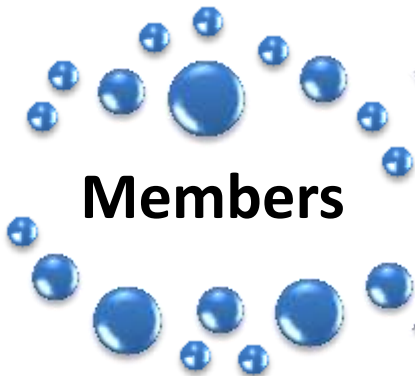




# Overview of the World Manganese Industry

- **Introduction**
  - GDP Growth in 2013 and its relation to the Steel Industry
- **Steel**
  - World Steel Production
- **Mn Ferroalloys**
  - World Supply – Demand Balance
  - SiMn Supply – Demand Balance & Trade
  - HC FeMn Supply – Demand Balance & Trade
  - Ref FeMn Supply – Demand Balance & Trade
- **Mn Ore**
  - Mn Ore Supply-Demand Balance & Trade
- **Mn Ore projects in Africa**
- **Conclusion**

# Where do we get our data?



**Members**



**Submit Directly  
their data  
(Special Website)**

**Run Special Studies  
to fill the gaps  
(China & India)**



**Analyst**



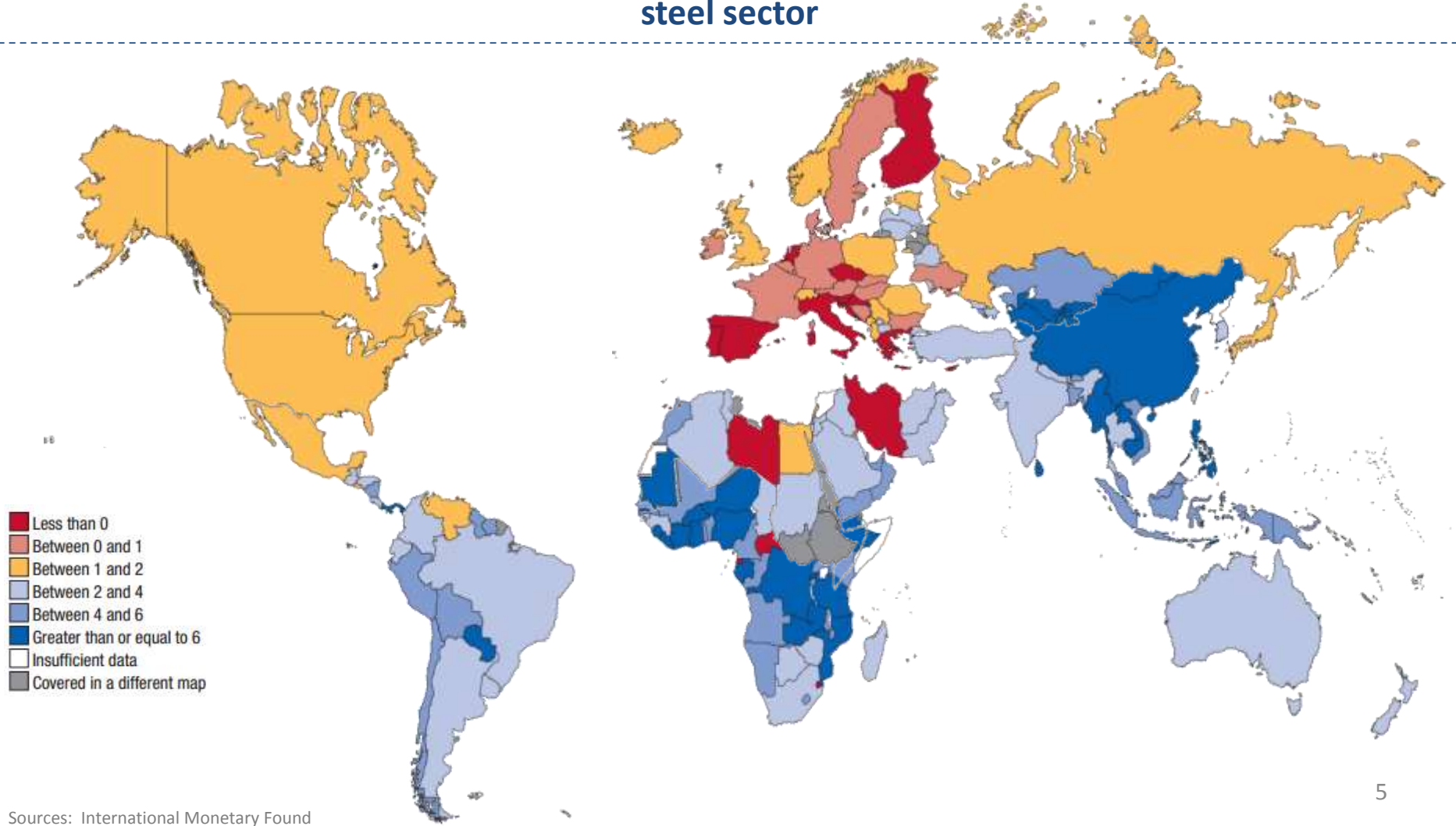
**Reports**

# Introduction

# GDP Growth in 2013 and its relation with the Steel Industry



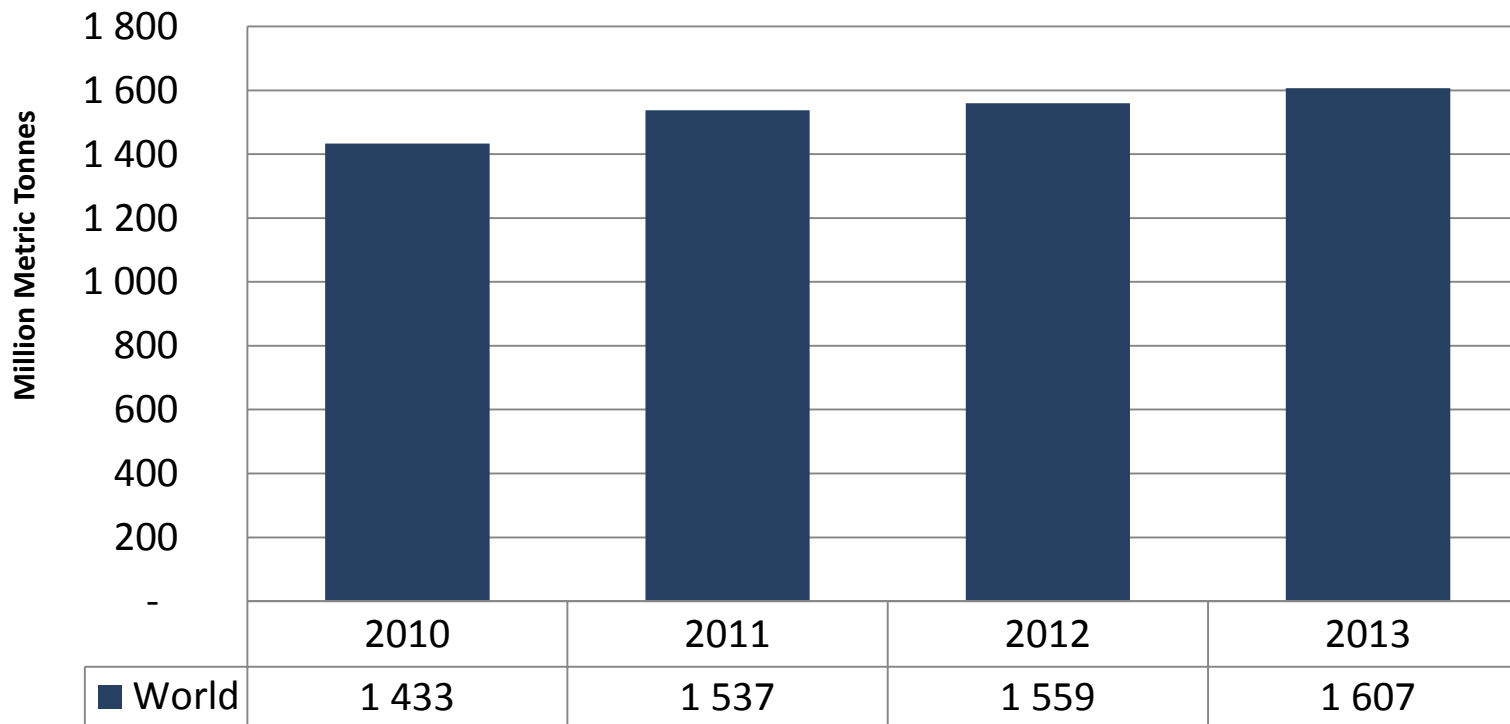
**GDP is one of the key drivers for the Steel Industry...  
... Europe showed the lowest GDP increase in 2013 and also the lowest performance in the steel sector**



