

The background features a large, light blue watermark of the ILZSG logo. It consists of a laurel wreath encircling the letters 'ILZSG'.

**International Seminar on Mining Investment
Policy for Base Metals in Southern Africa**

**The Boom in Base Metals
– Analysis and Outlook**

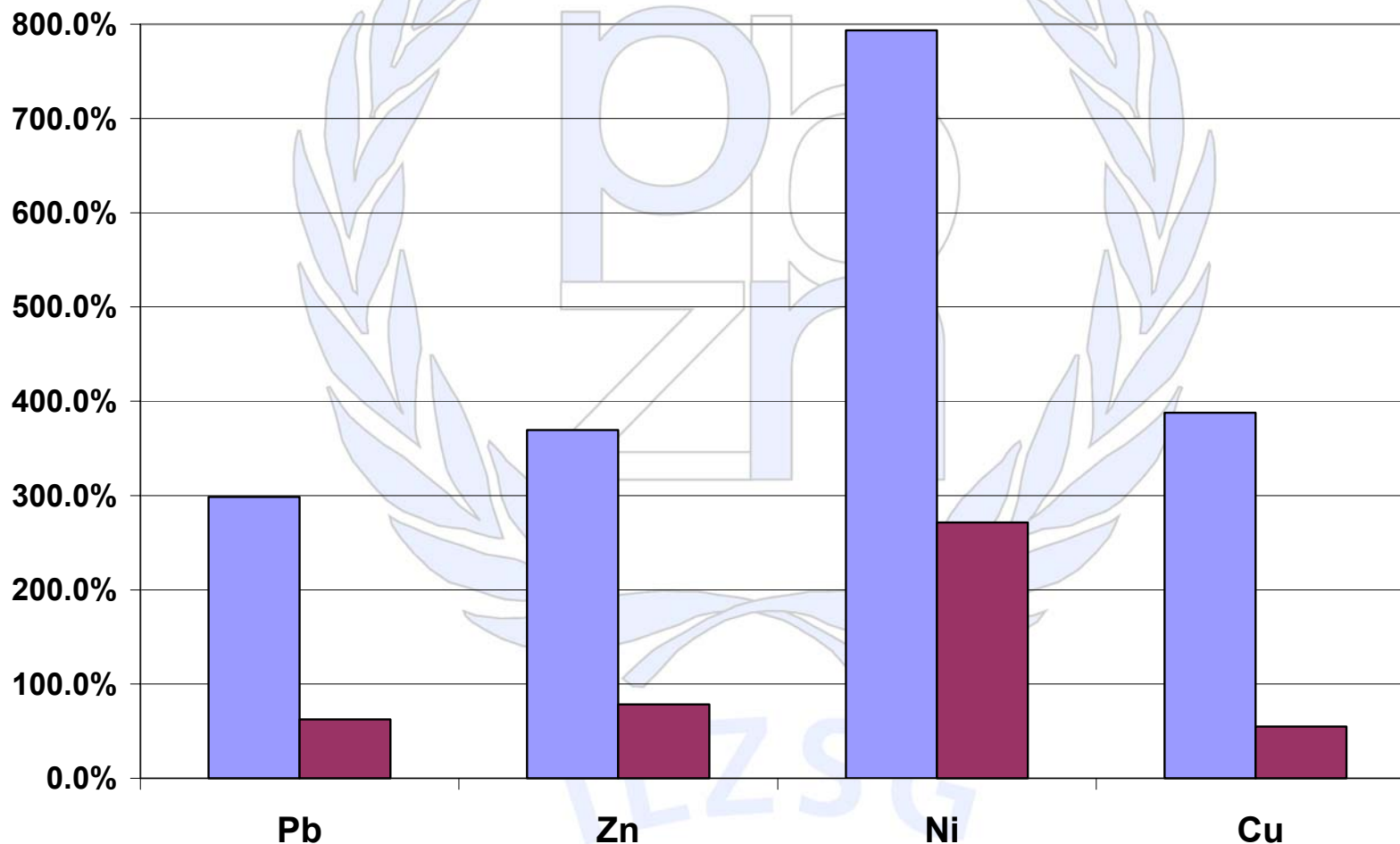
Paul White

ILZSG

5th June 2007, Windhoek

Price Rises Since 2002 and 2006

% Rise

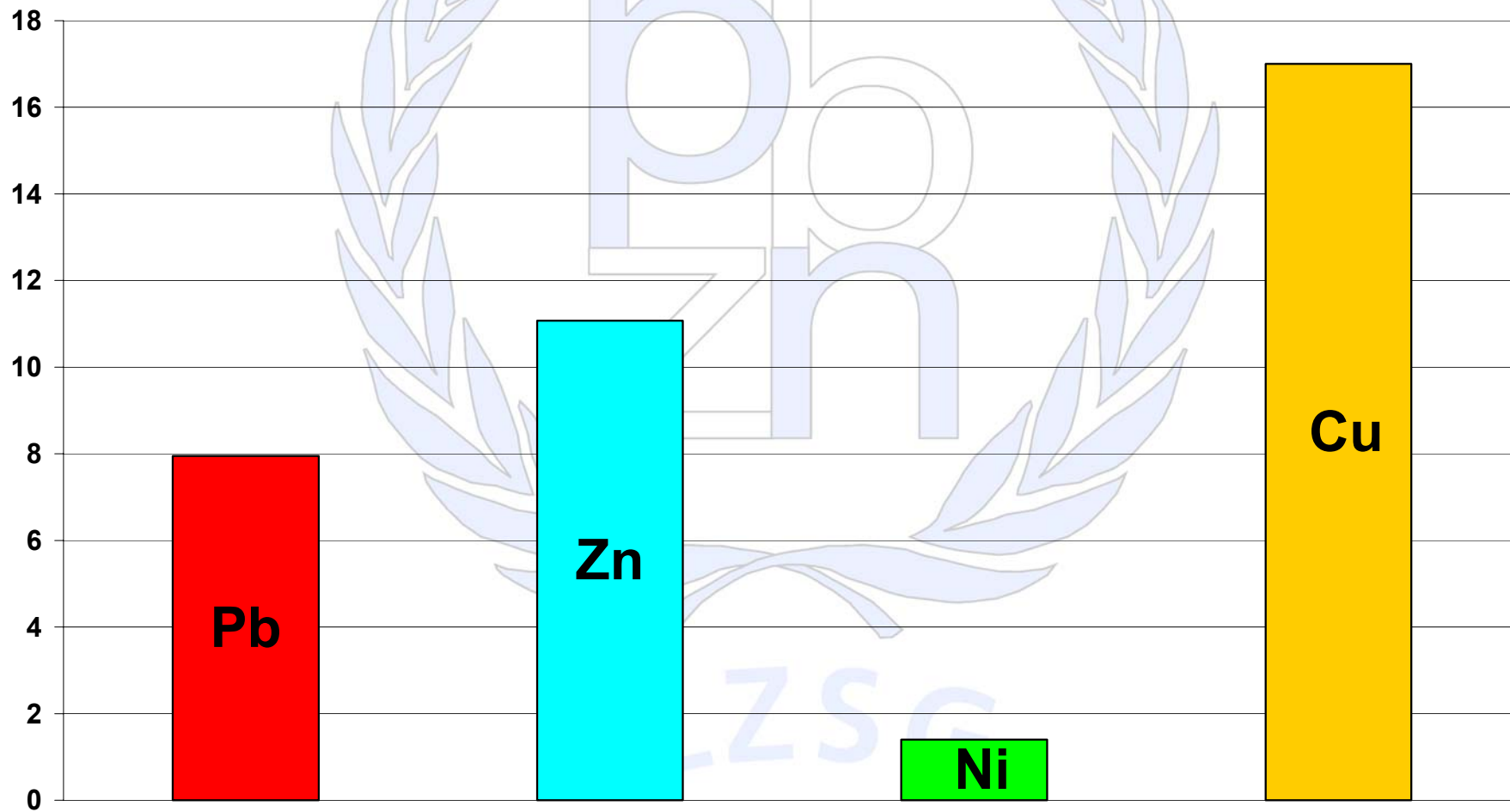


Jan 2002 - Now Jan 2006 - Now

Source: ILZSG

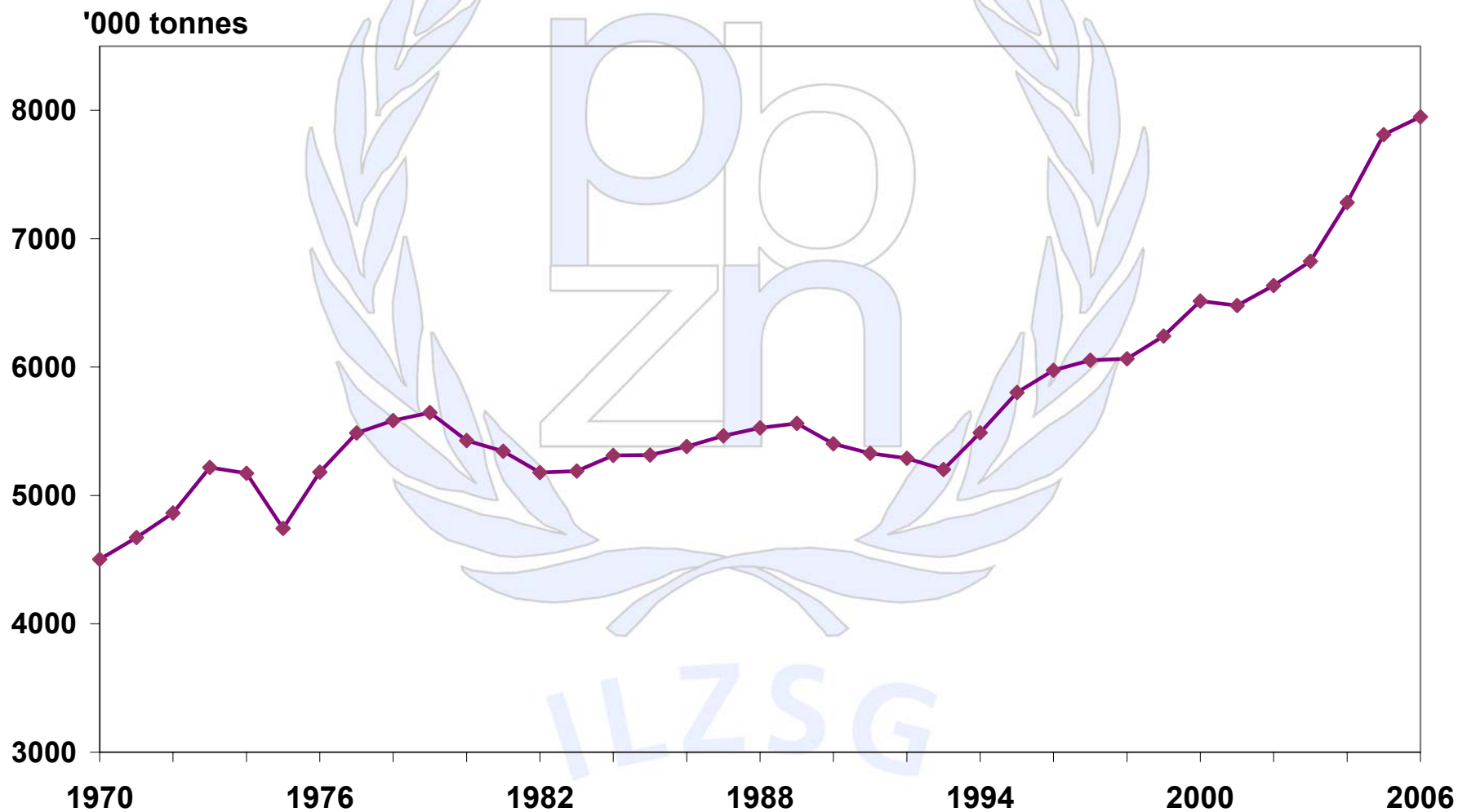
Relative Size of Markets

m tonnes

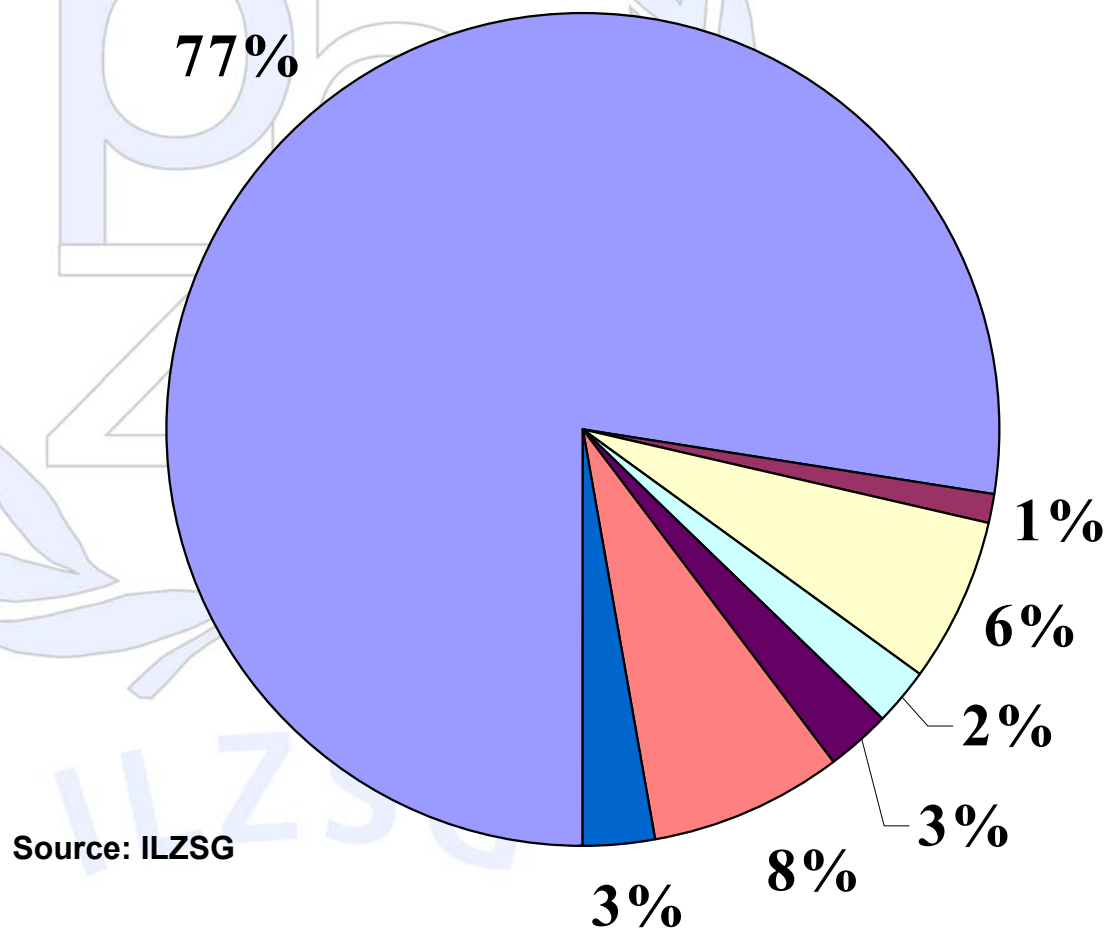
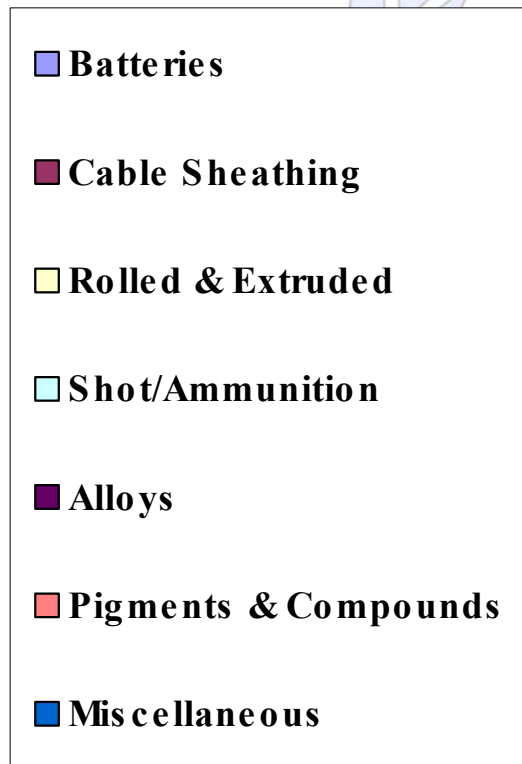


