



Global Mn Industry Overview

**Mark Camaj
IMnI**

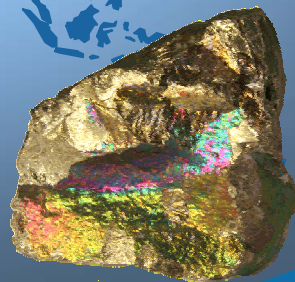
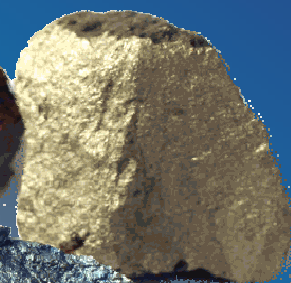
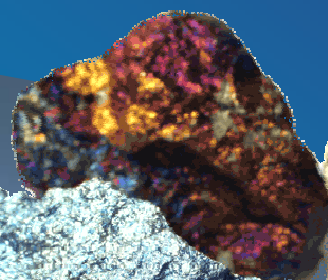
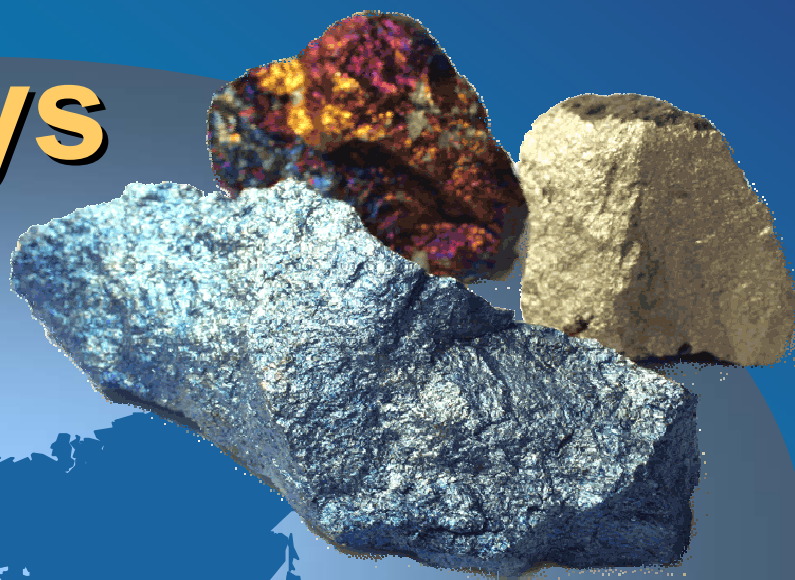
**Vienna
June 19, 2007**



2006 Mn Industry Highlights

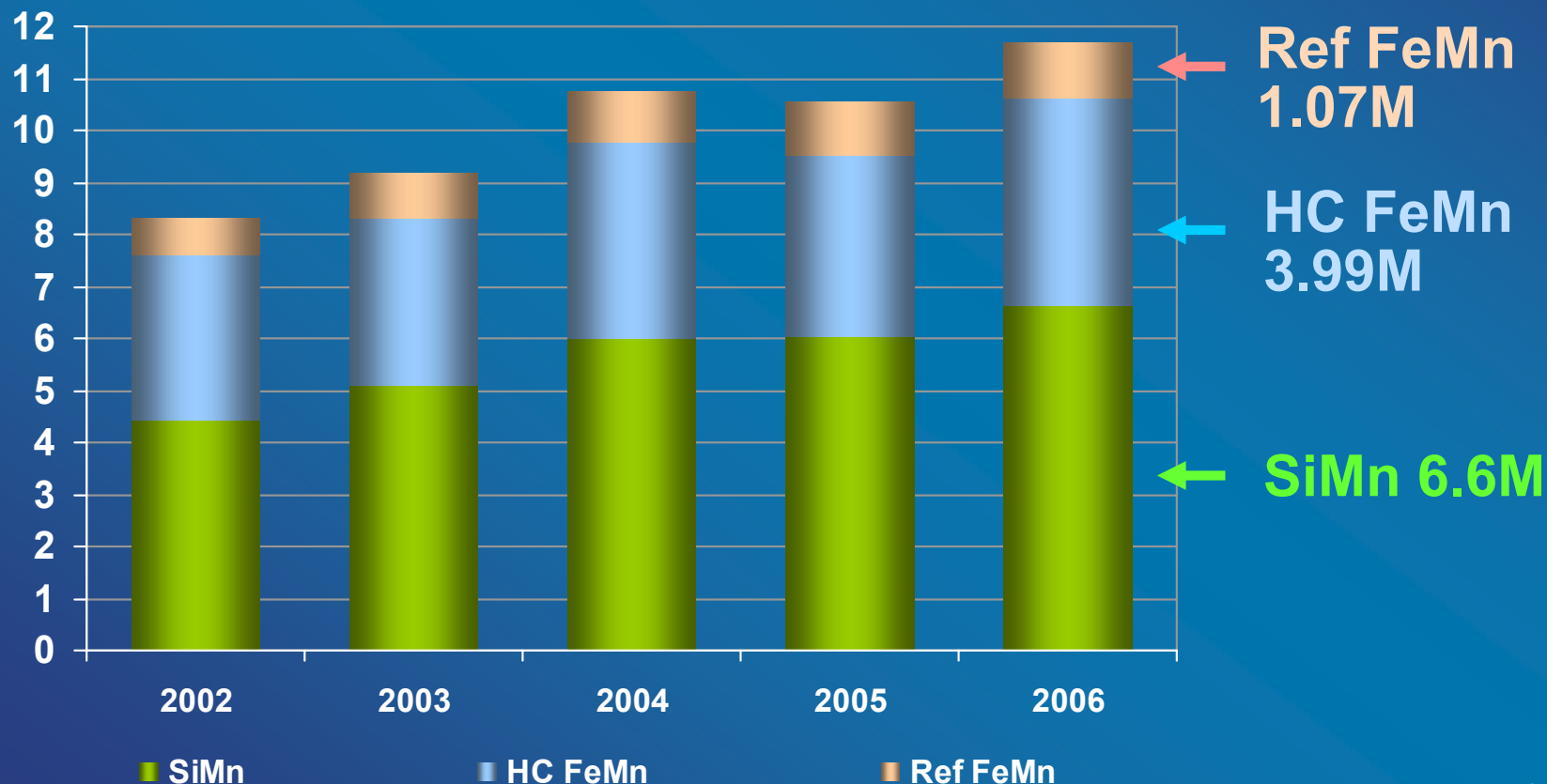
- Chinese alloy production up but ore down
- Elsewhere, alloys up in most producing countries
- High grade ore output was up, lower grades were down
- Chinese Steel Production continued to grow at rapid rate

