue that we have is that we are a country of employees and employers. We don't own. Ownership is a key issue. More local ownership. Entrepreneurial ag.”

■ Competition

Rather than traditional winner-take-all competition, stakeholders have developed a nuanced approach to competition that allows for lasting relationships and the perpetuation of diversity. Healthy competition creates a larger marketplace that is valuable for growing individual businesses. In addition to providing incentives, competition provides opportunities for collaboration that can sustain individual businesses. However, stakeholders have also witnessed the effects of consolidation and worry that competition can create undesirable power structures and undermine equity, a core value for many. The relationship between competition and equity creates an uneasy tension for some.

“We lead by example and are motivated by competition... We have a belief that there are more people involved in it. You've got a little business and are 100 miles out of town. Fence it in and no one will be able to get to you. Open it up or nobody will come just for you. It is like the whole shopping mall concept.”

RECOMMENDATIONS

TO THE ROOTS OF CHANGE COUNCIL

- Commit to further research on the core sustainability values and bridge values.

The Kellogg Foundation has requested, and we agree, that the suggested sustainability values be reconfirmed or adjusted based on further research conducted by a consulting firm specifically charged with this task. This firm would interview or conduct focus groups with influencers that associate their beliefs with values of sustainability as well as desired influencers that do not explicitly perceive themselves as aligned with sustainability and its core values.

- Until additional research is available, we recommend that the Roots of Change Council affirm the 5 core sustainability values and 6 bridge values listed above as foundational values for a vision for a sustainable food system, with the intention to reconsider when additional research is available.

The Council could affirm the values through a preamble to the Roots of Change Council principles, such as: “A sustainable food system is premised on the core values of interconnectedness, diversity, regeneration, social equity and health. In addition, we recognize that a state-of-the-art sustainable food system places high value on profitability, productivity, efficiency, innovation, safety and ownership. Specifically, we support the following principles...” The principles that follow can relate to each one of these values, much the way the Roots of Change Council principles currently do.

- Test messaging to reposition the sustainability community as explicitly “owning” the bridge values. (“the sustainable food community is extremely innovative and is developing many of the technologies necessary for a robust economy.”)

Goals for a New Mainstream

BACKGROUND

The 22 goals of a sustainable food system form the backbone of the 2030 vision for the project. The goals are values-based descriptions, written in opportunities-based language, of the benefits of a sustainable food and agriculture system. They can be considered an outline of the vision, a description of a sustainable food system in 22 short phrases. These goals served to guide the development of the sustainability indicators, the land use and value chain recommendations, the implementation strategy, and other elements of the project. These goals were solicited from the first round of 65 interviews of leaders operating in the sustainable food and farm arena. The goals were then refined, added to and endorsed by the Roots of Change Council.

Of note, we did not solicit a definition of sustainability during the interviews, since so often efforts to achieve sustainability become overshadowed by the minutiae of how it is being defined. We instead used the question, “What would a sustainable food system look like?” as a way to stimulate a rich description of a sustainable future. The intention was to create a list of goals that embrace the essence of sustainability and provide a clear description of a sustainable food system.

FINDINGS

The Vivid Picture goals for a sustainable food system are listed below. Importantly, all of these goals must be met in order for the food system to be considered truly sustainable. The goals are listed here with their descriptions and underlying values.

A sustainable California food system will...

■ **Promote food choices that lead to healthy eating.**

In a healthy food system, freshness, nutrition and taste are primary goals and people eat a balanced diet with fresh whole foods that are produced and processed in ways that maintain high nutritional content. *(underlying values: health, safety)*

■ **Provide easy access to healthy food from retail outlets for all eaters in California.**

In a sustainable food system, available transportation, household income, the existence of food outlets, social assistance and other factors make it easy for all Californians to obtain healthy food. *(underlying value: social equity)*

■ **Provide affordable food for all eaters in California.**

In a sustainable food system, Californians are able to purchase healthy products at reasonable prices. *(underlying value: social equity)*

- **Provide for meaningful livelihoods and opportunities for all food and farming workers.**
 In a sustainable food system, people employed in California’s food and agriculture sector have access to fairly compensated, dignified and meaningful work that provides a respectful and safe working environment as well as significant opportunities for personal development and advancement. *(underlying value: social equity)*
- **Facilitate continuous entry for beginning farmers, fishers, foresters, processors, retailers, restaurateurs and ranchers.**
 A sustainable food system facilitates the transfer of businesses and reduces barriers to entry for newly establishing entrepreneurs, supporting new entrants and entrepreneurs in a variety of ways in starting up food initiatives and businesses. *(underlying values: regeneration, profitability)*
- **Provide eaters with foods produced and processed as close to home as possible.**
 A sustainable food system encourages the availability of diverse foods produced in each region, promoting both successful regional food economies at home and focusing exports on complementary items that cannot be produced in the importing region. *(underlying values: diversity, interconnectedness)*
- **Encourage eaters to know where, how and by whom their food is produced.**
 In a sustainable food system, people know where their food comes from, how and by whom it was grown, raised or caught, and how and where it was processed and packaged. *(underlying values: diversity, interconnectedness)*
- **Support deepening regional identities through food.**
 In a sustainable food system, food and food production play a role in defining and deepening a sense of place and identity in a given region, thereby building market opportunities and generating demand for both unique and staple products. *(underlying values: diversity, interconnectedness)*
- **Honor and draw on the diversity and richness of different food cultures.**
 A sustainable food system supports and encourages the rich variety of foods and food traditions in the state, providing fresh foods to all cultures and encouraging immigrant producers to maintain their livelihoods. *(underlying values: diversity, interconnectedness)*
- **Support and increase biodiversity in plant and animal products (including marine species).**
 A sustainable food system provides people with real choice in the foods they eat. Not only are the products diverse, but within a product category, a range of crop and breed varieties are offered as well. *(underlying values: interconnectedness, diversity, regeneration, innovation, efficiency)*
- **Conduct farming, ranching, and fishing activities so that water, air, forests, and soil resources are enhanced and biodiversity and wildlife habitat are increased—so that food production continues in perpetuity.**
 In a sustainable food system, farming practices preserve and enhance wild and riparian areas, and successfully manage freshwater and marine food sources. *(underlying values: interconnectedness, diversity, regeneration, innovation, efficiency)*
- **Preserve farmland, forests, and oceans.**
 In a sustainable food system, food production, processing and distribution do not undermine the health or quality of farmland or forest and ocean ecosystems. *(underlying values: interconnectedness, diversity, regeneration)*
- **Recycle its wastes and reduce the use of petroleum and other non-renewable inputs.**
 The sustainable food system consumes as few input materials as possible (in particular non-renewable inputs such as fossil fuels) and minimizes its production of unwanted outputs (such as solid waste, effluent and air pollution). *(underlying values: interconnectedness, regeneration, innovation, efficiency)*
- **Employ humane practices in animal care.**
 In a sustainable food system, animal production adheres to high standards of animal welfare, encouraging a state of complete mental and physical health where animals are in harmony with their

environment. *(underlying values: interconnectedness, innovation, efficiency, health and safety)*

■ **Provide opportunities for revenue from on-farm energy production, tourism, education, and other value-added services (in addition to food production).**

In a sustainable food system, producers are able to supplement their income with value-added activities on their land, through services such as mentoring young farmers, contributing to smart development, and offering rural recreational activities. *(underlying values: social equity, regeneration)*

■ **Reward farmers, fishers, and ranchers for conservation services.**

A sustainable food system compensates farmers, ranchers, and fishermen for providing stewardship services other than day-to-day food production, such as wildlife habitat management, ecosystem service provision, energy production, compost generation, and recycling of urban wastes. *(underlying values: regeneration, profitability)*

■ **Provide opportunities for food, fishing, and farming operations to be profitable.**

In a sustainable food system, cooperation and transparency are encouraged among all actors in the value chain so that risks and rewards are shared, supply is managed, quality is maximized and all entities throughout the value chain have viable profit margins. *(underlying values: regeneration, profitability, interconnectedness)*

■ **Be characterized by many locally owned and operated food and farming businesses.**

A sustainable food system will require a critical mass of businesses throughout the value chain that are owned and operated by local people who are vested in the community, having enough of the regional market share to provide economic resilience to the region and nurture community, innovation, accountability, and quality. *(underlying values: interconnectedness, regeneration, diversity, ownership, profitability)*

■ **Encourage business structures and forms of capitalization that provide investment and ownership opportunities to workers and community members.**

The sustainable California food system will promote community-based, community-owned and managed business models that foster a sense of investment among local members. *(underlying values: interconnectedness, regeneration, ownership, profitability)*

■ **Allow fishers, farmers, foresters, ranchers, processors, retailers and restaurateurs to retire from their business while maintaining their business as a family or locally owned asset.**

In a sustainable food system, producers are afforded exit strategies that facilitate the transfer of their operations to family members or other new entrants from the community. *(underlying values: interconnectedness, regeneration, ownership, profitability)*

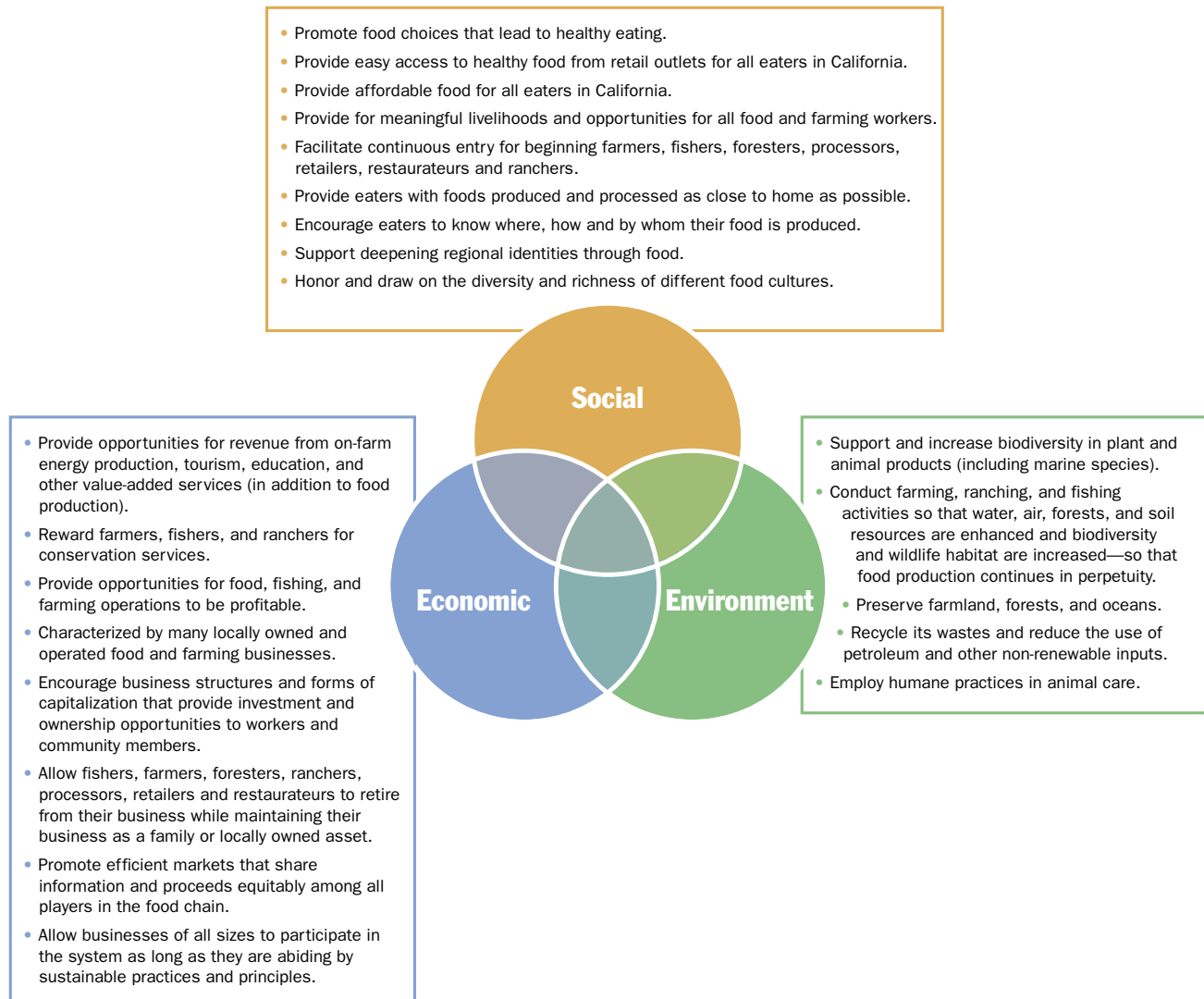
■ **Promote efficient markets that share information and proceeds equitably among all players in the food chain.**

In a sustainable food system, power and market share are more equally distributed among links in the food chain as well as among actors at each level, with cooperation, partnership and information-sharing as the norm rather than the exception. *(underlying values: interconnectedness, efficiency, innovation)*

■ **Allow businesses of all sizes to participate in the system as long as they are abiding by sustainable practices and principles.**

A sustainable food system is structured in such a way that enterprises of all sizes are able to thrive, and economic success is determined increasingly by fair and sustainable business practice. *(underlying values: interconnectedness, efficiency, innovation)*

Below, the goals are organized under the three traditional aspects of sustainability: social, environmental and economic.



RECOMMENDATIONS TO THE ROOTS OF CHANGE COUNCIL

■ Reaffirm commitment to the goals, test with stakeholders

The Roots of Change Council has already endorsed the goals listed above. Therefore, we recommend that the Roots of Change Council reaffirm their commitment to these goals with the intent to further refine the goals with feedback from a larger group of stakeholders. We do not, however, recommend taking this list of goals to hundreds of new stakeholders at the same time. We recommend conducting a short series of focus groups or interviews with representatives from target stakeholder groups to test the effectiveness of these goals.

A Mission for a New Mainstream

BACKGROUND

A mission statement for the future sustainable food system can unite a group of stakeholders. It can be used as the first place to find common ground among a diverse group.

FINDINGS

Meshing the above goals for a sustainable food system with the opportunities-based criteria, the following mission statement for a sustainable food system in California was developed:

California's sustainable food system of the future creates a new mainstream that lifts the fortunes of the food and farming industry, demonstrates the highest standards of stewardship, creates pride of place, offers meaningful opportunities for workers in the industry and leads a worldwide demand for health and quality in everyday living.

This statement is oriented to stakeholders in the food system particularly—not necessarily consumers, voters or citizens as a whole. It has been informally tested with many stakeholder groups as part of PowerPoint presentations on the Vivid Picture project. Health leaders, labor leaders, planners and sustainable business leaders have all responded positively to the mission statement.

RECOMMENDATIONS

TO THE ROOTS OF CHANGE COUNCIL

- Accept the above mission statement.

We believe there is little need to affirm the mission through a stakeholder development process. The mission statement, like the year of the vision (2030), can be declared by the Roots of Change Council when engaging a group of stakeholders in a process to discuss a future food system.

A Narrative for the New Mainstream

BACKGROUND

As stated above, the mission for a sustainable food system is:

California's sustainable food system of the future creates **a new mainstream** that lifts the fortunes of the food and farming industry, demonstrates the highest standards of stewardship, creates pride of place, offers meaningful opportunities for workers in the industry, and leads a worldwide demand for health and quality in everyday living. (Emphasis added.)

This statement implies that the key to unlocking the opportunities of sustainability is the creation of a new mainstream. The narrative of the vision for a new mainstream must put more flesh on the skeletal vision provided by the lists of values and goals. Creating a transformative narrative that appeals to a broad constituency is no small feat. However, the Vivid Picture project team constructed a set of narratives for each value and from that built a summary narrative to describe the new mainstream. This narrative must propel influencers and entrepreneurs to unite behind a shared vision of an opportunities-based mainstream that enhances the values of sustainability.

FINDINGS

The following summary narrative of the sustainable food system of 2030 reflects the key points of the Vivid Picture vision:

New Mainstream Narrative

The sustainable food system encourages a new social contract, an urban-rural partnership redefining the responsibilities eaters and food producers have to each other. In this contract, eaters know at least one farm or farmer and help to preserve agricultural lands. They are willing to pay the price—either at the cash register or through their taxes—for fresh, safe, delicious, ecologically sound foods, produced by people who are fairly compensated. In return, food producers provide healthy and regionally defined foods, delivered promptly from farm to table. Growers and ranchers gain new relevancy to urban communities by providing a broad array of services that had not previously been conceived of as farm products: watershed management, food security in the case of a national emergency, on-farm energy production, composting of urban wastes, wildlife habitat management, recreational tourism, clean air, and a clean drinking water supply.

Thanks to the new mainstream food system, California has become the premier provider of organic and sustainable agricultural products. By setting top-notch growing

standards, the state serves multiple domestic and world markets. Fresh and freshly prepared products, particularly those containing fruits and vegetables, are widely accepted as the best path toward improved health by the USDA, cancer prevention programs and popular diet books. School cafeterias cook with seasonal produce, instead of canned vegetables. Restaurants and grocery stores offer a higher percentage of fresh, perishable items than ever before. Fast-food menus change through the year as each season's crops roll in from the farm. Demand for health and freshness is met primarily by regional producers and delivered by localized distribution systems. While large retailers and wholesalers still play a part in the food industry, the market has shifted towards decentralized, local purchasing of fresh and perishable items. Food processors, distributors, restaurants and markets know they can make a difference while making a profit, and bolster the new partnership between eaters and producers. Food businesses are founded on the belief that it's more important to offer their workers meaningful opportunities than merely to provide them with jobs. Workers are seen as partners in food and farming operations, serving as key problem solvers and viewed as future leaders and equity holders.