Source: ILZSG / INSG / ICSG

World Lead Demand 1970 to 2006

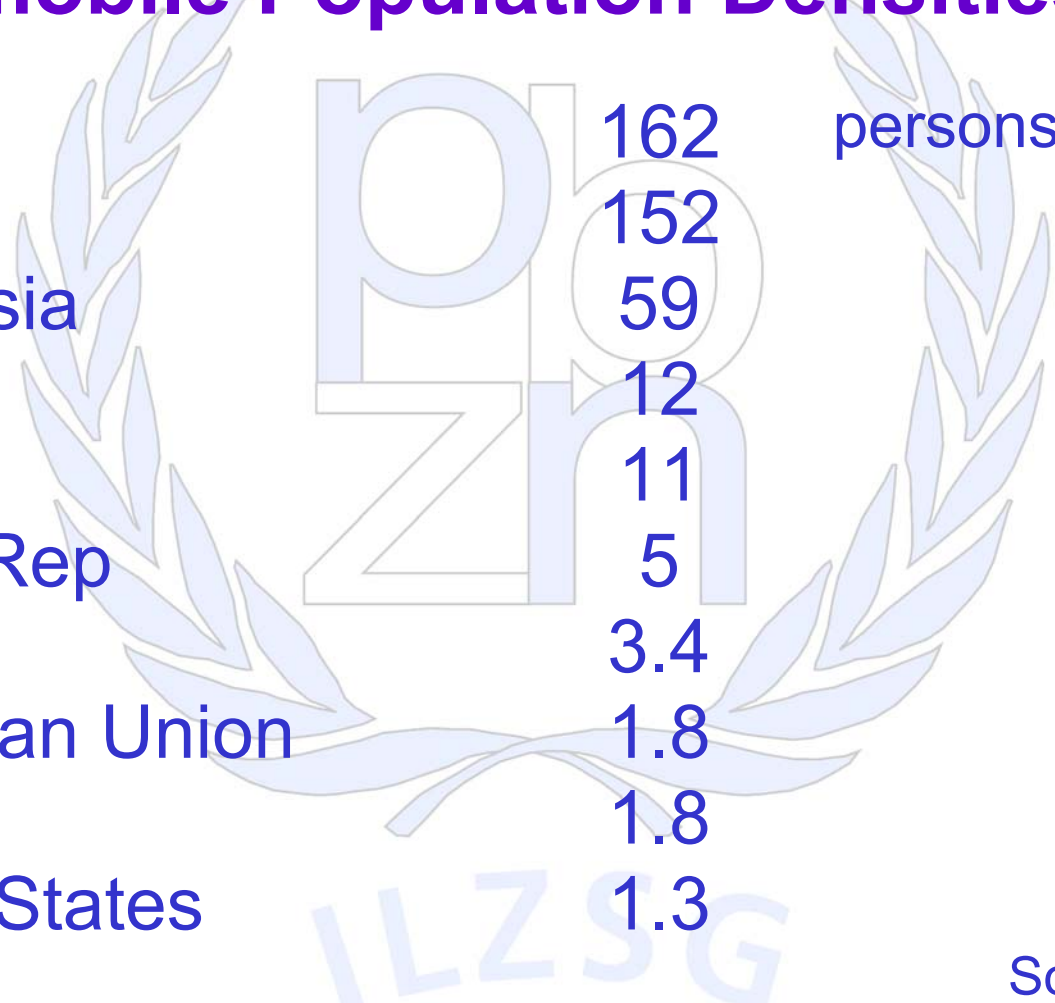


Lead End Uses 2005



Source: ILZSG

Automobile Population Densities 2005



China	162	persons per auto
India	152	
Indonesia	59	
Mexico	12	
Brazil	11	
Korea Rep	5	
Taiwan	3.4	
European Union	1.8	
Japan	1.8	
United States	1.3	

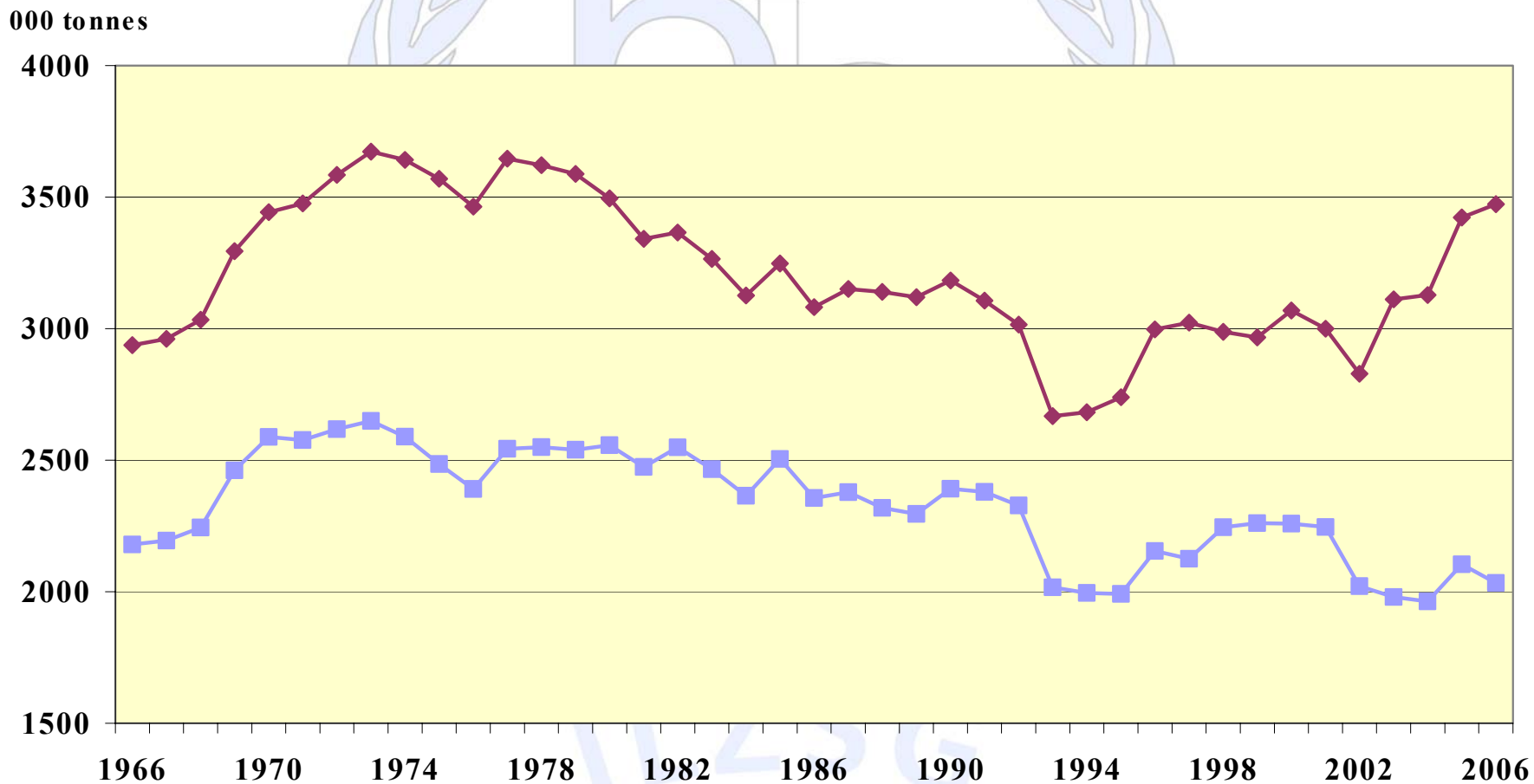
Source: SMMT

Recent Major Lead Plant Closures

The background of the slide features a large, light blue watermark of the ILZSG logo. The logo consists of a laurel wreath encircling the letters 'ilzsg' in a stylized, lowercase font. Below the wreath, the letters 'ILZSG' are written in a larger, bold, uppercase font.

Cockle Creek, Australia	Sep 2003	48,000t
Noyelles Godault, France	Jan 2003	190,000t
Titov Veles, Macedonia	Jun 2003	35,000t
Northfleet, UK (<i>partial</i>)	Dec 2003	70,000t
Glover, USA	Nov 2003	125,000t
Sudamin, Germany	Feb 2005	35,000t

World Lead Mine Output 1966 to 2006



Source:ILZSG

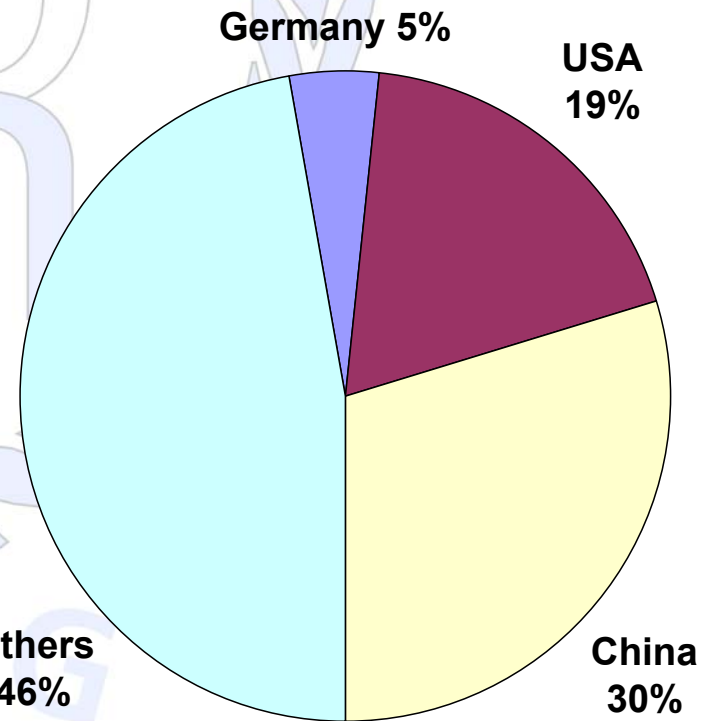
World Western World

World Lead Metal Usage

Distribution

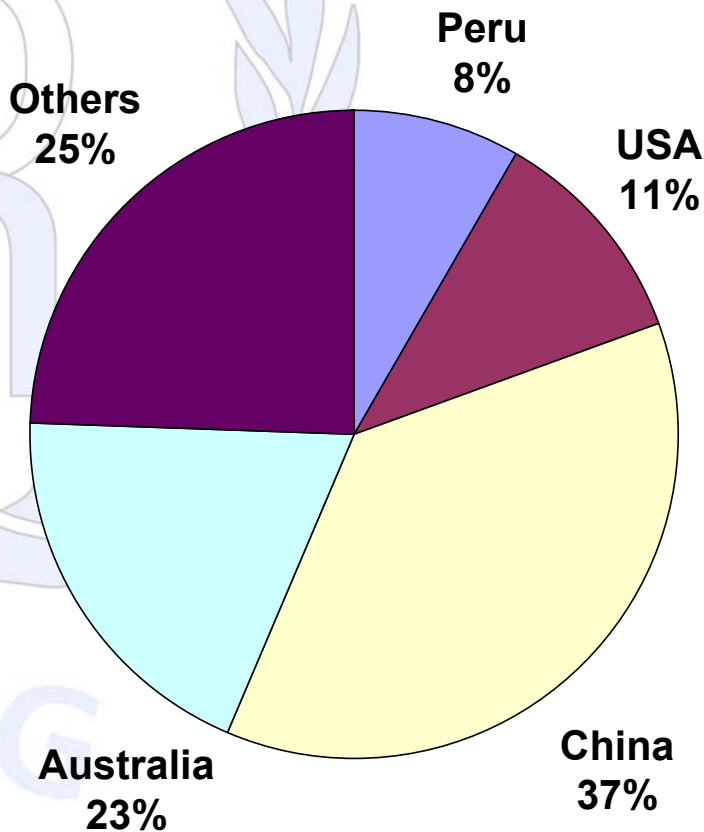
Forecast Change:

- 2007 +4.1%



World Lead Mine Output

Distribution



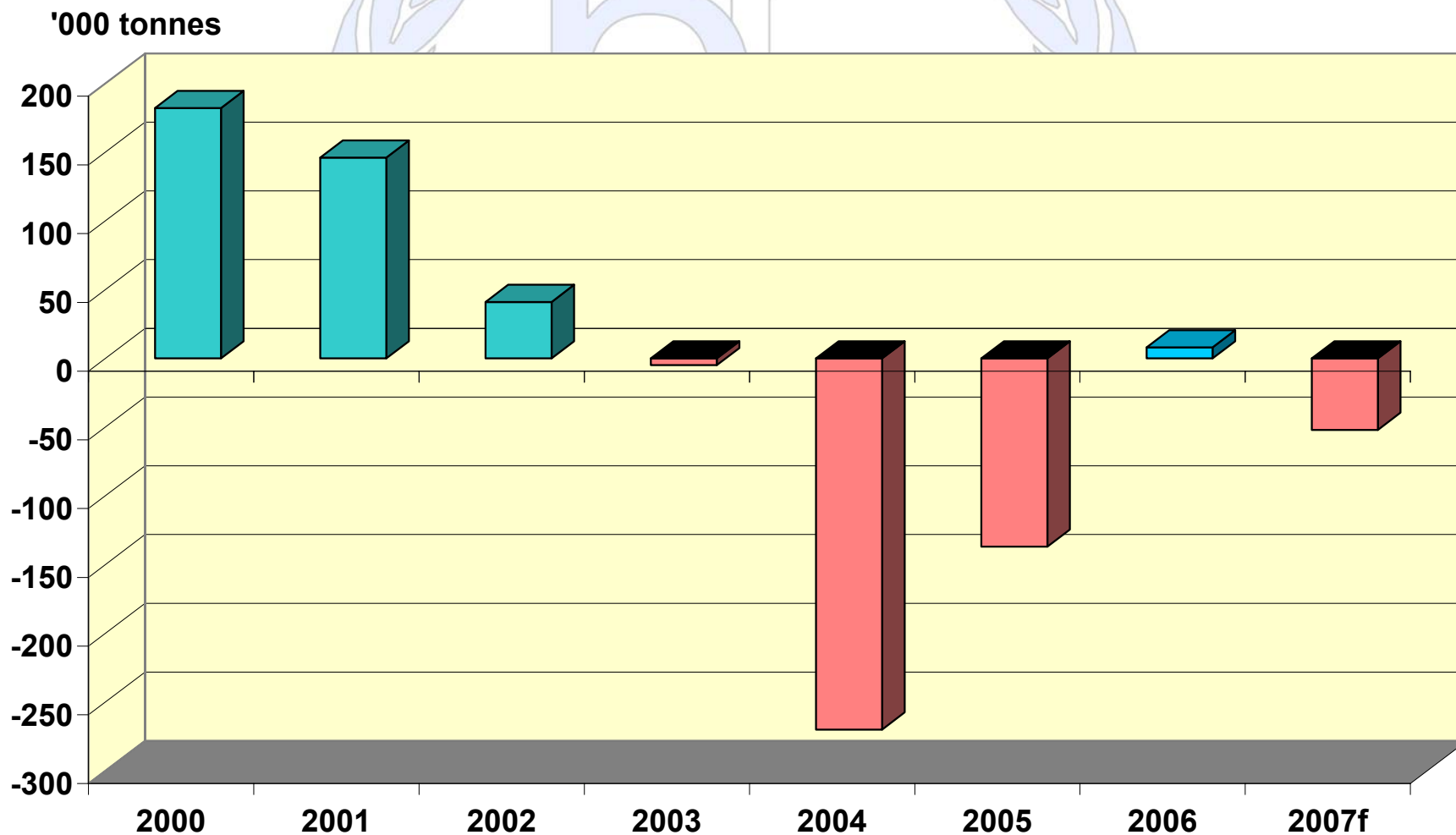
Forecast Change:

- 2007 +10.7%

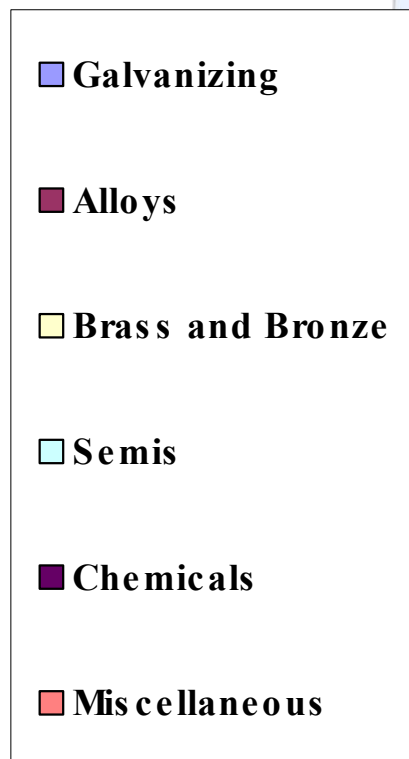
World Lead Metal Output

- China to account for 1/3 of world output in 2007
- Increases in Australia, Kazakhstan, Korea and United States
- Overall global rise of 3.8%

Lead Metal World Balance 2000 to 2007

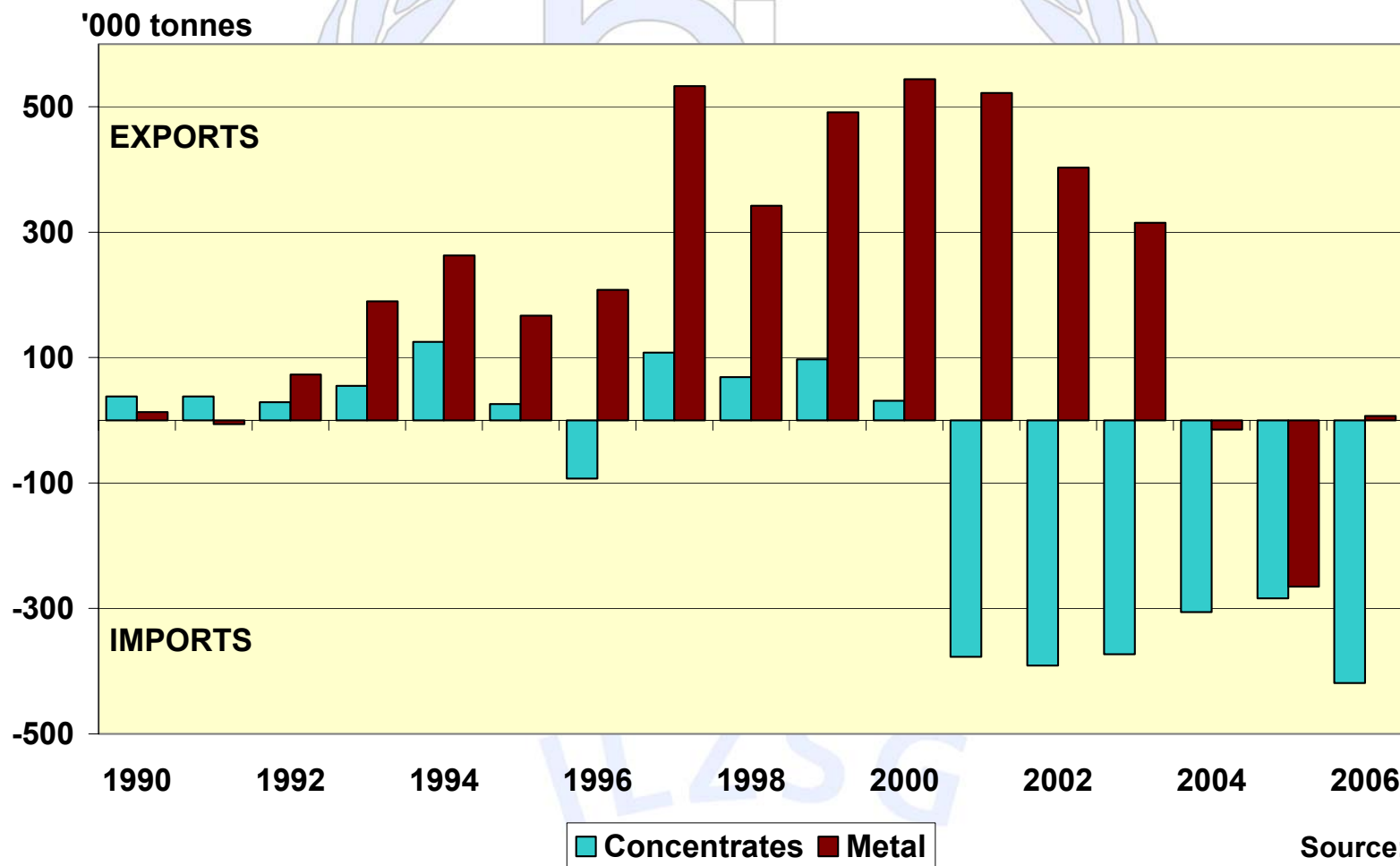


Zinc End Uses 2005



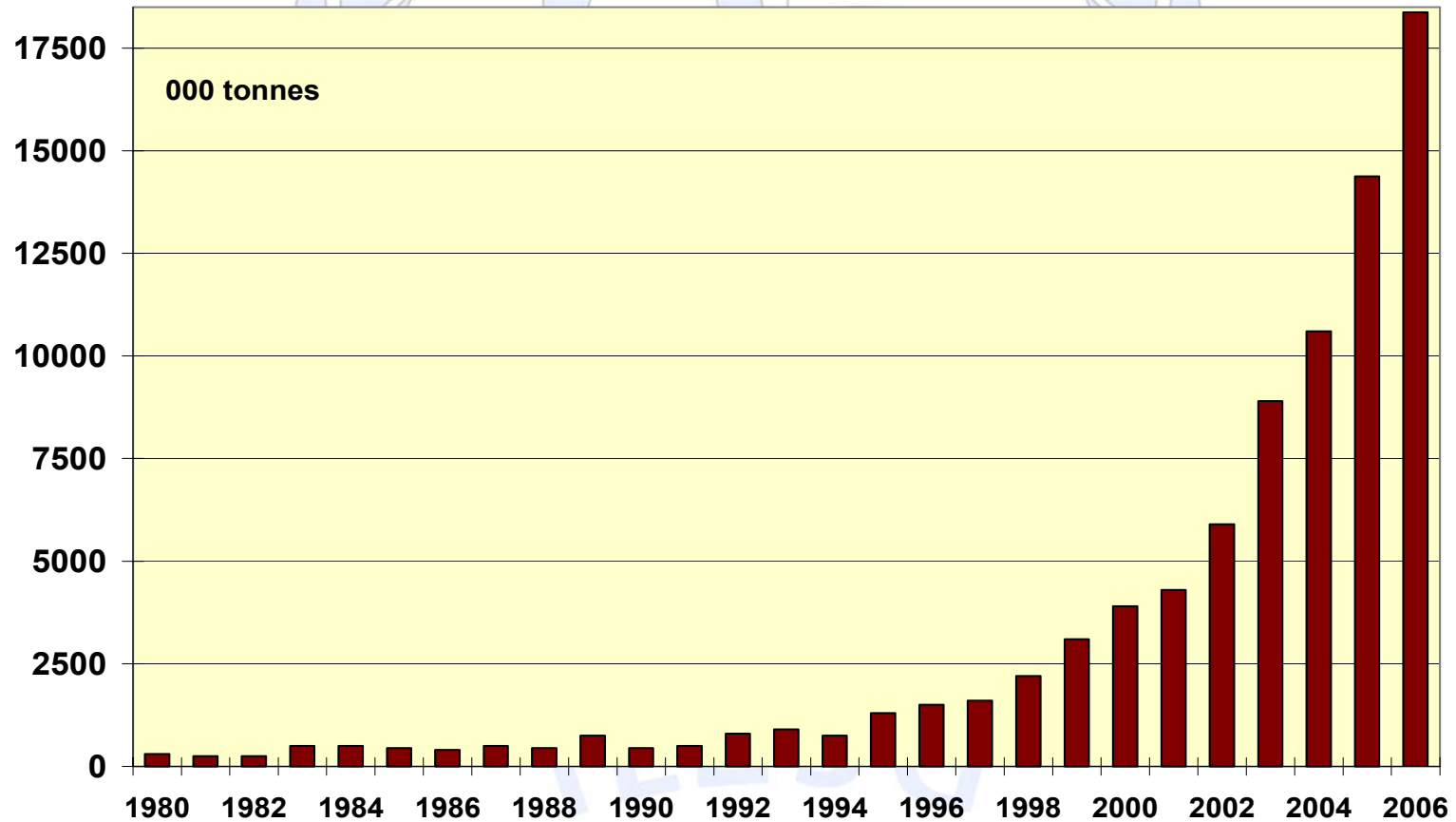
Source: ILZSG

Chinese Zinc Trade 1990 to 2006



Source: ILZSG

Apparent Consumption of Galvanized Steel in China 1990 to 2006

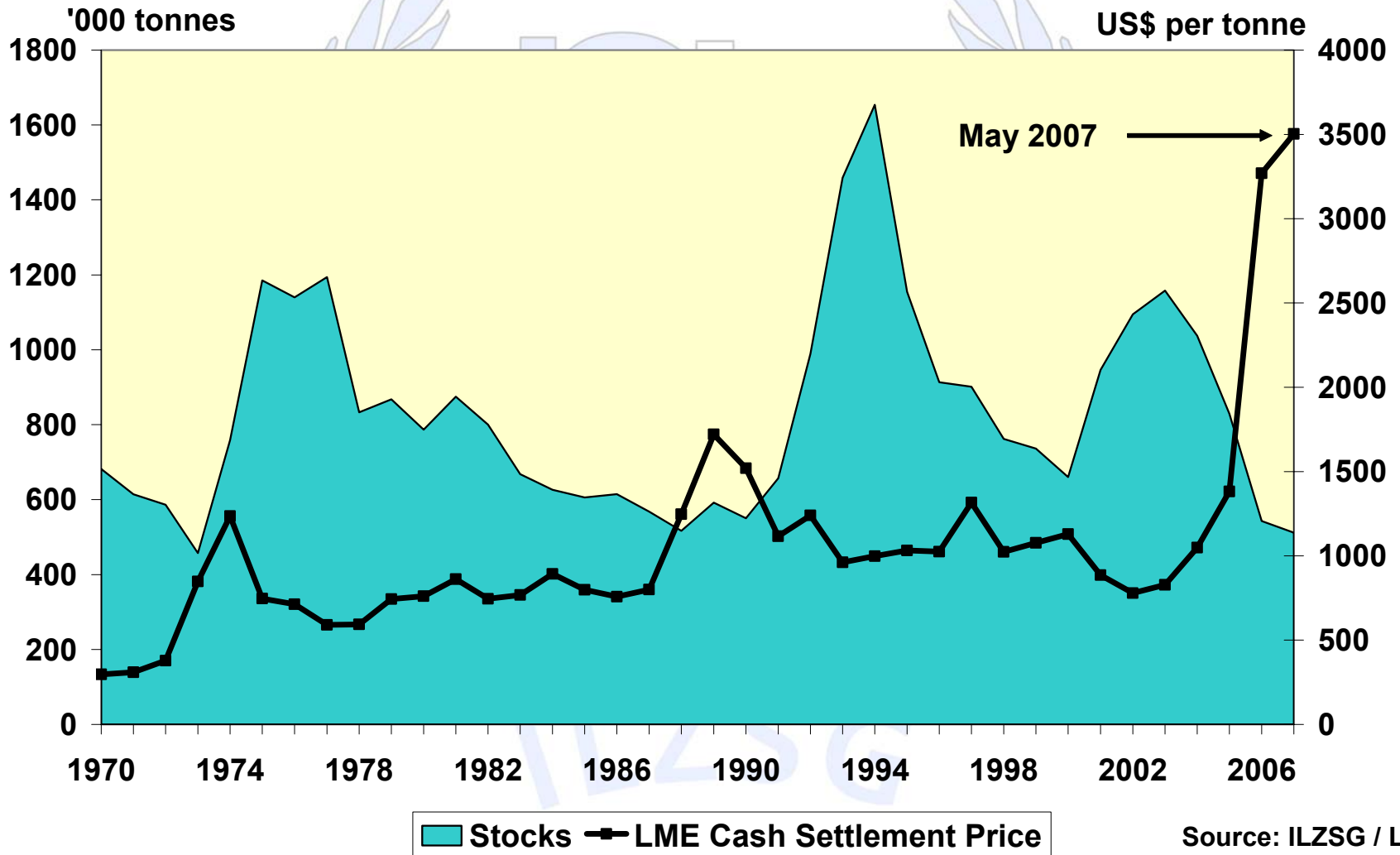


Source: China Metals

Recent Major Zinc Plant Closures

Cockle Creek, Australia	Sep 2003	110,000t
Noyelles Godault, France	Jan 2003	100,000t
Auby, France	Nov 2005	130,000t
Titov Veles, Macedonia	Jun 2003	66,000t
Avonmouth, UK	Feb 2003	115,000t
Big River Zinc, USA	Jun 2006	105,000t
Sudamin, Germany	May 2005	100,000t
Porto Vesme, Italy	Feb 2005	70,000t
Cartegena, Spain	May 2005	65,000t

