Indirect Impacts and Climate Change: Assessing NEPA’s Reach

C. Grady Moore, III, Leslie Garrett Allen, and Mary R. Forman

Does NEPA require an agency analyzing the environmental impacts of a freeway interchange to also consider the environmental effects of a possible assembly plant development at the new exit? If so, what about the siting of suppliers for the possible assembly plant at an industrial park across town? The traffic impacts of new employees traveling to that industrial park? The installation of new power lines to that industrial park? Similarly, does an agency analyzing the impacts of issuing a permit for a riverboat gambling facility have to consider the public health effects of gambling? The impact of constructing additional counseling facilities in the region for gambling addicts? The expansion of sewer lines to serve the new counseling facilities?

Some courts have used a “links of a chain” analogy to clarify the extent of indirect effects analysis required under NEPA. However, given the scope of NEPA, and the uniform tendency of NEPA analyses to expand over time, the “chains” may become longer, linking more remote and attenuated impacts to proposed federal actions. As a result, NEPA documents are filled with analyses of more removed impacts and have become less useful to decision makers and the public.

Indirect impacts are effects that are caused by the action but occur later in time or farther removed in distance, yet are reasonably foreseeable. 40 C.F.R. § 1508.8. They may include “growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate and related effects on air and water and other natural systems, including ecosystems.” 40 C.F.R. § 1508.8.

The problem with the indirect impacts definition is that it fails to mark an end; rather, it simply raises an additional question: when is an impact so remote that it need not be analyzed, despite its “foreseeability”? The vagueness and elasticity of this definition sometimes require agencies to analyze very remote and tenuous impacts. In fact, some have urged inclusion of “contribution to climate change” as an “indirect effect” of federal actions. See, e.g., Christopher Pyke and Kit Batten, Ctr. for American Progress, Full Disclosure: An Executive Order to Require Consideration of Global Warming Under the National Environmental Policy Act, May 2008, www.americanprogress.org/issues/2008/05/pdf/nepa.pdf.

Agencies assessing indirect impacts under NEPA, and courts reviewing NEPA challenges to these analyses, should be careful to ensure that the purpose of NEPA remains in sight and that the “rule of reason” inherent in any NEPA analysis remains intact. For example, as the Council on Environmental Quality (CEQ) chairman has warned, NEPA should not be used as a “back door way to regulate carbon emissions.” NEPA Guidance, Not. Carbon Control News, Apr. 14, 2008. Rather, the scope and detail of indirect impacts analyses should be limited in accordance with how far removed those impacts are from the proposed action. As impacts become more and more tenuous, the level of detail required in an impacts analysis should become less and less, thereby providing notice of the effects to the decision maker and the public without overburdening the acting agency or the decision document.

Indirect Impacts and the Rule of Reason

NEPA establishes policy, goals, and procedures to “insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.” 40 C.F.R. § 1500.1. While NEPA imposes a procedural requirement on federal agencies to take a “hard look” at the significant environmental consequences of a proposed action, this requirement is tempered by a “rule of reason.” The Supreme Court has characterized the “rule of reason” as requiring an agency “to furnish only such information as appears to be reasonably necessary under the circumstances for evaluation of the project rather than to be so all-encompassing in scope that the task of preparing it would become either fruitless or well nigh impossible.” New York Natural Res. Def. Council, Inc. v. Kleppe, 429 U.S. 1307, 1311 (1976), citing Natural Res. Def. Council v. Calloway, 524 F.2d 79, 88 (2d Cir. 1975). More generally, CEQ has described the “rule of reason” as “a judicial device to ensure that common sense and reason are not lost in the rubric of regulation.” 51 Fed. Reg. 15,618, 15,621 (Apr. 25, 1986).

