Transitioning to a Restoration Economy
A Case Study of Oregon’s Forestry Sector

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Rural Futures Lab™

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The Author

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Contents

Case Studies of Wealth Creation and Rural-Urban Linkages 5
1. Introduction 7
2. The National Picture 8
3. The Oregon Forestry Sector 11
4. Toward A Restoration Economy 16
5. The Rural-Urban Dimension 28
6. Conclusions 30
Works Cited 32
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Case Studies of Wealth Creation and Rural-Urban Linkages

This case study is from a collection of four case studies of wealth creation and rural-urban linkages (Dabson, Jensen et al, 2012). These are part of a broader effort supported by the Ford Foundation, known as the Wealth Creation in Rural Communities initiative. The primary purpose of these case studies is to stimulate learning, discussion and further inquiry about the application of the rural wealth creation framework. The cases were selected to illustrate different facets of this framework in action, and to further clarify the ways in which the framework could prove to be instrumental in achieving sustainable economic prosperity for rural people and places. The subjects of each of these cases represent decades of dedication and hard work by many people and organizations often in extremely challenging economic, social, and political contexts. These case studies are not evaluations or judgments of these efforts; on the contrary they are intended to provide foundations for rich debate on the future of rural regions and communities across the United States.

The other cases are:

- **Building a Regional Food System: A Case Study of Market Umbrella in the New Orleans Region**, which looks at the value chain intermediary, Market Umbrella, in New Orleans and on the particular challenges of promoting rural food systems in that region.
- **Plastics from Plants: A Case Study of NatureWorks, LLC, Blair, Nebraska** describes a subsidiary of Cargill that converts corn into a value-added plastic resin as a replacement for petroleum-based plastics.
- **Wind Energy and Rural Development: A Case Study of West Texas**, which explores the burgeoning wind energy sector across rural West Texas.

The four case studies illustrate different dimensions of wealth creation, value chains, and rural-urban linkages. Table A provides a preview of these dimensions.

*Table A: Case Study Dimensions*

<table>
<thead>
<tr>
<th>Sector</th>
<th>Forestry Products</th>
<th>Alternative Energy</th>
<th>Bio-Manufacturing</th>
<th>Food Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wealth Creation</td>
<td>Oregon</td>
<td>Texas</td>
<td>Nebraska</td>
<td>Louisiana</td>
</tr>
<tr>
<td>Shift from exploitative to restoration rural economy</td>
<td>Market driven with multi-level wealth implications</td>
<td>Market driven with multi-level wealth implications</td>
<td>Focus on social capital</td>
<td></td>
</tr>
<tr>
<td>Value Chains</td>
<td>Market development intermediary</td>
<td>Demand driven entrepreneurship</td>
<td>Corporate driven market development</td>
<td>Market development intermediary</td>
</tr>
<tr>
<td>Rural-Urban Linkages</td>
<td>Rural production, niche urban markets</td>
<td>Rural production, state/national urban markets</td>
<td>Rural/regional production, global markets</td>
<td>Rural production, urban public markets</td>
</tr>
<tr>
<td>Scale</td>
<td>State/multi-state</td>
<td>National</td>
<td>Global</td>
<td>Local/regional</td>
</tr>
</tbody>
</table>
For readers not familiar with the language of wealth creation, some of the terms used in these case studies may be unfamiliar or at least used in unfamiliar ways. Table B offers some definitions as an initial guide.

**Table B: Definitions of Key Terms**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets or Capitals</td>
<td>Forms of wealth that encompass the financial, natural, social, individual, built, intellectual, and political dimensions of a community or region</td>
</tr>
<tr>
<td>Asset Accumulation</td>
<td>Savings by individuals and households for key assets such as housing, education, and business start-up</td>
</tr>
<tr>
<td>Clusters</td>
<td>Geographic concentrations of interconnected companies and institutions that derive tangible benefits from proximity, common technologies, skills, etc., to enhance their competitiveness</td>
</tr>
<tr>
<td>Resilience</td>
<td>Ability of households, companies, communities and regions to anticipate problems, opportunities, and potentials, reduce vulnerabilities, respond to major disasters, and recover rapidly, better, safer, and fairer</td>
</tr>
<tr>
<td>Rural-Urban Linkages</td>
<td>Mutually beneficial relationships between rural and urban places and economies</td>
</tr>
<tr>
<td>Rural Wealth</td>
<td>The stock of enduring assets over which rural places have stewardship, control, or ownership</td>
</tr>
<tr>
<td>Rural Wealth Creation</td>
<td>Value chains that intentionally protect and increase the stock of assets in rural areas, and which embody a set of values about which the consumer cares (such as renewable energy or locally-grown and/or organic food)</td>
</tr>
<tr>
<td>Sustainable Livelihoods</td>
<td>Capabilities, assets, and activities needed to make a living, ensure resilience, and build wealth</td>
</tr>
<tr>
<td>Value Chains</td>
<td>Sequence of activities and processes required to bring a product or service from conception to final use, where at each stage value is added as tools, labor, knowledge, skills are applied</td>
</tr>
<tr>
<td>Wealth Creation</td>
<td>Policies and practices that lead to the retention and creation of wealth</td>
</tr>
</tbody>
</table>
1. Introduction

There are four principles that underlay the wealth creation approach. “Respect people and their places. Help people collaborate and tap new markets based on shared values. Build many kinds of wealth so everyone benefits. Keep wealth local.” These principles are at the core of a major transformation that was set in motion over 20 years ago and is still playing out today in the forests of Oregon.

This is a story about a series of shifts:

- From an extractive to a more sustainable natural resource economy
- From bitter conflict to careful collaboration
- From external control to community-based partnerships
- From wealth depletion to wealth creation

The story is continuing and these shifts are only just beginning. The extractive economy is still in evidence as the privately-owned forests in western Oregon rapidly expand exports of unprocessed logs to Asia. As Governor Kitzhaber observed:

>This amounts to nothing more than exporting our natural capital and our jobs. We are at risk of becoming a timber colony for Asia; while undermining our mill infrastructure and their surrounding communities... (Kitzhaber, 2011)

There is still distrust and conflict in the forest communities, and legislative and legal battles continue over the appropriate balance between economic and ecological goals for publicly-owned forests. The Federal government still owns and controls 60 percent of Oregon’s land base which fuels ongoing political and philosophical debates as to who should determine the future of the state’s natural resources. At the same time, there are changes in the nature of private forest ownership which are pushing more investment and management decisions outside Oregon. And the idea of thinking about the nation’s natural resources through the lenses of multiple forms of wealth is still in its infancy.

Nevertheless, there is much to celebrate in Oregon. This case study can only scrape the surface of what is an extremely complex and evolving chain of events and much has been left out. But there are signs of a developing restoration forest economy and its positive impacts along the forest products value chain; these impacts can be seen both in terms of wealth retention and creation and of forging linkages between rural and urban people and places. These developments do not just happen on their own. They require careful nurturing and intelligent intervention from a wide variety of people and organizations. The focus of this case study is on one such organization, Sustainable Northwest, which has played and continues to play the vital role of value chain intermediary.

