

IEA Expert Review Meeting 9-10 February 2009, Paris



WBCSD Cement Sustainability Initiative (CSI)
Patrick Verhagen, Holcim



CSI Participants (with headquarters country)

Ash Grove Cement (USA)

CEMEX (Mexico)

Cementos Molins (Spain)

Cementos Portland Valderrivas (Spain)

Cimentos Liz (Brazil)

Cimpor (Portugal)

CRH (Ireland)

Grasim Cement (India)

HeidelbergCement (Germany)

Holcim (Switzerland)

Italcementi (Italy)

Lafarge (France)

SCG (Thailand)

SECIL (Portugal)

Shree Cement (India)

Taiheiyo (Japan)

Titan (Greece)

Votorantim (Brazil)

Camargo Corrêa (Brazil)



- Initiative operating since 2000
- Addressing a range of sustainability issues incl.
 - Climate protection, safety, land impacts, fuels
- Currently 19 members
- 700 facilities
- Broad geographic reach:
 - 60% of global production outside China
 - 35% global production, but majority of production in EU, NA, LA, India
- 450 mil tonnes CO2 emissions in 2005



Collectively, participants have operations in more than 100 countries

Structure of the presentation

- Energy Technology Perspectives 2008, Cement Sector feedback
- Future Collaboration
- Global Energy and GHG Database



Energy Technology Perspectives 2008, Cement Sector

- Generally very complete and useful information.
- Written feedback provided to IEA (Jan 09) with:
 - Clarification of data and terminology and some specific details,
 - Indications of structural barriers that impede the full implementation of co-processing of alternative fuels and blending of mineral components,
 - Detailed discussion of the BAT levels for alternative fuels and blending rates.



Key Issues

- Significant progress made by CSI companies in reducing emissions intensity since 1990, and rate of progress has increased.
- But total impacts are limited as the sector can reduce emission intensity (tonne CO₂/tonne cement), but overall emission increases are driven by growth in demand in developing economies.
- A real decrease in emissions will require substantial new CCS technology for cement plants.



Future Collaboration

- Improving IEA industry analysis for ETP 2010':
 - Involve the industry with a clear agenda and time schedule on a yearly basis,
 - Share statistics (confidentiality).
- Recommendations to improve IEA/industry collaboration:
 - Identify common issues in a yearly IEA/Sector meeting.



Global Energy and GHG Database

A Database for the Cement Industry:

« Getting the Numbers Right » (GNR)

representative statistical information on the energy and CO₂ performance of clinker and cement production, worldwide and regionally, to serve the needs of internal and external stakeholders.



Data Assurance

- Assurance at plant and company level is required for all CSI companies.
- “Limited Assurance”^{*} is the standard
 - At least every 3 years,
 - Practitioner to assess need for site visits and report visits made in assurance statement,
 - 86% of the recent data collection was independently assured.
- Assurance necessary eg for proposed sectoral benchmark CDM concept.
- Collection tool requests the assurance status of all data.