# Steel

World Steel production rose 3% in 2013 vs. 2012

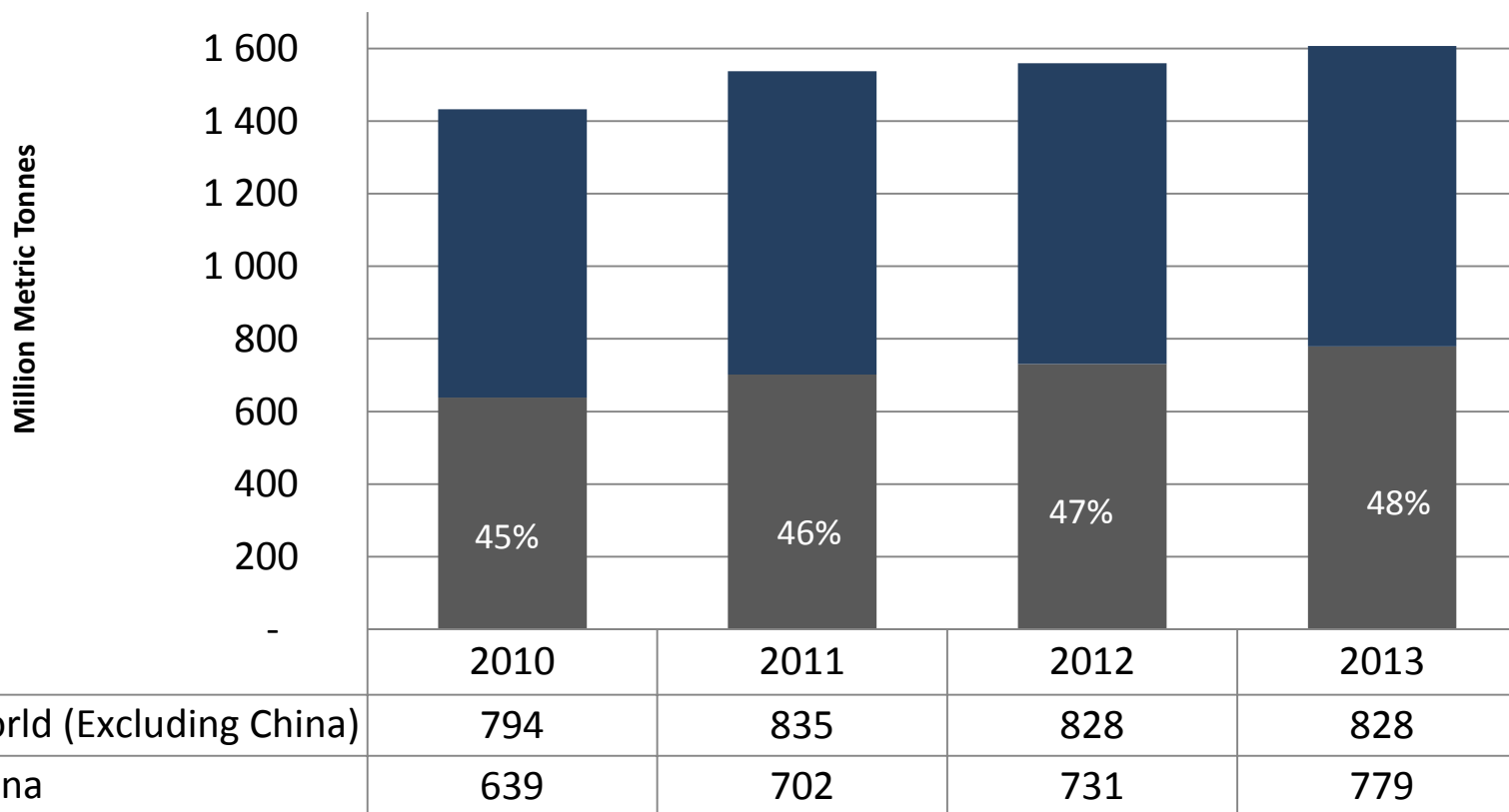
## Annual World Crude Steel Production 2010 - 2013 (in Million Metric Tonnes)





**Chinese Steel output increased by 7% in 2013 vs. 2012 and ...  
... China remains the most important country in terms of production**

**Annual World Crude Steel Production  
2010 - 2013 (in Million Metric Tonnes)**





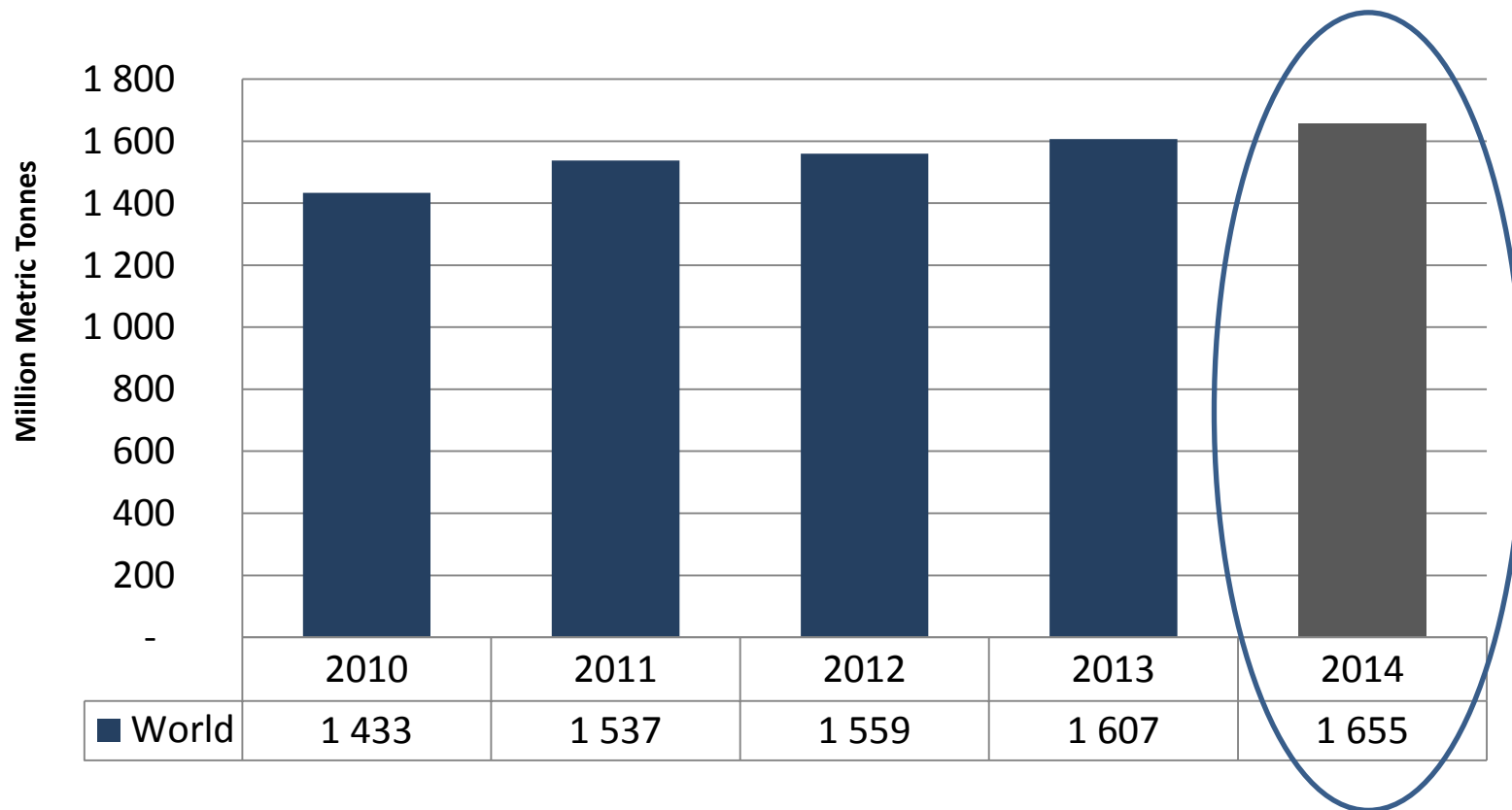
Europe experienced a decrease in Steel Output because of the slow economic recovery; while in North America the decline was the result of the restocking effect, furnace maintenance and control of production (high flexibility)

## World Crude Steel Production by region 2012 - 2013 (in Million Metric Tonnes)

Region	2012	% 2012	2013	% 2013	2013/2012
European Union (28)	169	11%	166	10%	-2%
Other Europe	40	3%	39	2%	-3%
C.I.S.	111	7%	109	7%	-2%
North America	122	8%	119	7%	-2%
South America	46	3%	46	3%	-1%
Africa	15	1%	16	1%	4%
Middle East	25	2%	26	2%	7%
China	731	47%	779	48%	7%
India	77	5%	81	5%	5%
Asia (excluding China)	295	19%	302	19%	2%
Oceania	6	0%	6	0%	-4%
<b>World</b>	<b>1 559</b>	<b>100%</b>	<b>1 607</b>	<b>100%</b>	<b>3%</b>