Mn Alloys

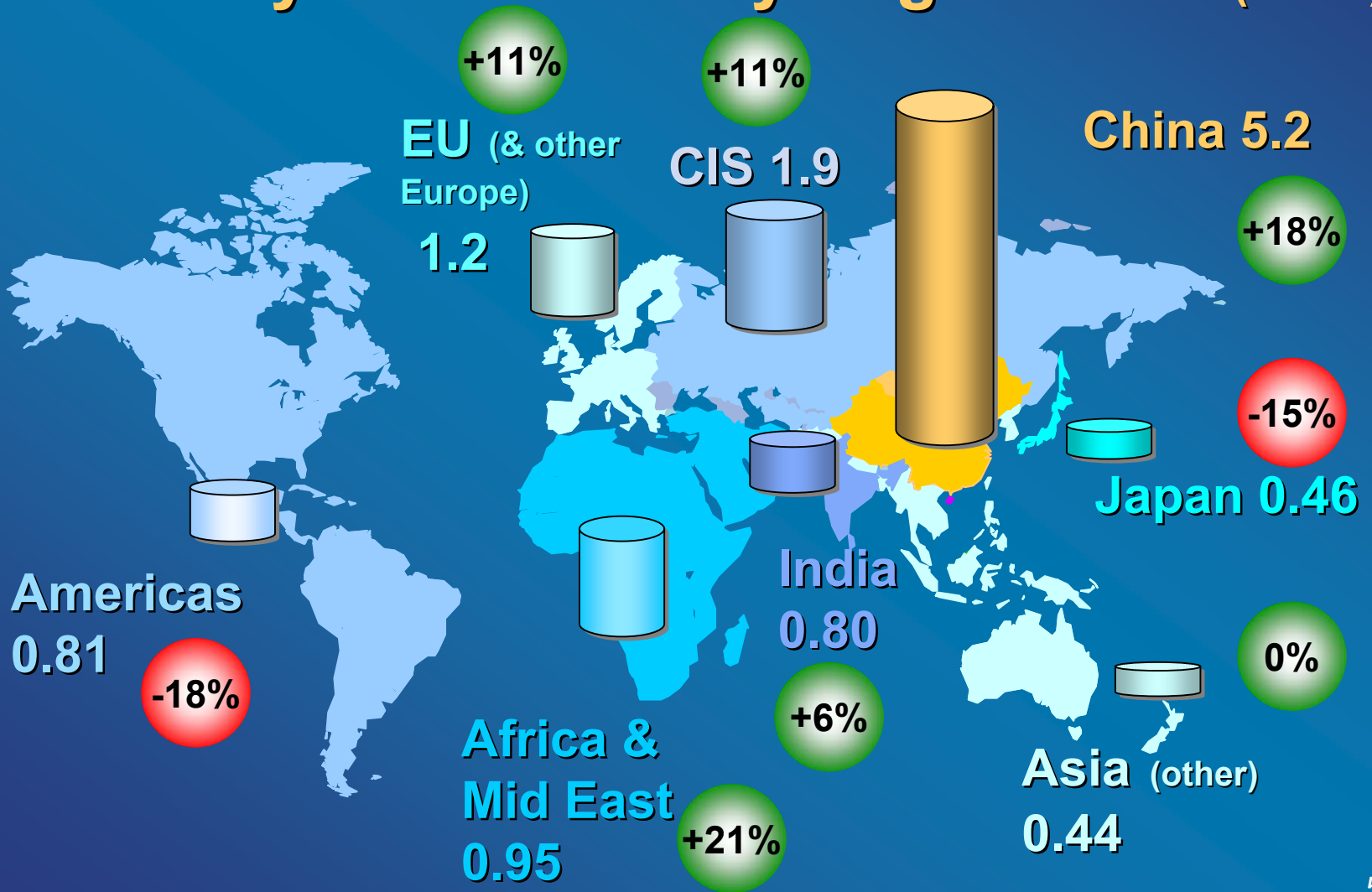


Global Mn Alloy Production 2002 - 2006

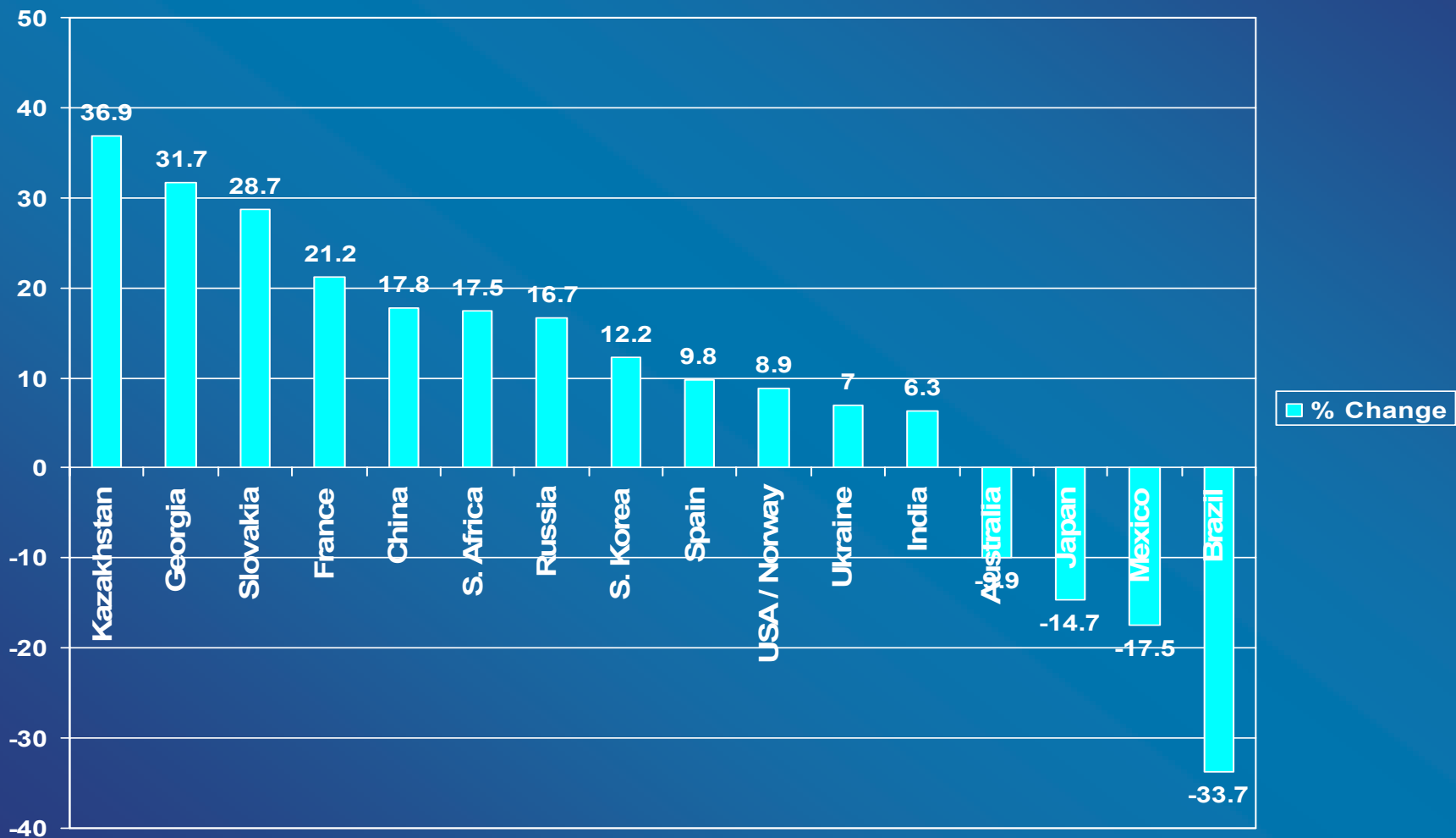
Mn alloy up 9.7% from 2005 to 11.7 M mt



Mn Alloy Production by Region 2006 (M mt)