This report describes the national context for forestry and the forest products sector and then the specific context of the Oregon forests, including the impact of a major swing in national policy towards the management of Federally-owned forest lands. There follows a discussion about the transition to a restoration economy and the role that Sustainable Northwest plays in that transition, together with a look at the research on rural-urban interdependence.

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1 See Wealth Creation in Rural Communities www.creatingruralwealth.org
2. The National Picture

This description of the national context is adapted from a report by the U.S. Forest Service (Smith, Miles, Perry & Pugh, 2009).

Main Characteristics of U.S. Forestlands

Forestlands extend over about one-third of the land mass of the United States, amounting to some 751 million acres – or equivalent to the area of the eight largest contiguous states. As shown in Figure 1, 68 percent of forestlands are classified as timber land – forests that are capable of producing 20 cubic feet per acre of industrial wood supply annually and not legally reserved from harvest. An additional 75 million acres (10 percent of total forestlands) are reserved for non-timber uses and are managed by public agencies or wilderness areas. The balance of 162 million acres are forests that are of low productivity but are of major importance for watershed protection, wildlife habitat, domestic livestock grazing, recreation, biodiversity maintenance and other uses. Most of this category is in the interior West and interior Alaska.

U.S. timberland contains approximately 920 billion cubic feet of growing stock, of which 57 percent are softwoods and 43 percent hardwoods. Softwoods are concentrated in the West, 43 percent of which are in the Pacific Northwest; hardwoods are predominant in the East. Douglas fir is the most abundant softwood; oak is the most abundant hardwood.

The Ownership and Management of U.S. Forestlands

About 44 percent (328 million acres) of forestlands are in public ownership (see Figure 2), three-quarters of which is controlled by the Federal government and about one-fifth by state agencies. The U.S. Forest Service has the largest share of publicly-owned forest lands extending over 147 million acres, or 20 percent of the total. There is much regional variation in ownership patterns, with the largest proportion of public lands at 67 percent in the Pacific Northwest region.
The 423 million acres in private ownership are in the hands of 11 million owners, 60 percent of whom own less than 10 acres. However, two-thirds of the forestland is owned by people or organizations with 10 acres or more. Those with holdings of 10,000 acres or more account for 22 percent of privately-owned forestlands. Family forests (owned by individuals, couples, estates, trusts) represent 92 percent of owners but only 35 percent (264 million acres) of forestlands.

Figure 3 shows the volume of growing stock by the main ownership categories. Private owners control 70 percent of U.S. timberlands and 58 percent of total growing stock volume, compared with 19 percent and 30 percent for the National Forests.
The Forest Products Supply Chain

Figure 4 illustrates the flow of production from the forest to the markets, both domestic and international.

Figure 4: The Forest Products Supply Chain: Forest to Markets (adapted from www.forestopereoperations.org)

In 2006, the total timber harvest totaled 15 billion cubic feet of which 91 percent came from private forestlands. Roundwood product processed through the mills was primarily converted to saw logs (48 percent), pulp wood (29 percent) and veneer (8 percent) with the balance used for composite panels, and poles, posts, and mulch (Smith, Miles, Perry & Pugh, 2009). The residue after processing, amounting to 87 million dry tons, was then mainly used for fuel (42 percent) and fiber products (41 percent). The forests also yield a range of non-timber products, categorized as edible and culinary, arts and crafts, medicinal and dietary supplements, floral and decorative, and landscape products.

In 2008, the U.S. the forest products industry directly employed over 900,000 people and generated over $200 billion in sales, and some ninemillion jobs were dependent on paper or packaging as an important part of their daily operations. However, since 2006, the forest products industry has lost 360,000 jobs, more than a quarter of its workforce (American Forest & Paper Association).

Changes Affecting the Forestry Industry

There are significant changes underway in both the management and use of the nation’s forestlands (Smith, Miles, Perry & Pugh, 2009):

- Restrictions on timber harvests on public lands have shifted timber operations to private lands in the U.S. and to forests in other countries. This has led to an intensification of the management of many private forests particularly in the South and on the Pacific coast.
- At the same time, there has been very significant divestiture of forestland holding by vertically integrated timber companies to timber management organizations (TMOs) and real estate investment trusts (REITs).

TIMOs and REITs are essentially tax-driven operations designed to generate short-term (8-10 years) guaranteed returns. The health of the forest is therefore not a primary factor. The profit is in selling logs to China and not to local sawmills. This is third world style exploitation.

Interview
• Expansion of residential development has been evident in many states, as has the loss of forests to urbanization pressures.
• Policies have shifted for controlling wildfires from total suppression to a more flexible approach to removing combustible materials, particularly on public lands.
• There has been a substantial increase in third-party certification for meeting independent standards for well-managed or sustainably managed forests.

3. The Oregon Forestry Sector

Oregon’s forestlands extend over some 30 million acres, about half the state’s land area. Of this, the Federal government owns over 18 million acres (60 percent), with 12 million acres comprising 15 National Forests. Timberland accounts for 24.6 million acres, of which 9.7 million acres are in private ownership, divided 60:40 between corporate and non-corporate forest holdings.

Map 1: Federal Forestland in Oregon

Map 1 shows in red those Oregon forestlands that are federally-owned and managed by the U.S. Forest Service and the Bureau of Land Management; the green areas are in other ownership, both State and private. Oregon’s forestlands are divided into two distinct regions: west of the Cascades, excluding the southwest part of the state east of the Coast Range crest, which has moderate temperatures and abundant rainfall (known as the Wet Forest); and east of the Cascades and the southern interior, where the summers are hot, winters cold and rainfall is much lower (known as the Dry Forest). The Westside
forests are rich and dense with Douglas-fir, hemlock, cedar and spruce, with a healthy understory of smaller trees; the Eastside forests are much sparser with ponderosa and lodgepole pine as the dominant species.

According to a 1996 report to the President and Congress, the forestlands of the Pacific Northwest...

...define the region’s identity, woven into the lives and livelihoods of the people who call this home...[T]hese forests provide clean water, pure air, a home for plant and animal species, opportunities for recreation, and a place for solitude and contemplation. These same forests also provide a wide range of resources that people demand, including wood for forest products; fish for commercial and sport fishing; lakes, rivers, and mountain for tourism and recreation; and may other resources for a variety of smaller industries. (Tuchmann et al, 1996, p.1)

For decades, public policy required both timber harvests at or near historic levels and increasing environmental protection. These conflicting mandates led to impassioned debates as to which policy goal was most important, and by the late 1980s the conflicts attracted national attention. There followed legislative and legal battles, which culminated in the listing of the Northern spotted owl as a threatened species under the federal Endangered Species Act in 1990. This became the symbol of a chain of events that have had major and continuing consequences for the economy and the ecology of the Pacific Northwest region. Within a year, Federal District Judge William Dwyer issued an injunction that stopped timber sales on Federal lands in most of the Westside forests in Oregon and Washington. The Clinton Administration inherited this issue in 1993 and, in an attempt to bring to an end a period of contentious litigation and community strife, the President adopted the Northwest Forest Plan in 1994.

