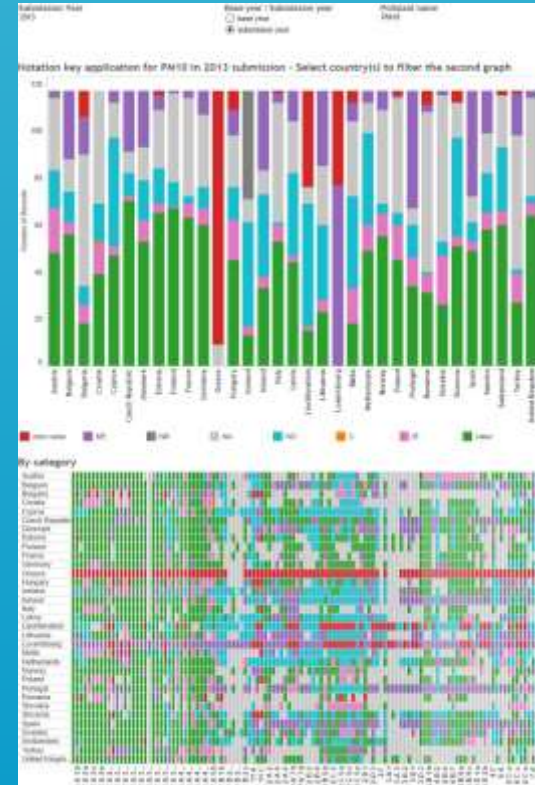
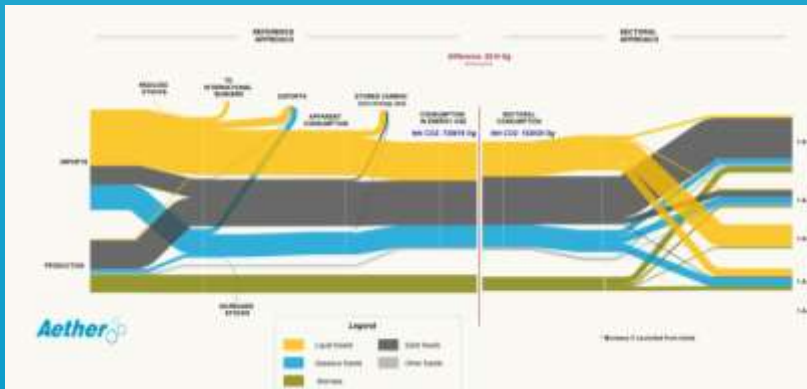


Understanding emission inventory data through data visualisation

Richard Claxton

TFEIP, 14th May 2014



Overview

- Introduction
- Mass balance approach
- Cross-country analysis
- Conclusions

Introduction

- Can we improve inventory quality (TCCCA) through visual methods?
- Assess the tools / programmes available to us
- Assist with internal QC
- Understand whether we can analyse submission data interactively and learn anything new

A mass balance approach

Current issues:

- Inventory processes are often complex
- Dependent upon a number of factors e.g.
 - Fuel content
 - Technologies
 - Climate...
- Some inventory processes contribute to numerous reporting categories such as combustion and process

A mass balance approach

The challenge:

- Design a system to visually analyse mass balances in inventory processes

...Improving QA/QC and reporting

- **Transparency**
 - Completeness
- **Consistency (internal)**
 - Comparability (external)
- **Accuracy**

