

CIWM Ben Heath Award 2009

adapted version of CIWM East Anglia Centre
Christmas 2008 presentation

20th October 2009

Shlomo Downen

United Kingdom

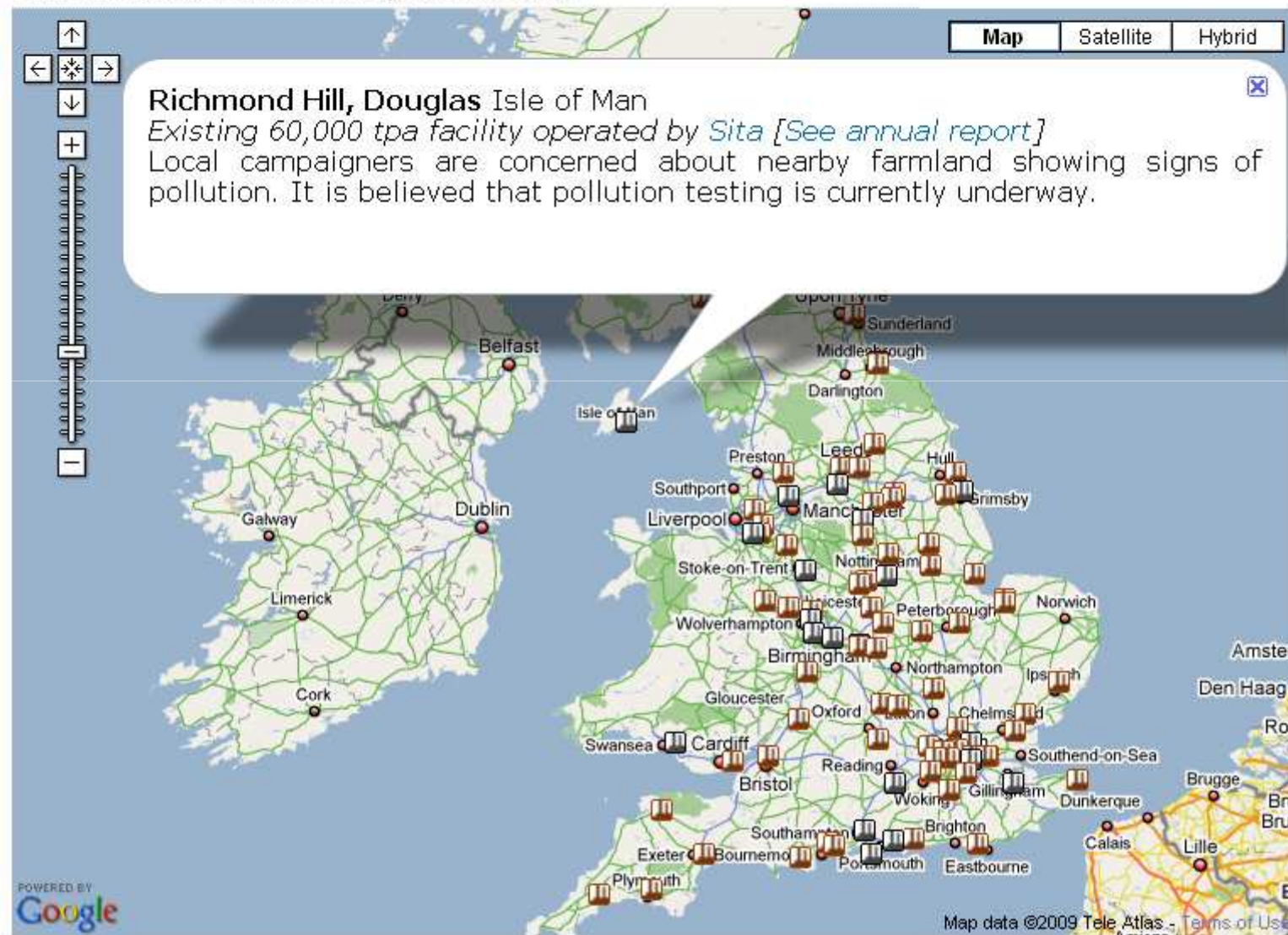
Without Incineration Network
(UKWIN)

UKWIN

- Network of more than 100 groups & individuals
- Oppose waste incineration
- Promote sustainable waste management
- Formed to share knowledge and experience, to put people in touch with people and information
- Website: www.ukwin.org.uk attracts 1,000+ a day seeking information, support, and news
- Interactive map: existing and potential UK sites
- Knowledge Bank: deposit / borrow information

<http://www.ukwin.org.uk/map/>

Household Waste Incinerators, October 2009



Do we agree?

