



*Thermal Treatment of Sewage
Sludge for CHP Applications*

15/16 September 2003, Brussels

Dr Karen Laughlin

Workshop

Forms one of the final activities of our FP5 project “Sewage Sludge Gasification for CHP Applications”; ENK5-CT2000-00050.

Aim

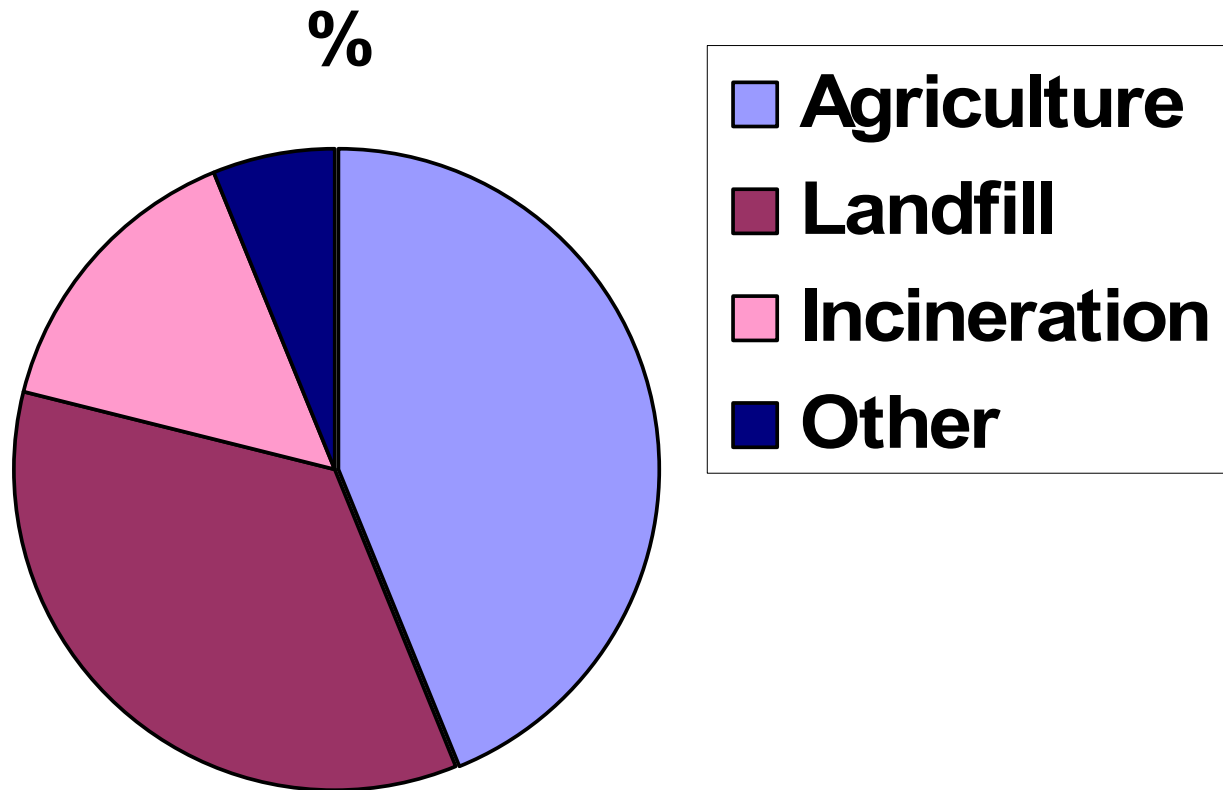
- **To discuss current activities in thermal conversion of sewage sludge to generate heat and power**
- **To disseminate results of our FP5 project**

THE PROBLEM

Environmental pressure on traditional disposal routes for sewage sludge are increasing

- **Disposal at sea: banned since 1998**
- **Disposal onto agricultural land, usually after digestion as a fertiliser, becoming difficult to permit: presence of heavy metals and organic contaminants**
- **Disposal to landfill becoming limited: expense and strict disposal regulations, EU ban?**
- **Disposal via incineration: –ve public perception and highly regulated**

European Sewage Sludge Disposal Market Share by Method



“Other” Process Options for Re-Use and Disposal

- **Composting**
- **Anaerobic digestion**
- **Stabilisation**
- **Combustion/oxidation with energy recovery**
- **Drying**
- **Gasification/pyrolysis**
- **Vitrification**
- **Hydrothermal oxidation**

Workshop Programme

Thermal Drying

- Volume reduction
- Homogenous product
- Used as fertiliser/gasifier feedstock
- Pathogen free material/long term storage
- **Requires energy input**

Gasification/Pyrolysis

- Syngas produced
- “Green” energy
- **Developing technology**

Combustion/Oxidation

- Proven technology
- Auto-thermal operation with x's energy sold
- **-ve public perception & highly regulated**

Workshop Programme

Day 1 Monday 15 September

1130 Thermal Drying

1200 Gasification/Pyrolysis

1300 Lunch

1430 Combustion/Oxidation

1500 Techno-Economic Issues

1530 Break

1600 Discussion

1700 Closure of Day 1

Workshop Programme

Day 2 Tuesday 16 September

0945 Summary of Day 1

1000 Related FP5 Projects (1)

1030 Break

1100 Related FP5 Projects (2)

1130 General discussion

1200 Closure of the Workshop