

**ENSURING RISK REDUCTION
IN COMMUNITIES WITH MULTIPLE STRESSORS:
ENVIRONMENTAL JUSTICE AND
CUMULATIVE RISKS/IMPACTS**

**NATIONAL ENVIRONMENTAL JUSTICE ADVISORY COUNCIL
CUMULATIVE RISKS/IMPACTS WORK GROUP**



**DRAFT REPORT
EXECUTIVE SUMMARY
JANUARY 31, 2004**

Produced for Purposes of Discussion at the
NEJAC Meeting
New Orleans, Louisiana
April 13-16, 2004

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This DRAFT report and recommendations have been written as part of the activities of the National Environmental Justice Advisory Council, a public advisory committee providing independent advice and recommendations on the issue of environmental justice to the Administrator and other officials of the United States Environmental Protection Agency (EPA).

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“I am sick and tired of being sick and tired.” This poignant plea for assistance has been voiced at every single meeting of the National Environmental Justice Advisory Council (NEJAC) and echoed by numerous environmentally overburdened people of color, low-income, and tribal communities throughout the nation. This plea reflects profound disappointment in such communities with the status of their health, frustration with the public health community’s failure to assist in improving health, anger over the unresponsiveness of many businesses complacent with the adequacy of their regulatory obligations and unresponsive to the health problems their neighbors face, and bewilderment at the government’s failure to understand and correct these shortcomings. Communities richly understand the degree to which they are burdened, yet find the government unwilling to seek their counsel and to provide the resources needed for communities to exercise their full voice in regulatory decisions that impact their lives. For many communities facing stresses from factors beyond their control, living with a myriad of polluting facilities, this affront is compounded by the impacts of racial and economic discrimination.

The sense of anguish expressed above and uniformly experienced by disadvantaged, underserved, and environmentally overburdened communities reflects a complex web of combined exposures. In recent years, this combination has come to be described as “cumulative risks and impacts.” Manifested in the above plea is the concept of vulnerability, a matrix of physical, chemical, biological, social, and cultural factors which result in certain communities and sub-populations being more susceptible to environmental toxins, being more exposed to toxins, or having compromised ability to cope with and/or recover from such exposure.

It is in the context of this kind of community experience that the U.S. Environmental Protection Agency (EPA), through its Office of Environmental Justice (OEJ), has requested that the National Environmental Justice Advisory Council (NEJAC) address the following question:

In order to ensure environmental justice for all communities and tribes, what short-term and long-term actions should the Agency take in proactively implementing the concepts contained in its Framework for Cumulative Risk Assessment?

The NEJAC Cumulative Risks/Impacts Work Group (hereinafter referred to as “NEJAC Work Group” or the “Work Group”), consisting of representatives from communities, academia, business and industry, non-governmental organizations, and state, local, and tribal governments, has worked diligently over the past 12 months to address this question. It respectfully submits this report and proposals for recommendations for deliberation at the NEJAC meeting to be held in New Orleans, Louisiana (April 13-16, 2004).

DEFINING THE ISSUE: MULTIPLE STRESSORS AND MULTI-MEDIA APPROACHES

The issues of cumulative risks and cumulative impacts are inherently multi-faceted, interconnected, and complex. The NEJAC Work Group began its work with an understanding its focus must be the real life context of communities confronting environmental justice issues. The Work Group chose to begin with a discussion of two key definitional topics: (1) the idea of using multiple stressors as a common starting point of discussion, and (2) the need for multi-media approaches to address cumulative impacts in a holistic way and to overcome programmatic and regulatory fragmentation. With respect to the identification of multiple stressors, the Work Group quickly recognized a need to ascertain and mitigate these stressors in a time frame shorter than traditionally envisioned by cumulative risk assessment. This early identification and response has come to be termed the Work Group's "bias for action." With respect to the latter, the report suggests that a comprehensive, integrated, and unified approach toward communities burdened by environmental hazard that across multiple environmental media over time. The Work Group stresses that adequately addressing these cumulative, multi-media impacts will require a unified, place-based approach that transcends the single-media, single program focus of current environmental regulation.

