

Rachel's Environment & Health News  
#781 – Critiques of the Precautionary Principle  
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This week our good friend Mary O'Brien describes common criticisms of the precautionary principle, and examines San Francisco's precautionary ordinance to see if these criticisms are valid. Mary is especially well qualified to do this because San Francisco officials relied on Mary's book, *Making Better Environmental Decisions*,<sup>[1]</sup> in writing their ordinance. As you all know by now, the precautionary principle is the "better safe than sorry" approach to decisions.

This past summer, when the City and County of San Francisco, California adopted the precautionary principle to guide all public policies that affect the environment,<sup>[2]</sup> it caused panic inside the chemical industry.

For 100 years the chemical industry has been exposing workers and communities to toxic chemicals without anyone's informed consent, an ethical lapse (and source of legal liability) of titanic proportions. Now the precautionary approach is suggesting that chemicals should be tested before people are exposed. Who knows where such crazy ideas might lead?

In late November, the Environmental Working Group ([www.ewg.org](http://www.ewg.org)) published a secret memo,<sup>[3]</sup> written by the American Chemistry Council (ACC, formerly known as the Chemical Manufacturers Association).<sup>[4]</sup>

The leaked memo outlines a secret ACC campaign to be led by an "attack dog" PR firm, Nichols-Dezenhall, to "stigmatize" the precautionary principle (PP) and "win control of the message war" in California. The memo says that the precautionary principle (PP) is a "top priority" for the American Chemistry Council because the PP is too common-sense: "For too long, the 'common sense' appeal of the PP has gone unopposed," the memo says. "Moreover, California is a bellwether state, and any success enjoyed here could readily spill over to other parts of the country," the memo says. Common sense spilling over! This IS serious.

Please read this hilarious (and chilling) memo for yourself,<sup>[3]</sup> and the press coverage it received in California.<sup>[4,5]</sup> And now here's Mary O'Brien's examination of industry's critique of the precautionary principle. --Peter Montague

### Critiques of the Precautionary Principle

by Mary O'Brien\*

Five critiques of the Precautionary Principle are particularly common:

1. The Precautionary Principle is vague and therefore useless.
2. It is about values and emotion, not science.
3. If implemented, it would strangle technological and economic progress.
4. It arises out of a naive wish for a risk-free world.

5. It ignores risk assessment, thereby leading to the dangerous possibility that an alternative that is adopted may cause far more harm than the original proposed activity.

In contrast to these critiques, San Francisco's (SF's) July 2003 precautionary principle ordinance,<sup>[2]</sup> provides a classic example of just how reasonable, practical, and wise the implementation of precaution can be, and how baseless are the critiques of the principle.

Critique #1: The Precautionary Principle is vague.

Response: San Francisco's (SF's) ordinance clearly describes specifics of the Precautionary Principle.

Any statement of any precautionary approach is vague to begin with, just as the Hippocratic Oath taken by all physicians, "Do No Harm," is vague. But when a community, state, nation or treaty articulates and implements a precautionary approach in a specific situation, it is not vague. San Francisco's ordinance, for instance, makes clear who, what, when, where, how, and why:

WHY: General Welfare

The first finding declared by the SF Board of Supervisors in its precautionary principle ordinance is that every San Franciscan has an equal right to air, water, earth, and food that is of a sufficiently high quality "...that individuals and communities can live healthy, fulfilling, and dignified lives"

This isn't science. This is a value. And yet each word, "healthy," "fulfilling," and "dignified" has meaning that most citizens would broadly agree upon.

WHO: Government, Residents, Citizen Groups, Businesses

San Francisco's ordinance explicitly requires "all officers, boards, commissions, and departments of the City and County" to implement the Precautionary Principle in conducting city affairs. It also states that business, community groups, and the general public share the responsibility to take "anticipatory action to prevent harm."

WHAT: City Ordinances, Decisions

The ordinance requires that the precautionary approach be applied not only to ordinances and resolutions, but also to ordinary conduct of City affairs.