World Steel production is expected to grow by 3% in 2014 vs. 2013

## Annual World Crude Steel Production 2010 - 2014 (in Million Metric Tonnes)

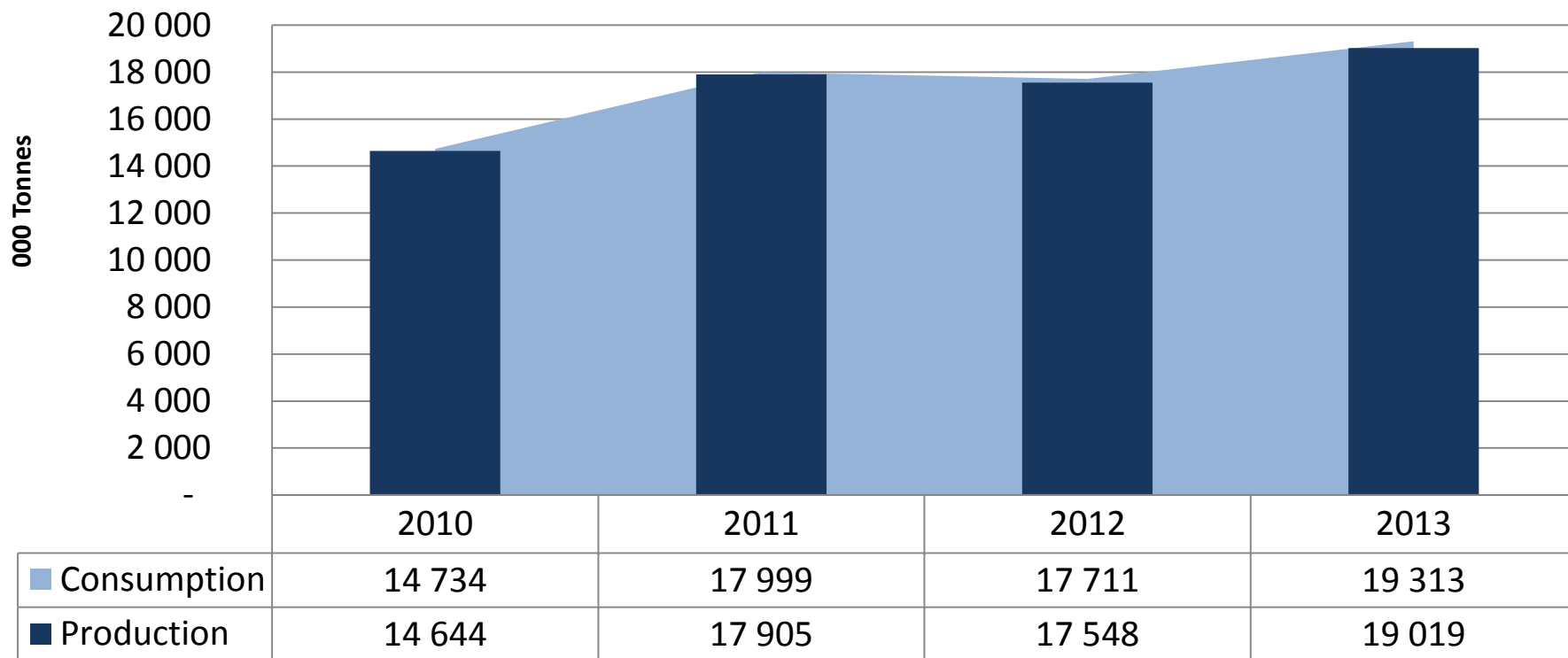


# Mn Ferroalloys



Most of the World's Production and Consumption changes can be explained by China, since it represents around 60% of the Mn Ferroalloy market.

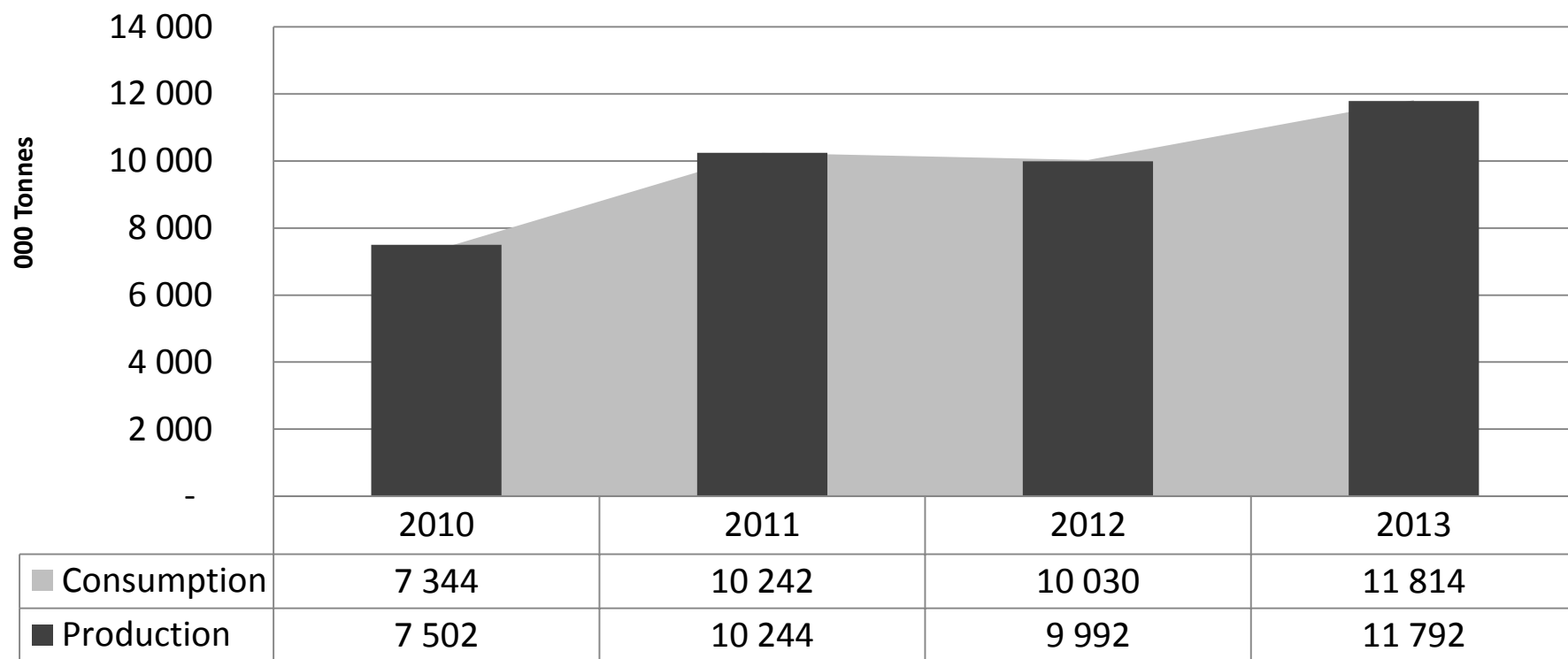
**World Mn Ferroalloys Production and Real Consumption**  
(in 000s metric tonnes)





**China increased Mn Ferroalloy production and consumption by 18% in 2013 vs. 2012 thanks to an increase in local steel output (7% vs. 2012)**

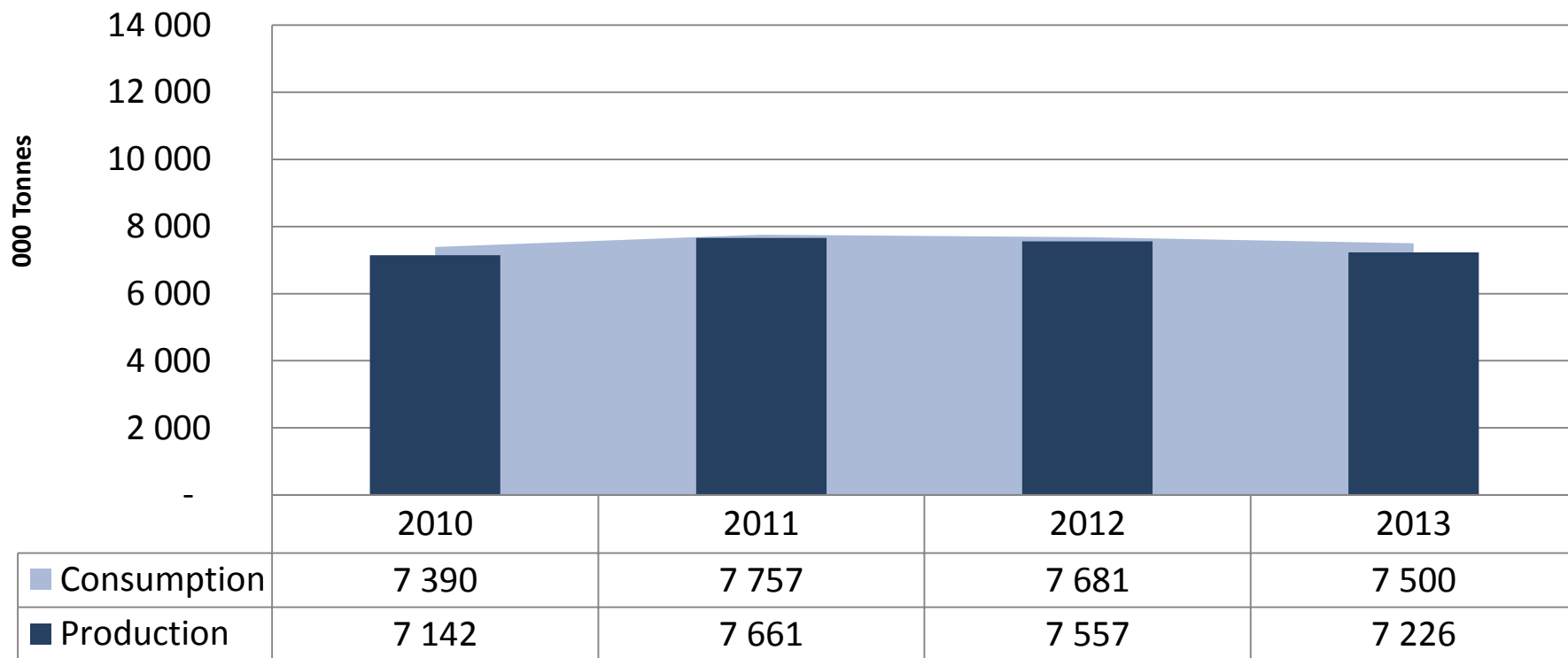
**Mn Ferroalloys Production and Real Consumption in China**  
(in 000s metric tonnes)





