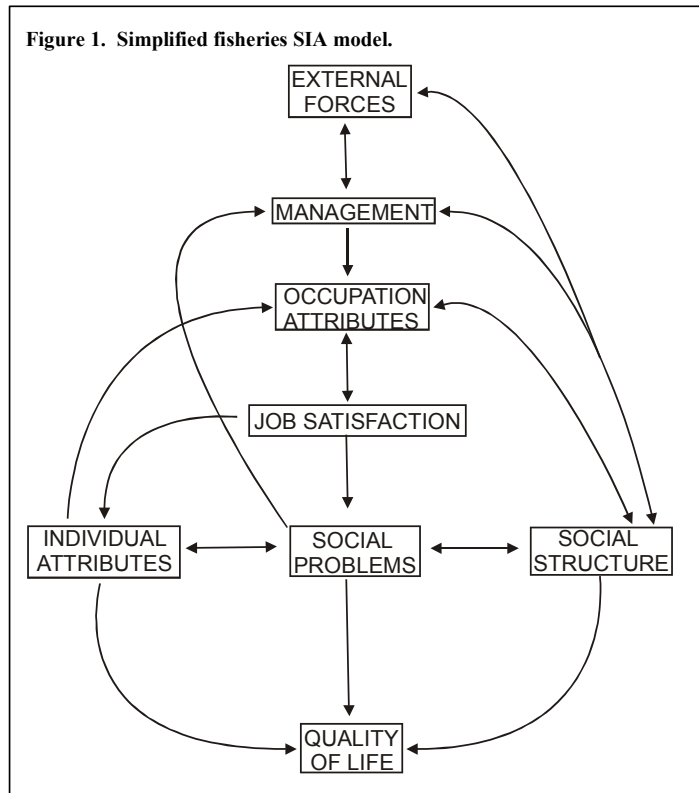
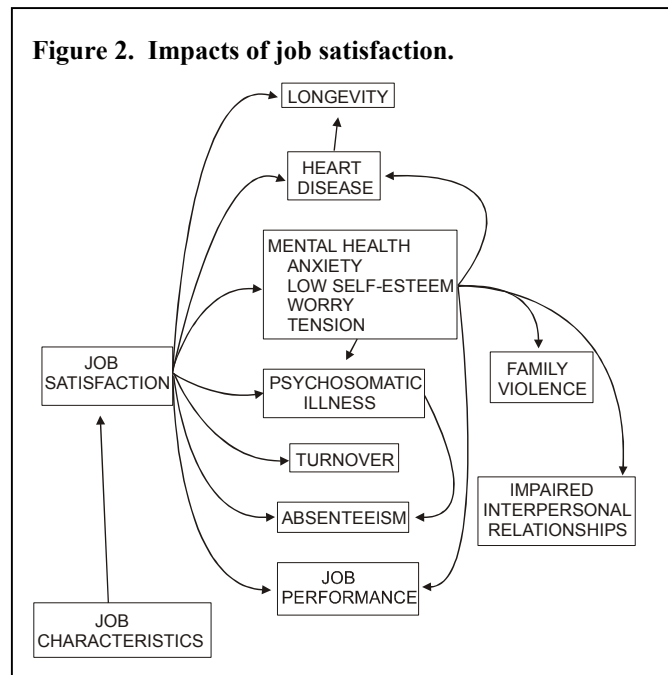


THE PRELIMINARY MODEL FOR FISHERIES SOCIAL IMPACT ASSESSMENT
 DRAFT—IN PROCESS OF BEING EXPANDED & EDITED
 Richard B. Pollnac & the SIA Modeling Workshop Participants

One of the goals of the workshop was to develop a model for fisheries social impact assessment. One of the impact indicators we discussed involved “well being” or “happiness” as distinct from “money” or “production”, although the indicator depends, in part, on these latter two variables. For the discussion here, this indicator will be referred to as “quality of life”, although we may change the name so that we do not get involved in the lengthy discussions of “quality of life” that developed during the 1970s and 80s. During the workshop a model was developed and Pollnac agreed to begin to develop a narrative to accompany the model. As a means of simplifying the presentation—something that would be necessary for a presentation to managers anyway—a preliminary, more general model is presented and discussed. Since “job satisfaction” plays a central role in the model, a sub-model, concerning impacts of job satisfaction is presented to illustrate its role in the larger model. Finally, the more complex model developed in the workshop is discussed.