In accord with the rule of reason, indirect impacts must be “reasonably foreseeable.” 40 C.F.R. § 1508.8. An impact is considered “reasonably foreseeable” if it is “sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.” Sierra Club v. Marsh, 976 F.2d 763, 767 (1st Cir. 1992). The Ninth Circuit has tried to clarify the extent of an impacts analysis, employing a “links of a chain” analogy:

Environmental impacts are in some respects like ripples following the casting of a stone in a pool. The simile is beguiling but useless as a standard. So employed it suggests that the entire
Sylvester v. U.S. Army Corps of Engineers, 884 F.2d 394, 400 (9th Cir. 1989). Despite this effort at clarification, courts continue to struggle with deciding when the chain ends. The D.C. Circuit has recognized that “[t]he limits to which NEPA’s causal chain may be stretched before breaking must be defined by the policies and legislative intent behind NEPA.” Glass Packaging Institute v. Regan, 737 F.2d 1083, 1091–92 (D.C. Cir. 1984) (rejecting plaintiffs’ claim that permitting liquor to be packaged in plastic bottles should have considered the effect on human health from “a deranged criminal [injecting] poisons through the plastic walls of [the] bottles”).

Causation and Foreseeability

Cases in which the adequacy of an agency’s impacts analysis is challenged illustrate the uncertainty agencies face. Sometimes a determination of impacts stops at the question of whether the project caused the impact. For instance, when analyzing impacts from an airport runway extension, the Eleventh Circuit upheld the Federal Aviation Administration’s “limited analysis” of the possible increase in capacity of an airport. See C.A.R.E. Now v. Fed’l Aviation Admin., 844 F.2d 1569, 1575 (11th Cir. 1988) (reviewing indirect impacts as a subset of a general cumulative impacts analysis). The court held that because increase in capacity at the airport was inevitable because of the growth of the city of Atlanta, any increased growth could not be attributed to the extended runway. Id.; see also Florida Wildlife Fed’n v. Goldschmidt, 506 F. Supp. 350, 375 (S.D. Fla. 1981) (holding that development would not be the result of highway construction, obviating the need for an indirect effects analysis of that development).

Challenges to agencies’ decisions not to include impacts that are completely out of their control have been denied on similar grounds. In Department of Transportation v. Public Citizen, plaintiffs asserted that the Department of Transportation (DOT) violated NEPA by failing to consider the possible environmental effects of the increase in cross-border operations of Mexican motor carriers resulting from the DOT’s issuance of regulations concerning with the president’s lifting of a moratorium on Mexican motor-carrier certifications. 541 U.S. 752 (2004). Plaintiffs argued that increased emissions from Mexican trucks were “reasonably foreseeable” indirect impacts of the regulations. Id. at 765. The Supreme Court held that “NEPA requires a ‘reasonably close causal relationship’ akin to proximate cause in tort law,” and because DOT had no ability to prevent the cross-border operations of Mexican motor carriers, the environmental impact of those operations would have no effect on DOT’s decision making. Id. at 754, 769–70.

Following the reasoning of Public Citizen, simply alleging that a project is the “but for” cause of an impact is not enough to require an indirect impacts analysis. In City of Shoreacres v. Waterworth, the Fifth Circuit considered whether the Corps of Engineers must analyze the indirect effect of deepening a river channel when deciding to grant a permit to dredge and fill for a ship terminal. 420 F.3d 440 (5th Cir. 2005). The Corps’ final environmental impact statement (FEIS) was challenged on the grounds that the deepening of the river channel was a reasonably foreseeable, nonspeculative effect of the permit because cargo ships of the future would be too large to use the channel at its current depth. Id. at 451. Although it was “undisputed” that the Houston Ship Channel could only be deepened by an act of Congress, not any decision of the Corps, the plaintiffs asserted that the Corps’ dredge and fill permit would in effect “cause” the channel to be deepened sometime in the future, which would have harmful environmental consequences. Id. at 451–52. The court concluded that “a ‘but for’ causal relationship [was] insufficient to make an agency responsible for a particular effect under NEPA and the relevant regulations.” Id. at 452 (quoting DOT v. Public Citizen). Looking next to the foreseeability requirement, the court found that the deepening of the channel was “pure speculation” and thus did not warrant consideration as a cumulative impact of its issuance of the dredge and fill permit. Id. at 453–54.

