



INTERNATIONAL NICKEL STUDY GROUP

Outlook for Global Nickel Market in 2007-2008

“2007 China International Nickel and Cobalt Industry Forum”

Ningbo, People's Republic of China

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Overview of the presentation

- **INSG Information**
- **World Nickel Ore Production**
- **World Primary Nickel Production, Usage and Balance**
- **Prices and Stocks**
- **First Use of Primary Nickel**
- **Primary Nickel Usage in the Stainless Steel Sector**
- **Nickel Developments**
- **World Primary Nickel Production, Usage and Balance 2005 to 2008**
- **Conclusions**



INSG (1)

- Headquarters/Secretariat - Lisbon, Portugal
- Co-located with International Lead & Zinc and Copper Study Groups, with significant cost savings and synergies
- Membership and Contributions from 15 Countries and the European Community
- Meetings twice a year, held mainly in April/May and October, usually in Lisbon



INSG (2)

- An Autonomous International Governmental Organization
- Membership by both producing and user countries
- Significant role for industry representation
- Small Secretariat with professional staff of two, plus shared Secretary-General, Economist & Administrative Officer



INSG (3)

- Member Countries decide on Group's work
- Industry Advisors have major influence
- Avoids politicization
- Close contact with key industry associations, including Nickel Institute, ISSF
- Very strong support from Non Member Countries and Individual Companies



Member Countries

Australia

Greece

Norway

Germany

(Assoc. Member)

Cuba

Portugal

Finland

EC

Italy

Russian Federation

Japan

Sweden

Netherlands

France

Brazil

United Kingdom



Objectives (1)

- to collect and publish improved statistics monthly on nickel markets - including production, usage (consumption), trade, stocks, prices and other statistics such as recycling
- to publish other information on nickel, such as data on industry facilities, environmental regulations and end use markets



Objectives (2)

- to provide a forum for discussions on nickel issues of interest to nickel producing and using (consuming) countries and their industries, including environmental issues
- to undertake economic analysis of nickel markets and related topics



Statistics

- Extensive range of statistics produced monthly
- Coverage includes mine production, primary nickel, nickel-bearing scrap
- Production, usage (consumption), stocks, trade
- Usage (consumption) data is particularly well regarded



Economic and Environmental issues

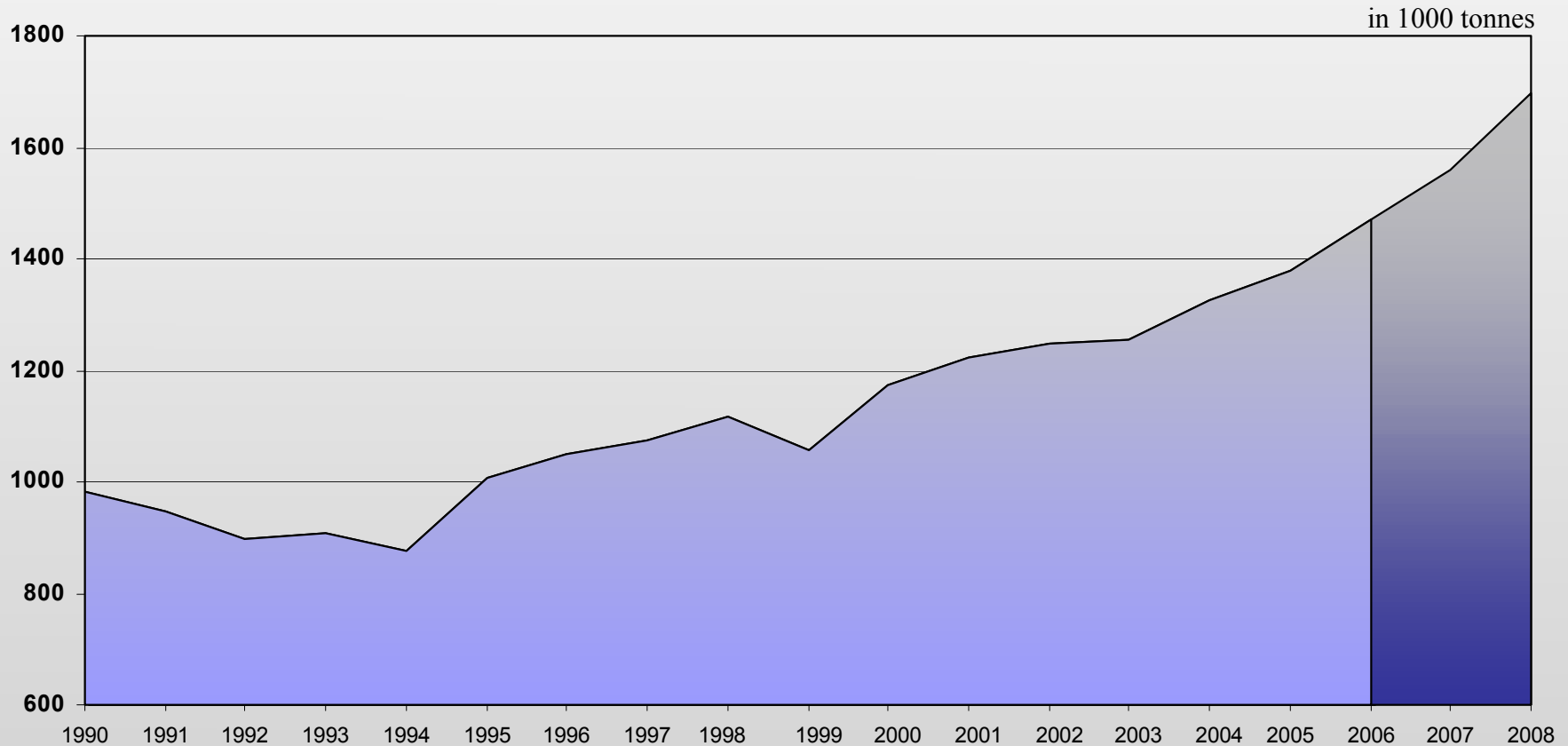
- Legislative: advising governments on impact of existing and new legislation on the nickel market