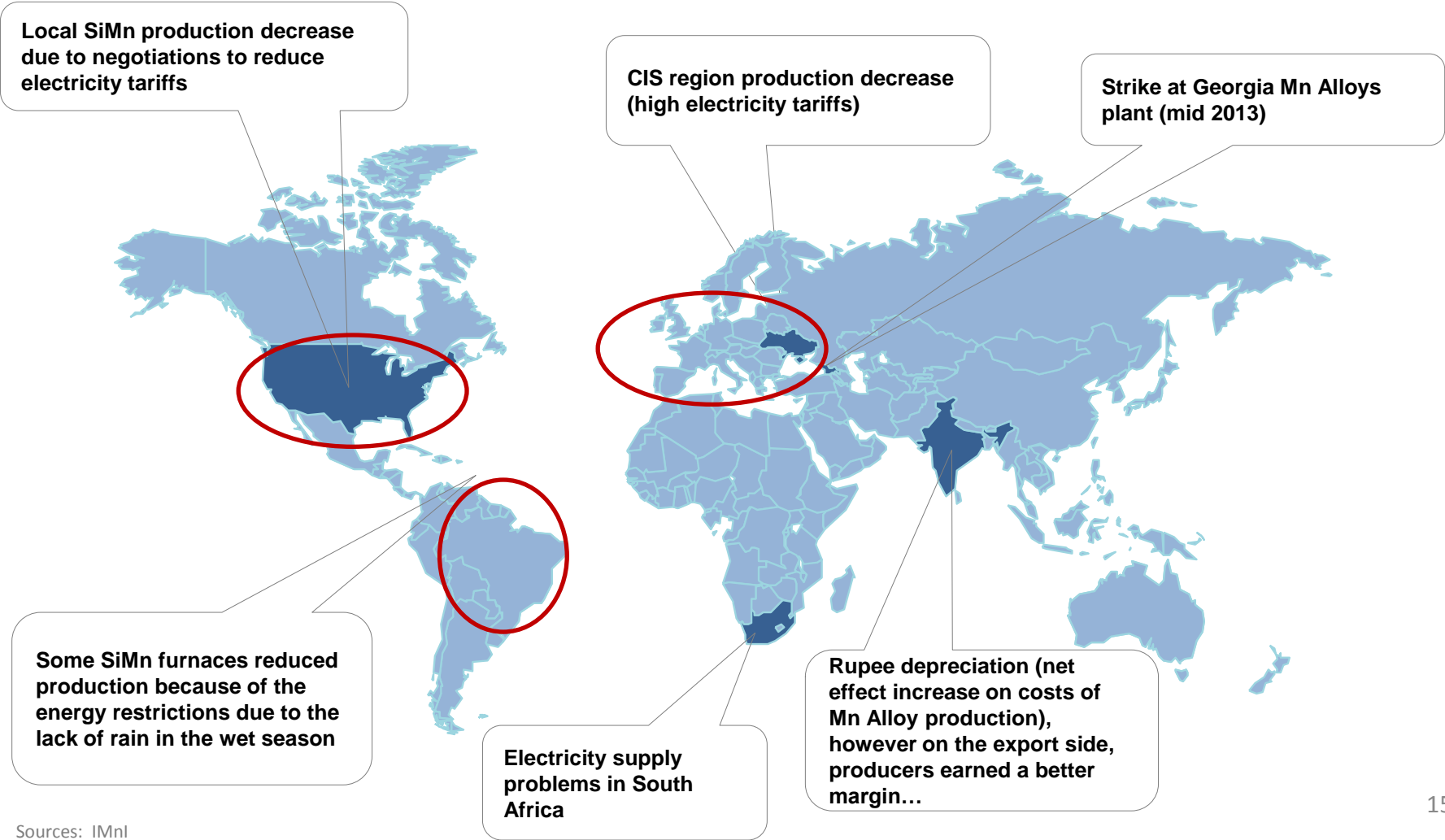
Excluding China from our analysis, we can see that both Production and Consumption decreased in 2013 vs. 2012. Some of the main factors for the decrease were...

**World Mn Ferroalloys Production and Real Consumption (excluding China)**  
(in 000s metric tonnes)



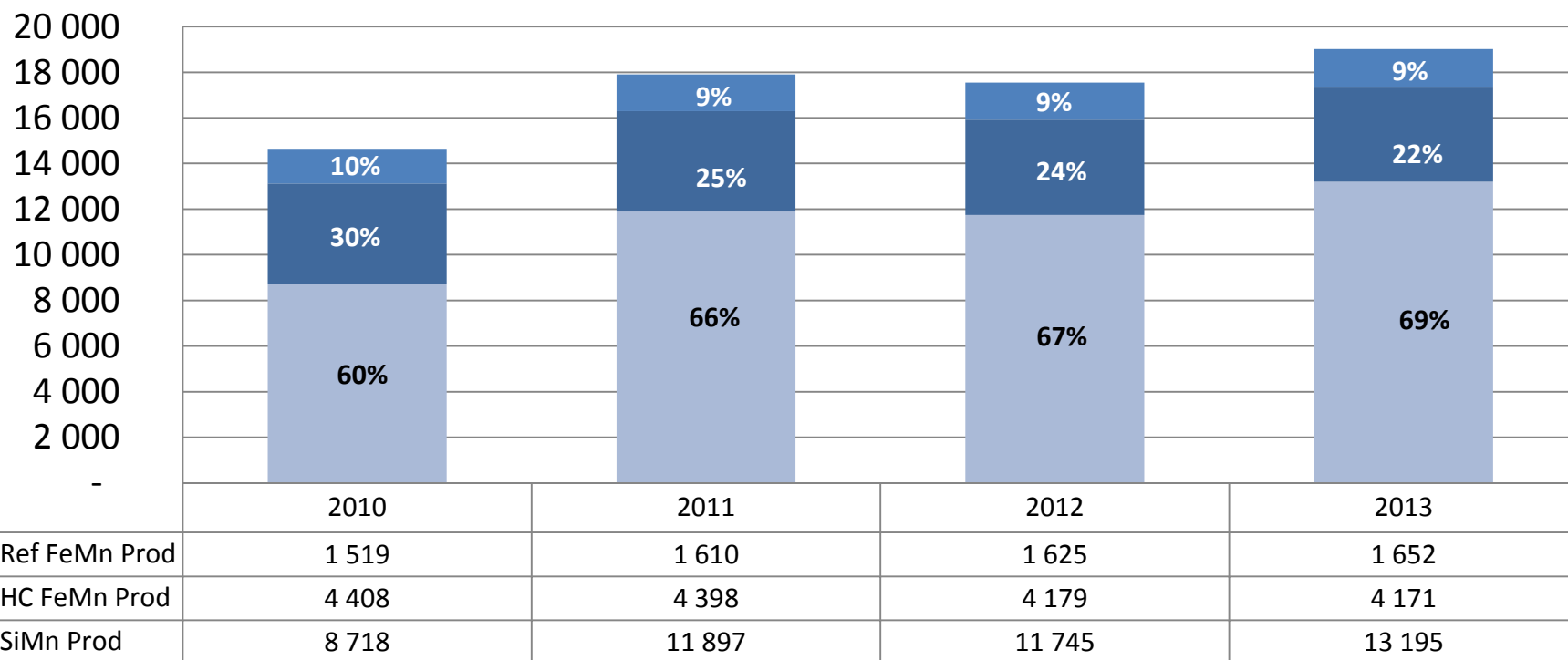
# Mn Ferroalloys

... the low demand from the Steel sector (outside China) and...



**China produced 47%, 52% and 68% of the World HC FeMn, Ref FeMn and SiMn respectively in 2013**

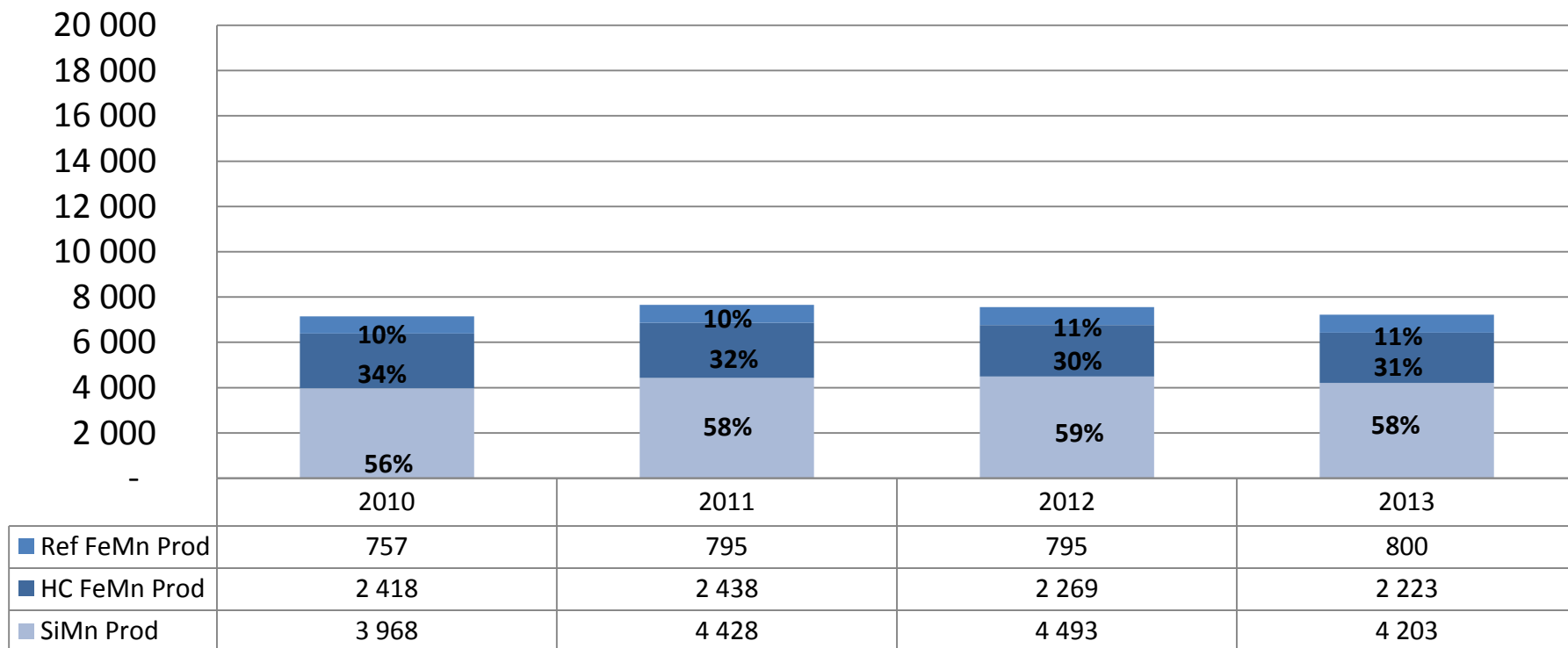
**World Mn Ferroalloys Production  
(in 000s metric tonnes)**