- There are better (more sustainable) technofixes than old school mass burn incinerators?
 - e.g. anaerobic digestion (AD); upcycling
- Technofixes alone are not enough
 - paradigmatic shifts: precycling, incl. freecycling
 - designing out 'waste' in products, production methods, packaging, etc.
- Material that could be recycled, composted or digested should not be burnt
 - incl. batteries, car engines, fridges, kitchen waste, plastics, aluminium, etc.

Alternatives exist

Alternatives to incineration are:

- Cheaper, more flexible, quicker to implement
- Better for the environment
- For example: weekly, separate food waste collection for treatment by composting or AD

Recyclables and biodegradables should be separated from small amount of residue material

This residue should be stabilised by composting and then sent to landfill

Precycling

- Action taken so something does not become waste, i.e. preparing for not-wasting
- Phasing out incompatible materials
- Ensuring resources remain as resources (and are not contaminated / 'destroyed')
- Working with Nature's capacity to remake resources
- Meeting more needs with less so everyone can take part (fairness aspect of sustainability)

Why UKWIN opposes incineration

Incineration of household waste:

- Depresses recycling and wastes resources
- Releases greenhouse gasses
- Forced through against strong public opposition
- Relies on exaggerated future quantities of waste
- Creates toxic emissions and hazardous ash

Transport and disposal of hazardous ash pose significant health risks

Recycling and waste

- Good local recycling is worthy of celebration!
- Incineration reduces our ability to reuse or recycle potentially valuable discarded material
- WRAP's 'Catch 22': Few LA's collect plastic waste other than bottles, as there is limited potential for recycling → lack of plastics available for companies to create new products / demand

*Domestic Mixed Plastics Packaging Waste
Management Options*

Incineration releases CO2

- Incineration is accompanied by twice or more CO2 per unit of power than the same energy (as electricity or CHP) produced from fossil fuel

Stop Trashing the Climate, June 2008

www.stoptrashingthecclimate.org

- WRATE cheats by ignoring biogenic carbon
- ATROPOS found: “scenarios using incineration were amongst the poorest performing” while those using MBT were much better

GHG Balances of Waste Management Scenarios, Eunomia, January 2008

Climate Change



A Changing Climate for Energy from Waste?

