

Perspectives on The Wildlife Society's Economic Growth Policy Statement and the Development Process

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Abstract

On 18 September 2004, The Wildlife Society (TWS) published an official policy statement on economic growth and wildlife conservation. We believe this policy statement did not adequately address the issues. Thus, TWS missed an opportunity to lead the natural resource profession in refuting the fallacious rhetoric that "there is no conflict between economic growth and wildlife conservation" through the adoption of a strong policy statement on economic growth. Although we commend TWS Council for adopting a policy statement on economic growth, we believe the final wording contains several weaknesses. Here, we take a closer look at the statement and further evaluate how it might be strengthened in the future. (WILDLIFE SOCIETY BULLETIN 34(2):507-511; 2006)

Key words

economic growth, policy statement, steady state economy, The Wildlife Society, Working Group for the Steady State Economy.

The Wildlife Society Policy on Economic Growth

The Wildlife Society (TWS) policy statement defines economic growth as "an increase in the production and consumption of goods and services" (<http://www.wildlife.org/policy/index.cfm?tname=policystatements&statement=ps35>). We believe this definition is appropriate. However, we see problems with the next sentence: "Technology has the potential to diminish or exacerbate the effects of economic growth, depending on whether the net result is increased or decreased per capita natural resource consumption." This sentence might have been appropriate with further elaboration. Its current wording ignores the fact that new technology requires research and development, an expenditure that entails economic growth at current levels of technology (Czech 2003). Furthermore, we have a history of technological fixes that have exacerbated or created new problems rather than solving them. Some examples include DDT, thalidomide, chlorofluorocarbons, and, more recently, the construction of elaborate levee networks to protect cities such as New Orleans from flooding, and the contamination of aquifers and streams used for drinking water and irrigation by highway salts and excess nitrogen fertilizer.

We compared the policy statement wording about technological progress with that originally proposed by the TWS Working Group for the Steady State Economy (WGSSE). The working group wrote, "Up to a point and in the short term, the capacity for economic growth is increased by technological progress, or invention and innovation that results in a higher output of goods and services per unit of input. The research and development associated with technological progress is itself a physical,

economic activity requiring the liquidation of natural capital. Technological progress results in an expansion of the human niche and, in the service of economic growth, results in the liquidation of additional natural capital" (Appendix A).

We acknowledge that technological innovations can increase efficiency and reduce the co-production of waste. Under specific circumstances some of the wastes may actually become the raw materials for consumption, lessening but not eliminating the demands on natural capital. However, we argue that the key point remains: technological progress in the service of economic growth results in the liquidation of additional natural capital. When we note that natural capital (e.g., soils, waters, and forests) had comprised wildlife habitat prior to its liquidation, the fundamental conflict between economic growth and wildlife conservation emerges (Czech 2000).

The second paragraph of the TWS policy statement points out that some believe in perpetual economic growth, while others do not (<http://www.wildlife.org/policy/index.cfm?tname=policystatements&statement=ps35>). This assessment should not surprise anyone. What is surprising to us is that nowhere in the "policy statement" does TWS take a side on the issue. It seems that TWS is ignoring thermodynamics and carrying capacity in considering the neoclassical economist's *reductio ad absurdum* that continually improved efficiencies and substitutions will allow us to grow our economy forever, ultimately using no natural resources at all (Solow 1974).

In contrast to the TWS policy, WGSSE stated, "Based upon established principles of physics and ecology, there is a limit to economic growth in the long term regardless of technology" (Appendix A). Although positions on wildlife management and conservation issues can vary among well-meaning scientific

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organizations for a variety of reasons, a consensus has been building among ecological economists and natural resources professionals on limits to growth. For example, The Society for Conservation Biology's North America Section did not think it necessary to elaborate beyond the point, "Based upon established principles of physics and ecology, there is a limit to economic growth" (<http://conbio.net/SCB/Activities/Sections/NAmerica/NAS-SCBPositionOnEconomicGrowth.cfm>).

