EPA Resource Efficiency & Waste Prevention Programme - towards ... ‘Doing More with Less’

EPA Sustainability Pillar Briefing
September 2013

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Doing more, with less!

- Less impact
- Less resources
- Less need
- Less waste
- Less Hazardousness
- More information
- More Recovery / Re-use
- More Eco-Efficient
- More sustainable
- More policy interventions
- More thought!
Rationale - Resource Efficiency Drivers

- EU Regulatory Imperative
- Sustainability pressures
  - Finite resources
  - Quality of Environment
  - Quality of Health
  - International Policy
  - EU Policy
  - National Policy
- Business pressures
  - Energy
  - Waste
  - Raw materials costs
  - Regulatory Requirements
  - CSR
  - Investor expectations

Rio+20
OECD
EU 2020 Strategy
EU RE Strategy
EU RE Roadmap
EU Raw Materials Strategy
EU Waste Directive
EU REACH & Eco-Design Directives
Research Programme

- Sustainability Pillar
- Water Pillar
- Climate Pillar

**EPA Resource Efficiency Programme**
Delivering Sustainable Production & Consumption Behaviours
Un-Sustainable Consumption & Production

- Raw Materials Consumed: 16t
- Wasted: 6t
- Disposed: 3t

Per Person in EU 27
ALL Waste Generation

European* Average per person **5.4 t**

Ireland Average per person **c.4.3 t**

* incl. Norway, Turkey & Croatia
Household Waste Generation

European Average per person: 444 kg

Ireland Average per person: 368 kg
Industrial Manufacturing Waste
‘Productivity’
(€ GDP / tonne waste)

GDP per tonne of waste

€0
€5,000
€10,000
€15,000
€20,000
€25,000
€30,000
€35,000
€40,000
€45,000
€50,000

2004  2006  2008  2010
MSW ‘Productivity’
(€ GDP / tonne MSW)
Resource Efficiency

Main function / ambition is to:

Influence Consumption & Production Behaviours & Technologies
Old Production Model

- Cheap Resources
- ‘New’ material and raw material culture
- High Demand
- Turnover/throughput was king
- High Spending power
- High rate of obsolescence
- High product prices accommodated production / service inefficiencies (ability to pay)
- Full externalities not priced in
- Everybody doing OK
NEW Production Model

- Scarce Resources / Restricted Materials
- High cost resources
- More durability
- More repair’ability
- Producer Responsibility
- Cleaner Technology
- Life-cycle-thinking
- Innovation
- Competition
- Discerning customers

Green Economy - Green Growth
Production – Consumption Cycle

- **Design**
- **Resourcing**
- **Production**
- **Consumption**
- **Recycling**
- **Disposal**
- **Reuse**

Secondary Resources

Primary Resources
RE Model employed

- Waste Prevention
- Energy Efficiency
- Clean Technology
- Water Conservation
- Eco-Design

RE = Behaviour + Technological
Working with others in planning & delivery

National Waste Prevention Programme

- Government & EU Commission
- Business & Industry
- Enterprise Agencies & Bodies
- Homes, Communities & NGOs
- Local & National Authorities
- Consultants & Professional & Representative Bodies

SEAI
EI
IDA
Forfas
Bord Bia
Teagasc
Irish Water
BIM ...

DoECLG
DJEI
DoAFM
DAHG ...
Examples of Irish Activities for Resource Efficiency

- Green Healthcare
- Green Hospitality
- Green Business
- Green Retail
- Smart Farming
- Green Festivals
- Eco-Concertive
- LAPN
- Green Home (An Taisce)
- Greening Communities
- Eco-Eye
- Stop Food Waste
- SMILE exchange
- Free trade Ireland
- EPA Research
- Prevent and Save Packaging Prevention Programme (REPAK)
- An Taisce Green Schools

Activities:
- TapTips.ie
- SwanIreland.ie
- rx3
- EI Green Tech
- IDA Clean Production
- SEAI Energy Efficiency Programme & Alternative Energy
- Bord Bia Origin Green
- Foodbanks (BIA, etc)
Case Studies
Examples of Key Programmes

- Green Business
- Green Hospitality Award
- Stop Food Waste
- Local Authority Prevention Network
- Green Festivals
- Green Enterprise (CGPP)
- Green Healthcare
- Green Home
- Green Communities
- Smarter Farming

Resources efficiency programme for hotels, catering companies & restaurants
- Free consultancy
- Resources use mapping (waste, water, & energy)
  - Assessment & report ('low hanging fruit')
- Follow up
- Award scheme

>260 members (>25% of Irish hotel beds)
>7,000t waste reduction
>380 million litres water saved
>41M kWh energy saved
>€6M saved annually by members