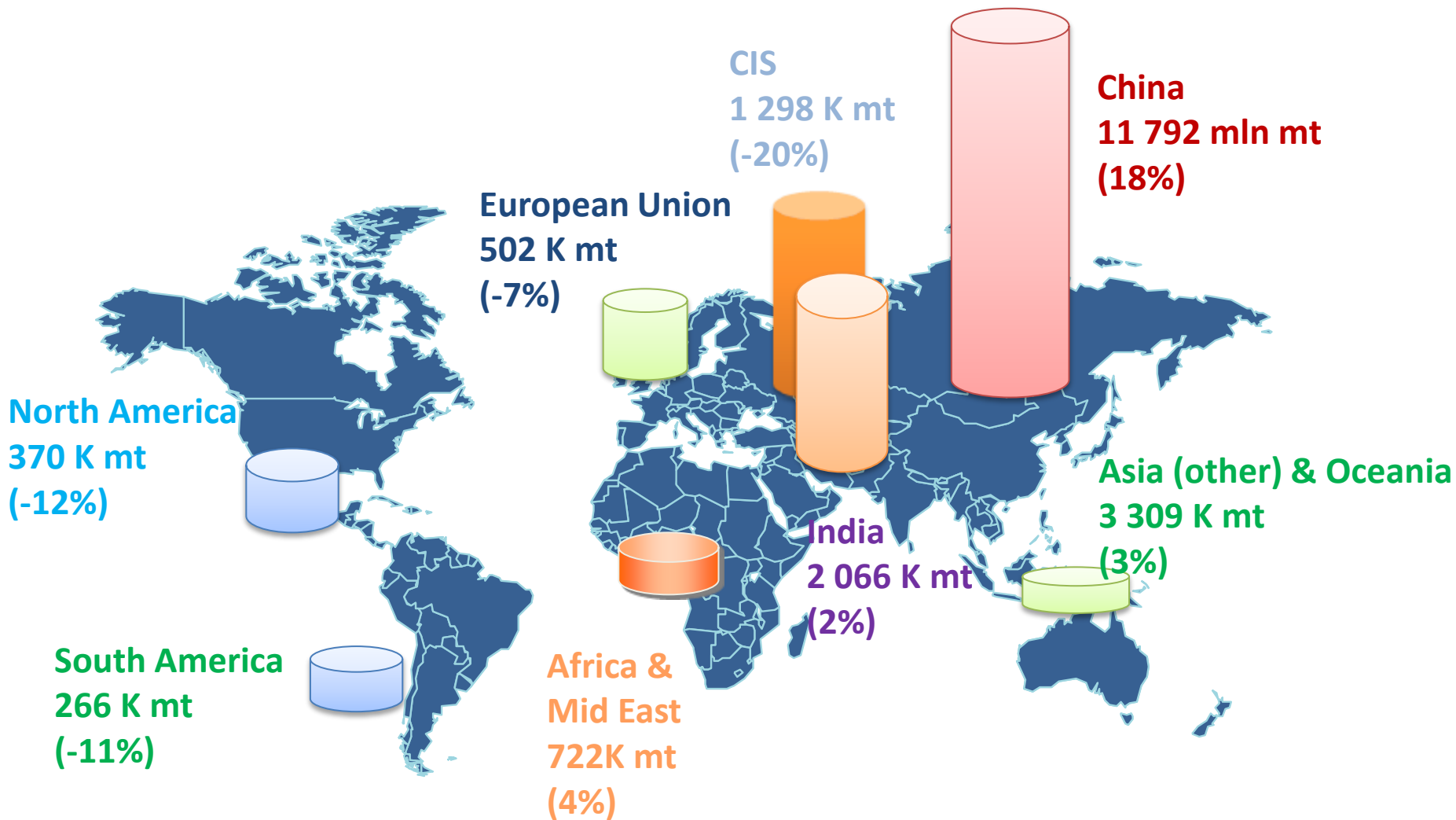


**Excluding China, SiMn output decreased 6.5% vs. 2012;  
HC FeMn output also dropped 2%**

**World Mn Ferroalloys Production (excluding China)  
(in 000s metric tonnes)**



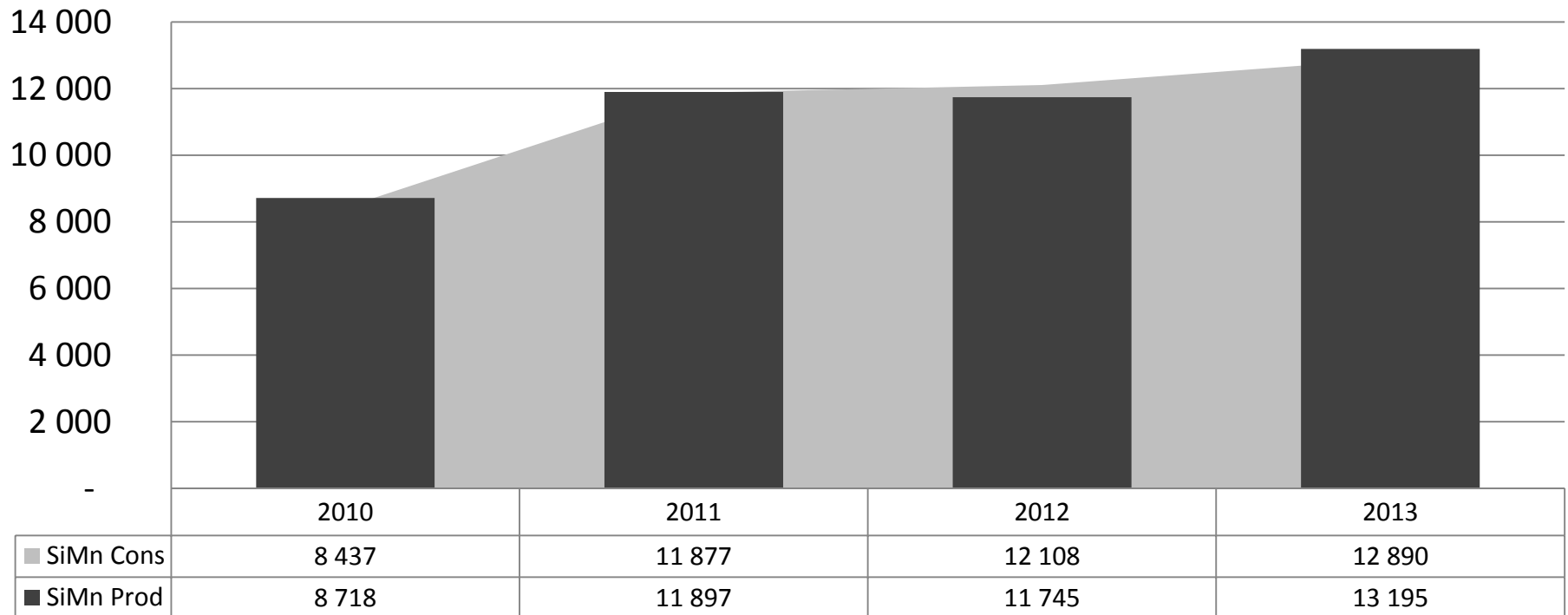
## Total Ferroalloy Production in 2013 (change vs. 2012)





**World SiMn production and consumption increased (12% and 6% respectively y-o-y), indicating oversupply in the market.**