- Nickel Recycling
 - ✓ environmental impact: waste, primary resources
 - ✓ economic (market) impact: supply of nickel units from scrap

- Economic: studies on nickel supply and demand; country studies; trade issues; potential Common Fund for Commodities projects to promote nickel



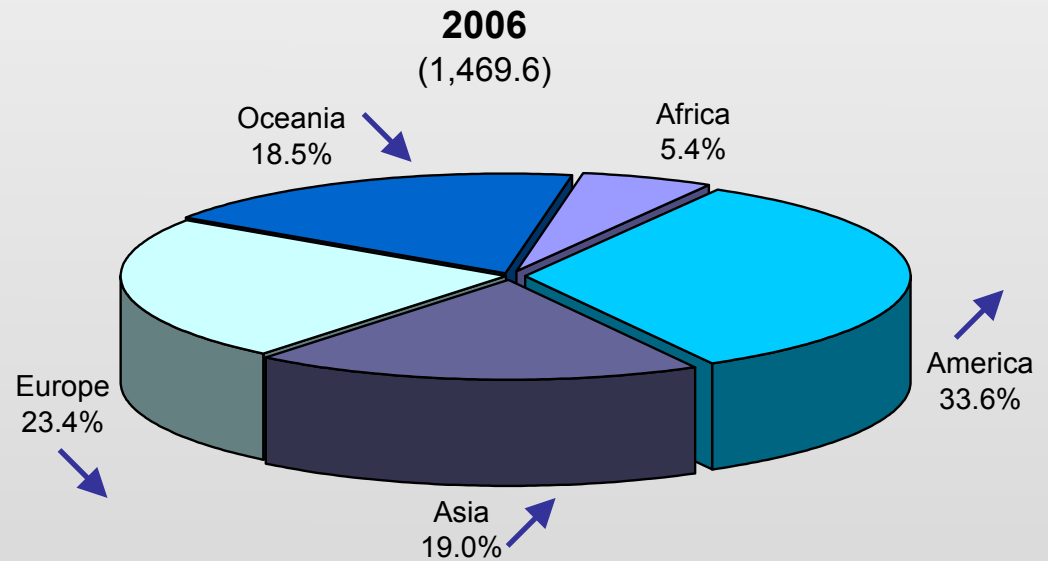
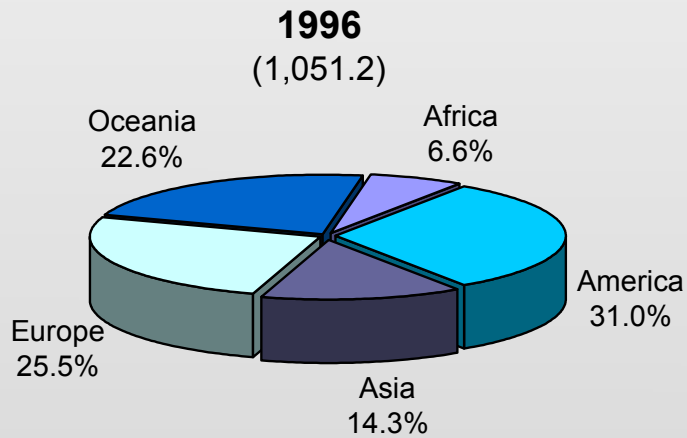
World Nickel Ore Production