Farmers and eaters look back on a past when the mainstream food system was marked by homogeneity and commodity markets. Instead, the sustainable mainstream food system is composed of many niches, each offering delicious, fresh, customized food choices for healthy communities.

RECOMMENDATIONS

TO THE ROOTS OF CHANGE COUNCIL

- Accept that a narrative based on the values and goals set out in the vision and embraced by both traditional sustainability constituencies and non-traditional sustainability constituencies is imperative. A narrative is a key component for unifying a broad group of influencers.
- Use a perception-based consulting firm to test this narrative and others like it built from the core and bridge values. Finalize a narrative that can galvanize a large constituency of current and future stakeholders.

A Bold Agenda for Change

BACKGROUND

The Initiatives

In chapter 1, the Vivid Picture project team presented the project’s theory of change. We described an opportunities-based approach to building broad alliances that could re-engineer the food system by spurring the processes pictured in the “working toward a fundamental solution” systems diagram: sustainable market development, incentives-based policy development, and values-based communications. In chapter 2, we laid out a mission, value set, and goals that could lead to a sustainable food system for California, and described in narrative form some of the patterns of work, commerce, and culinary enjoyment that would characterize such a system. This theory of change and this vision are rooted in the first round interviews we conducted with 65 advisors.

In this chapter, the project team seeks to translate theory and values into action. We offer a bold, yet pragmatic, agenda of strategies that actualize the sustainability-engendering processes. We group these strategies under three broad headings, or initiatives. These three initiatives, in combination, can help California to create a new mainstream food system, one which is organized around the core values of sustainability.

The three initiatives were finalized as a result of the extensive input advisors provided in a second round of interviews. Detailed objectives and tactics under each initiative were identified from several sources: the first and second round interviews, scenario building and analysis by Ecotrust, input from two Roots of Change workgroups, and detailed research by many project associates.

Three Initiatives for a New Mainstream: An Overview

The Best and Brightest: A respected, competent, mission-driven leadership and workforce

To achieve the Vivid Picture project goals, we must develop a respected, skilled, innovative workforce committed to the values of sustainability. The hearts, minds and hands of thousands of leaders and workers are the foundation upon which to build a sustainable food system.

Get Fresh: Healthy, community-based food systems

Mission-driven, talented individuals will apply their skills in community-based food systems to ensure economic and social benefits accrue locally. They will weave a diverse food network in which small and large partners link eaters with producers, establish healthy eating as the norm, and create regional identities based on food.

A New Urban-Rural Partnership: Linking communities, economics and the environment

Eaters and producers are connected not just through the exchange of money for food, but also in their mutual reliance on natural resources to sustain communities and livelihoods. A renewed social contract will ensure that the ecological services upon which both areas rely continue unabated, and that new opportunities create continued prosperity and economic viability for agriculture.

In honing the list of specific strategies offered here, the Vivid Picture project team sought bold and pragmatic ideas that would appeal to non-traditional alliances of change-makers. *We cannot emphasize enough, however, that although many of the action items came from our conversations with stakeholders, the interviewees have, by and large, not yet heard each others' ideas or reviewed any of the contributing Ecotrust analysis. As a result, the project team strongly recommends that these strategies undergo vetting and further development with stakeholders, both those who are part of the process and those outside this circle.*

In concert, these three initiatives and their 54 action items provide concrete avenues to address almost all of the 22 Vivid Picture goals, strengthening the foundation for a new mainstream sustainable food system. In addition, we shaped these initiatives to meet the opportunities-based criteria, to support the five core values of sustainability and promote the six bridge values for the system. Finally, each objective was evaluated for its ability to harness existing trends that create opportunities to shift the food system to more sustainable footing.

The Trends

In any system as dynamic as the California agriculture and food system, trends are at work that shape the overall outlines of what is possible. Ranging from demographic changes to technological innovation, they represent a background against which the food system of the future will arise. The Vivid Picture project team identified eight trends that we expect to persist over the coming generation. Stakeholders who recognize the opportunities inherent in these trends can use them to fuel their efforts and accelerate the change they bring to the food system.

- **Growing population:** California's population will grow substantially by 2030. The population is expected to increase 41% from 2000 levels to 48 million people.¹ Compared with 2000 levels, more than one million additional acres of urban land would be required to support this increase with current patterns of development. Rather than viewing growth as strictly negative, population expansion can provide an opportunity to plan for and develop new neighborhoods that are premised on community-based food systems. Advocates of sustainable food systems, working with planners and developers to promote energy- and water-efficient housing, could significantly reduce urban resource demands. Numerous new food operations, markets, restaurants, school cafeterias, and business cafeterias will open to meet the needs of the population. These new food outlets can be models of a sustainable system, employing thousands of mission-driven entrepreneurs and workers. In addition, the burgeoning development and tax revenue could be used in part to fund conservation, food and hunger programs as well as regional plans that encourage such sustainable development.
- **Aging population:** California's population is aging rapidly, with the over-65 population expected to more than triple by 2030 and to comprise 17.3% of the population by then, up from just 8.6% in 2000. These older Californians can be seen as a built-in market of people who are focused on health. Even though some of the elderly are on fixed income, health is a primary concern for this group and opportunities for developing and supporting the sustainable food system abound.²
- **Shifting ethnicity:** The Hispanic population in California is expected to more than double from 2000 levels to comprise 47% of the population by 2030. A large proportion of this population has agrarian roots and brings a wealth of values that coincide with sustainable food systems, including an appreciation of regionality, fresh food, diverse products and a connection to the land. This group, if

¹ See report #7 by Celeste LeCompte, "The Impact of Population Shifts on the Food System in California in 2030."

² Ibid.

³ Ibid.

⁴ See report #4, "Current Trends and Background Information Directly Related to the Vivid Picture Goals for a Sustainable Food System" by Katy Mamen.

respected and nurtured, has great potential to lead the demand for sustainable products.³

- **Consolidation in the food system:** Six or fewer corporations will soon dominate food retailing worldwide.⁴ A surprising range of food-related businesses are concerned about this trend—from large market players who desire increased diversity and competition in their supplier and customer base to small businesses overwhelmed by the brunt of these pressures. While no research has thoroughly documented this phenomenon in the context of California’s local food economies, a recent study commissioned by the California Department of Food and Agriculture’s “Buy California” Marketing Initiative did investigate the impacts of a shift in spending toward more California-produced food, demonstrating that even small shifts toward purchasing more food grown in-state has significant multiplier effects for the state’s economy.⁵ There could be significant support for activities that would increase the number of regionally owned and operated food and agriculture operations, as well as support for more regional purchasing by large retailers, restaurant operations and manufacturers.
- **Growth in organic and natural foods:** The market for organically produced foods is increasing rapidly around the world—the US organic market is currently growing at an astonishing rate of 17% per year.⁶ Even if the annual increases slow to current European growth rates of 7–8% per year, as some predict,⁷ the organic market will continue to be one of the fastest growing sectors in the food industry. Likewise, the entire natural foods industry continues to grow at a rate of 7% annually. California has a great opportunity to become a premier model of organic and sustainable production, responsibly fulfilling the growing demand both within the state and beyond.
- **Growth in expertise in the for-profit and non-profit sector:** The sustainable food sector has spawned hundreds of expert, mission-driven leaders. These business leaders bring knowledge of lessons learned and an understanding of how to grow a mission-driven and profitable business. Leveraging this talent, wisdom, and accompanying desire to see the next generation succeed is essential. These individuals can provide significant leadership for a Sustainable Business Incubator that can grow the system. Many non-profit and foundation leaders have built pivotal social marketing campaigns, research institutes and policy platforms. These individuals can lead the reformulation of support systems and structures for a sustainable food system.
- **The oil economy:** Economic motivations for transitioning to non-petroleum based fuels, fertilizers and packaging are increasing. California is well positioned to kick the petroleum habit and develop more energy-efficient food systems as the price of oil increases relative to the cost of alternatives. Already, a range of state-level energy efficiency and alternative fuel measures have been passed, and support for implementing private-sector fuel development incentives is mounting. Due to spikes in electricity and natural gas prices and mounting evidence of global climate change, cities and counties could be well positioned to play a large role in fostering creative solutions that reduce costs, boost reliability, increase in-state economic opportunities, and shrink the environmental footprints linked to energy production and consumption.⁸
- **National security:** National security and food security are closely linked. Recent concerns about acts of sabotage have extended to the nation’s food supply. When Secretary of Health and Human Services Tommy G. Thompson resigned in December 2004, he said he worried every night about threats to the food supply. He said, “For the life of me, I cannot understand why the terrorists have not attacked our food supply because it is so easy to do.”⁹ Such concerns highlight some of the issues with a highly-centralized import-dependent food system and can serve to increase opportunities for strong community-based food economies.

The Analysis

Both qualitative and quantitative methods were used to hone the initiatives and corresponding list of objectives.

⁵ Friedland, Dr. William (2003, July 14). University of California, Santa Cruz. Personal communication.

⁶ Natural Foods Merchandiser, XXIII:6, 1. 2002. Retrieved from www.naturalfoodsmerchandiser.com by Ken Meter, November 10, 2004.

⁷ Marty Traynor-Spencer, Natural Foods Merchandiser, in Nov 19, 2004, telephone conversation with Ken Meter.

⁸ See report #4, “Current Trends and Background Information Directly Related to the Vivid Picture Goals for a Sustainable Food System” by Katy Mamen.

⁹ Pear, Robert (2004, Dec 4). US health chief, stepping down, issues warning. The New York Times. Retrieved from: www.nytimes.com/2004/12/04/politics/04health.html?ex=1259816400&en=011a6bc57616fb58&ei=5090&partner=rssuserland Published: Dec 4, 2004.

Qualitative Interviews

The second round of project interviews involved structured conversations with 84 stakeholders, some who had previously been interviewed and others who were added to the list to provide insights on topics that were not represented by the initial group. These individuals were asked to think outside the box and suggest market development or incentive-based policy strategies that could propel change in the food and agriculture system. As ideas emerged in one interview, they were tested and refined in succeeding interviews. Two sets of interviewers were engaged in this process. New Territories Research, a qualitative interview firm, conducted most of the interviews with the individuals who were interviewed in the first round. The National Resources Defense Council (NRDC) team, led by Jonathan Kaplan, interviewed most of the individuals who were added to the original list.

Reports

Over the course of the project, several consultants and team members were enlisted to conduct research on a variety of topics, such as food access, industry consolidation, legal barriers to community-based food systems, and sustainable farm economics. Their conclusions about the current state of the food system and trends impacting its future are summarized in the 22 reports produced for the project.

Analysis and Scenario-Building

The Ecotrust team developed a set of tools for generating plausible scenarios for the food system of the future. This toolset, entitled SEEDS (SocioEconomic and Ecological Decision Systems), enables users to create various projections for statewide population growth patterns, impacts of urban growth on agriculture, impacts of climate change on agro-ecological growing zones, projections for numbers of future food outlets based on complex retail siting rules, projections for numbers of restaurants and schools based on demographic suitability analysis, impacts of local purchasing on various farm types, environmental impacts of purchasing behavior on the landscape, and the resulting number of food and farming jobs each set of inputs produces. The Ecotrust team constructed two versions of a food system future for the year 2030. The Business as Usual scenario anticipates the impact of current trends. The Vivid Picture scenario provides alternative inputs to the food system based on the goals for the system set by the Roots of Change Council. While this toolset is still in its infancy and is being refined, it has provided analysis of several key variables—such as the number and location of food outlets, and the prospects for controlling urban sprawl. Plans for future development and use of SEEDS to provide community impact statements for regional areas are in process.

Roots of Change Council Workgroups

Finally, a tremendous effort was made by two workgroups commissioned by the Roots of Change Council. The Workforce Workgroup, comprising labor leaders from across the state, began meeting in August 2005 to identify problems farmworkers face, possible root causes of these problems, and fundamental solutions. The Sustainable Business Workgroup has been meeting for more than a year to brainstorm creative approaches for new business models that might produce greater local returns to local communities. These groups have contributed many objectives that were incorporated in the agenda for change.

FINDINGS

INITIATIVE 1:

The Best and the Brightest: A respected, competent, mission-driven leadership and workforce

California's population has grown steadily since World War II, and this trend is expected to continue or even accelerate. New communities will form with thousands of places for people to buy food: grocery stores, hospitals, schools, prisons, cafeterias, and restaurants.¹⁰ Which entrepreneurs will run these new food outlets? What will be the values that they bring to their business? How will they care for their workers? What will be their purchasing practices? A new mainstream built on sustainable values must be energized by a competent, mission-driven leadership and workforce. The core values of sustainability must be cultivated in our new leaders and workers. The bridge values of sustainability must be taught. Building a respected, mission-driven community will provide the foundation for a new mainstream.

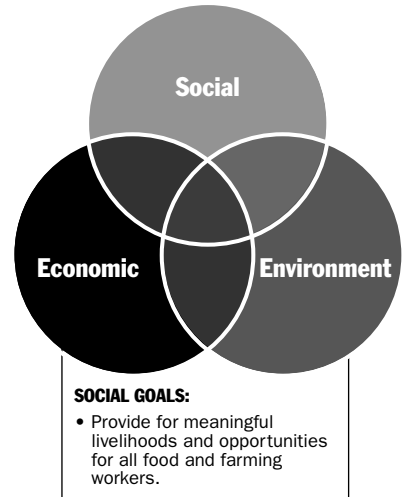
Farmworkers must be respected for the services they provide in the new sustainable mainstream, incorporated into the fabric of the communities they inhabit, fairly compensated for their labor, and provided with opportunities for growth and promotion within farming as well as other job areas in the food system.

The best and the brightest students from across the country will enter the University of California and California State University systems to take advantage of the innovative, cutting-edge curricula that have been adopted. Sustainability values pervade the system, producing a competent, mission-driven workforce that builds California's farms, industries, and businesses.

Values Underlying the New Mainstream

- | | |
|-----------------------------|------------------------|
| ■ Interconnectedness | ■ Profitability |
| ■ Diversity | ■ Innovation |
| ■ Regeneration | ■ Efficiency |
| ■ Social Equity | ■ Safety |
| ■ Health | ■ Ownership |
| | ■ Competition |

These values—identified through interviews with key players in the food system and described earlier in greater detail—will serve as the foundation for building a new mainstream. The Best and the Brightest initiative aims to propagate these values in the food system's workforce through education, training, and mentoring programs.



Sustainability thinkers speak of a “triple bottom line” that tracks three varieties of positive outcomes: environmental integrity, social equity, and economic viability. In the charts that accompany each of the three initiatives, we list and categorize the goals that each initiative addresses directly.

Public officials will rely on the analysis of long-term benefits and sustainability indicators when crafting public policy. Pundits and financial analysts will scrutinize companies' and politicians' sustainability efforts. In short, it's going to take an army of skilled knowledge workers to drive the system forward.

¹⁰ Ecotrust's analysis suggests there could be up to 3600 new food markets, over 25,000 new restaurants, 4000+ new public schools and 700+ farmer's markets.

A. Objective: Make sustainability a credible business education discipline in the University of California and the California State University systems

Extending the reach of sustainability programming across multiple disciplines, ranging from agricultural science and agricultural economics to business and nutrition, creates a well-rounded army of trained leaders, managers and workers—the necessary infusion of talent for building a new mainstream. Entrepreneurs and an educated workforce with a deeply embedded knowledge of sustainable values, products and practices fuel the growth of the sustainable system. New technologies and processes are developed, enabling the creation of numerous new support industries. Making sustainability a desirable and credible discipline for students is a cutting-edge activity for the universities, jump-starting significant job opportunities and business development in the state.

i. Integrated Sustainability Management Undergraduate Degree

A curriculum for best practices in marketing, logistics, and labor management specifically for a sustainable food system brings together business schools and agriculture programs for across-the-value chain programming. This synergy could support a system-wide shift away from conventional supply chains towards sustainable value chains, in which producers are seen as partners, transparency and traceability are key parts of the supply process, and best practices focus on building positive workforce cultures. Coursework in product development, urban-agriculture interfaces, conservation, partner-based value chains, regional food system logistics, and policy implications of sustainability are widely available.

ii. Executive MBA in Food Systems Management

Launching an Executive MBA in Food Systems Management produces logistics managers, community capital experts, triple-bottom line accountants, and warehousing managers with expertise in managing transparency and identity preservation. Students master the business principles of cooperative structures, community capitalization, decentralized purchasing for large companies, and community-based manufacturing.¹¹

iii. Green Technologies Institute

California's Silicon Valley is the home of high-tech in America. A new Green Technologies Institute within the university system combines California's high-tech reputation with its agricultural sectors. Students of this innovative institute get seminar and laboratory experience with development of eco-packaging and product tracking technologies, energy-efficient food logistics, consumer transparency information systems, on-farm energy production systems, and others.¹²

iv. Sustainable Entrepreneur In-residence Program

Business leaders in the sustainable food sector bring their hands-on understanding of how to grow a mission-driven and profitable business. Leaders in the public-interest sector have built social marketing campaigns, research institutes and policy platforms in support of the nascent sustainable food system. Their talent, wisdom, resources, and desire for the next generation to succeed must

¹¹ Qualitative interviews with Vivid Picture advisors by NRDC. Oct 2005. See report #15, "Outlining a Change Agenda."

