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Sustainable Materials Management
PRODUCT STEWARDSHIP: EU INTEGRATED PRODUCT POLICY (IPP)

INTRODUCTION

The occasional series of international fact sheets on this web page provides summary information on selected topics relevant to the functions and activities of the EPA programs that manage waste, clean up contaminated sites, promote the productive use of land, and address emergencies. An important purpose of the papers is to promote a fuller understanding of actions around the world to protect the environment in relation to these subject areas. The international fact sheets do not establish policy or represent the views of EPA. Each fact sheet provides information and electronic links to other sources of information that can provide the reader with a fuller understanding of the material. For organizational purposes, the fact sheets have been placed in four broad categories:

- Treaties, Directives, and Policies
- New Directions in Program Management
- Innovative Approaches to Environmental Protection
- Emerging Issues

TOPIC SUMMARY

The European Union (EU) Integrated Product Policy (IPP) developed by the European Commission (see http://ec.europa.eu/environment/ipp/) takes a "holistic" approach to stewardship in the development, use, and disposition of products and services. Its goal is to help policy makers identify when and how to take actions in integrated ways that most effectively achieve sustainability goals. As described by the EU, IPP is based on five environmental management principles: 1) life-cycle thinking; 2) working with the market; 3) stakeholder involvement; 4) continuous improvement; and 5) flexibility in the use of a variety of policy instruments. This fact sheet is not comprehensive; rather is provides a starting point for readers interested in investigating the topic.

THE IPP CONCEPT

Through IPP, European policy makers have chosen to take an integrated conceptual approach to address the production, use, disposal and reuse of products and services in ways that reduce their environmental impacts and improve their ecological properties across the entire life cycle. The life-cycle of a product is often long and complicated. It includes the extraction of natural resources, product design, manufacture, assembly, marketing, distribution, sale, and use, as well as eventual disposal or reuse of the product's constituent parts. A product's life cycle involves parties with many different needs and interests, including designers, industry, marketers, retailers, and consumers.

IPP employs both voluntary and mandatory policy tools, including economic instruments, substance bans, voluntary agreements, environmental labeling, environmental management

systems, and product design guidelines to minimize impacts on the environment associated with the product life cycle. IPP would use these policy tools in an integrated manner, based on an evaluation of the life-cycle product impacts, to maximize environmental improvements. Product-focused strategies that may be used to implement IPP include: eco-labeling, green procurement, design for the environment, life cycle management, life cycle engineering, and extended producer responsibility. See http://ec.europa.eu/environment/ipp/toolbox.htm for more information on the "IPP Toolbox."

IPP evolved in the 1990's, consistent with the 1992 Rio Declaration on Environment and Development, when the EU sought to develop a broader environmental policy framework for products. EU policymakers were concerned about potential barriers to trade that could emerge if fragmented product-focused environmental policy approaches developed in individual member countries. Further, an EU role in product policy was advocated to recognize more fully the diverse needs of stakeholder groups and markets in the complex life cycles of goods and services across Europe. Some policymakers also reasoned that promoting environmentally superior products could enhance economic competitiveness internationally. Finally, support for IPP principles reflected a growing belief that development without product policy would be inherently unsustainable in economic, environmental, and political terms.

IPP was discussed formally with stakeholders in a 1998 conference. Following a study commissioned by the European commission, in February 2001, the Commission adopted a Green Paper on IPP: http://europa.eu.int/comm/environment/ipp/2001developments.htm. In June 2003, a non-binding IPP "Communication" was adopted by the European Commission. See http://europa.eu.int/comm/environment/ipp/ippcommunication.htm. The Communication identifies IPP as an integral part of the EU sustainable development strategy and states the importance of a product dimension to environmental policy at a time when the overall quantity, variety, and complexity of products and services are growing and their trade is increasingly global. The communication highlights the use of voluntary approaches to coordinate the use of existing and future environment-related product policy instruments.

The 2003 IPP Communication outlines steps that the EU will take to: (1) establish a framework For continuous environmental improvement of products through their life cycle; and (2) focus on products with the greatest potential for environmental improvement. The choice of a Communication, rather than a directive, resulted in part from disagreements among EU nations, along with concerns expressed by stakeholders. The EU recognized the importance of life-cycle analysis (LCA) and materials flow accounting to achieve IPP and sustainable policy goals, and the Communication establishes a European Platform of Life Cycle Assessment to study LCA . See http://ec.europa.eu/environment/ipp/lca.htm. At this point, no plans for a regulatory strategy to implement IPP have been announced. Voluntary pilots, on cell phones and teak garden chairs were established in 2004 to demonstrate how IPP could work. See http://ec.europa.eu/environment/ipp/pilot.htm. In August 2006, the EU released a report identifying food and drink, transport, and housing as the three product groups consumed in the EU that carry the heaviest environmental burden. See http://ec.europa.eu/environment/ipp/identifying.htm.

