

FEATURE: HUMAN DIMENSIONS

Flaxen Conway and Wesley Shaw

Conway is a professor of sociology at Oregon State University, Corvallis, and can be contacted at flaxen.conway@oregonstate.edu. Shaw is a NOAA Coastal Management Fellow at the Massachusetts Office of Coastal Zone Management, Boston.

Socioeconomic Lessons Learned from the Response to the Federally-Declared West Coast Groundfish Disaster

ABSTRACT: Congress responded to the 2000 West Coast groundfish disaster by allocating \$5 million in disaster relief for Oregon, Washington, and California. Each state designed and executed its own disaster response program to help impacted members of the fishing industry and coastal communities to cope with the downturn. While the federal goals for the funding were identical, each state created different relief programs. Oregon focused on helping individual members of the fishing community to access social services. Washington focused on economic development of coastal towns. California focused on payments to impacted individuals and cooperative fisheries research. While federal responses to fisheries disasters cost the government millions of dollars each year, they are rarely researched and poorly understood. The goal of this project was to document responses to the disaster (focusing on Oregon), explore useful comparisons, and extract possible lessons learned. Results indicate that people working in the fishing industry face many obstacles to leaving the fishery, and that aggressive, well-planned outreach programs are necessary for efforts to directly help members of the fishing community through fishery disasters. It is hoped that the lessons learned in this project will help both decision makers and those impacted by future fishery disaster responses.

Lecciones socioeconómicas aprendidas de la respuesta al desastre pesquero de la costa oeste de los Estados Unidos

RESUMEN: En 2000 el Congreso de los Estados Unidos de Norteamérica respondió al desastre pesquero sucedido en la costa oeste aportando, como medida de mitigación, 5 millones de dólares a los estados de Oregón, Washington y California. Cada estado diseñó y ejecutó su propio programa de contingencia para que las comunidades costeras y miembros de la industria pesquera que fueron afectados por el desastre, hicieran frente al siniestro. Si bien los fondos federales fueron iguales en cantidad, cada estado creó distintos programas de ayuda. Oregón se enfocó en ayudar de forma individual a los miembros de la comunidad pesquera para que tuvieran acceso a servicios sociales. Washington canalizó sus esfuerzos al desarrollo económico de los pueblos costeros. California se orientó a pagar directamente a los individuos afectados y a la investigación realizada por las cooperativas pesqueras. A pesar de que la respuesta por parte de la federación a los desastres pesqueros le cuesta al gobierno millones de dólares cada año, éstos son raramente objeto de investigación y no han sido comprendidos adecuadamente. La meta de este proyecto fue documentar las respuestas a estos desastres (específicamente en Oregón) explorar comparaciones que resultaran útiles y derivar las lecciones aprendidas. Los resultados apuntan a que la gente que trabaja en la industria pesquera enfrenta muchos obstáculos para abandonar la actividad, y que los programas extensivos, agresivos y bien definidos son necesarios para auxiliar a los miembros de las comunidades pesqueras en medio de desastres de esta naturaleza. Se espera que las lecciones aprendidas en este proyecto ayuden tanto a los encargados de tomar las decisiones como a todos aquellos que se vean afectados por desastres pesqueros en el futuro.



Figure 1. US West Coast groundfish landings, 1981–2000. Modified from Husing et al. 2002.

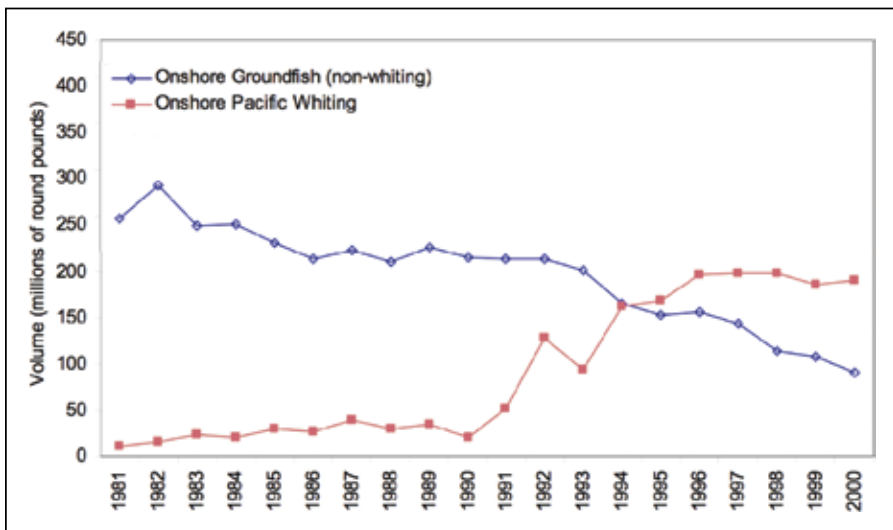
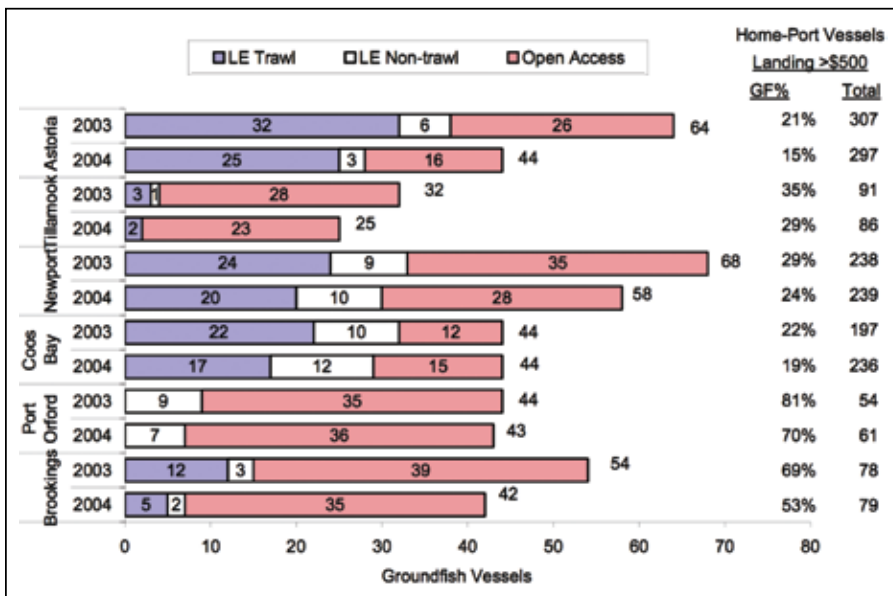