Final Report for Friends of the Earth

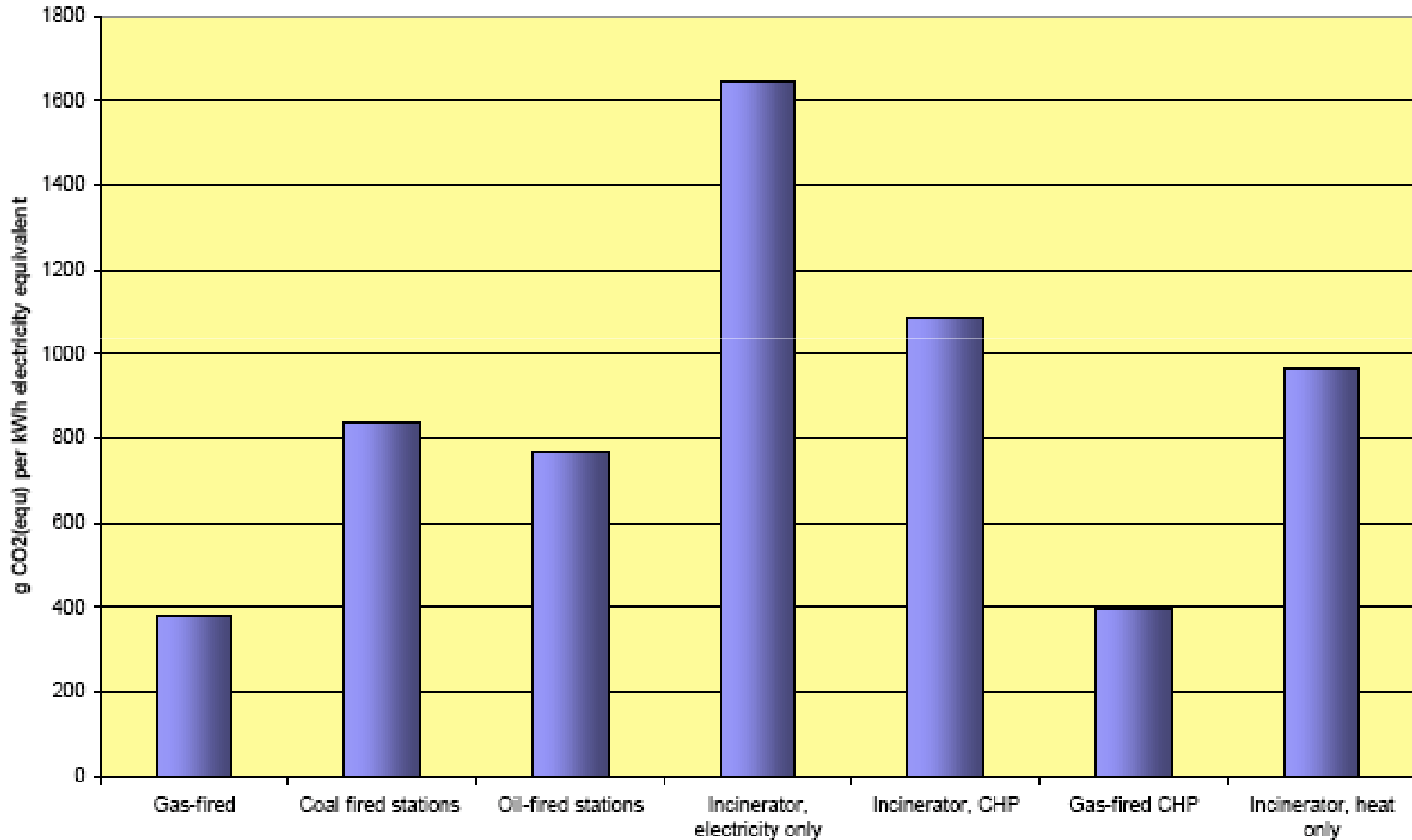
Author:
Dr Dominic Hogg

03/05/2006

“where incinerators generate electricity only, they almost certainly do not lead to a net reduction in GHG emissions, even if one ignores those emissions associated with biogenic materials”

CO2 Emissions Compared

Including CO₂ from Biogenic carbon:



Incineration like it or not!

- Incineration is forced upon communities, often against strong public opposition
- Imagine a 30 year mortgage on an unwanted house where you have no say in the purchase
- PFI is a great instrument if you want to:
 - Eliminate the paying customer from the purchasing decision; and
 - Lock-in default waste paradigm for 3 decades

Incineration like it or not?

- LA's not following Defra's PFI funding criteria – Criterion 6: "Proposals should demonstrate that other relevant authorities, the public, and interested parties have been consulted and that there is a broad consensus supporting a recognised long term waste management strategy which is reflected in the proposed solution."
- PFI cannot displace the need for waste strategies
- High Court decision in Capel, Surrey reinforces need for sound waste strategy before planning applications are submitted