The simplified model presents some rather obvious relationships. It is argued that external forces, such as population pressure, declining fish stocks, environmental activists, etc. influence the management of fisheries. In turn, management, which can impact fishing targets, times, techniques, numbers of fishermen, etc. has an influence on various attributes of the occupation of fishing. Impacts of the changes will vary according to attributes of the impacted fishery, fishers and community—some are more flexible and/or resilient than others.¹ Nevertheless, fishers, accustomed to a fishery with one set of attributes must now become accustomed to changes, some of which may impact their level of job satisfaction. A great deal of research (see research and



¹ Smith, et al. (2003) discuss factors influencing differential resilience of fishing families impacted by the Florida net ban.

references in Pollnac, et al. 2001; Binkley 1995; Gatewood and McCay 1990; Pollnac and Poggie 1988; Apostle, et al., 1985) has linked job satisfaction to 1) individual attributes such as mental health and longevity; and 2) social problems such as family violence, absenteeism, and job performance (see figure 2 for a more complete list of impacts). These social problems impact aspects of community structure such as community solidarity, and some, such as non-compliance with fishery regulations can feed back and impact aspects of fishery management. Further, aspects of community structure, such as occupational structure can impact occupation attributes; and community power structure, which might include powerful fisheries organizations, can directly influence management as well as the external forces that influence management. Finally, individual attributes, social problems and community structure all have an effect on overall quality of life. Figure 3 includes specific variables within each major category found in Figure 1.

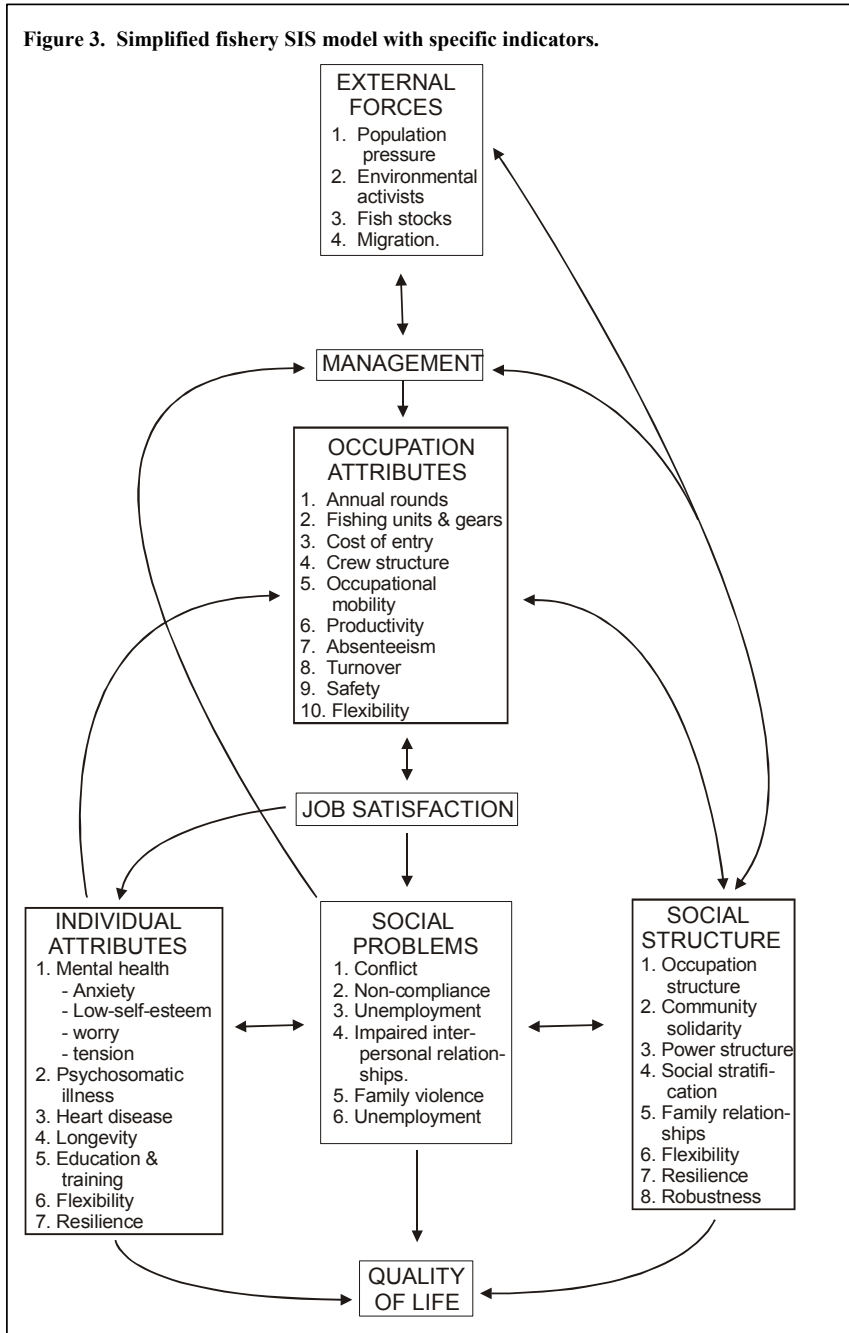
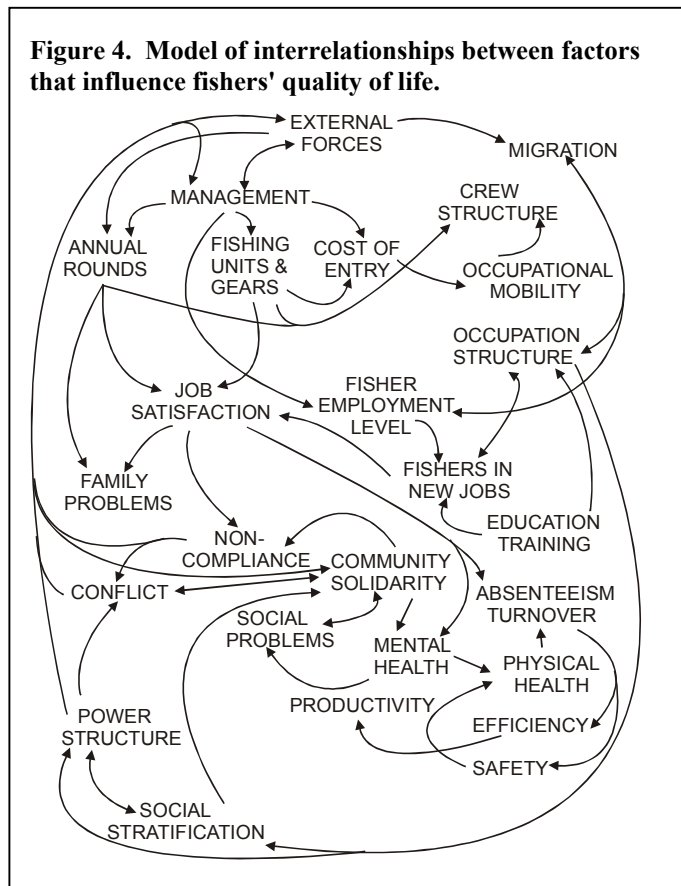


