INTRODUCTION ON MANAGEMENT OF E-WASTE AND HAZARDOUS WASTE IN VIETNAM

Mr. Nguyen Thanh Yen
Head of Hazardous Waste Management Division
Waste Management and Environment Promotion Agency
Vietnam Environment Administration

Content

• Waste Generation
• Legal framework
• Existing management system to implement the legal framework
• Current state of HW and e-waste management;
• Barriers, challenges and difficulties
• Future activities and recommendations

<table>
<thead>
<tr>
<th>Category</th>
<th>Sources</th>
<th>Types</th>
<th>Generation (1,000 t/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Urban</td>
</tr>
<tr>
<td><strong>Household</strong></td>
<td>Residential</td>
<td>kitchen waste</td>
<td>6,400</td>
</tr>
<tr>
<td></td>
<td>Commercial</td>
<td>plastic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Markets</td>
<td>paper</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>glass</td>
<td></td>
</tr>
<tr>
<td><strong>Industrial Non-Hazardous</strong></td>
<td>Industries</td>
<td>metals</td>
<td>1,740</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wood</td>
<td></td>
</tr>
<tr>
<td><strong>Industrial Hazardous</strong></td>
<td>Industries</td>
<td>fuel oil</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td></td>
<td>waste sludge</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>org. chemicals</td>
<td></td>
</tr>
<tr>
<td><strong>Hazardous healthcare</strong></td>
<td>Hospitals</td>
<td>tissue samples</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>blood</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>syringes</td>
<td></td>
</tr>
<tr>
<td><strong>Total-non agricultural waste</strong></td>
<td></td>
<td></td>
<td>8,266</td>
</tr>
<tr>
<td><strong>Agricultural</strong></td>
<td>Cultivation</td>
<td>Plant matter</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Livestock</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note:* Industrial waste excludes mining waste  
*Rural industrial waste derives from craft villages*

- 20-25% of total household waste
- concentrated in the South

Waste generation from craft villages:
concentrated in the North

<table>
<thead>
<tr>
<th>Type of Craft Village</th>
<th>Recycling</th>
<th>Pottery/ Building Materials</th>
<th>Textiles and Garments</th>
<th>Food Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Thousand tons of waste

- South
- Central
- North
Waste Generation (now)

**Industrial Waste:**
- 2004 forecast: 3.2 million tons (0.5 million tons hazardous) in 2010
- 2008 report from 35/63 provinces: 7.5 million tons (0.7 million tons hazardous)

**Healthcare waste:**
- 2004 forecast: 75 thousand tons in 2010
- 2008 report from 35/63 provinces: 1.79 million tons

---

E-waste Generation

Could be forecasted on the estimation on domestic production and importation (in 2006 and 2010) below:

<table>
<thead>
<tr>
<th>Item</th>
<th>2006 (set)</th>
<th>2010 (set)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>3,607,419</td>
<td>7,269,021</td>
</tr>
<tr>
<td>PC</td>
<td>594,586</td>
<td>1,072,623</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>3,230,788</td>
<td>3,361,971</td>
</tr>
<tr>
<td>Refrigerators</td>
<td>985,374</td>
<td>1,790,936</td>
</tr>
<tr>
<td>Air conditioner</td>
<td>64,818</td>
<td>640,960</td>
</tr>
<tr>
<td>Washing machine</td>
<td>931,313</td>
<td>1,711,971</td>
</tr>
</tbody>
</table>
2. LEGAL FRAMEWORK

Legal Framework in Vietnam (1)

- Vietnam does not have specific regulations on e-waste management. Instead, all e-waste are managed under hazardous waste legal framework.
- Decision 23/2006/QD-BTN&MT on issuing the list of hazardous waste (2 kinds):
  - Wastes that are always HW (including some kinds of e-waste).
  - Wastes that are suspicious for HW: Need to analyze the concentration to identify.
- National Technical Standards for Hazardous Waste thresholds QCVN 07: 2009/BTNMT: used to identify that wastes that are suspicious for HW.
Legal framework in Vietnam (2)