Figure 2. Oregon homeport vessel counts by port group and groundfish LE permit status. From Davis and Radtke 2005.



INTRODUCTION

Commercial fisheries on the U.S. West Coast are undergoing considerable change. Oregon's groundfish industry peaked in the mid-1990s, accounting for about 40% of the state's total fisheries value (Husing et al. 2002). Washington, Oregon, and California had large groundfish fleets; over 11,000 vessels participated between 1987–2000 (Scholz 2003) and revenue from the industry supported hundreds of jobs in coastal communities.

In the late 1990s the groundfish industry began a coastwide constriction, caused by the cumulative effects of poor stock recruitment, decades of heavy fishing, and management mistakes. As stocks declined, the amended Magnuson-Stevens Fishery Conservation and Management Act (MSA) mandated that the Pacific Fisheries Management Council (PFMC) sharply cut back catch levels.

Unfortunately for the commercial fishing community, these decreases in catch left behind thousands of under/unemployed people. Some managed to switch to other fisheries but others faced the difficult task of leaving the industry. Employees of governmental and non-governmental organizations, called the "social service community," assisted displaced members of the commercial fishing community with occupational training and other social services.

The ever-increasing percentage of the commercial fishing community needing assistance strained the social service community's capacity to help. Under local pressure, Oregon, Washington, and California requested federal assistance and on 26 January 2000, the U.S. Secretary of Commerce declared the West Coast groundfish fishery an economic disaster. Shortly thereafter Congress allocated \$5 million of disaster relief for the region. The money was split among the states, each of which designed and implemented its own response.

This article summarizes a study investigating three main questions about the West Coast groundfish disaster (WCGD): What was the severity of the WCGD? What was the government's response to the WCGD and how well did it work? And what were some lessons learned that could help communities and decision-makers deal with future disasters?

BACKGROUND AND CONTEXT

The groundfish fishery: history and changes over time

Our study used the PFMC's definition of groundfish (including several species of rockfish, flatfish, roundfish, sharks, skates, and a few unrelated species). Groundfish are harvested using hooks, traps, and trawling. Trawling accounts for approximately 90% of the commercial catch (1997 data, PFMC web site). Gear specialization has effectively split the West Coast groundfish industry into two groups, those who target Pacific whiting (*Merluccius productus*, a high-volume, low-value fish requiring large vessels to be fished efficiently) and those who target the other species (lower volume, higher value).

Management of groundfish has proven to be challenging for the PFMC and fishermen alike (Mansfield 2001; Radtke and Davis 2004). Groundfish (non-whiting) catches peaked in the early 1980s (Hanna 2000) and then began a long-term decline (Figure 1). By 2000, Oregon's catch had dropped from a 20-year average of 74,000 tons to 27,000 tons. In 2002, the PFMC declared nine species of groundfish overfished. Faced with extremely slow growth rates (Love et al. 2002) and a high degree of scientific uncertainty, the PFMC closed the entire continental shelf to bottom trawling. By 2004 the Oregon groundfish fishery had an ex-vessel value of just \$16.3 million; 53% below the 10-year average between 1987–1996 (Radtke and Davis 2005).

The Human and Social Impacts of the Decline

The MSA defines community as “a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs... and includes fishing vessel owners, operators and crew, and the United States fish processors that are based in such a community” (PL94-265). In our study, the commercial fishing community refers to people involved in the groundfish industry—people working on boats or in processing plants, gear manufacturing/repair, shipyards, fueling, mechanics, and fishermen's shore-side business spouse/partners. Members of the commercial fishing community have strong economic linkages

with the fishing industry (Jacob et al. 2001) and the diverse and changing coastal communities along the Oregon coast (Gilden et al. 1999). The commercial fishing community is diverse and attitudes of members are famously diverse (Harms and Sylvia 2001).

The social service community is diverse as well. Members may work directly with the commercial fishing community to access occupational training, food stamps, healthcare, and other social services, or they may be only indirectly involved in response program planning.