¹² Qualitative interviews with Vivid Picture advisors by New Territories Research and NRDC demonstrated that the sector needs to do a better job improving sustainability's credentials as a discipline. Oct 2005. See report #14, "Outlining a Change Agenda."

be enlisted in the transformation of the food system. A “Sustainable Entrepreneur in Residence” program will provide exposure and mentorship opportunities in both for-profit and non-profit environments for the next generation while recognizing the efforts of the previous generation’s leaders.

v. **Food and Farming Corps**

Like “Teach for America,” the Food and Farming Corps facilitates an urban-rural exchange that places innovative students along various segments of the food chain, from running inner-city food co-ops to working on on-farm fuel efficiency projects. Students submit applications to the large, competitive program for opportunities to work on farms, ranches, fishing boats or under-served urban neighborhoods. Some students choose to pursue a career in the food system, while others go on to be leaders in other fields, bringing with them an understanding of the food system. Farms and urban neighborhoods benefit from the immediate technological, scientific, and business expertise of the students, as well as the long-range support they will provide as enlightened change agents in their chosen fields and as supporters of public policies, businesses, and programs in the sustainable food system.

A place to start:

- Create a team of University and sustainable business contacts to lead the exploratory work on integrating sustainability in the University of California system and to guide implementation of the team’s findings.

B. Objective: Establish continuing education on sustainability in junior colleges, universities, and private programs

Continuing education and vocational training around sustainability produces the knowledge workers needed to staff the California food system in 2030. Workers in the new food system understand that we’re not merely selling consumers an apple—we’re selling them the story about the apple as well. The story of the apple includes where it came from, how it was grown, all the hands that touched it along the way. Produce clerks see themselves as the last farmer in the chain of the food system, and farmers provide valuable customer services. Likewise, farmhands see themselves as part of the customer service team delivering the product. This

Expert Insights to Strategy Development

The Vivid Picture project team began its search for strategies for a sustainable California food system in much the same way that it sought to describe the vision itself: by asking probing questions of a diverse array of stakeholders. Two teams of researchers interviewed 84 participants in the California food system, and asked them to consider what would create fundamental change toward sustainability in the arenas of the food system that are most familiar to them.

These semi-structured interviews were conducted by the Natural Resources Defense Council’s Jonathan Kaplan, who heads the Roots of Change-funded Sustainable Food Systems Partnership; NRDC’s consultant Kari Hamerschlag; and by New Territories Research, a Portland-based consulting firm. Based on each respondent’s area of expertise, interviewers opened discussion around a specific aspect of sustainability—urban-rural partnerships, the supply of fresh produce to California eaters, or state leadership in the production of biologically sound foods. Participants were asked what would increase the rate of change toward sustainability on that particular front, and were pressed to expand their ideas and consider what would make them more effective. Interviewers were probing for opportunities-based strategies, specifically:

1. Sustainable Market Development Strategies
2. Incentive-based Policy Strategies

Vivid Picture project Director Eileen Brady merged the list of strategies suggested by the interviewees with other ideas that resulted from the Roots of Change Fund Workgroup conversations, the Ecotrust analysis and the research papers commissioned for the project. From that array of strategies, with input from Jonathan Kaplan, Brady winnowed a list of core initiatives, objectives and tactics that meet the project’s opportunities-based criteria, that take advantage of existing trends, and that stakeholders are already embracing or appear ready to act upon.

The resulting menu of strategies is not a complete road map that will lead California to the Vivid Picture of 2030, nor is it an exhaustive list of objectives or tactics. Instead, it represents the Vivid Picture team’s recommendations for action items that can have a large impact and attract a broad coalition of support.

vision requires training in sustainable best practices, systems thinking, product knowledge, technological innovation, and nutrition—at all levels of the food system. All food systems workers are knowledge workers, who can gain the technical skills they need only through educational opportunities.

i. Certificate Program for Sustainable Food Handlers

Continuing education certification programs are implemented at all junior colleges, private programs, and the University of California system. Food system workers are encouraged and in many cases required to attend training on sustainable agricultural practices and technologies, product knowledge, and nutrition.¹³

ii. Community Orientation

Taking lessons learned from programs like California Farmlink, junior colleges across the state help farmworkers navigate local services—from job training and bilingual education to schools and healthcare facilities.¹⁴ Orientation programs answer questions about the community, from “How do I read my pay stub?” to “What is a PTA?” and “How do I get a small business loan?” Community members offer skills and expertise and feel a greater sense of respect for farmworkers.¹⁵

iii. Ag Leadership Program, Sustainability Track

The Ag Leadership Program could implement a sustainability module, in which members of the agriculture community would be introduced to leaders from an array of sustainability industries, from green building architects to wind developers and CEO’s of waste hauling companies to biodiesel processors and venture capital investors. Participants learn what it means to be a leader in the field of sustainability.¹⁶

A place to start:

- Grass roots groups approach junior colleges about community offerings.
- Ag Leadership to develop a proposal for a Sustainability Track.

C. Objective: Translate all public policy requests into cost savings, business development or job creation strategies for public officials

An incentive-based policy framework requires framing proposals in terms of economic benefits or cost savings. Job creation strategies, incentives for business development and cost reduction are all understood to provide opportunities. Sustainability policies must therefore be explained as more economically advantageous than the alternatives. While true-cost accounting can be employed to bolster sustainability proposals, policy must be clearly explained in terms of conventional, economic benefits.

¹³ Qualitative interviews with Vivid Picture advisors. Dec 2004.

¹⁴ The “Meaningful Livelihoods” ROC Workforce Workgroup Summary suggests that farmworkers face significant barriers to community inclusion, which further erodes community relationships. Providing an interface forum for farmworkers and local community members could help cultivate relationships while helping provide access to necessary services. See report #20, “Summary Input from the ROC Fund Workforce Workgroup,” prepared by Nicole Mason.

¹⁵ Qualitative interviews with Vivid Picture advisors. Dec 2004. No research was done to assess whether these programs are currently provided.

¹⁶ Qualitative interviews with Vivid Picture advisors. Dec 2004.

i. Policy Translation Services

Non-profit organizations hire analysts whose focus is to frame policy proposals in terms of economic benefits, raising the success rate of policies focused on sustainable food and farming policies. These analysts create communiqués for use by organizations sponsoring legislation.¹⁷

ii. Expert Testimony

A deep bench of credible experts on food and farming regularly testifies on cost savings, business development and job creation impacts for food and farming policies, establishing the benefits of sustainable food and agriculture proposals for mainstream America.¹⁸

iii. Public Funding Treasure Trove

Go-to experts inside policy organizations are specifically dedicated to matching public funds with sustainable initiatives. They help organizations leverage hundreds of thousands of federal, state, county, and municipal dollars for their work, providing direct consultation and public clearinghouse information. In addition, experts may design bond measures or levy proposals.¹⁹

A place to start:

- Analyze the capacity of statewide and national public policy organizations supporting food and agriculture policy development for their ability to develop and manage expert analysts to provide policy translation services, expert testimony and public funding assessments. Establish an “institute within an institute” inside at least one of these organizations, providing policy consulting services to organizations and associations developing policy initiatives.

D. Objective: Establish effective, respectful and fair farmworker employment

Many farmworkers feel a lack of respect from employers as well as the public at large, especially from the anglo community. This results in low self esteem and isolation. In addition farmworkers continue to be ranked among the lowest paid workers and have very few employment benefits (transportation, healthcare, housing, retirement). The structure of the work, the specialization of the contracting system, demands for quality control, seasonality of single cropping, and farm specialization are all contributing factors. However, immigration status may be the most fundamental structural issue at play. Fundamental solutions that can form the basis for a healthy vision for the future are difficult to arrive at. However, focus on immigration reform and retention of farmworkers seems key. Development of the “popular enforcement through popular governance” concept seems promising, as well.²⁰

i. North American Labor Visa

This inter-country visa will provide free mobility and eligibility for standard services and benefits in each country. Workers will be eligible for driver’s licenses, social security benefits, workers compensation, unemployment insurance, and public health services.

¹⁷ Qualitative interviews with Vivid Picture advisors conducted by NRDC and New Territories Research. Both Oct 2005. See report #14, “Outlining a Change Agenda,” and report #15 also called, “Outlining a Change Agenda.”

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Roots of Change Workforce Workgroup and interviews with Vivid Picture advisors suggest that Immigration Reform may be the most fundamental solution to addressing current problems associated with many farmworker concerns. See report #20, “Summary Input from the ROC Fund Workforce Workgroup,” prepared by Martha Guzman and Nicole Mason.

Roots of Change Council Workgroups

Sustainable Food Business Leaders Group

This group of leading sustainable food business leaders has met three times—acting as a leadership body helping to provide input to the Vivid Picture project and provide feedback from the business sector to the ROC Fund. The Group is discussing new sustainable food business models and helping to develop market development strategies for the Vivid Picture’s change agenda. Their work continues to directly impact the work of the Vivid Picture and the future work of the ROC Fund.

Workforce Workgroup

In January of 2004, The Roots of Change Fund entered a new phase of work that required increased focus and exploration of specific food systems issues. In particular, the ROC Fund identified the California agricultural labor force as a specific area of focus. The idea was that the Workforce Workgroup would engage various stakeholders, interested advocates, funders and other leaders in exploring food system workforce and labor issues. Guided by Council member Martha Guzman, the Workforce Workgroup is working to better integrate food system workforce and labor issues into the Vivid Picture project and give input to the ROC Fund on future potential labor related projects.

ii. Universal Farmworker Housing

Ventura County has built widespread community support for developing livable farmworker housing. Overcoming cultural and legal barriers and finding funding from the community at large, this success can be replicated in communities across the state. Further efforts could help establish first-time home-buyer programs for farmworkers.

iii. Real Enforcement Against Bad Actors

Bad actors have no place in a sustainable food system. Wages must be paid, workplace protections must be the norm. Enforcement systems that do not rely solely on government funding (joint liability, etc.) can be considered.

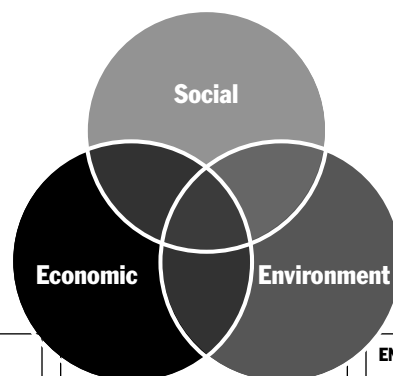
A place to start:

- Rebuild the Ag Jobs Coalition. Rework strategy and reconsider national policy approach.
- Launch farmworker housing conversations in other counties where the Ag Futures Alliance is active.

INITIATIVE 2: Get Fresh: Building community-based food systems

Each region will manifest a different expression of a community-based food system, but all will adhere to the underlying goal that people eat delicious food, grown as close to home as possible—both because of the taste and variety that is available in a local food system, but also to enhance the economies and communities located close by.²¹ Local, statewide and national players, linked in sustainable value-chain partnerships will create an extensive food network that ensures that benefits accrue locally.

The system will be known for providing safe and nutritious foods in an innovative, efficient, and productive manner. The system will offer ownership to many and profitability to players along the entirety of the value chain.



ECONOMIC GOALS:

- Provide opportunities for food, fishing, and farming operations to be profitable.
- Characterized by many locally owned and operated food and farming businesses.
- Encourage business structures and forms of capitalization that provide investment and ownership opportunities to workers and community members.
- Promote efficient markets that share information and proceeds equitably among all players in the food chain.
- Allow businesses of all sizes to participate in the system as long as they are abiding by sustainable practices and principles.

SOCIAL GOALS:

- Promote food choices that lead to healthy eating.
- Provide easy access to healthy food from retail outlets for all eaters in California.
- Provide affordable food for all eaters in California.
- Provide eaters with foods produced and processed as close to home as possible.
- Encourage eaters to know where, how and by whom their food is produced.
- Support deepening regional identities through food.
- Honor and draw on the diversity and richness of different food cultures.

ENVIRONMENTAL GOALS:

- Support and increase biodiversity in plant and animal products (including marine species).
- Conduct farming, ranching, and fishing activities so that water, air, forests, and soil resources are enhanced and biodiversity and wildlife habitat are increased—so that food production continues in perpetuity.
- Recycle its wastes and reduce the use of petroleum and other non-renewable inputs.
- Employ humane practices in animal care.

A. Objective: Create a message that promotes a ‘healthy food basket’

For years, activists have called for food purveyors to “educate the consumer,” relying on telling consumers the truth as a key strategy for developing sustainable food systems. However, many purveyors struggle to accomplish the task of building a market or creating consumer demand for sustainability. They are asking for help. New tools will aid purveyors in delivering the message of sustainability—focusing initially on taste, beauty, seasonality, community, freshness, and regionality, and secondarily on nutrition, social justice and the environment.²²

²¹ There exists no reliable source to evaluate how much of the food that is eaten in California was grown in California. The Ecotrust team asked numerous academic and industry experts to estimate this critical statistic. Estimates for produce range from 45–58% annually. Estimates for dairy products range from 70–80%. Estimates for meat range from 40–50%. The one thing that seems apparent is that California, even though it imports quite a bit of food, still feeds a large portion of its people from the California food basket, especially fresh products. The challenge for California is to feed itself more regionally if climate allows.

²² Qualitative interviews with Vivid Picture advisors clearly illustrate that one of the main lessons learned by the natural food industry is that the majority of customers will shop for taste, freshness, health benefits and price long before they select products for environmental or social justice reasons. However, a strong minority can create an early-adopter market based on environmental and social characteristics. Numerous marketing studies from leading research firms such as Mintel to specialized firms such as the Hartman Group confirm this.

i. A Dozen Words for Fresh

Conduct research and reframe the concept of “fresh.” Create a continuum of fresh. Produce that comes from a thousand miles away is “fresh” because it is not processed. “Picked yesterday” is a different type of fresh. Still different is the freshness of regional, local and garden foods. This type of freshness means unique, delicate, and not shelf-stable. It needs a name. Creating a language of freshness will allow chefs and marketers to adapt messages for consumers that promote immediate consumer interests such as taste, but are fundamentally linked to how close to home a product is grown.²³

ii. Cultural Leaders on Health and Sustainability

When movie stars, musicians, sport heroes, celebrity chefs, political leaders, coaches, church leaders, doctors, or school principals take a personal interest in one aspect of sustainability or cooking, they can shift an entire constituency to more forward-thinking choices and a love for gardening and cooking. Notably, anticipated demographic shifts indicate that Hispanic “leaders of opportunity” may harbor strong food-culture traditions that value freshness, regionality, and respect for the land. Cultivating their participation could have a significant, positive impact on diet in California.²⁴

A place to start:

- Conduct extensive qualitative market research and sensitivity analyses to identify a new language of freshness. The results should be presented to stakeholders and marketers for review.
- Identify and cultivate new food leaders through strategic research. Research should be done by a dedicated trend analysis group that can identify “leaders of opportunity.”

B. Objective: Prioritize access to quality foods for eaters in cities and towns

Food access is a complex issue. Two of the key drivers of access are income and proximity to quality food. At present, California exhibits a higher degree of income inequality than the national average, with a greater share of individuals earning wages below the 10th national percentile and above the 90th national percentile.²⁵ This gap is expected to widen in the coming decades. Food insecurity and hunger are regularly linked with an inability to pay for food. In addition, an estimated 18% of urban eaters need to travel more than 1 mile to a full-service grocery store that provides basic foods recommended by the USDA.²⁶ And the vast majority of rural eaters live farther than a mile from a full service grocery store.²⁷ In a sustainable future, closing the distance between eaters and quality food is a civic responsibility that is addressed head on.

²³ Qualitative interviews with Vivid Picture advisors elucidated different meanings of the word fresh. The power of “freshness” to attract a mainstream market is apparent, but linking the notion of “freshness” to qualities of locality requires further consideration. Dec 2004.

²⁴ Qualitative interviews with Vivid Picture advisors suggest that keeping a food message positive for eaters and inside the cultural norm is critical. A fear-based message may not generate mainstream support. Cultural leaders who love some aspect of food, if strategically cultivated, could provide enormous, highly leveraged and relatively inexpensive shifts in food choices.

²⁵ Deborah Reed. “Recent Trends in Income and Poverty” California Counts: Population Trends and Profiles cited in report #7, “The impact of population shifts on the food system in California in 2030,” March 2005, by Celeste LeCompte.

²⁶ For a comprehensive, statewide analysis of distance from eaters to full service grocery stores, see report #12, “Food Access in California Today.” Distance is only one factor. More than 1 million Californians do not have access to a vehicle and 30% of that group lives further than one half mile from a grocery store, compromising their access to food. One in every five Californians must travel more than one mile to access a full service grocery store.

²⁷ In the same study cited in footnote 26, the results indicate that only 9.32% of today’s rural eaters live within one mile of a full service grocery store.

i. Food Departments in Cities and Towns

Cities and counties have health, energy, parks and transportation departments. However, most cities lack the infrastructure to address the basic need for food. Food departments that advocate for food access and business development incentives for food markets in under-served areas create a priority agenda that reduces the number of people who lack food security.²⁸

ii. Food Access Zoning Requirements

Just as there is often a parks-per-capita requirement in zoning plans, a food market-per-capita requirement creates necessary commercial zones for food outlets, including farmers' markets and food markets-per-capita.²⁹ Transportation planning for food access becomes a necessary component of the transportation plan associated with the general land use plan.

iii. Minimum Wage Increase and Middle Income Job Development

The food community becomes involved in economic development in order to address the issues of food security and hunger. A robust economy, providing a range of middle-income jobs provides income levels sufficient for procuring quality food stuffs.