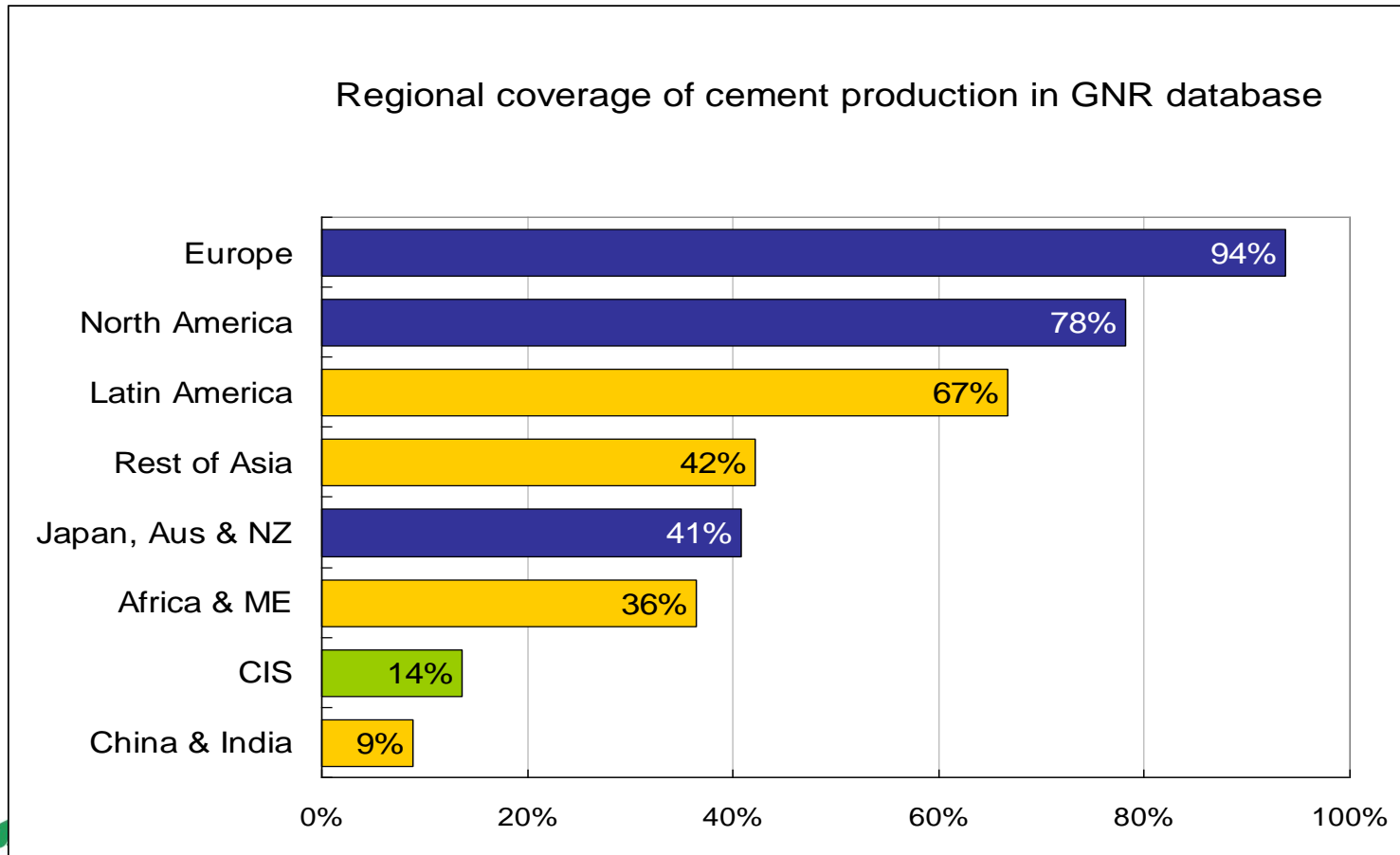


Database Management

- PWC appointed as independent contractor and database owner.
- PWC responsible for anti-trust compliance.
- PWC uses a number of “business” checks on incoming data including:
 - Compatibility with industry norms,
 - Compatibility with historical data.
- PWC consolidates to:
 - Specific company reports,
 - Regional and world reports.



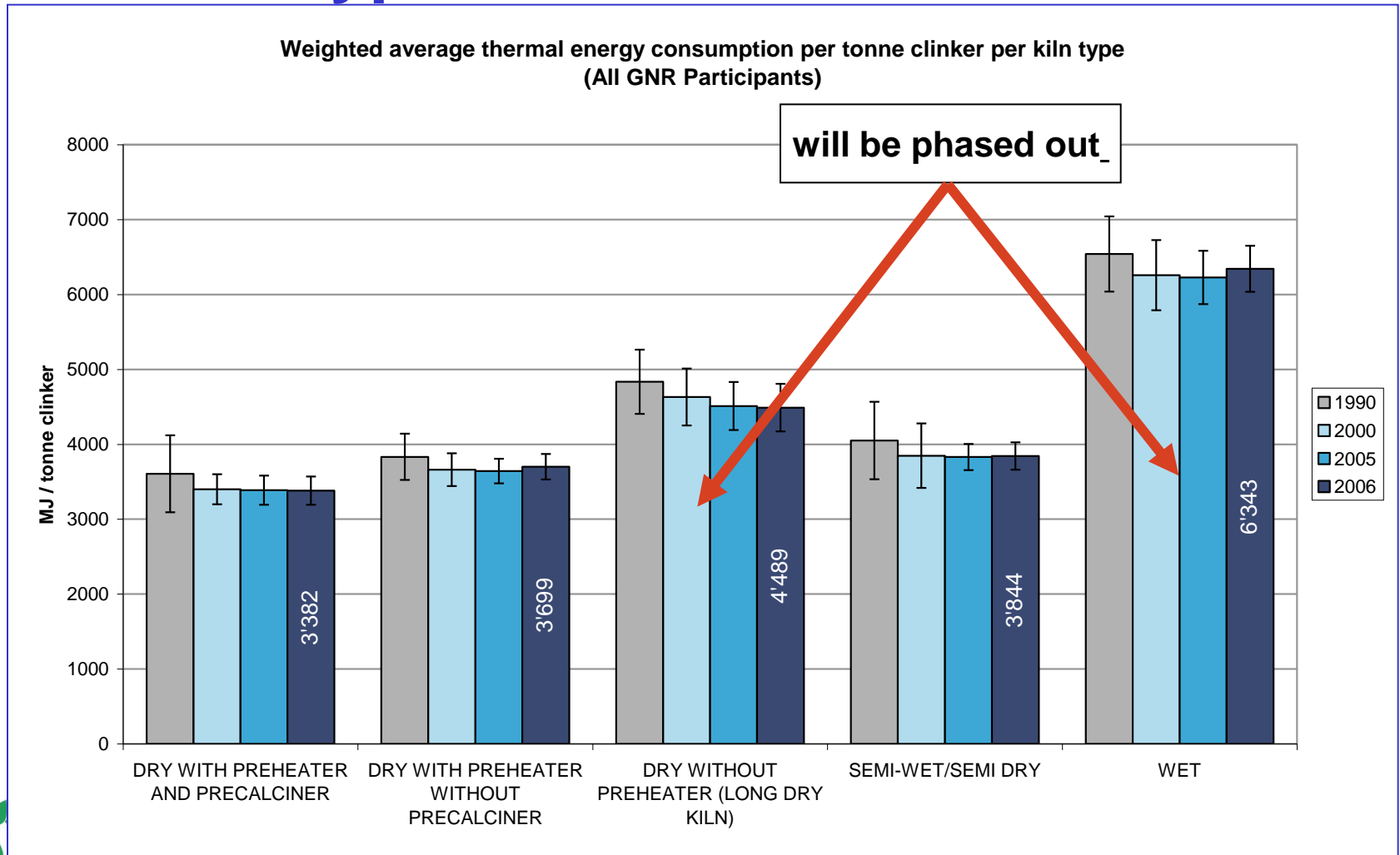
2005-2006 Average Coverage: 800 million tons cement



