

# 國立臺北大學自然資源與環境管理研究所

## 105 學年度第一學期『環境工程科學概論』

### 課程講義(15)：廢棄物處理與資源回收 Solid Waste Treatment and Recycling

Recommended Readings	<a href="#">《廢清法》修正案初審過關 大幅提高罰則上限</a> <a href="#">Circular Economy Strategy - Environment - European Commission</a> <a href="#">Paper or Plastic? - Monroe County</a>
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#### ● INTRODUCTION TO SOLID WASTE MANAGEMENT

- Solid Waste Treatment and Disposal Facility
  - ⇒ NIMBY (Not In My Back Yard), NIMET (Not In My Elected Term), BANANA (Build Absolutely Nothing Anytime Near Anyone)
  - ⇒ YIMBY (Yes In My Back Yard); Externality (Positive vs. Negative Externality)
- Treatment, Disposal, Reduction, Recycling, and Energy Recovery
- Sanitary Landfill; Incinerators; Recycling and Recovery Facilities
  - ⇒ Resource Recovery vs. Energy Recovery (Waste-to-energy incineration)
  - ⇒ 垃圾資源回收(焚化)廠⇒生質能利用中心⇒區域冷熱電供應中心
- Recycling Schemes: 3Rs, 4Rs, 5Rs (Reuse, Recycling, Recovery, Reduce, Refuse)  
「資源循環零廢棄」：Reduction(減量)、Reuse(再使用)、Recycling(物料回收)、Energy Recovery(回收能源)及 Land Reclamation(土地新生)等 5R 為推動策略。
  - ⇒ Sustainable Materials Management, Sound Material-Cycle Society, Circular Economy

#### ● BACKGROUND AND DEFINITION

- 廢棄物清理法 vs. 資源回收再利用法
  - ⇒ [立法院第 9 屆第 1 會期社會福利及衛生環境委員會第 14 次全體委員會議](#)
  - ⇒ [資源循環利用法\(草案\)](#)；[廢棄資源循環利用法\(草案\)](#)
  - ⇒ [廢棄物減量循環利用法\(草案\)](#)；[廢棄物清理法\(修正草案\)](#)
- 家戶垃圾(一般廢棄物)；事業廢棄物：一般事業廢棄物、有害事業廢棄物
  - ⇒ Solid Waste, Municipal Solid Waste (MSW), Garbage (Food Waste), Rubbish, Trash, Noncombustible, and Discards ⇒ Industrial Solid Waste ⇒ Hazardous Solid Waste
- 資源回收再利用：再生資源、回收再利用、再使用、再生利用 ⇒ 熱能回收？
- 「廢棄物」？「廢棄資源」？

#### ● SOLID WASTE MANAGEMENT AND RECYCLING

- Source Reduction(源頭減量) ⇒ Cleaner Production
- Collection and Transfer Operation ⇒ 「四合一」回收系統、垃圾費隨袋徵收
- Waste-to-Energy Combustion and Landfills ⇒ 灰渣：底渣＋飛灰
- Treatment of Garbage: Composting, Anaerobic Digestion, Soil Conditioner, etc.
- Eco-Labeling and Life Cycle Assessment ⇒ Diapers and Hot-Drink Cups

#### ● HOMEWORK ASSIGNMENT #10 (2017/01/03)：請收集相關資料以定義：

- (1) 垃圾產生量、(2) 垃圾清運量與 (3) 資源回收率，並繪圖說明行政院環境保護署公告之上述數據趨勢變化。