Figure 4 illustrates the complexity of the interrelationships between the variables in the model. Several “voyages” through the model, however, will illustrate both its utility and its present weaknesses.² To use an example we are all familiar with, external forces (e.g., overfished stocks and environmental activists) influenced restrictions on the coastal fishery in the Canadian Maritimes and a decrease in income (Binkley 2002). Among various adaptations (these adaptations reflect the flexibility of the fishery), some fishers shifted to long-trip, offshore fisheries. For some of these fisher families, the longer periods of time away from home resulted in negative impacts on job satisfaction and family relationships, and ultimate negative impacts on quality of life. Others, more flexible and resilient, adapted to the changes; hence, there was variability in resultant quality of life.

The same types of external impacts have influenced managers in some areas (e.g., Alaska) to implement individual fishery quotas (IFQs). In some fisheries in Alaska, the IFQ influenced crew size (no need for a large crew to maximize catches during a short open season) and crew structure (with a smaller crew the owner could rely on a few family members) as well as occupational mobility.³ The cost of an IFQ became so large that many young men lost the hope of ever accumulating enough capital to enter the fishery; hence, restricting their mobility. Many former crewmembers who were forced to leave the fishery, some of whom also lost hope of becoming a boat owner in the fishery, have decreased job satisfaction. The changed occupation structure of the impacted communities has resulted in greater social stratification (unemployed crew members and a class of very rich IFQ holders), with rich IFQ holders gaining more power in the community as well as increasing influence on management. Hence, while the quality of life has improved for some, it has decreased for others.



A final example is the increase in population, with concomitant increases in the wealthier sections of the population that want to live in a shore-side or “quaint” fishing community—what some refer to as “gentrification.” The gentry migrate to the fishing community, changing the occupation structure and social stratification (the in-migrants in this case are either independently wealthy or hold lucrative positions). This impacts the power structure in the community, especially if the wealthy form a shore-side, home-owners’ association that lobbies politicians to reduce or eliminate “stinky” bait barrels, “unsightly” stacks of gear, or fishers’ competition with the gentry’s sport fishing activities; hence, impacting aspects of management. This would impact community solidarity (the fishers versus the gentry), possibly leading to

² As one moves through the model, gaps (e.g., missing variables and/or arrows) become apparent. Workshop members should make suggestions for strengthening the model.

³ There should probably be a link between “occupational mobility” and “job satisfaction.” It is one of the characteristics of the occupation that at one time, in many fisheries, attracted and held many in the fishery.

conflict and more pressure on external forces for more “management” of the fishers with impacts on characteristics of the occupation, job satisfaction, and ultimately, quality of life.⁴

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⁴ Johnson and Orbach (1990) present research on a fishery in transition in the Florida Keys that provides support for this generalized discussion of the gentrification of a fishery. Hall-Arber, et al. (2001?) suggest that gentrification of fishing communities has had a negative influence on port fishing infrastructure in some ports while others have adapted well, indicating differences in community flexibility which could moderate impacts on social stratification.

⁵ There is no date on the report cited. It is assumed that the “01” in the MITSG 01-15 refers to the year.