Disasters and Disaster Response

Social scientists use the term disaster to describe communities that are incurring damages, losses, and/or disruption of their routine functions (Kreps 1989). Economic disasters can be caused by large-scale layoffs/closures, or changes in regulations that, for example in fisheries, force people to stop harvesting. Rural communities, particularly those that are resource-dependant, are particularly susceptible to economic disasters due to market and regulatory forces outside their control (Freudenburg and Frickel 1994; Overdevest and Green 1995).

Disasters of all types can have severe effects on both individuals and the community as a whole (Raphael 1986). Communities impacted by the 1980 eruption of Mt. St. Helens in Washington state saw increased rates of illness, alcohol abuse, family stress, and violent behavior (Adams and Adams 1984). Other common effects of disasters include psychological distress, depression, and anxiety (Miller 2005).

Governments and non-government organizations frequently assist communities impacted by disasters. Relief programs vary in design and scope, depending on the type and cause of the disaster, funding source, and political and economic pressures.

Comparison with Other Disasters

There are similarities between the WCGD and the Pacific Northwest timber crisis where, between 1979 and 1988, mill closures resulted in the loss of over 25,000 jobs (Pissot 1993). These transitioning workers faced similar challenges to those that faced members of the commercial fishing community during the WCGD: workers generally had low-levels of for-

mal education, were accustomed to high incomes, and were reluctant to leave the industry due to a strong sense of identity bound to their professions (Carroll and Lee 1990; Conway et al. 2000).

Similarities can also be found between the WCGD and the West Coast salmon crisis of the mid-1990s, which, unfortunately, shared some of the same participants. In the 1980s and 1990s salmonid stocks declined, and in 1994 the federal government declared a West Coast salmon fishery disaster and allocated more than \$24 million to relief programs in Oregon, California, and Washington. The response was designed as a stop-gap mechanism to help people endure some bad years in the fishery until it recovered and they could return to fishing (Gilden and Smith 1996a), not to transition people out of the fishery.

Despite the large amount of money spent, the salmon disaster response program was not well liked (Gilden and Smith 1996a, b). Only fishermen were qualified to receive benefits; there was no aid provided for fisheries support industries. Only a third of troll-permit owners applied for the relief (Gilden and Smith 1996b). Of those who did not apply, a third felt that they were not eligible and a quarter did not know about the program. A few did not apply because they did not approve of what they viewed as “government hand-outs.” Other complaints were that much of the help went to people who did not deserve/need it, eligibility was difficult or impossible to prove, and the rules were too confusing.

METHODS

The objectives of this study were to: (1) document responses to the WCGD, focusing primarily on Oregon, and (2) assess how well the responses worked. For Objective 1, 5 academic journals, 15 popular media (magazines, newspapers), 10 government white papers, 8 academic or non-governmental organizations' white papers, and 1 record of congressional testimony were perused. In addition, we gathered data through e-mails, telephone calls and in-person informal conversations with ten government employees, academics, and members of the commercial fishing and social service communities.

For Objective 2, we conducted a series of 23 ethnographic interviews along the West Coast between September 2005 and

October 2007. Ethnographic interviews reveal complex issues, emergent themes, and broad thematic views held by different communities (Silverman 2001; Robson 2002) and allow informants to help shape the interview and raise topics that might otherwise not be explored (Schwartzman 1993). Interviewees were selected through “snowball sampling” (Berg 2001; Robson 2002); initial contacts were selected from both communities and then interviewees were asked to provide names of other people they felt should be contacted for the study. Those interviewed within the commercial fishing community ranged from people working on boats, in processing plants, in gear shops, and in other support businesses, to fishermen’s shoreside business partners. Social service community members interviewed were employees at a variety of governmental and non-governmental organizations. Table 1 lists the geographic distribution and types of members interviewed from each community. Interviewees from both communities represented the diversity found in each community (gender, age), and interviewees from Oregon varied in their location (south, central, and north coast).

Interviews were conducted in person and ranged from 30 minutes to 2 hours. Responses were tape recorded, transcribed, and analyzed via content analysis (Berg 2001; Robson 2002). Unless otherwise noted, quotations are typical of what many interviewees said. To ensure confidentiality, only community identifiers follow quotations—FC for commercial fishing community and SC for social service community.

Table 1. Breakdown of interviewees by geography and community (FC = commercial fishing community and SC = social service community).

Participants by Community		
	FC	13
	SC	10
Participants by State		
Oregon	FC	11
	SC	4
California	FC	2
	SC	3
Washington	FC	0
	SC	1
National/other	SC	2

RESULTS AND DISCUSSION

When the WCFD was declared, Congress allocated disaster relief funds to be used by each state to help individuals and communities impacted. Funds were to be split among the states in proportion to the disaster in each state. Each state, while seeking to help similar groups of people and operating under identical federal guidelines, created very different programs (Table 2). We’ll report our findings with a focus on Oregon, indicating notable differences or similarities with California or Washington responses.