The TWS policy may be interpreted as suggesting that there *may* be a conflict between economic growth and wildlife conservation, but not necessarily a fundamental conflict, because whatever conflict there is may continually be reconciled via technological progress. Readers might be led to believe that TWS suspects perpetual economic growth is indeed possible if only the "right" kind of technological progress occurs. In other words, TWS appears to be advocating "smart growth," but biodiversity loss in our bubble economy continues whether or not growth is smart (Brown 2003).

We believe the third and fourth paragraphs contain the strongest wording in TWS policy statement on economic growth. Paragraph 3 lists a few "mechanisms of economic growth" that "may impact the physical environment" (<http://www.wildlife.org/policy/index.cfm?tname=policystatements&statement=ps35>). It includes the phrase "unsustainable consumption levels," which implies, at least, limits to the rate (if not the amount) of economic growth.

The fourth paragraph begins by referring to some unspecified "balance sheet" produced by equally unspecified "economic models." Several redeeming points can be found in such statements as the "inevitable reliance on natural resources to achieve economic growth" and the "erosive impact of economic growth on wildlife." When taken in context, we find that "*many* concerned about wildlife conservation *believe* greater attention needs to be given to the erosive impact of economic growth on wildlife" (emphasis added). Readers also could conclude that many others in the wildlife profession do *not* believe greater attention needs to be given to the erosive impact of economic growth and perhaps do not even *acknowledge* the impact.

In our opinion, TWS policy statements represent overall principles or guidelines adopted by the TWS membership as a whole. There will, of course, be minority views on many TWS policies. However, by going out of the way to identify subsets within TWS that "believe" in the existence of a problem or the importance thereof, we contend this provides little assurance that TWS membership as a whole has indeed taken a position.

The remainder of the TWS policy consists of 10 points that constitute "the policy of The Wildlife Society with respect to economic growth" (<http://www.wildlife.org/policy/index.cfm?tname=policystatements&statement=ps35>). The policy of TWS is to "encourage" actions, such as studying the issue and communicating about it. Phrases such as "resolution of incompatibilities between economic growth and wildlife conservation" and the inevitable engagement of "stakeholders" do not make for a strong position.

In summary, we believe many readers will conclude—whether true or not—that the TWS policy was worded so as to avoid political discord, especially with pro-growth forces such as

corporations, corporately financed politicians, and politically appointed economists, i.e., the "iron triangle" (Czech et al. 2003). The irony is that Czech et al. (2003) pointed with hope to a tool for breaking through the iron triangle to the economic policy arena: a strong TWS policy on economic growth.

How Was the TWS Policy on Economic Growth Conceived?

The reader may find it useful to understand how this policy statement was developed. The following timeline represents our best assessment of the beginnings of TWS policy statement on economic growth.

Czech (2000) proposed that TWS take a position on economic growth no later than 2000. Systems ecologists implicitly backed that position (Hall et al. 2000) as well as economists (Erickson 2000, Gowdy 2000) who sought to assist TWS in debunking the myth that wildlife conservation and economic growth were compatible. The WGSSE formally proposed a policy on economic growth at the TWS 2003 annual conference (Appendix A). Nearly identical policies were adopted by the Society for Conservation Biology's North America Section, the United States Society for Ecological Economics, and the Center for the Advancement of the Steady State Economy (with endorsements from numerous individuals and organizations). We believe the highlight from 2001–2003 was the publication of TWS Technical Review 03-1, which described a "fundamental conflict between economic growth and wildlife conservation" (Trauger et al. 2003:1).

How then, given WGSSE's proposed policy statement and Technical Review 03-1, did TWS Council approve a weakened policy statement? The following description represents our best understanding of why this happened.