A place to start:

- Create a comprehensive sample plan for a food department to be made available for local groups to utilize in petitioning various public agencies. The plan should include a general food department charge, specific responsibilities, and methods for revenue generation and be created in conjunction with a “friendly” city that can pilot implementation.
- Develop a state campaign around challenging local jurisdictions to “pass the milk test”—ensuring that everyone lives in a neighborhood safe enough and with a market close enough that they would feel comfortable sending their 12-year-old child out to get a gallon of milk.³⁰
- Work with the State Department of Public and Health Services and the Governor’s office to challenge cities and counties to create food departments and food-related zoning guidelines, and to focus on eliminating food insecurity.

C. Objective: Develop regional supply and purchasing infrastructure

While California is often considered a “big Ag” state, it also includes over 55,000³¹ small and mid-sized farms, which are all under 500 acres in size, producing food.³² The California Department of Food and Agriculture (CDFA), private organizations, and non-profits across the state can help strengthen direct marketing

²⁸ Qualitative interviews with Vivid Picture advisors, Dec 2004.

²⁹ Given current trends of urban sprawl and the proliferation of “box stores” and other large format supercenters, the Ecotrust team estimates that as much as 28% of people living in urbanized areas in California in the year 2030 could live a distance of more than 1 mile from their nearest full service food store. However, similar analysis shows that under a Vivid Picture scenario, as few as 1% of the urban population would live further than one mile from the nearest full service food store.

³⁰ This “milk test” emerged from qualitative interviews with Vivid Picture advisors, suggesting a milk test challenge to cities. Dec 2004. This idea requires additional message-testing to determine if the concept will resonant with public officials and market leaders.

³¹ California’s small and mid-sized farms (<500 acres) engaged in food production are estimated to number 57,002. This figure excludes farms classified by the North American Industrial Codes (NAICS) as Greenhouse, nursery, and floriculture production (1114), Tobacco farming (11191), Cotton farming (11192) and Aquaculture and other animal farming (1125, 1129). In a Vivid Picture scenario where individuals eat twice as much produce as currently and frequent markets that are associated with a distribution system that buys from small and mid-sized vendors, the number of farms under 500 acres increases to 73,020.

³² Extensive sustainability indicator data collected by the Ecotrust team shows that, while the number of farms has decreased in recent years, there is still a foundation of healthy and stable small and mid-sized farms in California. Oct 2005. See report #11, “Interactions of food system types in localized value chains in California: Implications for a sustainable food system in California in 2030.”

opportunities for farmers, fishers and ranchers as well as direct sourcing opportunities for buyers choosing a regional purchasing strategy. The emerging interest in local and sustainable foods from hospitals, college campuses, business campuses and small restaurants has made apparent the lack of regional infrastructure necessary to support this spike in demand. Efficient infrastructure to support small-scale production and buyers of all sizes is required to bring sustainable products to regional markets, strengthening community-based food systems.

Scenario Planning

Scenario planning is a way to learn about the future by investigating the impact of the most uncertain and significant driving forces of the present day. The process doesn't yield a forecast that would define a single projection of the unknowable long-term future. Instead, it highlights the certainties, the uncertain and uncontrollable factors, and a palette of possible actions to help us determine which choices today are most apt to shape the future to our liking. Royal Dutch/Shell is often cited as the first major corporation to employ scenario planning to important advantage, allowing it to respond nimbly to 1970s-era shifts in the oil industry. Cold War military strategists used it as well. But scenario planning dates back at least two and a half millennia, to the days of Chinese general Sun Tzu, who wrote, "The winning general crafts many strategies in preparation for battle; the losing general but few." More recently, the UN's Millennium Ecosystem Assessment employed scenario planning to envision four possible futures for 2050, entitled: Order from Strength, Global Orchestration, TechnoGarden, and Adapting Mosaic.

The scenarios devised for the Vivid Picture project describe possible implications for California in 2030, and flesh out different ways the parts of the food system might interact in that year. Overall, the scenarios consider this question: "How can eaters, producers, distributors, manufacturers, and food outlets be organized on the landscape to produce the positive social, environmental and economic impacts envisioned in the goals of the Vivid Picture?" Each scenario makes a specific set of assumptions about key forces that will steer the future, such as eaters' preferences and the regulations governing the conversion of farmland to urban uses. By comparing the different futures that result, it is possible to discern how those driving factors are likely to influence the sustainability of California's food system.

The scenarios we explored address different ways of meeting the challenges facing California's food system in the coming decades. One key variable is how the growth in California's population will be accommodated. In a Business as Usual scenario, cities continue to sprawl into their surroundings, and 1.02 million acres of farmland are lost to urban uses. In our version of Vivid Picture conditions, incentives (and regulations) promoting smart growth and compact development house the same population in a smaller area, sparing 900,000 acres that would otherwise have been urbanized, and reducing the loss of farmland to 100,000 acres.

Ecotrust's scenario-planning tools were also used to investigate the areas of growth in the value chain of food distributors, retailers, and other outlets. Given the expected demographic growth, the number of eaters required to support different kinds of food outlets, and different value choices

made by consumers and food-outlet managers, Ecotrust's tools project the number and geographic distribution of food outlets in 2030 for a Business as Usual case and a Vivid Picture case.

Ecotrust's databases are constructed to model, to the extent data is available, impacts of conventional supply chains vs. impacts of sustainable value chains. Conventional supply chains demonstrate markedly different characteristics from sustainable value chains. The following differences were identified between the two approaches to the food system, drawing on the work of Ken Meter, George Stevenson, Rich Pirog, Nick Saltmarsh, Tully Wakeman, the New Economics Foundation and Vivid Picture interviews.

CONVENTIONAL SUPPLY CHAINS:

- Producer as "supplier"
- Producers often externalize marketing and distribution and do not know where product ends up
- Success depends on individual bottom line
- Emphasis on confidentiality
- Market proposition: price, taste, convenience, consistency
- Maximizing short-term profits for shareholders worldwide

SUSTAINABLE VALUE CHAINS:

- Producer as "partner"
- Producers often internalize marketing and distribution and clearly understand where their product ends up
- Success depends on trust and cooperation among partners
- Emphasis on traceability and transparency
- Market proposition: taste, regionality, environmental and social care
- Ensuring reasonable long-term profits and other benefits to local stakeholders

Our datasets attempt to quantify these qualities and then measure various impacts of these different orientations.

The scenarios built for the Vivid Picture project illustrate a spectrum of plausible futures. They are not predictions of how the future will turn out, but rather sketches of possible futures that result from a confluence of large-scale trends and individual choices. Using Ecotrust's GIS system, those outcomes can even be depicted in map form, as they arrange themselves across the landscape. By helping us to imagine different endings to the story of the coming generation, scenarios crystallize the importance of the choices that lie ahead, and stimulate discussion about the future we desire.

i. Direct Market Districts

The California Department of Food and Agriculture (CDFA) currently organizes its efforts and data collection systems by county or agricultural district. In 2030, the state identifies “market districts” and accompanying farm areas or “foodsheds” to service those urban marketplaces. This allows CDFA to identify and cultivate thousands of direct-market buyers (restaurants, delis, small markets) and link buyers with growers through direct market events, print and on-line market linkage services.³³ The California Farmers Market Association may play a key role in developing these relationships, hosting regional trade shows and other relationship building activities.

ii. State of the Art Regional Sourcing for Purchasers

Chefs, restaurateurs, deli managers, produce managers and others require reliable access to products that meet their quality standards. Brokered by non-profits and supply cooperatives, on-line communications help to establish initial relationships between buyers and large, medium or aggregated small producers.³⁴ Developing a cost-efficient sourcing system is critical for bringing sustainable products to mid-size markets.

iii. Aggregated Supply Opportunities for Small and Mid-sized Farmers

Small fishers, farmers and ranchers who want to diversify their revenue base by supplying the wholesale market aggregate their harvests to get products to market.³⁵ Using the lessons of successful current-day cooperatives, non-profits and producer marketing coops develop infrastructure for the aggregation and distribution of products from small-volume producers.³⁶

iv. Dozens of Fresh-to-Market Distributors

For a food system to provide more fresh products grown closer to home, more regional distributors are required. Leveraging and repositioning existing resources may meet the challenges of a regionalized system. For example, the dairy industry has supplied perishable, regional, cooled products to market in a timely manner for decades. These dairy distribution operations may serve as models for broader, more comprehensive distribution systems.³⁷

v. California CSA Marketing Co-op

A statewide CSA non-profit infrastructure links thousands more consumers directly to agriculture by supporting community-supported agriculture (CSA) farms in the state, focused entirely on developing new customer bases for CSAs, supporting neighborhood buying clubs, and encouraging individual share membership.³⁸

³³ CDFA has expressed interest in this idea. Conversations with Eileen Brady, August 2005.

³⁴ Cited in qualitative research with Vivid Picture advisors by New Territories Research and NRDC as well as in the Sustainable Food Business Leaders Workgroup, sourcing products in considerable volume remains a significant obstacle for bringing local, seasonal products to market. There are examples of successful, profitable supply aggregation organizations where lessons can be learned and applied.

³⁵ Ibid.

³⁶ Research indicates that while some marketing coops are waning, several new style producer coops are emerging as efficient, mission-driven, and successful models worth emulating. See report #17, “Cooperatives, A California Analysis: An Old Structure for a New Economy,” Sept 2005, by Lola Milholland.

³⁷ The Sustainable Business Workgroup of the Roots of Change Council and the Qualitative Interviews of Vivid Picture advisors place a high value on developing distribution systems that can deliver perishables in a timely manner. Many suggested growing existing infrastructure, such as dairy distribution operations. See reports #14, “Outlining a Change Agenda,” #15 also called, “Outlining a Change Agenda,” and #21, “Summary Input from the ROC Fund Sustainable Food Business Leaders.”

³⁸ Ibid.

vi. Small Manufacturers Paired with Big Supply Lines

To increase the volume of fresh products consumed, small and mid-sized manufacturers scale up production. Large manufacturers often have down-time on their lines. Putting small operations on big-operator systems can increase efficiency, productivity and overall capacity of both operations to produce local, fresh processed goods.³⁹

vii. An Abundance of Micro-processors

Just as large-scale publishing moved to “desktop publishing” in the 1980s, so can the food industry shift to micro-processing for many product ventures including the making of soda, sauces, ice cream, condiments, and meat products. Innovative processing and packaging equipment as well as legal infrastructure must be designed to meet the needs of new micro-enterprises.⁴⁰

A place to start:

- Support CDFA, perhaps in conjunction with the California Federation of Certified Farmer’s markets, to build direct market infrastructure linked to Market Districts. A GIS database of farmers and potential buyers is critical to the success of the program. Local or regional affiliate groups comprised of farmers, fishers, ranchers and direct market buyers will form the backbone of the direct market network across the state.
- Support development of a statewide CSA marketing coop comprised of CSAs and CSA shareholders across the state. A model that is self-sustaining after a period of time based on member contributions should be employed.
- Establish public-private partnerships to develop sourcing and regional infrastructure.
- Establish a business incubator to evaluate new business models and capitalize and launch new business ventures. Business models could include sourcing, supply aggregation concepts, supply-line usage and micro-processing activities.

D. Objective: Strengthen existing, and launch more, regional, county-based brands

In a sustainable California food system, regions are known for the food they produce. To date, regional branding efforts in California have been slow to emerge and their progress somewhat difficult to gauge. However, the promise of these projects for uniting and defining a region are significant and worth pursuing. European appellation systems—which have protection under WTO rules—can offer valuable lessons.

i. A Common Framework for Regional Brands

A coherent structure for regional brand efforts, which identifies the basic requirements for a brand, jump-starts numerous such efforts across the state.⁴¹ Requirements may include regional boundaries, labeling, growing standards, and production levels. A self-governing body with representation from each region manages the system.

³⁹ Qualitative interviews with Vivid Picture advisors suggested many ways in which big suppliers would be interested in providing services to small suppliers. Dec 2004.

⁴⁰ Qualitative interviews with Vivid Picture advisors provided numerous suggestions around how to make food processing “small scale” and localized. These suggestions also included the idea that big manufacturers decentralize using micro-processing equipment and systems. Dec 2004.

⁴¹ Qualitative research with Vivid Picture advisors conducted by NRDC, completed Oct 2005. See report #15, “Outlining a Change Agenda,” by Jonathan Kaplan.

ii. Good-Neighbor Brands

Local public-interest stakeholders can partner with model producers that have made strong social or environmental contributions to the community and tell the stories of these producers. These stories could then be used by the producers to add to their brand, linking them to place.

A place to start:

- Build cross-state coalition of counties to review and assess the elements that would underlie an efficient, cohesive format for regional brands.
- Organize diverse stakeholders to develop and market a regional brand to distinguish producers in a watershed, air basin, or terroir that have collectively managed an environmental challenge (e.g. 75% of the producers in the area adopt specified practices, or restore water quality in designated waterways).

E. Objective: Increase the number of local or regional food outlets committed to the sustainability mission and goals

Retail food markets are consolidating at an unprecedented pace—the top three supermarket chains control 47% of the market in Northern California and 63% in Southern California.^{42,43} Harnessing the opportunity inherent in the population growth trends, it will be possible in the next 10 years to aggressively launch new locally controlled retail and food service outlets, adding more locally owned and operated businesses to the mix. Retailers that purchase locally will be rewarded for growing a local economy of processors, manufacturers and producers. The same opportunities exist in food service—both private and government-managed institutions.

i. 45 New Regionally Owned and Operated Grocery Chains

California is on track to construct over 900 new large supermarkets by 2030.⁴⁴ If half (450) of these new supermarkets were owned and operated by local chains of up to ten stores each, at least 45 new local owners would be in place in 25 years, bringing a regional flavor to the marketplace, circulating over \$6 billion per year locally, supporting 54,000 workers and diversifying the purchasing structure of the food system.⁴⁵ Those strong retail players can then position themselves to capture opportunities in existing markets as they arise.

ii. 2000 New Small, Corner-store Markets

Currently California has an estimated 1,857 small grocery markets. If the trend towards supercenters continues, we can expect 3,923 new small stores.⁴⁶ If supercenters do not emerge

⁴² Adjusted for population, the top 3 retailers control 57% of all food sales in the state. The market area for Northern California from which this statistic is derived includes parts of Nevada, and also excludes the northernmost 5 counties in California (totalling 0.4% of the state's population). Source data from Trade Dimensions (2001). Progressive Grocer/Supermarket Business 2002 Marketing Guidebook. Wilton, CT: Trade Dimensions.

⁴³ To date California has not been saturated by supercenters and discount stores. An extensive evaluation of consolidation trends and consequences was undertaken for the Vivid Picture project by Katy Mamen, formerly of ISEC. See report #4, "Current Trends and Background Information Directly Related to the Vivid Picture Goals for a Sustainable Food System," Dec 2004, by Katy Mamen.

⁴⁴ Given projected population, densities and demographic distribution of the population for 2030, Ecotrust projects that over 900 new "Safeway-sized" stores will be built for a statewide total of 3245. This calculation uses population data from the 2000 US Census, an Ecotrust calculation of demographic distribution down to block-group level, and a sensitivity analysis of existing sites using InfoUSA retail siting data. See report #11, "Interactions of Food System Types in Localized Value Chains in California," Oct 2005, by Mike Mertens.

⁴⁵ Using current day employee productivity numbers, Ecotrust estimates 120 employees are needed for an average supermarket.

as significant players, we can expect 5,207 small stores.⁴⁷ In either case, a large number of new small-store opportunities exist for local or regional owners, providing the opportunity for locally controlled purchasing and new ownership options.

iii. Shared Ownership Structures for Food Markets

Non-traditional ownership structures build on existing cooperative and franchise structures. In addition, establishing grower-owned grocery markets, worker-owned cooperative markets, and grocery collectives linked to housing and healthcare collectives provides more value for the growers and workers than the current system provides.⁴⁸

iv. 1,200 Farmer's Markets

As population increases along with per capita demand for produce in a sustainable food system, interest in farmer's markets will grow. If these trends occur, California may be home to three times as many farmer's markets as in 2005, dramatically increasing the opportunity for eaters to buy local and know where their food comes from.⁴⁹ Expanding farmer's market product selection to include more "lightly processed" items and a greater variety of staple products could encourage more regular visits.⁵⁰

A place to start:

- Create a business incubator and associated capital fund to launch new independent grocery chains and restaurants for growing areas. Emphasize options for Hispanic owners. The business incubator should also be charged with developing business plans for grower-owned and worker-owned grocery and restaurant formats, as well as considering shared market, finance, building and back-end efficiencies for small formats.

F. Objective: Increase regional purchasing and food preparation for organizations of all sizes

One of the most critical roles large organizations can play in a sustainable food system is creating new models for sourcing, preparing and marketing local products. Large restaurant chains, manufacturing companies, retailers, and food service purveyors can all participate in a community-based food system by purchasing from regional sources and providing fresh-prepared foods. These organizations can work to create efficient and profitable models for meeting the demands for community-based, region-defining products and services.