Oregon’s Response

Several years before the WCGD was federally declared, individuals in Oregon from both the commercial fishing community and the social service community saw signs of a coming disaster. In the late 1990s they formed a coalition of caseworkers from coastal agency One-Stops (multi-agency facilities housing employment department services, workforce services, and adult and family services), the Oregon Economic and Community Development Department, and the Department of Community Colleges and Workforce Development, with members of local fishery groups and Oregon Sea Grant Extension educators. Together they designed the Groundfish Disaster Outreach Program (GDOP), and later served as the Advisory Committee

for the program, developing policies and finding solutions to challenges.

The GDOP was designed to help the commercial fishing community access existing resources and transition out of the industry, and to help the social service community find affected members of the commercial fishing community. The GDOP had two main components: outreach peers and groundfish transition income (GTI). Outreach peers were members of the commercial fishing community who were contracted part-time by GDOP to help other members of the commercial fishing community find services in six target areas (Table 3). Outreach peers, who were not government or agency representatives, “greased the skids” in many ways for those trying to leave the fishery. One of their creations was the Occupation Skills Checklists (Table 4), a list of transferable job skills that demonstrated to members of both communities that the commercial fishing community already possessed skills in demand by employers. Five outreach peers and a coastwide coordinator began their work in May of 2000. They worked independently yet met regularly over the life of the program.

The second component of the GDOP was GTI—a source of economic support for people who wanted to leave the fishery but were unable to stop fishing long enough to retrain or look for new work. This was critical in Oregon because of a state bill (HB 3308, 1999) that left Oregon fisher-

Table 2. Breakdown of Interviewees by geography and community. (*Original funding is listed. Note that an additional \$2.2 million was received in 2002 [85% of which went to GTI, 15% to peer outreach])

Oregon’s Response		
Program*	Budget	Percent of Total Budget
Peer Outreach	\$66,000	4%
Groundfish Transition Income	\$1,680,000	96%
Washington’s Response		
Program	Budget	Percent of Total Budget
Diversify Coastal Communities	\$1,200,000	80%
Research	\$300,000	20%
California’s Response		
Program	Budget	Percent of Total Budget
Vessel Safety Equipment	\$300,000 (actual was approx. \$100,000)	13% (actual was approx. 6%)
Collaborative Research	\$763,000 (actual was approx. \$1,200,000)	33% (actual was approx. 69%)
Program Admin.	\$70,000	3%
Groundfish Transition Stipend	\$1,200,000 (actual was approx. \$400,000)	51% (actual was approx. 22%)

Table 3. Number of people anticipated to be impacted in Oregon by the WCGD.

Regions	Anticipated Number Impacted (%; n = 330)
Astoria	24%
Tillamook	8%
Newport	27%
Coos Bay	20%
Port Orford	12%
Brookings	9%

Table 4. Occupational Skills Checklist for Deckhands.

OCCUPATION SKILLS CHECKLIST: DECKHAND	
Vessel operation	
<input type="checkbox"/>	stands watch
<input type="checkbox"/>	takes direction from captain
<input type="checkbox"/>	steers vessel
<input type="checkbox"/>	loads equipment and supplies by hand or hoist
<input type="checkbox"/>	pulls and guides nets and lines
<input type="checkbox"/>	signals other workers to move, hoist and position loads
<input type="checkbox"/>	removes fish from nets, hooks, pots
<input type="checkbox"/>	stows catch/refrigeration or preservation mixture or ice
<input type="checkbox"/>	sorts catch
<input type="checkbox"/>	has knowledge of radio operation for distress call
<input type="checkbox"/>	operates safety and fire equipment
<input type="checkbox"/>	has knowledge of refrigeration system
<input type="checkbox"/>	may cook for crew
Maintenance	
<input type="checkbox"/>	vessel repairs
<input type="checkbox"/>	switching out pumps-motors hyd/elec
<input type="checkbox"/>	scrape vessel for paint
<input type="checkbox"/>	equipment maintenance & repair
<input type="checkbox"/>	block and tackle
<input type="checkbox"/>	hydraulics/heavy equipment
<input type="checkbox"/>	rope & cable splicing
<input type="checkbox"/>	general maintenance of vessel
<input type="checkbox"/>	oil changes
<input type="checkbox"/>	climbing in rigging for light replacement, rigging repair
<input type="checkbox"/>	battery maintenance
<input type="checkbox"/>	wash deck, conveyors, knives or other equipment
<input type="checkbox"/>	paint vessel
<input type="checkbox"/>	winch operation
<input type="checkbox"/>	electrical work
<input type="checkbox"/>	net mending
<input type="checkbox"/>	winch turning
<input type="checkbox"/>	gear repair
<input type="checkbox"/>	welding
Business management	
<input type="checkbox"/>	tax forms
<input type="checkbox"/>	record keeping (self-employed/sub-contractor): vessel names, hours worked, wages received, all business related expenses
Personal Skills	
<input type="checkbox"/>	physical strength
<input type="checkbox"/>	can take direction
<input type="checkbox"/>	heavy lifting
<input type="checkbox"/>	knowledge of fish types
<input type="checkbox"/>	good health
<input type="checkbox"/>	perseverance
<input type="checkbox"/>	good physical coordination
<input type="checkbox"/>	patience
<input type="checkbox"/>	mechanical aptitude
<input type="checkbox"/>	commitment
<input type="checkbox"/>	team player
<input type="checkbox"/>	work outdoors
<input type="checkbox"/>	long hours/intermittent sleep
<input type="checkbox"/>	able to recognize and deal with emergency situations
<input type="checkbox"/>	good attitude
<input type="checkbox"/>	flexibility to assume other's role on vessel

men generally ineligible for federal and state unemployment insurance.