Following the 2003 conference, TWS turned the WGSSE proposal over to the TWS Policy Statements Subcommittee (Subcommittee), consisting of 4 Council members and the TWS policy director. The Subcommittee developed the position, which TWS, per agreement, introduced in the May 2004 issue of *The Wildlifer*, inviting comments from TWS membership by 1 August 2004. Although there is no apparent requirement that the Subcommittee seek input from knowledgeable TWS members prior to developing a policy statement, we suggest here that future consideration be given to inviting comments from any working group instrumental in developing a policy statement. This input should be sought prior to a statement being reviewed by the membership because these individuals are likely to have special expertise and insight on the issue. For example, in this case, given the politically difficult task already at hand, the WGSSE had carefully avoided unnecessary, ideological references pertaining to American political economy in developing their position (Appendix A). We believe politically charged phrases, such as "free competitive market," "dominant expansionist philosophy," and "faith in technology," found in the Subcommittee's statement, and the resultant negative feedback, might have been avoided and were wholly unnecessary to posit the fundamental conflict between economic growth and wildlife conservation.

Realizing the concerns that some members might have about supporting a steady state economy, Brian Czech and Herman Daly (a foremost authority on the steady state economy) coauthored an article for the *Wildlife Society Bulletin* on this topic (Czech and Daly 2004). The article was designed not only to elaborate on the implications of the steady state economy, but also to provide TWS members with the original WGSSE proposal, which was provided in their Table 1. The article was published in the 2004 summer issue, which arrived in mailboxes during the last week of July. It is unfortunate that little time was available for members to read the article prior to sending in their comments on the policy statement, relative to the 1 August 2004 deadline. The contents of the article may have allayed several of the fears expressed by some members. Regrettably, on 18 September 2004, rather than approving a strong statement with possibly a few dissenting votes, the modified and, in our opinion, weak policy statement was approved with a unanimous vote of 11–0.

Is There a Productive Future for the TWS Policy on Economic Growth?

We cannot expect a great deal from the current TWS policy statement on economic growth anytime soon. We believe that before it can be an effective educational tool among the public and in the policy arena it will need to be strengthened and its ambiguity removed. It will need continued efforts by the WGSSE and a stronger commitment from TWS Council. To insure convergence on such issues in the future, we suggest that TWS develop a process by which TWS policy statements can be reviewed by the working group proposing the policy or a process be provided by which policy statements can be revised if new information becomes available or if perceived inaccuracies are found in them. The process might include the following: 1) allow working groups that participated in the development of a policy

Literature Cited

- Brown, L. R. 2003. *Plan B: rescuing a planet under stress and a civilization in trouble*. W. W. Norton, New York, New York, USA.
- Czech, B. 2000. Economic growth as the limiting factor for wildlife conservation. *Wildlife Society Bulletin* 28:4–15.
- Czech, B. 2003. Technological progress and biodiversity conservation: a dollar spent, a dollar burned. *Conservation Biology* 17:1455–1457.
- Czech, B., E. Allen, D. Batker, P. Beier, H. Daly, J. Erickson, P. Garrettsen, V. Geist, J. Gowdy, L. Greenwalt, H. Hands, P. Krausman, P. Magee, C. Miller, K. Novak, G. Pullis, C. Robinson, J. Santa-Barbara, J. Teer, D. Trauger, and C. Willer. 2003. The iron triangle: why The Wildlife Society needs to take a position on economic growth. *Wildlife Society Bulletin* 31: 574–577.
- Czech, B., and H. E. Daly. 2004. The steady state economy: what it is, entails, and connotes. *Wildlife Society Bulletin* 32:598–605.
- Erickson, J. D. 2000. Endangering the economics of extinction. *Wildlife Society Bulletin* 28:34–41.
- Gowdy, J. M. 2000. Terms and concepts in ecological economics. *Wildlife Society Bulletin* 28:26–33.
- Hall, C. A. S., P. W. Jones, T. M. Donovan, and J. P. Gibbs. 2000. The implications of mainstream economics for wildlife conservation. *Wildlife Society Bulletin* 28:16–25.
- Solow, R. M. 1974. The economics of resources or the resources of economics. *American Economic Review* 64:1–14.
- Trauger, D. L., B. Czech, J. D. Erickson, P. R. Garrettsen, B. J. Kernohan, and C. A. Miller. 2003. The relationship of economic growth to wildlife conservation. *Wildlife Society Technical Review* 03-1. The Wildlife Society, Bethesda, Maryland, USA.

