

# *European Standardization of the Characterization of Wastes from the Mining Industry*

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and Euromines

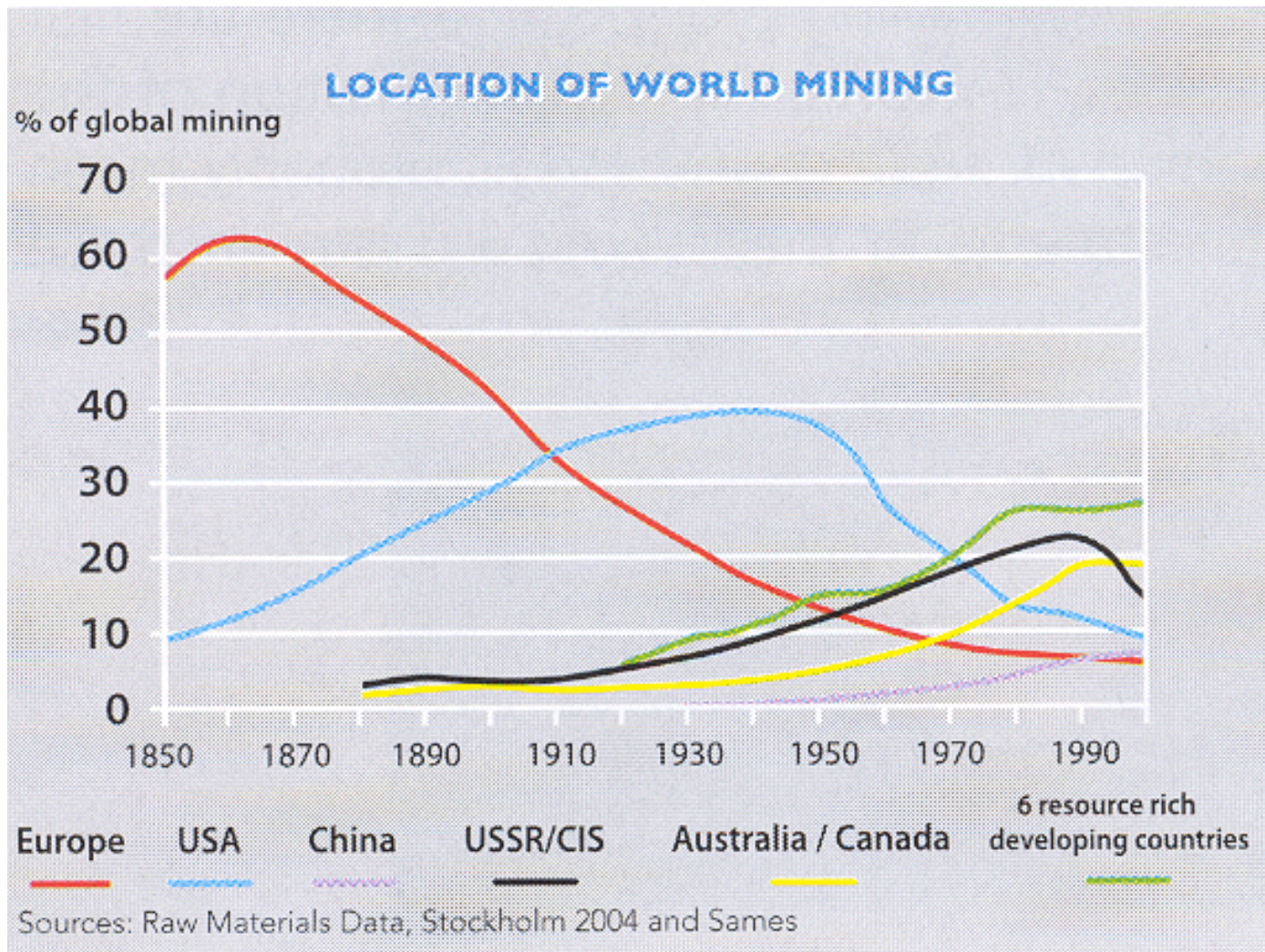
# Outline

- » Introduction
- » Mining in Europe
- » Legal Background
- » Preparatory work
- » Work plan