GTI recipients received up to \$1,000 a month for single individuals and \$1,500 a month for married people, for up to nine months. GTI was available on a first-come, first-served basis to individuals who were:

1. Oregon residents
2. Part of the groundfish industry
3. Negatively impacted by the groundfish disaster (unemployed or underemployed)
4. Actively using or willing to use reemployment assistance
5. Willing to commit to permanently leaving the commercial fishing industry.

When commercial fishing community members signed up for reemployment programs, the determination of GTI eligibility was made by the agency One-Stops. GTI payments were handled by the Oregon Employment Department (OED). Funds were quickly allocated (within weeks), and the first GTI checks were mailed out in June 2001, approximately eight months after federal disaster funds were allocated. Hoping to assist more people in need, Oregon applied for and received an additional \$2.2 million in early 2002 (FY 2002 Commerce/Justice State Appropriations Bill; Table 2). These funds were allocated hours after they were made officially available. All GTI funds were allocated by November 2005.

It would be impossible to precisely quantify the number of people helped by the GDOP, as outreach peers only kept estimates of how many people they interacted with. Noting these limitations, cautious estimates suggest that by 2004 the GDOP had reached over 1,500 people. Of those, over 800 directly accessed resources, with over 400 people using agency reemployment programs and 350 using other agencies (food or housing assistance, mental health, etc.). In late 2005, OED reported that approximately 400 individuals had accessed GTI funds. Table 5 shows the breakdown of those who accessed support from the GDOP and the types of occupations they transitioned into.

Washington, on the other hand, spent their portion on coastal communities of place, channeling disaster funds into existing programs (Table 2). The Washington Department of Community, Trade and Economic Development was to get \$1.2 million to help communities deal with the coastwide decline of groundfish fisheries through economic diversification. Grants were given to “promote economic diversity away from dependence on the commercial groundfish fishery” and to address locally defined priorities. The remaining \$0.3 million was to be administered by the Washington Department of Fish and Wildlife, to help set up arrowtooth flounder (*Atheresthes stomias*) bycatch research. There appeared to be little project management and no centralized coordination. Employees at coastal agency One-Stops were aware that the disaster had been declared but received no guidance or funds to administer new programs.

California's response was similar to Oregon's but had several notable differences. In June 2001 a group of representatives from the California Department of Fish and Game (CDFG) and local agency One-Stops organized meetings in five coastal communities to decide what to do with the California share of the disaster funds. The CDFG, serving as the lead agency in the project, used comments from the meetings, written public comments, and input from an industry advisory group to create the final response plan. The plan included funding for collaborative research, a safety equipment purchasing program, and a groundfish disaster stipend (GDS) program modeled after Oregon's GTI (Table 2). Target audiences were the commercial fishing fleet and the charter fleet.

Challenges Existed

Despite recognition of the overall success of Oregon's GDOP, evidence of cultural conflict emerged as an interview theme. Differences in cultural characteristics and expectations, for example, resulted in stereotyping (Table 6). Some of these stereotypes were offered as explanations for the perceived failure of some fishing

Table 5. Breakdown of members of the commercial fishing community (FC) that accessed the GDOP, and the types of occupations they entered into.

Members of the FC	Who Accessed the GDOP	Types of Occupations Chosen
Boat owners/captains	15%	Occupations varied greatly, spanning from academics to laborers, technicians to social workers
Deckhands	43%	
Shoreside partners	29%	
Processing and other shoreside businesses	13%	
And of these		
Men	60%	
Women	40%	

industry members to transition out of the industry. For example, commercial fishing community members were stereotyped as being "a different breed," having a "fishing addiction," or being accustomed to making more money than they could in other occupations:

. . . they're used to making big chunks of money, and they don't make huge chunks of money when they get out into the real occupational world.—SC

. . . guys are used to making a hundred, two hundred thousand dollars a year and all of the sudden you want them to make ten bucks an hour? It doesn't even cover their lifestyle, their bills. Fishing is strange . . . it becomes an addiction, and it's a way of life. . . not just a job. If it was just a job you'd see more people quitting.—FC

Other barriers existed as well. Interviewees mentioned that age and feelings of pride prevented many fishermen from accessing aid. Another obstacle was a lack of experience with job search skills such as writing resumes or interviewing. Similar to the lack of education was the lack of experience and the lack of desire (reported by and about members of the commercial fishing community) to work for someone else. This clearly ties with the strong sense of independence of fishermen

and other natural resource workers such as farmers. Many who transitioned out of fishing gravitated towards self-employment, but members of the commercial fishing community interviewed reported that they felt that the agency One-Stops discouraged self-employment, reporting that they were told that tracking self-employed people was too "difficult."

While the groundfish fleet decreased in size, every port reported boats still going out. So unlike a mill closure, fishermen up and down the coast continued to try to fish and some who started retraining returned to fishing before or after finishing their training. This situation is true in many fishery disasters. However, this led to two other commonly-voiced themes in interviews—frustration with temporal and geographical inconsistencies between agencies and the importance of looking beyond numbers—and often highlighted cultural conflicts caused by stereotyping (Table 6).

