

Precautionary Purchasing in San Francisco

Guiding Questions

1. What was the central sustainability challenge or problem?

The central sustainability challenge in this case was the carcinogenic effect of toxic chemicals leached into the environment from a variety of human activity.

2. What stakeholders participated in addressing this challenge? How did those stakeholders participate?

The [Science and Environmental Health Network Bay Area Working Group](#) worked to pass precautionary principle based legislation in the Bay Area with the help of [Commonweal](#) and the [Breast Cancer Fund](#). Initially, the city's partnership with these non-governmental organizations (NGOs) was contentious. The NGOs were playing their traditionally antagonistic role, despite the willingness of the city to pursue common goals. Overcoming early distrust required extensive and time-consuming relationship building in order to establish that everyone truly shared priorities. However, once trust had been established, both sides worked closely together to shepherd the precautionary purchasing ordinance into law. Once the ordinance passed, the NGOs gradually lessened their involvement, moving on to work on statewide legislation.

In the broader community, the San Francisco Department of Environment (SFDoe) held many open meetings to garner community input on precautionary purchasing. However, these meetings sometimes struggled to attract sufficient attendance. To address this, San Francisco is currently developing a web tool to generate citizen involvement called [InSight](#).

3. What factors supported or impaired success in this case study?

Many factors set the stage for San Francisco's sustainability leadership:

- The city and county share the exact same boundaries, giving them very similar priorities and creating less bureaucratic territorialism.
- San Francisco enjoys a regulated monopoly for waste services operated by [Recology](#), an environmentally responsible Bay Area business that opened early in the 20th century.
- The region's history includes prominent battles over environmental protection, from John Muir's 1908—1913 [protests of the Hetch Hetchy Dam](#) in the early days of the Sierra Club to today's [Save the Bay](#) campaign.
- The city's economic mix of high-tech, bio-tech, banking, and legal services drives progressive demographics, provides high rents to property owners, and includes businesses that are relatively image-conscious and open to sustainability initiatives.

Another major component of San Francisco's success is the institutional permeability and flexibility of the SFDoe. The institution has emerged as a clearinghouse for all municipal sustainability initiatives, and politics plays a comparatively minimal role in program development. In San Francisco, the bureaucracy has learned to support change, in contrast to the inertia and risk aversion associated with most municipal and county governments. Ideas for sustainability transitions come from the mayor's office, the Commission, within the department, and from citizens, community groups, and nonprofits. SFDoe manages open communication with all these groups and nurtures programs from their initial ideas through successful implementation, accumulating necessary resources and support along the way. The institution acts as an open forum for stakeholder participation and an incubator for sustainability transitions.

Impairing factors in this case included the initial distrust between the city and NGOs, comfort of various stakeholders with the status quo, and effective communication between the many stakeholders involved in the implementation process.

4. What approach linked scientific knowledge and practical action?

Those in charge of implementation at the city level initially saw the [precautionary purchasing ordinance](#) as what amounted to a retitling of existing priorities. However, over time, it became apparent that a major perspective shift had occurred. Precautionary purchasing began to ask the question: "Is it necessary?" Debbie Raphael (director of SFDoe's Toxics Reduction Program) and SFDoe's director at the time, Jared Blumenfeld, capitalized on the opportunities afforded by the precautionary principle ordinance and began to enact major changes. With the support of a progressive populace, the backing of an interested mayor, Recology's malleable revenue stream, and the new legislation, the department was able to focus on effective implementation.

The logistics of that implementation required departmental employees with scientific backgrounds (including our presenter Chris Geiger, who holds a PhD in Environmental Science, Policy, and Management) to leverage existing academic research. Where it was necessary to augment available research, SFDoe contracted consultants (including Ann Blake, another presenter) to generate data on alternatives assessments specific to city needs. Such research included questions about performance and durability, as well as about toxicity.

Implementation of changes suggested by research was as challenging as any step in the process. Successful implementation requires effective communication between disparate groups: researchers identifying alternatives with less toxicity, purchasers trained and used to focusing on the bottom line as the sole or primary decision tool, and end-users focused on performance. These stakeholder groups all play different roles in implementation, and maintaining their communication and cohesion is necessary to move forward. Each of these constituencies has specialized skill sets, epistemologies, and systems for their work. It's very important to empower pertinent stakeholders to share their insight on system dynamics, as outsiders will not have the same facility to predict and understand how change will affect the system. For example, the ways janitors use cleaning supplies must be understood by researchers and purchasers so that the alternatives discovered and purchased suit the needs of the cleaning staff. Cleaning staff, on the other hand, must understand how their practices must change in order to successfully use the new products.

5. What scientific and what real-world outcomes were achieved?

Although the city's precautionary purchasing ordinance initially struck its implementers as relabeling, in practice, alternatives research and implementation took center stage. The city now commissions academic studies by consultants and universities on alternatives to toxics. The reach of the ordinance has spread beyond toxics and begun to use life-cycle thinking across the city's purchasing. This includes carbon footprint accounting, packaging reduction, and examination of labor practices for everything from food to vehicles to city uniforms. Of course, what received attention first was low-hanging fruit such as disposal of paint, use and recycling of paper, less toxic janitorial supplies, and recycling. However, a decade later, deeper issues such as vendor labor practices and locally sourced food, among many others, now receive significant attention.

