River Resource Values and Expectation Overview

Introduction

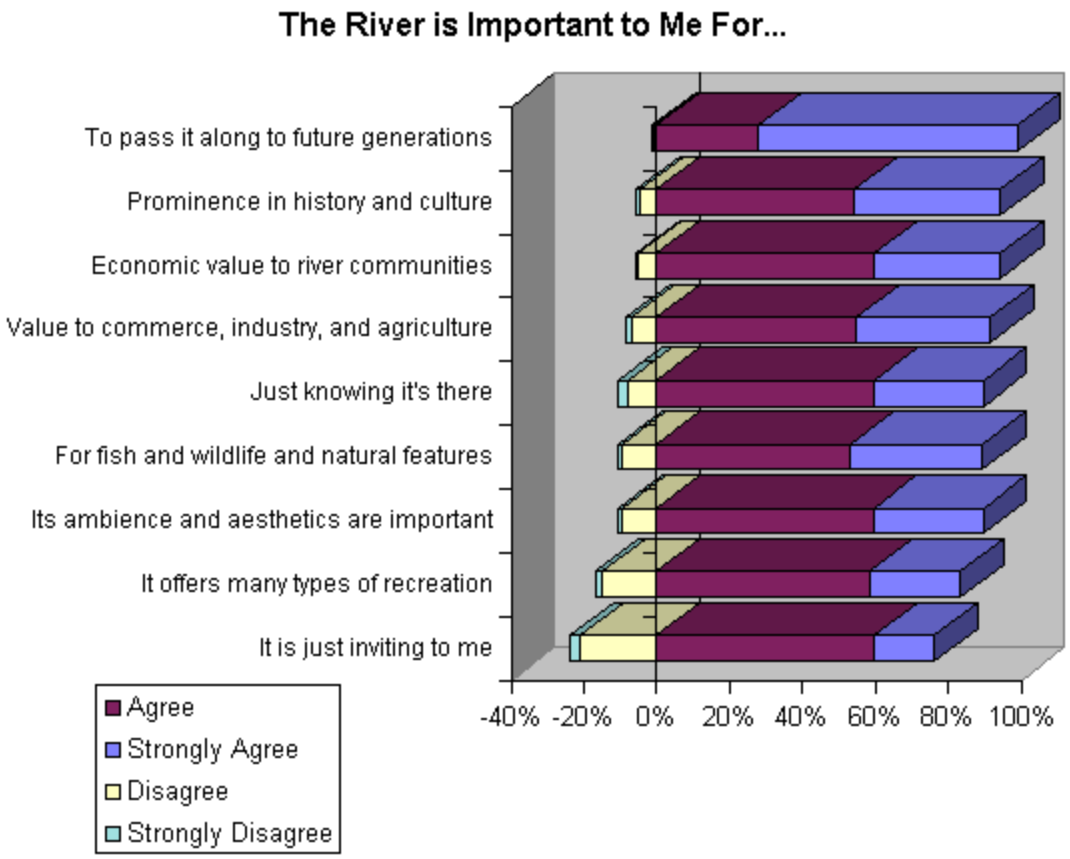
The human dimension is an important, yet often overlooked, aspect of river ecosystem planning and analysis. However, one of the important missions of the Environmental Management Program's (EMP) Long Term Resource Monitoring Program (LTRMP) is to provide decision-makers with information to maintain the UMRS as a viable large-river ecosystem, given its multiple-use character. Within the context of this mission, a survey of the general public was conducted to assay river resource values and expectations.

The survey was developed by the Environmental Management Technical Center (EMTC) and accomplished as part of the LTRMP.1 The survey consisted of interviews with 2,500 randomly selected individuals residing in Illinois, Iowa, Minnesota, Missouri, and Wisconsin. The interviews were conducted by telephone between September 7 and October 24, 1996, by Survey Center Marketing Research of Chicago under government contract. The survey sample of 2,500 was divided to include 500 interviews per state; it was further divided to distinguish between interviews held with residents of counties bordering the navigable portions of the river system (300 per state) and with residents of each state's remaining counties (200 per state). The survey response rate was 60% and the results are considered accurate to +/-2%.

