THE ANNAPOLIS ACCORDS
FOR RISK ANALYSIS:

A CITIZEN’S GUIDE
FOR RISK-ASSESSMENT
AND RISK-MANAGEMENT

Executive Summary
application of the Accords will help users to understand the strengths and weaknesses of past analyses, policies and plans, while prospective application will help improve the quality of future efforts to protect health, safety and environmental quality.

The Annapolis Accords are derived from the work product of a workshop, which was sponsored by the Annapolis Center. Workshop participants included a broad spectrum of prominent scientists, economists, social scientists and risk managers. Annapolis Center board member, Dr. John Graham, of the Harvard Center for Risk Analysis, acted as organizer and chair of the workshop.

**RISK-ASSESSMENT ACCORDS**

A risk assessment should be complete. A complete assessment of a hazard, using peer-reviewed, state-of-the-art information, includes consideration of potential consequences for human health, quality of life, health of ecosystems and economic well-being.

All relevant information should be used in risk assessments. Assessments of risk should use all relevant information necessary to characterize a potential health or environmental hazard. If an assessment does not include all relevant information, there should be a clear explanation of the reasons for such an omission and explicit judgments about the quality and weight of the evidence.

Estimating risk should be based on clear definitions. Both quantitative and qualitative estimates of risk should be based on clear definitions of hazards, types and amounts of exposures, the variability of response among affected populations, and effects over time.

Claims about scientific certainty should be spelled out and sources given. Risk assessment is an ongoing process that needs to carefully reflect the latest information. Claims about scientific truths and consensus should, therefore, be made with caution. Assessments should clearly communicate sources, assumptions, limitations and uncertainties in the available scientific data.

Risk considerations should be clearly communicated. Judgments of the seriousness of hazards should include quantitative estimates of risk and consideration of qualitative factors to enhance their understanding and use not only by scientists and policy-makers but also by the public.

**RISK-MANAGEMENT ACCORDS**

Opportunities should exist for informed public contribution in risk-management decisions. Risk-management plans and policies should include early opportunities for participation by a variety of interests. Such participation should involve evaluating risk estimates and risk-reduction alternatives that are compatible with other significant societal goals. Risk-assessment information should be available and understood by all participants in the risk-management process.

Decision-makers should use risk assessments to prioritize public health and environmental-risk management. Risk-based priorities should be identified, using the best possible assessment to help assure that significant resources are allocated to addressing the largest and most important health and environmental threats. Risk-ranking techniques should be developed to compare the quality of assessments of natural and manmade risks.
Risk-management decisions should consider the benefits and costs of alternative policies. When risk-management policies are developed, policy-makers should insist on having information about what the expected benefits will be, who will incur gains or losses, and how much each alternative will cost and who will pay. When combined with the insight provided by risk assessments, such benefit and cost information can yield the fairest level of public health, environmental and economic protection.

Risk-management decisions should encourage the development and use of new knowledge and insight. Policies should be designed so that they provide incentives for new scientific knowledge and social, ethical and legal insight. Such incentives will continuously improve the quality of risk-based decisions.

Implementation strategies are a key element of risk management. Risk-management actions should consider a range of innovative and adaptive policies and administrative steps to achieve public health and environmental goals more rapidly and cost-effectively. These strategies should include non-regulatory approaches.

MISSION

The Annapolis Center supports and promotes responsible environmental, health and safety decision-making.

The Center evaluates and scores risk assessments both to assist the public in understanding hazards and the relative risks they may present and to identify areas for emphasis in research and policy. The Center's Annapolis Accords provide a vehicle to evaluate the quality of the science underlying risk analysis and the quality of the policy foundations supporting risk management. The Annapolis Center is a non-profit, 501(c)3 educational association.
ENVIRONMENTAL
HEALTH RISK ASSESSMENT
COMMITTEE

The Environmental Health Risk Assessment Committee encourages the broad application of sound scientific principles and data in exposure and risk assessment, and obtains a general acceptance within and outside regulatory agencies of probability based techniques to accurately assess risk.

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ECOLOGICAL RISK
ASSESSMENT COMMITTEE

The Ecological Risk Assessment Committee develops and fosters the application of sound scientific principles, domestically and internationally, across all elements of the ecological risk assessment process, supports scientific research necessary to improve risk assessment methodologies, and facilitates communication among all stakeholders interested in the outcome of ecological risk assessments.