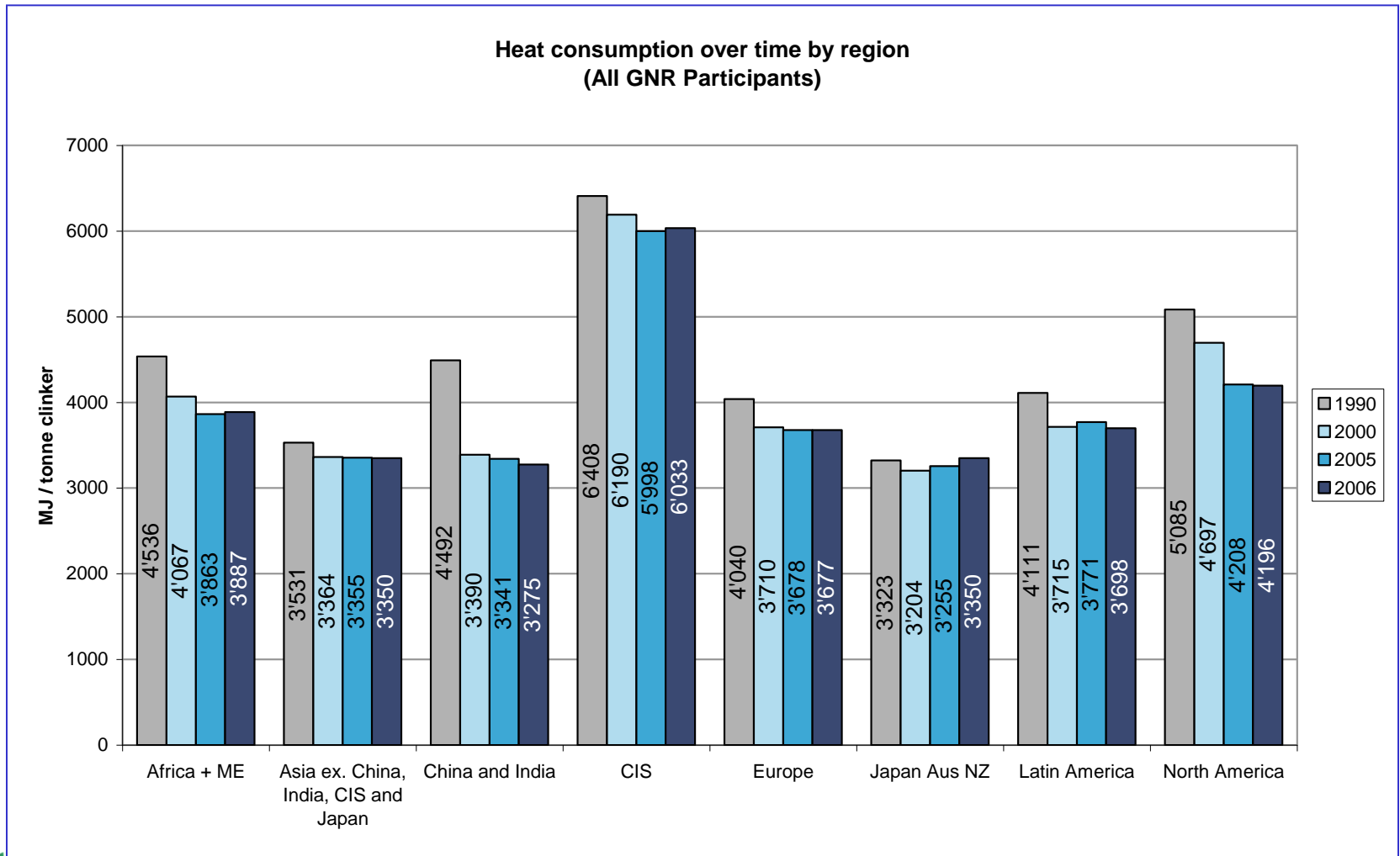
Some Typical GNR Outputs 2006



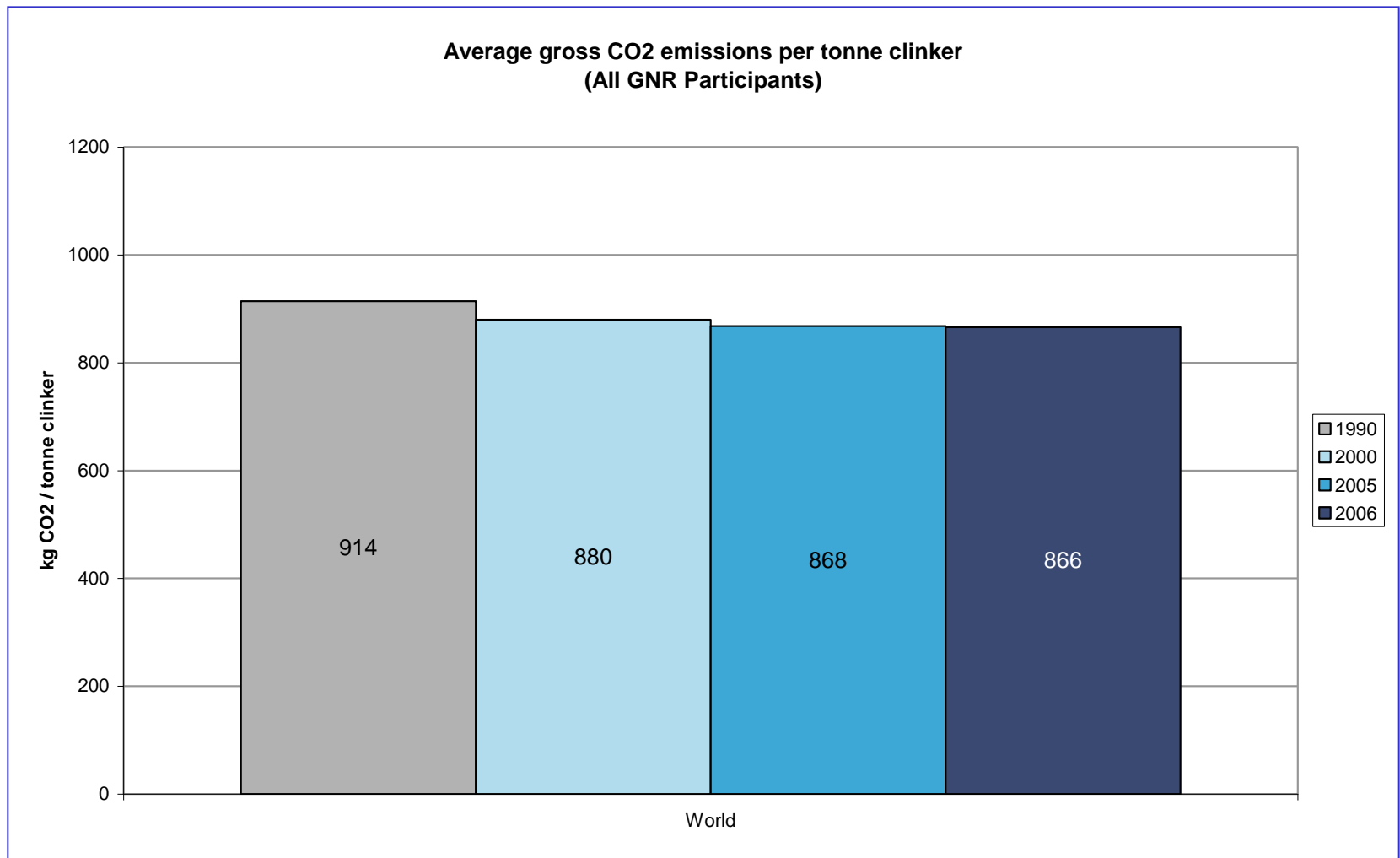
Energy Consumption Per Tonne Clinker Per Kiln Type