Results (for all respondents combined) showed that citizens value and appreciate the river system in complex ways, and have diverse opinions about how the river system should be managed in the future. Water quality and pollution were overwhelmingly the biggest concerns held by citizens. Potential management actions related to these issues received the strongest support. Efforts to improve and increase habitat and the aesthetic quality of the river ranked next highest, followed by flood protection measures.

People Value the River

Respondents value the river system for a wide variety of reasons. There was virtually unanimous agreement (99%) that it is important to take care of the river system so that we can pass it along to future generations for their enjoyment. There also was a high level of agreement (over 80% for most indicators) that the river is important for environmental, commercial and economic, recreational, historical, and aesthetic reasons. Only 28% of the respondents stated that the river has no particular importance to them personally.



Environmental Considerations Are People's Biggest Concerns

Water quality and pollution are overwhelmingly the biggest concerns of citizens. When asked to identify the most important problem on the stretch of the river with which they were most familiar, three-quarters of respondents who had an opinion mentioned a water quality issue. Flooding issues were the only other category to be mentioned by more than 10% of the respondents with an opinion.

Environmental Management Actions Most Strongly Supported

Respondents were asked to identify their level of support for various river management actions using a five-point scale ranging from 1=no support through 5=strong support.

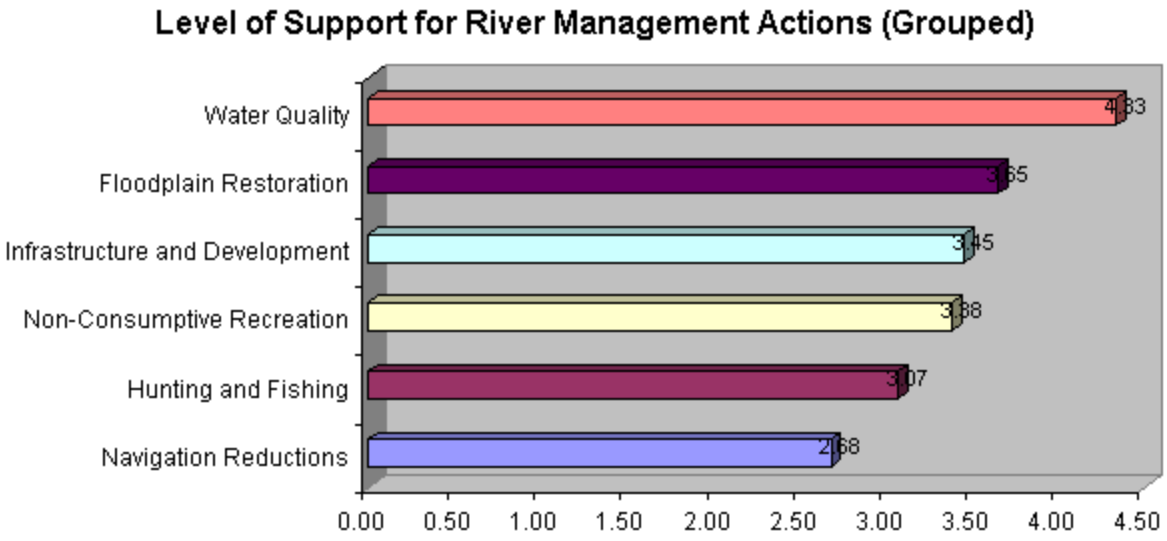
Efforts to improve water quality and reduce pollution received the strongest support, with more than half of all respondents indicating strong support, and less than 5%indicating no support. Efforts to improve and increase habitat and the aesthetic quality of the river system ranked next highest, and so on.

The lowest overall support was indicated for efforts to reduce barge traffic, increase the size of the locks, remove the locks and dams, and create more

hunting opportunities. For example, efforts to remove the locks and dams were strongly supported by only 15% of the respondents, and were not supported at all by 30% of the respondents.

