

What Would a True Economic Impact Analysis of a Critical Habitat Designation Incorporate?

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One could say that we have a conundrum because of the current interpretation of the Endangered Species Act. We are trying to maximize the net social benefits of preserving endangered species that have social values but not well defined monetary values while considering only a select group of preservation costs. In such a situation a counterfactual economic impact analysis underestimates the impacts of critical habitat designation creating a potential over allocation of resources to preservation activities. However, including the full costs of preservation is to invalidate the ESA.

The Purpose of Economic Impact Analysis

Economic impact analysis (EIA) is a tool that shows how an event affects economic activity within an economy or between economies. An EIA uses causal economic models that trace the interrelationships between interindustry expenditures and final demand expenditures. Economic impact models predict how a specific event or events can be expected to change output, income, and jobs within communities.

The purpose of EIA is to analyze the effects of an event on a particular study area. EIA is often used in policy modeling to predict the consequences associated with a policy change such as tax rate change, infrastructure investments, or changes in environmental standards.

Counterfactual Economic Impact Analysis

An EIA of a Critical Habitat Designation (CHD) requires a counterfactual impact analysis. A counterfactual study simulates events that are contrary to the present situation. In the case of a CHD, the possible removal or limitation of economic activity must be considered, by simulating the effects upon a study area by either removing or reducing the activity by an appropriate magnitude. Counterfactual questions that could be asked include: What would be the economic effects upon the 34 counties in Arkansas that have a potential CHD if restrictions on the use of area rivers and their surroundings are placed? How would CHD affect road improvements, bridge improvements, timber and agricultural uses; recreational uses; water treatment and water quality investments; and mining, oil and gas operations for example.

Economic Impact of a Critical Habitat Designation: Considerations

EIA is an established method of analysis that traces its heritage back to 1758 and the French economist Francois Quesnay and, in modern times, Wassily Leontief in 1936 (Miernyk, W, 1966, pages 4-5). A unifying theme between these two economists is the emphasis they placed on economic interdependences. Economic interdependence results in several considerations that have significant consequences on the predictive power of an EIA. In an EIA the study area must be defined, and distinctions must be made between events that affect the allocation of resources as opposed to the distribution of resources.

Economic interdependence between economic agents occurs across different geographical areas. Any EIA must be defined in terms of some location or at some level of geography. The geography may be at a county level, state level, national level, or combination of subnational geographic units. The limiting factor is often the availability of data. The choice of a geography is important since it establishes the study area enabling a distinction between events that occur within the study area from those that are outside the study area. In the case of a CHD, a restriction of an activity like the loss of economic tourism can have economic impacts in a CHD study area but at the national level there are offsetting impacts. In such a situation, at the national level there are no net economic impacts although the CHD area has a loss of economic activity.

Often U.S. Fish and Wildlife Service analyzes the economic impacts of CHD based on Census-tract boundaries that include the designated areas. However, these areas may exclude many business and community interactions that are impacted by potential restrictions that may be imposed under the Endangered Species Act (ESA). In this case a misspecified study area results in an underestimate of the true economic impact. (HISTECON Associates, Inc., 2013, page 5)

Allocative effects are resource using effects. The allocation of resources between alternative uses has economic costs in terms of what is forgone. This is the concept of economic cost or opportunity cost. Opportunity cost is the value of the best forgone alternative use for the resources. A distribution effect on the other hand focuses on who gets what. Concerns about fairness and equality are often the consequence of uneven distribution effects.

Regulations and restrictions have both allocative and distribution effects. As already noted restriction resulting from a CHD may cause economic activity to simply relocate to other locations in the nation. This is a local allocative effect that is offset by redistribution effect elsewhere. Although, there are no guarantees that distributional effects will equal the allocative effects. EIA studies of a CHD often presume that they are equal when they only consider consultation and administration costs in their analysis.

Road improvements and other economic development projects create wealth and well-being. The benefit of these improvements will not accrue to these communities if the projects are not built, so this is a net loss to the community regardless of whether or where the projects are eventually located. Many of the economic activities cannot simply be moved to alternate locations. Prime examples of these are bridges, paving county roads, harvesting timber from previously cultivated tree stands, parks and recreation areas, and “highest-in-structure” drilling sites for natural gas. In each of these cases, the lost opportunity would be unavailable absolutely to any other location because of the unsuitability or non-comparability of the alternatives. They are foregone opportunities. (HISTECON Associates, Inc., 2013, page 9)

What is the difference between Coextensive Approach and the Baseline-Incremental Approach?

The Endangered Species Act (ESA) prohibits the use of EIA in the decision to list a species as endangered. The ESA also requires the Fish and Wildlife Service to concurrently or up to a year later propose to designate a critical habitat. The CHD decision can take into account consideration of probable economic impacts of the designation. (U.S. Fish and Wildlife Service, 2011)

In the baseline-incremental approach, the listing of the endangered species establishes the baseline and the incremental costs are a consequence of the CHD. (Sinder, 2004, page 163) The primary CDH costs are the agencies consultation costs with the Fish and Wildlife Service. CHD's cost associated with the allocative and distribution effects are considered to be a consequence of the listing decision and are excluded from consideration in an EIA.

The coextensive approach contends essentially the listing and the CHD are the same event focused on preserving an endangered species. As such the resources committed to the preservation entail both the listing and the CHD and should be the focal point of the EIA. One possible interpretation of the coextensive approach is that it views the ESA as a process where the baseline is the way the world was before the listing and the event would be the process of listing and obtaining CHD. An EIA based on this coextensive approach would have a fuller accounting of costs by incorporating both the costs of the CHD and listing costs.

A problem with the coextensive approach is the ESA requires listing decisions to be based solely on the best available sciences and commercial information. This is the same requirement that enables the baseline –incremental approach to reduce the full economic costs of preserving endangered species by excluding the cost of listing from EIA.

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