# Introduction

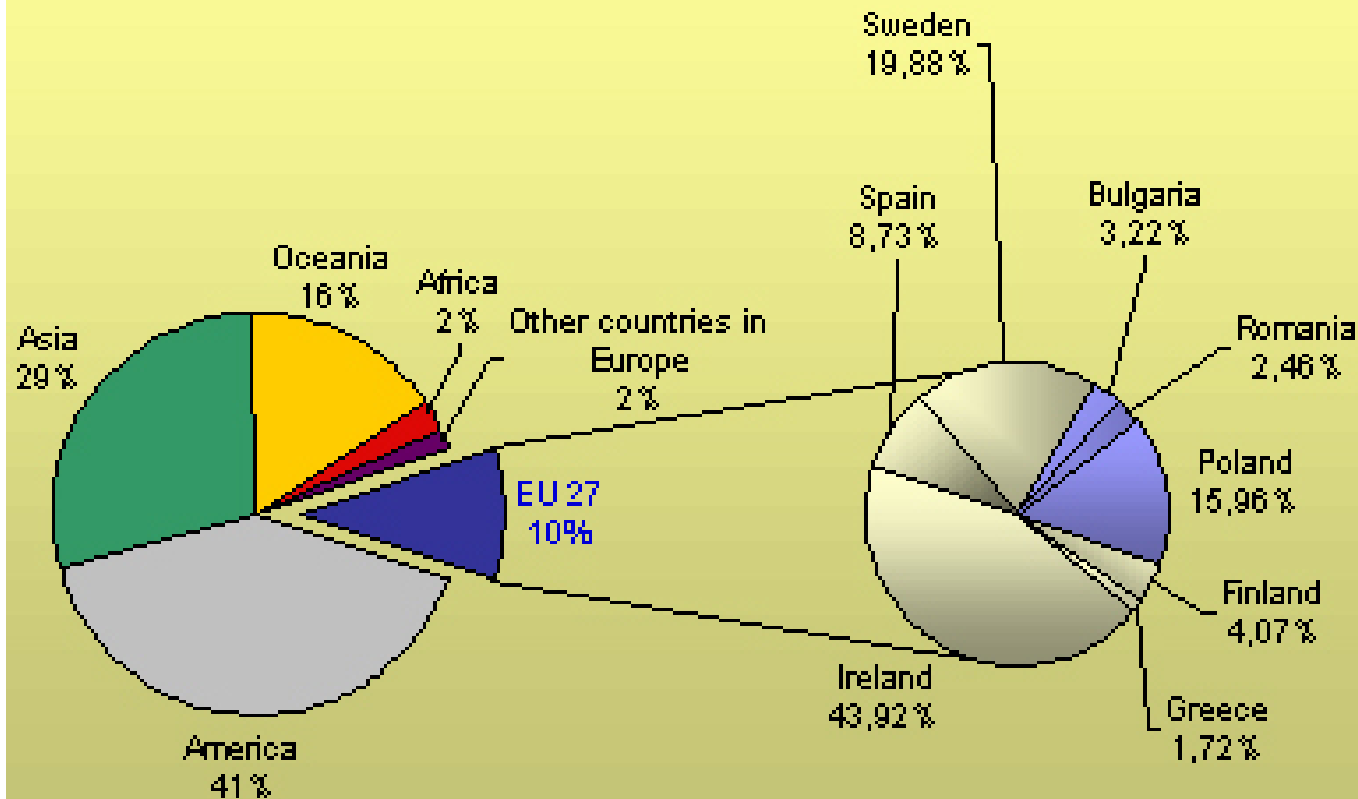
- Current European focus on mining issues
- BAT document, July 2004
- Directive on the management of waste from the extractive industry, January 2006
- Focus on active/new mines ...
- ... but also on impact from closed facilities
- Thematic strategy on resource management, supply and use