Zinc Stocks and Prices 1970 to 2007



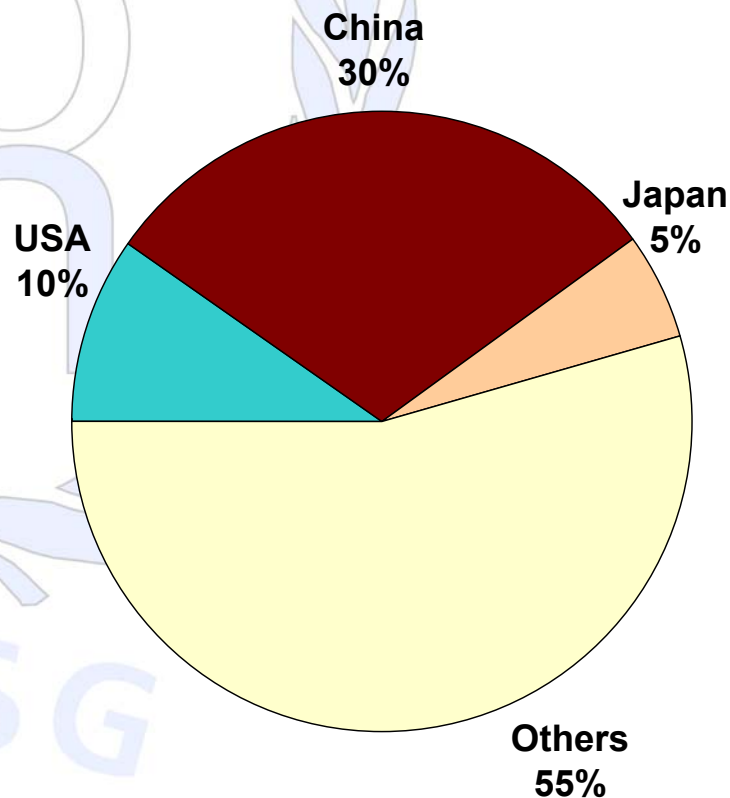
Source: ILZSG / LME

World Zinc Metal Usage

Distribution

Forecast Change:

- 2007 +4.0%

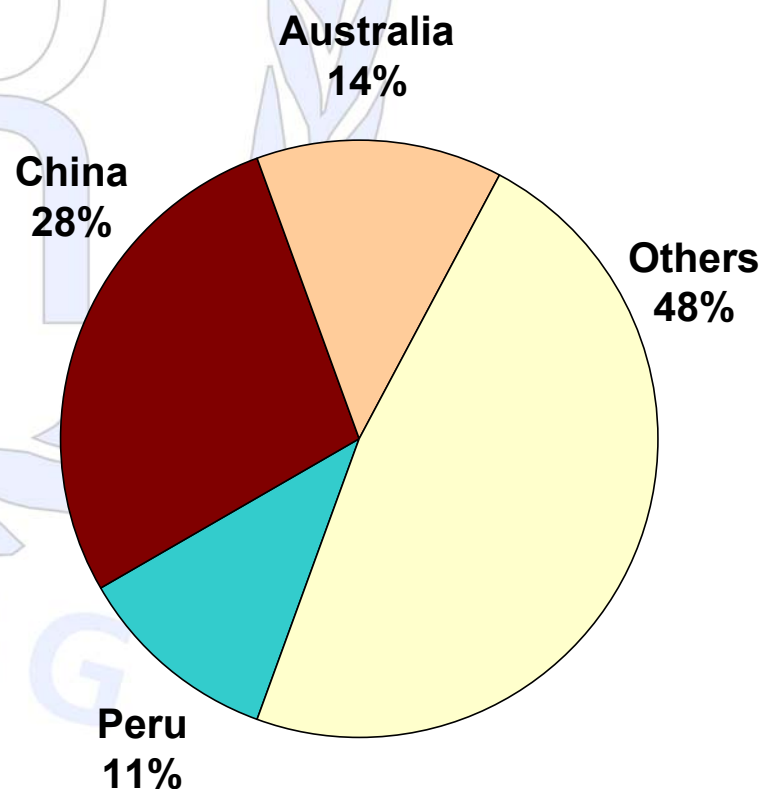


World Zinc Mine Output

Distribution

Forecast Change:

- 2007 +9.4%



World Zinc Mine Development

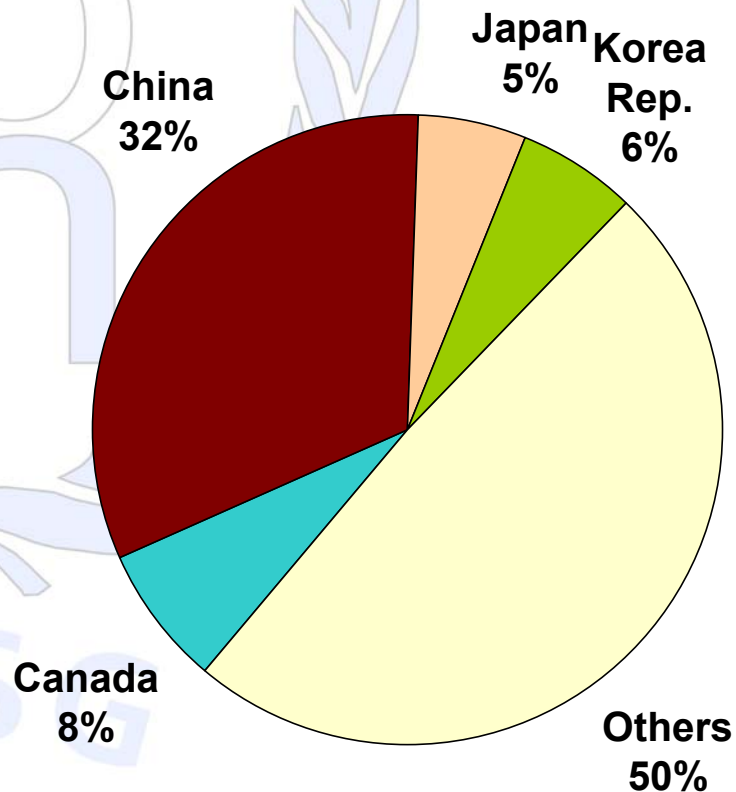
- Higher output in Australia and Canada
- Increases at Antamina in Peru
- Opening of San Cristobal in Bolivia
- 6.5% rise in Europe
- 12.1% increase in China
- Expansion in Kazakhstan

World Zinc Metal Output

Distribution

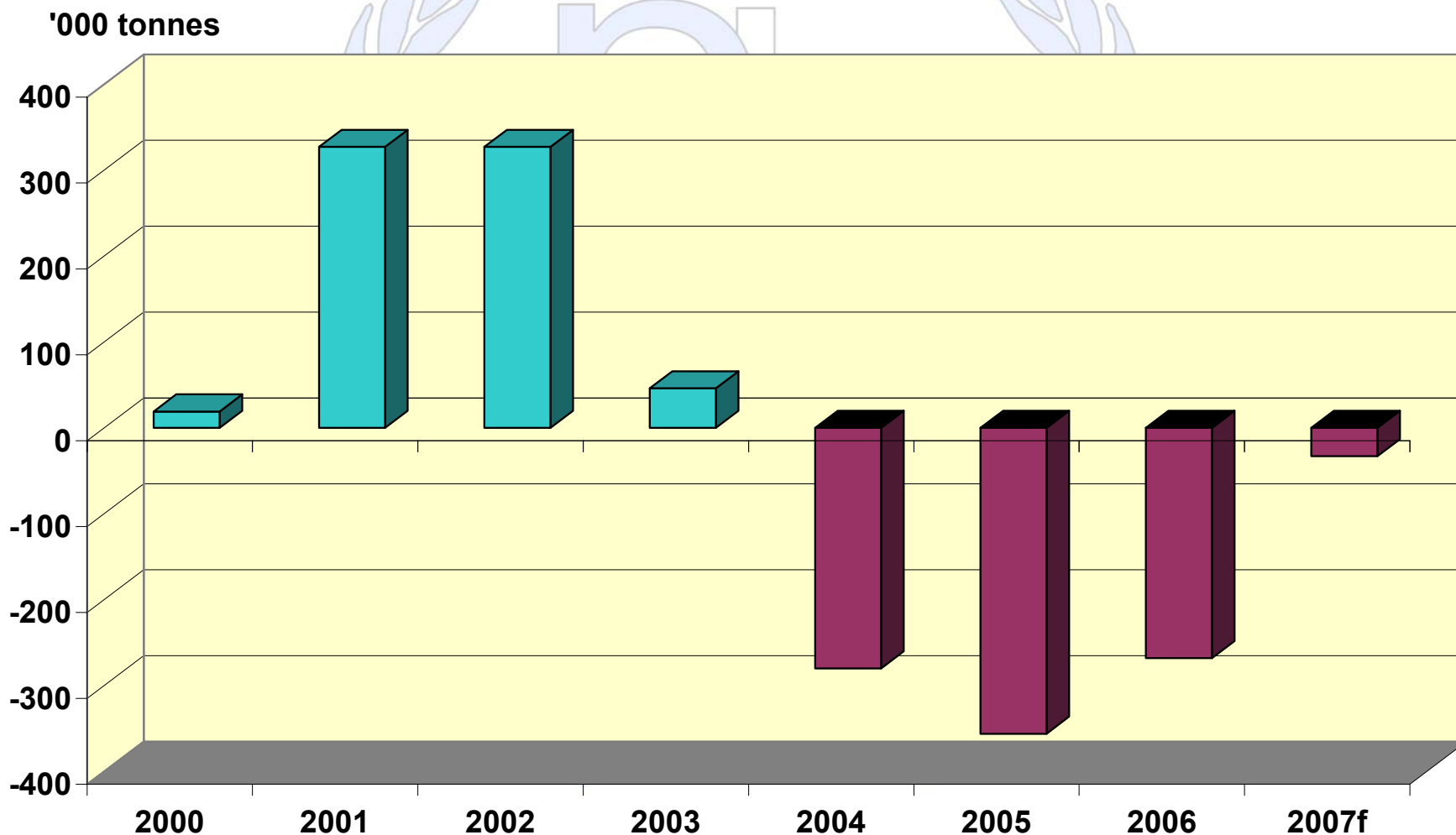
Forecast Change:

- 2007 +7.2%

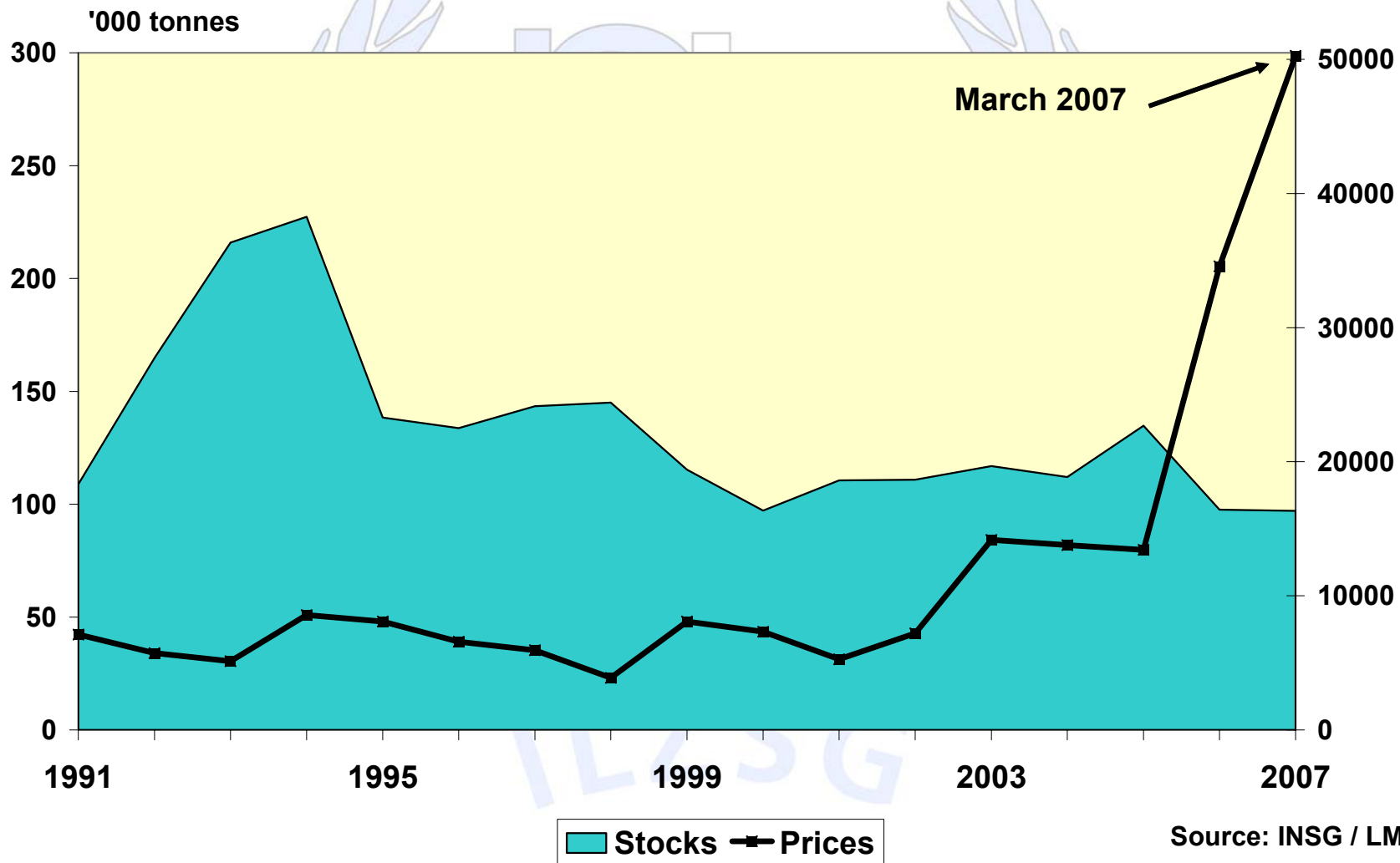


Source: ILZSG

Zinc Metal World Balance 2000 to 2007

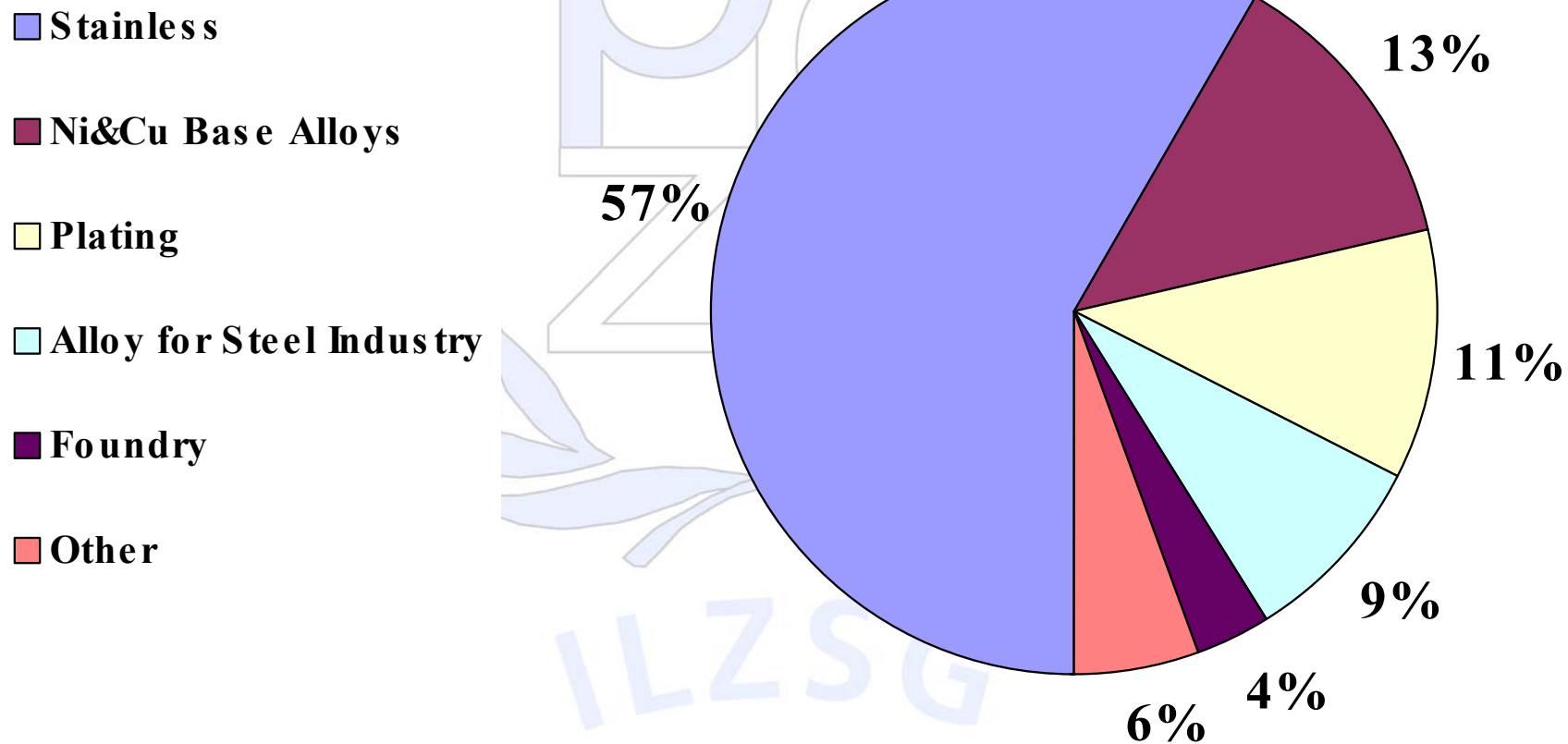


Nickel Stocks and Prices 1991 to 2007



Source: INSG / LME

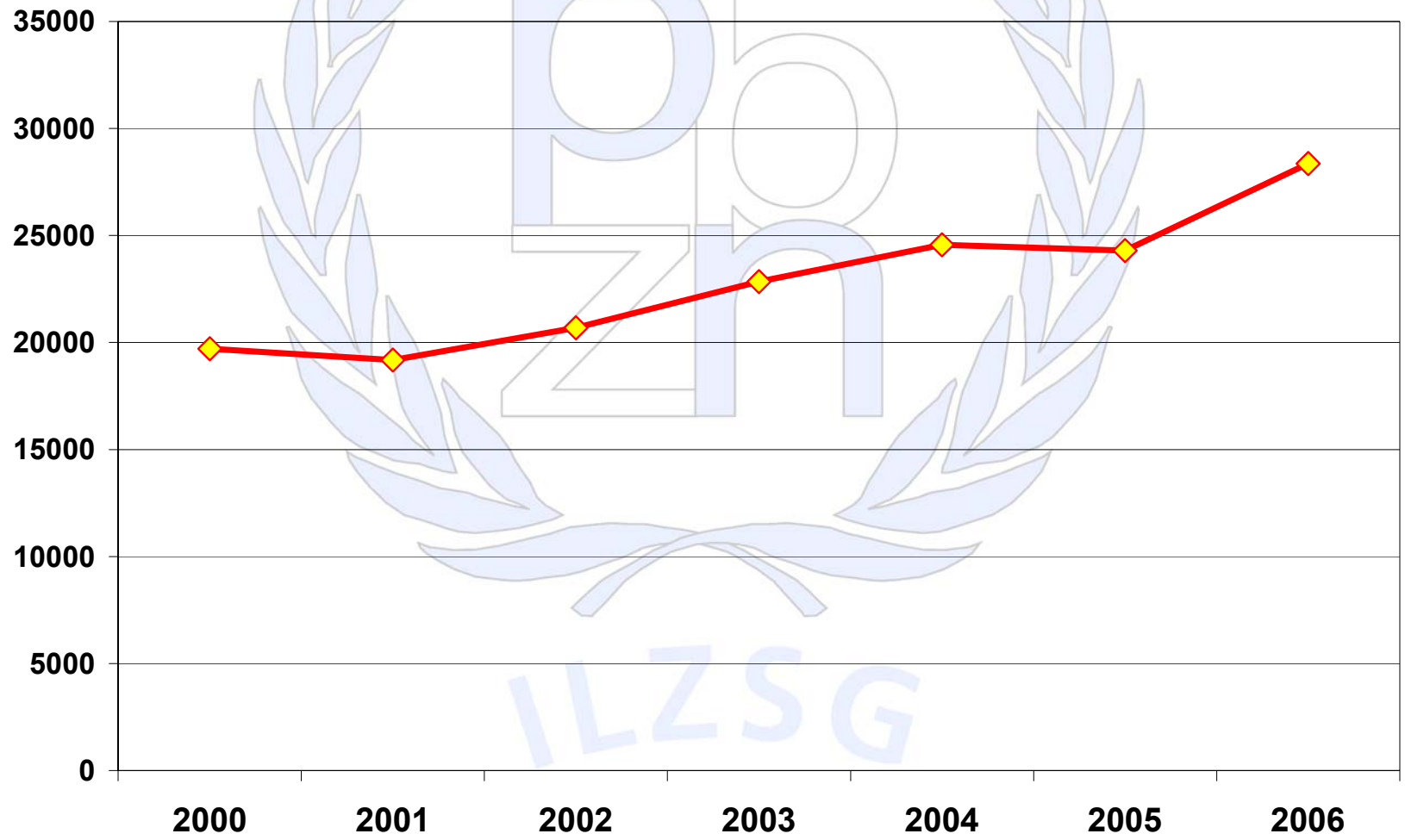
Nickel End Uses 2005



Source: Heinz Pariser

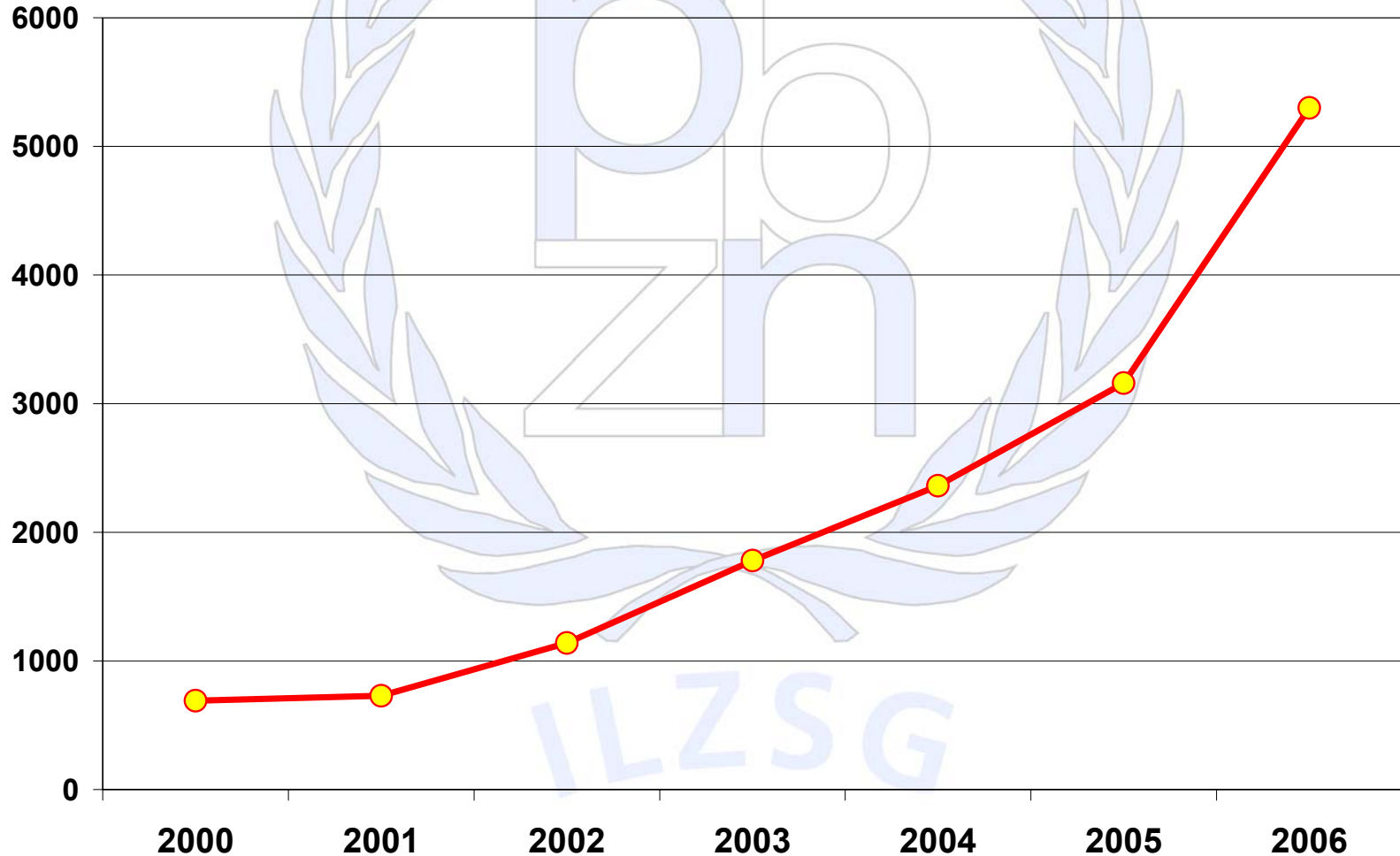
Global Stainless Steel Production 2000 to 2006

'000 tonnes



Chinese Stainless Steel Production 2000 to 2006

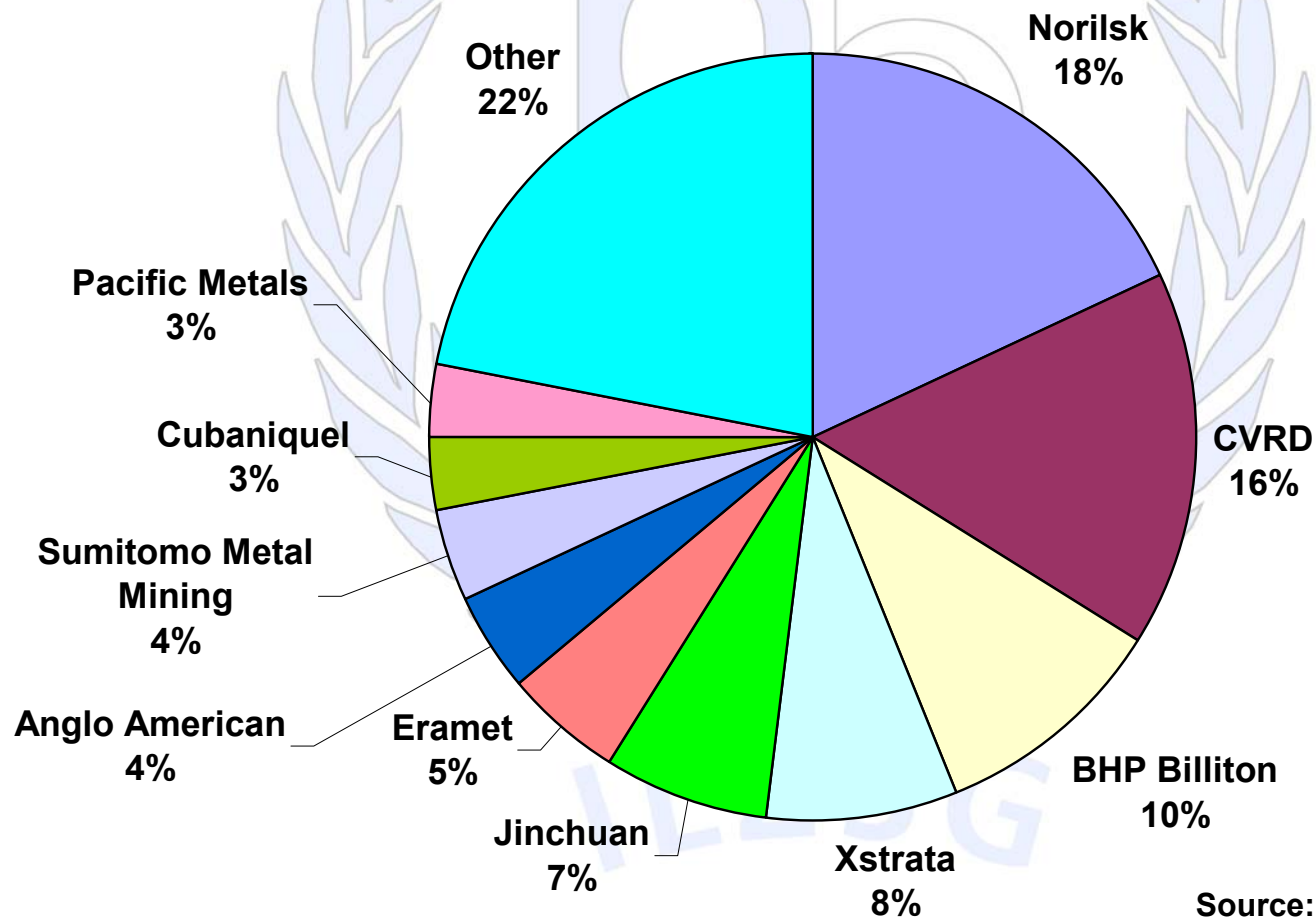
'000 tonnes



Nickel Supply Problems

- Delays with Laterite Projects
 - Goro, New Caledonia 60Kt
 - Koniambo, New Caledonia 60Kt
 - Ravensthorpe, Australia 45Kt