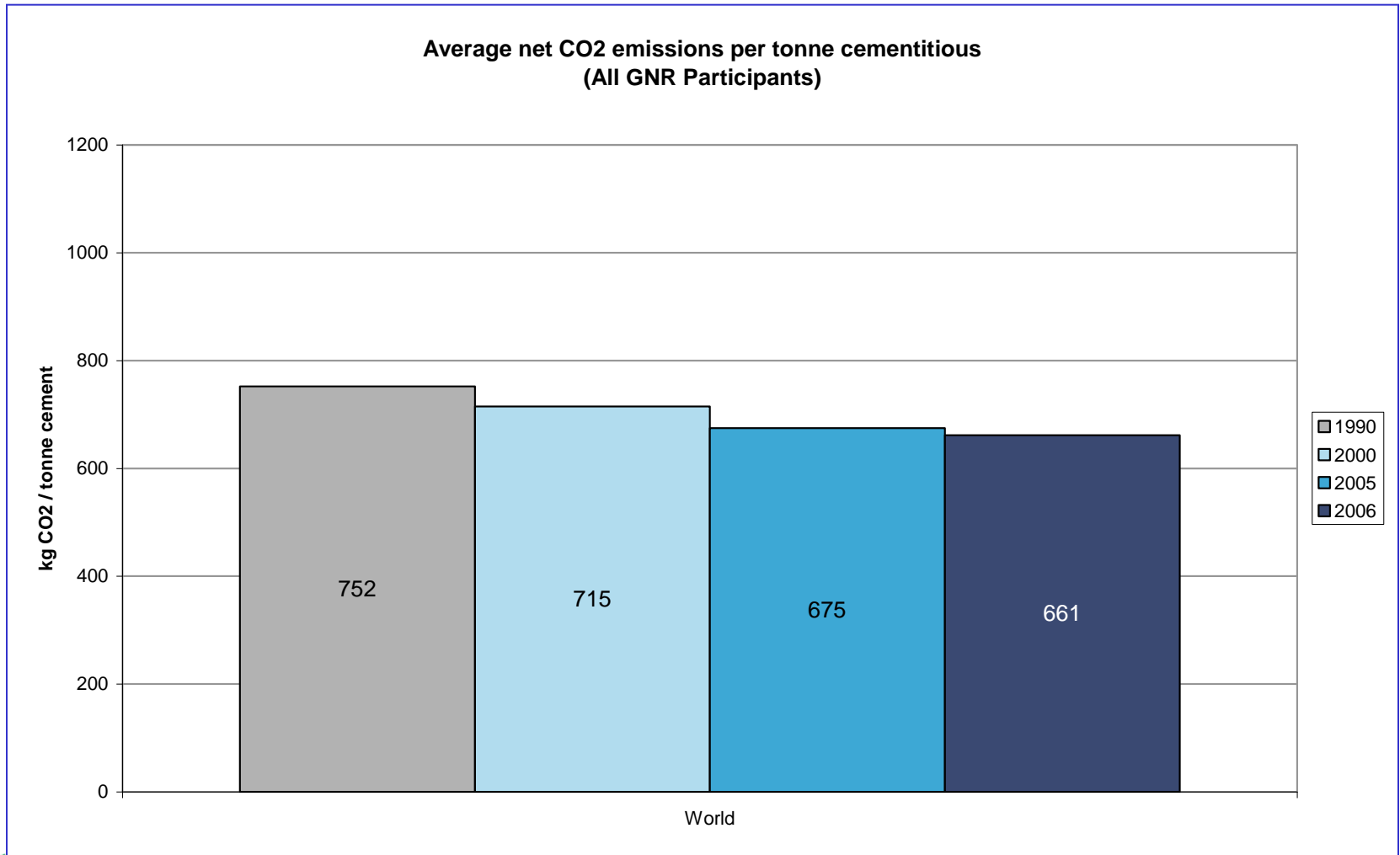
Energy Consumption Per Tonne Clinker



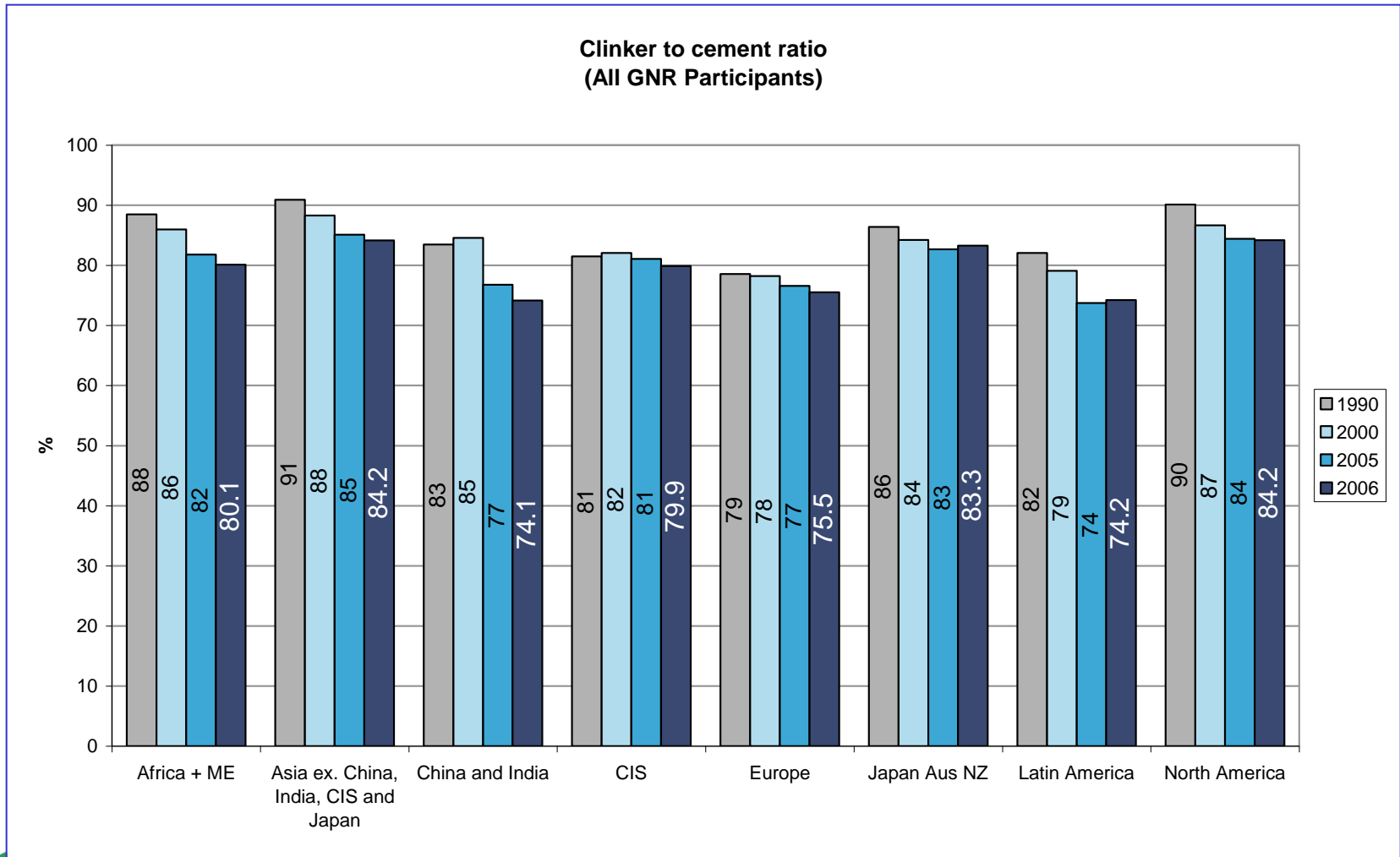