⁴⁶ The grocery market is generally considered to be a "zero-sum" game. There is only a fixed amount of food "at-home" dollars available in any given community. If a new store is added to the same population, sales must decrease at existing outlets. Ecotrust created two scenarios for 2030. In the Business as Usual scenario, supercenters continue to be added to the landscape at current rates and market penetration. In this scenario eaters maintain their current marketbasket. In the Vivid Picture scenario, supercenters are not a significant factor and other food outlets are allowed to flourish. In this scenario eaters purchase twice as much produce as they do today. Given population projections, densities and demographic distribution of the population for 2030 and marketplace business rules associated with a variety of food outlet types, the following results occurred. In the Business as Usual scenario, California is home to 140 supercenters and 3,923 small markets. In the Vivid Picture scenario California is home to 6 Supercenters and 5,207 small markets. For further reference see report #11, "Interactions of Food System Types in Localized Value Chains in California."

⁴⁷ Ibid.

⁴⁸ The Sustainable Food Business Leaders Workgroup, an advisory committee to the Roots of Change Council, is interested in new retail formats that have a small footprint, are efficient and provide growers with ownership in the market as well as the rest of the value chain. They contend that exploration of a holding company, or a market and finance company servicing multiple small stores, may be the key to providing local control and top line efficiency. See report #21, "Summary Input from the ROC Fund Sustainable Food Business Leaders."

⁴⁹ Ecotrust analysis, using farmer's market trade area rules allowing no overlapping trade areas, assuming a doubling statewide of consumer purchases of produce results in 1,221 farmer's markets commanding 2% of the statewide market. See report #11, "Interactions of Food System Types in Localized Value Chains in California."

⁵⁰ Qualitative research conducted with Vivid Picture advisors, New Territories Research, Oct 2005. See report #14, "Outlining a Change Agenda."

i. Micro-processing for the Big Guys

Large firms lead the way to new technologies for meeting local tastes and regional appetites. Large manufacturers and food preparation services decentralize operations in order to provide freshly prepared products for delivery to local purveyors. Products made fresh daily are packaged in non-shelf stable packaging for same-day or next-day use. Products for use within a week have a different packaging standard and may be shipped regionally. Products for long distance travel are packaged in shelf-stable packaging.⁵¹

ii. Regional Purchasing Incentives

Suppliers and public entities offer rewards to restaurant chains, supermarkets, food service operations and government agencies for their progress in sourcing their purchases regionally and tracking them.⁵² Economic development agencies will see these organizations as drivers of development for local manufacturers and processors.

A place to start:

- Support local food and health advocates by working with larger manufacturers or food service operations to remove obstacles and identify opportunities for piloting decentralized food purchasing and food preparation.
- Work with a non-profit legal team to identify possible state, county, city, and agency targets for pilot regional buying incentives.

G. Objective: Replicate Sustainable Food Examples

The organic and natural foods industries have spent the past 35 years in the school of hard knocks, learning how to run businesses that make great food and provide environmental and social benefits—all while making a profit. These individuals are true pioneers and have paved a path towards success. Many of these farming, fishing, ranching, processing, retailing, and restaurant businesses continue to be mission-driven. They have an interest in growing the sustainability community by helping similar organizations get started or grow.⁵³ We have the benefit of these entrepreneurs' experience and may, with their consent, use their wisdom to grow existing businesses, link businesses together more effectively or develop new businesses based on these models.

i. Farms, Fishing Operations and Ranches as Market Makers and Partners

One of the key characteristics of sustainable producers appears to be that they are “price makers” in the market. They know where their products end up in the market. They know their customer base and its characteristics. They work to increase the quality of their product and customize it to their market's needs. They also have built very strong partnerships across the value chain that support their business and others. These producers do not follow the market.

⁵¹ Qualitative research with Vivid Picture advisors suggested that new decentralized business models for larger companies are well within reach. Dec 2004.

⁵² Potential international and other obstacles exist to incentivizing regional buying, but literature and interviews with advisors indicate that there is room to test the limits to the barriers, especially if larger purchasing agents were stakeholders in policy development. Also see report #18, “Laying a Foundation for a Local Food System for California: A Survey of Policy and Local Impacts.”

⁵³ Many interviews with Vivid Picture advisors were conducted by Alison Edwards and the Ecotrust team to request detailed financial and business models. Walking a fine line of not giving away their competitive edge yet wanting to share information in order to grow the sustainability core, all organizations that were interviewed provided extensive and critical information on their operations. See report #11, “Interactions of Food System Types in Localized Value Chains in California.”

They stay up with the market or lead the market. Many sustainable operations, including Lundberg Farms, Straus Family Creamery, Organic Valley Farms, Canard Farm, and many others, are pioneers and provide the wisdom of lessons learned as market makers.⁵⁴

ii. Distributors as Small Farm Consolidators and Transparency Links

Sustainable distributors have aggregated the supply of small and mid-sized operations and can tell the story of these products to the buyers. They not only know the wholesale price of a product, but how it was grown and produced, where the products were grown or harvested, and where the products are sold. These mission-driven, sustainable producers create markets for small and mid-sized producers that have difficulty finding markets. They deliver products to buyers who have direct relationships with producers. They provide information and stories and vouch for credibility of a producer to a buyer—all aspects of a sustainable value chain. Organizations such as Alberts Organics, Veritable Vegetable, United Natural Foods and Clover Stornetta Creamery provide key links in the chain. These operations blaze the trail for sustainable wholesalers.⁵⁴

iii. Retailers and Food Service Operators as Foundations for Community

Sustainable food providers have developed mechanisms for enriching communities in many ways. They have redefined traditional roles. Bringing a sense of community into their operations, they not only provide community gathering opportunities, but help to define regions by bringing in products from the region. They also are unrecognized engines of regional economic development. Committed to local purchasing, they are spurring the growth of regional processors, manufacturers and agricultural operations, helping to provide a platform for these businesses to grow and be successful. In addition, these sustainable operations are characterized by a mission to build strong workplace communities. Bon Appétit Management Company, Sacramento Food Coop, Jimbos...Naturally!, and others lead the way in crafting a new way of strengthening communities.⁵⁴

A place to start:

- Build a cohort of sustainable business leaders willing to work together to advise staff from the Business Incubator on developing models and market opportunities for sustainable businesses. A wealth of entrepreneurial and mission driven talent and mentors currently exist to devise options for a variety of regions and trade areas in California.

⁵⁴ The Vivid Picture project team has had the honor of delving into deep interviews and conversations with leaders from the sustainable food industry. These interviews gave us a foundation for some hypotheses, worth further exploration, about what makes sustainable food system partners stand out from their conventional counterparts.

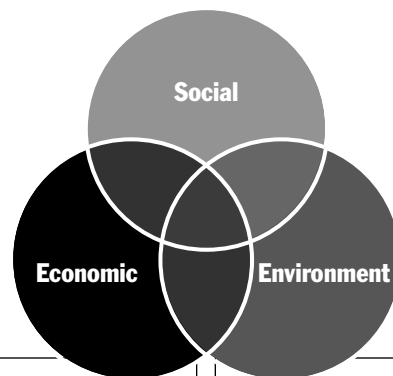
INITIATIVE 3: Urban-rural Partnership: Linking communities, economics and the environment

It's time to forge a new understanding between urban and rural communities. The issues facing California are too complex and challenging to be solved by either constituency alone.

Instead, citizens of cities and counties must stand together to confront California's complex issues through dialogue and shared action. A renewed social contract will re-articulate the relevancy of rural communities to city-dwellers.

Urban players must share responsibility for issues such as water conservation, while rural communities must be compensated for providing valuable conservation services. Urban communities provide valuable markets to be cultivated carefully by farmers, fishers and ranchers. A wise

partnership of urban and rural leaders can face the fact that the population is growing, design a reasonable land-use plan, build pragmatic solutions for natural resource management, and make California the premier provider of sustainable food products. Sustainable and conventional agriculture groups will join with city planners, environmentalists, and health and community advocates to promote new approaches to these issues. The merging of the values of interconnectness and regeneration with the importance of profitability will move this agenda forward.



<p>ECONOMIC GOALS:</p> <ul style="list-style-type: none"> • Provide opportunities for revenue from on-farm energy production, tourism, education, and other value added services (in addition to food production). • Reward farmers, fishers, and ranchers for conservation services. • Provide opportunities for food, fishing, and farming operations to be profitable. 	<p>ENVIRONMENTAL GOALS:</p> <ul style="list-style-type: none"> • Support and increases biodiversity in plant and animal products (including marine species). • Conduct farming, ranching, and fishing activities so that water, air, forests, and soil resources are enhanced and biodiversity and wildlife habitat are increased so that food production continues in perpetuity. • Preserve farmland, forests, and oceans. • Recycle its wastes and reduce the use of petroleum and other non-renewable inputs. • Employ humane practices in animal care.
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A. Objective: Preserve farmland using smart growth targets

The state is facing a loss of more than 1 million acres of farmland over the next 25 years, primarily due to population growth. While some acres may be urbanized for the sake of inevitable urban expansions and farmland owner profitability, a smart growth strategy that aligns urban and rural interests can preserve the state's farmland and enhance food security.

i. Livable Population Densities

Accepting current population projections for California, a statewide smart growth approach to planning can achieve a mean density of 10.21 persons per acre while continuing to provide a range of densities for California's cities and counties and without exceeding current maximum densities.⁵⁵

⁵⁵ Population projections were taken from data compiled by the California Department of Finance. Spatially specific analyses of population growth and urban sprawl were conducted by the Ecotrust team. See report #8, "Estimating spatially explicit population distribution and urban area expansion in California for the Year 2030," for additional detail.

Projected population impacts on growth

	Business as Usual		Vivid Picture
	2000	2030	2030
Population (millions)	34.0	48.1	48.1
Total urban area (million acres)	3.9	5.7	4.4
Mean population density in urban areas (per acre)	7.43	8.16	10.21
Affected farmland (acres)	n/a	1,020,000	100,000
Affected prime farmland (acres)	n/a	355,000	23,000

ii. 500,000 Acres of Developable Land

Even under a statewide smart growth approach to planning, 500,000 acres would still be open for development through 2030. However, development of farmland would be limited to 100,000 acres, of which only 23,000 acres would be prime farmland.⁵⁶

A place to start:

- Adopt statewide targets for population density and farmland preservation to be obtained by counties. Allow inter-county density trading.
- Adopt a real estate transaction fee to generate funding that can be used to conserve farmland, assist young farmers and launch agricultural economic development projects.
- Develop model local principles that can be adopted by local governments, following the Ventura AFA example.

What Is 'GIS'?

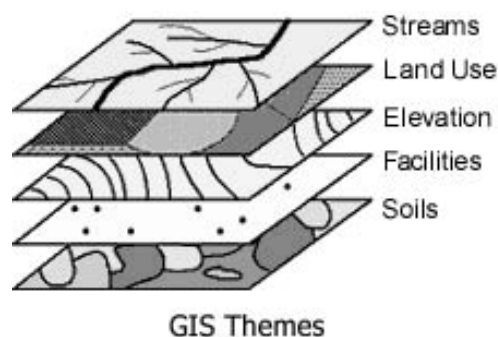
Geographic Information Systems (GIS) use layers, called “themes,” to overlay different types of information, much as older maps used mylar overlays to add successive types of information to a geographic background. Each theme represents a category of information, such as population, roads or soils. As with the old mylar maps, the layers which are underneath remain “visible” while additional themes are placed above.

But GIS isn't just a way to store maps. Each theme is more than a map, it's a data set. So a streams layer doesn't just show the course of each creek and river, it can also hold important data about each segment of the stream, such as which fish species are present, or whether it runs year-round. A map of land parcels might be linked to a sheaf of information about each parcel, such as zoning, current use, owner, and so on. GIS databases include a wide variety of information, including geographic, social, economic, political, environmental, and demographic themes.

The combination of maps and data gives GIS its power: maps can be drawn from the database and data can be referenced from the maps. What's more, it becomes

possible to ask precise questions that require analysis of data from more than one layer. For instance, highlighting the streams that run through cropland is a snap, given two distinct GIS layers that depict streams and land use separately.

The Vivid Picture project draws on hundreds of GIS layers, which were used to construct the Vivid Picture scenarios. It would have been impossible to devise the scenarios—which portray a plausible distribution of eaters, food outlets and production types across the California landscape in 2030—without GIS.



⁵⁶ An understanding of California's current growth patterns and relevant smart growth planning strategies was gleaned from Landis and Reilly's "How We Will Grow: Baseline projections of the growth of California's urban footprint through the year 2100." This data was analyzed in several scenarios by Ecotrust. See report #9, "Agricultural lands available for production in 2030," for additional detail.

B. Objective: Preserve on-farm riparian areas, wetlands and wildlife habitat

Protecting a limited number of agricultural acres will provide significant benefits to water quality, wildlife, and flood protection. To this end, growers must be offered incentives for on-farm habitat management, and landowners must be compensated in some way if land is taken out of production for these public purposes. The pay-off would be substantial:

i. Full Riparian Zone Protection

Reserve a 35-foot corridor on each side of rivers and creeks that run through agricultural lands, protecting approximately 158,000 acres in stream-side buffers.⁵⁷

ii. Full Protection for Currently Unprotected Wetlands

Designate approximately 169,000 acres of current agricultural land as stand-alone wetlands, and compensate landowners accordingly, thereby protecting all wetlands found on agricultural lands in California.⁵⁸

iii. Full Wildlife Habitat Management

Use integrated farming and wildlife habitat management to protect approximately 6.9 million acres in wildlife habitat and wildlife corridors, while continuing to cultivate those lands.⁵⁹

A place to start:

- Leverage federal Farm Bill funding to provide incentives and compensation to farmers supplying on-farm conservation services using existing tools in the Conservation Reserve Program.

C. Objective: Establish agriculture-based energy production

In the sustainable food system of the future, California agriculture leads the way in reducing petroleum use over the next several decades. An urban-rural commitment to developing the capacity and the market for new energy sources is required. Benefits could include:

i. 30% Non-petroleum Fuel by 2030

By implementing the recommendations put forth by the State Energy Resources Conservation and Development Commission and the State Air Resources Board in their August 2003 report to the Legislature, entitled “Reducing California’s Petroleum Dependency,” California achieves 20% non-petroleum fuel use in the year 2020 and 30% in the year 2030.

⁵⁷ A 35-foot buffer width is the minimum required for conservation under the USDA Conservation Reserve Program. Agricultural lands were mapped by Ecotrust using California Department of Conservation, Farmland Mapping and Monitoring Program data and employing a 50-foot width from the center of each stream to approximate a 35-foot buffer along side each river. See report #9, “Agricultural lands available for production in 2030” for detail.

⁵⁸ Wetlands in question are lands that appeared both on the maps of wetlands identified by US Fish and Wildlife National Wetland Inventory and on the California Department of Conservation, Farmland Mapping and Monitoring Program roster of farmland. Lands currently used as farmland and managed as wetlands, such as many well-managed rice fields, are not counted in the 169,366 of wetlands preservation recommended by this analysis. See report #9 *ibid*.

⁵⁹ The areas to be managed in this way were identified by overlaying California Wilderness Coalition wildlife tracking data and farmland maps from the California Department of Conservation’s Farmland Mapping and Monitoring Program. See report #9 *ibid*.

A place to start:

- Build statewide markets through state incentives for transition to agriculture-related energy sources.
- Participate in efforts by the State Energy Resources Conservation and Development Commission to develop plans to increase the use of alternative fuels.
- Create a statewide business plan for transitioning to cellulose-based fuels over the long term.

D. Objective: Develop shared civic responsibility for clean air and water

While US Farm Bill conservation program funding can play a critical role in providing incentives for on-farm stewardship (see below), urban dwellers in California should also step up investment in cleaner water and air. Under the new urban-rural partnership, producers and urban leaders sit down and agree on mechanisms for generating sustained revenues that can be allocated at the state or local level. No action items follow here because they were not raised in the interviews nor was there time for specific research around them during the project. There are plenty of conversations and proposals for this area that are being discussed. This information can be compiled at a later date.

E. Objective: Coordinate food waste recycling and composting systems between urban and rural players

Managing the ecology of food waste requires full participation by industry, the public sector and the public. Higher-density urban populations create most of the food waste. Rural counties are needed to help with the composting and recycling component of the system. By managing food waste through agricultural resources, farms, cities, and waste management agencies reap significant benefits.

i. Zero Food Waste

Food waste makes up approximately 15% of California's commercial waste stream. One of the strategic goals of the California Integrated Waste Management Board is to "Promote a 'Zero-Waste California' in which the public, industry, and government strive to reduce, reuse, or recycle all municipal solid waste materials back into nature or the marketplace in a manner that protects human health and the environment and honors the principles of California's Integrated Waste Management Act."⁶⁰ By promoting a zero-waste California, not only is landfill waste reduced, organic soil amendments become more available and new revenue streams are created for regional waste management companies.⁶¹

A place to start:

- Support the Integrated Waste Management Board to further its efforts to manage food waste using compost and other agricultural resources.

⁶⁰ The California Integrated Waste Management Board calculated this statistic for commercial waste streams. Sunset Scavenger, the waste management company for San Francisco and numerous other California municipalities, estimates that food waste accounts for a minimum of 20% of residential customers' waste stream.

⁶¹ Sunset Scavenger, the waste management company for San Francisco and numerous other California municipalities, works with soil science consultants to create custom blend composts for different agricultural and viticultural operations around San Francisco.