Changes in Alloy Production in 2006

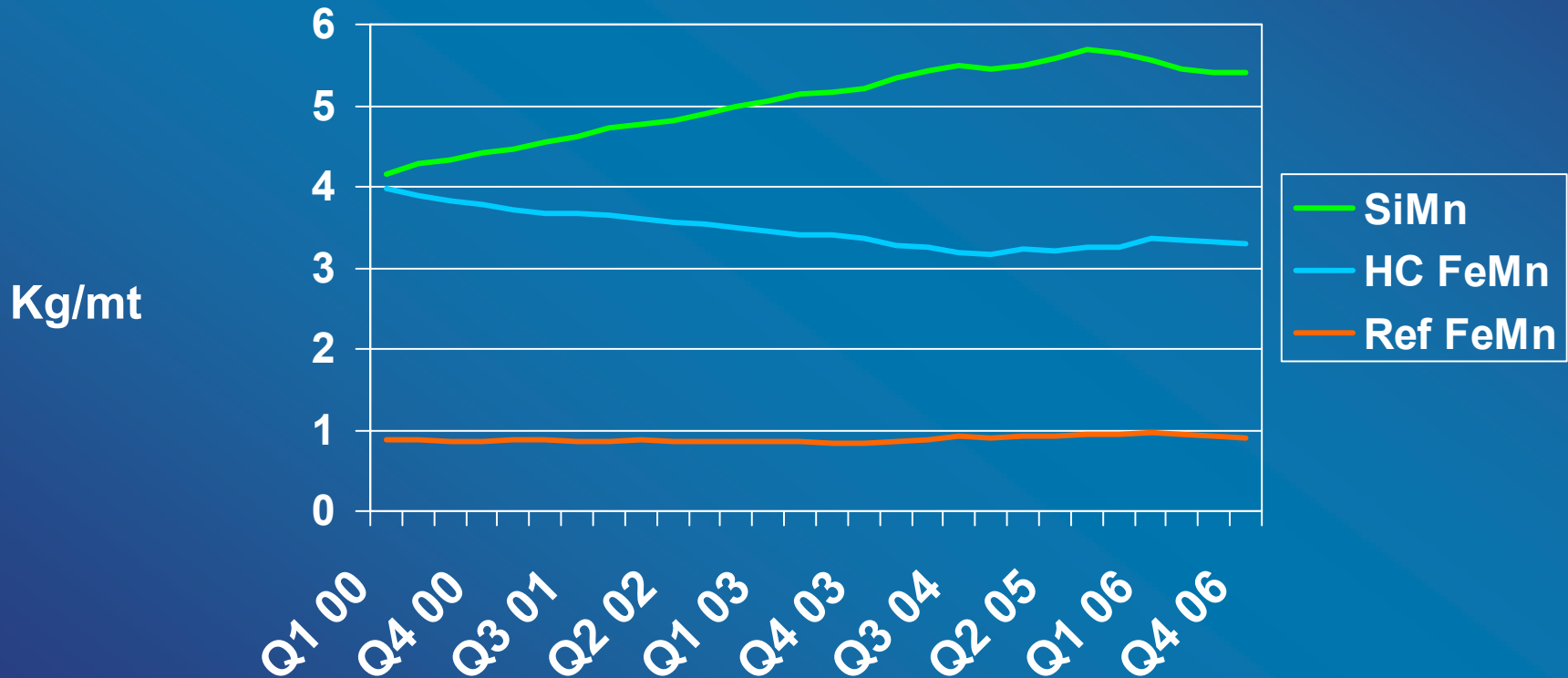


Alloy Apparent Consumption

- HC FeMn increased by 11% in 2006 to 4.1M mt
- Refined FeMn decreased by 1% to 1.1M mt
- SiMn was up 7% to 6.5 M mt