Share of Nickel Production

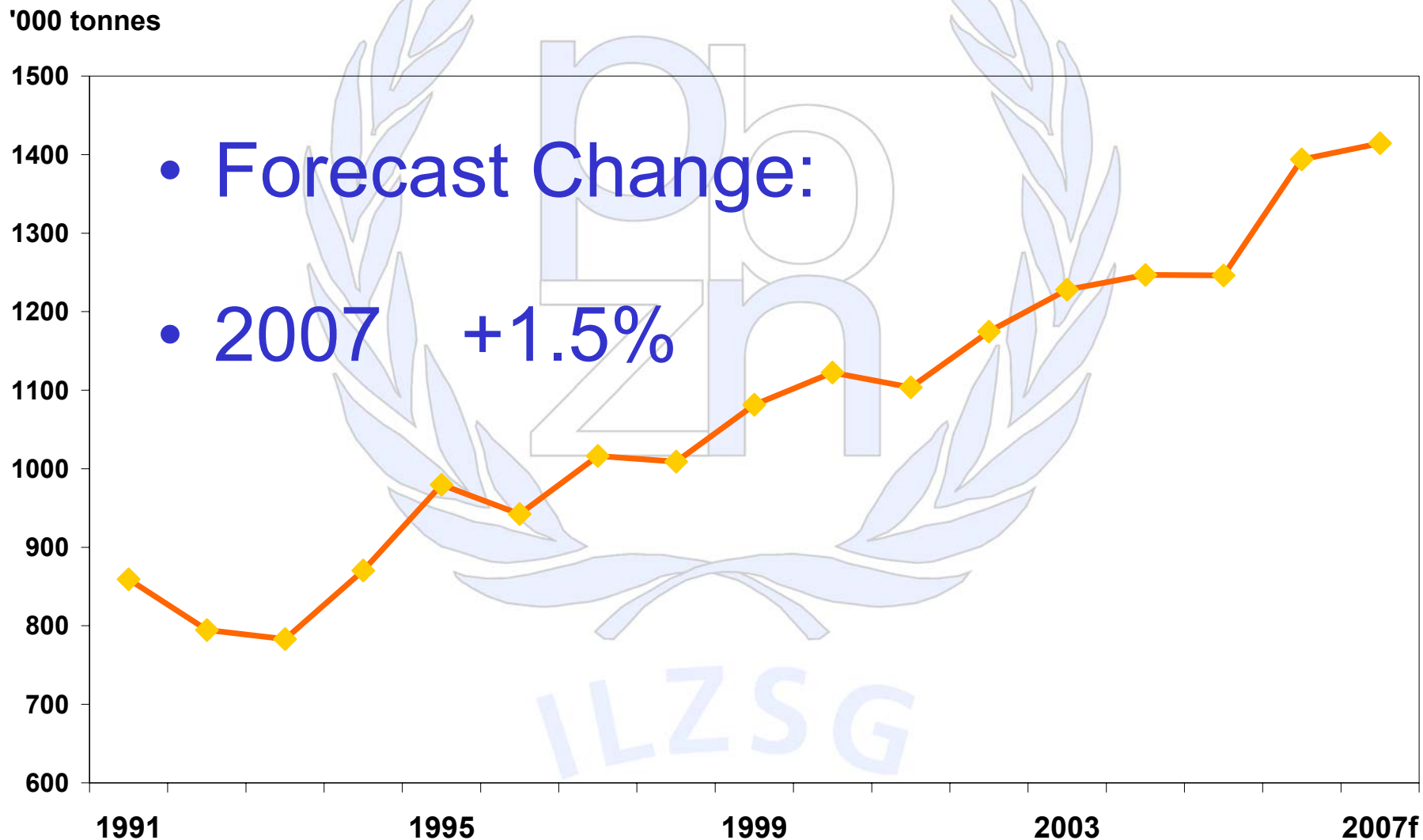


Source: Macquarie / Brook Hunt

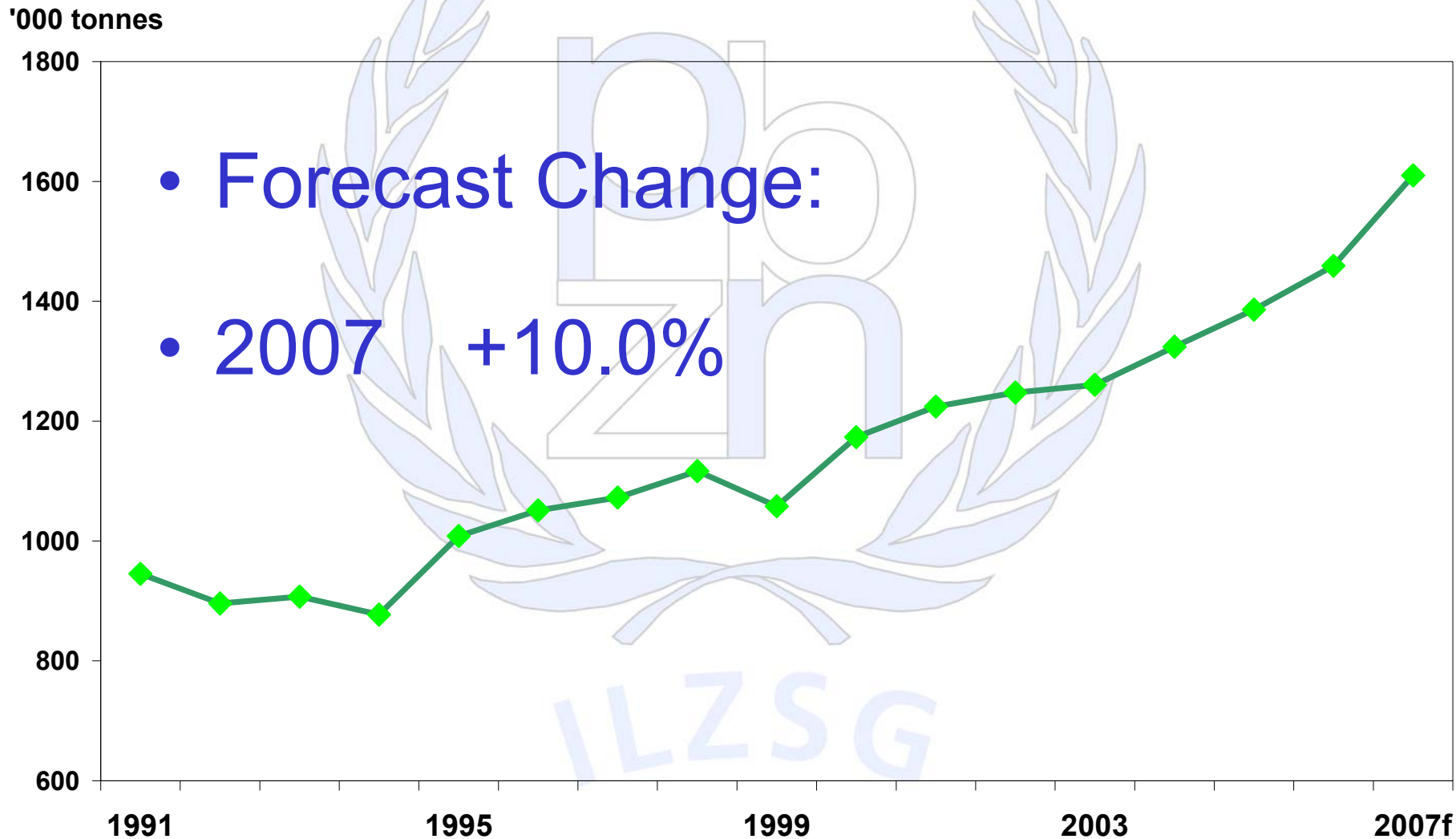
Increasing Consolidation

- Xstrata → Falconbridge 2006
- CVRD → Inco 2006
- Norilsk → OMG Nickel 2007
- Xstrata
Norilsk → Lionore ?
- Sherritt → Dynatec ?