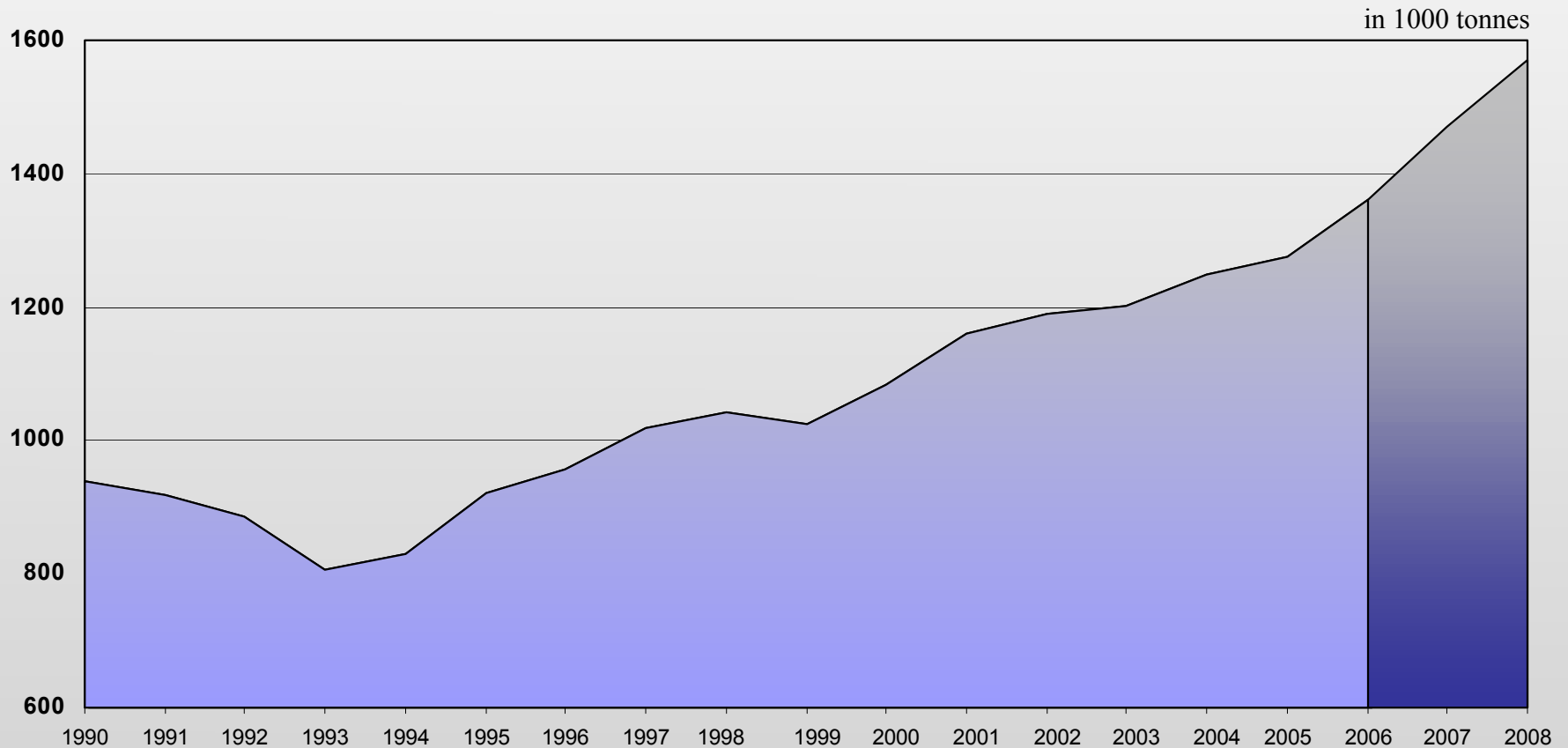
World Nickel Ore Production

in 1000 tonnes





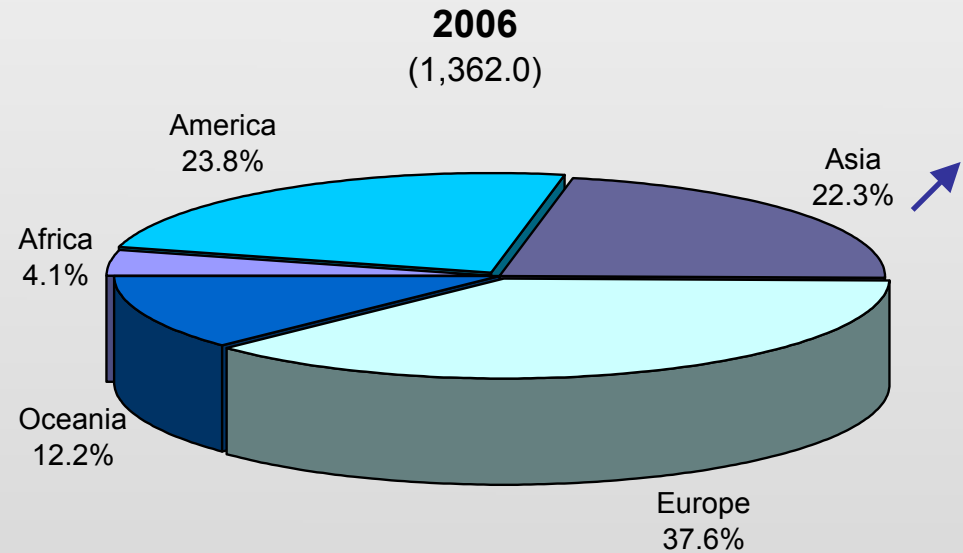
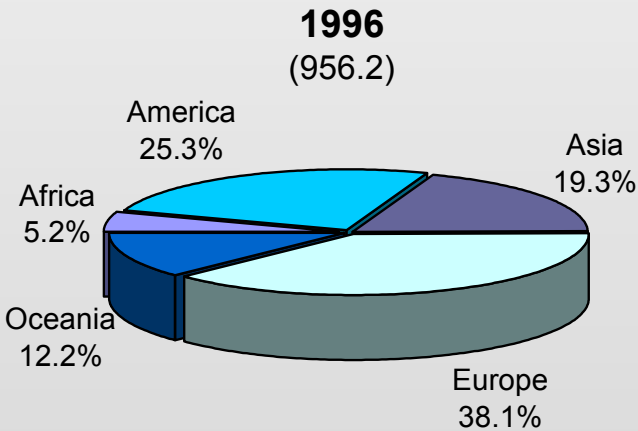
World Primary Nickel Production