HOW: Public Process

San Francisco's ordinance makes clear that its precautionary approach is an aggressively public process, including transparent decisionmaking, public right to know about environmental and economic impacts of options, and public participation in determining the range of alternatives to be considered.

The ordinance's "how" also includes a value-based guide to selecting among those alternatives: ask whether a given hazardous activity is necessary, and if it isn't, select the

alternative with the least potential impact on human health and the environment. "Inherent in the Precautionary Principle policy," the findings observe, "is a belief that a risk that is unnecessary, and not freely chosen, is not acceptable."

Thus, wise alternatives must not only be considered, they must be selected.

WHERE: All Decisions Affecting the Environment

The ordinance specifically mentions applying the precautionary principle to "...such areas as transportation, construction, land use, planning, water, energy, health care, recreation, purchasing, and public expenditure." This is both ambitious and a large challenge.

WHEN: Past, Present, and Future

The findings in the ordinance note that through San Francisco's Sunshine Act and various environmental ordinances such as their Integrated Pest Management Ordinance and Resource Efficient Building Ordinance, precaution is not new to San Francisco. Thus, the precautionary principle ordinance is an expansion of, not a departure from, past approaches.

Within three years of the passage of the ordinance, the Environment Commission must submit a report on the effectiveness of the policy.

Critique #2: The Precautionary Principle is about values, not science.

Response: The San Francisco Precautionary Principle is about values and science.

The oft-heard critique that the precautionary principle abandons science to simply put forward a value of zero risk is rendered moot by San Francisco's simple statement that application of the Precautionary Principle will involve "careful assessment of available alternatives using the best available science." All reasonably foreseeable costs should be considered, "even if such costs are not reflected in the initial price." Moreover, "As new scientific data become available, the City will review its decisions and make adjustments when warranted."

Critique #3: The Precautionary Principle stifles progress.

Response: San Francisco's Precautionary Principle encourages both technological progress and behavioral progress.

The ordinance notes, "Science and technology are creating new solutions to prevent or mitigate environmental problems." In other words, science and technology need not create only environmentally hazardous technologies; they are also creating, and are capable of creating, solutions to prevent or mitigate environmental problems. Thus, the precautionary principle is an effective facilitator of technological progress.

But the San Francisco ordinance also expands the meaning of progress beyond the horizons of technology. "Achieving a society living respectfully within the bounds of nature," the ordinance notes, "will take a behavioral revolution." Easier said than done, of course, because we are all creatures of habit, and some businesses and individuals defend business-

as-usual, even when that business-as-usual or shopping-as-usual ignores the bounds of nature or is killing our children. Thus the city's conscious use of the term "revolution."

Critique #4: The Precautionary Principle requires a risk-free world.

Response: The San Francisco Precautionary Principle requires less harm, not zero harm.

Wisely, the San Francisco ordinance does not require those defending a potentially hazardous activity to prove it is safe. Essentially nothing we do is "safe." Our daily use of electricity is not "safe" for salmon that are blocked by hydroelectric dams. Our daily discharge of our own personal wastes into clean water is not "safe" for native aquatic biodiversity.

Instead, the San Francisco ordinance aims to reduce impacts on the environment, which means more health. Prior to selecting an alternative, there is "a duty to consider all the reasonably foreseeable costs [of alternatives]." Analysis of reasonably foreseeable environmental, health, and economic costs of any alternative usually reveals some potential for harm. Following analysis, decision makers are directed to "select the alternative with the least potential impact on human health and the environment." Thus, the San Francisco ordinance states no expectation that all harm, all impact, all risk of harm will be absent from the alternatives chosen.

Critique #5: The Precautionary Principle throws out risk assessment; alternatives might cause more harm.

Response: The San Francisco Precautionary Principle assesses risks and benefits of alternatives.