The Plan was designed to facilitate the recovery of the habitat for the spotted owls and other endangered species and to herald an entirely different approach to forest management on Federal lands. The plan called for science-based forest management built on five broad principles: adherence to national laws, protection and enhancement of the environment, provision of a sustainable timber economy, support for the region’s people and communities during the economic transition, and ensuring that Federal agencies work together.

The Plan required coordinated management of lands administered by the Forest Service and the Bureau of Land Management. Much of the Westside lands became subject to restrictive land use allocations. These allocations designated land for uses such as:

- Congressional reserved areas, such as wilderness, wild and scenic rivers, and national monuments;
- Late successional and old-growth reserves as habitat for spotted owls;
- Adaptive management areas for testing alternative management approaches to integrate ecological and economic objectives; and
- Riparian reserves along rivers, streams, ponds, and lakes.

About 22 percent of the total was allocated for sustainable, programmed harvesting.

It is important to note that the Northwest Forest Plan related only to the Westside forests in Oregon. However, the Eastside forests were the subject of a similar set of forces. The Interior Columbia Basin Ecosystem Management Project (ICBEMP) was a preemptive effort to avoid litigation from the Sierra Club and others over riparian logging and its impact on salmon and other fish. The equivalent indicator
species of the Northern spotted owl in the east was the pileated woodpecker whose falling numbers were indicating significant forestlands stress. This led the introduction of the 21-inch screen to halt logging of any tree over that diameter. Thus active management became the accepted approach to dealing with the health of the National Forests across the entire state, with the inevitable impact on timber harvest levels.

Figure 5 shows clearly the precipitous drop in harvest levels over the past two decades – in fact since 1990 the timber harvest from Federal lands has dropped by 90 percent (see yellow line). Overall harvest levels have fallen from a nearly nine million board feet per year in the mid-1980s to under four million board feet since the mid-1990s, with only about 10 percent now being harvested from Federal lands. Levels from private forestlands (see green line) have remained stable over the period at between three to four million board feet (OFRI, 2010). Today, 76 percent of Oregon’s timber harvest comes from private forest lands, with 12 percent from federal lands and 12 percent from other public and private lands.

*Figure 5: Timber Harvest Levels by Ownership 1993-2007 (Oregon Forest Resources Institute, 2010, p.11)*

Table 1 shows that the forest industry in Oregon, according to the American Forest & Paper Association (2011), directly employs nearly 37,000 people, of which 60 percent are in wood products, 25 percent in forestry and logging, and 15 percent in pulp and paper.
Table 1: Snapshot of the Oregon Forest Industry (American Forest & Paper Association, 2011)

<table>
<thead>
<tr>
<th></th>
<th>Forestry &amp; Logging</th>
<th>Wood Products</th>
<th>Pulp &amp; Paper</th>
<th>Oregon Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>9,290</td>
<td>22,019</td>
<td>5,556</td>
<td>36,865</td>
</tr>
<tr>
<td>Annual Payroll Income</td>
<td>352</td>
<td>1,180</td>
<td>480</td>
<td>2,012</td>
</tr>
<tr>
<td>Facilities</td>
<td>--</td>
<td>146</td>
<td>55</td>
<td>201</td>
</tr>
<tr>
<td>Value of Industry Shipments</td>
<td>--</td>
<td>4,042</td>
<td>3,037</td>
<td>7,079</td>
</tr>
<tr>
<td>Tax Payments (State &amp; local taxes, $mill.)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>158</td>
</tr>
</tbody>
</table>

Nevertheless, the pulp and paper industry provides the highest annual payroll income per capita at $86,393, compared with $53,590 in wood products, and $37,890 in forestry and logging; and the highest value of shipments per employee at $546,616 compared with $183,569 in wood products.

A report from the Oregon Forest Resources Institute (2011) using different assumptions shows total direct employment in 2009 to be 47,772, not including self-employed and contract employees in jobs such as transportation, heavy construction, business services, and forest labor. The estimate for total employment using an econometric model was 57,000 jobs or about 3.5 percent of the state total. The same report indicates that the average wage for the sector is $43,952, eight percent higher than the state average.

The nature and scope of the transformation taking place in Oregon’s forestlands is not easy to capture, not least because twenty years on, it is still a work in progress, and decades of exploitation and neglect cannot be overcome overnight. A major monitoring study of the implementation of the Northwest Forest Plan (Davis, R. et al, 2011) in Oregon’s Westside provides some idea of what has happened over the period 1994-2008.

- Unemployment increased from 6 percent to 11 percent across the area covered by the Northwest Forest Plan in line with national trends.
- Total employment in the forest products sector, including secondary wood processing and logging, continues to rise and fall in line with harvest levels. From 2001-2007, total employment declined by 9 percent, with much of the decline on non-federal lands.
- During the period, timber offered for sale on federal lands more than doubled, and the 2008 harvest was nearly double that of 2001. However, timber offers in 2008 were only 75 percent of what was technically available from programmed, sustainable harvesting, and actual harvests were only at half the potential level.
- The area of forestlands designated in the Forest Plan as “late-successional and old growth” declined by 0.5 percent on Federally-controlled lands (about one-third of Federal forestlands was so designated) although there was a decline of 13 percent on nonfederal lands.
- Across the Northwest, the Northern spotted owl decreased in number by an annual rate of 2.8 percent, although the population remained stable in Oregon. There was some habitat loss of
3.4 percent mainly due to wildfire, and barred owls have become a vigorous competitor for prey and habitat.

- Another endangered indicator species, the marbled murrelet is a small seabird that nests in coastal old growth forests. It has declined by 3.9 percent annually as a result of habitat loss caused by fire on federal lands and timber harvesting on nonfederal lands.
- The condition of watersheds has seen a modest improvement overall, with the positive impacts of road decommissioning and natural vegetative growth partially offset by wildfires.

There is no direct equivalent monitoring data for the Eastside forests. The ICBEMP’s final environmental impact statement, published in 2000, described the ecological and social conditions and trends for lands administered by the U.S. Forest Service and the Bureau of Land Management over the previous 10 to 20 years. The statement concluded that there was a need for a new management strategy for public lands, given the following:

- Soil productivity was declining in areas with the greatest intensities of timber harvesting, forest road construction, and grazing. The sustainability of the soil ecosystem function and process was at risk.
- Sedimentation and erosion was evident across the watershed as a result of water diversions, impoundments, road construction, changes in silvicultural practices, and excessive livestock grazing. The flow of streams had been impacted by dams, diversions, and groundwater withdrawal.
- There have been some major changes in vegetation, including a 95 percent decrease of western white pine and whitebark pine, a loss of large trees in roaded and harvested areas, a decline of old ponderosa pine, and the rapid spread of noxious weeds throughout the basin and of woody species on dry grasslands ad cool shrublands.
- An increase in fragmentation and loss of connection within and between habitats caused by conversion to agriculture and urban development, grazing, harvesting, recreation, fire exclusion, and mining, has led to declines in plant and animal diversity.
- The overall extent and continuity of riparian areas and wetlands have decreased, with some significant changes in land use and vegetation. Water quality has been affected, and non-point pollution in the form of sedimentation, turbidity, flow alteration, and high temperatures. The result has been the loss of some fish species and significant decreases in the numbers of others.