16:1 ROI

NB: Irish Tourist Board recognised, & Recognised by Hotel & Hospitality Federation
Green Enterprise (formerly CCGP) – Outcomes for Participant Businesses

Key Outcomes:

- Significant environmental improvements.
- Economic advantages – cost savings and revenue growth.
- Reputational improvements – national & international eco-business awards
- Four companies have patented new innovations
- Creation of new expertise and broadening of the technology base within organisations
Green Healthcare - Food Waste (Acute, bulk)

Unserved 27%
Uneaten 18%
Untouched 4%
Eaten 51%
Case Studies

- Ferrycarrig Hotel (Shower heads; €8,200 refit; 11 month payback on water use, waste water treatment and water heating)

- Green Isle Pizzas (‘Goodfellas’) reduced 921 t cardboard in <12 months, 73 t of shrink wrap, 123 less truck journeys, etc.

- Sennheiser Consumer Electronics
  - compressors – 1bar reduction = 27,000kWh pa saved, waste water management (1.8M litre reduction), packaging refinements, etc., >€10,000 pa saved
New Smarter Framing programme

Focus for *Smart Farming* programme is to look at resource use and efficiency on all farms across all sectors and highlight “top tips” in relation to resource efficiencies in:

- Animal nutrition
- Fertiliser management
- Land management
- Energy efficiency and machinery management
- Water conservation
- Inputs management and waste minimisation

=> Goal:- reducing carbon footprint & demonstrating sustainability in Irish farming

[www.smartfarming.ie](http://www.smartfarming.ie)
Project catalogue
(www.guide.localprevention.ie)

Welcome to the Local Authority Prevention Network (LAPN) Catalogue and Resource Efficiency Toolkit

Search or browse for freely available materials developed by local authorities.
Click to view the LAPN Catalogue.

Get tips and tools for implementing an effective waste prevention programme.
Click to view the LAPN Resource Efficiency Toolkit

The LAPN Catalogue is a repository of online and freely available materials developed by local authorities and others to promote resource efficiency in Ireland.
How to use the catalogue

The LAPN Resource Efficiency Toolkit is an online interactive step-by-step guide for local authorities, organisations and businesses to implement an effective waste prevention programme. How to use the toolkit
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<tr>
<td><strong>Green Hospitality Award</strong></td>
<td>€0.366M</td>
<td>7,000 t waste prevented 41,800,000 KWh energy saved 380,000,000 litres water saved 260 members 150 properties certified</td>
<td>€6.00M</td>
<td>16:1</td>
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<td><strong>Green Business Initiative</strong></td>
<td>€0.34M</td>
<td>Water, energy &amp; waste savings 700 active members 40 Resource Efficiency Assessments Typical savings of €70,000 per annum per company assessed</td>
<td>c. €3M</td>
<td>9:1</td>
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<td><strong>Green Healthcare Project</strong></td>
<td>€0.148M</td>
<td>5,500 t waste could be prevented €210,000 measured savings in food in two acute hospitals, a 42% reduction in food waste at each</td>
<td>€5.29M</td>
<td>35:1</td>
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<td><strong>SMILE</strong></td>
<td>€0.15M</td>
<td>783 members of scheme 387 waste-matches made 139 waste-matches in progress 6,687t waste potentially diverted Numerous services &amp; logistics traded</td>
<td>€0.675m</td>
<td>4.5:1</td>
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<td><strong>Green Homes</strong></td>
<td>€0.2M</td>
<td>20,000 participant households 5,500 members of greenhome.ie website (a 32% increase on 2011) Est. €320 saving potential per high performing household</td>
<td>€1.6M</td>
<td>8:1</td>
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Concluding Comments & Observations
Challenges ...(1)

- Credibility (Eco-fatigue)
- Too busy
- Knowledge / skills
- ‘My business will hardly benefit’
- Identifying champions/leaders
- Maintaining momentum
- Normalising behaviours
- Integrating with other national programmes
- No legal obligation for a National RE Strategy
- Waste as a RESOURCE
- Investing in ‘Relentlessness’
Challenges 2 - Moving the Agenda

- Clean Technology
- Eco-Efficiency / Waste Prevention
- Eco-Design / LCT
- Sustainable Use of Natural Resources
- Carbon Neutral Circular Economy
Learn more at: www.BeGreen.ie

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Follow up (examples) ... 

- www.BeGreen.ie  (universal landing page)
- www.nwpp.ie  (Annual Reports)
- www.greenbusiness.ie
- www.cleanerproduction.ie  (CGPP)
- www.localprevention.ie  (LAPN)
  www.guide.localprevention.ie
- www.stopfoodwaste.ie
- www.ghaward.ie  (Hospitality Sector)
- www.smileexchange.ie
- www.preventandsave.ie  (Packaging PRI)