Gross CO₂ Emissions Per Tonne Clinker



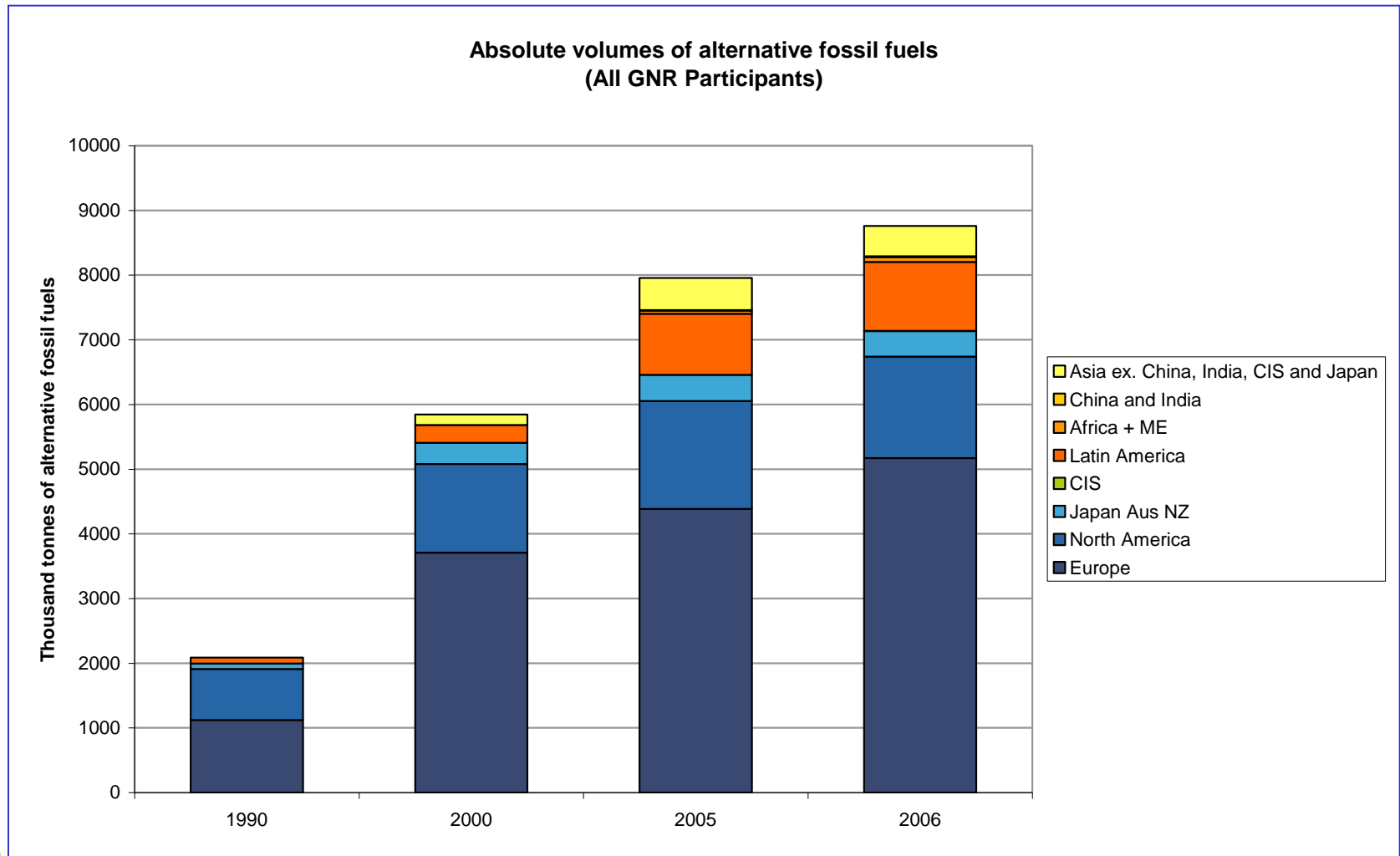