A Defenders of Wildlife report (Brown, 2000) focused on the increasing susceptibility of the forests to severe wildfires. Human activities, particularly livestock grazing, fire suppression, and logging of larger, older trees, had transformed much of the dry forest in the ICBEMP area from a fire regime of frequent, low severity fires to one of less frequent but high severity fires. These massive wildfires destroy the overstory trees, impact the soils, watersheds, and wildlife habitat, and have serious implications for humans living nearby.

It should also be noted that in the Eastside dry forest counties, unemployment has been in the 13-15 percent range, with poverty levels in 11-18 percent range over the past decade (Davis, E.J. et al, 2010).

Another important impact of harvest restrictions has been on the financial health of Oregon’s rural county governments. Historically, counties with a substantial proportion of their land in Federal forests have depended on shared revenues from timber harvests to support their revenues. The dramatic cut in harvest levels in the 1990s had an immediate impact on the functioning of county governments.
Congress in 1993 and then through the Secure Rural Schools and Community Self-Determination (SRS) Act in 2000 authorized payments to counties and schools based on receipts during years of historically high harvests. In Oregon these payments went to 33 out of 36 counties. Funding tied to Forest Service lands was directed to spending on county roads and schools, whereas funding tied to Bureau of Land Management lands could be used for general purposes. The provisions of the SRS Act expired in 2006 but were extended to 2011 on declining scale; final payments to counties will be received in the year ending June 30, 2012.

An economic impact study of the termination of the SRS Act payments (Weber, Lewin and Sorte, 2011) estimated that Oregon faces the prospect of a loss of 3,800 to 4,400 jobs as counties slash personnel and services.

4. Toward a Restoration Economy

It is hard to argue that these data show other than modest progress on some indicators and a worsening in conditions on others. Nevertheless, there are indications of a significant paradigm shift underway – from a regional economy that is extractive, confrontational, externally-controlled, and wealth depleting, to one that focuses on forest health, community collaboration and capacity-building, diversified employment opportunities, public financial stability, state-of-the-art infrastructure, a workforce with enhanced skills and knowledge, and greater rural-urban dialogue and linkage. In other words, Oregon is slowly moving toward what can be called a “restoration economy.”

The following is a vignette from rootofsustainability.org. It provides just one example of the new approaches being developed within Oregon’s forests.

A mature juniper tree can consume 40 gallons of water a day. In the Klamath Basin, where farmers, environmentalists and tribes are scraping for every last drop of water, the exploding growth of juniper (from 2 million acres in the 1800s to 10 million acres today) is creating even greater demand on the already limited water supply. Agencies, nonprofits and watershed councils have spent years developing strategies to reduce juniper populations and thereby increase water supply for fish and farms.

Pulled juniper trees are commonly burned, but Mark Cobb realized the potential of this resource. As an experienced woodworker, Mark knew that juniper had the durability and aesthetics to be a high value product. After working with the local Reach Mill, which employs more than 65 disabled people, Mark created a process where the juniper would be properly kiln dried. He now uses this wood to build furniture and lumber products that he retails, wholesales and distributes throughout the world. Mark’s business, West Coast Juniper, has grown to more than $350,000 in annual sales (with 90% of business conducted online) while providing four full-time jobs. Mark expects his sales to triple thanks to partnerships with the Klamath Tribes and Sustainable Northwest.

Figure 6 shows the components of the paradigm shift to a restoration economy. It uses as its organizing framework the wealth creation approach referred to in Chapter 1 as developed through the Ford Foundation’s Wealth Creation in Rural Communities initiative. For each of the seven forms of wealth, there is a brief description of the old paradigm, linked to the vision that many people, communities, and organizations in Oregon are now adopting – the new paradigm.
### Figure 6: Wealth Creation Framework and the Transition to a Restoration Economy

<table>
<thead>
<tr>
<th></th>
<th>Old Paradigm</th>
<th>New Paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natural</strong></td>
<td>Policies allowed historically high levels of harvesting, promoted active fire suppression, excessive livestock grazing, removal of old growth over story, reduced water health, and increased risk of catastrophic fire and disease. Spotted owl as the indicator of rapidly declining forest health.</td>
<td>Policies supporting forest restoration, where forests are actively managed to restore forest health (including trees, water, habitats, and aesthetics), thin overstocked forestlands to reduce fire and disease risk, and ensure a predictable, sustainable supply of timber harvest.</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td>Major conflict between government agencies, timber industry, communities, and environmental groups, fought through legislation and courts. Growing powerlessness of communities.</td>
<td>Focus on community-based collaboration where forest owners, environmental groups, and industry create forest restoration plans, and avoid continuing strife and litigation. Higher levels of self-determination at the community level. Emphasis on community capacity building and leadership development.</td>
</tr>
<tr>
<td><strong>Individual</strong></td>
<td>Loss of employment opportunities as timber harvesting on federal lands severely restricted; families and communities under pressure from poverty and unemployment.</td>
<td>Shift in employment opportunities from industrial logging to complex forest restoration contracting. Long-term prospects improve as economic development supports diversification.</td>
</tr>
<tr>
<td><strong>Financial</strong></td>
<td>Loss of household income as jobs disappear; payments to local governments based on timber harvests decline; dependence upon Federal SRS payments to keep county services and schools; soon to go away.</td>
<td>Incomes stabilize and rise as more jobs created in restoration and local value-added economy. Decoupling of county finances from timber harvest levels, and new revenue approaches have to be found to support county and community services.</td>
</tr>
<tr>
<td><strong>Built</strong></td>
<td>Closing of mill and other infrastructure essential to a working wood products industry.</td>
<td>Development of new infrastructure including local-scale mills, biomass energy plants, and support infrastructure. Broadband critical.</td>
</tr>
<tr>
<td><strong>Intellectual</strong></td>
<td>Skills of large scale logging and milling operations no longer in demand,</td>
<td>Development of new skills and knowledge base for managing forests for economic, social, and ecological goals. Development of entrepreneurial ventures to seize market opportunities from forest restoration.</td>
</tr>
<tr>
<td><strong>Political</strong></td>
<td>As population declines in rural regions, loss of political representation in state capital; as policy and legal battles become widespread, more intervention from outside region, less control at local level</td>
<td>Growing appreciation of rural-urban interdependence driven by “buying local/regional” preferences, and enlightened leadership around “One Oregon” message. Greater local engagement and control in management of Federal lands.</td>
</tr>
</tbody>
</table>
So where are the opportunities that will make the vision a reality? Here are two approaches – one from the forestry and forest products industry, the other from a nonprofit group with a mission to support the creation of a restoration economy.

The Forest Products Industry Technology Roadmap

A process sponsored by Agenda 2020 Technology Alliance, the Institute of Paper Science & Technology at the Georgia Institute of Technology, the American Forest and Paper Association, and the U.S. Department of Energy led to the production of the Forest Products Industry Technology Roadmap (Agenda 2020 Alliance, 2010). This roadmap, among other things, provides recommendations for six interventions that need to be made into the value chain in order to create a more sustainable and competitive forest products industry. Figure 7 shows the main components of the forest products industry value chain and the proposed interventions.

