

# Sustainable Waste Management Solutions: ZERO WASTE IS

- Turning waste into resources through composting, recycling, reuse, and biogas
- Reducing resource consumption
- Implementing the Stockholm Convention & applying BAT/BEP
- Reducing POPs and Greenhouse Gas Emissions
- Promoting Green Jobs

Learn how Zero Waste Strategies provide no burn, no bury solutions that advance these critical development issues



**IN COLOMBIA:** The Association of Recyclers of Bogota works to keep useful materials from being landfilled or incinerated—decreasing the need for more mining, extraction, and pollution. Nohra Padilla (far left, 2013 Goldman Prize Recipient) organized street recyclers in Colombia and won a constitutional court battle in favor of expanded resource recovery programs, the labor rights of traditional recycling workers, and the environmental health rights of the population.

## Zero Waste Solutions to Waste Management & Reduction of POPs Emission

- The Stockholm Convention and BAT/BEP Guidelines give **priority to zero waste practices**, which prevent the formulation and release of POPs. (See Stockholm Convention: Annex C; A. “Priority should be given to the consideration of approaches to prevent the formation and release of the chemicals listed in Part I. Useful measures could include:” “(c) The promotion of the recovery and recycling of waste and of substances generated and used in a process)
- **Zero waste strategies** conserve energy and resources while creating jobs and supporting community development.
- These solutions also **eliminate the need for incinerators**, which emit POPs, mercury, and greenhouse gases, among many other dangerous pollutants.

### Statistics and References

- Recycling and composting create 10-20 times as many jobs as incinerators and landfills<sup>1</sup> and conserve 3-5 times the energy that incinerators waste.<sup>2</sup>
- Incinerators emit more carbon dioxide per megawatt-hour than coal-fired power plants<sup>3</sup>, and a New York state study showed they emit up to 14 times more mercury.<sup>4</sup>
- Recent research by Vietnam’s Ministry of Natural Resources and Environment showed that several of the country’s incinerators emit dioxin levels far over permitted levels – one 81 times over the allowed amount!<sup>5</sup>
- Research shows that adopting proven waste reduction strategies in the U.S. alone could have climate protection benefits comparable to closing one fifth of the country’s coal-fired power plants.<sup>6</sup>

<sup>1</sup> Platt, Brenda, Resources Up in Flames, GAIA, 2004.  
<sup>2</sup> Morris, Jeffrey, Comparative LCAs for Curbside Recycling Versus Either Landfilling or Incineration with Energy Recovery, The International Journal of Life Cycle Assessment, July 2005. Available at: <http://www.springerlink.com/content/m423181w2hh036n4/>  
<sup>3</sup> U.S. EPA, <http://www.epa.gov/cleanenergy/energy-and-you/affect/air-emissions.html>  
<sup>4</sup> NY Department of Conservation, Comments to New York State Public Service Commission in the Matter of the application of Covanta Energy Corporation, August 19, 2011.  
<sup>5</sup> Eco-Business news, Vietnamese Incinerators Create Deadly Dioxin Gases, April 13, 2015. Available at: <http://www.eco-business.com/news/vietnamese-incinerators-create-deadly-dioxin-gases/>  
<sup>6</sup> Tellus Institute and Sound Resource Management, More Jobs, Less Pollution: Growing the Recycling Economy in the US, 2011. Available at: <http://www.no-burn.org/downloads/MoreJobsLessPollutionFinal.pdf>

**IN INDIA:** Thanal (NGO based in Southern India) launch a Zero Waste Kovalam initiative, which highlights Kovalam’s creative and holistic zero waste solutions. “Zero Waste Kovalam” addressed these problems by examining materials in waste (developing social and ethical criteria by which products are designed), conducting an audit of garbage generation, and multi-stakeholder (NGOs, hotel, restaurants, civil society, etc) educational survey. With seed funding from the GEF via IPEN’s 2004-2006 International POPs Elimination Project and GAIA, Thanal implemented a project with a two-pronged work plan: 1) assessment of the capability of biogas plants for biodegradable materials (resource recovery) and 2) training of women’s groups on alternatives to materials such as plastics (material substitution), followed by the creation of a “Zero Waste Center” in 2003. The project was successful in stopping a possible POPs-generating incinerator, implementing materials substitution to prevent POPs formation, and creating sustainable waste management livelihoods. In February 2006, the Pacific Asia Travel Association awarded Zero Waste Kovalam its Environmental Award. Thanal has also expanded the Zero Waste strategy model to other communities, and helped to found the Zero Waste Himalayas Network.



### The Stockholm Convention Prioritizes Zero Waste:

The Stockholm Convention and BAT/BEP Guidelines give priority to zero waste practices, which prevent the formulation and release of POPs.

#### Annex C of the Stockholm Convention

“A. General prevention measures relating to both best available techniques and best environmental practices  
 Priority should be given to the consideration of approaches to prevent the formation and release of the chemicals listed in Part I. Useful measures could include:  
 (a) The use of low-waste technology;  
 (b) The use of less hazardous substances;  
 (c) The promotion of the recovery and recycling of waste and of substances generated”

#### BAT/ BEP Guidelines:

“(i) Cross-cutting considerations  
 (ii) Waste management considerations  
 Recycling  
 Generally a large proportion of municipal solid waste can be composted, reused or recycled. In several industrial countries more than 50% of municipal solid waste is recycled. Some regions achieve even higher recycling rates. NGOs such as Zero Waste International Alliance are following such ambitious goals for the diversion of wastes from landfills or incinerators in a number of countries. Zero waste means designing and managing products and processes to reduce the volume and the toxicity of waste and materials, conserve and recover all resources and not to burn or bury them. Zero waste programmes have been implemented in many countries...”

### Reduce Mercury Pollution & Promote Job Creation