Remoteness

Courts tend to rely on the “reasonably foreseeable” element to exclude more speculative and remote impacts. For example, Hoosier Environmental Council, Inc. v. U.S. Army Corps of Engineers involved the Corps of Engineers’ issuance of a permit for construction and operation of a riverboat gambling facility. 105 F. Supp. 2d 953 (S.D. Ind. 2000). The court clearly delineated what the direct and indirect impacts of the action were. Direct impacts of issuing a permit were dredging of the river and becoming eligible for a gaming license. Id. at 972. Indirect impacts included construction of a hotel, pavement, golf academy, golf course, and parking and utility facilities. Id. The court also noted that the indirect effects “became increasingly tenuous and speculative as the inquiry proceeded outward from the core project.” Id. at 974. The Corps was not required to consider the environmental effects of additional secondary development that might be spawned by the riverboat facility. Instead, the court found that this development was not reasonably foreseeable and the Corps’ decision to not consider these impacts “complied with the rule of reason.” Id. at 974. In that same case, the court concluded that the Corps was not required to include gambling in its impacts analysis, agreeing that this issue was “not within [the Corps’] purview and was beyond the scope of the Corps’ authority in its evaluation of [the] permit application.” Id. at 978.

The Hoosier court distinguished the case from an earlier decision by the Ninth Circuit rejecting a state agency’s position that the uncertainty of development in the area made the secondary environmental effects of the project too speculative for evaluation. City of Davis v. Coleman, 521 F.2d 661, 676 (9th
The *Hoosier* court concluded that the two cases were entirely different. In *Davis*, development would most certainly result from a proposal to build a major interchange in an agricultural area near the edge of urban development for the purpose of connecting a freeway with a road that did not yet exist. In *Hoosier*, by contrast, no facts existed that would induce a reasonable person to foresee the commercial development that might result from the presence of the riverboat casino. 105 F. Supp. 2d at 975–76.

By comparison, several courts have struck down agency decisions for failing to adequately evaluate the growth-inducing effects of major federal projects in small communities, especially where the goal and anticipated result of the project is to stimulate growth and development. See, e.g., *Sierra Club v. Marsh*, 769 F.2d 868, 878-79 (1st Cir. 1985) (because DOT’s environmental assessment (EA) for a cargo port and causeway connecting island to mainland indicated that the project would act as a principal stimulus for further industrial development on the island, effects of that development should be analyzed); *Friends of the Earth Inc. v. U.S. Army Corps of Eng’rs*, 109 F. Supp. 2d 30, 40–41 (D.D.C. 2000) (growth-inducing effects of a proposal to build three floating casino barges in a rural area were not speculative and must be considered in a NEPA assessment).

This encourages the agency to simply ignore the impacts and, if challenged, argue they are too speculative, when some notification, however generic or qualitative, may serve the public and decision makers better.

However, in other circumstances, no growth-inducing effects need be analyzed. See *Northwest Bypass Group v. U.S. Army Corps of Eng’rs*, 470 F. Supp. 2d 30, 49 (D.N.H. 2007) (purpose of road project was not to promote development but to ease congestion). Similarly, the Federal Highway Administration was not required to analyze airport expansion as an indirect effect of approving a road construction project. Rather, the First Circuit found that any possible expansion was too speculative because of all of the events and contingencies that would be required before such expansion could occur. Airport expansion was, therefore, found to be not reasonably foreseeable. See *Airport Impact Relief v. Wylke*, 192 F.3d 197, 206–07 (1st Cir. 1999).

These cases illustrate that agencies face substantial uncertainty about the extent to which their NEPA analyses must consider more and more remote impacts of an action. Courts have reminded us that NEPA does not require consideration of every conceivable impact. However, despite these decisions, the question remains: When does the chain end? Categorizing indirect impacts as either simply “foreseeable” or “speculative” seems insufficient. Certainly the impacts in the cases discussed were foreseeable to some extent by definition or else they would not have been raised in the first place. The basis on which courts label some growth-induced impacts as “foreseeable” and some not seems more ends-driven than principled.

