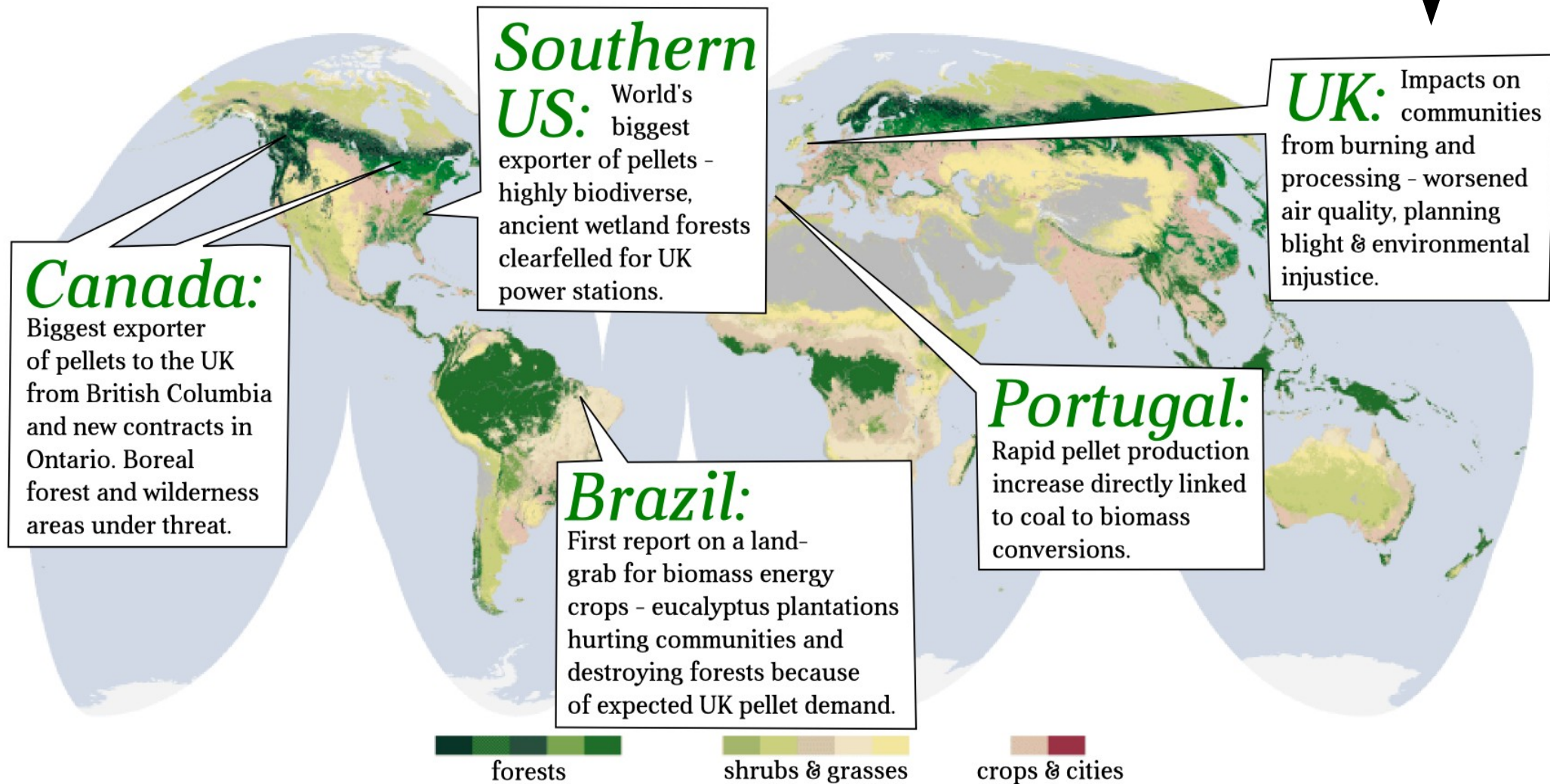


# UK Impacts



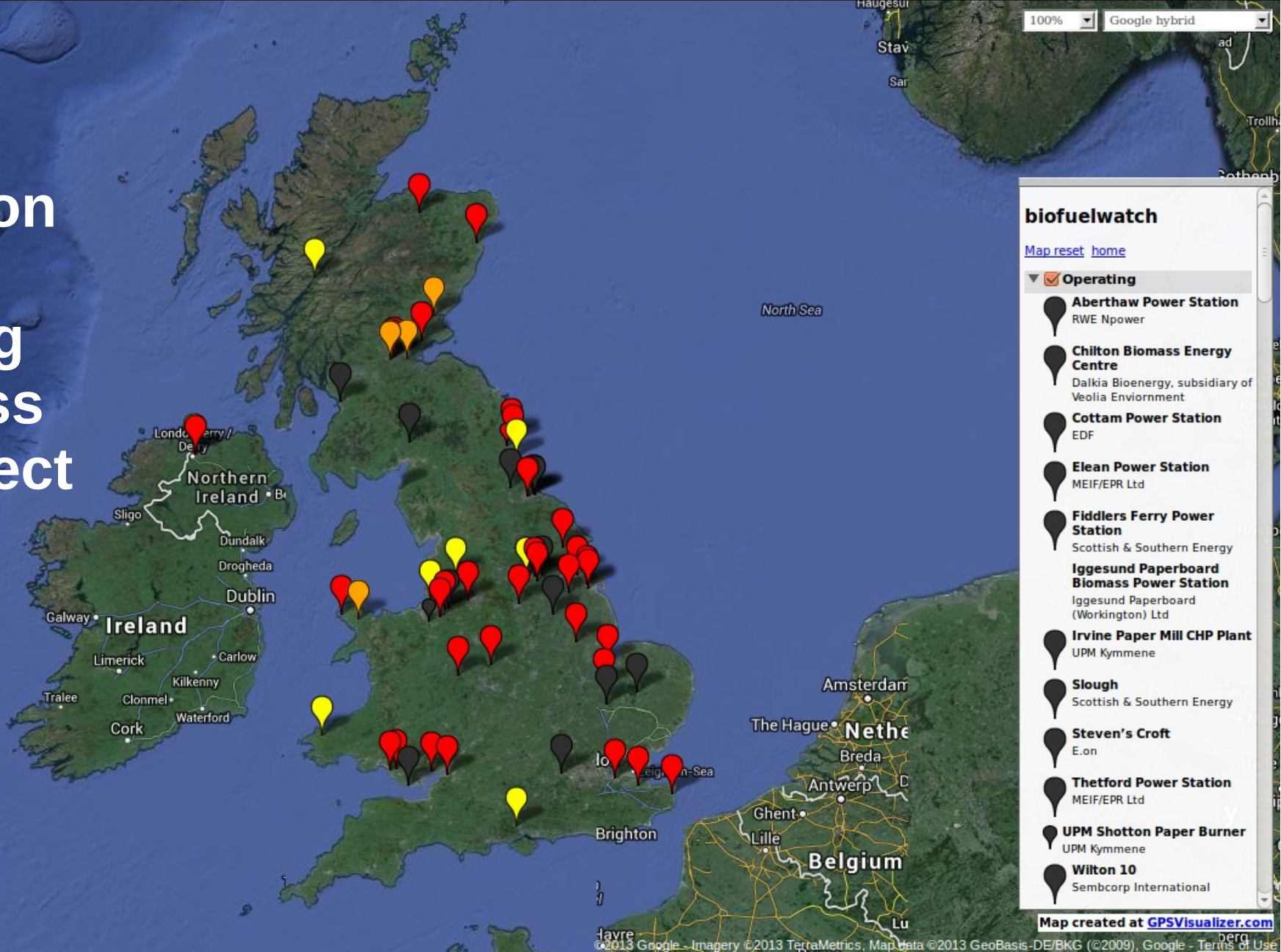
# How does large scale biomass burning affect public health?

Burning biomass causes similar levels of pollution as burning coal.

While less of some pollutants (sulphur dioxide and mercury) are released, there is evidence that more very small particulates (PM 2.5) and Volatile Organic Compounds are emitted.



Pollution  
from  
burning  
biomass  
will affect  
a lot of  
people



There are 14 coal power stations in the UK, 3 of which are being shut down. However, there are 9 biomass power stations greater than 15MW in operation and plans for 45 more.