**World SiMn Production  
(in 000s metric tonnes)**

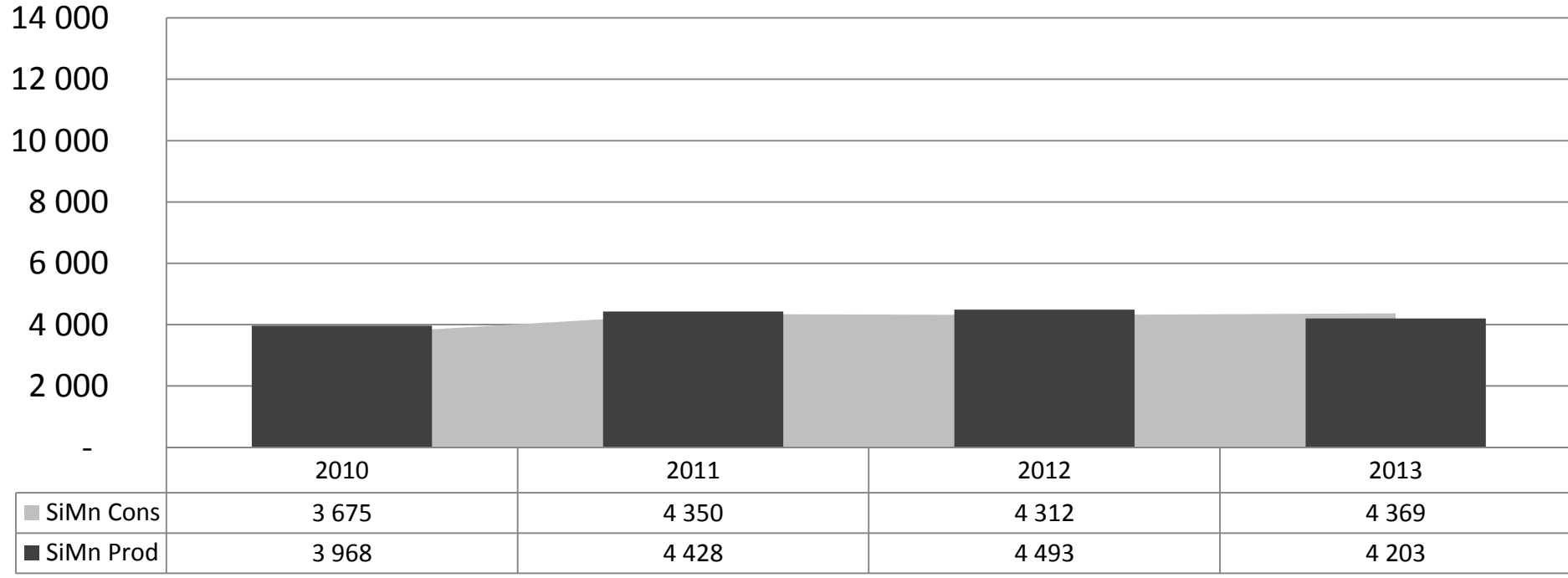


# SiMn Supply - Demand



**SiMn production (excluding China) showed the most important decrease of the Mn Alloys (-6.5% vs. 2012). The high electricity tariffs in CIS region and North America were the main factors for the decline**

**World SiMn Production (*excluding China*)  
(in 000s metric tonnes)**





## SiMn Top 10 Net Importers 2013 (in 000s metric tonnes)

Number	Country	Tons
1	United States	336
2	Japan	283
3	Turkey	243
4	Russia	182
5	Germany	168
6	Italy	143
7	Taiwan	120
8	Poland	53
9	Canada	52
10	Thailand	45

- **2013 was a challenging year for US SiMn producers . They started negotiations with their State Government to get better electricity tariffs**

## SiMn Top 10 Net Exporters 2013 (in 000s metric tonnes)

Number	Country	Tons
1	India	770
2	Ukraine	304
3	Georgia	188
4	Norway	185
5	Australia	94
6	South Africa	84
7	Kazakhstan	76
8	Brazil	51
9	Mexico	30
10	Venezuela	26

- **India, as the most relevant net exporter during 2013 faced some production problems due to the electricity prices and the rupee depreciation (leading to increased production costs).**
- **Even if the CIS region experienced a decrease in its production level, Ukraine remains the world's second net exporter.**

## World Electricity prices

- Increase in cost
- Low profitability



## USA Market (main net importer)

- Domestic production
- Stock levels
- Imports

## CIS Region production

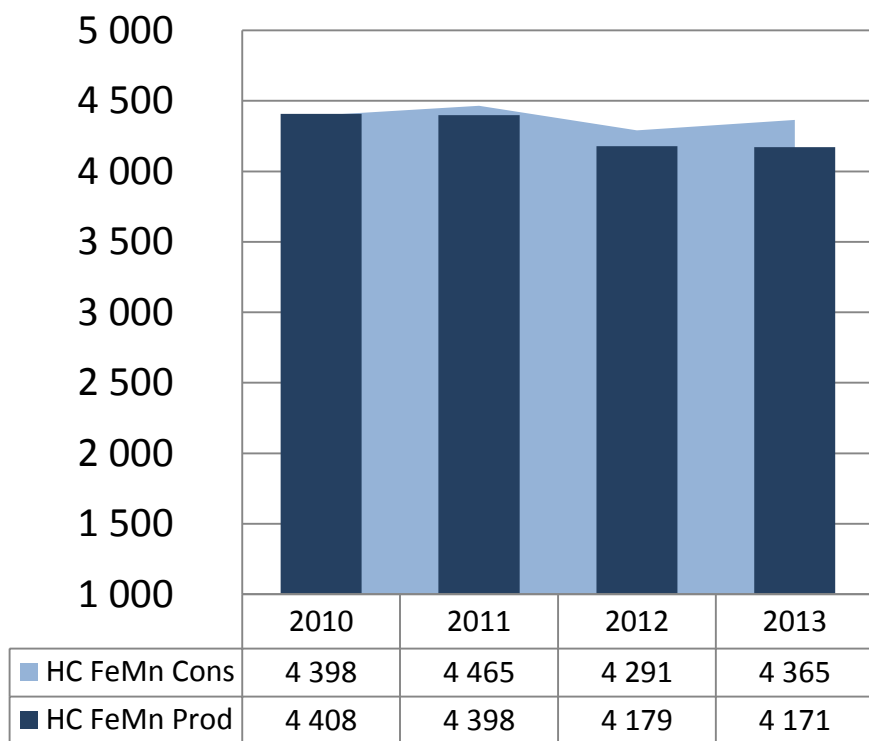
- Speculation on production side
- Effect of political situation in Crimea and Ukraine
- Strikes in CIS region

## Indian Rupee currency evolution

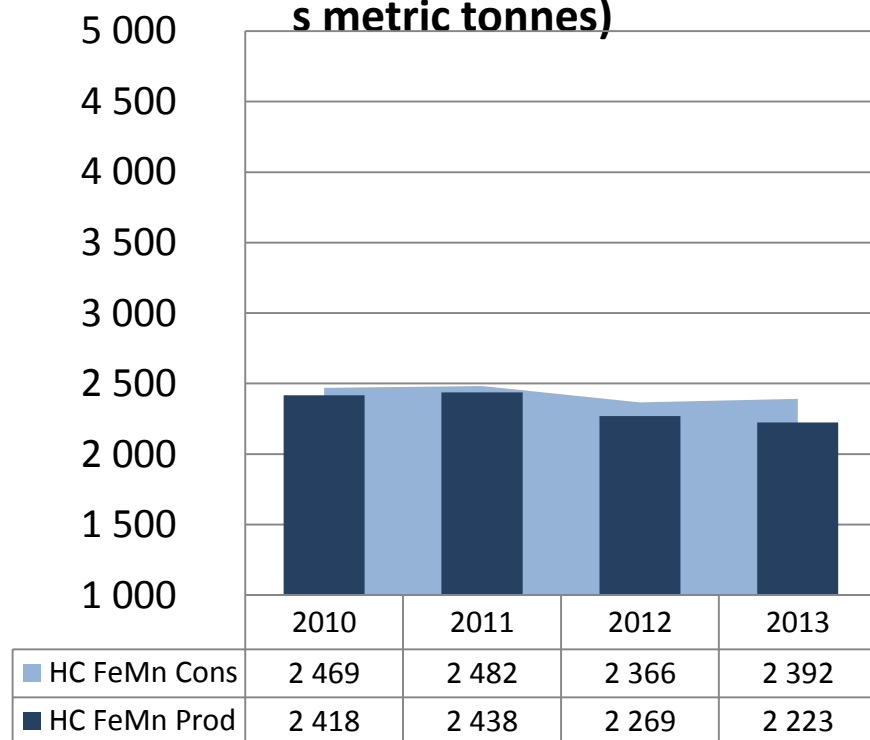
- As the main Net Exporter, India, with the depreciation of the Rupee, saw the production costs for its Mn Ferroalloys increase, but also a better margin for export material.

**World HC FeMn production decreased slightly by 2% in 2013 vs. 2012.  
In CIS and Central European region production declined because of low demand**

**World HC FeMn Production  
(in 000s metric tonnes)**



**World HC FeMn Production  
(excluding China)  
(in 000s metric tonnes)**



## HC FeMn Top 10 Net Importers 2013 (in 000s metric tonnes)

Number	Country	Tons
1	United States	259
2	Japan	117
3	Germany	109
4	Taiwan	80
5	Italy	47
6	United Kingdom	45
7	Turkey	30
8	Belgium	25
9	China	24
10	Canada	23

- **USA is the world's leading importer of HC FeMn and represented around 20% of world imports in 2013.**

## HC FeMn Top 8 Net Exporters 2013 (in 000s metric tonnes)

Number	Country	Tons
1	South Africa	467
2	Australia	113
3	South Korea	103
4	Norway	85
5	India	68
6	Spain	48
7	France	48
8	Russia	23