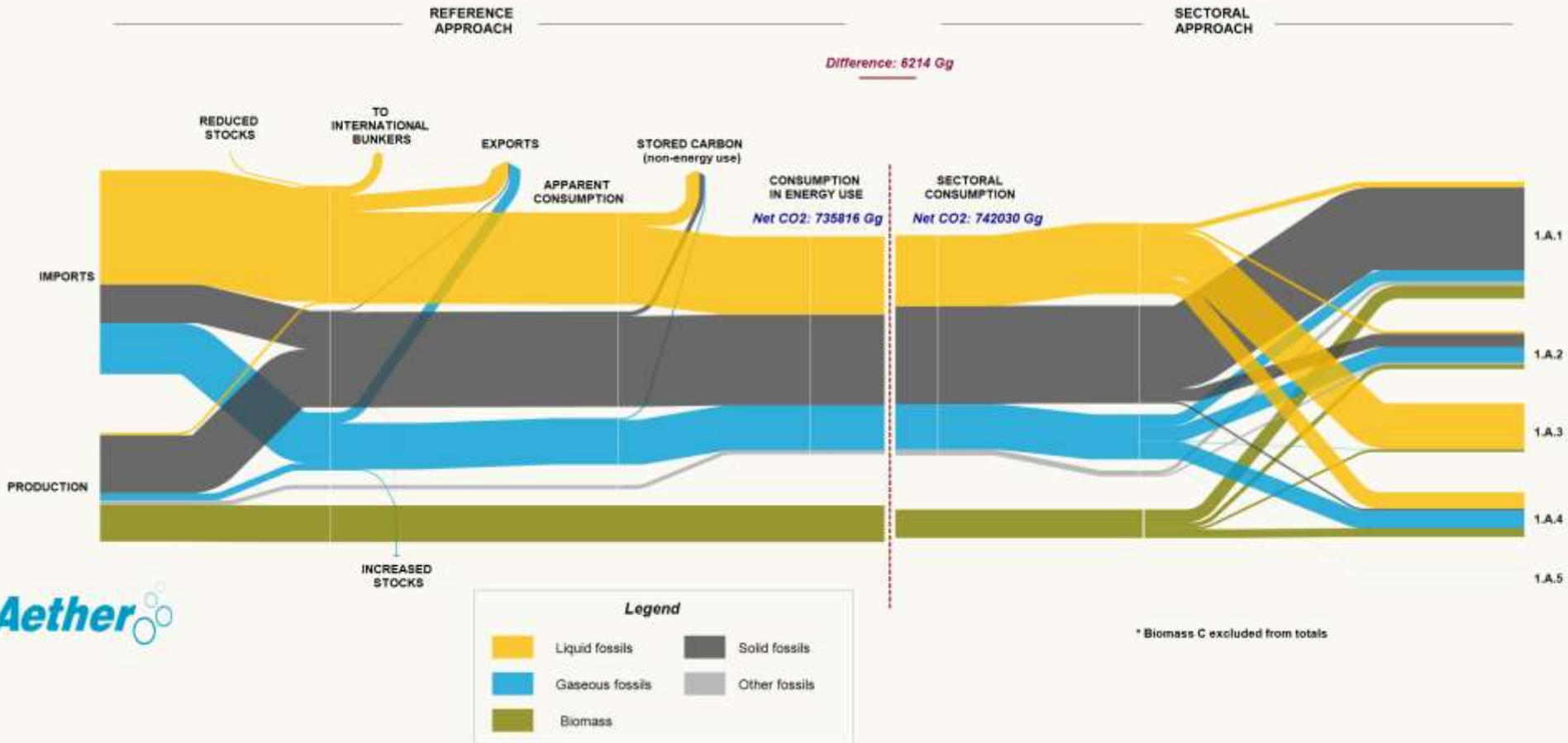
A mass balance approach

What tools do we have available?

- Can we get added benefit by employing new tools / programmes?
- Can we build these around our existing data sets (MS Office)?
- Can we improve transparency without writing ~100 page documents?