*Figure 7: Sustainability interventions into Forest Products Value Chain (adapted from Forest Products Industry Technology Roadmap, 2010, p.4)*
These interventions are focused on:

1. **Carbon Emissions and Energy Consumption** – More efficient generation and greater use of energy from non-fossil fuel sources, together with advanced techniques for capturing carbon dioxide emissions.
2. **Biomass Supply** – Improved forest management systems and development of tree types designed and grown for specific end-uses.
4. **Water Use** – Reduced water use in pulping and papermaking, and close-looped water systems for treatment and re-use of effluent.
5. **Biomass Value** – Development of new processes for conversion and use of biomass, and of new opportunities to displace petroleum-based products.
6. **Recovery and Recycling** – Improved sorting, new ways of recovering materials and reuse within production and energy processes, and products designed for deconstruction or recycling.

Some of these interventions may well require substantial long-term and large-scale investments before they achieve widespread adoption, and others, such as “designing and growing trees for specific purposes”, may raise questions as to their compatibility within a restoration economy framework. However, many give a glimpse of what might be possible in terms of creating new business opportunities and reducing environmental impacts of forestry and forest products operations. Both are critical to economic prosperity, community well-being, and ecological sustainability in rural Oregon.

**Sustainable Northwest**

Sustainable Northwest, based in Portland, Oregon was established as an independent nonprofit organization in 1994 – at the same time as the adoption of the Northwest Forest Plan – by concerned political leaders from Oregon and Idaho who saw the need for a non-partisan entity that could help find solutions to the environmental, economic and social challenges faced by citizens, leaders, and communities in the Northwest. Since then, Sustainable Northwest has demonstrated its ability to bring together multiple, often opposing sides of an issue, and to craft and promote solutions through a collaborative process.

Sustainable Northwest sees four important forces at play: the forests of the Pacific Northwest are in urgent need of restoration, there is a talented labor force eager for opportunities to get back to working in the woods, there are local businesses seeking sustainably harvested wood to turn into high value products, and there is growing consumer interest and markets for locally-sourced materials. Bringing these together to forge a new economy based on diverse enterprises, jobs in forest restoration, use of small diameter timber, and regional markets for sustainably produced forest products has become the impetus for Sustainable Northwest’s work.

This work can be summarized as the promotion of:

- Collaborative, community-based solutions;
- Business models and markets that are sized appropriately to the available natural resource base, and support regional and national “green” economies;
- Networks that connect people and ideas, and foster innovation; and
• Public policy that supports sustainable natural resources management.

Sustainable Northwest operates at three levels:

• At the local level to help build strong rural communities that conserve and restore forests and rangelands.
• Across communities by building networks that advance and create a strong collective voice for community-based land stewardship.
• At the federal and state policy level, through presenting policy solutions that strengthen investment in sustainable natural resource management.

Figure 6 provides a graphic illustration of the main components of Sustainable Northwest’s interventions into the forest products industry value chain (based on discussion with Martin Goebel, 11/28/2011):

• The process (Level I) begins in the rural communities that have had to endure the impact of the dramatic changes of forest management practices, particularly on federal lands, and need support in charting a new future for themselves, based on collaboration and community-based solutions.
• The next level (II) focuses on the sourcing of wood that meets standards for sustainable forest management and harvesting. Support is given to private forest owners in obtaining Forest Stewardship Council certification and producers who source material from public lands forestry projects designated and monitored by active collaboratives.

Figure 6: Sustainable Northwest Interventions in the Forest Products Value Chain

• The third level (III) is direct engagement in the marketplace through a wholesaling operation that links suppliers across the Pacific Northwest and markets in the region and further afield.
• Organizing and expanding the market for sustainable wood products is the fourth level (IV), working with architects and builders in the cities of Portland and Seattle so such products are specified in new development projects.
The final level (V) is concerned with providing a voice for policy change in Washington DC and state capitals based on the experiences and practices of what is working on the ground among communities, forest owners and managers, and businesses to advance a restoration economy in the Pacific Northwest.

### I. Building Community Capacity – Blue Mountain Forest Partners

The Malheur National Forest extends over 1.7 million acres of eastern Oregon. It is a beautiful landscape of high desert grasslands, sage and juniper, pine and fir trees, together with alpine lakes and meadows. The forest extends across the two counties of Grant and Harney which have a combined population of about 13,500. Two-thirds of Grant County and three-quarters of Harney County are Federal lands. The largest settlements are Burns (3,000 people) and John Day (1,700 people).

Unemployment levels are in excess of 16 percent and poverty rates are over 15 percent. These communities have relied upon their natural resources of timber, agriculture, and ranching for generations, but now they are struggling to cope with changing market conditions and reduced economic opportunities.

There are two collaborative groups of local residents that are committed to work with the U.S. Forest Service to ensure that the National Forest is “being managed to restore ecological resiliency in a socially acceptable manner that provides economic benefit to these communities.” (SNW, (1)). One of these is Blue Mountain Forest Partners that operates on the north end of the Malheur National Forest in Grant County. Sustainable Northwest has been a partner since its inception in 2006 helping to build community capacity to be active members of the collaborative.

Forest management activities have been directed toward forest restoration and hazardous fuels reduction to decrease the risk of large wildfires. In the Malheur National Forest, these activities have been achieved through timber sales, service contracts, and stewardship contracts. The success of these collaborative efforts is seen in three ways (SNW, (1)):

- The first is that there have been no appeals or lawsuits for five years relating to the Malheur National Forest – this is particularly significant given the contentiousness of reduced timber harvests on public lands.
- Secondly, the first restoration project developed through the collaborative in 2006 was just 7,200 acres in size, but more recent projects are at landscape scale at over 40,000 acres. These projects are designed to protect lives and property from major wildfires, improve forest health

The US Forest Service and the Bureau of Land Management are permitted to pursue stewardship contracting for forest restoration projects. This allows contracts to be awarded on the basis of “best value” – allowing collaborative, ecological, economic, and social objectives to be factored in alongside price.

Daly, C. (2006)
through thinning, and reducing fire hazard and insect and disease risk through prescribed burning.

- And thirdly, there are multiple benefits to the local economy as small diameter wood harvested through thinning operations is being put to use as biomass for local community heating systems. These benefits include jobs in sourcing the fuel and restoring the forest and the local processing of compressed logs, the introduction of new ways to heat schools, hospitals, and homes that provide substantial savings over imported oil and natural gas, and funds for reinvestment in much-needed public infrastructure and services.

## II. Strengthening Local Businesses – Healthy Forests Healthy, Communities Partnership

### [Image of Northwest Windsor Chairs, Klamath Falls, Oregon]

Another example of collaboration promoted and administered by Sustainable Northwest is the Healthy Forests, Healthy Communities Partnership. The partnership’s goal is “to create a network that builds awareness of, and demand for, regionally and responsibly produced wood products, and enhances rural capacity to produce and market goods that benefit both entrepreneurs and forest ecosystems.”