COUNTRY EXAMPLES

An environmental policy focus on products in some individual EU-member nations has influenced, and has been influenced by, the development of IPP by the EU.

- Denmark. As part of the Product-Oriented Environmental Initiative, in 1996 the Danish Environmental Agency (EPA) established the first of seven product panels, and Denmark has used eco-labels since 1989. The Danish EPA in 2002 established a Life Cycle Assessment Center and has undertaken a number of other initiatives related to IPP. See http://www.mst.dk/indu/06010000.htm.
- Netherlands. The first of five international "Green Goods" conferences took place in 1993 in The Hague, The Netherlands. In 1994, the Dutch Ministry of Housing, Spatial Planning and the Environment (VROM) published "Policy document on Products and the Environment." Since that time, VROM has focused attention on sustainability and the environmental consequences of consumption through pilot studies and policy dialogue.
- Sweden, The Swedish 'Eco-Cycle' Commission, established in 1993, delivered its final report titled "A Strategy for Sustainable Materials and Products" in 1997. In 2001, the Swedish EPA was charged with a developing a basis for use of integrated product policy by Sweden, in cooperation with other countries. The Swedish Ministry of the Environment has established an informal IPP network to collaborate and exchange national experiences among authorities, representatives from the environment and the business sector, scientists, and consumer representatives. The network, a driving force in the development of IPP in Europe, runs parallel to the EU Commission's IPP work. See http://www.internat.environ.se/index.php3?main=/documents/issues/envprod/envprod.htm.

SOME U.S. ACTIVITIES AND ADDITIONAL RESOURCES

Environmental policymakers on both sides of the Atlantic have paid increased attention to the policies associated with the life cycle of products that would reduce adverse environmental impacts. Below are summary descriptions and links that reflect some of these policy directions:

- EPA – Product Stewardship. http://www.epa.gov/epr/. Product stewardship calls on those in the product lifecycle—manufacturers, retailers, users, and disposers—to share responsibility for reducing the environmental impacts of products. The web site highlights recent developments in product stewardship and provides numerous links to other sources of information
- EPA - *Beyond RCRA: Prospects for Waste and Materials Management in the Year 2020* http://www.epa.gov/epaoswer/osw/vision.htm. This document identifies general strategies and tools that might be used to build a new vision for the future of the EPA RCRA program based on resource recovery. The growing consensus that wastes when possible should be reused shifts the historic "cradle-to-grave" paradigm in RCRA to a "cradle-to-cradle" model that emphasizes sustainable materials management
- EPA – Resource Conservation Challenge (RCC). http://www.epa.gov/rcc/. The RCC emphasizes natural resource conservation and efficient materials management
- EPA – Pollution Prevention.
  http://www.epa.gov/opptintr/p2home/p2policy/definitions.htm.
  As defined under the Pollution Prevention Act, pollution prevention means "source reduction" and other practices that reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials, energy, water, or other resources, or protection of natural resources by conservation. See also
  http://www.epa.gov/opptintr/p2home/aboutp2/tips.htm
- EPA - Design for the Environment (DfE). http://www.epa.gov/dfe/. DfE assists industry through a variety of tools (such as EPA's "PBT Profiler" for persistent bioaccumulative toxics and EPA's Risk Screening Environmental Indicators model) to screen and assess toxics and help develop "greener" products

- EPA - Toxics Release Inventory (TRI). http://www.epa.gov/tri/. TRI is a community-right-to-know program that provides information to the public regarding toxic chemical releases
- EPA- eCycling. http://www.epa.gov/epaoswer/hazwaste/recycle/ecycling/index.htm. The page describes a number of initiatives for the reuse (e-cycling) of electronic wastes
- EPA – Municipal Solid Waste Initiatives. http://www.epa.gov/epaoswer/non-hw/muncpl/programs.htm. EPA has a number of programs and initiatives to foster source reduction and recycling activities for municipal solid wastes
- EPA – WasteWise. http://www.epa.gov/epaoswer/non-hw/reduce/wstewise/. WasteWise is a voluntary EPA program through which organizations eliminate costly municipal solid waste and select industrial wastes
- EPA - Energy Star. http://www.energystar.gov/. Energy Star is a joint program of the U.S. EPA and the U.S. Department of Energy to help save money and protect the environment through energy efficient products and practices
- EPA - Environmentally Preferable Purchasing (EPP). http://www.epa.gov/opptintr/epp/index.htm. EPP is a program to encourage and assist Federal Executive agencies purchase environmentally preferable products and services
- EPA – Life Cycle Analysis (LCA). http://www.epa.gov/ORD/NRMRL/lcaccess/. LCA helps policy makers to make more informed decisions through a better understanding of the human health and environmental impacts of products, processes, and activities