

PERSPECTIVE

Terrorism, NEPA, and the Paradigm Shift

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In 1962, Thomas Kuhn shook the scientific establishment when he published his momentous book, *The Structure of Scientific Revolutions*. Prior to Kuhn, the scientific community commonly believed that scientific and technical progress was generally achieved through the steady unceasing march of small progressive developments. In other words, progress generally builds slowly upon continuous and gradual developments; this belief, or perhaps myth, is still widely accepted by much of the general public, as well as a large segment of the scientific community.

But Kuhn startled the scientific community, shaking this notion to its very foundations. He challenged this traditional belief by arguing that progress generally occurs not through a smooth, steady transition, but instead actually manifests itself as a series of major challenges, even revolutionary confrontations, to mainstream beliefs.

Today Kuhn's theory is popularly summarized in terms of the more palatable phrase—"paradigm shift." Accepted theories, methodologies, and approaches tend to be toppled more by one sudden stroke rather than through small evolutionary changes; progress often manifests itself as a series of convulsions.

Unfortunately, progress is often muted because it doesn't conform to accepted premises. A paradigm shift in thinking must often surmount accepted and rigid dogma—the antithesis of openly accepting new ideas and approaches.

Since the tragedy of September 11, I have increasingly come to believe that the scientific community is again at the crossroads of a new paradigm shift. To date, very little attention has been given as to what role, if any, "environmental" planning and the National Environmental Policy Act (NEPA) in particular might play in planning for and

countering terrorism. In fact, prior to September 11, the only environmental planning book that even briefly mentioned the subject of analyzing terrorism was the text *Effective Environmental Assessments*.¹ In the beginning, I was bewildered and saw little or no linkage between terrorism and NEPA. Not only has there been very little attention devoted to the subject of how NEPA (and other similar planning processes) should be implemented in the new age of terrorism, there has been virtually no direction on how such an analysis should even be performed.

Some might at first question the linkage between evaluating terrorist acts and planning processes such as NEPA, which has "traditionally" been viewed as a strictly environmental planning process. Under NEPA, an Environmental Impact Statement (EIS) must be prepared for *major federal actions* that may *significantly* affect the quality of the *human environment*. The term "human environment" has been interpreted in a very comprehensive manner by the courts. Additionally, at least four (and perhaps all ten) of the factors cited in the Council on Environmental Quality (CEQ) NEPA regulations for determining significance are directly applicable to determining the significance of potential terrorist attacks. One of these factors, in particular, states that the significance of an impact depends on "...the degree to which the proposed action affects public health or safety." Clearly, potential terrorist attacks are actions whose impacts need to be evaluated if they are deemed to pose a potentially significant impact on "public health and safety."

Recently, it has become more clear to me that NEPA and other similar "environmental" planning processes might provide crucial, cutting-edge tools for assisting planners, policy makers, and decision makers, as well as the public, in securing the nation's homeland. Described below are some of the possible ways that NEPA, State Environmental Policy Acts (SEPA), Environmental Impact Assessments (EIA), and other similar planning processes could be seized upon in combating the war against terrorism:

- Properly integrated and executed, planning processes such as NEPA provide ideal tools for not only analyzing "traditional" environmental impacts of proposed projects, but for also evaluating terrorist scenarios and the impacts that could result from potential attacks upon proposed projects, including assessing alternatives and mitigation measures for reducing or eliminating such threats.
- Federal agencies can prepare strategic or programmatic EISs in developing "master plans" for identifying and securing high-impact targets across existing broad programs. The results of these analyses can then be used in identifying programmatic alternatives and mitigation measures for countering or reducing such threats. Such analyses run the gamut from evaluating threats to the nuclear industry, to securing the nation's borders, or revamping immigration policies and controls.
- Approximately one-half of the states have a "NEPA-like" process (SEPA), a number of which have a requirement to prepare a NEPA-like analysis that could be used to effectively plan, evaluate, and address potential terrorist threats associated with proposed actions. The results of these efforts could also be used by states in preparing programmatic counter-terrorist plans for fortifying potential targets across the entire state.
- At the city and community level, a NEPA-like process can be applied in identifying, prioritizing, and evaluating high-risk targets (water reservoirs, chemical factories, national monuments, airports, etc.); here again, the results of such studies can be used not only for identifying potential terrorist scenarios, but also in developing alternatives and mitigation measures for safeguarding high-value targets.
- From the standpoint of the international community, EIAs can be prepared to identify potential targets, evaluate the impacts, and consider alternatives and mitigation measures for safeguarding high-value targets.

As outlined below, NEPA and other similar planning processes incorporate all the essential elements necessary for ensuring that

a comprehensive and exhaustive analysis of potential terrorist threats is performed:

- Allows analysts to use the public scoping process in identifying and screening potentially significant targets;
- Requires that proposals be critically examined before a final decision is made to take action;
- Provides a rigorous scoping process for ensuring that all potential terrorist scenarios, impacts, alternatives, mitigation measures, and significant issues are identified;
- Provides for a public involvement process that not only allows the public to provide input into the planning process and reviewing analyses, but also affords agencies with flexibility to protect national security by restricting public access to material that is of a sensitive or classified nature (prudence will need to be exercised in balancing basic freedoms against legitimate national security concerns);
- Details specific requirements for consulting with other agencies and experts;
- Specifies a rigorous planning process for evaluating not only the proposed action, but also reasonable alternatives and mitigation measures;
- Prescribes rigorous requirements for ensuring that potentially significant impacts are properly evaluated;
- Prescribes detailed requirements that Environmental Assessments, EIS, and/or EIA documents must meet;
- Details specific factors for assessing the significance of impacts;
- Details specific requirements that must be followed in preparing, circulating, and reviewing the final analysis;
- Specifies a detailed process that must be followed by the decision maker in choosing a final course of action; and
- Allows for implementation of mitigation measures and a comprehensive monitoring program for ensuring that alternatives and mitigation measures for reducing impacts are correctly implemented.

Perhaps even more important is the fact that the approach generally used in performing an accident analysis (e.g., nuclear reactors, hazardous facilities, dams) in NEPA and other EIA processes is virtually identical to the same methodology that can be employed in scoping and screening potential terrorist scenarios, and evaluating their consequences. Once potential terrorist scenarios have been identified, alternatives and mitigation measures can be evaluated for reducing potential impacts to high-threat targets.

Yet, while the analytical process for evaluating potential terrorist threats is very similar to that of a standard NEPA analysis, there are a number of methodologies and regulatory procedures that might need to be performed differently from a strictly, more traditional, NEPA analysis. For example, methods for enlisting public involvement, scoping potential terrorist scenarios, and securing sensitive or classified information might need to be implemented differently

from the way more traditional NEPA and “environmental” planning processes have been practiced in the past. Thus, fresh approaches might need to be developed for effectively implementing “environmental” planning and NEPA in an era of increasing terrorist threats.

Developing practical guidance on how NEPA and other similar planning processes can be effectively used for securing the nation against future terrorist attacks is needed. For this reason, I am currently writing a book for publication this year that is intended to provide practical guidance on how NEPA and other similar planning processes can be effectively used in combating terrorism. I would like to invite anyone who has ideas, or would like to contribute sections or even chapters to this effort, to contact me within the next 30 days at the e-mail address indicated below.

Yes, just perhaps, it’s time for a major paradigm shift, one that might radically enhance our nation’s ability to thwart and counter acts of catastrophic terrorism.

Note

1. C. H. Eccleston, 2001, *Effective Environmental Assessments: How to Manage and Prepare NEPA EAs*, CRC Press, Boca Raton, FL, 456 pp.

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