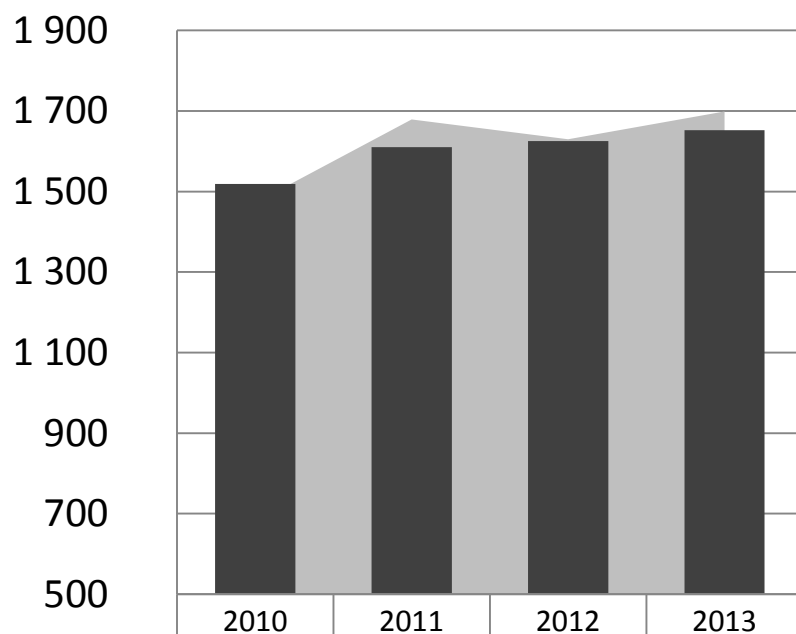
- **South Africa is the leading HC FeMn exporter, even if the country experienced difficulties with electricity supply.**





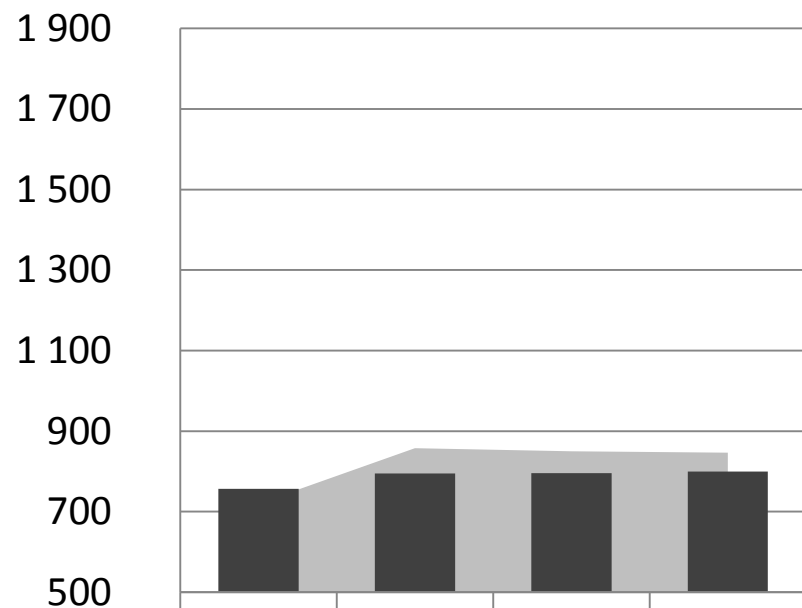
## World Ref FeMn market was balanced in 2013

### World Ref FeMn Production (in 000s metric tonnes)



■ Ref FeMn Cons	1 472	1 679	1 630	1 699
■ Ref FeMn Prod	1 519	1 610	1 625	1 652

### World Ref FeMn Production (excluding China) (in 000s metric tonnes)



■ Ref FeMn Cons	720	858	850	847
■ Ref FeMn Prod	757	795	795	800

## Ref FeMn Top 10 Net Importers 2013 (in 000s metric tonnes)

Number	Country	Tons
1	United States	71
2	Germany	57
3	Canada	36
4	Brazil	29
5	India	24
6	Italy	22
7	Russia	19
8	Turkey	17
9	Sweden	16
10	Poland	12

- Ref FeMn imports in USA represented around 12% of World Imports during 2013.

## Ref FeMn Top 6 Net Exporters 2013 (in 000s metric tonnes)

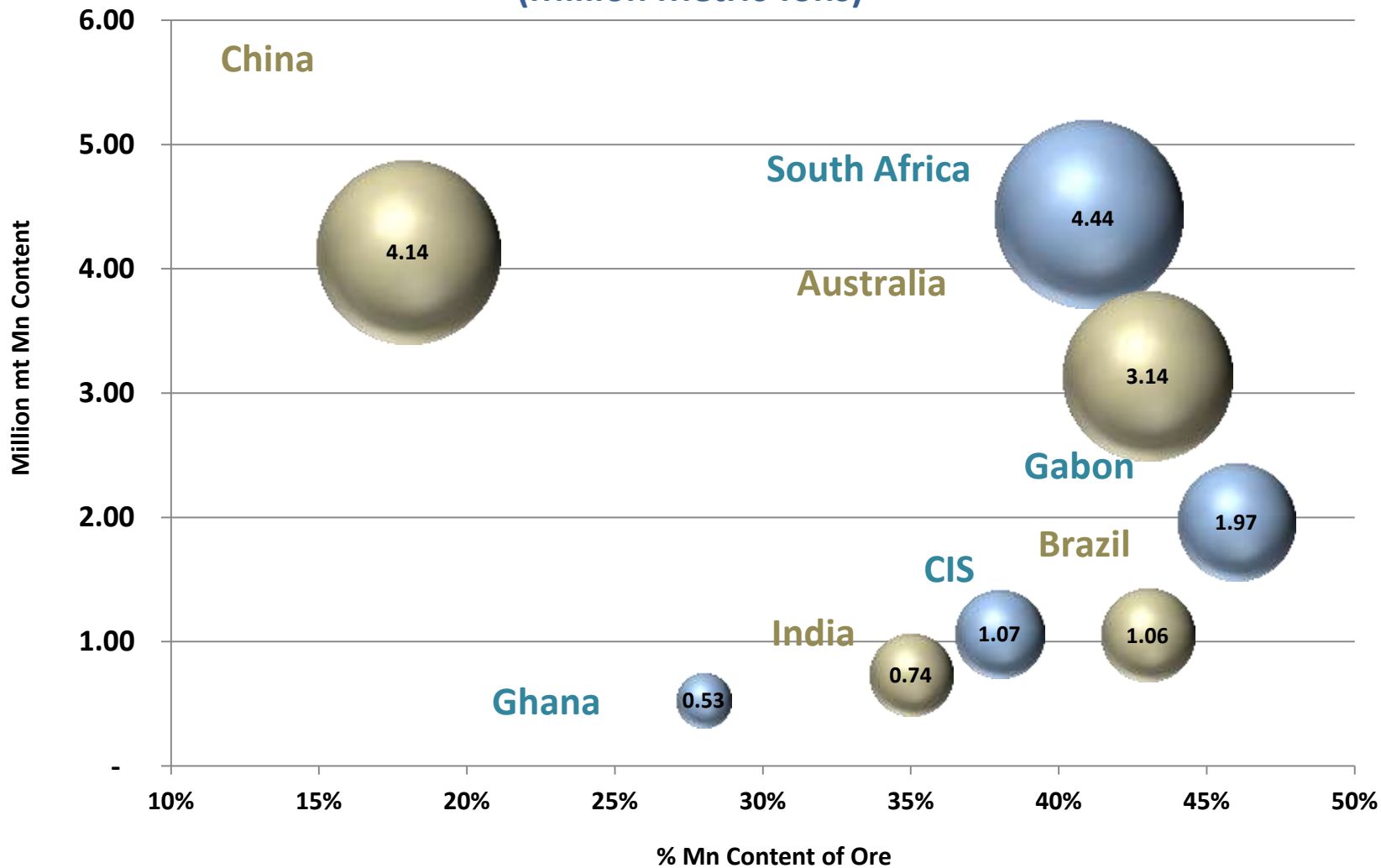
Number	Country	Tons
1	Norway	211
2	South Africa	94
3	South Korea	73
4	Spain	15
5	Mexico	9
6	France	8

- Norway, South Africa and South Korea represented 37%, 16% and 14% of the Ref FeMn deduced exports in the World in 2013.