F. Objective: Complete water conservation plan, sharing responsibility between urban and rural players

Water conservation efforts have often been stymied by divisiveness between urban and rural populations. The population projections for 2030 suggest that demand for water will increase substantially. Cultivating an urban-rural partnership to address California's water needs can encourage all parties to accept responsibility for the need to conserve water across the board.

i. 2030 Water Needs are Met by Conserving 4.4 Million Acre-feet Annually

Local water management solutions, including conservation, recycling and groundwater desalination, meet California's additional needs through more efficient use of water resources.⁶²

A place to start:

- Review, help refine, and institute the recommendations on water investment made by the Planning and Conservation League.

G. Objective: Strengthen organic certification and grow number of organic farming operations

Organic agriculture has led the way in developing the market for sustainable products. While the USDA organic regulations have provided an imperfect set of standards and provoked substantial controversy, overall they have fostered the growth of the market and increased consumer confidence in the sustainable ethic. The organic label can likely stand the test of time, and should not be crowded out by numerous other "eco-labels." Organic can also become a better label if its scope is expanded, thereby deepening, strengthening and continuing to energize the market for organics.

i. Expanded USDA Organic Label

Expanding the organic label to include standards beyond inputs (such as a farms' contributions to the common good in the form of social, cultural, environmental and economic vitality) consolidates social concerns, such as labor standards and environmental impact, under one roof. This change reduces the risk that another additional label could fracture the market.⁶³

ii. A LEED-style Organic Transition Certification System

A graduated organic standard modeled on the US Green Building Council's Leadership in Energy & Environmental Design (LEED) certification provides recognition for transitional farms as well as those that exceed current organic program standards, by offering Bronze, Silver, Gold and Platinum certification levels.⁶⁴

⁶² To meet the water needs of the state in 2030 an additional 3–3.4 million acre-feet per year will be needed. According to the Planning and Conservation League study, *Investment Strategy for California Water*, this need can be met through a shared urban and rural responsibility. Up to 2.3 million acre-feet can be conserved by urban efforts, especially during new home construction. Up to 600,000 acre-feet can be conserved through increased agricultural conservation.

⁶³ Several of the interviews conducted with Vivid Picture advisors by New Territories Research, during Oct 2005, revealed concerns about the proliferation of eco-labels and the dilution of the National Organic Program. See report #14, "Outlining a Change Agenda."

⁶⁴ Several of the interviews conducted with Vivid Picture advisors by New Territories Research, during Oct 2005, revealed a need for a way to recognize the efforts made by farms and operations that are working towards organic certification as well as those that go above and beyond the baseline provided by National Organic Program standards. See report #14, "Outlining a Change Agenda."

iii. Federal Investment for Transition to Organic

Utilizing the World Trade Organization's Agriculture Agreement Green Box payment rules, the US Farm Bill strengthens federal incentives for transitioning land to more sustainable practices. Using these incentives increases farm preparedness for organic market growth.⁶⁵

iv. Organic Economic Development Zones

Modeled after the Community Development Block Grant Program, Organic Economic Development Zones provide tax breaks and local area incentives for organic transition that encourage whole communities to transition to organic, increasing the odds of exponential change.⁶⁶

v. Linkages between Organic Industry and Public Agencies

Expanding the scope of the organic program allows integration and consolidation of reporting regulations among public agencies such as organic certification, DPR, NRCS and more. Reducing the "red tape" involved in certification increases efficiency and reduces overall true public costs.⁶⁷

vi. 100% Organic School Lunches

The iconic commitment of California to providing organic lunches to every student statewide positions organic as important and mainstream, linking it to caring for both our children and our state.

A place to start:

- Vet strategic approaches to strengthening the organic label with national and California-based organic trade organizations in order to strengthen organic's long term market potential.
- Provide foundation support to organic organizations to build demonstration and pilot farm projects for the next generation of organic standards.
- Create discussion forums to engage organic and public agency leaders in building a joint reporting and rewards program.
- Provide funding to further research the links between health benefits and organic foods, creating momentum for the organic label.

H. Objective: Adopt a sustainability certification system (not a label system) that is tied to market opportunities, entices purchasers, and quells regulators

As the state's population grows, increased demand for clean air and clean water will push growers to adopt increasingly protective practices to help safe-guard these vital natural resources. Regional Water Quality Control Boards and the California Air Resources Board have already started the process of ending long-standing regulatory exemptions for agriculture, and are now creating new requirements for growers to monitor and prevent releases from their farms. If they don't already, California growers may soon face

⁶⁵ Several of the interviews conducted with Vivid Picture advisors by New Territories Research, during Oct 2005, as well as qualitative research conducted with Vivid Picture advisors by Alison Edwards, in fall 2005 suggested that some produce farmers would rather not invoke subsidies and risk extreme market fluctuations, while others would welcome the support.

⁶⁶ Qualitative research with Vivid Picture advisors by New Territories Research and NRDC, Oct 2005, see reports #14 and #15, both titled, "Outlining a Change Agenda."

⁶⁷ Qualitative research with Vivid Picture advisors conducted by NRDC and New Territories Research during Oct 2005 suggested that cutting "red tape" was crucial to expansion of sustainable agriculture. Advisors suggested numerous specific strategies, such as an integrated farm audit that could allow farmers to qualify for reduced workers' comp or health insurance.

some of the most stringent environmental regulations imposed on agriculture anywhere, yet they must compete in an increasingly global marketplace. New strategies are needed to reward producers who provide important environmental benefits at home. The swiftest way to make large scale environmental and social change, and enhance the stability of agriculture in California, may be to introduce “California Star,” a premier certification system that creates market opportunities, sets a new standard for agriculture and relieves regulatory pressure.⁶⁸ California Star positions California farmers as trend-setting premium providers, and can ratchet up quality standards for food and agriculture worldwide. A certification program of this kind creates a premium baseline standard.

i. 70 Percent Compliance to California Star Certification Standards

Agriculture, environmentalists and several large buyers agree to the environmental and social standards for the California Star program, using an incremental approach. The program changes the face of small- and large-scale agriculture. More than 70% of the state’s farmland acres are certified under this program, allowing environmentalists to declare victory, go home, and leave the glory to the farmers. The wine industry, some leading tomato processors and dairymen have shown early leadership and achieved proven success with this approach.⁶⁹

ii. Linking Buyers and Premium Growers

Certification, often confused with “eco-labels,” can serve a valuable economic purpose outside of public awareness. Certification programs that link buyers and producers can provide a basic understanding between growers and buyers on environmental and social quality of the products. Buyers can then market those benefits to consumers in the best way they see fit, either using the certification itself or their own branding strategy.

A place to start:

- Provide initial foundation support for non-profit organizations that work to build markets and market relationships for certified California Star products.⁷⁰
- Seek Federal investment through WTO green box-compliant US Farm Bill allocations for farmers transitioning to compliance with California Star certification.
- Engage agricultural and environmental leaders in finding new state or local funding sources, such as a “penny a gallon” food fee, that can help producers comply with emerging environmental regulations and promote a California Star type program.

I. Objective: Transfer university research on sustainable agriculture to producers in a more targeted and effective way

The University of California has perhaps the largest wealth of information for sustainable growers anywhere. This resource, however, has not been used to its maximum effect. Sustainable growers need a state-of-the-art information transfer system to form the foundation of their knowledge system.

⁶⁸ Qualitative research with Vivid Picture advisor Kari Hamerslag for NRDC, Oct 2005. See report #19, “An Assessment of Market Viability for Third-party Certification and Eco-label for California”.

⁶⁹ Qualitative research with Vivid Picture advisors by Ecotrust, Dec 2004.

⁷⁰ The Portland, Oregon-based Food Alliance is one example of such an organization.

i. Business-advised Sustainable Agriculture Systems Institute

A new organization is founded, inside the University of California or as a non-profit affiliate of the University, whose sole focus is to package and disseminate faculty research on sustainable agriculture to producers. It relies on dedicated funds and is linked to UC Extension. A business advisory group guides this organization, and offers incentives to faculty for conveying their research results to growers in plain language.⁷¹ The ready availability of relevant research helps expand the number of sustainable acres under cultivation in California.

A place to start:

- Support a small, high-profile exploratory team, endorsed by the University of California, to create an operating structure for an organization dedicated entirely to providing information on sustainable growing. The process should last no more than one year and should be staffed by an organizational or business development consultant.

RECOMMENDATIONS

TO THE ROOTS OF CHANGE COUNCIL

First Steps

- Adopt the three initiatives as the core initiatives for change.
- Create workgroups of experts to provide guidance and expertise on each of the initiatives. The state-wide ag leadership group, the workforce workgroup and the sustainable business leaders workgroup could be the beginnings of advisory groups for each of the initiatives.
- Select and move forward on a few items to build a track record for action. The NRDC and AFA projects are well positioned to explore several of the activities above. The workgroups, with structured facilitation, may have interest in and be in a position to act upon some of the items listed above, as well.
- Formalize a plan for development of new infrastructure mentioned in the Bold Agenda for Change that will support implementation activities:
 - Business Incubator to develop new business models, business plans and a capital fund.
 - Policy Institute to provide “translation services” for policy makers on food system related proposals.
- Select a city, county or region to localize some of the analysis and bring the three initiatives together. Is there a location or two that would be ideal for putting all three of these initiatives together at the same time?

⁷¹ Qualitative research with Vivid Picture advisors conducting by NRDC, completed Oct 2005. See report #15, “Outlining a Change Agenda.”

Stakeholder Involvement

- Map existing groups and networks to change agenda priorities. This could be done from two points of view. First, take each of the initiatives, objectives and tactics in the Bold Agenda for Change and conduct a brief institutional assessment identifying which groups, businesses are currently working on strategies similar to the ones suggested. Second, create a list of stakeholder interest group areas, such as health, labor, environment, food security, organic agriculture, conventional agriculture and local food systems and draft a document clearly describing how the report addresses their specific areas of concern.
- Begin the process of stakeholder development by requesting stakeholder input on the menu of objectives and tactics mentioned above. Hire NRDC and New Territories Research to go back to every individual that was interviewed over the course of the project (this will include all of the Roots of Change Council members). The consultants can use the information from the mapping exercise listed above to context their approach (cover letter with the report or partial report) to these stakeholders. Specifically, consultants will assess: 1) general reaction to report as a whole, 2) level of excitement about the goals and mission, 3) level of interest in the opportunities based approach, 4) reaction to the power of three initiatives to change the food system, 5) tactics that spur the most interest, 6) tactics that spur the least interest, and 7) tactics that stakeholders feel are already being addressed.
- Design a plan for how to refine the agenda for change based on stakeholder feedback.
- Develop a list of stakeholder gaps. Who is missing? Which groups haven't been heard from? Develop plan for enlarging the stakeholder group. This plan will likely be a slow interview type process or an introduction via one of the groups active in managing initiative activities.

On-going Research

- Identify (either in an existing organization or new organization) a team that can manage additional research projects and serve as a think tank for continued development of the ideas presented in this report. Specifically, some of the tasks of this group may include: 1) track existing research directly related to priority actions items, 2) prepare background information for community level change activities, and 3) monitor progress on the indicator report card as it relates to the action item in the change agenda. This team would develop a formal relationship with research institutions in-state and at national level, leveraging existing resources.
- Turn the analysis underlying the agenda into the best available science in support of food system transitions. Commission Ecotrust to refine and publish select reports, aiming for a series of peer-reviewed publications and conference presentations. Consider hosting a regional/national conference on the systems-scale analysis required for imagining the transition.
- Support the development of analytical tools (SEEDS) at different scales, beginning with the deployment of a county or regional-scale tool for use by AFA.

● 4 ●

Primary Indicators

BACKGROUND

From the outset, the Roots of Change Council recognized the need to measure progress toward sustainability. The Vivid Picture project team was charged with developing “a set of sustainability indicators... for each sector using inclusive analytic techniques. All indicators must be measurable and based on data that is currently collected or can be collected.”

An indicator can be defined as “a way to measure, indicate or point to with more or less exactness,” or “a technique used to show the condition of a system.” For example, an indicator for the goal “a sustainable food system promotes food choices that lead to healthy eating,” might be: daily per capita servings of fruits and vegetables. As this example shows, indicator data are the actual quantitative measurements or observations that address the underlying intent of the indicators. In the example above, the healthy eating measurement for 2001 was 4 servings of fruits and vegetables per day.

The Vivid Picture sustainability indicators are not intended to comprehensively describe the state of the food system. Instead, they represent a limited set of measurable benchmarks to help gauge progress toward a sustainable food system, and are intended to be used in combination with expert opinion and qualitative analytical methods. The indicator set presented here seeks to highlight key data whose change can be taken as a proxy for change in the broader system.

The Vivid Picture project advanced current indicator theory by pioneering a set of indicators for not only one issue area, but a whole multidimensional field—the health of the food system. To the best of our knowledge, this is the first effort to develop indicators for the food and agriculture sector at a state level using existing data, and represents an attempt to quantify trends not previously measured. The project required the team to develop a system for measuring progress toward ecological, economic, social, and health outcomes, making the collection very diverse. Furthermore, this system measures outcomes throughout the value chain, from input supply and production through to retail and consumption.

Identifying the Indicators

The Vivid Picture indicators team met in July 2004 to establish a process for selecting indicators. The

Indicators, by the Numbers

77

Total primary indicators selected

125

Total number of indicators considered

120

Total number of data sets seriously considered

5

Total cross-cutting indicators

indicator model selection was guided by a review of many previous efforts. A literature review on indicator models had been conducted and a range of models were considered. For the Vivid Picture indicators, a Pressure-State-Response model was selected and some Linkage Analysis was incorporated.

Indicators were identified using an extensive outreach process. The first step was to create a list of goals for a sustainable food system. Indicators were then selected to measure progress toward each of these goals, drawing on stakeholder input and participation. Indicator theory suggests that stakeholder participation is important in helping identify, interpret and apply indicators. The Vivid Picture project accepted the view that indicators are useless if they are not used—as such, it is essential that stakeholders vet, understand and support the set of indicators selected. Input was sought from the ROC Council and dozens of food system experts at both the initial identification stage and again in refining the list of indicators. Many participants brainstormed possible indicators. Experts provided feedback on the data and content as well as possible data sources. We consulted an average of three experts per goal. A deep review of the indicator set was conducted to finalize the list and eliminate any remaining inappropriate indicators.

Defining Indicators of a Sustainable Food System

In tracking progress toward the vision of a sustainable food system, it is useful to measure concrete, discrete parameters. Unfortunately, no system this complex can be reduced to a single measurement, so it is important to follow a broad array of indicators, each of which illuminates a particular aspect of the system and the changes it is undergoing. Each Vivid Picture project indicator is a proxy for a certain dimension of sustainability, just as infant mortality and unemployment rates are barometers of the health and economy of a society.

Indicators have come into wide use in recent years. Projects that were particularly influential for the Vivid Picture project team included the sustainability indicators from the 1992 Earth Summit in Rio de Janeiro, as well as various US and regional efforts. Among the most significant of those for Vivid Picture were the Great Valley Center's work, "The State of the Great Central Valley of California: Assessing the Region Via Indicators," the University of California Sustainable Agriculture Research and Education Program's local foodshed studies (part of a national research project entitled "Local Food Systems in a Globalizing Environment"), and other US models such as the Florida Local Assessment Guide and Sustainable Seattle's flagship community indicator project.

The choice of any one sustainability indicator reflects an underlying theoretical model. Indicators built

on the "multiple capital framework," for instance, measure available capital (natural, human, social, physical, and financial) and the risks to those assets. Indicators shaped around the "basic orientors framework" aim to measure basic qualities of sustainability, such as security, adaptability, and effectiveness.

Specific indicators for Vivid Picture were devised using the following process:

The Vivid Picture project team:

- *obtained agreement on the goals of the indicator project;*
- *brainstormed indicators with the Roots of Change Council, other experts and participants;*
- *refined the list with the Vivid Picture indicators team, applying criteria for indicator selection;*
- *redefined initial indicators after input from outside experts;*
- *obtained available trend data for indicators from field experts and data managers;*
- *reviewed indicators again with the Vivid Picture project team; rated their acceptability; and finally*
- *incorporated new ideas and repeated the selection process.*

For the Vivid Picture project, the team designed a set of indicators around the "Pressure-State-Response" model, which is widely used by agencies and the United Nations. This method recognizes that certain factors (such as emission of pollutants or farm bankruptcies, called "pressures") can affect the state of a system (such as air quality or average farm size). Those changes in state may elicit "responses" in the form of policies or other human behavior such as research. Pressure-State-Response indicators measure a system's initial state and its state after some response has been mobilized. They can also track the pressures themselves, to determine whether they are increasing or abating. As a result, these indicators bear information about the effectiveness of leverage that has been applied to the system. The selection of indicators was also influenced by the "Linkage Analysis" model, which holds that indicators ought to be tied to the issues of greatest importance to the community in question.

Some questions that have arisen about the indicators:

Should the project set targets for 2030 for the indicators? Over the course of the project, the Vivid Picture project team considered several methods for setting 2030 targets for the indicators. Each time we considered setting a target for 2030, the proposed target elicited lengthy, informal discussion among food and farming experts we consulted. It became exceedingly clear that setting targets for each indicator was best left to a second phase as an exercise for stakeholder development.

Are these indicators transformational enough? The question of whether the indicators we are presenting are transformational enough was raised at a Roots of Change Council meeting. In our view, simply considering this information as a set of data that belongs together in one report card is in itself significant and new. In addition, many of the indicators have rarely been given the prominence this list provides them. And as a result, placing value on a data point such as “number of Hispanic farmers” creates a new mindset for how to evaluate the success of the system. That said, the Vivid Picture project team has gathered a few “wish list” indicators, those that do not have existing data supporting them, that we believe may be transformational in nature. They are described in the Wish List Indicator section below.