Agencies within One-Stops generally operated with varying degrees of autonomy. Among agency One-Stops along the coast, some agencies operated with little coordination with other agencies and often offered inconsistent benefits. In some cases, a caseworker might take on one member of the commercial fishing community, but not another. This helped to fuel other stereotypes (judgmental, bureaucratic; Table 6). And, like farmers

and other members of natural resource communities, fishermen were often cash poor but asset rich:

When I started, 'well, there's something out there to help you—let's access it.' I showed them the income that I'd been making, [and] they informed me that they could not pay for the books or the tuition because they needed to be able to get me a job after I graduated paying 75% of the wages that I was making before going into the program, or it would count badly against them. There was no way that they could do that, so they were not going to give me any money.—FC

They could be starving to death, literally, and their kids could be starving to death, yet, on paper their assets looked so great that they didn't qualify for a lot of programs. We live and die by statistics. Its no longer just about getting people trained.—SC

There was almost universal agreement that the GTI was critical to the success of the program. People have historically transitioned out of the fishery without GTI, but interviewees thought that the program was much more successful due to the inclusion of GTI.

Table 6 Expressed stereotypes of the commercial fishing community and the social service community by members of both communities.

Stereotypes of the Commercial Fishing Community	Stereotypes of the Social Service Community
Proud/Independent/Hardworking	Governmental
FC members are looked down upon	Insensitive
Poor with structure	Bureaucratic
Freeloaders	Helpful
Alcohol and drug users	Rude
Unreliable / not serious about retraining	Mean
A different breed	Judgmental

Without GTI, I don't think they could have successfully made that transition. With it people were able to at least try and get through the process.—SC

The GTI money was a big draw for people to come into the program, and it was a big draw because it was a nice chunk of change, but it also was a component that was needed for the success of the transition.—FC

Yet GTI also brought challenges. Initially, the IRS indicated that it would tax GTI as income, significantly reducing the aid provided by the program; GDOP leadership worked to change this. In February 2002 the IRS decided that GTI would be tax-free because it was a needs-based payment” and not “income.

In California, the commercial fishing community's response to the program was not as strong as had been expected. The safety equipment program closed in July 2003 with only a third of the moneys budgeted paid out (Table 2). Groundfish disaster stipend (GDS) funds were also not readily used by the commercial fishing community; only 58 people received GDS funds and approximately a third of the \$1.2 million remained in the GDS pool when the program closed in June 2004 (money remaining was transferred into the collaborative research program).

Several reasons were given for the commercial fishing community's lack of interest in GDS. Outreach had not worked well; while interviewed members of the California commercial fishing community and social service community had heard about Oregon's program, most had seen no evidence of California money coming to their region. Recruitment for the disaster program was called “ad hoc” at best. By an employee's own confession, CDFG had little to no experience in dealing with economic disasters. While the CDFG mailed out announcements about the programs to all license holders, they had no outreach peers or other mechanisms for contacting crewmembers or people working in processing plants.

They didn't get word unless their boss told them... The only real way to get word out is in person.—SC

In Washington, our research indicated that there was little project management and no centralized coordination. Employees approached at coastal One-Stops were aware that the disaster had been declared, but they received no guidance or funds to administer new programs.

Members of the Washington commercial fishing community were able to access standard state and federal unemployment insurance. According to an agency One-Stop employee, “Fishermen all sign up for unemployment instantly, soon as they come off the boats. It's a pattern,” but also commented that the system was too impersonal, and “wasn't working for them as well as it could.”

Successes in Oregon

Each interviewee was asked if they felt that the program was a success, an intentionally-broad question allowing respondents to answer in a way that revealed their own definition and experience. Numerous people from both communities noted this was a program specifically designed to help people who were interested in leaving the fishing industry, not to convince people to leave, and ultimately only worked for those willing to help themselves.

Unless the fisherman, or whoever the program is directed at, wants to do it, it isn't going to work.—FC

I think that it was a really good opportunity for those that wanted to make the transition. . . . those that wanted to make that happen, they were the ones that made the program a success.—SC

Nearly everybody interviewed felt that overall the program did well. Some talked about how it was successful in meeting specific goals, others quoted statistics, and some felt that it had simply helped members of the commercial fishing community to deal with the industry downturn.

It worked real well, and our success rate has been real good . . . I haven't looked at the stats lately, but last time I looked our placement rate was about 90%.—SC[My job-training] was good. I enjoyed it. It was

a little hard being away from home, but I knew it was something that I wanted to do.—FC

Most people interviewed believed that communication between the commercial fishing community and the social service community had improved, as had awareness in the commercial fishing community of social service community programs. However, there was almost universal sentiment that the individuals involved were critical and that as they left positions in agencies or their communities the bridges would disappear with them.

I think [there were bridges], as long as the outreach peer was there.—FC

I think that a lot of bridges were built . . . [but] nothing lasts forever. There's an awful lot of turnover and burnout in agency work. I don't know that it'll be the same when everybody who experienced this program is gone.—SC

Everybody interviewed expressed reasons for the GDOP's success, and positive communication came up as a theme. While many found meetings frustrating, most agreed they were critical to the success of the program as a whole.

