

3M Sustainability In-depth: Dr Joseph Ling, The Father of Pollution Prevention

Dr. Joseph Ling, 3M's former Staff Vice President, Environmental Engineering and Pollution Control, was a pioneer in the field of environmental and air quality management and is recognized, worldwide, as the father of pollution prevention. Throughout Dr. Ling's distinguished career he revolutionized the way society understands and manages its environmental impacts. He was one of the first individuals to articulate and embrace a holistic approach to environmental management that considers the environmental impacts to all media (air, water, and land) when evaluating policy and program decisions. As early as 1971, Dr. Ling advocated this holistic approach in his testimony before the U.S. Congress regarding the creation of new drinking water quality regulations. Dr. Ling argued that the proposed legislation, which relied heavily on pollution controls, would generate significant air pollution and waste through its implementation and that pollution prevention was a more prudent approach.



Dr. Ling took his novel ideas one step further by integrating them into 3M's business processes. In 1975, Dr. Ling launched 3M's revolutionary Pollution Prevention Pays program or 3P. The 3P program is based on the reality that pollution prevention is more environmentally effective, technically sound and economical than conventional pollution control equipment. 3P seeks to eliminate pollution at the source through product reformulation, process modification, equipment redesign, and the recycling and reuse of waste materials. The program has been instrumental in helping 3M to reduce its volatile organic air emissions by 95% since 1990 through a series of projects ranging from the creation of new products with fewer emissions to the transition from solvent to water based adhesives. Over the last 32 years the program has prevented more than 2.6 billion pounds of first year pollutants with more than 565 million pounds coming from the prevention of emissions to air.

While Dr. Ling's impact on 3M's operations and air emissions was vast, his greatest impact comes from his work to spread these ideas globally. In 1976, Dr. Ling first presented his ideas at the Non-Waste Technology and Production Conference sponsored by the United Nations Economic Commission for Europe. Shortly after, countries such as the United Kingdom, France, Germany, and Sweden adopted pollution prevention as a formal part of their environmental policies and Dr. Ling was approached by the Director of the United Nations Environmental Program to develop a booklet explaining these theories for distribution to UN member countries¹. In addition, Dr. Ling further spread these ideas by serving as an advisor to three sitting U.S. presidents, the United Nations, and the U.S. EPA; serving as a delegate to the U.S. -U.S.S.R environmental treaty in 1979; speaking at conferences throughout the United States, Europe, and Asia; and serving on numerous boards and associations. Up until his death in 2005, Dr. Ling continued to advocate a holistic, pollution prevention approach and donate his time to advancing proactive, science based environmental decision making.