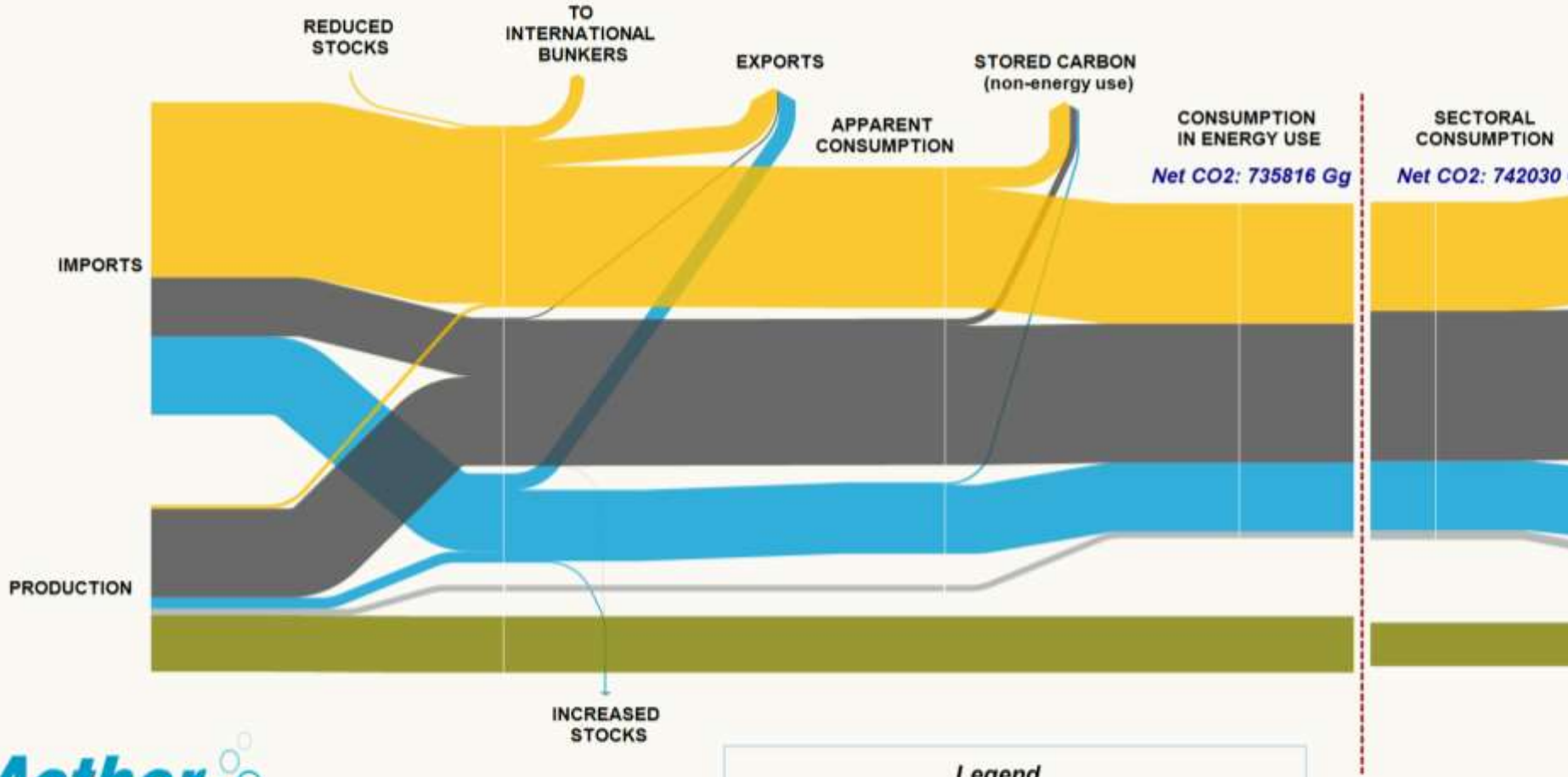
Some examples...