Our first experience with the GDOP was not successful . . . We ended up having a meeting saying, 'why isn't this working?', and then it started working. . . . Pretty soon we had a hundred e-mails going back and forth and were communicating with each other and building relationships. And I firmly believe that the relationships are what made this work.—SC

While respondents in Oregon indicated that maintaining clear communication between agencies and regions was a continuous, if often successful, struggle, in California, communication between agencies during the program was often called “virtually nonexistent” and there was a lack of active, adaptive coordination. This is similar to what an independent study on California's response reported to the Monterey County Office for Economic Development (Pomeroy and Dalton 2003). This report posited that the program was less effective than

it could have been due to insufficient promotion, unclear rules, and design flaws.

Suggested Improvements to the Oregon Program

Interviewees were asked what changes they would make if they could reorganize the program from the beginning. Interviewees who went through the retraining expressed appreciation for the training they had received and a desire for more. Some were frustrated that they hadn't been able to finish programs that they had started, though they acknowledged they had been aware of the limited duration of the program.

My niece, she went for her [Certified Nurse's Assistant certification] and now she's working in the doctor's office. She wanted to be [a Registered Nurse] but the funding ran out and she's got another two years to go . . . How can you keep doing something when your money runs out?—FC

The most commonly voiced recommendation was for increased communication, coordination, and standardization between the various organizations involved.

CONCLUSION

Fishery disaster response programs cost governments millions of dollars, yet little research has been put into assessing them; they are poorly understood and documented. This study strove to gain some understanding of fisheries disasters programs by investigating the WCGD. Although specifically evaluating the relative effectiveness of each state's program was impossible due to the wide range of approaches, comparisons between states revealed similarities and differences in the programs potentially useful in future program design.

While accessing social services is never an easy or pleasant task, the process is particularly difficult for members of the commercial fishing community. People trying to leave the industry face unique obstacles including a lack of job search skills and an unpredictable work schedule that makes adhering to traditional retraining programs difficult.

An aggressive, well-planned outreach program is necessary for any effort that aims to directly include people from the fishing industry. Traditional routes of advertising help but the best success rates were found in areas where peers actively recruited members of the fishing industry.

When planning for future disaster responses, it's important to look at the lessons learned from the WCGD and other disaster responses. Oregon's response to the WCGD specifically targeted a broader audience than the salmon disaster program by attempting to include not only fishermen but their onshore business partners, processor employees, and others who were directly reliant on the groundfish industry. This inclusiveness was the result of including commercial fishing community representatives in the design of the GDOP, and the successes of the GDOP may have been related to the continual inclusion of the outreach peers throughout the life of the program. Furthermore, while the salmon commercial fishing community expressed frustrations with eligibility red tape and general disappointment with the program (Gilden and Smith 1996a,b), neither of these complaints emerged in our study, possibly because the GDOP was specifically designed to avoid some of the salmon disaster response problems.

Our study, although small and not perfect by any means, allowed us to gather some lessons learned that could be incorporated into the design of future disaster response programs. Some common broad points and keys to success that were consistently relayed to us:

- **It's about People and**

Perceptions: The majority of the complaints were about individual people or groups and how they treated each other; many of the positive comments concerned the benefits of building relationships.

- **Nobody Enjoys Accessing Social**

Services: No evidence indicated that the system was biased against the commercial fishing community; people access social services as a last resort and most find the experience humiliating.

- **The Commercial Fishing Community Faces Unique**

Challenges in Transitioning: The most pronounced obstacles include high-incomes that are difficult to replicate in most coastal communities, work schedules that make it difficult to adhere to most retraining plans, and the preference for fishing as "a way of life."

- **Successful Transitions out of the Fishing Industry Are Possible:**

Despite obstacles, there are many examples of members of the commercial fishing community who left the industry and transitioned into other work.

- **Successful Fishery Disaster Relief Programs Are Possible:**

While no program was loved by all people interviewed, each had its advocates and the programs in Oregon and California reported successfully helping commercial fishing community members. People in Oregon felt that the GDOP—despite some problems—was generally an overall success. Keys to this success include:

- o Use of a neutral, respected convening entity to bring partners together.
- o Proactive planning; planning and implementation done in partnership with the impacted community.
- o Carefully designed and aggressive peer outreach.
- o Attention to inter- and intra-agency communication.
- o Recognition that economic support during transition is critical.

If members of both the commercial fishing and social service communities, as well as fisheries managers and other decision makers, were to consider these lessons learned, they might have a better understanding of how decisions made may impact communities and what support communities might need to deal with those impacts in the best possible way when the next fishery disaster occurs. ☺

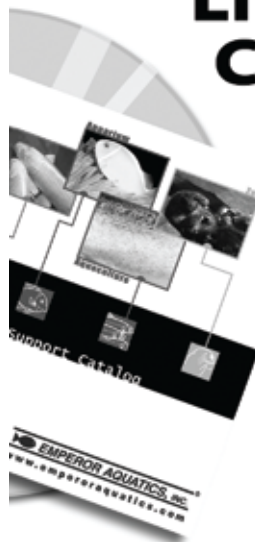
ACKNOWLEDGEMENTS

We would like to thank the participants in this study for sharing their experience and perceptions with us. We would also like to thank Oregon Sea Grant, NOAA Fisheries, and the U.S. Congress for support of this project.