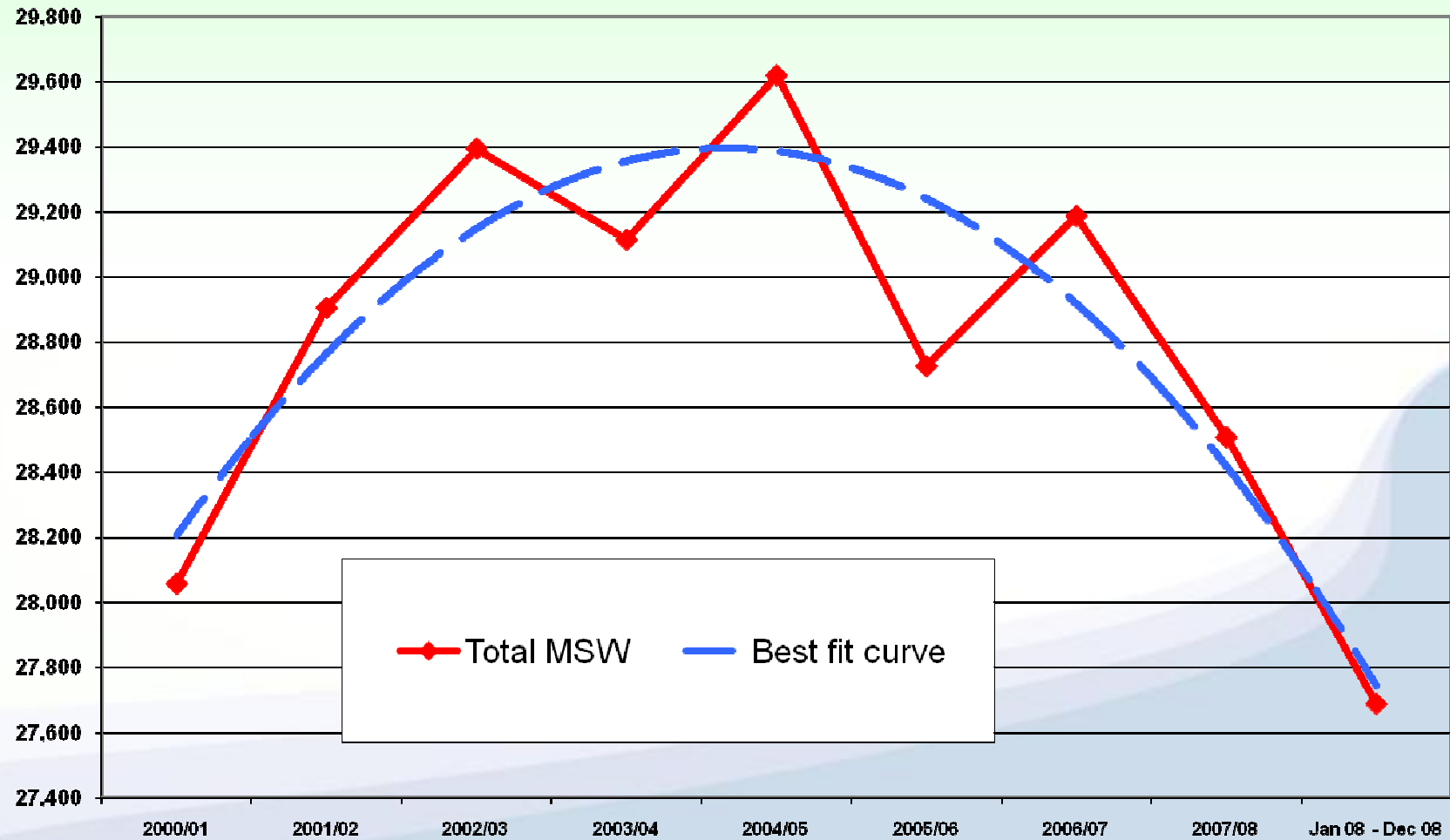
Exaggerated quantities of waste

- Waste PFI contracts entered into as response to predictions of huge increases in the quantity of household waste (calculated 5 – 10 years ago)
- Household waste has actually fallen
- Operators: 'top up' with C&I (and/or trade) waste to make up 'shortfall' → operational efficiency problems, e.g. for Veolia's Sheffield incinerator - see *Did McDonald's give Sheffield's incinerator indigestion?*

<http://ukwin.org.uk/2008/07/17/did-mcdonalds-give-sheffields-incinerator-indigestion/>

Exaggerated quantities of waste

Total MSW in England (000s tonnes)



Exaggerated quantities of waste

Audit Commission's *Well Disposed* (2008):

WDAs might buy too much disposal infrastructure if they overestimate future volumes of waste arising, including other authorities' waste or trade waste...

Data quality and realism of projections were the weakest areas in our desktop assessment of strategies...if WDAs overestimate the amount of waste they will need to process, both the overall cost and the cost per tonne of waste processed are likely to be higher than they would have been had estimates proved accurate...

Toxic emissions & hazardous ash

- Agreed: Incinerators do not improve air quality
- Extent and nature of the harm caused contested
- Fumes pass through expensive filter systems
- Significant levels of NO_x, ultrafine nano-particles
- Nitrogen dioxide emissions from each tonne of waste equate to driving about 8,000 km
- Nano-particles can pass through lung lining, causing internal inflammation and penetrating to organs (even to foetus in a pregnant mother)
- High levels of dioxins emitted during start-up and close-down - not monitored in the UK

Health risks

- UKWIN calls for more precautionary approach
- Better research into extent of damage to human and animal health, ecosystems, fragile habitats
- Government & regulators should compel the waste industry to measure, assess and suppress all suspect emissions of harmful toxins
- Evidence shows that emissions from incinerators and their ashes are potentially harmful
- 5-7% mass becomes fly ash (APC) - hazardous, strongly alkaline high in dioxins & heavy metals

Health risks

- Bishops Cleeve (Gloucestershire) hazardous landfill takes fly ash from many incinerators
- Residents see the ash literally blowing around
- UKWIN believe residents are justified in fearing the health impacts - shown as significant by an official study
- Research co-authored by EA scientists shows children around the site can be exposed above their tolerable daily intake of dioxin
- Yet no action has been taken to protect them



Health risks

“Incinerators are in reality particulate generators, and their use cannot be justified now that it is clear how toxic and carcinogenic fine particulates are... Recent research has confirmed that particulate pollution, especially the fine particulate pollution which is typical of incinerator emissions, is an important contributor to heart disease, lung cancer, and an assortment of other diseases, and causes a linear increase in mortality.”