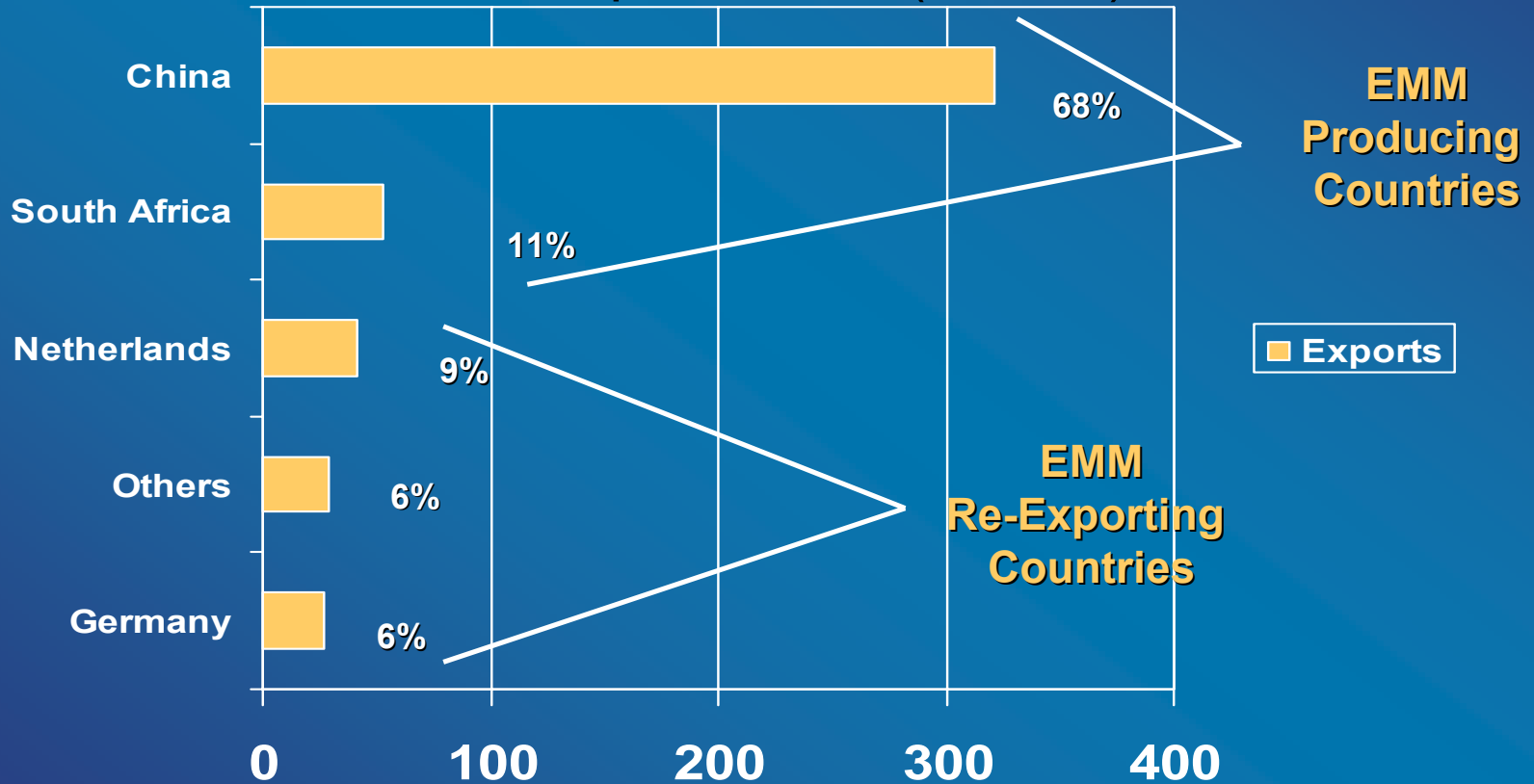
WORLD TOTAL = 11.6 million mt

Real Alloy Unit Consumptions



EMM - Electrolytic Mn Metal

Deduced Exports 2006 (000 mt)