“The indicator set presented here seeks to highlight key data whose change can be taken as a proxy for change in the broader system.”

Is the indicator list too long? The concept of a “food system” is relatively new and attempts to measure the impacts of a food system are even newer. After serious consideration by the Vivid Picture project team, we decided that a complete list of indicators with existing trend data would best serve the needs of advocates attempting to shift the system. The community attending to the food system is just beginning to comprehend the system’s complex, interrelated issues. There is a steep learning curve ahead of this group in reaching a real understanding of just how a successful food system performs. To that end, a thorough list of indicators was prepared, which can be used as a report card to assess the system over time. However, in the interest of simplicity, we have selected a sub-set of the primary indicators that we call “cross-cutting indicators.” These 5 indicators may or may not be a short cut for measuring the impact of the system, but they can be watched and tested for sensitivity alongside the longer list of primary indicators to see if in fact a short list offers parallel results to the longer list.

What is the best way to address extensive data limitations? The process of identifying sustainability indicators for the food system in California has highlighted a number of limitations that deserve further attention. First, significant data gaps prevent a comprehensive understanding and measurement of the food system. We address some of the important gaps in the indicator “wish list” located at the end of this section. Second, the process revealed that in many cases, related data are collected in uncoordinated fashion by different agencies in related fields. As a result, interpreting data across fields and institutions has proved challenging. For example, in studying the average Californian’s diet and health, the California Department of Education’s comprehensive data on overweight students does not relate directly to the Centers on Disease Control and Prevention’s definitions. In measuring food consumption, serving size is not held constant among agencies, making interpretation across data sets difficult.

Despite the scope of the project and the data limitations we faced, we are submitting a significant list of indicators for consideration.

FINDINGS

Indicator Criteria

The Vivid Picture project indicators team developed a set of 11 criteria against which to assess the appropriateness of potential indicators. Indicators had to satisfy the following principles in order to be considered acceptable.

- **Based on Vivid Picture goals:** The indicator measures progress toward the given goal or goals.
- **Opportunities-based:** The indicator measures progress toward the goals (positive) rather than regression away from the goals (negative).
- **Statewide:** The indicator data must be available for the state of California, rather than for the US or a smaller region within California.
- **Measurable:** The indicator data must be quantifiable.
- **Available:** The data must be available to the public.
- **Cost-effective:** It must be possible to access the data with little financial cost.
- **Stable, reliable, credible:** The data must be from a reliable and credible source, collected in a rigorous and consistent way and replicable from one time period to the next.
- **Understandable and usable:** The indicator must be easily grasped by potential interpreters of the data so that they can apply it in their own communities.
- **Sensitive to change:** The indicator must respond to change over a reasonable length of time—not take hundreds of years to show progress.
- **Measure effectiveness of Vivid Picture scenarios:** The indicator will ideally relate directly to the Vivid Picture scenarios and help to measure the outcomes of each scenario.

Indicators

The following is a list of 77 proposed indicators for 18 of the 22 goals. Four goals were added to the list after most of the indicator research had been conducted. All of the following indicators meet most of the criteria above. In addition, all of these indicators are easily updated. A research paper detailing each of the indicators and their sources accompanies this report. The paper includes the following items for each indicator:

- *Trend data:* Data points or trend data in tabular or graph format for each indicator. While the purpose of the Vivid Picture indicators is to monitor change between now and 2030, historical data provide context, supply baseline data and facilitate an understanding of the indicators and their sensitivity.
- *Source information:* Full reference for the source of the data, with URL information where available.
- *Data particulars:* Information to help explain and give context to the trend data.
- *Strengths and limitations:* A brief narrative highlighting the assets of the indicator as well as the limits of its power to represent the state of the food system.

- *Promotes food choices that lead to healthy eating*
 - a. Daily per capita servings of fruits and vegetables**
 - b. Obesity rate in adults**
- *Provides easy access to healthy food from retail outlets for all eaters in California*
 - a. Distance (and distance distribution) from eaters to nearest full-service food store (urban and rural, those with/without cars)**
 - b. Number of farmer's markets that accept FMNP coupons (WIC), senior FM coupons, food stamps**
- *Provides affordable food for all eaters in California*
 - a. Percentage of households that are food insecure/ food secure**
 - b. Percentage of population that is in poverty**
- *Provides for meaningful livelihoods and opportunities for all food and farming workers*
 - a. Average wage paid to farmworkers**
 - b. Percentage of farmworkers employed through farm labor contractors**
 - c. Average wage paid to grocery workers (compared to other industries)**
 - d. Average wage paid to food service and processing workers (compared to other industries)**
 - e. Total number of ethnic minority farmers (Hispanic, Asian, African American)**
- *Facilitates continuous entry for beginning farmers, fishers, foresters, processors, retailers, restaurateurs and ranchers*
 - a. Total number of ethnic minority farmers, farms, acreage (Hispanic, Asian, African American, American Indian)**
 - b. Total women farmers (principal operator) and acreage controlled**
 - c. Age distribution of farmers**
 - d. Number of commercial fishing licenses and permits**
- *Provides eaters with foods produced and processed as close to home as possible*
 - a. Total direct ag sales to public**
 - b. Percentage of consumers now buying CA ag products more often than 6 months ago**
 - c. Number of school districts with farm-to-school programs**
- *Encourages eaters to know where, how, and by whom their food is produced*
 - a. Total direct sales per capita, as % of total ag sales**
 - b. Number of certified farmer's markets**
 - c. Sales from certified farmer's markets**
 - d. Number of CSAs**
 - e. Number of farms that offer ag tourism**
 - f. Number of school gardens**
 - g. Number of farm-to-school programs**

- *Supports deepening regional identities through food*
 - a. Number of counties and producers participating in “Buy Fresh, Buy Local” campaigns**
 - b. Number of restaurants participating in the Chef’s Collaborative**
 - c. Number of Slow Food Convivia and number of members in the organization**
- *Supports and increases biodiversity in plant and animal products (including marine species)*
 - a. Number of crops statewide for top 75% of the harvested acres**
 - b. Number of cultivars for selected CA commodities for top 75% of harvested acres**
- *Conducts farming, ranching, and fishing activities so that water, air, forests, and soil resources are enhanced and biodiversity and wildlife habitat are increased—so that food production continues into perpetuity*
 - a. Number of organic acres in CA**
 - b. Tons topsoil lost/year due to erosion**
 - c. Total water usage (acre-feet) in ag**
 - d. Amount of water-quality-limited surface water with agriculture as a source of pollution**
 - e. Farmworker pesticide poisonings**
 - f. Number of areas in no-take marine reserves**
- *Preserves farmland, forests, and oceans*
 - a. Number of acres prime farmland**
 - b. Number of acres of urban area**
 - c. Number of acres in Williamson Act**
- *Provides incentives for waste recycling, reduction of petroleum and other non-renewable inputs*
 - a. Number of organic growers**
 - b. Number of organic acres in CA**
 - c. Number of composters accepting food and ag waste (current) in relation to total number of composters/processors of organic materials (mostly urban)**
 - d. Total tons of food and ag waste disposed; pounds per capita**
 - e. Number of operating Food Diversion Programs**
 - f. Fuel, fertilizer and chemical expense in agriculture; as % of total expenses**
- *Employs humane practices in animal care*
 - a. Number and identity of humane animal certification programs**
 - a1. Number of Certified Humane Raised and Handled animal producers (label)**
 - a2. Number of AHA-certified animal producers (Free-Farmed Certification Program)**
 - b. Number of grass-fed animal producers**
- *Provides opportunities for revenue from on-farm energy production, tourism, education, and other value-added services (in addition to food production)*
 - a. Number of farms engaged in ag tourism**
 - b. Dollars for renewable energy programs**

□ *Rewards farmers, fishers, and ranchers for conservation services*

a. Total dollars paid to CA for conservation practices; number of contracts

a1. Total dollars paid in NRCS EQIP program

a2. Total dollars paid in CSP (Conservation Security Program)

a3. Total dollars paid in WHIP (Wildlife Habitat Incentives Program)

b. Total dollars paid to CA for retiring farmland

b1. Total dollars paid under Conservation Reserve Program (CRP)

b2. Total dollars paid under Wetland Reserve Program (WRP)

b3. Total dollars paid under Grasslands Reserve Program (GRP)

c. Total acreage in Williamson Act

□ *Provides opportunities for food, fishing, and farming operations to be profitable*

a. Farm production balance

b. Net farm income

c. Number of farms by size/sales category

d. Personal income generated by farm, manufacturing, retail food and eating/drinking establishments

e. Number of workers in various food sectors

f. Number of retail food businesses by size classes (number of employees)

g. Number of food manufacturers by size classes (number of employees)

h. Retail price spread

i. Number of federal and state inspected slaughterhouses

j. Income/employment from commercial fishing and processing

□ *Characterized by many locally owned and operated food and farming businesses*

a. Total number of farms by size classes (by sales volume and acreage)

b. Total number of retail food businesses by size classes (number of employees)

c. Total number of food manufacturers by size classes (number of employees)

d. Percent of CA farm debt held (by various types of lenders)

e. Aggregate income earned by workers in various food sectors

h. Total number of workers in various food sectors

i. Number of fish retail licenses/transfer tickets

In addition, the following four goals were recently added to the roster of Vivid Picture goals. Their addition came too late to devise corresponding indicators.

□ *Honor and draw on the diversity and richness of different food cultures.*

□ *Encourage business structures and forms of capitalization that provide investment and ownership opportunities to workers and community members.*

□ *Promote efficient markets that share information and proceeds equitably among all players in the food chain.*

□ *Allow businesses of all sizes to participate in the system as long as they are abiding by sustainable practices and principles.*

RECOMMENDATIONS

TO THE ROOTS OF CHANGE COUNCIL

- Accept the list of 77 primary indicators, with the intention to update regularly, track over time and assess their effectiveness in measuring the state of the food system. Use this list as a report card on the food system.
- Consider formal communications to each of the data managers or agencies managing these datasets supporting the maintenance of the data gathering on the issue in question.
- Conduct on-going sensitivity analyses on these datasets to further understand the true impacts of these data on the associated goals. Request stakeholder input on interpretation of the indicator data as part of this process.
- Develop additional indicators for remaining goals.
- In the next phase of the project, request stakeholder input on 2030 targets for selected indicators.

“Wish List” and Supplemental Indicators

BACKGROUND

Wish List Indicators: The indicator selection criteria were extremely valuable in guiding our indicator selection process. Many common-sense indicators at first glance appeared to be excellent candidates for the Vivid Picture goals, yet several promising indicators were rejected because there was no existing data that measured the indicator. For example, the proportion of food consumed in California that was produced in California seems as though it would be an excellent indicator of a system that provides eaters with food produced and processed as close to home as possible. However, there is no data source in existence to measure the indicator. This indicator suggestion was put on our wish list.

Supplemental Indicators: Supplemental indicators were removed from the primary indicator list if the data associated with them were not as robust as other possible indicators.

FINDINGS

See the report “Proposed Indicators for a Sustainable Food System” for complete list of supplemental and “wish list” indicators.

RECOMMENDATIONS

TO THE ROOTS OF CHANGE COUNCIL

- Consider funding a “wish list indicator” project, a project that would evaluate what it might take to gather data on ideal or hoped-for indicators.

Cross-Cutting Indicators

BACKGROUND

In addition to the recommended indicators, 5 preliminary cross-cutting indicators have been selected. These are indicators that, as a set, measure progress toward economic, environmental and social equity issues. Their small number makes them easier to consider than the entire list of 63. They address multiple values and goals at once and serve to give a quick yet selective pulse of the state of the food system. These indicators are prioritized from the existing list of recommended indicators, and are intended to simplify the evaluation of a sustainable food system by presenting a subset of indicators.

The list of cross-cutting indicators represents a first cut and should be considered a preliminary selection. Over time, data for indicators on the wish list may become available and they, or even other indicators, may better serve to measure progress toward the 22 goals of a sustainable food system than the 5 suggested here. A note of caution: it is important to keep in mind that such a small set of indicators can likely never be a good proxy for whole system change. With such a small set, it is important to ensure that efforts are not overly focused on achieving these five indicators at the expense of broader system change.

The selection process for the cross-cutting indicators was similar in some ways to the process for the main set of indicators but more cursory because of time limitations. The cross-cutting indicators were selected to meet the following criteria:

- Address ecological, economic and social equity/health
- Be sensitive to food system change (i.e. if the food system became more sustainable, these indicators would show us to what extent)
- Be understandable and straightforward
- Be informed by the Vivid Picture analyses done to date
- Be few in number (ideally 3–5)

FINDINGS

The following list is the preliminary set of cross-cutting indicators selected by the team with a brief analysis for each.

1. **Percentage of households that are food insecure/food secure.** We consider this indicator a key gauge of the health of the food system in general. It addresses economic, social and health concerns simultaneously. Unfortunately, it does not address nutrition to the extent we would have liked.

2. **Average wage paid to farmworkers.** This indicator addresses economic concerns and social equity. Because farmworkers are at the bottom of the economic ladder, this indicator serves the ‘canary in a mine shaft’ function of an early alert to change. If worker wages go up, we can assume wages are improving across the board. Unfortunately, it does not address other aspects of labor such as what proportion of workers actually get paid.
3. **Total direct agricultural sales to public; percent of total ag sales.** This indicator reflects economic, environmental, human health and social concerns and actually could serve as a direct indicator for a large number of the goals. One primary limitation is that it does not reflect other marketing outlets that form part of a sustainable food economy. Also, while currently not a problem, direct sales marketed to distant regions over the internet could be a growing portion of direct sales, which runs counter to some of the goals of a sustainable food system. This could affect the usefulness of this indicator in the long term.
4. **Total number of farms, food retail establishments and food processors/manufacturers.** This indicator addresses a range of economic concerns and, as such, is a good indicator of a healthy economy. The more businesses there are, the more local economies gain a boost from the food sector. We can also assume that more capital remains local and is more evenly distributed. This also indirectly indicates a stronger social fabric, as community is supported by local business. Finally, we can also assume that a greater number of food businesses means that outlets are closer to the communities they serve.
5. **Number of organic acres in California.** A higher number of organic acres indicates economic as well as environmental health. We can assume there is a direct reduction of agricultural chemicals and that farming is more in harmony with the environment. Furthermore, it would indicate the economic success of sustainable agriculture. This indicator, however, can be considered the “sore thumb” of the indicators from two perspectives—those producers who consider themselves “beyond organic” and those producers who do not want to associate themselves with organic production for a variety of reasons. In addition, the indicator is not a very good measure of organic animal production. Nevertheless, given the limited available environmental data, we considered this the best available indicator of the environmental health of the food system.

RECOMMENDATIONS

TO THE ROOTS OF CHANGE COUNCIL

- Track the suggested cross-cutting indicators as a subset of the main list of indicators. Use as a rough measure of the state of the food system.
- Refine and adapt the above list of cross-cutting indicators over time.

• **Compiled Recommendations** • **to the Roots of Change Council**

1. The Project's Theory of Change

- Adopt an opportunities-based approach, using the opportunities-based criteria described above to complement current approaches to change.
- Accept the three opportunities-based approaches as a promising theory of change to shift California's food system toward sustainability.

2. A Vision for a New Mainstream, Sustainable Food System for California

The Food Systems Wheel: Actors in the Food System

- Accept the food systems wheel and its segments as the Roots of Change Council's official diagram of food system components with the understanding that it may be revised over time.
- Use the wheel in a stakeholder development process to explain the components of a food system and help stakeholders to see how they fit into the food system.
- Engage stakeholders in refining the wheel.

A Year for the Vision: 2030

- Select the year 2030 as the date for the vision. We do not expect stakeholder controversy around this date, nor the rationale for its selection.

Values for a New Mainstream

- Commit to further research on the core sustainability values and bridge values.

The Kellogg Foundation has requested, and we agree, that the suggested sustainability values be reconfirmed or adjusted based on further research conducted by a consulting firm specifically charged with this task. This firm would interview or conduct focus groups with influencers that associate their beliefs with values of sustainability as well as desired influencers that do not explicitly perceive themselves as aligned with sustainability and its core values.

- Until additional research is available, we recommend that the Roots of Change Council affirm the 5 core sustainability values and 6 bridge values listed above as foundational

values for a vision for a sustainable food system, with the intention to reconsider when additional research is available.

The Council could affirm the values through a preamble to the Roots of Change Council principles, such as: “A sustainable food system is premised on the core values of interconnectedness, diversity, regeneration, social equity and health. In addition, we recognize that a state-of-the-art sustainable food system places high value on profitability, productivity, efficiency, innovation, safety and ownership. Specifically, we support the following principles...” The principles that follow can relate to each one of these values, much the way the Roots of Change Council principles currently do.

- Test messaging to reposition the sustainability community as explicitly “owning” the bridge values. (“the sustainable food community is extremely innovative and is developing many of the technologies necessary for a robust economy.”)

Goals for a New Mainstream

- Reaffirm commitment to the goals, test with stakeholders

The Roots of Change Council has already endorsed the goals listed above. Therefore, we recommend that the Roots of Change Council reaffirm their commitment to these goals with the intent to further refine the goals with feedback from a larger group of stakeholders. We do not, however, recommend taking this list of goals to hundreds of new stakeholders at the same time. We recommend conducting a short series of focus groups or interviews with representatives from target stakeholder groups to test the effectiveness of these goals.