CORE MESSAGE: ADOPTING A COMMUNITY-BASED COLLABORATIVE PROBLEM-SOLVING MODEL FOR ADDRESSING CUMULATIVE RISKS AND IMPACTS

EPA's *Framework for Cumulative Risk Assessment* (hereinafter also referred to as the Agency's "Cumulative Risk Framework") provides important tools and mechanisms to begin to address the multi-faceted impacts felt by overburdened communities and to determine the depth of vulnerability to harm these communities experience. The NEJAC Work Group argues that combining the Agency's new Cumulative Risk Framework with a collaborative problem-solving approach is the **fastest and surest way** to bring about tangible and sustainable benefits for disproportionately impacted communities and tribes. Significant experience and lessons are now emerging in the use of an Environmental Justice Collaborative Problem-Solving Model. Such lessons can be of great value to operationalizing the concepts of the Agency's Cumulative Risk Framework. Together, they provide a critical set of strategies and tools for achieving the ultimate goal of both environmental justice and the Cumulative Risk Framework, i.e., healthy and sustainable communities.

This report acknowledges that the Agency's *Framework for Cumulative Risk Assessment* represents a profound advancement in the kind of thinking that will help communities and tribes address their concerns. The Cumulative Risk Framework is important because, for the first time, it opens the scope of risk assessment to include the environmental, health, social, and cultural factors that are key to understanding community risk. It allows for a focused discussion of multiple sources of physical impact, as well as the social and cultural factors included in the concept of vulnerability. Within this framework, the community can enter into a dialogue about risk that realistically incorporates the factors experienced by disadvantaged, underserved, and environmentally overburdened communities and tribes.

The Work Group recognizes, however, that cumulative risk reduction will not occur simply because the cumulative burden is identified. For tangible results, there must be a conscious effort to develop a collaborative process bringing governments and all sectors of the community together in a problem-solving mode. This means that all relevant stakeholders will need to engage in an open and deliberative discussion of causes of risk and be willing to contribute to a community-wide effort to reduce it. This collaborative problem-solving approach is a paradigm shift of equal importance to the paradigm shift embodied in the cumulative perspective on risk laid out in the *Framework for Cumulative Risk Assessment*.

DISCUSSION OF KEY CONCEPTS

Stressors: The report notes that the EPA's *Framework for Cumulative Risk Assessment* places no limitation on the definition of stressors, explicitly stating that they include not only chemicals but also socioeconomic stressors such as lack of health care. This is one reason why the Framework is such an important milestone, laying the basis for a realistic and meaningful dialogue about comprehensive risk in disadvantaged, underserved, and environmentally overburdened communities and tribes.

Vulnerability: The concept of vulnerability goes to the heart of the meaning of environmental justice. Vulnerability recognizes that disadvantaged, underserved, and overburdened communities come to the table with pre-existing deficits of both a physical and social nature that make the effects of environmental pollution more, and in some cases unacceptably, burdensome. As such, the concept of vulnerability fundamentally differentiates disadvantaged, underserved, and overburdened communities from healthy and sustainable communities. Moreover, it provides the added dimension of considering the nature of the receptor population when defining disproportionate risks or impacts.

The EPA's formal definition of vulnerability, i.e., susceptibility/sensitivity, differential exposure, differential preparedness, and differential ability to recover, allows an analytical framework to understand how a disadvantaged community may face greater impacts from pollution than the general population. Moreover, it takes on new meaning when linked to concepts like health disparities. Vulnerability and health disparities are integrally related concepts, and in some ways, *health disparities are both an outcome of and a contributor to vulnerability.*

Community-Based Participatory Research: The National Institute for Environmental Health Sciences defines community-based participatory research as "a methodology that promotes active community involvement in the processes that shape research and intervention strategies, as well as the conduct of research studies." Community-based participatory research can be an extremely useful tool not only to obtain valuable information for cumulative risk/impact assessments, but also to empower the affected community and to engender more effective prevention/intervention efforts.