statement to remain involved right up until its adoption; 2) allow working groups the opportunity to petition for a re-review of TWS policy statement 5 within a 90-day “grace” period prior to final adoption; or 3) allow for a re-review of policy statements at specific times (e.g., every 2 years). The re-review would then trigger a means by which a subcommittee of working group and original authors, for example, would then consider whether a revision of TWS policy statement is necessary. Regarding the WGSSE role in the current process, perhaps we could have done a better job of educating the members or providing a forum for discussion prior to TWS eliciting comments. For now, other societies—e.g., the Society for Conservation Biology, American Fisheries Society, and Ecological Society of America—may have to lead the way on this matter. The amount of wildlife remaining to be protected in the future will be a function of these societies’ and TWS’s fortitude and forthrightness on this controversial issue.

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Appendix A.

The policy on economic growth and wildlife conservation proposed by Working Group for the Steady State Economy at The Wildlife Society conference on 6 September 2003.

A. *Whereas:*

1. Economic growth, as defined in standard economics textbooks, is an increase in the production and consumption of goods and services, and;
2. Economic growth occurs when there is an increase in the multiplied product of population and per capita consumption, and;
3. The American economy grows as an integrated whole consisting of agricultural, extractive, manufacturing, and services sectors that require physical inputs and produce wastes, and;
4. Economic growth entails the liquidation of natural capital such as but not limited to soil, water, timber, forage, minerals, fisheries, and wildlife, and;
5. Economic growth is often and generally indicated by increasing real gross domestic product (GDP) or real gross national product (GNP), and;
6. Up to a point and in the short term, the capacity for economic growth is increased by technological progress, or invention and

innovation that results in a higher output of goods and services per unit of input, and;

7. The research and development associated with technological progress is itself a physical, economic activity requiring the liquidation of natural capital, and;
8. Based upon established principles of physics and ecology, there is a limit to economic growth in the long term regardless of technology, and;
9. Technological progress results in an expansion of the human niche and, in the service of economic growth, results in the liquidation of additional natural capital.

B. Therefore:

1. There is a fundamental conflict between economic growth and wildlife conservation in which economic growth operates at the competitive exclusion of wildlife in the aggregate, and;
2. Moderate levels of economic activity create a need for professional wildlife management and conservation activities, but too much economic growth conflicts with the wildlife profession as it eliminates an increasing proportion of wildlife and habitats, and;
3. A steady state economy (that is, an economy with a stable or mildly fluctuating product of population and per capita consumption) is a viable alternative to a growing economy that is consistent with the goal of wildlife conservation, and;
4. Long-term sustainability requires the establishment of an economy at a size small enough to avoid the breaching of reduced ecological and economic capacity during expected or unexpected supply shocks such as droughts and energy shortages, and;
5. The wildlife sciences may assist other natural and social sciences in estimating economic carrying capacities under various scenarios and in suggesting appropriate objectives for GDP and other macroeconomic production and consumption parameters, and;
6. A steady state economy is consistent with economic development, wherein economic development is a qualitative process in which different (not necessarily newer) technologies are employed and the relative prominence of economic sectors evolves, and;
7. A steady state economy is consistent with an increasing quality of life as indicated by various welfare parameters such as health, education, and leisure time, and;
8. A steady state economy is especially appropriate for nations such as the United States which have procured high levels of wealth and which liquidate disproportionate shares of the earth's natural capital, and;
9. For some nations with widespread poverty, increasing per capita consumption remains an appropriate goal in the short run.

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