As a consequence, NEPA analyses are vulnerable to an agency’s desires to avoid obligations to address impacts it cannot control or evaluate thoroughly and to plaintiffs’ attempts to delay agency actions by arguments that remote impacts should have been addressed. The agency is in a dilemma: it identifies a possible impact, which is remote in time or location, but which, arguably, is foreseeable. If the agency raises the issue, its lack of ability to quantify and assess that impact opens the agency to criticism. This encourages the agency to simply ignore the impacts and, if challenged, argue they are too speculative, when some notification, however generic or qualitative, may serve the public and decision makers better.

**Is Global Climate Change a Link in the Chain?**

Determining the end of the indirect effects “chain” presents a particular problem for agencies struggling with whether and how to consider the indirect or cumulative impacts of their actions on global climate change. For instance, if an agency is approving a highway, must it include in its NEPA analysis the links from the road to the cars to the increase in greenhouse gas (GHG) emissions to the impact on global climate? Does an agency’s approval of a pipeline connecting components of an oil and gas development project outside of the United States require an analysis of all of the links from the pipeline to global climate change?

Recently, CEQ has been petitioned to promulgate regulations that require agencies to address global climate change in NEPA analyses. See The International Center for Technology Assessment, Natural Resources Defense Council, and Sierra Club’s Petition Requesting That CEQ Amend Its Regulations to Clarify That Climate Change Analyses Be Included in Environmental Review Documents (Feb. 28, 2008), www.icta.org/template/index.cfm. Asserting that substantial scientific evidence exists proving that “evidence of human modification of the global climate is compelling,” the petitioners request that CEQ revise its regulations to require consideration of cli-
climate change as a reasonably foreseeable effect in each federal agency’s NEPA analysis. Id. at 3, 19. The petition asks CEQ to amend the definition of “effects” under 40 C.F.R. § 1508.8 to include climate change as an example of an indirect effect that must be analyzed. Id. at 39. Under the amendment, the “indirect effects” definition would read:

Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. Such effects include the contribution of the action to climate change through, for example, the release of greenhouse gas emissions.

Id. (emphasis in original).

CEQ has at least considered requiring agencies to view global climate change as a reasonably foreseeable impact of emissions of GHGs. As early as 1997, CEQ drafted guidance emphasizing the consideration of climate change as part of the NEPA process. See CEQ’s Executive Office of the President, Draft Guidance Regarding Consideration of Global Climate Change in Environmental Documents Prepared Pursuant to the National Environmental Policy Act, 4 (1997), www.mms.gov/eppd/compliance/reports/ceqmemo.pdf (Guidance). Relying on a report prepared by the Intergovernmental Panel on Climate Change, CEQ’s Guidance states that based on available scientific evidence, climate change is a “reasonably foreseeable” impact of emissions of GHGs. Id. The Guidance provides that each agency should exercise its own independent judgment and discretion to determine the extent to which it should assess global climate change and that all agencies should start by analyzing the climate change effects of long-range energy, transportation, and forest management programs. Id. at 5–6. (emphasis added). However, the draft guidance was never finalized, and given the continuing debate regarding regulation of GHG emissions, see Massachusetts v. EPA, 549 U.S. 497 (2007), and the emissions’ impact on climate change, the process stopped.

Several courts have addressed whether GHG emissions’ effect on climate change should be considered in NEPA documents, but the vagueness of the regulations has led to mixed results. For example, Border Power Plant Working Group v. Department of Energy involved DOE’s issuance of two presidential permits to build transmission lines in the United States and across the Mexico border to connect power plants in Mexico with the power grid. 260 F. Supp. 2d 997 (S.D. Cal. 2003). Following an EA, DOE issued a finding of no significant impact (FONSI). The plaintiffs asserted, and the court agreed, that emissions from the operation of the power plants should be considered as effects of granting a permit to construct and operate transmission lines. In particular, the plaintiffs argued that DOE should have evaluated carbon dioxide and ammonia because of their contribution to global warming. Despite DOE’s arguments that it need not evaluate “questionable effects” or “imaginary horribles,” the court held that these effects were neither “questionable nor imaginary.” Id. at 1028. The court concluded that “[b]ecause these emissions have potential environmental impacts and were indicated by the record . . . the EA’s failure to disclose and analyze their significance is counter to NEPA.” Id. at 1029.