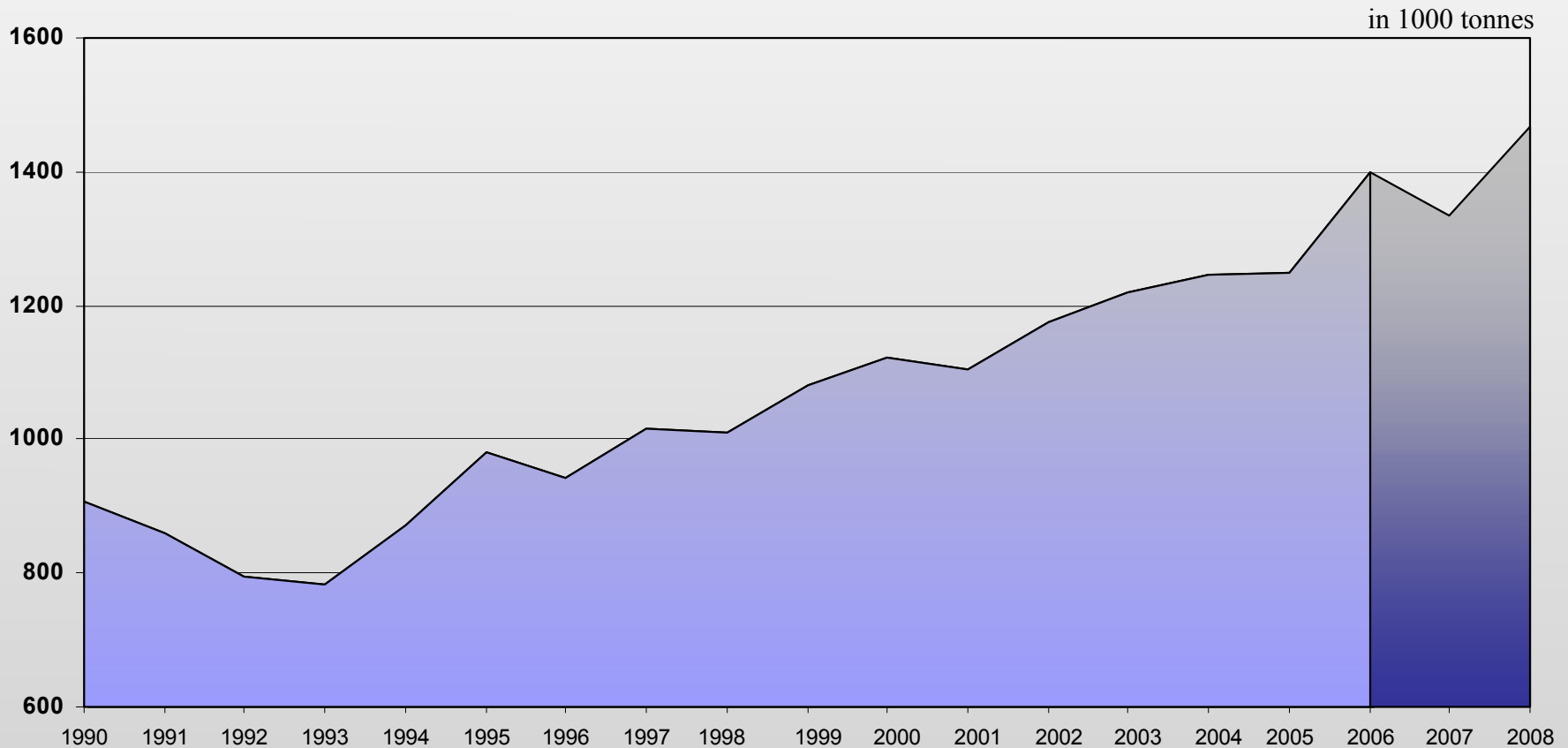
World Primary Nickel Production

in 1000 tonnes





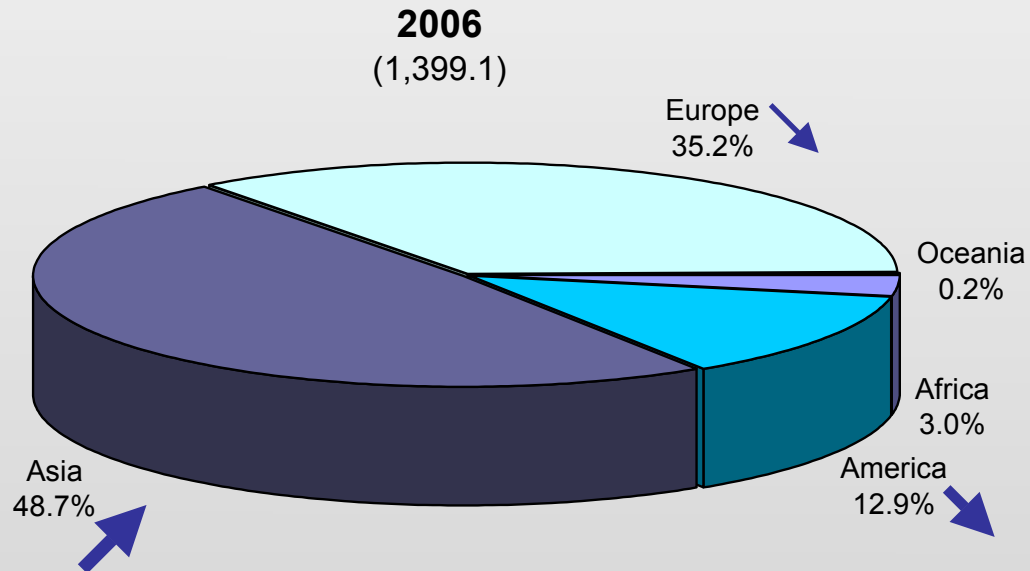
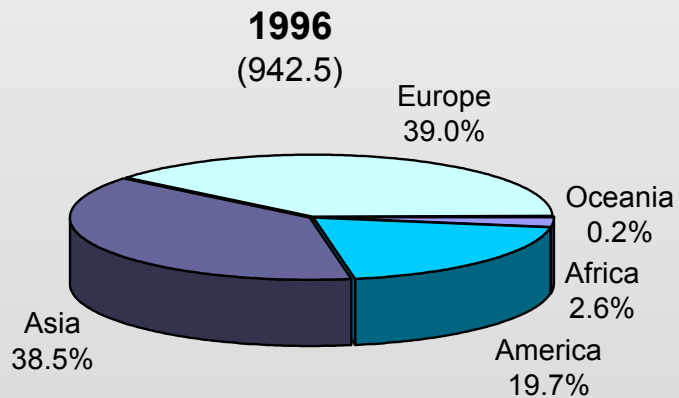
World Primary Nickel Usage (consumption)