REFERENCES

- Adams, P., and G. Adams.** 1984. Mount Saint Helen's ashfall: evidence for a disaster stress reaction. *American Psychologist* 39(3):252-260
- Berg, B.** 2001. *Qualitative research methods for the social sciences*, fourth edition. Allyn and Bacon Publishing, Toronto.
- Carroll, M., and R. Lee.** 1990. Occupational community and identity among Pacific Northwestern loggers: implications for adapting to economic changes. In R. Lee et al., eds. *Community and forestry: continuities in the sociology of natural resources*. Westview Press, Boulder.
- Conway, F. D. L., J. Gilden, and A. Zvonkovic.** 2000. Changing communication and roles: innovations in Oregon's fishing families, communities, and management. *Fisheries* 27(10):20-29.
- Freudenburg, W., and S. Frickel.** 1994. Digging deeper: mining dependent communities in historical perspective. *Rural Sociology* 57(2): 266-288.
- Gilden, J., and C. Smith.** 1996a. Survey of gillnetters in Oregon and Washington: summary of results. Oregon State University, Oregon Sea Grant, Corvallis.
- _____. 1996b. Survey of Oregon troll permit owners: summary of results. Oregon State University, Oregon Sea Grant, Corvallis.
- Gilden, J., F. Conway, S. Cordray, L. Cramer, C. Finley, G. Goblirsch, and C. Smith** 1999. Oregon's changing coastal fishing communities. Oregon State University, Oregon Sea Grant, Corvallis.
- Hanna, S.** 2000. Setting the fishery management stage: evolution of the West Coast groundfish management. IIFET 2000 proceedings, International Institute of Fisheries Economics and Trade, Oregon State University, Corvallis. Accessed 18 November 2005. Available at: <http://oregonstate.edu/dept/IIFET/2000/papers/hanna.pdf>
- Harms, J., and G. Sylvia.** 2001. A comparison of conservation perspectives between scientists, managers and industry in the West Coast groundfish fishery. *Fisheries* 26(10):6-15.
- Husing, O., S. Davis, and H. Radtke** 2002. Oregon's groundfish fishery: trends, implications, and transitioning plans. Oregon Coastal Zone Management Association, Newport, Oregon.
- Jacob, S., F. L. Farmer, M. Jepson, and C. Adams.** 2001. Landing a definition of fishing dependent communities: potential social science contributions to meeting National Standard 8. *Fisheries* 26(10):16-22.
- Kreps, G.,** 1989. Disaster and social order. In G. Kreps, ed. *Social structure and disaster*. Associated University Presses, Newark, New Jersey.
- Love, M., M. Yoklavich, and L. Thorsteinson.** 2002. *The rockfish of the northeast Pacific*. University of California Press, Berkeley, California.
- Mansfield, B.** 2001. Property regime or development policy? Explaining growth in the U.S. Pacific groundfish fishery. *The Professional Geographer* 53(3):384-397.
- Miller, G.** 2005. The tsunami's psychological aftermath. *Science* 309(5737):1030-1033.
- Overdeest, C., and G. Green,** 1995. Forest dependence and community well-being—a segmented market approach. *Society and Natural Resources* 8(2):111-131.
- Pissot, J.** 1993. Spotted owl not cause of Northwest forest crisis. *The Washington Post*, March 2.
- Pomeroy, C., and M. Dalton.** 2003. Socio-economics of the Moss Landing commercial fishing industry. Report to the Monterey County Office of Economic Development. Accessed November 18, 2005. Available at: http://www.psmcommercialfishingcommunity.org/efin/docs/otherpublications/ML_Cmcl_Fishing_Ind_Report.pdf
- Radtke, H., and S. Davis.** 2004. Oregon's commercial fishing industry: preliminary review of year 2003 and outlook for 2004. Report for Oregon Department of Fish and Wildlife and Oregon Coastal Zone Management Act, Newport.
- _____. 2005. Oregon's commercial fishing industry: year 2004 preliminary review and year 2005 outlook. Report for Oregon Department of Fish and Wildlife and Oregon Coastal Zone Management Act, Portland.
- Raphael, B.** 1986. *When disaster strikes: how individuals and communities cope with catastrophe*. Basic Books, Inc., New York.
- Robson, C.** 2002. *Real world research: second edition*. Blackwell Publishers, Malden, Massachusetts.
- Scholz, A.** 2003. Groundfish fleet restructuring information and analysis project: final report and Technical Documentation. Report for Pacific Marine Conservation Council and Ecotrust, Portland.
- Schwartzman, H.** 1993. *Ethnography in organizations*. Sage Publications, Newbury Park, California.
- Silverman, D.** 2001. *Interpreting qualitative data: methods for analyzing talk, text, and interaction*, second edition. Sage Publications, London.

FREE Aquatic Life Support CD Catalog!



Egg Incubation
Ultraviolet Sterilization
Mechanical Filtration
Foam Fractionation
Biological Filtration
Skid Mounted Systems
Automated Skid Systems
and more...

 **EMPEROR AQUATICS, INC.**[®]

www.emperoraquatics.com

P: 610-970-0440 | E: info@emperoraquatics.com