There are currently over 70 participating companies in Oregon, Washington, California, and Montana. The partnership provides a range of marketing services, such as product differentiation, market research, media exposure, tradeshows, and business-to-business connections. It also offers capacity-building services in the form of training and workshops, financial systems support, business planning, and peer-to-peer learning.

A particular focus of Healthy Forests, Healthy Communities is on trees that were used mainly for fuel and firewood because they were not seen as having much commercial value in the commodity markets. The characteristics of the wood from these under-utilized and small diameter species are particularly attractive for quality furniture, flooring, paneling, molding, and millwork. Creating markets for this wood as part of forest restoration activities adds value and economic opportunity.

## III. Linking Suppliers to Customers – Sustainable Northwest Wood, Inc.

In 2008, Sustainable Northwest formed a for-profit subsidiary, Sustainable Northwest Wood, Inc. with investment capital from the Ford Foundation and the Meyer Memorial Trust. It operates as a “wholesale lumber yard that connects local mills to growing green building markets, serving both regional producers and conscientious consumers.” A wide range of products are stocked including dimensional material, interior and exterior finish lumber, and native hardwoods. All products are from
the Pacific Northwest and grown on forests managed either to the standards of the Forest Stewardship Council (FSC) or as part of the Healthy Forests, Healthy Communities Partnership.

After three years in operation, the company has been on target with its sales and is on its way to profitability. Its success has been helped by the relative strength of the ‘green’ building market in Portland during what have been challenging times for the construction industry nationwide. Sustainable Northwest Woods has been able to supply local sustainable wood to this market and has developed a reputation for reliability. Providing evidence of a demand for FSC lumber has encouraged larger lumber yards to carry more inventory particularly for sustainable structural commodities, which in turn is forcing the company to refocus its efforts on high value, low volume markets. As Ryan Temple of Sustainable Northwest Wood notes, “Eventually, what we’re doing that’s innovative moves into the mainstream. From a mission point of view and for a forest and community sustainability point of view, that’s great. From a business point of view it’s a challenge” (Sustainable Business Oregon, November 18, 2011).

The Oregon Sustainability Center, a seven-story, $64 million project, is planned to go up in the eco-district of Portland State University’s downtown campus. The building hopes to attain the Living Building Challenge certification from the Living Future Institute and will provide critical data for the future construction of sustainable buildings elsewhere. The Center plans to utilize both solar and geothermal technology. It is striving to meet a triple net-zero status, where energy, water, and waste are generated, utilized, or recycled on site. The local sourcing of sustainable materials is an important aspect of the project.

Sustainable Northwest Wood works with 64 locally-owned mills and wood products businesses around the region. A focus is specialty wood, such as juniper, white oak, and madrone, and making them available to the Portland market.

Challenges going forward include maintaining adequate supply to match growing demand especially when the construction industry comes out of recession. Large mills can readily gear up, but smaller mills without access to capital are less able to do so. Another cause for concern is the lack of differentiation by customers and in pricing between different levels of FSC certification, so that forest owners that supply 100 percent sustainably grown wood with all the extra care and costs involved are unable to obtain a premium over FSC plantation products.
IV. Expanding Markets — *Build Local Alliance*

Back in the summer of 2005, Build Local Alliance cofounder, Stephen Aiguier, and fellow wood users, knew that they were determined to use local, responsibly grown wood, but they were having problems finding and getting it. At the same time, cofounder Peter Hayes, and fellow forest owners, believed that their forests were growing local, responsibly grown wood but had problems reliably connecting with wood users to whom this mattered. So they teamed up in hopes of creating a single solution to their two problems - and the BLA was born. Recognizing the success of the Farmer-Chef Connection in solving a parallel pair of problems, Augier and Hayes asked each other "why not adapt the idea and apply it to wood?" (www.buildlocalalliance.org).

*Figure 7: Build Local Alliance and the Value Chain*

Build Local Alliance’s aim is to improve the vitality of local forests and related human communities by connecting local, responsibly grown and processed wood with local projects. It brings together participants along the “responsibly managed” value chain (Figure 7), through three strategies: educating the business community and consumers on the availability of local, responsibly managed wood choices; supporting connections between leaders in all links of the local wood chain, to increase local business services and products; and showcasing opportunities and examples that demonstrate the value and possibilities of using local, responsibly-managed wood.

V. Changing Policy – Rural Voices for Conservation Coalition

Sustainable Northwest is active in forestry policy through regional organizing, congressional education, and building alliances with diverse interest groups. Common ground is sought through collaboration despite the highly polarized national debate around restoration and wildfire policy. The policy program translates lessons learned in local community sustainability efforts into policy and institutional reform at the regional and national levels. This includes the Rural Voices for Conservation Coalition (RVCC) for which Sustainable Northwest plans and organizes all RVCC activities, distributes information on policy developments, raises funds to support the activities of the partners, and works to connect the partners with journalists.

RVCC comprises rural western, regional and national organizations that have joined together to promote balanced conservation-based approaches to the ecological and economic problems facing the West. Its goals more specifically are to:
- Develop and promote ecologically responsible and economically equitable solutions to the problems inhibiting the restoration and maintenance of Western forests.
- Increase support for federal funding of restoration and maintenance of public lands and rural economic development.
- Advance legislative ideas and influence legislation proposed by others.
- Strengthen the voices of rural leaders in conservation and economic development policy.

RVCC convenes an Annual Policy Meeting at which participants define its priority policy issues, messages and solutions for the coming year, and twice yearly, organizes a “Western Week-in-Washington” giving members a chance to convey shared messages and solutions to Congressional staff, Federal land management agency personnel and interest groups.

A critical part of RVCC’s work is the development of issue papers to provide perspectives on current problems and introduce proposed solutions. For instance, the May 2011 Issue Paper packet included RVCC’s FY 2012 Appropriation priorities, a paper on sustainable biomass energy (in conjunction with the Coalition for Eastern Forests and Communities), and a paper on rural capacity for conservation and job creation.

**The Dry Forest Investment Zone**

Another example of Sustainable Northwest’s collaborative work, which brings together ecological, economic, and community dimensions of forest restoration, is the Dry Forest Investment Zone (Davis E.J. et al, 2010). This is a five-year initiative to advance sustainable forestry, economic development, and community resilience in the dry forests of eastern Oregon and northern California. It is being funded by the U.S. Endowment for Forestry and Communities, USDA Rural Development, and the Ford Foundation. Sustainable Northwest is partnering with Wallowa Resources, Enterprise, Oregon; the Watershed Research and Training Center in Hayfork, California; and the Ecosystem Workforce Program at the University of Oregon in Eugene, Oregon.

The Dry Forest Investment Zone consists of 15 counties across eastern Oregon and northern California (see Map 2) that share similar socio-economic challenges such as poor market conditions for wood products, and high levels of poverty and unemployment.

There are three inter-related components to the initiative: local energy generation, healthy forests, and strong communities.