Source : GTIS

Mn Ore

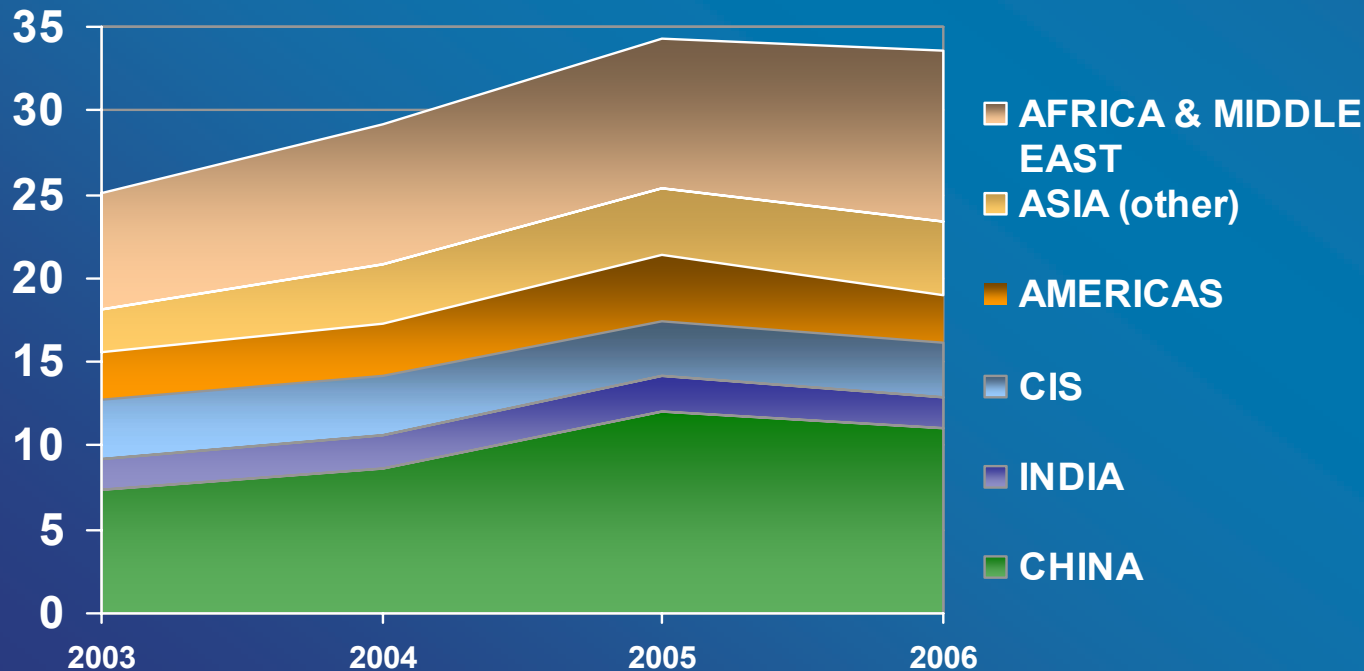


Mn Ore Production

2006 World production = **33.7** mil (wet) mt, **-3%** growth yoy,
 however Mn content = **11.8** mil mt up **+2%** yoy

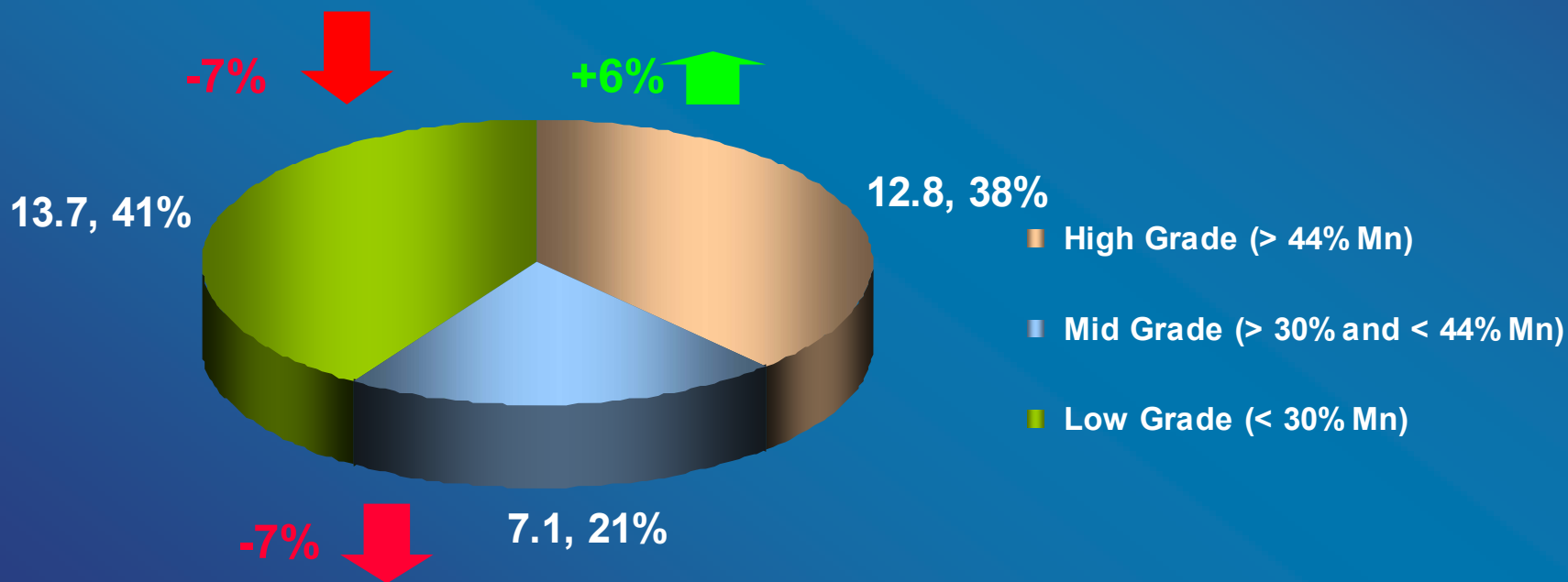
**2006
Prod
Growth
YOY**

Quarterly Mn Ore Production - wet (000 mt)