Net CO₂ Emissions Per Tonne Cement



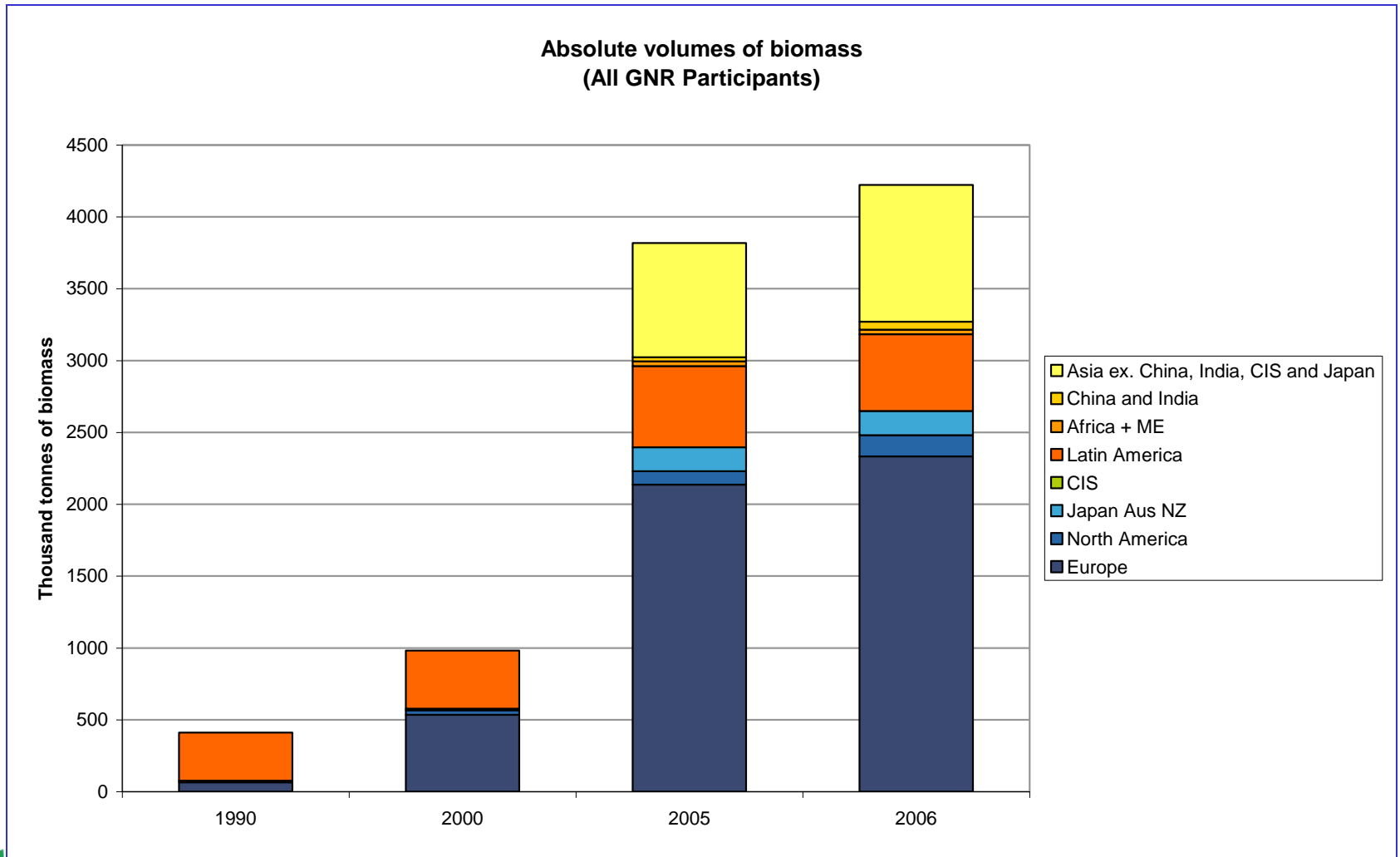
Regional Average Clinker to Cement Ratios