# Mining in the World

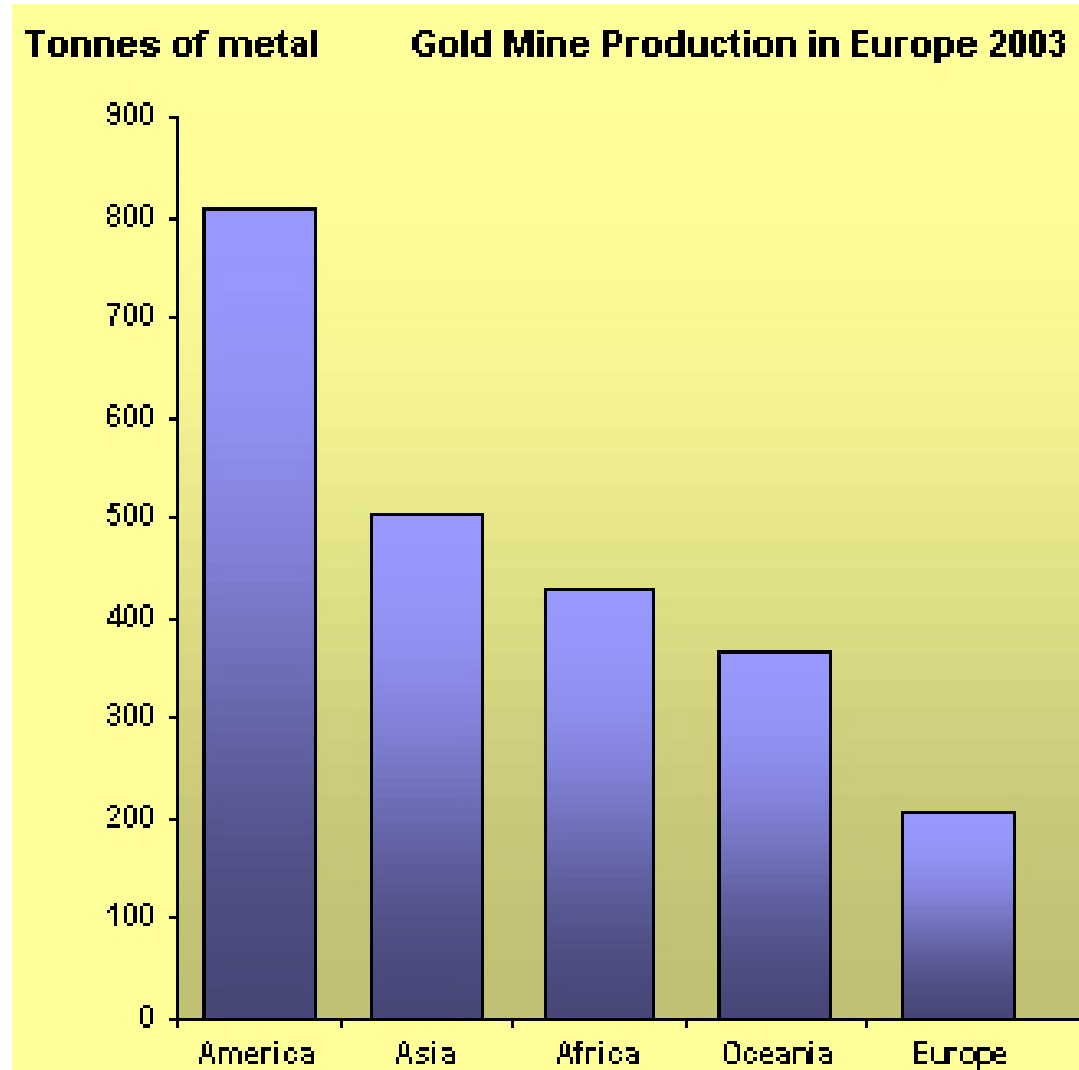


# Mining in Europe - Zinc

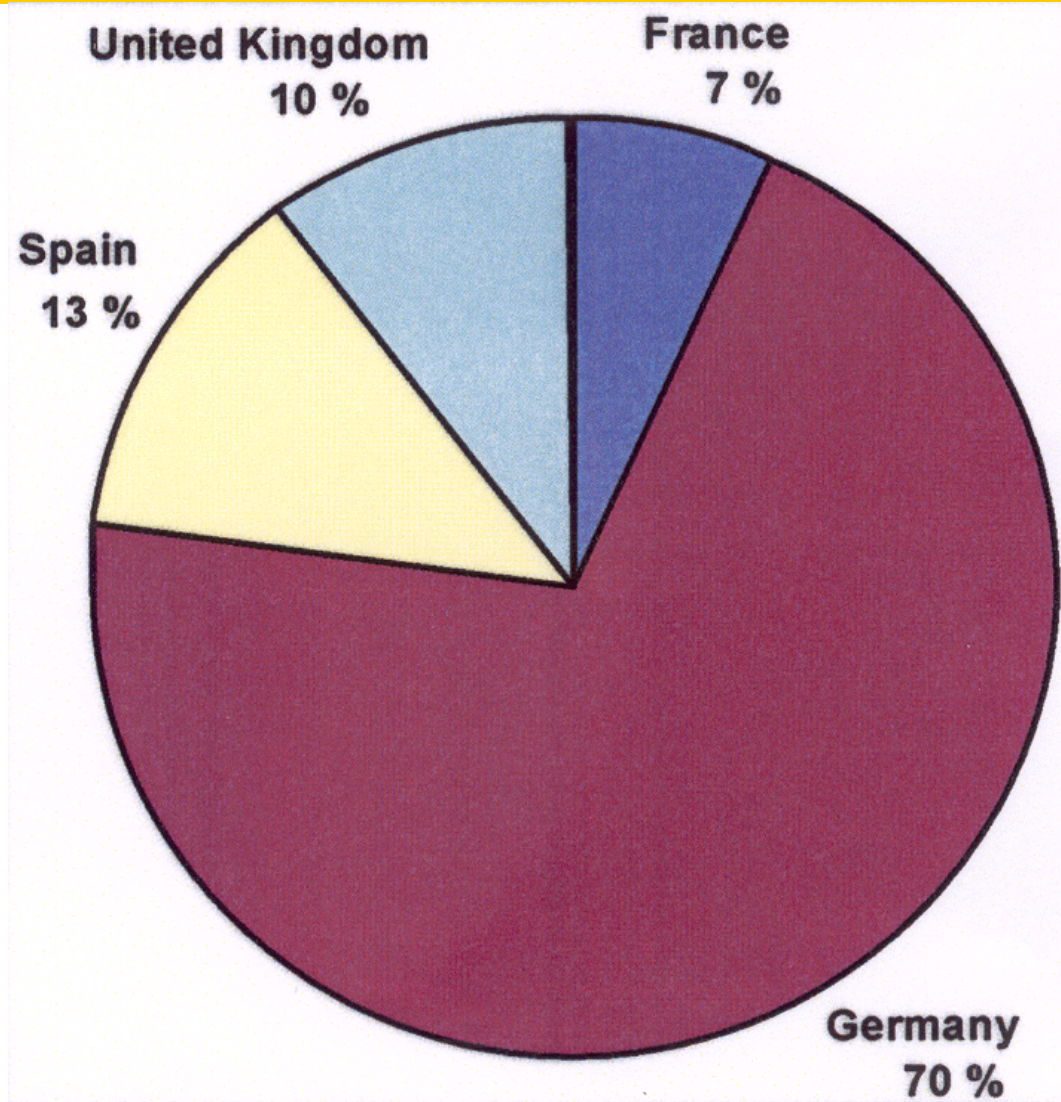
Zinc Mine Production in 2003



# Global Mining – Gold



# Mining in Europe – Potash

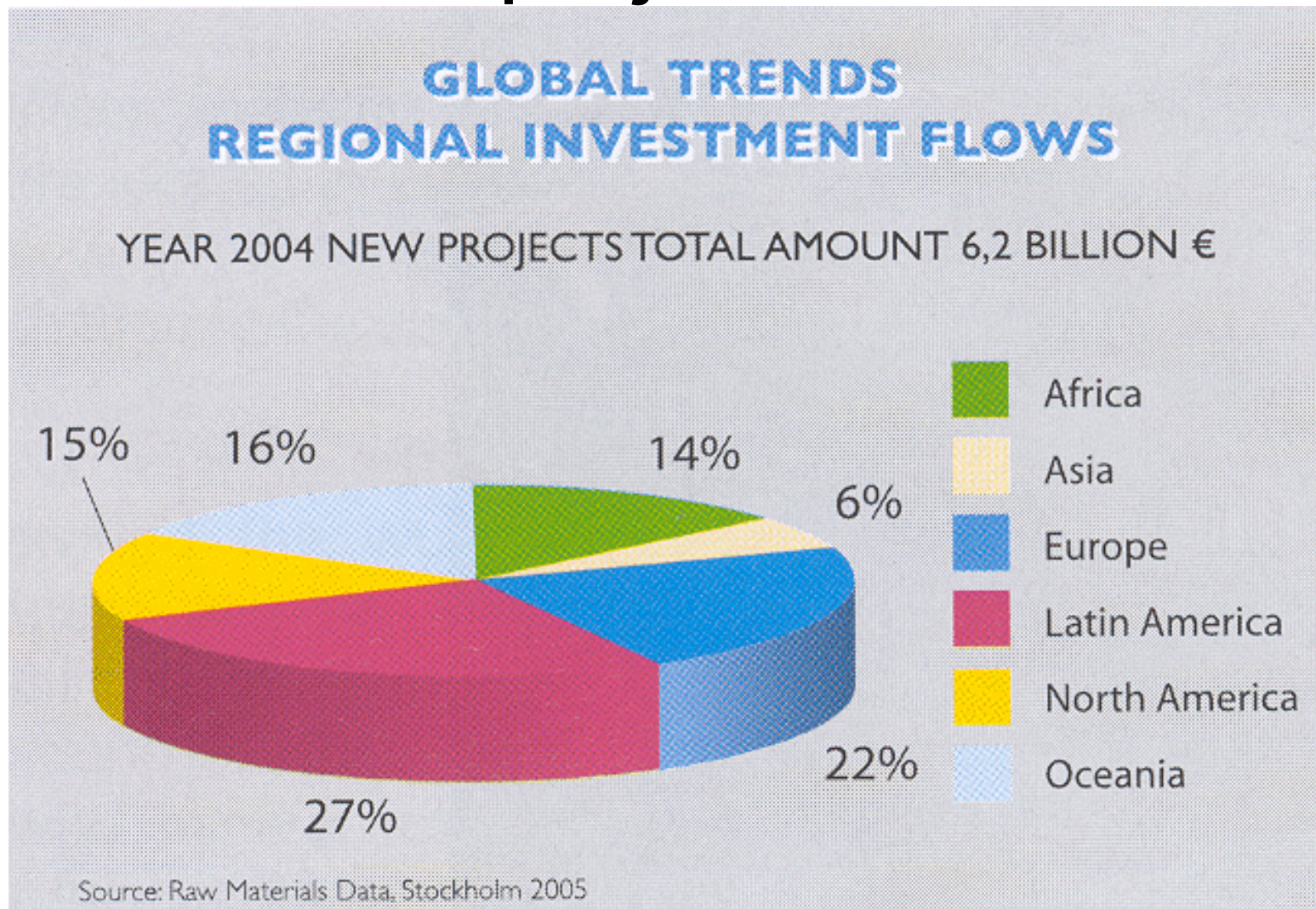


# Mining in Europe – Hard coal (kt)

Country	1980	1996	1997	1998	1999	2000	2001
France	20194	7314	5779	4739	4033	3166	1971
Germany	94492	53156	51212	45340	43849	37338	30362
Spain	13147	17465	18861	16380	15433	14965	14539
United Kingdom	130096	49307	47123	40045	36356	30465	32512
<b>Total EU-15</b>	<b>257929</b>	<b>127242</b>	<b>122975</b>	<b>106504</b>	<b>99671</b>	<b>85934</b>	<b>79384</b>
Bulgaria	267	186	99	118	108	66	20
Czech Republic	288	301	301	301	300	631	630
Hungary	3065	996	959	914	783	754	570
Poland	193121	136385	137100	116381	110443	103173	103896
Romania	8060	4219	3401	2679	2748	3243	3680
Turkey	3602	3029	2291	3994	2705	3110	3719
<b>Total Cand. Countr. and Turkey</b>	<b>208403</b>	<b>145116</b>	<b>144151</b>	<b>124387</b>	<b>117087</b>	<b>110977</b>	<b>112515</b>
<b>Total Europe</b>	<b>466332</b>	<b>272358</b>	<b>267126</b>	<b>230891</b>	<b>216758</b>	<b>196911</b>	<b>191899</b>
<b>World</b>	<b>2728475</b>	<b>3818221</b>	<b>3833233</b>	<b>3789727</b>	<b>3505000</b>	<b>3447248</b>	<b>3408945</b>