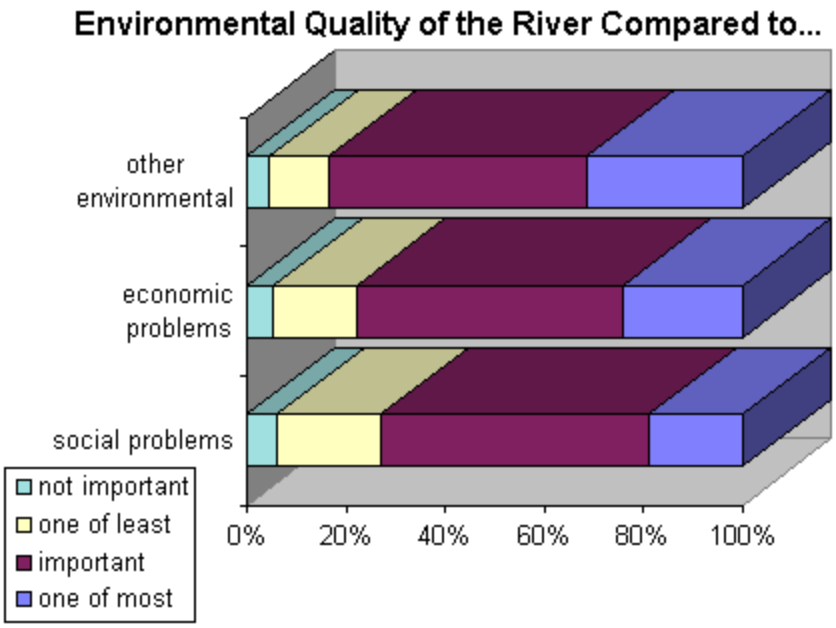
View a graph showing the level of support for each of the 26 management actions considered.

As an additional indicator, respondents were asked to identify what they felt was the most important management effort for the river system. Efforts aimed at reducing pollution were again the most commonly identified (62%), followed by efforts related to improving habitat (15%), recreation (9%), flood protection (7%), reducing barge traffic or removing dams (5%), and increasing lock size or efficiency (3%).

