



HOW TO EMBED THE PRECAUTIONARY PRINCIPLE IN COMMUNITY DECISION-MAKING AND THE COMPREHENSIVE PLAN

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The precautionary principle is a powerful decision-making tool that follows the basic precept of public health and applies it more broadly to environment and environmental health issues: we ought to take precautionary action to prevent harm in the face of scientific uncertainty. This is a decision rule that couples an approach to science with the ethical idea of preventing harm. It stands for the proposition that the wise course is to take action to prevent harm and not wait for certainty about cause and effect before finding another way forward.

The principle is grounded in an ethic of present generations taking responsibility for the health and well-being of future generations. Government is specifically charged with fulfilling that responsibility since typically it is the steward of the commonwealth and common health - all the things we share from air, water, parks, public schools, roads, wildlife and so much more. The commons are the basis of the economy and community. Planning for, and taking care of the commons, is the central role of government. For government to fulfill this responsibility to present and future generations, the most effective decision-making tool is the precautionary principle.

There are three components to the precautionary principle algorithm: scientific uncertainty, the likelihood of harm and precautionary action. Those three elements of the principle are not self-implementing and require some additional decision steps. There are 5 basic steps that decision-makers can take to implement the precautionary principle.

- 1) **Heed early warnings.** Pay attention to trend lines in areas the community cares about. Increases in negative indicators such as cancer, autism, traffic deaths, obesity, or declines in positive indicators such as water quality or air quality give communities key information about where to intervene in the system.
- 2) **Set goals.** Once a community has an idea of the status and direction of an indicator, it can set goals to improve health or environmental quality. Do you want to reverse the trend lines in special education or water quality? Setting a goal will help a community design and plan new strategies. Planning and then monitoring success will inform whether the intervention worked.
- 3) **Identify and choose alternatives to the harmful activity.** Say a pesticide being used in parks that is a known neuro-toxicant or carcinogen. What other methods are there to address the problem in the park? In the case of the Los Angeles school system, they decided to eliminate the use of cosmetic herbicides. School personnel identified steam backpack devices that used steam to get rid of weeds growing in playgrounds and schoolyards. Steam was safe and effective in contrast to the toxicity of the pesticide.
- 4) **Reverse the burden of proof.** Reversing the burden of proof means the things a community wants to protect (air, water, children, elders, wildlife) get the benefit of the doubt. It means that the corporate proponent of an activity needs to verify that their activity won't make things worse. It also means that the polluter must be held accountable and pay for the damages. For instance, a corporation that wants to put in a possibly polluting facility could be required to put up a performance bond before it was given a permit. The bond would be held by the community and cashed in case of a spill or accident. The corporation could also be required to



negotiate a community benefits package to balance out the negative impacts of the corporation's project. These community benefit agreements are frequently used by developers but could be used to obtain benefits from other proponents of various businesses. Usually the community is represented by nonprofits and the completed benefits agreement is ratified by the county board or city council.

- 5) **Democratic engagement.** Involve all stakeholders in the decisions. A community is far more likely to get creative solutions and better alternatives if it involves all the parties who will be affected by the decision. In the case of the L.A. school district, they first neglected the maintenance crews and imposed a solution on them. The results were angry staff and ugly school grounds. When the district finally involved the maintenance crews, the collaboration co-created the innovative solution of the steam backpacks.

There is one additional step in democratic engagement, and that is obtaining the free, prior, and informed consent of the community affected by the decision. The community needs to have the right to say 'yes' or 'no' to things affecting their future. Local governments have a remarkable capacity for obtaining the consent of their communities through town hall meetings, referenda, ballot initiatives, and other measures for engaging the residents.

Embedding the Precautionary Principle in Comprehensive Plans

- 1) Describe the government public trust responsibility of government by creating a preamble to the Comprehensive Plan or by including this in the Plan introduction. An important step in justifying the inclusion of the precautionary principle into plans is to assert the authority of government to make decisions that protect the commonwealth and public health for present and future generations. A good way to do that is to incorporate a statement about public trust responsibilities of government early in the Plan.
- 2) Include the five precautionary principle mechanisms (listed above) in the planning process and in the community's Plan. The specific steps of implementing the precautionary principle provide a roadmap for planners. They provide a guide for preventing harm to the commonwealth and public health. For instance, if a proposal comes before planners, the proponents of that activity need to demonstrate it will not add to the ecological or social justice burdens of the community. This way the burden of proof is reversed since the community is not responsible for demonstrating that the proposal could increase pollution, or social inequities like poverty. Another key precautionary step is identifying alternatives to harmful activities. Proponents of activities and planners alike can identify the potential harms and search for better alternatives.

Resources

At the nexus of science and environmental health, the websites [Science & Environmental Health Network](#) and [Toxipedia](#) provide some wide-ranging resources for defining and incorporating the precautionary principle into Plans, City Resolutions, and decision-making.