4th Report of British Society for Ecological Medicine on The Health Effects of Waste Incinerators (2006)

Health risks

“Incineration...gives rise to large quantities of highly toxic fly ash (air pollution control residues) which pose important long-term health risks. No adequate methods exist for the disposal of this ash.”

4th Report of British Society for Ecological Medicine on
The Health Effects of Waste Incinerators (2006)

The Committee on the Medical Effects of Air Pollutants (COMEAP) also recognises the linear ‘no threshold’ impact of particulates

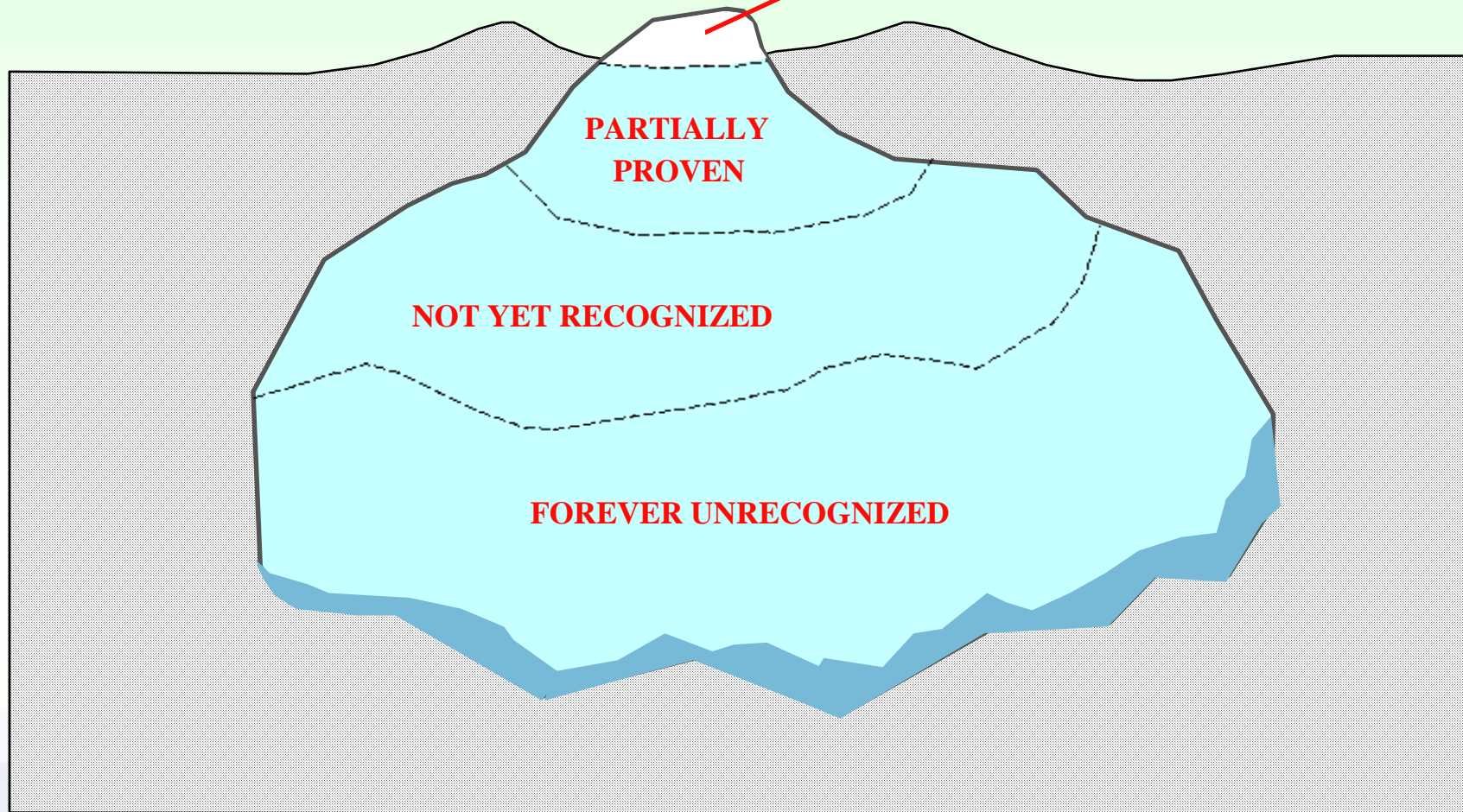
THE TOXIC ICEBERG

PROVEN HARM

PARTIALLY
PROVEN

NOT YET RECOGNIZED

FOREVER UNRECOGNIZED



UK without incineration?

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More sustainable alternatives should be used instead - beyond technofixes towards zero waste

ANY QUESTIONS?
Feel free to e-mail them to me
at shlomo.down@gmail.com

