

# **Comparison of Attitudes of Hunters and Illinois Residents Toward Wildlife Conservation**

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## Comparison of Attitudes of Hunters and Illinois Residents Toward Wildlife Conservation

### Abstract

In this study, we compare values-orientation among the *Chicago-area general public*, *rest-of-Illinois general public*, and *hunters statewide*. This study is part of a comprehensive survey designed to assess attitudes toward wildlife and conservation in Illinois (Miller et al. 2007). Sample sizes totaled 482 (37% response) for the Chicago-area general public, 640 (49% response) for the rest-of-Illinois general public, and 558 (61% response) for hunters statewide. All 3 groups, but especially hunters statewide (86%), exhibited high levels of bequest values-orientation by disagreeing with the statement that economic growth was more important than preserving natural resources for future generations. The same pattern was observed throughout for statements relating to economic gain compared to resource protection or conservation. Majorities (80%-90% range) of the 3 groups agreed that economic prosperity was dependent on a healthy environment. Majorities (85%-97%) of all 3 groups also agreed that healthy populations of wildlife were important to them. A majority of hunters statewide (60%), a majority of the rest-of-Illinois general public (53%), and a plurality of Chicago-area general public (49%), disagreed with the statement that wildlife should have the same rights as people. Majorities of all 3 groups thought that hunting deer and elk in high-fence enclosures should be illegal. However, the groups differed with respect to hunting for trophy animals, with hunters statewide being supportive and the general public exhibiting negative attitudes. The findings of this study suggest that values toward wildlife conservation and land protection are strong among Illinois hunters and the general public.

## **Problem Statement**

This study was designed to compare wildlife and conservation values-orientation among members of the Chicago-area general public, rest-of-Illinois general public, and hunters statewide. We provide an in-depth analysis of responses to 2 multi-statement questions that were included in a comprehensive survey of attitudes toward wildlife and conservation in Illinois (Miller et al. 2007).

## **Introduction**

Discussions regarding value of natural resources focus generally on economic values of the specific resources, either as raw materials (e.g. board feet of standing timber), potential to be realized (board feet of timber to the local mill), or micro- and macro-economic contributions (mill jobs for the local community). Wildlife are not gauged in economic terms as often as forests, water, minerals, or range land, yet economic amenities associated with wildlife (e.g. hunting licenses revenue, guide fees, hunting equipment) are often used in discussions of relative value of wildlife. Economic values are important, but they are only part of the values assigned to wildlife. Social conflict over wildlife rarely concerns actual economic value. The basis for conflict concerning wildlife and their habitats usually centers on differing psychological values and beliefs held by individuals and groups within our society.

Debates concerning resource use and allocation are not recent occurrences in wildlife management. The basis of these arguments derive from conflicting and contrasting values and beliefs over use of our natural resources (Rudzitis 1999). Some members of our society believe natural resources are resources first and foremost for human consumption (Scherer and Attig 1983). Others feel the same resources are there for individual human use as needed, including realization of personal financial profit (Rolston 1988). Still other members of our society believe

natural resources, including wildlife, have inherent worth and as such are held in public trust and must be considered of higher value than economic commodities (Taylor 1993). Each of these beliefs are based on individual values shared collectively by members of our society and form the basis of conflict over economic development and wildlife conservation.

Values are our standards for evaluating the world around us (Kahle 1983), and are the criteria by which we make choices, judgements, rationalizations, and evaluations (Rokeach 1979). In terms of the individual, values are few in number and relatively slow to change, and form the foundations upon which our beliefs and attitudes are developed (Homer and Kahle 1988). It is widely held that values are formed during the socialization process of the individual and thus remain relatively stable among adults (Schwartz and Bilsky 1987, Stern and Dietz 1994). Brown and Manfredi (1987) present a clear distinction between psychological, societal, cultural, and physiological values.

Cognitive hierarchy theory suggests a relationship exists whereby values form the basis for beliefs, attitudes, and resulting behaviors (Rokeach 1973). As values form the basis of our actions in the world, beliefs are developed in respect to how certain actions will affect objects that are valued. Individuals build their belief structures upon their core values and refer to their personal value and belief structures to determine attitudes expressing acceptability of objects and behaviors, or the end results of such behaviors (Bem 1970, Schwartz 1970, Fulton, Manfredi, and Lipscomb 1996). Attitudes express the positive or negative beliefs held toward the perceived action outcomes relative to how we value the object in question. Therefore, beliefs mediate between values and attitudes, which are the cognitive expressions of the deeper-held values, whereas certain behaviors are the cogent expressions of the same values (Heberlein 1981, Schwartz and Bilsky 1987).