**Local Energy** – Throughout the zone, local communities are collaboratively and actively managing the health of nearby forests, so that they can use the byproducts of forest restoration to generate energy
for heating and powering local schools and municipal buildings. Small diameter trees removed during forest restoration that would otherwise be discarded or burned in the forest are now being manufactured into condensed wood pellets and bricks. These products are burned in wood-fired boilers to generate thermal energy for the local community.

In December 2010, Malheur Lumber Company, in John Day, finished an expansion of its existing lumber mill to integrate the production of wood-based fuels. Malheur Lumber is the last remaining mill in the region and this recent expansion has received strong support from two local collaboratives – the Blue Mountain Forest Partners and the Harney County Restoration Collaborative – since it is “appropriately scaled” to support their restoration goals for the Malheur National Forest. Small diameter trees removed during forest restoration, that otherwise would be piled up and burned in the forest, will now be manufactured into wood pellets and bricks.

Crucial to the economic success of this business expansion is an integrated manufacturing model that maximizes value from each piece of wood at the facility. Malheur Lumber now manufactures a suite of products to produce multiple revenue streams including lumber, shavings for animal bedding, wood pellets and bricks, and thermal energy (heat) to dry lumber.

The expansion at Malheur Lumber has allowed the company to retain 75 employees and created ten new jobs.

Sustainable Northwest (2)

Healthy Forests – Sixty-eight percent of the land within the Dry Forest Investment Zone is federally managed, comprising mainly dry pine and mixed conifer forests and high desert grassy range lands. Without proper management, these forests are at risk of drought and catastrophic wildfire, threatening local communities and their economies that depend on forest resources.

Throughout the zone, members of local communities, the forest industry, and the federal government are working together, with the help of Sustainable Northwest and its partners, to ensure that the National Forests are actively managed and healthy.

Strong Communities – Communities in the zone are shaped by the environmental and economic challenges they face. They also possess strong leaders, a drive to collaborate, and the ability to innovate. Community leaders and collaborative groups are creating local jobs, ensuring that the forests are healthy, and are finding cost and energy savings in local resources. In doing so, they are making the places they call home resilient and strong.

Twelve community-based natural resource organizations and collaborative groups are participating in a program to build their organizational strength, so that they are better able to accomplish land stewardship, explore integrated woody biomass utilization, and pursue improved federal and state forest policy. The program includes organizational assessments, peer learning, training workshops and webinars, and one-on-one technical assistance.
The Restoration Economy – Real or Imagined?

If the restoration economy is to be successful in the long-term, there has to be a sustained demand for the products generated from the forests. The trends seem promising for the two main streams of wood products: those that are certified as having been harvested from sustainably managed forests, and those generated through the thinning of forests and converted for biomass energy purposes.

**Demand for Certified Wood Products** According to Green Outlook (McGraw-Hill Construction, 2011), the U.S. market for green building grew from $10 billion in 2005 to $42 billion in 2008, and was projected to rise to between $55 billion and $71 billion by 2010. McGraw-Hill Construction estimate that by 2015, 40-48 percent of new non-residential construction by value will be green, equating to a market of $120 billion to $145 billion. In addition, there is a growing market for green retrofitting and renovation which in 2010 was estimated to represent 7-12 percent of the retrofitting and renovation market valued at $3 billion. In spite of the recession, this growth was driven by very large institutional projects particularly in the education and health care sectors, and by a supportive policy environment at both the federal and state levels, and research showing multiple benefits of green construction.

Although much of this activity is focused on achieving energy savings and more effective management of water and waste, an increasingly important factor has been the use of LEED in project specifications. In 2009, LEED was used in two-thirds of high value construction projects, and in over a quarter of all building projects. This has particular relevance for the forest products sector as LEED includes credits for the use of Forest Stewardship Council (FSC) certified materials. The FSC specification rate increased from 11.6 percent in 2006 to 20 percent in 2009. The sectors where FSC specification increased the most was in dormitories, education, manufacturing, hotels, and public buildings. This was particularly evident in the Mid-Atlantic and Pacific Northwest.

**Demand for Biomass** The Energy Information Agency’s 2012 Annual Energy Outlook projects that increased generation from non-hydro renewable energy resources in the electric power sector will account for 33 percent of the overall growth in electricity generation from 2010 to 2035. The non-hydro renewable share of total generation will increase from four percent in 2010 (of which 46 percent was derived from wood and wood-derived biomass) to nine percent in 2035.

Biomass generation is projected to increase nearly four-fold, driven by the federal Renewable Fuels Standard, and by the co-firing of biomass with coal increases over the projection period, induced partially by state-level Renewable Portfolio Standards as well as favorable economics in regions with significant forestry residues. Traditional Industrial combined-heat-and-power generation in sectors such as the pulp and paper industry continue to contribute to overall biomass generation (EIA, 2012).

**Declining County Revenues** However, in spite of these seemingly favorable market indications, the shift from an extractive to a restoration economy is a slow process, and there are many challenges that still remain to be addressed. The loss of revenues to Oregon’s rural counties, resulting from the cessation of timber-related payments, will be a major crisis for communities already struggling with high levels of poverty and unemployment. The economic opportunities from restoring the forests, biomass, and other entrepreneurial ventures may yield revenues and generate savings in the medium to long-term but will not be sufficient in the short-term to maintain essential public services. A Governor’s task force (2009) examined ways in which the crisis might be averted and concluded that it would take responses from every level of government – county, state and federal – to have any impact. Many of the task force’s recommendations were controversial, including raising taxes and calling for at least a doubling of timber
harvests from public lands, and some required state constitutional changes, others federal legislation. The concerns for possible job losses, the compromising of public health and safety, and the closing of schools could be major tests for the restoration paradigm.

**Encouraging Developments** On the other hand, there are indications that the restoration approach is gaining some traction. In May 2011, Senator Wyden, the chair of the Senate Subcommittee on Public Lands and Forests, held a hearing on his bill, The Oregon Eastside Forest Restoration, Old-Growth Protection and Jobs Act (S.2895). The purpose of the bill was to protect old growth forests and refocus national forest management in eastern Oregon on science-based restoration. Timber harvesting would be restricted primarily to small diameter trees and would serve landscape-wide forest and watershed restoration goals. One of the most important aspects of the bill was that it codified ongoing agreements between conservationists, the timber industry, and the community-based collaboratives, with the support of the U.S. Forest Service.

In February, 2012, the U.S. Department of Agriculture announced an allocation of $48.4 million to Eastern Oregon to support projects in the Malheur and Fremont-Winema national forests. The funding will be used to help restore more than 422,000 acres of forest, and will retain or create some 240 jobs over the next ten years. The money comes from the federal Collaborative Forest Landscape Restoration Program, and will be directed towards three community-based collaboratives, all supported by Sustainable Northwest.

5. The Rural-Urban Dimension

The past 20 years of turmoil and transition in Oregon’s forestlands have attracted national attention and generated much legislative and legal activity. But they also highlight an important feature of the state’s cultural and political reality.