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In Mayo Foundation v. Surface Transportation Board, 472 F.3d 545 (8th Cir. 2006), the Surface Transportation Board issued a draft environmental impact statement (DEIS), a final supplemental environmental impact statement (FSEIS) on the environmental impacts of constructing a new rail line. Intervenor Sierra Club argued that the new rail line would result in a "shorter, cheaper distribution route from Wyoming's Powder River Basin [PRB]," which would result in an increase in air-polluting emissions, and that the Board failed to adequately address these impacts. Id. at 554. The court, seeming to ignore the petitioners' call for specific, independent analysis of impacts on climate change, held that the DSEIS and FSEIS did "extensively discuss the potential impacts on air quality" of the project and "more than adequately considered the 'reasonably foreseeable significant adverse effects [of increased coal consumption] on the human environment.'" Id. at 556.

The proposed regulations require that the federal action must be an "essential cause" of an effect for it to be considered an indirect effect.

Following Mayo and other similar cases, the Ninth Circuit, in Center for Biological Diversity v. National Highway Traffic Safety Administration, 2008 U.S. App. LEXIS 17629, *111 (9th Cir. 2008), invalidated the National Highway Traffic Safety Administration's (NHTSA's) NEPA analysis for promulgation of regulations. The court reasoned that by allowing certain standards for tailpipe emissions, "the NHTSA's regulations were the proximate cause of those emissions." Id. at *103, *114. Furthermore, the court considered the emissions to be cumulative impacts and stated that "the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct." Id. at *114–15. Therefore, the court held that the NHTSA had violated NEPA by failing to consider the cumulative impacts of the increase in carbon emissions and by failing to provide a convincing statement of reasons to support its view that impacts would be insignificant. Id. at *145.

These cases have put agencies on notice that an analysis of a project's impact on global climate change may be required to prevent a successful challenge to the adequacy of a NEPA review. They also highlight the need for substantive guidance.

The Fish and Wildlife Service Approach

The Endangered Species Act (ESA) requires federal agencies to prepare a biological opinion evaluating the direct, indirect, and cumulative effects of a proposed action on any listed species. The treatment of this issue in the ESA context can provide guidance on how the issue should be addressed in the NEPA context. Recently, the Fish and Wildlife Service (FWS) listed the polar bear as a threatened species under the ESA. In making this determination, the FWS considered, in part, the effects of global climate change on the polar bear. However, when the secretary of the interior announced the listing, he made clear that while global climate change was a factor in determining to list the polar bear, the ESA would not be "abused to make global warming policies." Press Release, U.S. Dept. of Int’r News, Secretary Kempthorne Announces Decision to Protect Polar Bears under Endangered Species Act (May 14, 2008), www.doi.gov/news/08_News_Releases/080514a.html.

In conjunction with the polar bear listing, the FWS and National Marine Fisheries Service (the Services) clarified the definitions and correct standards for analyzing effects of a proposed project for purposes of determining whether consultation is required. See 73 Fed. Reg. 47,868 (Aug. 15, 2008). The proposed regulations explain the appropriate causation standard to be used in determining the effects of an agency action, and reinforce the Services' current view that the ESA is not the appropriate instrument for addressing global climate change or regulating GHG emissions. Id. at 47,872.

The proposed regulations require that the federal action must be an "essential cause" of an effect for it to be considered an indirect effect. This is intended to emphasize that there must be a close causal connection between the action and the effect, that is, more than a "but for" connection. Id. at 47,870. The Services also propose to add language to the definition of "effects of the action" to explain that to be considered an indirect effect the effect must be caused by the action and be "reasonably certain to occur," based on "clear and substantial information." Id. This revision clarifies that the action must be more than just likely to occur and that it cannot be mere speculation. Id. As an example of this standard, the Services stated that "GHG emissions from building one highway are not an 'essential cause' of any impacts associated with global warming. Moreover, any such effects are later in time, but are not reasonably certain to occur." Id. at
47,872. Therefore, “impacts associated with global warming do not constitute ‘effects of the action’ under the proposed revision to that definition.” Id.