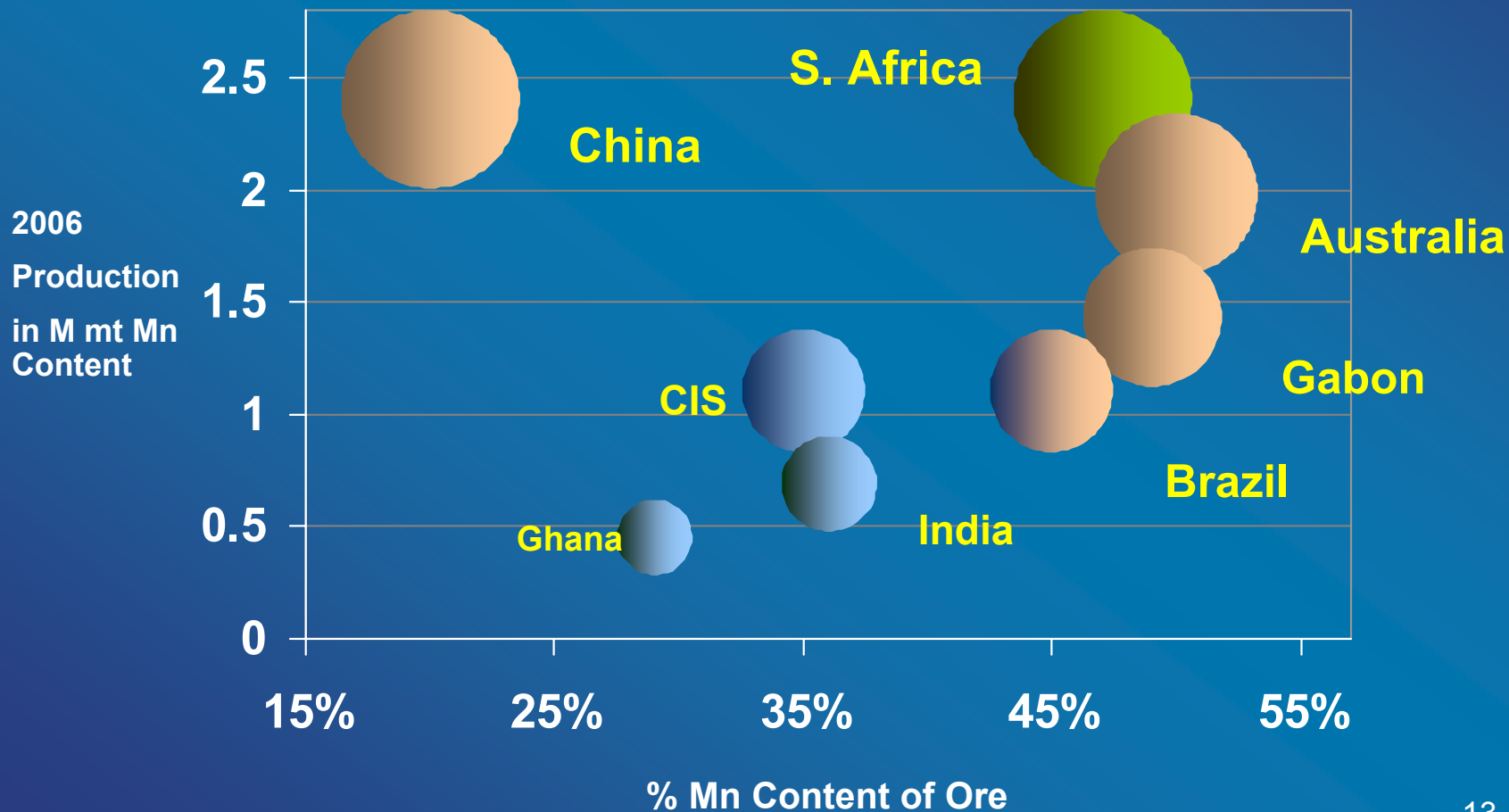
Mn Ore Production

2006 World Mn Ore production by grade
33.7 million mt wet (**11.8 M** mt content)



Top 8 Mn Ore Producers 2006

(M mt Mn content)



Mn Ore Consumption Highlights (in M mt Mn Content)

- **Total World** 11 million mt in mn content (31.3 million mt wet). Up 4% YOY
- **China** China up a healthy 19% to 5.1 million mt in Mn content
- **CIS** Up 5% to 1.9 million mt in Mn content
- **W Europe** Down 10% to 821K Mt in Mn content
- **Americas** Down 6% to 838K Mt in Mn in Mn content