As social values are values of individuals held collectively in our society, it is important to discern dominant individual values regarding environmental phenomena (e.g. wildlife) and processes (e.g. ecosystems). Wildlife can be assigned instrumental value, for which the value of wildlife can be realized only if it is used to provide for human needs. The central thesis of instrumental value is that the value of an object (wildlife) is dependent on humans and can only be realized when used to provide for humans. On the other hand, intrinsic value is that which is subjectively assigned to the object or process (e.g. spiritual, cultural, or symbolic) and is relative to the individual or culture in which the object or process is defined. Norton (1987) argues that instrumental values for preservation of biodiversity, for example preserving rainforests for potential as stocks of plants with pharmaceutical uses, provide valid arguments in an anthropocentric form. Intrinsic values, according to Norton, cannot be defined nor transferred to society as a whole. Problems exist with exclusive application of quantitative evaluations of value according to Shaw (1987). He argues that to define wildlife in a resource economic sense, we must first define the product and identify the individual receiving the benefit of that product, and that these 2 main components of resource evaluation are not fully realized.

Seligman (1989) proposes individuals valuing the environment for instrumental or utilitarian purposes are expressing anthropocentric values, while those who believe nature has value in and of itself and deserves moral standing are expressing ecocentric values. The word “anthropocentric” has been defined as a values-orientation whereby the natural world is viewed as a storeroom of materials awaiting human use (Eckersley 1992). Thompson and Barton (1994) found attitudinal and behavioral correlates of anthropocentric and ecocentric values. Individuals expressing anthropomorphic attitudes tended to be more apathetic overall and less likely to join organizations or practice conservation behaviors than individuals expressing ecocentric attitudes.

Van Liere and Dunlap (1980) conducted a comprehensive review of the literature and data from several studies prior to 1980 to examine effects of 5 socio-demographic variables on environmental attitudes: gender, age, social class (income, education, and occupational prestige), residence, and political affiliation. They found that most individual studies supported the hypothesis that environmental concern was related to age, and when tested in a meta-analysis the studies reported a moderate negative correlation between age and environmental attitudes. Their literature review indicates 2 conflicting hypotheses on the effects of social class and environmental concerns. The dominant paradigm suggests environmental concern increases with class status as individuals meet their basic needs. A few studies suggest, however, that lower income individuals tend to live in areas with more environmental degradation and therefore are more concerned about the environment. When examining the individual variables in their social class index, they found a moderately strong positive relationship between education and environmental concern, slight positive relationship with occupational status (too slight to be significant), and little support for income and environmental concern (likely due to too few studies). General support for difference in environmental attitudes and place of residence was found to exist, notably that urban residents tended to have greater environmental concern than rural residents. Rural residents live in smaller towns with economies tied more directly to natural resource uses (especially extractive uses) and economic development.

Van Liere and Dunlap (1980) found little support for gender differences and often revealed conflicting results. The meta-analysis provided little additional support for a relationship between gender and environmental concern, but the level of support could be explained by the fact that few studies that examined this specific connection existed at the time of their review. Political affiliation was found to have some relationship, but the studies to date

failed to reveal a significant correlation. Mohai (1992) found modest differences in environmental concern between genders, with women expressing somewhat slightly more concern than men in a national survey. A significant difference was found to exist in terms of environmental activism and organizational membership, with men being more likely to be environmentally active and belong to environmental organizations. Stern, Dietz, and Kalof (1993) investigated gender differences in environmental attitudes pertaining to political action and willingness to pay for actions to protect the environment. Although they found gender differences for specific beliefs, there was no significant overall gender effect. Results of a study of gender differences in conservation attitudes conducted by Czech, Devers, and Krausman (2001) supported the findings of Van Liere and Dunlap (1980) in that very few gender differences were found to exist. Mankin, Warner, and Anderson (1999) examined gender differences in attitudes toward wildlife management and use in Illinois. They found no significant differences for satisfaction with wildlife management, participation in wildlife-related recreation, or endangered species protection. Although the results were not statistically significant, men were more supportive of hunting than women. Investigation of regional effect (i.e. rural to urban) provided no significant differences in attitudes by gender. Anthropocentric-biocentric values orientations differed by gender in a study of Colorado residents' attitudes toward national forest management (Vaske et al. 2001). Females were more biocentric in their values, whereas men were more anthropocentric.