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As we move into the future, AIHC will continue to encourage the development and incorporation of the use of sound science in the risk assessment process. Moreover, AIHC will facilitate the use of science in regulatory decision making by:

Promoting change in the regulatory process to encourage the sound use of science.

Serving as a resource on scientific developments that can influence the approaches used in interpreting risk information.

Building consensus with scientists and policy leaders on ways in which scientific information can be more completely and effectively applied in regulatory decision making.

AIHC is the sum of its resources - its scores of dedicated volunteers from member companies, its broad network of scientific experts, and its reputation for scientific inquiry.

For more information about the American Industrial Health Council, please call (202) 833-2131.
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he American Industrial Health Council (AIHC) is a broad-based association that represents a diverse coalition of companies and trade associations, including manufacturers of consumer products, pharmaceuticals, petroleum, paper, chemicals, motor vehicles, foods and beverages, high technology and aerospace products.

AIHC’s mission is to promote the sound use of scientific principles and procedures in public policy for the assessment and regulation of risks associated with human health effects and ecological effects. Although AIHC does not act as an advocate for any product or substance, its generic positions affect the scope and impact of individual regulatory decisions.

AIHC has two fundamental objectives:

- Develop and improve the science base for risk assessment.
- Use the best available science in both policy development and the regulatory decision-making process.

AIHC provides ongoing input on scientific and science policy issues to federal, state, and international agencies responsible for the protection of human health and the environment, including the U.S. Environmental Protection Agency, the Occupational Safety and Health Administration, the Food and Drug Administration, the International Agency for Research on Cancer, and the International Programme on Chemical Safety.

AIHC’s achievements are the result of the programs and activities of four standing committees: Scientific Committee, Science Policy Committee, Environmental Health Risk Assessment Committee, and Ecological Risk Assessment Committee. Issues are addressed by these groups in a flexible, result-oriented approach. Participation on the following groups is available to AIHC’s member companies and its network of associations.

SCIENTIFIC COMMITTEE

The Scientific Committee focuses on emerging scientific issues and techniques, and creates opportunities for their evaluation and incorporation into the regulatory process. Through the Scientific Committee’s formal comments and active participation in the development of sound scientific principles and procedures, reciprocal trust is built with the scientific community. Members of this Committee and its subcommittees communicate relevant information and ideas to member companies, trade associations, academia, and government.

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**Dosimetry and Risk Assessment Subcommittee**

The Dosimetry and Risk Assessment Subcommittee provides a forum for government, academia, and industry experts to discuss and act upon technical issues regarding the development and application of biologically-based and pharmacodynamic approaches in risk assessment.

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**Epidemiology Subcommittee**

The Epidemiology Subcommittee responds to epidemiological issues, including the evaluation of potential environmental or occupational health hazards, health risk assessment, and national health policy topics. This Subcommittee focuses particularly on the role of human data in the risk assessment process.

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**Mutagenicity Subcommittee**

The Mutagenicity Subcommittee promotes the scientifically-based conduct and interpretation of tests used to assess the genotoxic potential of chemicals and evaluates the validity of the use of these data for heritable mutation and carcinogenic risk assessments.

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**Neurotoxicology Subcommittee**

The Neurotoxicology Subcommittee promotes the development of a scientific basis for neurotoxicity test procedures and approaches to evaluate the magnitude and nature of neurotoxicological effects resulting from human exposure to chemicals.

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**Reproductive and Developmental Effects Subcommittee**

The Reproductive and Developmental Effects Subcommittee supports and promotes the incorporation of sound science into the development of methodologies for the evaluation of reproductive and developmental data.

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**SCIENCE POLICY COMMITTEE**

The Science Policy Committee encourages and participates in the policy application of emerging scientific developments, and contributes to the process by which regulatory policy is developed, addressed, and applied. The Committee actively identifies generic policy issues that affect the use of science in the regulation of chemical substances, analyzes current scientific issues for their policy significance, and develops concepts for the optimal use of science in regulatory and legislative policy. These concepts are communicated to policy leaders and the scientific community.

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