Proportional Response: The concept of proportional response is a direct outgrowth of the NEJAC Work Group's thinking on conducting cumulative risk analysis in the context of a bias for action and its promotion of a collaborative problem-solving model for addressing cumulative risks and impacts. First, the idea of proportional response seeks to match the needs of communities and tribes with an appropriate level or type of analysis and action at any given point. In other words, analysis should be commensurate with community needs and the nature of the intervention to be taken. Secondly, response must be proportional to the harm caused.

Qualitative Analysis: An integrated analysis of cumulative risk and impacts will require making both quantitative and qualitative judgements. The report notes that there exists a body of literature in the area of environmental impacts analysis and cumulative impacts analysis that may prove to be useful to such an integrated analysis. For example, the White House Council on Environmental Quality (CEQ) published a report entitled "Considering Cumulative Effects Under the National Environmental Policy Act" in which CEQ provided eight principles and eleven methods for conducting cumulative effects analysis.

Other Key Concepts:

- Efficient Screening, Targeting, and Prioritization Methods/Tools;
- Unifying the Fields of Public Health and Environmental Protection; and
- Social Capital.

Special Concerns of Tribes: American Indian and Alaska Native tribes are sovereign governments recognized as self-governing under federal law. Under its well recognized “trust responsibility” to Indian tribes, the federal government has special fiduciary obligations to protect tribal resources and uphold the rights of indigenous peoples to govern themselves on tribal lands. Many federal laws have delegated authority to tribes in recognition of their sovereign status. The unique legal status of American Indian and Alaska Native tribes creates an important requirement for governmental entities and other stakeholders to understand that the federal government must consult directly with tribal governments when contemplating actions that may affect tribal lands, resources, members, and welfare.

PROPOSALS FOR RECOMMENDATIONS

The NEJAC Work Group has decided to frame its proposed advice and recommendations under the eight major interrelated themes. While each is critically important by itself, addressing each (or a few) without all of the others will not be sufficient. Hence, they need to be addressed together in an integrated manner within a broad based Agency-wide framework for implementation. In addition, the report currently contains more than 60 proposed action items. Summary or consolidated versions of the most significant ones are provided below. When the NEJAC Work Group submits its final report, it intends to articulate the short- and long-term goals associated with this framework. A plausible way to organize this implementation framework could be around action items which promote a change in Agency *action*, a change in Agency *thinking*, and a change in Agency *capacity*. **As a start, EPA should incorporate all relevant concepts and recommendations of this report in any and all work growing out of the Agency’s *Framework for Cumulative Risk Assessment* and the development of Agency cumulative risk guidance.**

To institutionalize a bias for action within EPA through the widespread utilization of an Environmental Justice Collaborative Problem-Solving Model.

- EPA should designate at least five (5) low-income, people of color, and/or tribal communities in each EPA region to be the focus of the Agency’s bias for action in addressing cumulative risks and impacts. Activities should include but not be limited to community-based assessment, partnership building, provision of resources, prevention/ intervention risk reduction efforts, and application of the Environmental Justice Collaborative Problem-Solving Model. In regions with significant tribal populations, these should include at least one tribal community.
- EPA should initiate a set of multi-media, risk reduction projects in disadvantaged, underserved, and overburdened communities, to be conducted in every EPA region.
- EPA should develop: (1) efficient and effective screening, targeting, and prioritization methods/tools; and (2) a toolkit of implementable risk reduction actions to support such risk reduction efforts.
- EPA’s FY04/05 Headquarters and Regional Environmental Justice Action Plans should be revised to reflect the above activities and associated performance measures by no later than September 30, 2004.

To fully utilize existing statutory authorities.

- EPA's Office of General Counsel (OGC) should provide a memorandum explicitly identifying authority to evaluate and address cumulative risks and impacts in the statutes it administers and delegates, building on the OGC's December 1, 2000 memorandum on environmental justice authorities in permitting.
- EPA's program offices should draft guidance based upon the General Counsel's legal opinions, in areas including but not be limited to standard setting, permitting, and enforcement.
- EPA should create incentive programs that go beyond compliance to reduce cumulative impacts.

To address and overcome programmatic and regulatory fragmentation within the nation's environmental protection regime.