Buttel and Flinn (1978) found a curvilinear relationship between income and environmental attitudes. They report environmental concerns are low for lower income individuals and rise with rise in income. After a point, however, environmental orientation declines with increase in income. This decline in environmental orientation is likely due to very

high income individuals being more interested in protecting business over environmental interests. In their study of Colorado residents' values-orientation toward national forest management, Vaske et al. (2001) found no significant difference in anthropocentric-biocentric orientations based on income.

Similar to gender effects, education appears to have mixed significance as a predictor for environmental attitudes. Inglehart (1990) found that increased education was associated with increased positive attitudes toward environmental protection. Steel et al. (1994) reported education as a significant predictor of anthropocentric-biocentric attitudes in a national survey, but not significant in the same survey of Oregon residents. Findings by Vaske et al. (2001) for Colorado resident's anthropocentric-biocentric attitudes toward national forest management supported the hypothesis that increased education is associated with increased biocentric attitudes. There exists a paradox, for as education increases in a population, so does standard of living. As national standard of living increases so does productivity, which in turns fuels greater economic development (Humphrey and Buttel 1982). Thus, as education may lead to greater biocentric attitudes, it may also prompt greater economic development.

Residence merits special consideration as a demographic effect on environmental attitudes. Earlier studies (e.g. Tremblay and Dunlap 1978) found rural-urban differences in attitudes toward environmental protection and resource conservation. Mankin, Warner, and Anderson (1999) found urban and rural Illinois residents expressed different attitudes related to wildlife management, wildlife damage to vehicles and crops, use of wildlife for food, wildlife population control, and participation in wildlife-related recreation. These differences may not be as distinct in the future, however, as many regions of the United States (most notably the West) are experiencing rapid growth in rural regions (Cromartie and Wardwell 1999, Ingram and

Lewandrowski 1999). The rural environment offers many amenities, including wildlife, desirable to urban residents looking to live close to nature (Harris, Shaw, and Schelhas 1997, Rudzitis 1999). Manfredo and Zinn (1996) identified several potential wildlife-related conflicts associated with increasing populations and corresponding value differences between new and long-term residents in Colorado rural communities. Differences in value orientations have resulted in conflict regarding management of public resources in the West other than wildlife, including forests (Marcin 1993) and water (Wiebe, Tegene, and Kuhn 1999). Vaske et al. (2001) found residents who had lived in Colorado for longer periods tended to be anthropocentric in their value orientations toward national forest management, whereas new residents were likely more biocentric in their value orientations.

As populations shift from more urban regions to rural communities and remote locations, the rural/urban values distinction will wane. Conflict is already emerging due to the values of the newer residents conflicting with those of more established residents, most notably in the West. This conflict often arises from values associated with extractive uses of natural resources such as timber harvest (Bliss 2000, Bengston and Xu 1995) and consumptive uses of wildlife including hunting and trapping. These traditional uses of natural resources have constituted economic development for rural western communities. Shifting values and changing economic bases for these communities will result in further conflict over resource management.

## **Methods**

The 8-page questionnaire used for this study incorporated attitudes toward both specific conservation issues (e.g., wilderness management, economic development, endangered species conservation) and general ecological concepts (Miller et al. 2007). We employed a mail-back

survey of 3,000 single-family households, stratified into 2 groups: 1,500 residents in the 9-county region that comprises the greater Chicago metropolitan area (Cook, DuPage, Grundy, Kane, Kankakee, Kendall, Lake, McHenry, and Will.) and 1,500 households in the remainder of the state. Two-thirds (65%) of Illinois' residents live in the greater Chicago metropolitan area. In addition, we selected a random sample of 1,000 hunters from residents who purchased an Illinois Habitat Stamp. Each survey participant was mailed a questionnaire, cover letter, and postage-paid return envelope in February 2004. At approximately 14-day intervals, nonrespondents were subsequently sent a thank you/reminder postcard, a second copy of the questionnaire, another thank you/reminder postcard, and a third copy of the questionnaire.

The response rates were 61% (n=558) for hunters statewide, 37% (n=482) for Chicago-area general public, and 49% (n=640) for rest-of-Illinois general public (Miller et al. 2007). Coded data from returned questionnaires were entered into a computer file and analyzed using SPSS 12.0

## **Results**

Faced with choices between environmental protection and economic gain, hunters statewide exhibited greater support for conservation than did the general public in the Chicago area or in the rest of Illinois (Table 1). Although a majority of all respondents felt natural resource preservation was important, more hunters statewide (86%) showed greater bequest values-orientation by disagreeing with the statement that economic growth was more important than preserving natural resources for future generations. In comparison, 81% of the Chicago-area general public and 75% of the rest-of-Illinois general public were of the same persuasion. Similar patterns were observed for responses to the statements regarding economic gain

compared to resource protection or conservation. A higher percentage of hunters statewide (74%) supported wildlife protection over economic prosperity, contrasted with 65% of Chicago-area general public and 62% of the rest-of-Illinois general public.