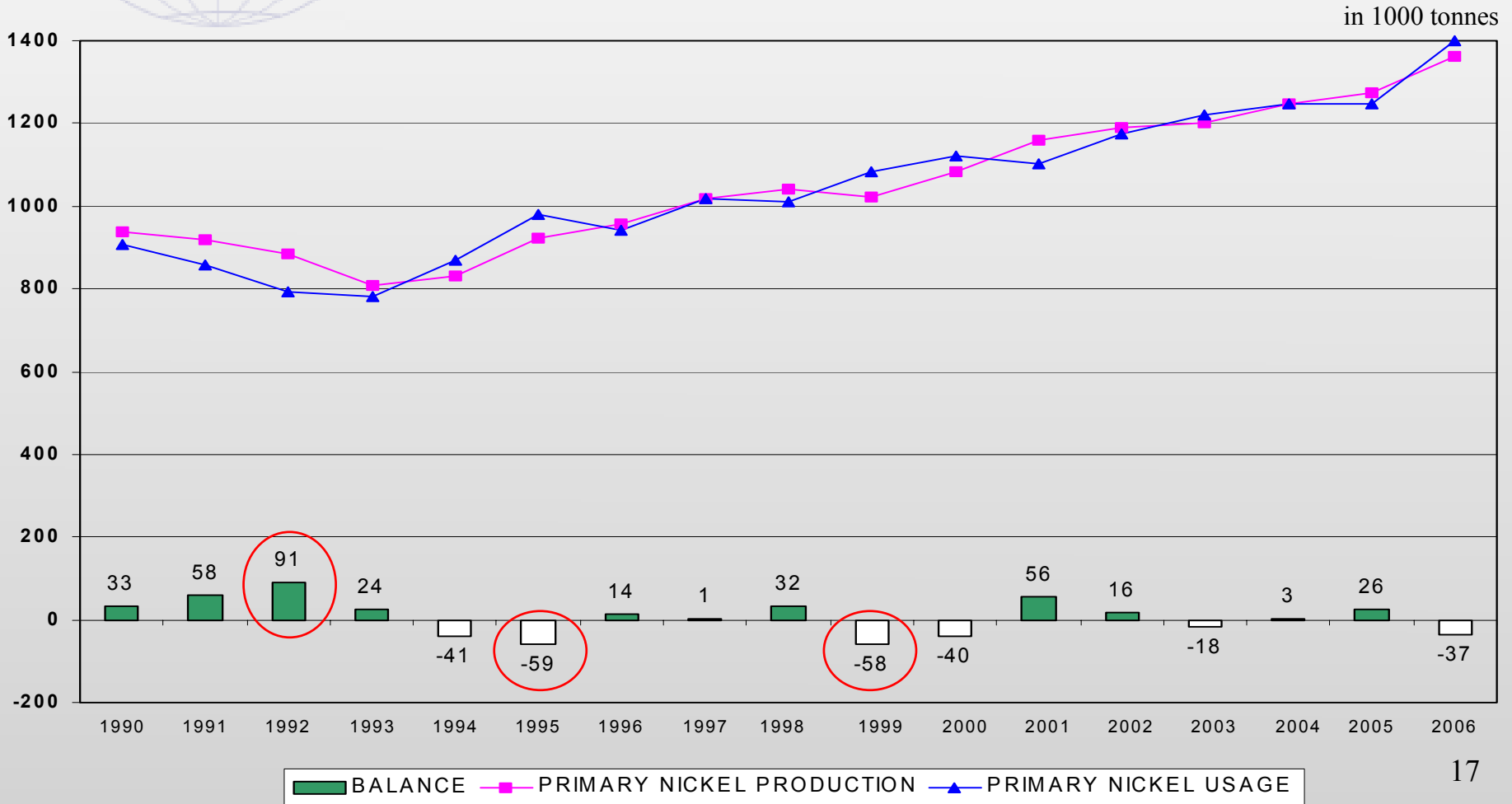
World Primary Nickel Usage (consumption)