San Francisco figures the Precautionary Principle requires "a thorough exploration and a careful analysis of a wide range of alternatives." It cautions against focusing only on short-term or immediate impacts: "Short and long-term benefits and time thresholds should be considered." What the ordinance avoids through consideration of alternatives is the widespread "risk assessment" practice of accepting a hazardous activity as a beginning and end, and then analyzing how much of the activity or technology is safe, or of insignificant risk or at least acceptable. The acceptability or unacceptability of a given activity or technology, will usually vary significantly depending on the consideration or lack of consideration of alternatives. Polyvinyl chloride (PVC), for instance, long seemed a great building material: long-lasting, versatile, low maintenance. When looking at its toxic manufacturing process, difficulty of disposal, firefighting hazards, and availability of alternatives,[6] however, using vinyl as a construction material rapidly loses its acceptability.

#### ESSENTIAL ELEMENTS OF A PRECAUTIONARY POLICY

San Francisco's approach to the Precautionary Principle is not the only reasonable or necessarily the best approach. But four elements seem essential in any significant precautionary approach (regardless of whether it is called that or not), and all four are present in San Francisco's ordinance:

1. Commitment to giving health the benefit of the doubt when harm is uncertain, but appears plausible.

2. Enabling fully informed public participation, particularly in the process of
3. Formulating a full range of reasonable alternatives, and
4. Transparently using technical and scientific information to analyze the alternatives.

It is important for government officials to acknowledge they are often not well-trained or even well-versed in a full range of alternatives that are relevant to a particular planning process, or a particular public health goal, or any other decisions that must be made.

Participation by the public, vendors, and businesses can greatly enrich the field of options for analysis. As a scientist who has worked for most of the past 22 years for nongovernmental organizations which have articulated and developed alternatives in many planning efforts, I cannot emphasize enough the wisdom of including citizens as (to once again quote San Francisco's ordinance) "...equal partners in decisions affecting their environment."

When we choose among alternatives, we don't want to jump from the frying pan into the fire. We need information to inform our decision making. Even the absence of sufficient information is information: It says we still know too little about what we are doing to the environment and, thus, to each other. And if we care about each other and our fellow creatures, acknowledgement of our ignorance should lead us full circle back to the essential value of siding with environmental health when decisions must be made amid missing information.

Have San Franciscans begun to implement their brand new precautionary principle ordinance? Yes, but so far mostly in the arena of toxics. Debbie Raphael, Toxics Reduction Program Manager in the city's Department of Environment, has been helping organize public meetings to guide the drafting of an environmentally sound purchasing ordinance.

"The City's intent has long been to minimize harm," Raphael observes, "but with the precautionary principle ordinance,

we're now adding major public involvement throughout the process. We're paying attention to how we craft and implement policy, not simply whether City staff thinks it is sufficiently protective."

"Who knows how much things will change once the public becomes engaged fully in determining alternatives for transportation, construction, land use, water, energy, health care, recreation, and public expenditures?" Raphael asks.

Probably a lot.

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\* Mary O'Brien, Ph.D., former staff scientist with Environmental Research Foundation, is the author of *Making Better Environmental Decisions: An Alternative to Risk Assessment* (Cambridge, Mass.: MIT Press, 2000). She is currently working on alternatives for three Utah national forest plans.

[1] Mary O'Brien, *Making Better Environmental Decisions: An Alternative to Risk Assessment* (Cambridge, Mass: MIT Press, 2000).

[2] <http://rachel.org/library/getfile.cfm?ID=195>

[3] American Chemistry Council, "Nichols-Dezenhall Precautionary Principle Campaign Proposal" (undated, but leaked Nov. 21, 2003). See <http://www.rachel.org/library/getfile.cfm?ID=330>

[4] Glen Martin, "Chemical industry told to get tough," *San Francisco Chronicle* Nov. 21, 2003. <http://www.rachel.org/library/getfile.cfm?ID=329>

[5] Douglas Fischer, "Chemical industry may fight tests," *Oakland Tribune* Nov. 21, 2003. <http://www.rachel.org/library/getfile.cfm?ID=328>

[6] <http://www.sfgov.org/sfenvironment/aboutus/greenbldg/pvcalternatives.pdf>

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