Majorities of hunters statewide (61%) and of the Chicago-area general public (61%) felt that leaving resources untouched (bequest value) was more important than developing them for economic benefit; although a majority of the rest-of-Illinois general public expressed the same values, the percentage (54%) was lower (Table 1). The proportion of respondents who did not support use of land for economic gain was higher for hunters statewide (70%) than for Chicago-area general public (64%) and rest-of-Illinois general public (61%). Overall, most respondents were not supportive of energy development on public land, with more hunters statewide (78%) being opposed than Chicago-area general public (73%) and rest-of-Illinois general public (70%). Majorities of respondents in each group also expressed support for conserving wildlife habitat over economic growth, with more hunters statewide (88%) once again expressing greater support for wildlife habitat than members of the general public (79% and 77%, respectively).

When considerations were provided for economic and environmental health, an overwhelming majority of respondents, regardless of group, was in agreement that economic prosperity was dependent on a healthy environment (Table 2). Most statements produced agreement in the 80-90% range.

Majorities of all 3 groups stated that healthy populations of wildlife were important to them (Table 3). However, 68% of hunters statewide strongly agreed with that statement, compared to 45% of the Chicago-area general public and 42% of the rest-of-Illinois general public. Similarly, differences were noted for the statements ensuring an abundance of fish and

wildlife populations for future generations and for the importance of the existence of fish and wildlife populations.

Items related to rights of wildlife showed stronger responses from hunters compared to the general public (Table 3). That is, more hunters statewide (23%) strongly disagreed that wildlife should have the same rights as people, compared to 13% for Chicago-area general public and 14% for the rest-of-Illinois. Furthermore, more hunters statewide (26%) strongly disagreed that wildlife should be given the same rights as pets, compared with 8% of Chicago-area general public and 13% of the rest-of-Illinois general public. A higher percentage of hunters statewide (19%) also strongly disagreed that rights of wildlife to exist were more important than human uses of wildlife, compared with 8% of Chicago-area general public and 9% of the rest-of-Illinois general public. Hunters statewide (26%) were also more likely to strongly disagree that some species were not worth spending money to save, compared with 15% of Chicago-area general public and 17% of the rest-of-Illinois general public. All 3 groups indicated that there has not been too much attention given to wildlife in our society.

There was little overall disagreement with the statement equating impact on wildlife with loss of habitat rather than hunting (Table 4). However, more hunters statewide (65%) strongly agreed with that statement, whereas 39% of Chicago-area general public and 41% of the rest-of-Illinois general public who strongly agreed. A similar pattern was observed with the statement about acceptability of reducing wildlife that causes crop damage, with more hunters statewide (42%) in strong agreement, compared with 10% for the Chicago-area general public and 18% for the rest-of-Illinois general public. It should be noted that, compared to the other groups, relatively more of the Chicago-area general public (15%) were unsure about this statement.

Differences among the 3 groups were apparent in their responses to questions about certain hunting practices (Table 4). Slightly more than one-half (53%) of the hunters statewide supported the statement that high-fence enclosure shooting operations should be illegal. This compares to 69% of the Chicago-area general public and 65% of the rest-of-Illinois general public who expressed similar feelings. Also, most hunters statewide (75%) disagreed that trophy hunting should not be tolerated, compared with 61% of Chicago-area general public and 48% of the rest-of-Illinois general public who agreed with this statement.

## **Discussion**

In general, hunters did not differ from members of the general public in their attitudes toward wildlife conservation. Or, to state it another way, the general public was in agreement with hunters on the importance of wildlife in their lives, need for protection of wildlife and habitat, and emphasis placed on conservation. Public awareness of the role habitat destruction plays in reducing wildlife populations was higher than might be expected from past studies (e.g., Mankin, Warner, and Anderson 1999). It appears that values toward wildlife conservation and land protection are strong among Illinois residents, especially when issues involve protecting land and populations of wildlife and fish for future generations to enjoy.

Although majorities of all 3 groups surveyed were of the opinion that high-fence shooting operations should be illegal, such feelings were much stronger among the general public than for hunters. These findings will be crucial if legislative efforts are put forth to regulate or ban high-fence shooting operations. Disagreement among the groups existed primarily in attitudes toward trophy hunting. Hunters were supportive of trophy hunting, whereas the general public

expressed negative feelings about this form of hunting. Further analysis may expose additional differences, especially those that cut across demographic variables.

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