World Nickel Demand 1991 to 2007

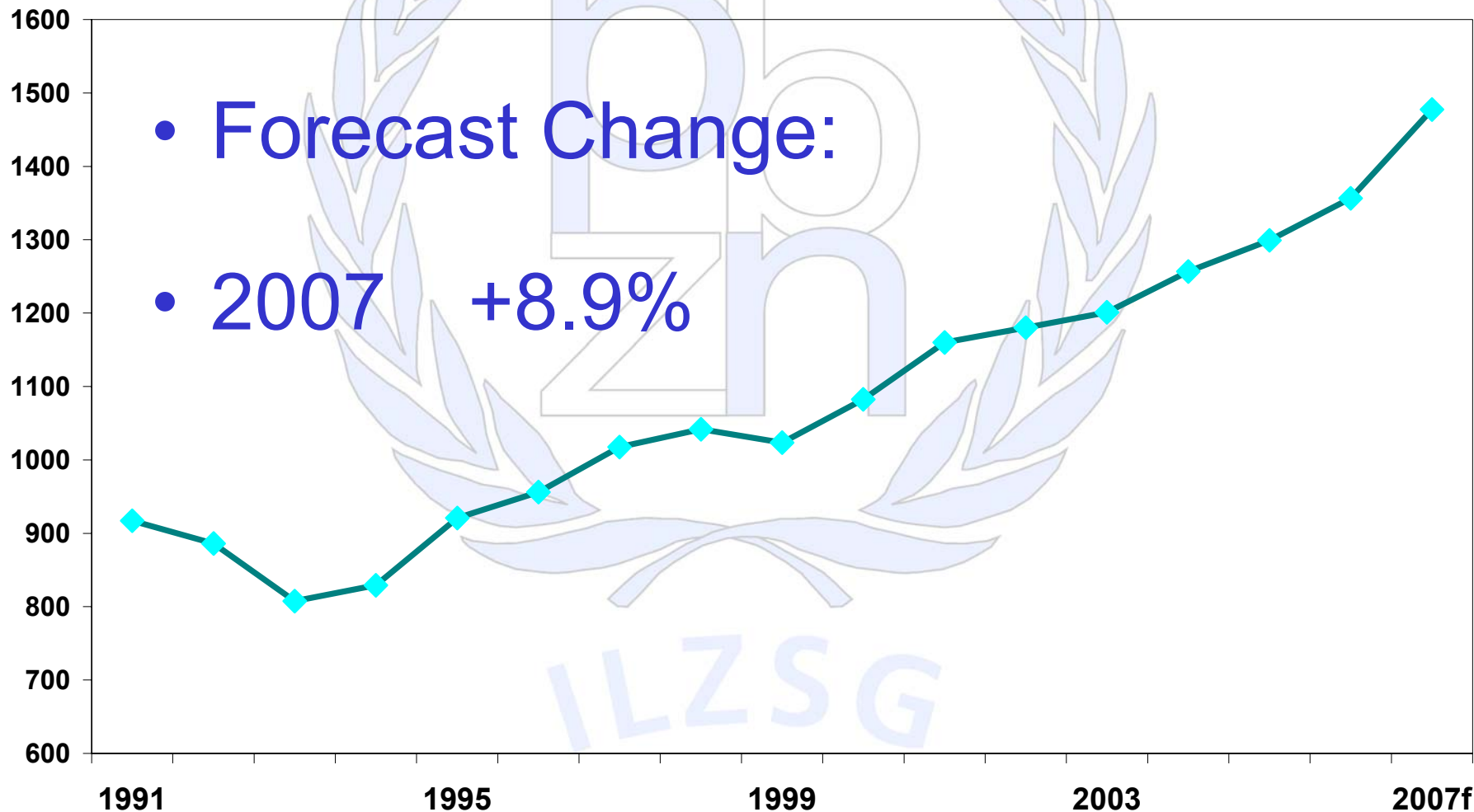


World Nickel Mine Output 1991 to 2007

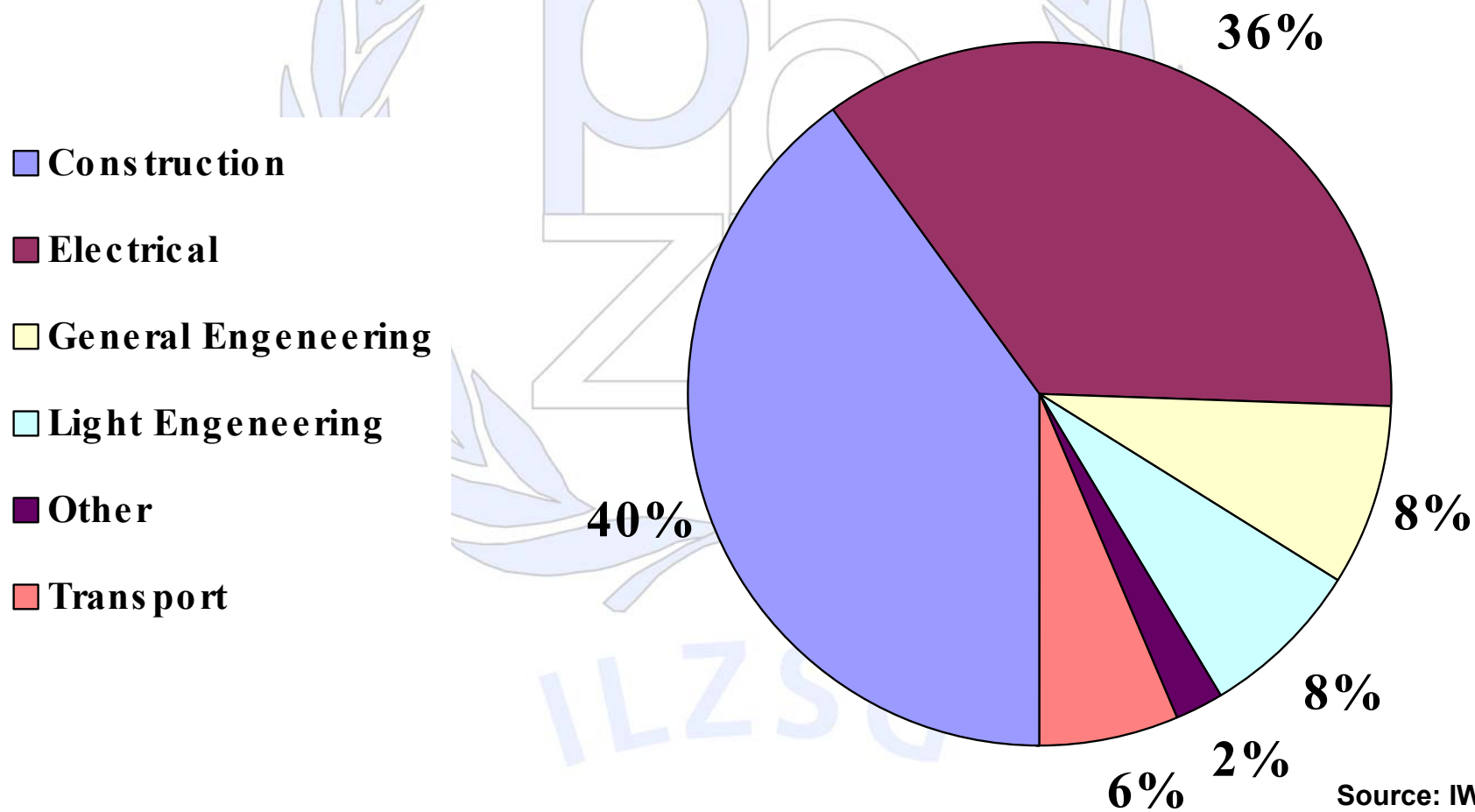


World Nickel Metal Output 1991 to 2007

'000 tonnes



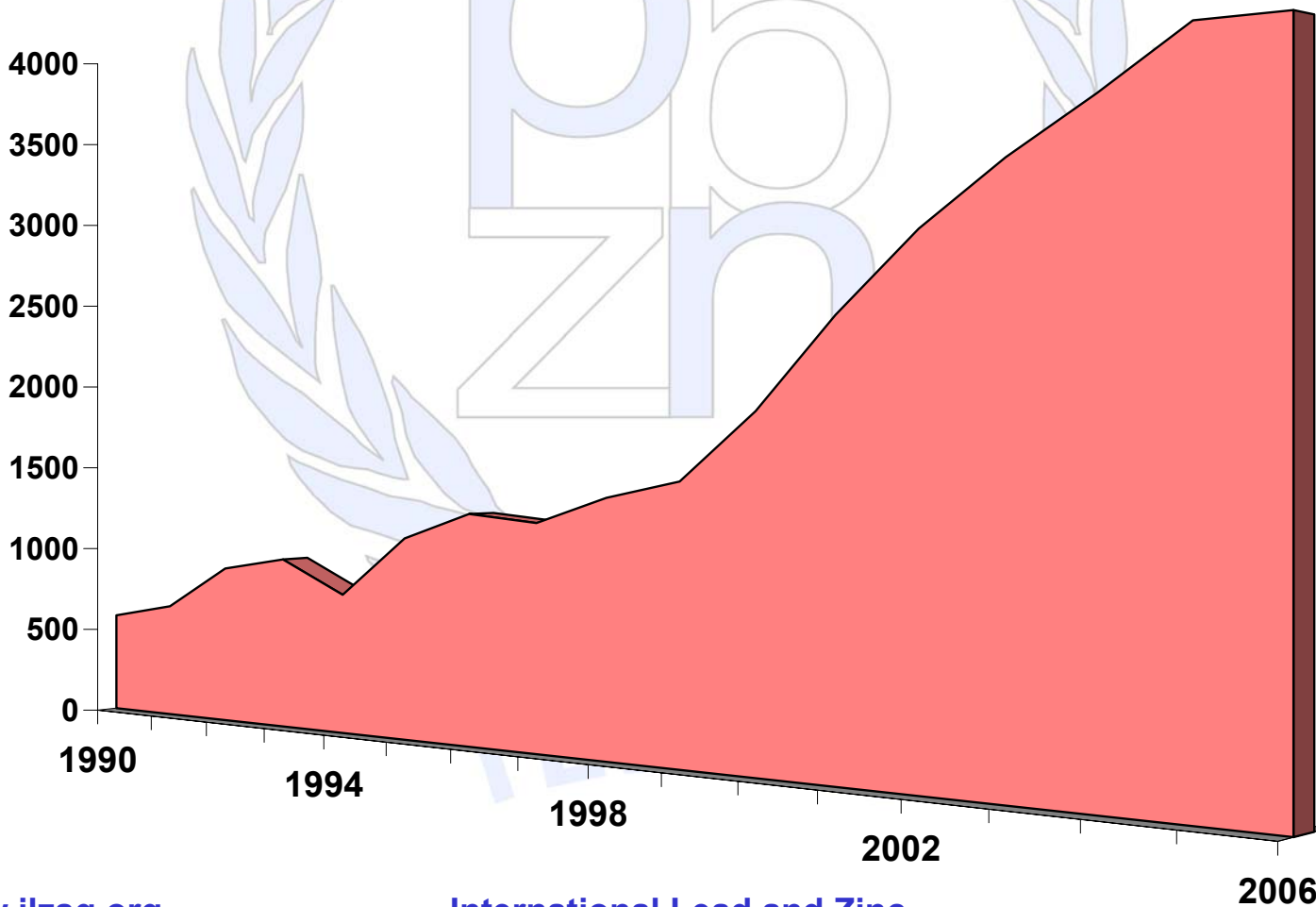
Copper End Uses 2005



Source: IWCC

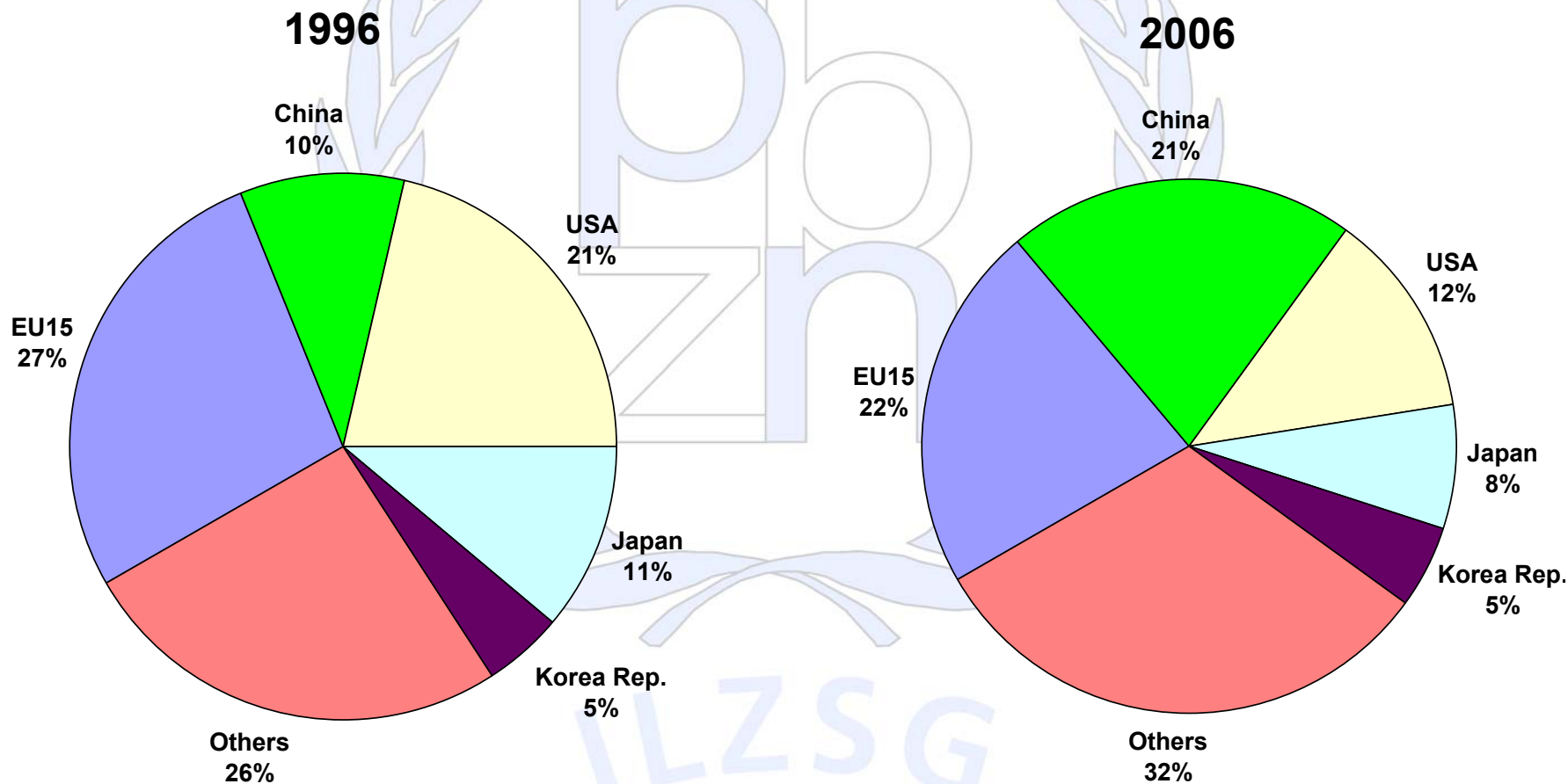
Chinese Copper Demand 1990 to 2006

'000 tonnes



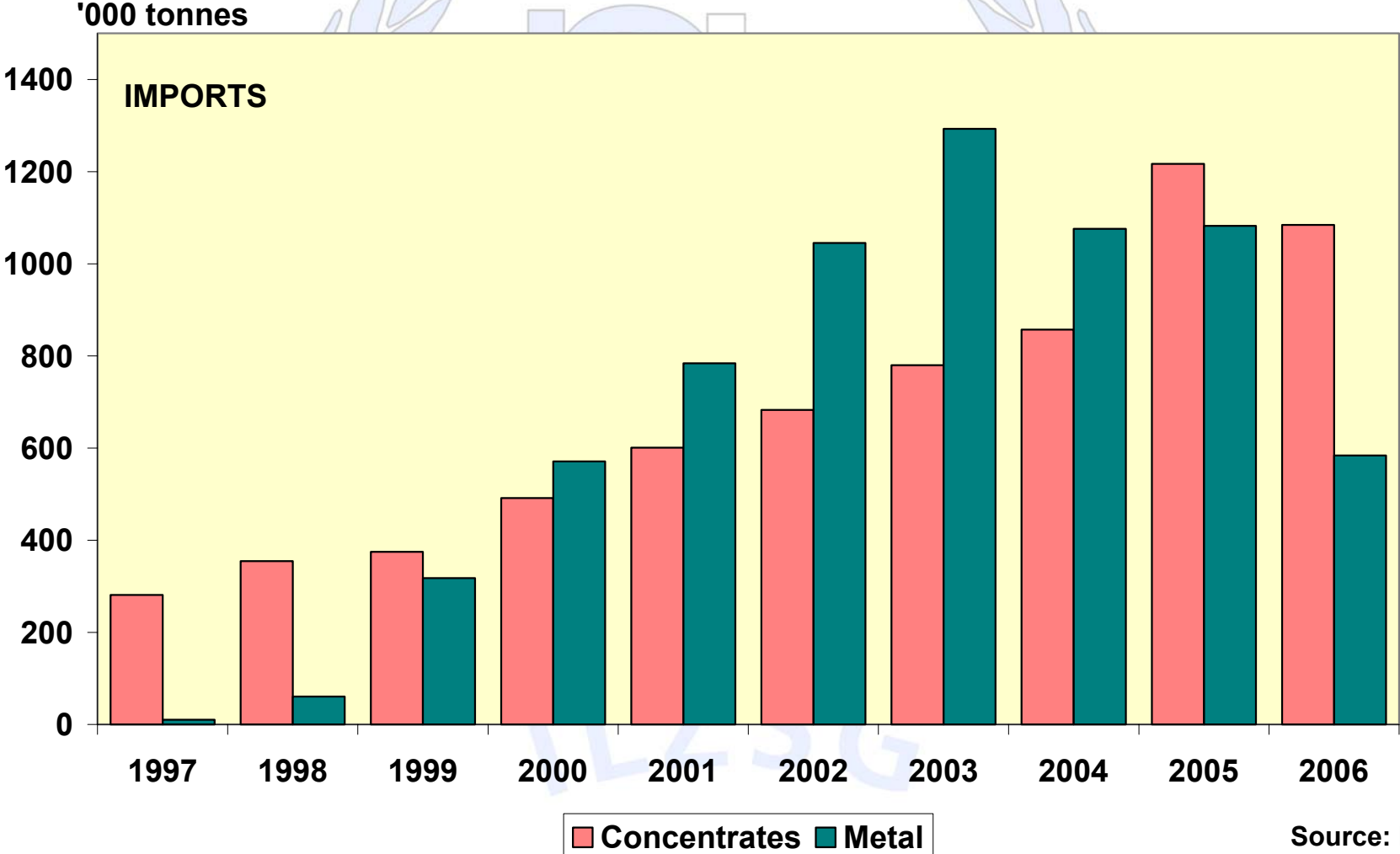
Source: ICSG

World Copper Demand Breakdown



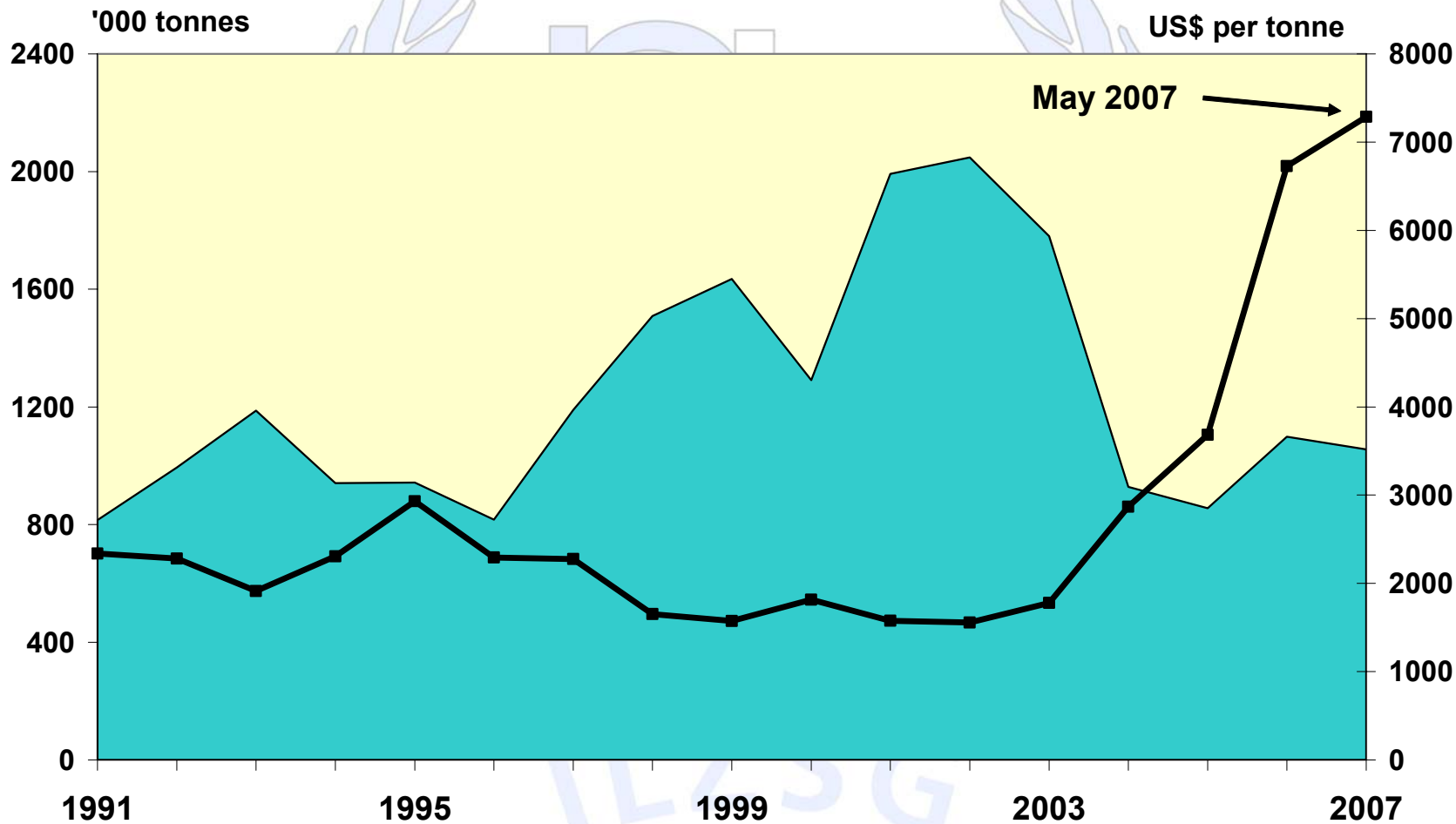
Source: ICSG

Chinese Copper Trade 1997 to 2006



Source: ICSG

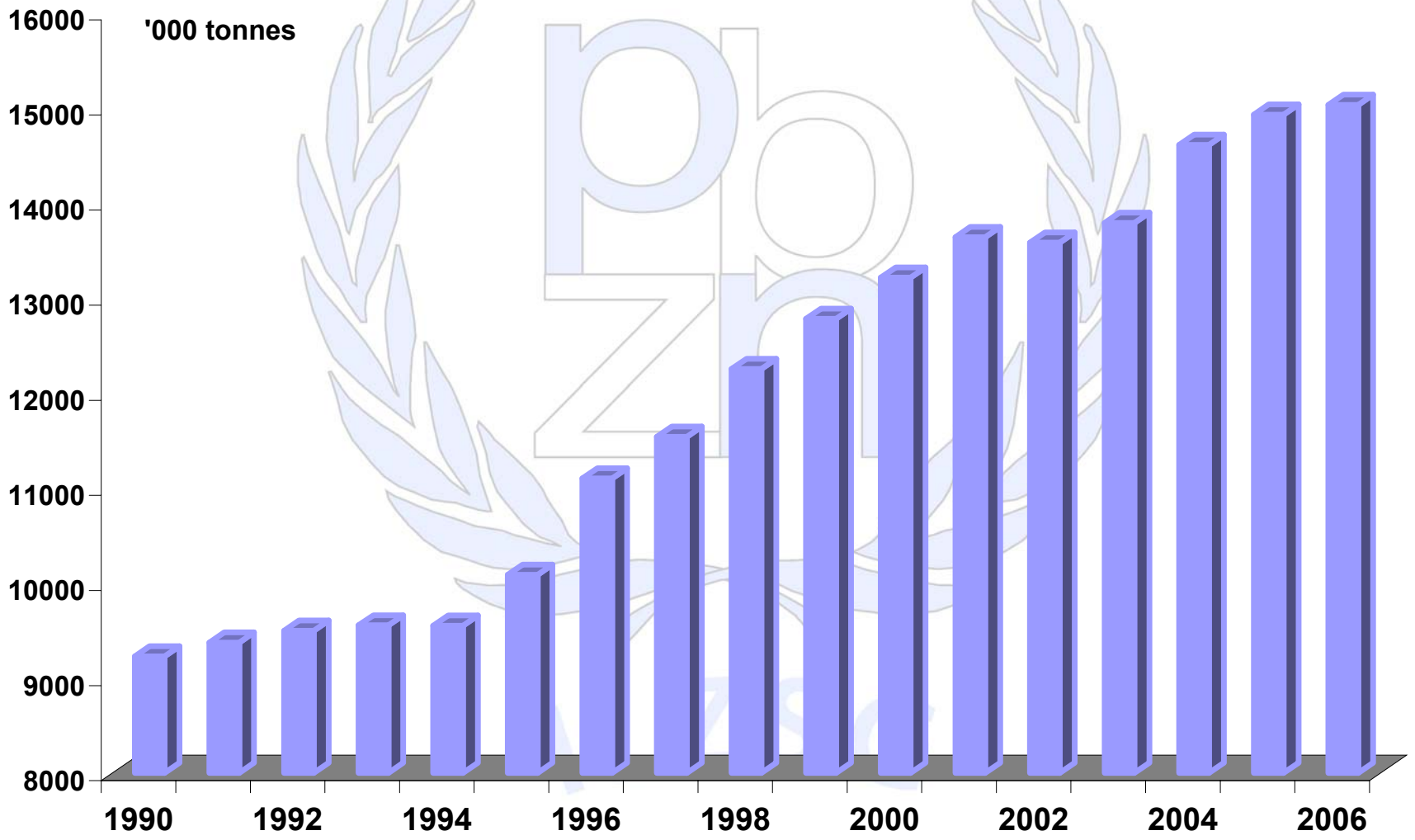