• Circular 12/2006/QD-BTNMT of Ministry of Natural Resources and Environment (MONRE) requires:
  - Generators of HW must register with provincial Department of Natural Resources and Environment (DONRE) and must transfer waste to licensed collectors, transporters, and treatment facility operators
  - HW collectors, transporters, and treatment facility operators (including recyclers) must apply for professional license.
    • Within one province: license issued by DONRE
    • Inter-provinces: license issued by MONRE

Legal framework in Vietnam (3)

• Article 67 of Law on Environment Protection 2005 requires the taking-back of discarded electronic & electric products and batteries
  - Developing a Decision to be issued by Prime Minister which requires the manufacturers and importers of EEE to have responsibility on collection of their products when they become e-waste. Main idea is the manufacturers and importers of EEE must deposit a certain amount of money to Vietnam Environment Fund for taking back activities
3. EXISTING MANAGEMENT SYSTEM TO IMPLEMENT THE LEGAL FRAMEWORK

Current Management systems

4. CURRENT PRACTICES OF HW AND E-WASTE MANAGEMENT

Current practices of HW and E-waste Management (1)

- Set-up of licensing system for hazardous waste collection, transport and disposal: 71 facilities are licensed by VEA (treatment and collection, transportation facilities) in addition with those licensed by provinces.
- Developing an e-manifest system for hazardous wastes for more effective management.
- Based on registration of e-waste generators, DONRE/DONRE require them to transfer waste to the licensed collectors, transporters and treatment facility operators. Those generators, collectors and treatment operator will need to report to MONRE, DONRE every 6 months.
- Environment Police strengthens the implementation of the regulation by irregularly checks and inspections.
**Current practices of HW and E-waste Management (2)**

- Until now, e-waste generation rate is still low because electrical and electronic equipment (EEE) are mostly in reuse.
- EEE in Vietnam is mostly discarded by selling to the collectors for dismantlement.
- Different collection systems for e-waste in Vietnam operated by collectors, transporters (licensed or not).
  - Big generators usually transfer e-waste to licensed transporter and treatment facilities.
  - Household and small generators who do no register usually transfer waste to unlicensed collectors and transporters.

**Current practices of HW and E-waste Management (3)**

- Informal sector usually collect HW from household and small generators.
  - Positive: collect almost HW and e-waste generated from household and small generators.
  - Negative: pollute environment (discard residues and invaluable parts to landfills) and affect the worker’s health.
5. Barriers, Challenges and Difficulties

- Low rate of e-waste will bloom up very fast soon and will be big problem if there is not good preparation for management capacity
- Small generators and household do not register for their e-waste and transfer their wastes to un-licensed collectors and transporters (get higher payment)
- Some licensed transporters still break the regulations: discard HW to environment without treatment (MONRE considers to stop issuing licenses to transporters but only to treatment facility)
- Limited budget and human resources
- Lack of appropriate treatment technology
- Low awareness of risk posed by e-waste: people consider e-waste as a valuable resources, not a pollution sources
- Low enforcement capacity
6. FUTURE ACTIVITIES AND RECOMMENDATIONS

Next steps

• Continue implementing the Circular 12/2006 (or its revised version) on registration and licensing system for generators, collectors, transporters and treatment facility operators.

• Very soon issuing and implement the Decision on responsibility of EEE manufacturers and importer on take-back of their products.

• Encourage the generators to transfer waste to licensed transporters and treatment facility operators.

• Through licensed collectors, Encourage and force transporters and treatment facility operators, the generators to register with DONRE.
Recommendations

- Review for revision of legal frame (particularly Law on Environmental Protection) to create the unification and systematic organization, institution and competence in waste management
- Enlarge the awareness raising
- Enhance inspection
- Develop and implement the central and provincial planning
- Increase budget
- Promote socialization

Sword lake - Hanoi
Hochiminh city

Ha Long Bay → new 7 wonders???
The beauty and usefulness often bring about problems or hazards after all !!! ;-)))

Thank you for your attention!

Web: www.vea.gov.vn
E-mail: baselvn@vea.gov.vn
   ngthanhuyen@vea.gov.vn