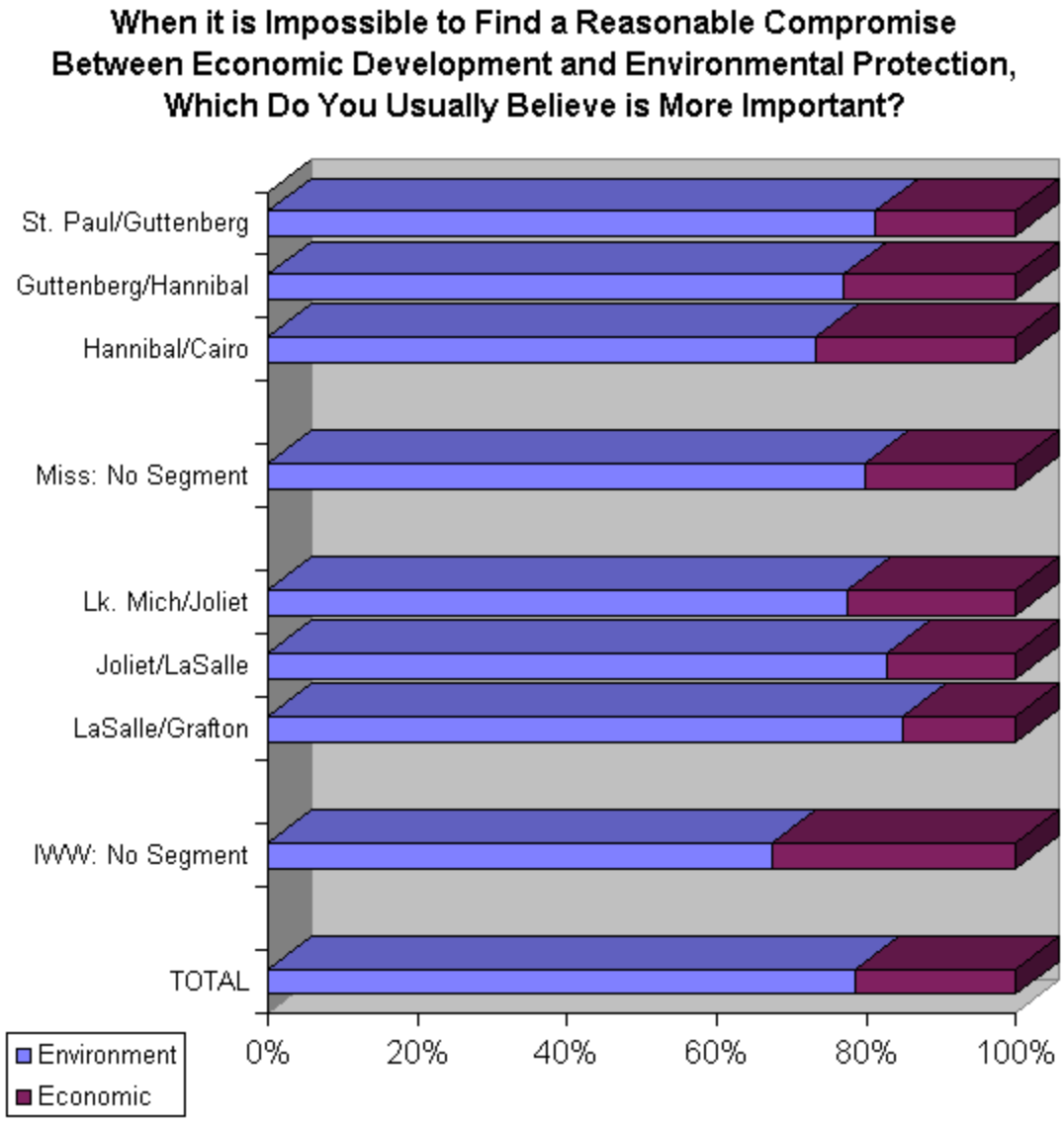


River System's Environmental Issues Important, but Not Society's Most Important

Respondents were asked to compare the importance of the river system's environmental problems to other societal problems. Compared to social problems, 19% felt river environmental issues were among the most important problems, 54% considered them important but not the most important, and 27% considered them among the least important problems or not important at all. River environmental issues were considered slightly more important compared to economic problems (24% among the most important, 54% important but not among the most important, and 22% among the least important or not important at all), and compared to other environmental problems (31% among the most important, 52% important, 17% among the least important or not important at all).

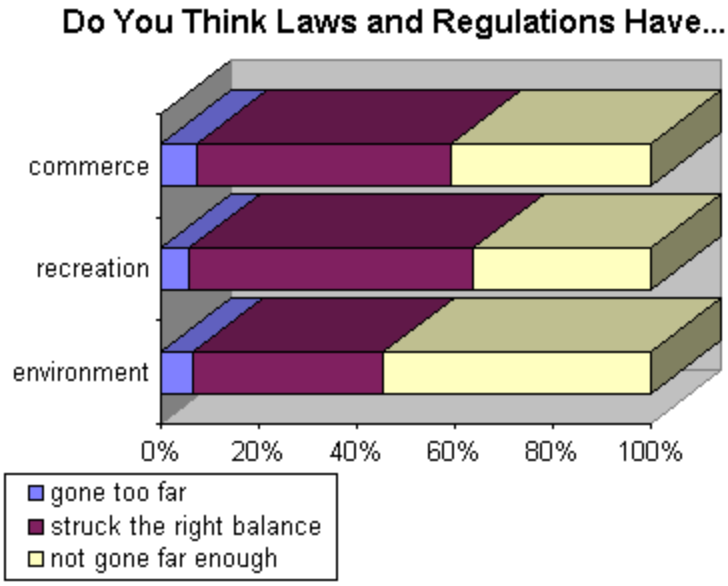


When it is impossible to find a reasonable compromise between economic development and environmental protection, 75% of respondents believe environmental protection is usually more important, and 20% believe economic development is more important. National data suggest that most people believe environmental protection and economic development can be achieved together.[2]