in 1000 tonnes



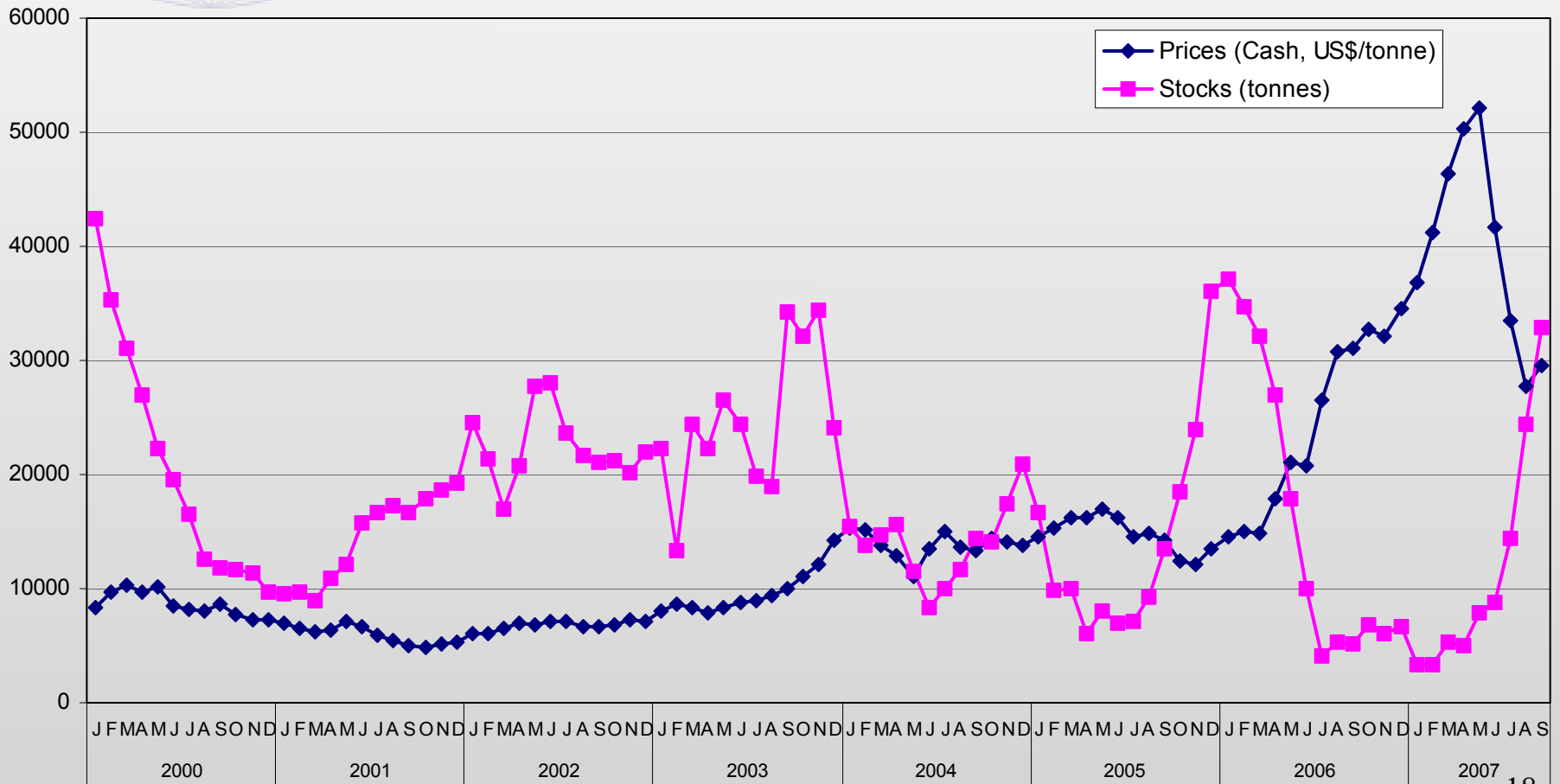


World Primary Nickel Balance



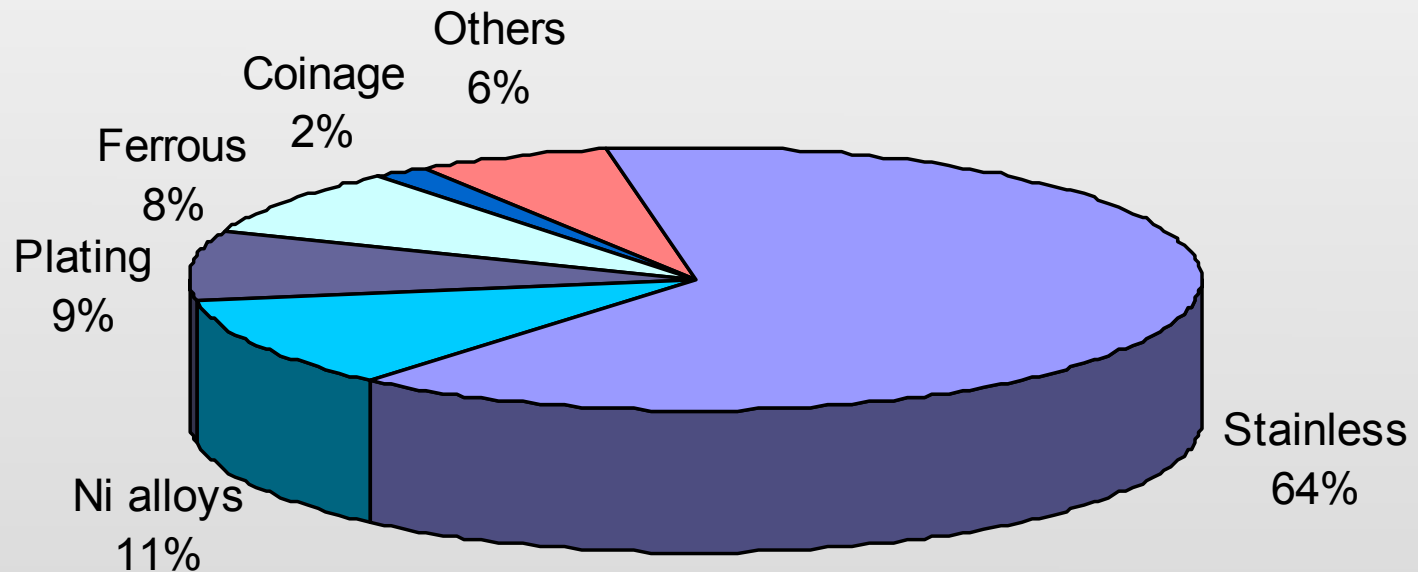


LME prices and stocks





First Use of Primary Nickel in 2006



Source: Eramet Ni Research



High volatility in primary nickel usage is due to the Stainless Steel sector