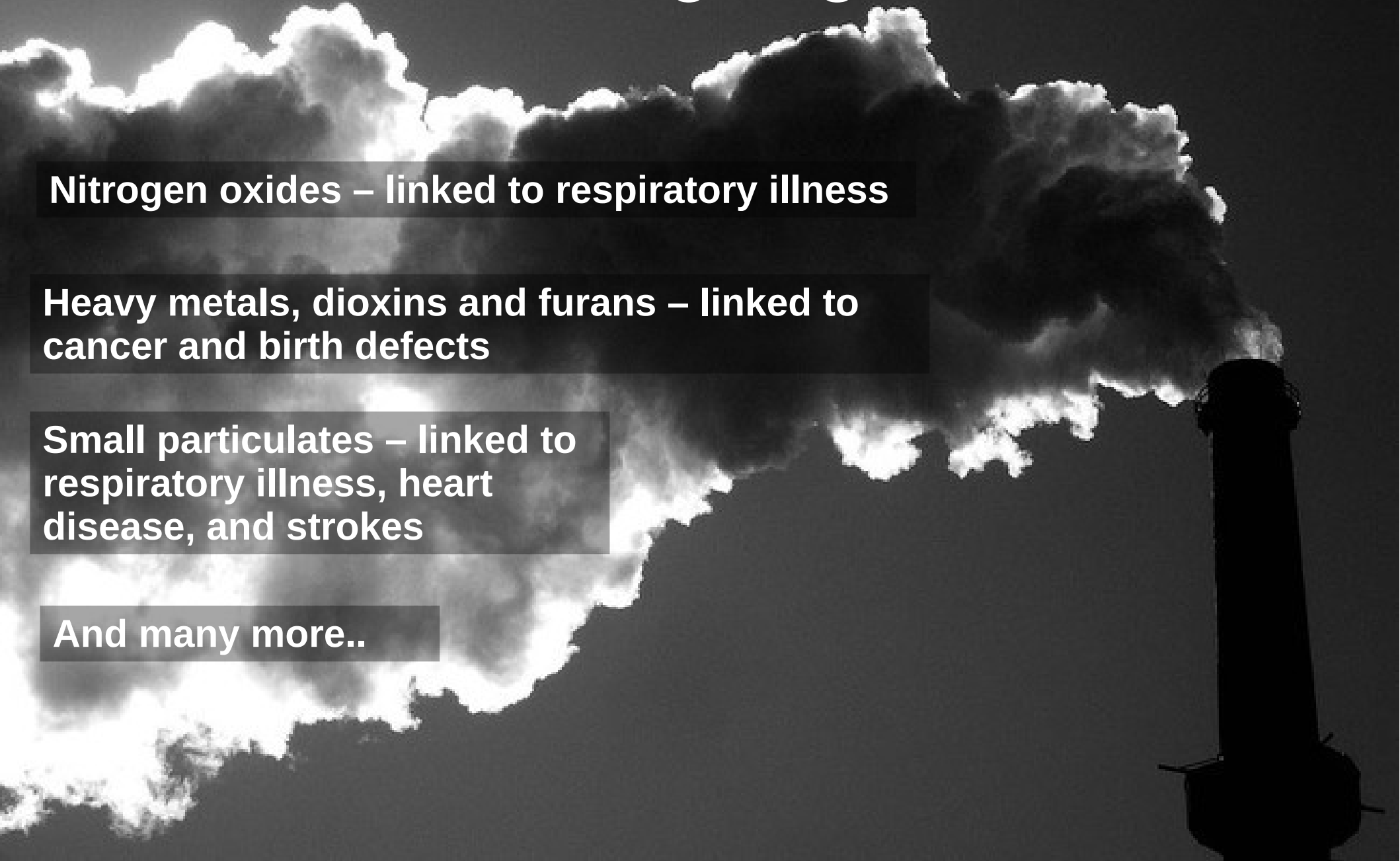
# **Biomass power station emissions from burning virgin wood**

**Nitrogen oxides – linked to respiratory illness**

**Heavy metals, dioxins and furans – linked to cancer and birth defects**

**Small particulates – linked to respiratory illness, heart disease, and strokes**

**And many more..**



# Biomass power station emissions from burning waste wood

A large pile of waste wood and debris, including planks, beams, and a blue pipe, illustrating the source of biomass for power generation.

All of the same as for virgin wood plus more heavy metals, more dioxins and more furans, including: arsenic, chromium, copper, lead, mercury, potentially pentachlorophenol, and many others..

Up to 1.75 million life years could be lost by 2020 as a result of small particulate emissions from burning biomass.

- Jim Fitzpatrick, environment minister 2009



# Community campaigns against bioenergy applications

28 planning applications have faced significant local opposition in the UK

10 planning applications have been rejected/withdrawn as a result.



However, out of 7 planning applications which were initially rejected by local authorities, only 2 were upheld by the Secretary of State when developers appealed.

# Difficulties that community campaigns face

- Secretary of State ruling that planning authorities cannot take account of feedstock sustainability and climate impacts, other than to require weak government sustainability standards to be met.
- Environmental Impact Assessments/Statements are written by technical consultants, requiring highly technical knowledge to be “credibly” criticised.
- Planning departments are expected to assess technical reports, but have been hit hard by budget cuts.
- If a Local Authority rejects an application the developer can appeal, but objectors have no such right if an application is approved.