<b>Europe as % of world</b>	<b>17 %</b>	<b>7 %</b>	<b>7 %</b>	<b>6 %</b>	<b>6 %</b>	<b>6 %</b>	<b>6 %</b>



# Global investments – new projects



# Waste Characterization - Legal Background

- New EU legislation on management of waste from the extractive industry
- Requires waste characterization, guidelines to be developed
- Existing waste characterization methods have focus on total content and leachability
- Limited understanding of mine specific issues among authorities in many countries, preference for prescribing standardized methods
- Need to define (and standardize) appropriate methods for mine waste

# Standardization in Europe

- CEN (European Committee for Standardization)
- TC(Technical Committee)292 Characterization of Waste
- Seven working groups
  - Terminology
  - Sampling
  - Analysis of waste/Selected group parameters
  - Basic characterization test for leaching behaviour
  - Leaching test procedures
  - Parameters related to species soluble in mineral acid or water: Analysis and digestion methods
  - Ecotoxicological properties
- Some 30 standards adopted to date

# Preparations – 1(3)

- Discussions within TC292
- Discussions with industry organizations
- Preparation of Background document
- June 2004, TC292 establishes ad hoc group to prepare and propose work plan for a new working group
- Questionnaire to industry  
(methods used today)

# Preparations – 2(3)

- Report to CEN/TC292; Evaluation of status, gaps and priorities based on;
  - Questionnaire
  - EU BAT document (BREF-note)
  - Evaluation Geotechnical methods
  - Existing European standards
  - BC Guidelines
  - ASTM standards

# Preparations – 3(3)

- Evaluation covered;
  - Basic methodology
  - Sampling
  - Geotechnical parameters
  - Chemical/Mineralogical analyses and characterization
  - Characterization of additives

# New working group – 1(3)

- New WG established by TC292 in June 2005
- Title; “Wastes from the extractive industry”
- Scope;  
“To evaluate and develop **European standards** needed for the characterization of wastes from the extractive industry covering **methodology, sampling, testing and analysis** with particular emphasis on **acid generation behaviour**, primarily to support the forthcoming Directive on Management of wastes from the extractive industry taking into account existing work and documents as well as similar needs of other waste materials.”

# New working group – 2(3)

- Work item “Acid generation behaviour”  
Scope; European standard to determine the acid generation and neutralization behaviour of sulphide containing wastes.
- Status report on Methodology  
Evaluation, suitability of EN12920 (Methodology)
- Status report on Sampling  
Develop “ideas” based on prEN14899
- Status report on existing CEN/TC292 standards



# New working group – 3(3)

- Convenor; Mr Matti Himmi, Pyhäsalmi Mine (Inmet)
- Secretariat; VTT (Technical Research Center of Finland), Espoo, Finland
- Members;  
25+ nominated “experts” from 12 EU member states,  
expertise on standardization work and on leaching, aggregates well represented  
limited expertise on mine waste specific issues

# Work plan

- First WG meeting in Finland, Dec 7-8
- Directive implemented Feb 2008
- Detailed work plan to be discussed at December meeting
- Work shops

# Closing remarks

- There is a momentum within Europe, we want to make sure it leads to something useful
- We do not want to duplicate work
- Build on existing best practice
- Seeking to add value
- European standards will have an impact outside Europe
- International cooperation/coordination very important

**Thank you for your attention!**