Reference vs. Sectoral approach








REFERENCE
APPROACH

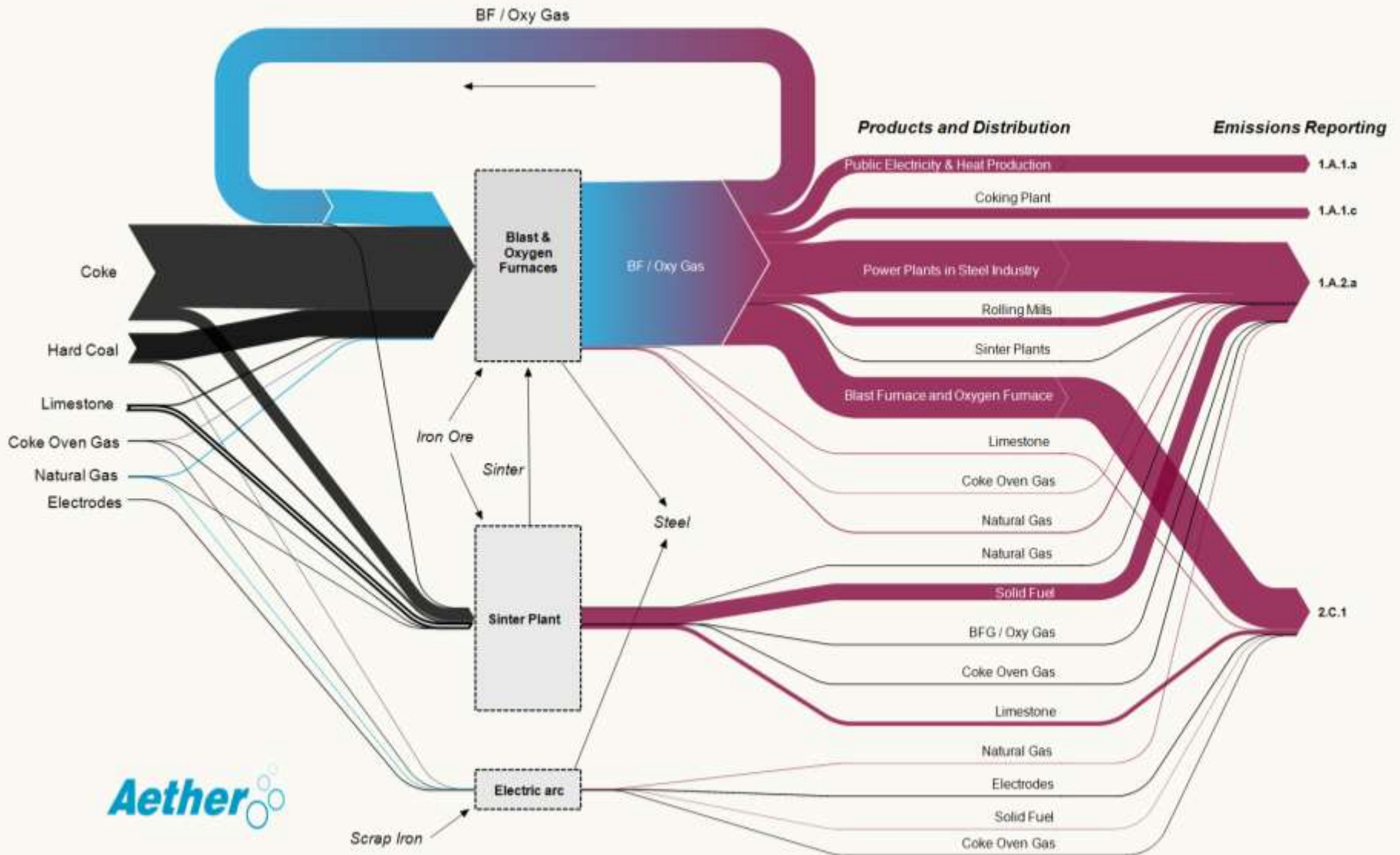
Difference: 6214 Gg



Legend

 Liquid fossils	 Solid fossils
 Gaseous fossils	 Other fossils
 Biomass	

Iron & Steel Production



A mass balance approach

Applying this to AQ

- Complex inventory processes? ✓
- Reliance upon energy balance and core data sets? ✓
- Data availability? ?

Cross-country analysis

Why are we doing this?

- By comparing levels of reporting we can improve our inventories in terms of completeness
- Focus on important categories (not for nit-picking!) and identify gaps to improve accuracy
- Improve the value of the international process by increasing comparability between parties

Cross-country analysis

The challenge:

- Use publically available data to enable countries to compare their inventories in an interactive manner across time, pollutants and categories...

...Learning by comparison:

- Transparency
- **Completeness**
- Consistency (internal)
- **Comparability (external)**
- **Accuracy**

Cross-country analysis

What tools do we have available?

- Can we get added benefit by employing new tools / programmes?
- Over-reliance on MS Office?
- Can we improve completeness, accuracy etc. by exploring data interactively?
- Are there any issues with the LRTAP submission data for this purpose?

Conclusions

- LRTAP submission data limited in comparison to GHGs, however...
- We can learn by exploring data and presenting it in an interactive way
- Engaging stakeholders, policy makers and the general public
- **Improving our inventory quality**

Contact details

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