Laws and Regulations on the River: "About Right" or "Haven't Gone Far Enough"

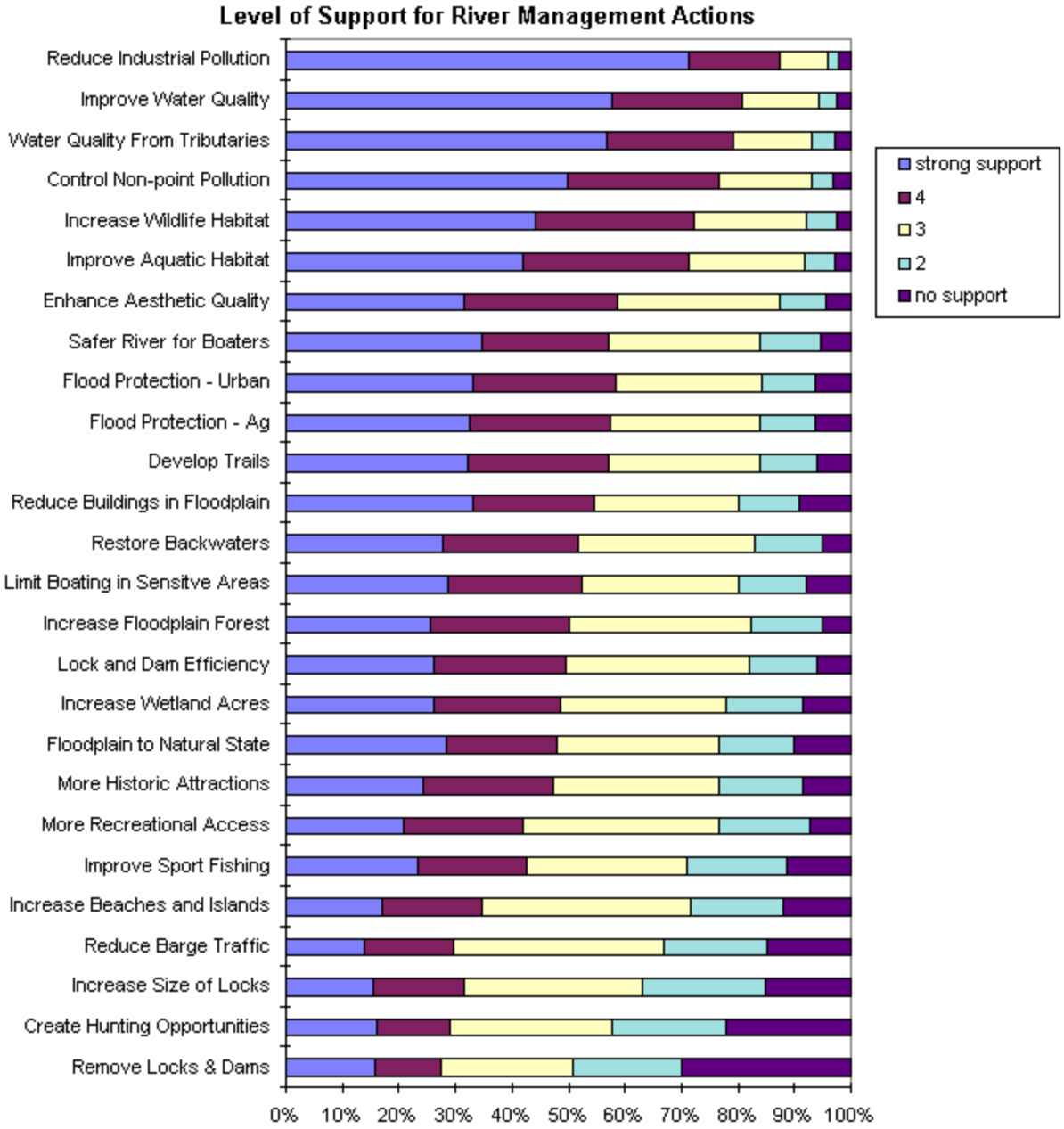
Respondents were asked to consider how the river is regulated for recreation, commerce, and the environment. Fewer than 10% of respondents feel that laws and regulations in these areas have "gone too far," and the majority of respondents are fairly evenly split between feeling the laws have "struck about the right balance" or "haven't gone far enough." Support for stronger regulation was highest for the environment, with more than half of the respondents feeling that laws and regulations "haven't gone far enough."