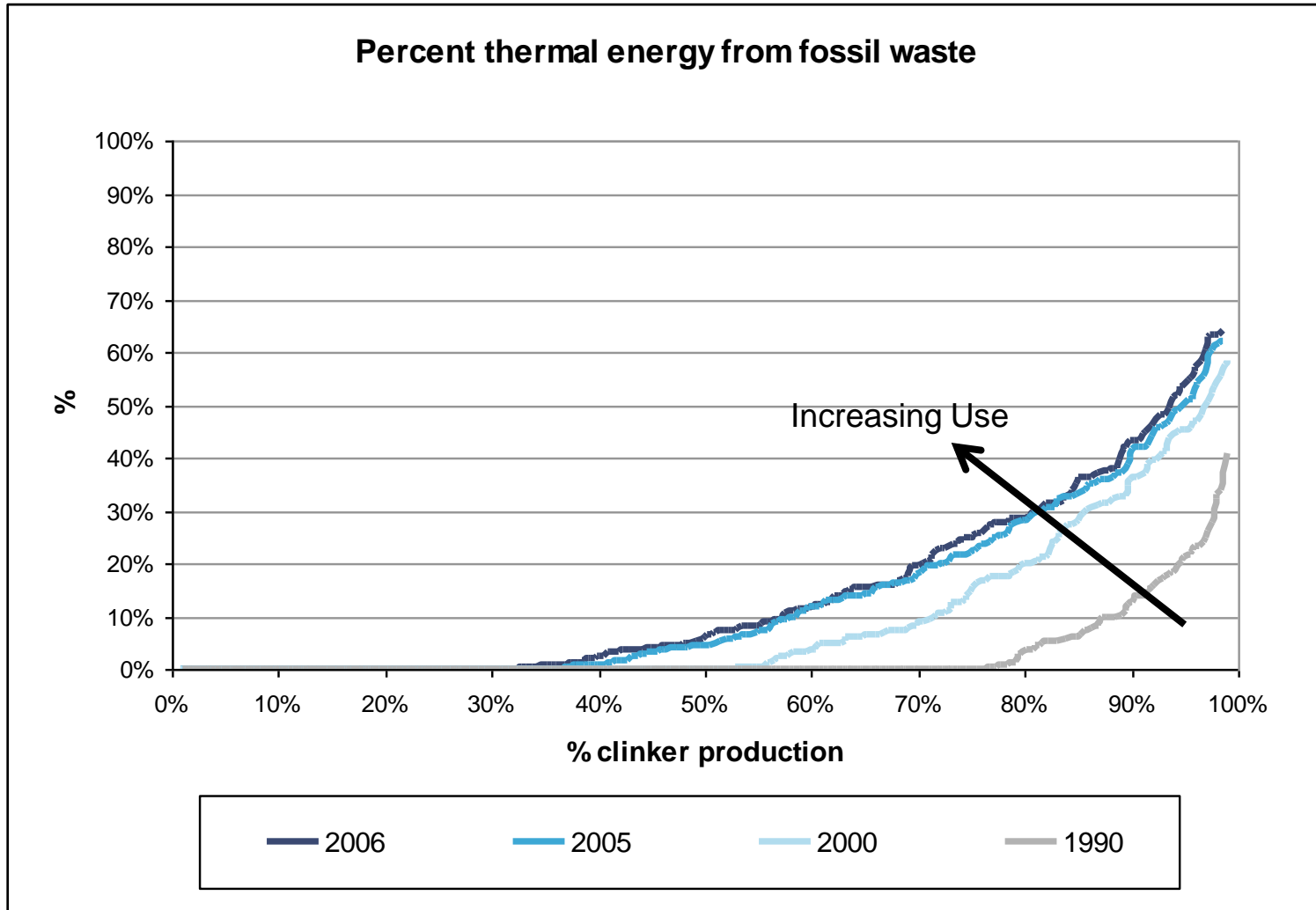
Alternative Fuel Use



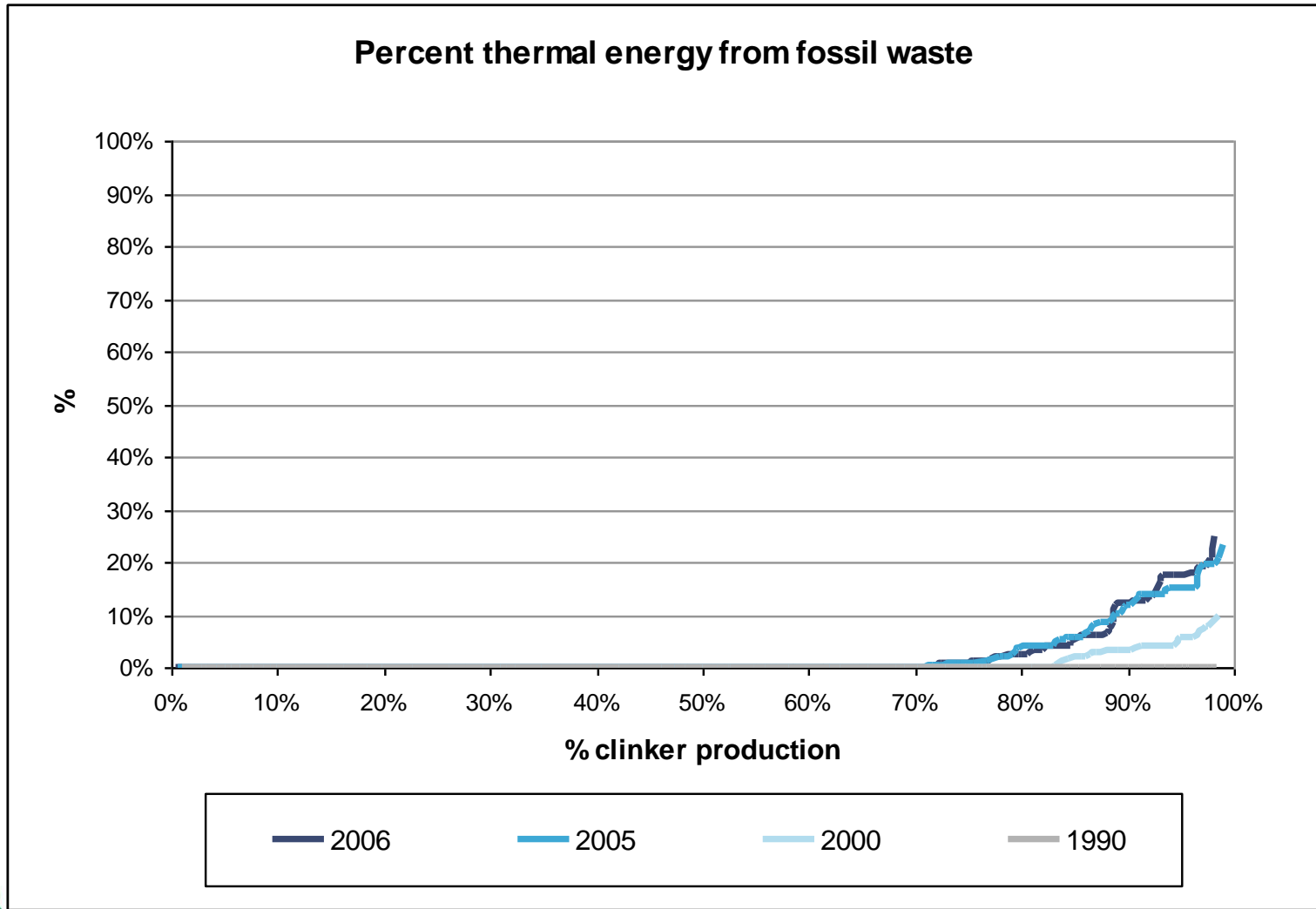
Biomass Use



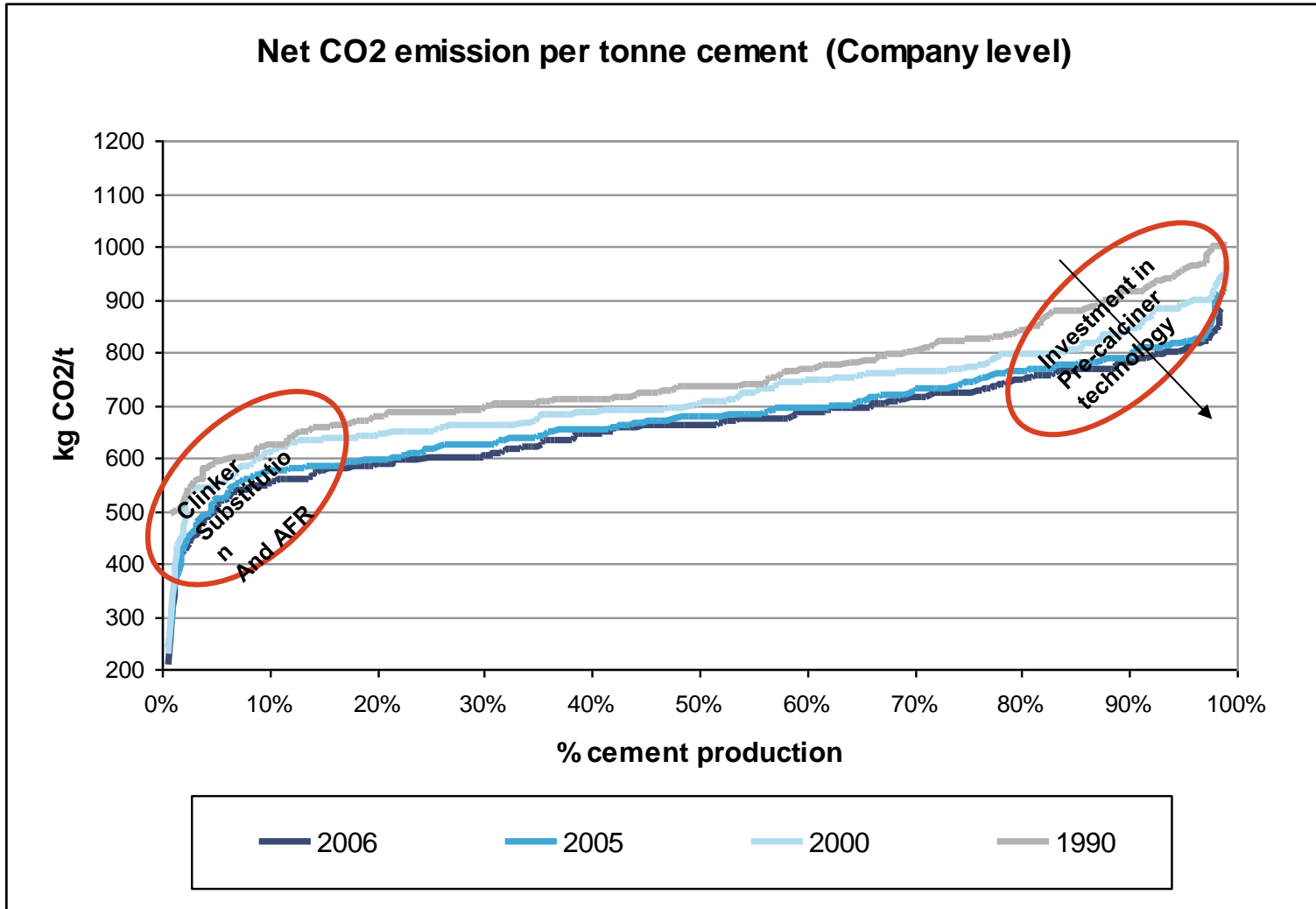
Alternative Fuel Use in Europe



Alternative Fuel Use in G5



Global Net CO₂ Per Tonne Cement from 1990 to 2006



Thank you.



Annex

Queries

- GNR answers queries from interested stakeholders (20+ responses in 2008),
- Queries channelled through the PMC,
- PWC are obligated to anti-trust and confidentiality commitments,
- Payment may be requested (covers costs),
- Direct to gnrpmc@wbcsd.org,



Queries

- Request should indicate:
 - Name and function of requesting organisation,
 - Description of the proposed use of the data,
 - Contact details for response or clarification,
 - Details of the requested information,
 - Geographic coverage required,
 - Specific variables requested,
 - Time frame for data.