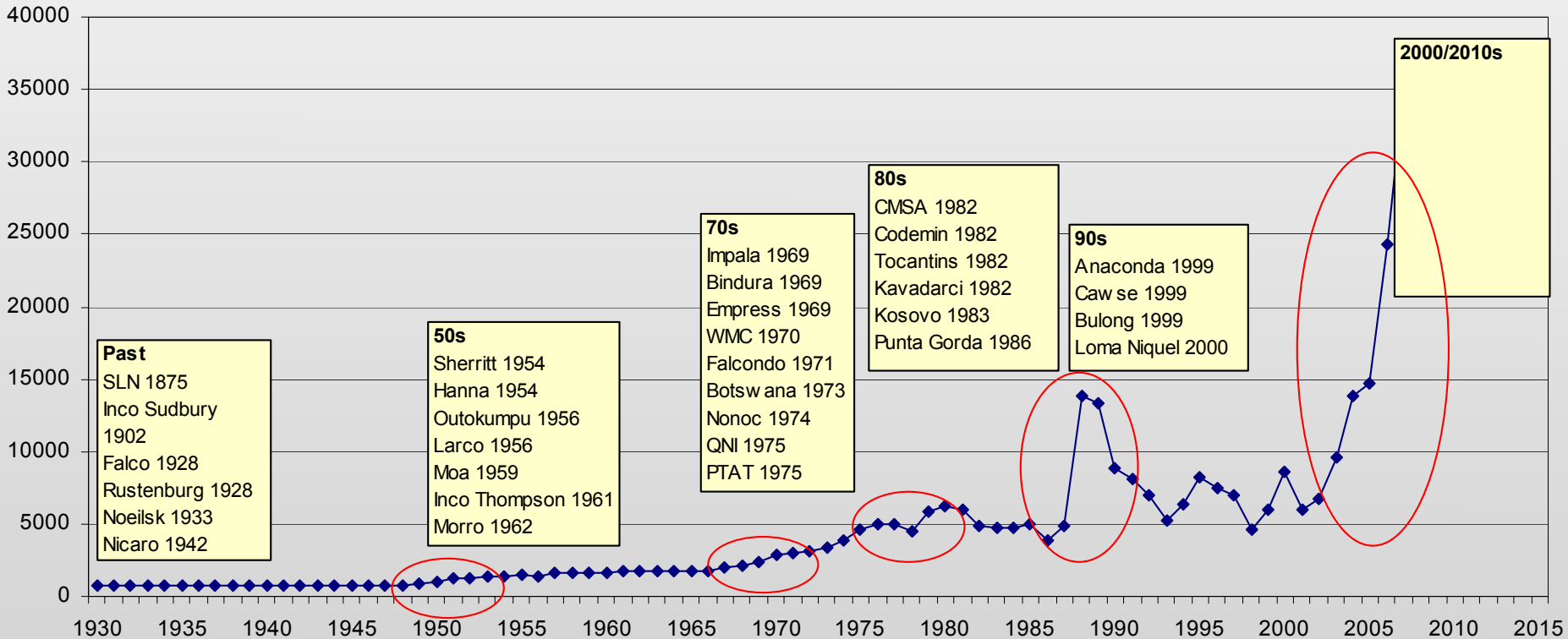
- 2005: 63.7% \approx 790 000t
 - 2006: 66.3% \approx 925 000t
 - 2007: down
- Two blue arrows point downwards from the 2005 data to the 2006 data, with the text "+ 135 000t, +17%" positioned to the right of the second arrow.