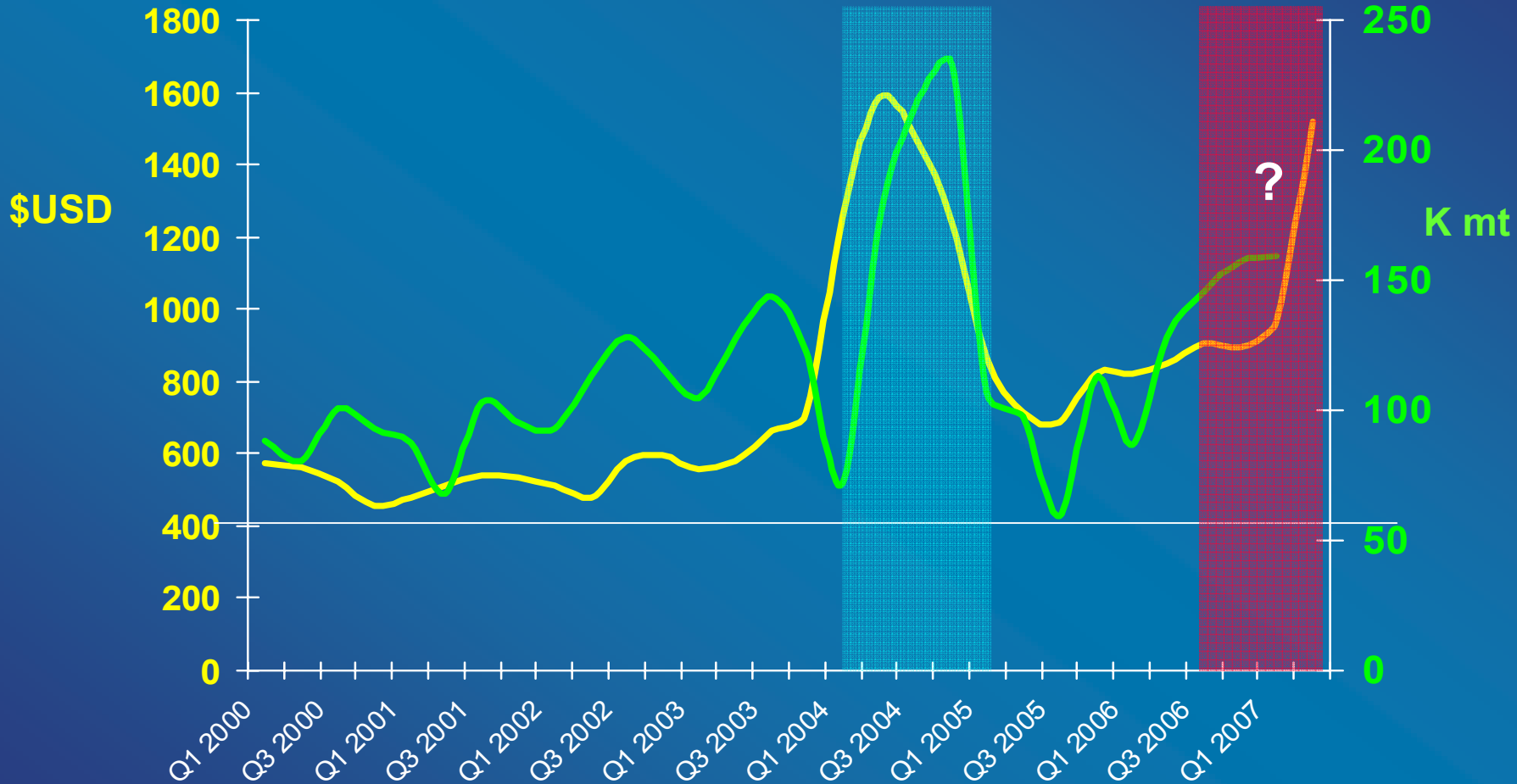
Key Factors for 2007



Key Factors in 2007

- Current Mn Alloy & Ore tightness driven by fundamentals and uncertainties over the future
- Mn Ore production uncertainties
- Continuing strong China & India steel production
- China's NDRC continues to try and curb ferroalloy overcapacity
- Adding more Mn in the SS production process as a substitute

Chinese exports vs US price of SiMn