Picture:  
A protest by the Breathe Clean Air Group against a biomass incinerator in Trafford

# Defra proposals for changes to Air Quality reporting rules

Defra proposing to abolish requirement for local authorities to monitor and report on air quality.

Local authorities no longer required to declare “Air Quality Management Areas”

Without AQMA's there will be no explicit grounds in planning policy for refusing planning applications on air quality grounds.



# Power Station Location and Deprivation

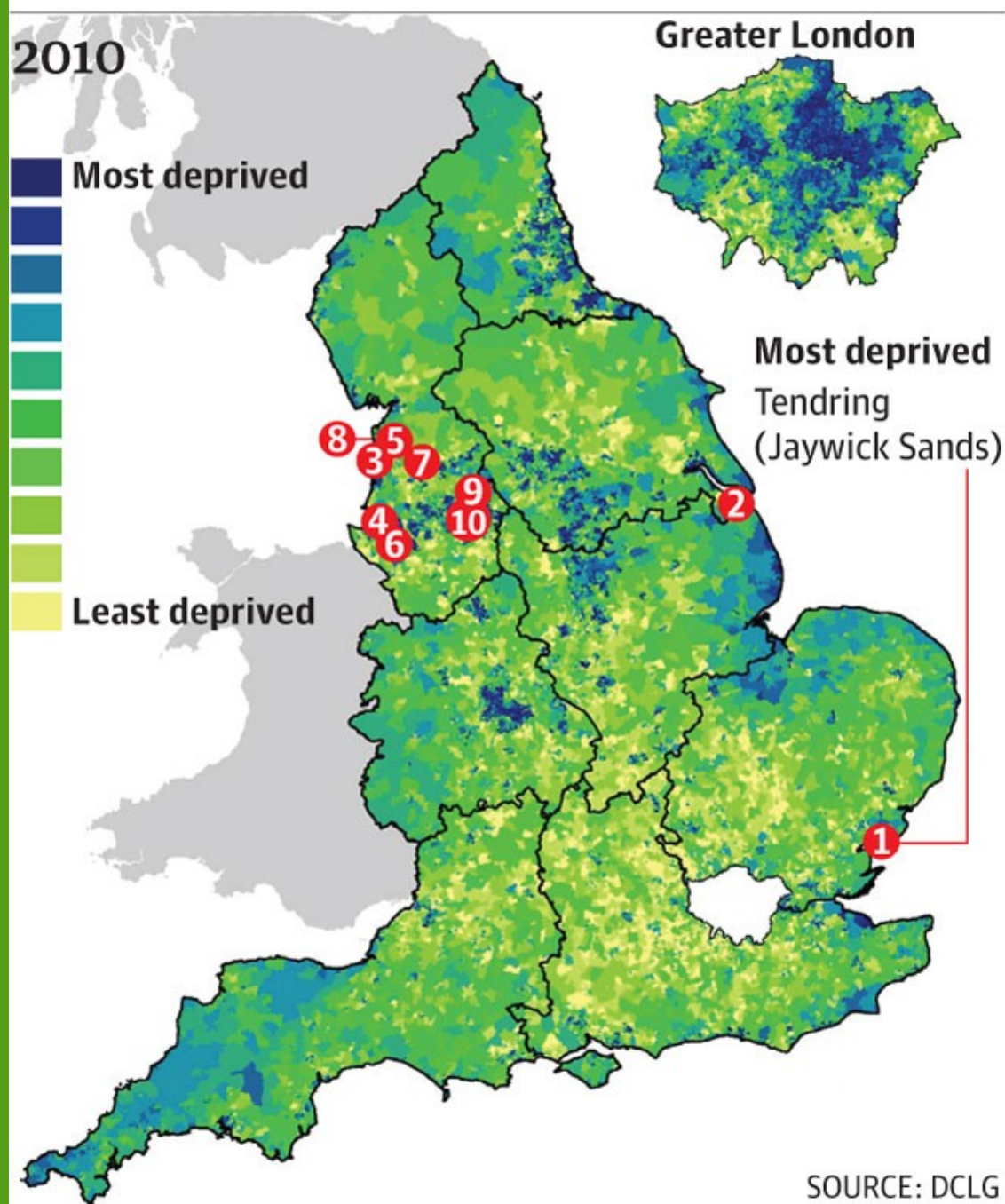
- Studies have found evidence to suggest that industries often have a disproportionate impact on more deprived communities.
- This is an Environmental Justice issue:

*“A human right to equal access to a clean environment and equal protection from possible environmental harm irrespective of race, income, class, or any other differentiating feature of socio-economic status”*

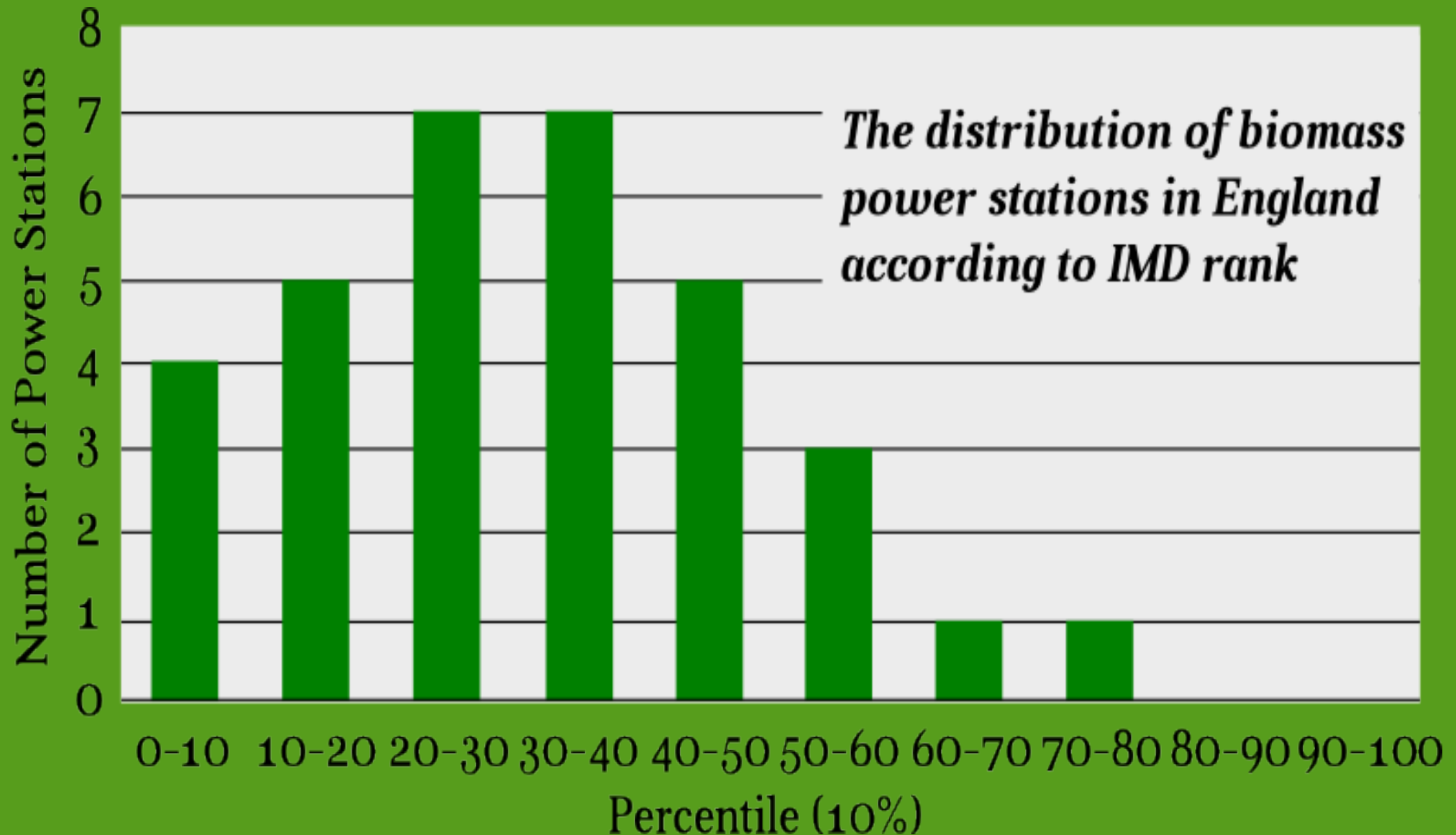
*From “An environmental justice analysis of British air quality”  
G Mitchel and D Dorling, 2003.*

# The Indices of Multiple Deprivation

## England's deprived areas



# The results of our investigation



# Conclusions

- The distribution of biomass power station developments in England is skewed to the **more deprived** end of the range.
- No biomass power station developments are found in the least deprived areas.
- This shows that **biomass power station developments are being built in areas which are relatively more deprived than elsewhere in England.**
- Further study should be undertaken into this important area of environmental justice.