> [O]ver the last several decades, the Oregon story has been divided into a rural narrative and a separate urban narrative. The separation of stories, and therefore communication, has created an imbalance and difficulty to developing solutions that benefit Oregon as a whole, thereby furthering the notion of the “urban/rural divide”. (www.rootofsustainability.org)

As Seltzer et al (2011a) note, “Differences in such things as economic base, geography and landscape, settlement patterns, and population within a state...almost always feed political, social and cultural divisions...In Oregon these divisions manifest themselves in pairs of opposing terms like wet and dry, east and west, coastal and inland, red and blue, metropolitan Portland and rural Oregon...” (p.11). They argue that:

> The urban-rural relationship can...be characterized by both interdependence and tension. Make no mistake: this is a tension born of interdependence, not just difference. With this diversity of views built into the very design of the institution we know as Oregon, our success in the coming decades depends on our ability to make constructive use of that interdependence while finding new means for either accommodating or looking past our differences (Seltzer et al., 2011, p. 13).

A study of the evolving economic relationship between Portland and its rural periphery (Holland et al, 2009; Holland et al., 2011) shines some light on the question of interdependence. The main findings were:
As Portland has grown over the past quarter century, its core economy has grown from being slightly smaller than the periphery economy in 1982 to being 50 percent larger in 2006.

Commuting linkages between the Portland core and the rural periphery have grown stronger, both in the number of commuters and relative to the size of the labor force. The core depends increasingly (though modestly) on the periphery as a source of labor, but it depends on it less than in previous decades as a market for its goods and services. The periphery in turn increasingly depends on the Portland core as a source of personal income for its residents, and has continued to purchase needed goods and services from the core while increasing its local production.

Core-periphery trade flows have weakened as the core has expanded trade to other regions and the periphery has become more self-sufficient. The periphery depends less on Portland as a market for its goods and services than it has in previous decades.

Growth in exports from the periphery has a significant cross-regional impact on the Portland core. The Portland core benefits more from a given level of growth in periphery exports than the periphery benefits from the same level of growth in core exports, although given the size and growth of the Portland core economy, Portland core exports have a significant impact on the periphery.

Both core and periphery, however, have a significant interest in each other’s economic health: 18 percent of the impact of a shock to the periphery economy leaks across to the core economy. Likewise, 7 percent of the impact of a shock to the core economy spills over to the periphery.

There is also a special “Portland factor” to be taken into account that has direct import for this case study. Seltzer et al (2011b) point to the city’s distinctiveness and competitive advantage, which rests “on its location in a spectacular setting, framed by mountains, characterized by abundance, and with ready access to wilderness, ocean beaches, and a vital working landscape.” (p. 162). They go on to make the assertion that “if the extent of Portland’s embeddedness in its rural periphery is unique among the nation’s cities, then Portland’s competitiveness depends on the health of its surrounding rural areas to a greater extent than is true for other U.S. cities” (p. 162).

This then is the context for looking at rural-urban linkages within the forest products sector in Oregon. Using the principles underlying Porter’s industry cluster approach, Martin (2011) suggests that it is important for rural clusters to be tied to the nearest metropolitan area. She argues that this is because many value chains involve global actors and reaching these requires a local partner that is globally connected. Links between rural producers and urban centers can also help the development of niche markets that can be tested and refined in adjacent urban markets before they are launched globally (p. 151).

An earlier study (Waters et al, 1994) estimated that the reduced timber harvest following the listing of the Northern spotted owl as a threatened species under the Endangered Species Act caused an estimated loss of 4,400 jobs in Portland. Most of this impact would have come from reduced household spending by the periphery for core-produced services. This represented less than 1 percent of the Portland core’s 534,000 jobs, but the loss of 4,400 jobs in the core represented about 14 percent of the total regional economic impact of timber-harvest reductions in the western Oregon periphery (Oregon State University, April 2010, p.3).

Clusters are defined as “geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions...in a particular field that compete but also cooperate” (Porter, 2000, p.15).
Martin points to several initiatives in Oregon that are seeking to establish tighter relationships between rural and urban parts of these clusters (or value chains). She sees these as representing investments that will reduce transaction costs, increase value, and improve profitability, and transform rural-urban relationships from arms-length, competitive, market-driven transactions to longer-term relationships based on honesty, integrity and trust. The key is differentiation – increasing profitability by branding and marketing products to specific market segments that may be willing to pay a price premium.

In the forest products sector, two differentiation strategies are being pursued, both of which have been described earlier. The first is differentiation through certification, a signal from a reliable third party that a product meets acceptable standards for quality. The Forest Stewardship Council provides certification that assures the consumer of forest products that they are from responsibly harvested and verified sources. The other form of differentiation is through direct marketing in an effort to connect producers to consumers. Sustainable Northwest Woods and Build Local Alliance are two examples.

As Martin suggests, the strengthening of rural-urban connections is essential for improving cluster or value chain performance. Portland, as well as other urban centers, is home to sophisticated, knowledgeable, quality-sensitive customers, who can help rural producers gain insights into the direction of future demand in larger markets. Portland’s reputation, according to Cortright (2007), for its concerns for sustainability has evolved into a unique geographic context that depends on a vital rural periphery.

6. Conclusions

This case study attempts to tell the story of a rural economy in transition. This transition has been hard, is still continuing and its eventual outcome is not certain. The forestry sector, globally, nationally and regionally, is itself going through a major transformation as markets evolve, environmental awareness increases, and technologies advance. Within that context, the Oregon forestry industry has had to contend with dramatic change, as harvesting from federally-managed lands was brought to a standstill by court order and a new regime of science-based forest management was introduced. The impact on the rural economy and rural communities has been severe, and the road to recovery has been slow, and hindered by the recession.

Nevertheless, there is a very important transition underway, characterized in the case study as a shift from an extractive to a more sustainable natural resource economy – to a restoration economy. This shift encompasses some important elements of rural wealth creation as the emphasis has moved to finding ways to mitigate conflict through community and stakeholder engagement and collaboration, to facilitating greater local control over forest management decisions on public lands, and to embracing the multiple forms that wealth can take in rural Oregon.

At the center of these shifts is Sustainable Northwest, a nonprofit organization that acts as an intermediary in the forging of a value chain that connects sustainable forest management practices to both the premium urban markets for high quality and locally-grown wood products, and the local and regional markets for wood biomass for energy production. Although these represent important and growing markets, the linking of supply and demand has been and continues to be a challenging process. What has been accomplished over the past 20 years has been significant but the pace has been too slow for the rural communities that have been undermined by the disappearance of the extractive forest economy. However, there is clearly considerable support and commitment to making the restoration
economy a success from the Federal government to the Governor to forest land owners, wood products companies and community leaders.

An intriguing dimension to this transition has been the perceived urban-rural divide that is reflected in the political, social and economic discourse in Oregon. But there is also strong interdependence between the urban centers, particularly Portland, and the rural hinterland. Much of the city's distinctiveness and competitive advantage is rooted in its connections to the natural environment that surrounds it, and that the success of the restoration economy will increasingly depend on strengthening connections between rural producers and the sophisticated urban consumers in Portland and to other cities in the Pacific Northwest and beyond.
Works Cited