- EPA should conduct a systematic examination of issues related to programmatic and regulatory fragmentation, including convening an advisory committee, and develop strategies to address the shortfalls of such fragmentation, including but not be limited to integrated and coordinated multi-media approaches, procedures to eliminate barriers caused by fragmentation, and interagency/intergovernmental approaches.
- EPA should develop information systems and assessment systems that looks across all media and at community-wide risks.
- EPA should develop guidance for working with disadvantaged, underserved and overburdened communities significantly affected by programmatic and regulatory fragmentation.

To fully incorporate the concept of vulnerability, especially its social and cultural aspects, into EPA's strategic plans and research agendas.

- EPA should make it clear that although quantitative evaluation of vulnerability is precluded in almost all cases by a scarcity of scientific knowledge and understanding, *this is not an excuse to ignore it*. Vulnerability should be an integral part of cumulative risk assessment even if it must be analyzed using qualitative measures.
- EPA should direct all offices whose missions relate to policy making, program implementation, regulatory enforcement, and professional and community training, to develop strategic plans for incorporating the concept of vulnerability into their operational paradigm.
- EPA should issue guidance on the meaning of vulnerability in the context of risk assessment, providing unambiguous direction to risk assessors and risk managers that vulnerability is defined as the combined effects of physical, biological, and social stressors on communities and individuals.
- EPA should integrate measures of vulnerability into all existing and new screening, targeting, and prioritization tools.
- EPA should direct all relevant offices to develop a long-term intramural and extramural prevention/intervention research agenda on vulnerability, including its social aspects.

To promote a paradigm shift to community-based approaches, particularly community-based participatory research and intervention.

- EPA should adopt and expand the use of a community-based participatory research and intervention approach in its training, outreach, and education programs for its personnel, as well as those of its partners in communities, tribes, state and local government, universities, business and industry, and others.
- EPA should formulate and implement a clear plan to utilize community-based participatory research methods in each of the ten proposed multi-media risk reduction pilot projects.

To incorporate social, economic, cultural, and community health factors, particularly those involving vulnerability, in EPA decision-making.

- EPA should develop the quantitative and qualitative capacity to incorporate social, economic, cultural, and community health factors into its research, regulatory, and grant programs.
- EPA should strengthen its capacity to conduct social science and community health analysis in an environmental justice context, including recruitment of social scientists, community health scientists, and community health representatives, and persons with community-based experience to the Agency's staff.

To develop and implement efficient screening, targeting, and prioritization methods/tools to identify communities needing immediate intervention.

- EPA should inventory and review of existing screening, targeting, and prioritization methods and tools to ascertain the following: (1) strengths and weaknesses of existing tools, including best features and gaps; (2) ways in which these tools can be improved; (3) determine steps to move forward development and use of these tools, including guidance regarding minimum criteria for selection and use of a particular tool. In addition to methods and tools available at EPA, this inventory should include other federal agencies, states, public health agencies, universities, etc.
- In the long-term, EPA should incorporate indicators into such screening and targeting tools that allow it to address other factors of concern to cumulative risk analysis, such as social, economic, and community health factors, and those related to vulnerability.

To address capacity and resource issues (human, organizational, technical, and financial) within EPA and the states, within impacted communities and tribes, and among all relevant stakeholders.

- EPA should ensure that there are adequate resources (human, technical, organizational, financial) for communities to meaningfully participate in a community-based efforts to address cumulative risks and impacts as part of a paradigm shift to community-based approaches. EPA should ensure that its FY04/05 Headquarters and Regional Environmental Justice Action Plans have adequate resource commitments to meaningfully accomplish the above.
- EPA should develop and implement a short- and long-term plan to systematically build the social science capacity at EPA, and to promote this concept among its partner agencies at the federal, state, local, and tribal levels.
- EPA should ensure training for its staff, as well as promote training for state and local government, tribes, business and industry, and community-based organizations on the various aspects of the paradigm change being proposed in this report, including but not be limited to environmental justice, community-based collaborative problem-solving, community-based participatory research, social science analysis, and qualitative analysis.