Supplementary Materials

Journal Articles

Espinoza T, Geiger CA, Everson I (2010) The real costs of institutional "green" cleaning. SFDoe

Flores L (2009) Progress towards sustainability in urban planning: san francisco and montreal. Focus 6:69-76

Raphael DO, Geiger CA (2011) Precautionary policies in local government: green chemistry and safer alternatives. Solutions 21(3):245-358

SFDoe Materials

Precautionary Principle Ordinance

Precautionary Principle Year 3 Report

San Francisco Department of the Environment 2011—2013 Strategic Plan

Takeuchi D (2004) Memorandum on the precautionary principle. Legislative Reference Bureau 04-3018M response memo

Report

Economist Intelligence Unit (2011) US and canada green city index 116-119

Brief Background

San Francisco is recognized, by [The Brookings Institution](#), [The Economist](#), and [Siemens](#) (among others), as a global leader in urban sustainability. The city's institutional sustainability structures start with the mayor, who appoints members of the San Francisco Commission on the Environment. The commission sets policy across a broad range of sustainability challenges for the [San Francisco Department of Environment](#) (SFDoe), which employs over 100 staffers and green jobs trainees in the following departments: [Zero Waste](#), [Toxics Reduction](#), [Energy](#), [Air Quality and Transportation](#), [Green Building](#), [Green Business Program](#), [Urban Nature](#), [Environmental Justice](#). The department's mission statement is:

"The Department of the Environment creates visionary policies and innovative programs that promote social equity, protect human health, and lead the way toward a sustainable future. We put our mission into action by mobilizing communities and providing the resources needed to safeguard our homes, our city, and ultimately our planet.

SF Environment works to improve, enhance, and preserve our urban and natural environment and to ensure San Francisco's long-term sustainability. By developing innovative, practical and wide-ranging environmental programs, fostering ground-breaking legislation, working collaboratively with key partners and educating the public on comprehensive sustainability practices, SF Environment makes it easy for everyone in San Francisco to protect their environment" (SFDoe 2011—2013 Strategic Plan).

Also of importance to San Francisco's sustainability successes is the support of the business community for progressive building codes, recycling initiatives, and energy conservation and production from renewable sources. San Franciscan businesses are happy to be at the table with the SFDoe to negotiate the time frames for the implementation of sustainability legislation, according to the head of the local Building Office Manager's Association. This is in stark contrast to many cities, in which businesses dedicate themselves to fighting all inhibiting regulation. It seems that enterprises in San Francisco have grasped to a greater degree the benefits of market differentiation, high quality of life to attract skilled workers, and long-term cost savings from sustainability transitions.

Of course, the citizenry of San Francisco also plays a major role in the city's political economy. The city has been able to pass policies connecting SFDoe program funds directly to consumer behavior. Recology's curbside pricing for waste services is a perfect example. Every five years, Recology negotiates waste management rates with the city, while the city negotiates internally how to attach those revenues to specific SFDoe priorities. One example of those specific priorities is Recology changing its pricing to a flat rate. Customers can deduct a percentage from that rate indexed to their diversion of waste from the landfill category into the recycling and compost categories. This strongly incentivizes desired increases in recycling and compost diversion. Additionally, the strongly progressive culture, history, and politics of San Francisco's citizens is a unique but crucial element of the support for and success of the city's sustainability transitions.

Case Focus: Precautionary Purchasing

During the 1980's, the U.S. experienced a national movement to pass legislation to enact the precautionary principle at various levels of government. The [Science and Environmental Health Network Bay Area Working Group](#) worked to pass such legislation in the Bay Area with the help of [Commonweal](#) and the [Breast Cancer Fund](#). These groups shared a common interest in reduction of toxics that increase cancer risk.

In 2000, San Francisco's city government reorganized, creating the SFDoe from existing departments with Francesca Vietor as its first director. At this point, the city began writing its environmental code with support from the NGOs lobbying for precautionary principle legislation. In 2003, the final draft of

a precautionary principle ordinance was realized; and, in 2005, the precautionary purchasing ordinance was passed into law. The legislation was partially the result of a feed-forward loop drawing on existing city and state environmentally responsible purchasing as well as California's history as a leader in environmental protection.

Those in charge of implementation at the city level initially saw the [precautionary purchasing ordinance](#) as what amounted to a retitling of existing priorities. However, over time, it became apparent that a major perspective shift had occurred. Precautionary purchasing began to ask the question: "Is it necessary?" Debbie Raphael (director of SFDoe's Toxics Reduction Program) and SFDoe's director at the time, Jared Blumenfeld, capitalized on the opportunities afforded by the precautionary principle ordinance and began to enact major changes.

Historically, risk assessment of toxics had followed the formula of hazard = risk x exposure, with primary emphasis on reducing exposure. Asking, "Is it necessary?" was a significant change, shifting that primary emphasis from exposure reduction to questioning the necessity of using a hazardous material in the first place. The question, "Is it necessary?" led to alternatives assessments, which measured alternative products on a variety of indices, and suggested changes in purchasing, if appropriate. These assessments led to changes in city purchasing of some pesticides and janitorial supplies.

Moving forward from implementation, SFDoe uses metrics (where possible) to track success and help choose future targets. The department goes so far as to track individual purchasers' performance, enabling the green purchasing program to present annual awards and incentives for desired behaviors. These awards and incentives serve as feed forward loops, helping local businesses differentiate themselves in the market and recalibrating policy incentives to produce the most sustainable outcomes.

Though some factors in San Francisco's success, such as the Bay Area's culture of environmental responsibility, are unique to the area, the case of precautionary purchasing serves to illustrate the institutional dynamics that have made the city a global sustainability leader. The willingness of the city to employ the outside expertise of consultants and academics has led to research targeted where the city needs timely and practical answers. The persistence of department staff in relationship building has created dynamic partnerships between the city and a multitude of organizations, stakeholders, and communities. SFDoe and its partners see their work as moving along a spectrum toward success. The institution's capacity to champion solutions helps it identify and capitalize on opportunities for change, and has set the stage for San Francisco's sustainability transitions.