Copper Prices and Stocks 1991 to 2007



Stocks Prices

Source: ICSG / LME

Copper Mine Production 1990 to 2006

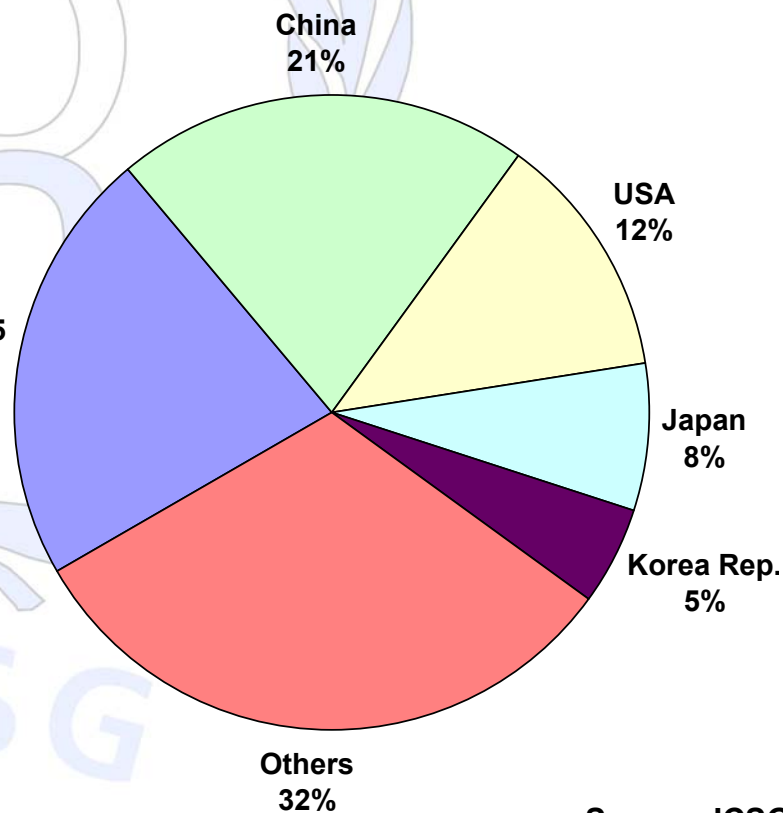


World Copper Demand

Forecast Change:

- 2007 +4.7%

Distribution



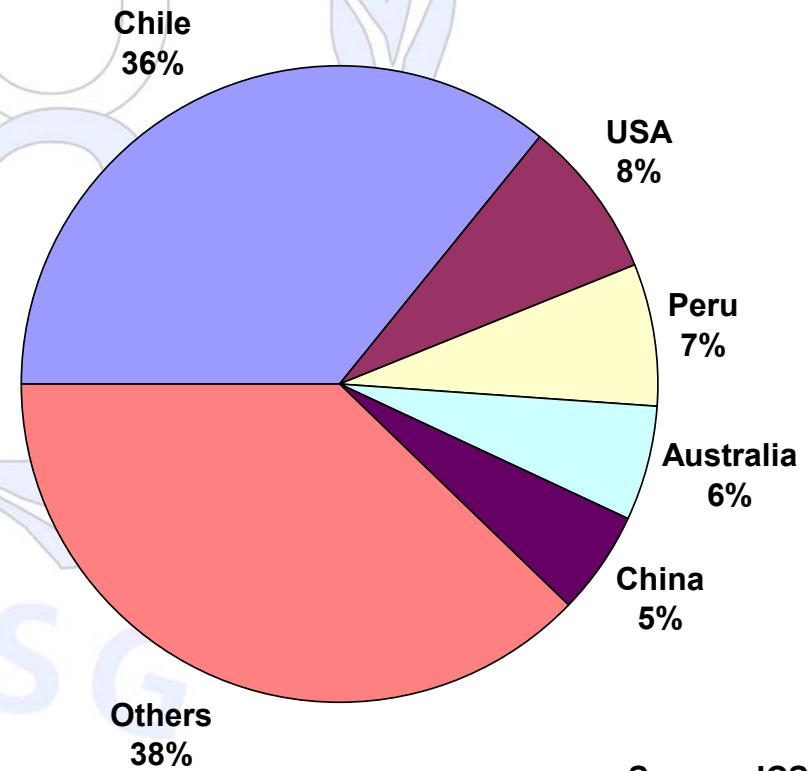
Source: ICSG

World Copper Mine Output

Distribution

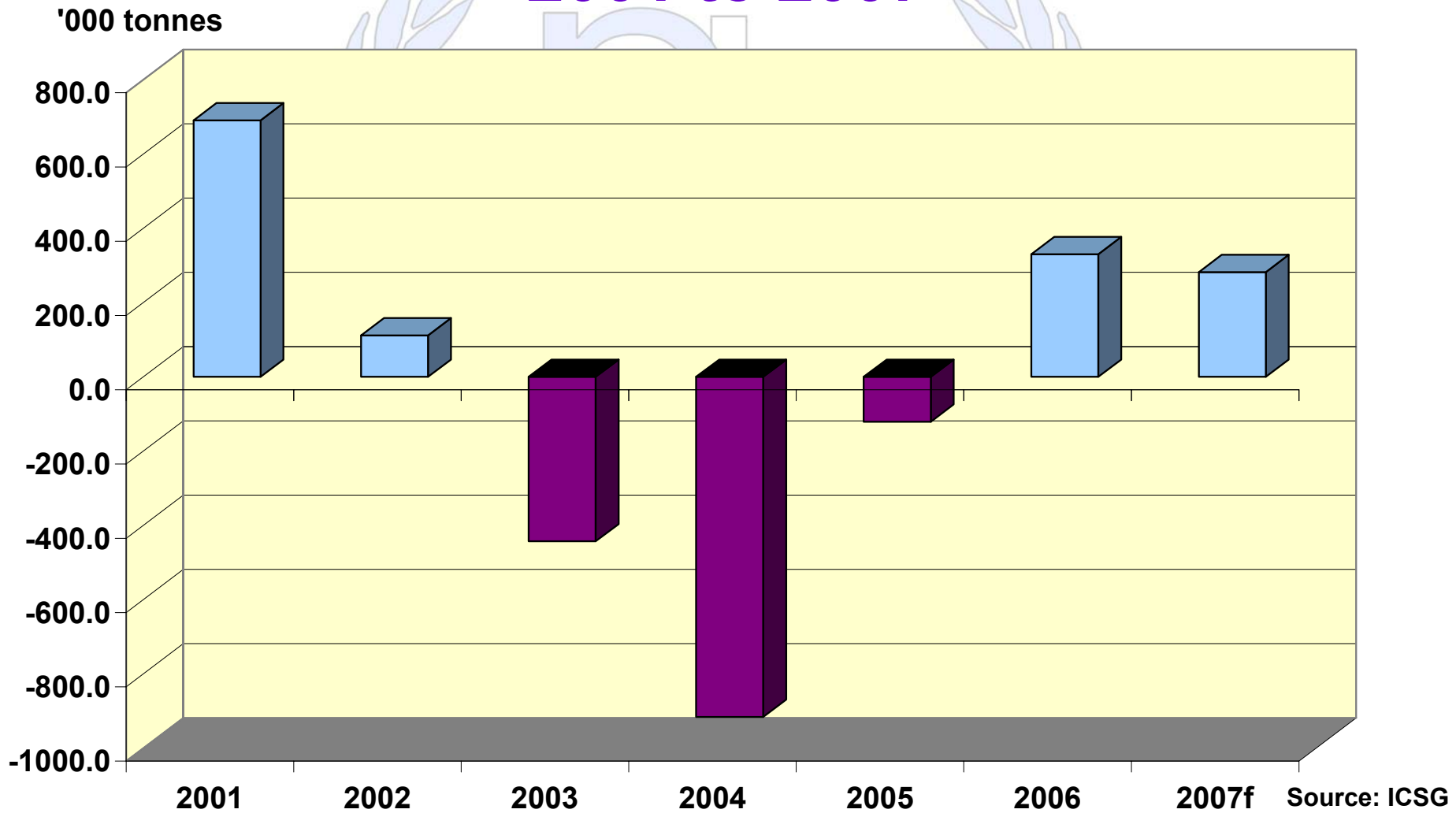
Forecast Change:

- 2007 +6.3%



Source: ICSG

Copper Metal World Market Balance 2001 to 2007



**International Seminar on Mining Investment
Policy for Base Metals in Southern Africa**

**The Boom in Base Metals
– Analysis and Outlook**

Paul White

ILZSG

5th June 2007, Windhoek