PREVENTION – new additions

III Strategies and tools

Waste is generated from industrial, commercial and consumer activities throughout the life-cycle of materials and products. Therefore, a successful waste prevention strategy must target all relevant stakeholders throughout all life stages of a material[[1]](#footnote-1) in order to effectively meet waste prevention objectives.

There are three essential strategies that have been widely used to prevent waste from industrial, commercial and consumer activities. These strategies can coexist and are often most successful when integrated into a comprehensive approach that Educates, Motivates and Mandates preventative actions: 1. Educate through public awareness efforts to encourage behavioural change, 2. Motivate through measures that incentivize change or disincentivize status-quo, and 3. Mandate change through regulatory action.

All three strategies can be employed at various life-cycle stages of materials and products to promote waste prevention through strict avoidance, source reduction and direct reuse actions.

**Information and awareness strategy**

Creating awareness among the general public as well as the business community is fundamental to changing behaviour and attitudes about the way people consume resources and generate waste. Sharing practical information and guiding tools about how individuals can prevent and reduce waste in their daily lives, is a critical first step.

Public awareness strategies employed by governments, NGO’s and industry through information exchanges have been widely successful in transferring knowledge about the life-cycle environmental benefits of prolonging product use, for example. In fact reusable shopping bags are a prime example where public awareness activities over the past decade have led to a transformational shift in attitudes and behaviours away from single use bags. Another related example includes the widely accepted benefits of refilling plastic and glass bottles after cleaning to conserve natural resources and reduce environmental impacts.

Eco-labelling is another prime public awareness example. Eco-labels help consumers identify environmentally preferable products through voluntary labelling programs. The Electronic Product Environmental Assessment Tool (EPEAT) is an example of a private labelling program that identifies computers, displays, imaging equipment and televisions that have environmentally preferable attributes, including the strict avoidance of notable hazardous constituents from production. Consumers are given a choice between buying products that do not contain hazardous constituents and those that do. Manufacturers are also encouraged to remove hazardous constituents from product design in order to compete in the marketplace with those that are distinguished with eco-labels.

**Motivation Strategy**

Motivating strategies often provoke actions by incentivizing people to make behavioural changes that support waste prevention. Financial stimulus such as tax incentives for the purchase and installation of renewable energy technologies are one such stimulus strategy. The financial stimulus subsidizes upfront costs, and ultimately prevents waste from being generated at source by reducing demand for conventional energy sources that are fossil fuel intensive.

Financial incentives in the form of cash rebates have also been successful when offered to consumers when purchase products that meet specific environmental compliance targets. One example is the U.S. ENERGY STAR label, which identifies energy consuming devices that provide for efficient operation during the use phase of the product. Stimulus programs initiated by local governments have offered cash rebates for the purchase of ENERGY STAR labelled products, and thus contributed to waste prevention goals by reducing energy demand at source.

Collection events and donation programs that offer free drop off, or tax incentives for valuables that are donated for reuse are other examples of motivating strategies.

**Mandating Strategy**

Regulatory strategies enforce bans on the use of hazardous materials in production (strict avoidance) as well as imposing limits on the volume of waste generated (source reduction) by certain industrial activities. With industry at the helm of making design and production decisions that affect all other product life-cycle stages, industry is a prime target for regulatory strategies.

Sustainable design requirements, producer responsibility initiatives, environmental controls through permitting and take-back mandates are all regulatory strategies.

The EU RoHs directive 2002/95/EC, which requires EU Member States to ensure that new electrical and electronic equipment (EEE) put on the market after 1 July 2006 does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) has been a successful regulatory strategy that implements strict avoidance action.

Other regulations have sought to limit the volume of waste generated, such as emissions targets for power production. These limits promote clean alternatives and the prevention of waste through source reduction.

**Tools** (to be developed)

Include key examples:

Leasing vs owning

Green (public) procurement

Eco-design programmes

Industry process modifications (ref. Cleaner Production publications)

Note: include rebounding effects

1. A material can be defined as any substance that is mined, reclaimed, grown, processed, produced, distributed, used, discarded or reprocessed, or any object that is produced, distributed, used, discarded or reprocessed, including the derived wastes. [↑](#footnote-ref-1)