Although the Services note that their “reasonably certain to occur” standard is narrower than NEPA’s “reasonably foreseeable” standard, id. at 47,870, the FWS approach is instructive. That is, CEQ, acting agencies, and reviewing courts must place assessment of climate change in the appropriate NEPA context. NEPA is not a substantive driver on an action-by-action basis. Its role in that setting is to ensure that the agency makes an informed decision. How does assessment of climate change, or other indirect impacts, advance that purpose? And can an agency serve those purposes by addressing such impacts commensurate with their proximity to the action?

**Level of Detail**

To better support NEPA’s purpose, it would be more appropriate to allow agencies to use a sliding-scale approach to discussions of impacts: the more tenuous the impact, the less detailed the analysis must be. Even when agencies address indirect impacts, such as growth-induced effects, in their NEPA analyses, the level of discussion required by NEPA is uncertain. In one case, a court found that the Bureau of Indian Affairs’ (BIA) analysis of indirect effects of taking land into trust for construction of a casino was inadequate. Tomac v. Norton, 240 F. Supp. 2d 45, 51–52 (D.D.C. 2003). The BIA had cataloged a number of socioeconomic effects that would result from building a casino, including changes in the pattern of land use, population density, and growth rate. The court noted that it was a much closer call than cases where an agency simply failed to address growth-inducing effects at all but ruled that the assessment was not sufficient. Such criticism of an agency’s analysis could lead to results that undermine NEPA’s central purpose. Agencies might decide that it is impossible to avoid litigation and, therefore, choose to omit a brief discussion of some indirect impacts and hope that no one will notice.

To avoid this disincentive, CEQ’s approach to the required level of discussion based on significance of an impact would work well in the context of remoteness of an impact. These regulations already require an agency to discuss impacts “in proportion to their significance.” 40 C.F.R. § 1502.2(b). Thus, as impacts become less and less significant, an agency’s analysis should become less and less detailed. For instance, in The Land Council v. Vaught, the Forest Services prepared an FEIS for the management of two forests. 198 F. Supp. 2d 1211 (E.D. Wash. 2002). The FEIS was challenged on the grounds that it did not discuss the environmental impacts due to rain-on-snow events. Id. at 1242. The court held that because the agency reasonably determined that there would be no significant environmental impacts due to rain-on-snow events, a brief discussion of these impacts satisfied NEPA. Id.

An analogous application of the rule of reason should be applied to indirect impacts. Specifically, indirect impacts should be discussed in proportion to their proximity to the action. This is a necessary extension of the rule of reason because it is not clearly subsumed by the existing rule: an attenuated impact may still be considered significant. See 40 C.F.R. § 1502.2(b). For example, while global climate change may be significant, if the only causal link between a project and global climate change is through a long chain of permitting, development, increased traffic, and marginal emissions of GHGs, then requiring a detailed discussion seems disproportionate. And this disproportionate discussion works against the policy of keeping NEPA documents focused on impacts most relevant to the decision at hand.

Using proximity as a guide, an agency might disclose global climate change as an indirect, albeit very indirect, effect of an agency action but would not be required to include as thorough a discussion as would be required for an effect that is less removed from the proposed action.

When NEPA was passed in 1969, it was intended to be a valuable tool to ensure that federal agencies take into consideration the environmental impacts associated with their actions. However, the value of the NEPA analysis to a decision maker is eroded if the analysis attempts detailed discussion of remote impacts. Courts, CEQ, and agencies should work to better define the bounds of NEPA analyses and to ensure that the “rule of reason” does not get “lost in the rubric of regulation.” 51 Fed. Reg. 15,618, 15,621 (Apr. 25, 1986). As a start, indirect impacts analyses should be addressed in relation to their proximity to the action, allowing an agency to disclose some highly attenuated impacts without fear of having the adequacy of those disclosures challenged. This would focus decision makers on the environmental conditions most influenced by the proposed federal action at issue. ☛