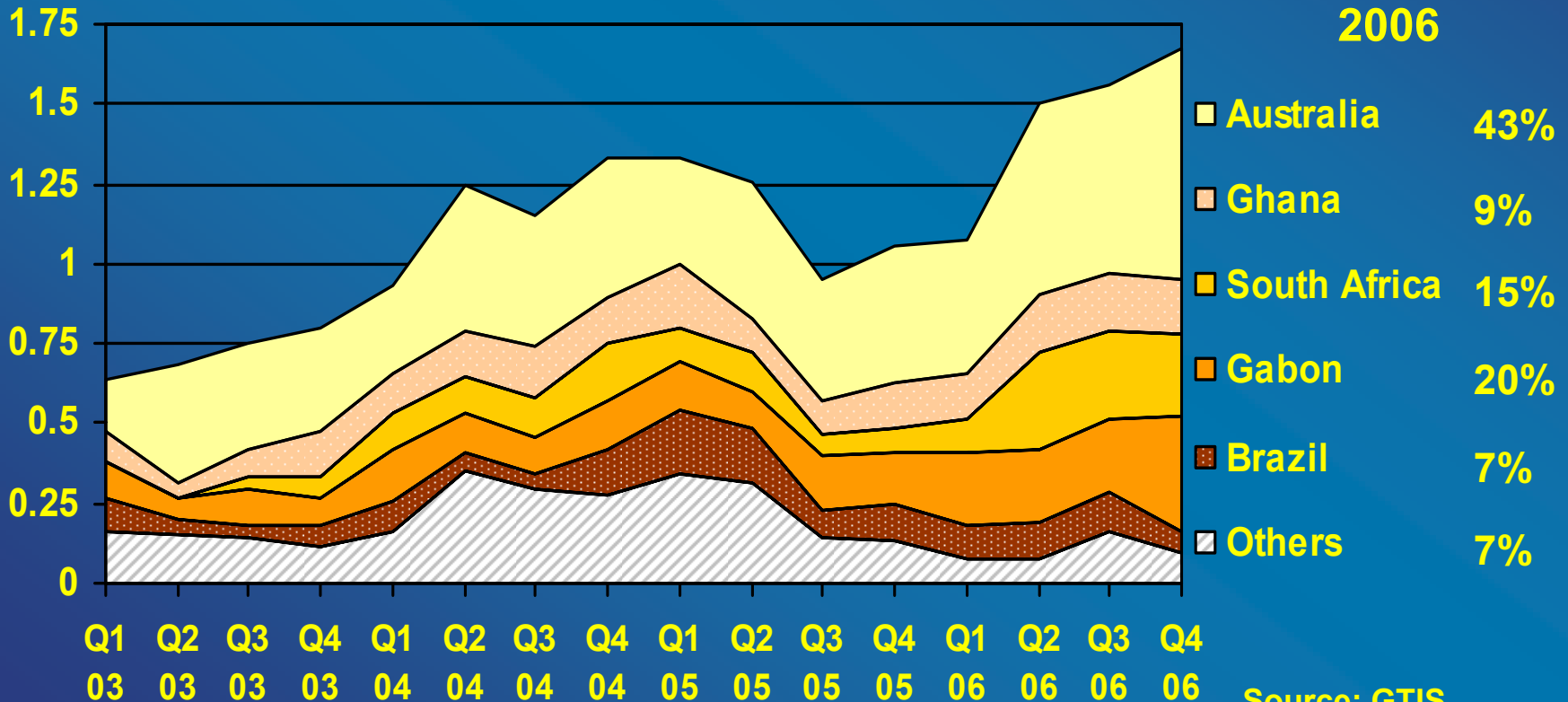


Sources: Metal Bulletin and GTIS

Mn ore Imports to China (2003 -2006)

6.21 M mt ore imported in 2006

% of Total Imports 2006



Summary of Key Points

- Steel reaches historic levels, driving demand for Mn alloys
- Mn Alloys showed strong growth in production
- Negative growth in Mn Ore (wet) production, but positive growth in high Mn content ore.
- China SiMn exports & Mn Ore imports have increased



Thank you!