Nickel Developments

Nickel Prices / New Capacity

◆ Annual Avg. Price USD





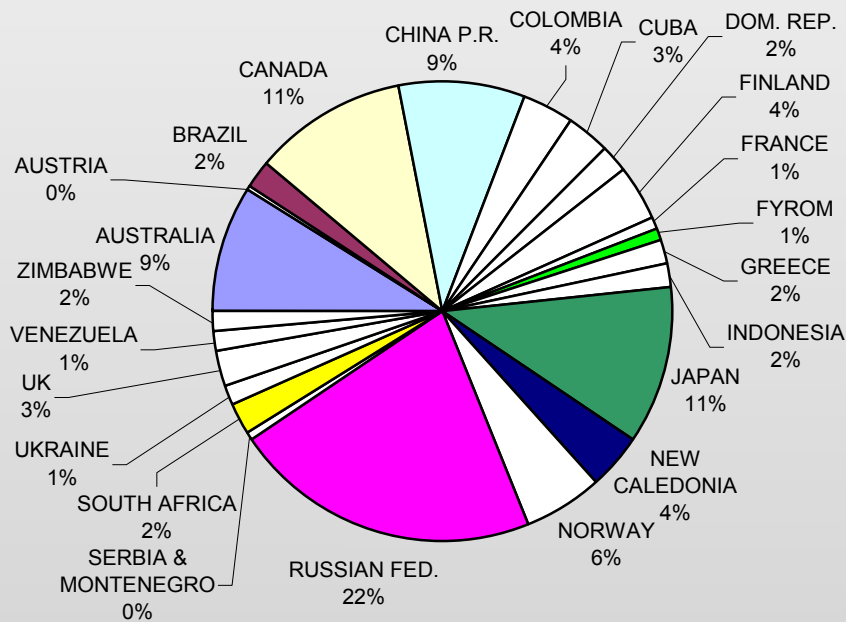
New World Primary Refined Nickel Capacity in 2006

- World nickel refined capacity in 2006 increased by over 77 000 tpa, or over 5%, compared with 2005's figure, according to INSG data
- Most were brown-field expansions
- World total refined capacity was over 1.53 Mtpa in 2006
- World capacity utilization was over 88%
- The figures above exclude nickel pig iron production capacity in China, which could be considerable

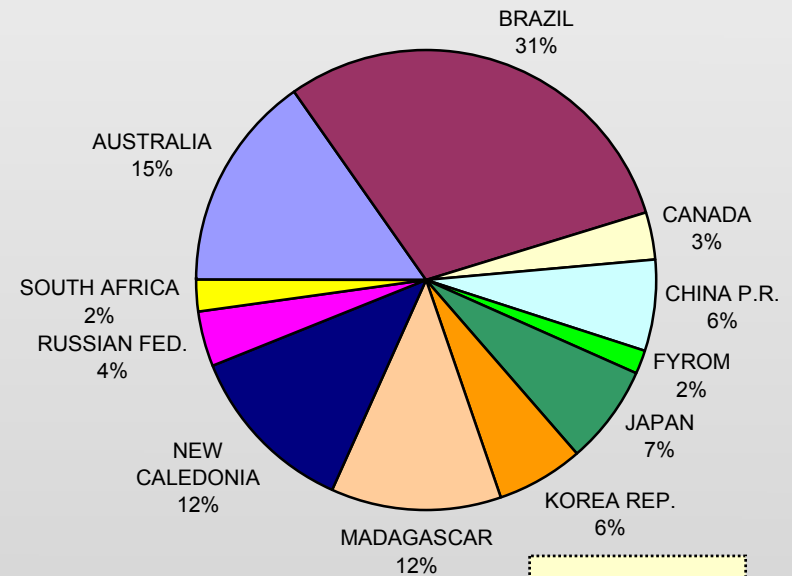


Refined Nickel Capacity by Country

2006: \approx 1.5Mt



New committed developments:
 \approx 0.5Mt



New
producing
country

New
producing
country



World Primary Nickel Production 2005 to 2008

in 1000 tonnes

Area	2005	2006	% change	2007	% change	2008	% change
Africa	55.5	56.1	1.0	56.7	1.1	60.0	5.8
America	307.6	324.2	5.4	335.3	3.4	341.4	1.8
Asia	271.0	303.6	12.0	384.1	26.5	410.5	6.9
Europe	485.2	512.4	5.6	525.6	2.6	544.0	3.5
Oceania	177.4	165.7	-6.6	168.4	1.6	213.3	26.7
Total	1296.7	1362.0	5.0	1470.1	7.9	1569.2	6.7



World Primary Nickel Usage 2005 to 2008

in 1000 tonnes

Area	2005	2006	% change	2007	% change	2008	% change
Africa	32.0	42.0	31.3	27.5	-34.5	37.1	34.9
America	174.1	180.4	3.6	168.4	-6.7	174.2	3.4
Asia	590.8	681.8	15.4	721.5	5.8	787.5	9.1
Europe	447.2	492.0	10.0	414.9	-15.7	464.7	12.0
Oceania	2.8	2.9	2.8	3.0	3.9	3.0	0.0
Total	1246.9	1399.1	12.2	1335.3	-4.6	1466.5	9.8



World Primary Nickel Balance 2005 to 2008

in 1000 tonnes

Area	2005	2006	% change	2007	% change	2008	% change
Production	1296.7	1362.0	5.0	1470.1	7.9	1569.2	6.7
Usage	1246.9	1399.1	12.2	1335.3	-4.6	1466.5	9.8
Balance	49.7	-37.1		134.8		102.7	



Conclusions (1)

- The nickel market has become very volatile
- Primary nickel usage down by 5% in 2007, but could increase by 10% in 2008
- Primary nickel projects are starting to come into production and up to 0.5Mt have been identified as committed
- Primary nickel production is estimated to steadily increase, by 8% in 2007 and a further 7% in 2008



Conclusions (2)

- Sufficient primary nickel units should be available in, at least, the short to medium term
- China will remain the most important market
- Developments in nickel pig iron might become a surprise factor in the future.



INTERNATIONAL NICKEL STUDY GROUP

**Many thanks for your
kind attention!**

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