# Mn Ore

# Mn Ore Production

## 2013 Mn Ore Production in Mn Content (Million Metric Tons)

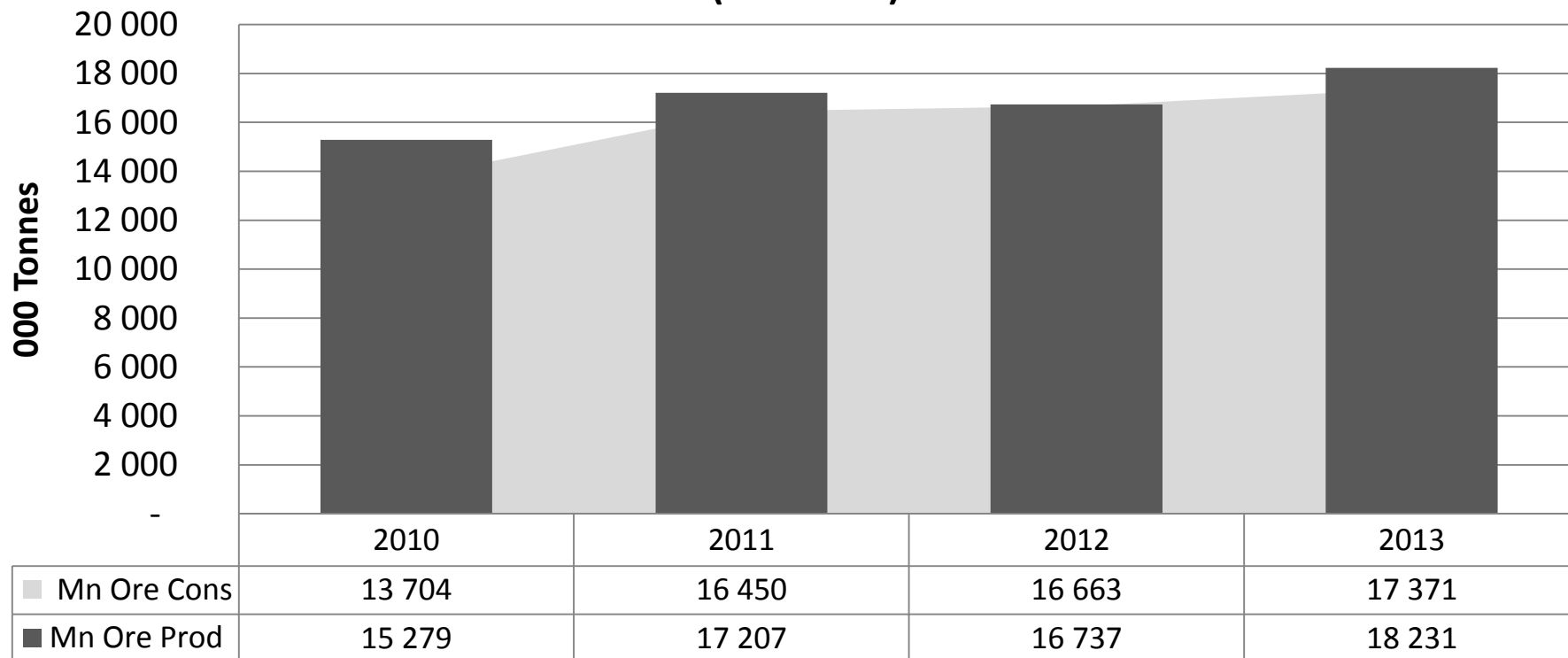


# Mn Ore Supply - Demand

**Mn ore production increased 4% in 2013 vs. 2012**

**The African mines showed an increase of 24% vs. 2012 while China, the most important consumer of Mn Ore, raised its consumption by 12% vs. 2012**

**Mn Ore Production and Consumption in Mn Content  
(in tonnes)**



# Chinese Mn Ore imports

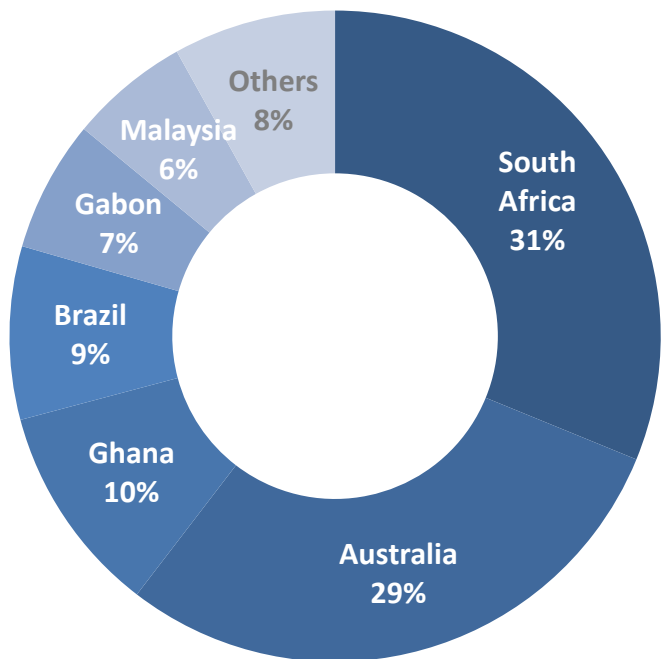


**Chinese Mn Ore imports increased 34% in 2013 vs. 2012**

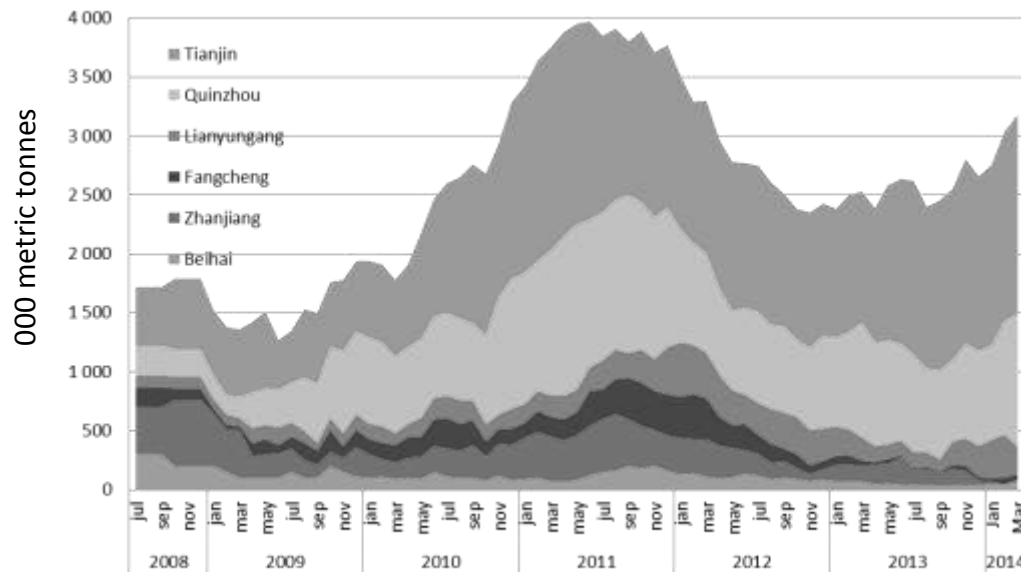
**Chinese Mn port stocks started to increase in mid-2013. The demand from the Mn Ferroalloy sector was weak at the end of 2013.**

**Mn Ore imports to China during 2013  
(in Million metric tonnes)**

**16.63 Million Metric Tonnes**



**Mn Ore Port Stocks in China**



# Major Mn Ore Projects in Africa



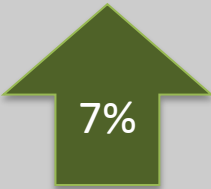

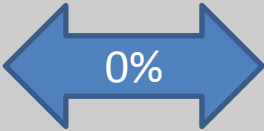
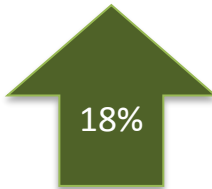



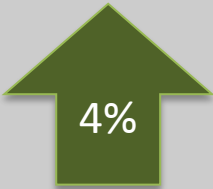

Company	Mine
Assmang	Gloria, capacity expansion of 600,000 t
Jupiter, Ntsimbintli and OMH	Tshipi Borwa, 2.4 mtpy of ore, launched in late 2012
Kudumane Manganese Resources/AML	Kudumane, new 1.5 mtpy mine (surface mining method is applied, in 2019 underground mining is to start as well); capacity to grow to 2.5 mt
BHP Billiton	Wessels, capacity expansion (up 500,000 tpy to 1.5 mtpy ) came on stream in Dec. 2013)
Kalagadi Resources	Coega Industrial Development Zone, new 3 mtpy ore mine and 2.4 mtpy sintering plant
Aquila Resources	Avontuur Manganese project: ore is to be mined from surface initially, then underground mining to take over. Mn ore production is to average 1.5 mtpy
Pan African Minerals	Project of new 100 million tonnes Mn Mine (investment: 1 billion usd)

- **With the new Mn projects in South Africa, the country will continue leading in Mn Ore production.**
- **The development of an efficient transportation system and new port terminals are essential for South African companies to market their Mn Ore.**

# Conclusion



## China's Effect on the Steel Sector and Mn Value Chain

	China	World	World Excluding China
Steel (production)	 7%	 3%	 0%
Mn Alloys (production)	 18%	 8%	 4%
Mn Ore (consumption)	 12%	 4%	 6%

# Conclusions



## Steel

- Chinese Steel output increased 7% in 2013 vs. 2012; China remains the world's biggest producer.
- Europe experienced a decrease in Steel Output because of its slow economic recovery

## Mn Alloys

- China produced 47%, 52% and 68% of the world 's HC FeMn, Ref FeMn and SiMn respectively.
- If we exclude China from our analysis, SiMn production showed the most important decrease of the Mn Alloys (6.5% vs. 2012). The high electricity tariffs in the CIS and North America were the main factors for the decline.
- Things we need to watch for in 2014:
  - Electricity prices around the world
  - What will happen in the CIS region (speculation, production problems...)
  - Indian rupee movements (as the main exporter of SiMn)
  - US market (as the world's main importer of Mn ferroalloys)
  - The development of the new Mn ferroalloy projects (Malaysia, etc.)

## Mn Ore

- Mn ore production increased 4% in 2013 vs. 2012
- The African mines showed the an increase of 24% vs. 2012 output
- China, the most important consumer of Mn Ore, raised its consumption 12% vs. 2012
- Things we need to watch for in 2014:
  - Development of the new Mn ore projects in South Africa
  - Consumption of Mn Ore inside China

# IMnI Mkt Research, Statistics & Publications

# IMnI's Statistics and Publications Portafolio



## Market Research & Statistics

Monthly Market Research

Monthly Trade Matrices

Special China Mkt Research Study

Special Indian Mkt Research Study

Monthly World Steel Production

Other Special Reports

## Publications

### China Weekly

- Economy & Steel
- Mn Ore and Alloys
- Mn Metal and EMD
- Statistics

### India Weekly

- Economy & Steel
- Mn Ore and Alloys
- Statistics

### Rest of World Weekly

- Mn news outside of India and China

**alberto.saavedra@manganese.org**  
**stats@manganese.org**