[1] The State of Missouri provided $5,000 in direct support of this project. The St. Paul District of the U.S. Army Corps of Engineers administered the contract.

[2] "From Anxiety Toward Action: A Status Report on Conservation in 1994." The Times Mirror Magazine's National Environmental Forum Survey, June 1994.

The Level of Support For Each of the 26 Management Actions Considered



GROUPINGS OF MANAGEMENT ACTIONS FOR THE UMRS

The statistical techniques of Factor Analysis and Reliability Analysis have been used to identify and clarify relationships among the 26 independently assessed management measures. Six groups of distinct management measures were

identified (see below). The groups (or "factors) can be conceived as broad management areas, which have been named here in an attempt to capture the associated management activity. The bullets under each factor list the specific management measures as they were asked on the questionnaire. The groupings conform well to the way broad management areas were conceived by the agency representatives when developing the questionnaire. The groups are listed in descending order of overall support, based on normalized means (adjusted for the number of items) as are the specific measures within each group. The measurement scale used was "1=no support, 5=strong support." Note that one item, boating safety, did not fit any of the other groups.

FACTOR 1: Water Quality (mean: 4.33)

- *Efforts to reduce industrial pollution of the river (4.54)*
- *Efforts to develop new programs to improve water quality (4.32)*
- *Improving the quality of the water that flows into the river from its tributaries (4.29)*
- *Efforts to control non-point sources of pollution; for example, agricultural or urban runoff (4.17)*

FACTOR 2: Floodplain Restoration (mean: 3.65)

- *An increase in the amount and quality of wildlife habitat (4.03)*
- *An improved aquatic habitat (4.01)*
- *Efforts to enhance the aesthetic quality of the river (3.76)*
- *Restoration of the river backwaters (3.61)*
- *A reduction in all building development in the floodplain (3.59)*
- *Efforts to limit recreational boating in environmentally sensitive areas (3.53)*
- *Efforts that would increase the amount of floodplain forest (3.49)*
- *An increase in the number of wetland acres along the river (3.39)*
- *Efforts to restore the floodplain to its natural state (3.38)*

FACTOR 3: Infrastructure and Development (mean: 3.45)

- *Initiatives to provide greater flood protection for urban areas (3.66)*
- *Efforts to provide more flood protection for agriculture (3.66)*
- *Efforts to make the locks and dams more efficient for navigation (3.54)*
- *Efforts to increase the size of congested locks so that they can handle more barge traffic (2.94)*

FACTOR 4: Non-consumptive Recreation (mean: 3.38)

- *Efforts to develop additional trails for hiking and walking (3.66)*
- *More historic attractions along or near the river (3.42)*
- *Efforts to provide more recreational access areas (3.32)*
- *An increase in the number of islands and beaches along and within the*

river (3.12)

FACTOR 5: Hunting and Fishing (mean: 3.07)

- *Efforts to improve sport fishing (3.29)*
- *Efforts to create more hunting opportunities (2.84)*

FACTOR 6: Navigation Reductions (mean: 2.68)

- *Reduction of barge traffic on the river (2.87)*
- *Initiatives to remove the locks and dams and return the river to its natural state (2.48)*

*DROPPED VARIABLES**

Efforts to create a safe river for boaters (3.76)

**Variable dropped due to poor fit with other variables based on Reliability Analysis*