

SUSTAINABILITY AND THE PRECAUTIONARY PRINCIPLE

By Michael A. Rice*

The fact that cultured shellfish are filter feeders that graze on phytoplankton is a major selling point used by many shellfish farmers as they argue their cases to official authorities to obtain leases or permits to start their aquafarms

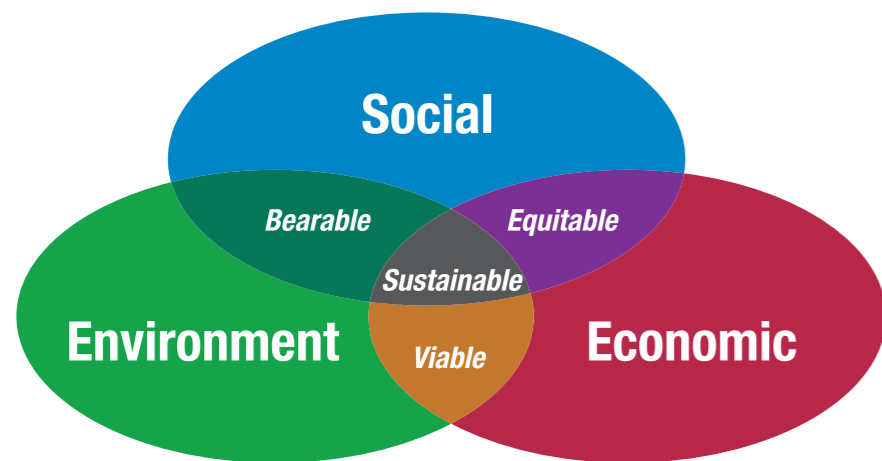


Image 1. Three elements of sustainability attributed to *Our Common Future*, 1987 . Source: Wikimedia Commons.

After all, most all shellfish aquaculture farming worldwide is conducted in waters held in common and administered by some government entity that is vested with the authority of managing the waters as part of the public trust. Very frequently, the Precautionary Principle is evoked by critics of various shellfish aquaculture projects as

their philosophical basis for opposition. Just what is the precautionary principle anyway?

In its most basic form, the precautionary principle is simply the old adage of “better safe than sorry” when applied to environmental policy. The precautionary principle has its philosophical origins with the publication of Rachel Carson’s *Silent Spring* in 1964 and the first Earth

Day of 22 April 1970. It gained traction during the heyday of the development of environmental policies in Europe and the United States in the early 1970s. In Germany, the principle *Vorsorge*, or foresight, articulated the belief that their society should avoid environmental damage by carefully planning any proposed projects. This *Vorsorgeprinzip* developed into a fundamental principle of German environmental law and eventually spread across Europe, being incorporated into basic environmental policy during the formation of the European Union. It was invoked to justify the implementation of robust policies to tackle acid rain, global warming and water pollution. Likewise in the United States, the landmark environment legislation of 1972, including the Clean Water Act, the Clean Air Act and the Endangered Species Act, all had the precautionary principle at their philosophical cores although it was not explicitly stated. The precautionary principle later entered into international treaties with the Rio Declaration of 1992.

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation (Rio Declaration 1992, Principle 15).

Despite all of the environmental advances since the 1970s, particularly in the massive reduction of air and water pollution in most countries with advanced economies, the precautionary principle has frequently been abused/used as a tool by opponents to halt aquaculture project development, not on environmental grounds *per se*, but often for other ulterior political reasons. For example, in my home state of Rhode Island during the early 1990s, there was a push by a few in our state legislature to streamline the aquaculture laws to allow for growth of shellfish aqua-



Image 2. The *Thomas D. Royal* of Saltwater Farms, Davisville, Rhode Island. Photo by M.A. Rice.

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culture leasing in the coastal waters of the state. Justification for the legislative action to increase the amount of shellfish aquaculture in the state was twofold. First, it was known that at the turn of the 20th Century the aquaculture of oysters was a major economic force within the state with nearly 21,000 acres (about 8,500 hectares) of coastal waters leased for oyster farms and about 60,000 metric tons of oysters worth several million dollars being produced annually. Second, investment by the state and federal governments in the wake of the Clean Water Act to clean up the industrial and sewage pollution (major causes for the decline and failure of the very lucrative oyster farm-

ing industry between the 1920s and 1950s) was very successful, thereby creating conditions for the rebirth of a once thriving aquaculture industry.

But despite the potential benefits to the state presented by a historic track record of shellfish aquaculture production and successful pollution abatement other issues cropped up as counterpoints, such as preservation of traditional markets for wild harvested shellfish or limiting the amount of commercial activity within the view of coastal landowners. The aquafarm critics raised the precautionary principle as a proxy, applying it for political reasons, rather than valid scientific reasons. Often,

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their testimony included legitimate scientific studies showing environmental degradation caused by different types of aquaculture, such as shrimp farming in the tropics during the early days of its development, or high density shellfish farms in areas with conditions very much *unlike* the locale under review, all acting to confuse decision-makers during the process. Additionally, these critics were often selective in their use of the scientific findings, pointing to the potentially negative consequences exclusively, potentially leaving any positive benefits of the aquaculture project completely unrealized.

A major conceptual stumbling block in making progress in aquaculture development has to do with the semantics of the word 'sustainability.' To many environmentally-minded people, 'sustainability' refers primarily to long-term environmental sustainability, and this is okay for a government agency such as the US-EPA or environmental non-governmental organizations (ENGOS) that have mission mandates to protect the environment. But a danger of this narrow view of what sustainability is all about is that reliance on the precautionary principle could stifle all innovation, since implementation of any new technology carries some risk of unknown consequences in varying degrees.

In the mid-1980s a wider view of sustainability was developed that incorporates elements of economic and social sustainability as well (See: Brundtland Commission 1987. *Our Common Future*, United Nations). If a business is not making money, it could hardly be considered a sustainable enterprise. Likewise, if communities are stressed, perhaps to the point of poor public health and even civil unrest, they could never be considered fully sustainable. Most contemporary views of sustainability incorporate the economic and social elements with the

view that 'sustainability' is a target goal of human-environment equilibrium (or homeostasis), while 'sustainable development' is a practical set of holistic policies and pro-active approaches that move us toward the goal of sustainability. This broader contemporary view of sustainability allows for a more proactive approach that considers socioeconomic as well as environmental risks in the decision-making calculus.

Political decision makers are always faced with the task of balancing the environmental, social and economic benefits of any proposed project such as a new shellfish farm in common-held or public-trust waters. But the good news is that in many ways most all aquafarmers in their day to day work very closely embody the Brundtland Commission's ideals of a green industry, balancing both socioeconomic elements with good environmental stewardship. After all, without good environmental stewardship the aquaculture crops would be dead very quickly, along with their businesses! **END**



Image 3. Rhode Island Senate Agriculture and Environment Committee. Photo by Steve Ahlquist.



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