A Mission for a New Mainstream

- Accept the above mission statement.

We believe there is little need to affirm the mission through a stakeholder development process. The mission statement, like the year of the vision (2030), can be declared by the Roots of Change Council when engaging a group of stakeholders in a process to discuss a future food system.

A Narrative for the New Mainstream

- Accept that a narrative based on the values and goals set out in the vision and embraced by both traditional sustainability constituencies and non-traditional sustainability constituencies is imperative. A narrative is a key component for unifying a broad group of influencers. Use components as needed.
- Use a perception-based consulting firm to test this narrative and others like it built from the core and bridge values. Finalize a narrative that can galvanize a large constituency of current and future stakeholders.

3. A Bold Agenda for Change

First Steps

- Adopt the three initiatives as the core initiatives for change.
- Create workgroups of experts to provide guidance and expertise on each of the initiatives. The state-wide ag leadership group, the workforce workgroup and the sustainable business leaders workgroup could be the beginnings of advisory groups for each of the initiatives.
- Select and move forward on a few items to build a track record for action. The NRDC and AFA projects are well positioned to explore several of the activities above. The workgroups, with structured facilitation, may have interest in and be in a position to act upon some of the items listed above, as well.
- Formalize a plan for development of new infrastructure mentioned in the Bold Agenda for Change that will support implementation activities:
 - Business Incubator to develop new business models, business plans and a capital fund.
 - Policy Institute to provide “translation services” for policy makers on food system related proposals.
- Select a city, county or region to localize some of the analysis and bring the three initiatives together. Is there a location or two that would be ideal for putting all three of these initiatives together at the same time?

Stakeholder Involvement

- Map existing groups and networks to change agenda priorities. This could be done from two points of view. First, take each of the initiatives, objectives and tactics in the Bold Agenda for Change and conduct a brief institutional assessment identifying which groups, businesses are currently working on strategies similar to the ones suggested. Second, create a list of stakeholder interest group areas, such as health, labor, environment, food security, organic agriculture, conventional agriculture and local food systems and draft a document clearly describing how the report addresses their specific areas of concern.
- Begin the process of stakeholder development by requesting stakeholder input on the menu of objectives and tactics mentioned above. Hire NRDC and New Territories Research to go back to every individual that was interviewed over the course of the project (this will include all of the Roots of Change Council members). The consultants can use the information from the mapping exercise listed above to context their approach (cover letter with the report or partial report) to these stakeholders. Specifically, consultants will assess: 1) general reaction to report as a whole, 2) level of excitement about the goals and mission, 3) level of interest in the opportunities based approach, 4) reaction to the power of three initiatives to change the food system, 5) tactics that spur the most interest, 6) tactics that spur the least interest, and 7) tactics

that stakeholders feel are already being addressed.

- Design a plan for how to refine the agenda for change based on stakeholder feedback.
- Develop a list of stakeholder gaps. Who is missing? Which groups haven't been heard from? Develop plan for enlarging the stakeholder group. This plan will likely be a slow interview type process or an introduction via one of the groups active in managing initiative activities.

On-going Research

- Identify (either in an existing organization or new organization) a team that can manage additional research projects and serve as a think tank for continued development of the ideas presented in this report. Specifically, some of the tasks of this group may include: 1) track existing research directly related to priority actions items, 2) prepare background information for community level change activities, and 3) monitor progress on the indicator report card as it relates to the action item in the change agenda. This team would develop a formal relationship with research institutions in-state and at national level, leveraging existing resources.
- Turn the analysis underlying the agenda into the best available science in support of food system transitions. Commission Ecotrust to refine and publish select reports, aiming for a series of peer-reviewed publications and conference presentations. Consider hosting a regional/national conference on the systems-scale analysis required for imagining the transition.
- Support the development of analytical tools (SEEDS) at different scales, beginning with the deployment of a county or regional-scale tool for use by AFA. .

4. Primary Indicators

- Accept the list of 77 primary indicators, with the intention to update regularly, track over time and assess their effectiveness in measuring the state of the food system. Use this list as a report card on the food system.
- Consider formal communications to each of the data managers or agencies managing these datasets supporting the maintenance of the data gathering on the issue in question.
- Conduct on-going sensitivity analyses on these datasets to further understand the true impacts of these data on the associated goals. Request stakeholder input on interpretation of the indicator data as part of this process.
- Develop additional indicators for remaining goals.
- In the next phase of the project, request stakeholder input on 2030 targets for selected indicators.

“Wish List” and Supplemental Indicators

- Consider funding a “wish list indicator” project, a project that would evaluate what it might take to gather data on ideal or hoped-for indicators.

Cross-Cutting Indicators

- Track the suggested cross-cutting indicators as a subset of the main list of indicators. Use as a rough measure of the state of the food system.
- Refine and adapt the above list of cross-cutting indicators over time.

• Acknowledgements •

Vivid Picture project Interviewees March 2004–October 2005

The following individuals graciously participated in at least one and in many cases up to three interviews during the course of the Vivid Picture project. They shared their opinions, their passions, their skepticism and their hopes for the future. None of these individuals or their organizations have reviewed or endorsed the findings of the Vivid Picture project. We gratefully acknowledge their participation.

John Ash, Chef, creator of Ash & Co.

Zenobia Barlow, Center for Ecoliteracy

Michael P. Bauccio, Bon Appétit Management Co.

Spencer Beebe, Ecotrust

Dan Benedetti, Clover Stornetta Creamery

Michael Besancon, Whole Foods Market,
Southern Pacific Region

Vanesa Bogenholm, California Certified
Organic Farmers

Ashley Boren, Sustainable Conservation

Eileen Brady, Ecotrust

Carolyn Brickey, Protected Harvest

Janet Brown, Center for Ecoliteracy

Valerie Brown, California Department of
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David Brubaker, formerly of PennAg Industries,
Grace/Spira Factory Farm Project

Frank Buck, California Dept of Health Services,
California Nutrition Network

Rosie and Ward Burrows, Organic Valley

Don Cameron, Terranove Rance, Inc.:
Diversified Farming

Bob Cannard, Cannard Farm

Susan Clark, Columbia Foundation

Stacie Clary, California Coalition for
Food and Farming

Jim Cochran, Swanton Berry Farm

Larry Cohen, Prevention Institute

Paul Cultera, Sacramento Natural Foods Coop
Alegria de la Cruz, California Rural Legal
Assistance Foundation

John Deiner, Red Rock Ranch

Tim Diestel, Diestel Turkey Ranch

Leonard Diggs, Santa Rosa Jr. College/
Diggs Farms

Michael Dimock, Ag Innovations Network

Paul Dolan, Fetzer Vineyards

Jim Dunlop, Tastes Like Chicken Ranch

Scott Exo, Food Alliance

Ann Evans, California Department of Education

Gail Feenstra, UC Davis Sustainable Agriculture
Research & Education Program

Andy Fisher, Community Food Security Coalition

Phil Foster, Pinnacle Ranch

Harrison Fraker, UC Berkeley, College of
Environmental Design

John France, France Ranch

Hunter Francis, Cal Poly State University

Michael Funk, United Natural Foods

Allen Garcia, Living Farms

Keith Gardiner, Rose Dale Ranch

Hank Giclas, Western Growers

Stephen Gliessman, UC Santa Cruz, Department
of Environmental Studies

Harold Goldstein, Center for Public Health Advocacy

Jennifer Greene, Windborne Farm

Bob Grimm, Grimmway Farm/Cal-Organic

Marcia Guerrero, Chez Panisse Foundation

Joan Gussow, Columbia University

Julie Guthman, UCSC Community Studies,
College 8 Faculty Services

Martha Guzman, California Rural Legal
Assistance Foundation

Douglas Hanson, Organic Valley

Ken Hecht, California Food Policy Advocates

Traythan Heckman, Daily Acts

Helge Hellberg, Marin Organic

Alex Hinds, Marin Community Development Agency, County of Marin

Ferd Hoefner, Sustainable Agriculture Coalition

Barclay Hope, Albert's Organics

Lizz Hund, Rabobank

Lauren Johnson, Ecotrust

Susan Johnson, Ventura County

Desmond Jolly, UC Small Farm Center

Paula Jones, San Francisco Food Systems

Jonathan Kaplan, Natural Resources Defense Council

A.G. Kawamura, State of California: Department of Food and Agriculture

Holly King, Great Valley Center

Kristie Knoll, Knoll Farms

Sibella Kraus, Sustainable Agriculture Education Center

Randall Lange, Lange Twins Inc.

Jesus Lopez, California Rural Legal Assistance

Grant Lundberg, Lundberg Family Farms

Joe MacLavaine, Paramount Farming Co.

Craig MacNamara, Sierra Orchards/FARMS Leadership, Inc.

Katy Mamen, formerly International Society for Ecology and Culture

Aaron and Mark McAfee, Organic Pastures Dairy Company

Joseph McIntyre, AG Innovations Network

Mark McKay, BC Natural Chicken

Craig McNamara, FARMS Leadership, Inc.

Mary McCartney, United Farm Workers of America, AFL-CIO

Jose Montenegro, CIDERS

Russell Moore, Chez Panisse

Frank Muller, Joe Muller & Sons Yolo Vineyards

Nell Newman, Newman's Own Organics

Bill Niman, Niman Ranch

Bu Nygrens, Veritable Vegetable

Charlene Orszag, Tierra Miguel/Cal Poly SLO

Pietro Parravano, Institute for Fisheries Resources

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Kathryn Phillips, Environmental Defense

Judith Redmond, CAFF/Full Belly Farm

Claudia Reid, CalSAWG

Peter Riggs, Forum for Democracy and Trade

Robin Robinson, nSpired Natural Foods

Joe Rogoff, Whole Foods Market

Richard Rominger, formerly USDA/CDFA

Bruce Rominger, Rominger Brothers, Inc.

Ruth Rominger, formerly The Natural Step

Karen Ross, California Association of Winegrape Growers

Heather Saam, Food Alliance

Drake Sadler, Traditional Medicinals

Joe Schirmer, Dirty Girl Produce

Bob Scowcroft, Organic Farming Research Foundation

Stan Sears, Little Shasta Ranch/Oregon Country Beef

Cas Sochacki, Old Mill Farm

Jimbo and Colleen Someck, Jimbo's... Naturally!

Douglas Stonebreaker, Prather Ranch

Albert Straus, Straus Family Creamery

Ron Stochlic, California Institute for Rural Studies

Dan Sumner, Agriculture Issues Center, University of California

Leland Swenson, formerly CAFF

Ed Thompson, American Farmland Trust

Mark Vallianatos, Center for Food and Justice

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Alice Waters, Chez Panisse

Craig Watson, SYSCO

Craig Weakley, Small Planet Foods

Carol Whiteside, Great Valley Center

Joel Wollner, Peace Village

George Work, Work Family Ranch

Larry Yee, University of California Cooperative Extension, Ventura County

Marc Zammit, Bon Appétit Management Co.

Vivid Picture project Team February 2004–October 2005

The following individuals compose the Vivid Picture project team. They brought a wide variety of expertise to the project, ranging from GIS analysis skills, to qualitative research skills, to technical industry experience to whole systems thinking. Many individuals dedicated a substantial portion of their time and energy to this project over a period of years. Others spent their summers working on research papers. The final outcome of the project is a tribute to the unique contributions of each of the team members.

Gregory Agamalian, Reed College, Intern

Alison Bartlett, Consultant

Sam Beebe, Ecotrust

Eileen Brady, Ecotrust

Mark Cady, Community Alliance with Family Farmers

Juan Carlos, Consultant

Jessica Deelo, UC Sustainable Agriculture Research and Education, Intern

Erin Derden-Little, UC Sustainable Agriculture Research and Education, Intern

Ali Edwards, The Green Table

Tobin Ernst, Willamette University, graduate Intern

Gail Feenstra, UC Sustainable Agriculture Research and Education

Andrew Fuller, Ecotrust

Tom Gillpatrick, The Lake Group

Christina Grace, New Territories Research

Tom Grace, New Territories Research

Analisa Gunnell, Ecotrust

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Katherine Hayhoe, ATMOS Research & Consulting

Andrea Hildebrand, Ecotrust

Carolina Jaramillo, Ecotrust

David Lakey, The Lake Group

Celeste LeCompte, Consultant

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Astrid Scholz, Ecotrust

Howard Silverman, Ecotrust

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Lily Thompson, Consultant

Karen Zimmer, California Alliance with Family Farmers

Seth Zuckerman, Editorial Consultant

Vivid Picture Science & Economic Advisors

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Paul Burnet, Ph.D., CH2M Hill

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Desmond Jolly, Ph.D., UC Davis

Karen Klonsky, Ph.D., UC Davis

Joseph McIntyre, Ag Innovations Network

Brian Rohter, New Seasons Market

While each of these team members made a significant contribution, Ecotrust, project coordinator for the Vivid Picture project, takes complete responsibility for the results and views expressed herein.

• Reports •

Prepared for the Vivid Picture project

Our understanding of the present state of the California food system, the direction in which it is currently headed, and the leverage points for guiding it toward sustainability were informed by a rich body of research commissioned for the Vivid Picture project and distilled in the following reports. All of the papers listed below can be found at www.vividpicture.net under “documents.”

1. Sustainable Food Systems: Working Towards a Fundamental Solution. October 2005. Howard Silverman, Ecotrust. Advisors: Eileen Brady, Ecotrust, Ken Meter, Crossroads Resource Center.
2. What Values Influence Stakeholder Perceptions of a Sustainable Food and Farming Industry for California? October 2005. Celeste LeCompte, Ecotrust. Principal Investigator: Eileen Brady, Ecotrust.
3. The California Food System in Numbers. November 2004. Compiled by Andrea Hildebrand.
4. Current Issues and Trends Connected to the Vivid Picture Goals for a Sustainable Food System. December 2004. Katy Mamen, consultant, formerly of the International Society for Ecology and Culture. Much of the content of this paper drawn from Ripe for Change: Rethinking California's Food Economy (2004), by Katy Mamen, Steven Gorelick, Helena Norberg-Hodge and Diana Deumling.
5. Finding Food in California: Local Gains, Systemic Losses. December 2004. Ken Meter, Crossroads Research.
6. Farm and Food Economy Profiles for Selected Regions of California. December 2004. Ken Meter, Crossroads Resource Center.
7. The Impact of Population Shifts on the Food System in California in 2030. March 2005. Celeste LeCompte, Ecotrust. Advisor: Analisa Gunnell. Editorial assistance: Eileen Brady, Ecotrust.
8. Estimating the Spatially Explicit Population Distribution and Urban Area Expansion in California for the Year 2030. October 2005. Mike Mertens, Ecotrust. Editorial Assistance: Howard Silverman, Ecotrust.
9. Agricultural Lands Available for Production in 2030. October 2005. Analisa Noel Gunnell, Ecotrust. Editorial Assistance: Eileen Brady and Howard Silverman, Ecotrust.
10. Agro-ecologic Zone Analysis and Evaluation of Correlated Crops in 2030 in California. October 2005. Mike Mertens, Ecotrust. Editorial assistance: Howard Silverman, Ecotrust.
11. Interactions of Food System Types in Localized Value Chains in California: Implications for a Sustainable Food System in California in 2030. October 2005. Mike Mertens, Ecotrust. Technical assistance: Carolina Jamillo, Steven McGrath, Ecotrust. Editorial assistance: Howard Silverman, Ecotrust.
12. Food Access in California Today. October 2005. Doe Hatfield, consultant. Principal advisor and editorial assistance: Analisa Gunnell, Ecotrust.
13. A New Architecture for the California Food System. January 2005. Jim Cochran, Swanton Berry Farms.
14. Outlining a Change Agenda. October 2005. Christina and Tom Grace, New Territories Research.
15. Outlining a Change Agenda. October 2005. Jonathan Kaplan, NRDC and Kari Hamerschlag, consultant.
16. Proposed Indicators for a Sustainable Food System. October 2005. Project Manager: Gail Feenstra, UCSAREP. Principal investigators: Carolina Jaramillo, Steven McGrath, Ken Meter and Analisa Gunnell. Prepared by Katy Mamen, consultant.

17. Cooperatives, A California Analysis: An Old Structure for a New Economy. October 2005. Lola Milholland, Amherst College. Editorial Assistance: Eileen Brady, Ecotrust.
18. Laying a Foundation for a Local Food System in California: a Survey of Policy and Legal Impacts. October 2005. Tobin P. Ernst, Willamette University. Editorial Assistance: Eileen Brady.
19. An Assessment of Market Viability for Third-party Certification and Eco-label for California. October 2005. Kari Hamerschlag, consultant.
20. Summary Input from the ROC Fund Workforce Workgroup. October 2005. Prepared by Martha Guzman and Nicole Mason, Roots of Change Fund.
21. Summary Input from the ROC Fund Sustainable Food Business Leaders. October 2005. Prepared by Jill Kaufman, California Environmental Associates.
22. Historic Trends and Future Opportunities in Commercial Fisheries and Fish Consumption in California. October 2005. Dane Blakely Springmeyer, consultant.

All of the papers above were prepared for the Vivid Picture project. While we have confidence in the information reported in these documents, they have not yet been formally peer reviewed. For this information to be credible to stakeholders and to be used as best available science, many of these papers would benefit from formal review and further analytical refinement.