



“Importance of Latin America’s Contribution to the Global Supply of Copper, Lead, Zinc and Nickel”

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International Copper Study Group

International Nickel Study Group

2nd EU - Latin America Dialogue on Raw Materials

Cartagena, Colombia, 22-23 September 2015

INTERNATIONAL STUDY GROUPS

INTRODUCTION

- Shared headquarters in Lisbon, Portugal, since 2006
- Intergovernmental organizations consisting of member governments plus the European Union representing metals producing and using countries
- **International Lead and Zinc Study Group:** established in 1959, has presently 30 members
- **International Copper Study Group:** established in 1992, has presently 24 members
- **International Nickel Study Group:** established in 1990, has presently 15 members

STUDY GROUPS

MAIN OBJECTIVES & FUNCTIONS

- To conduct **consultations** and **exchanges of information** on the international copper, nickel, lead & zinc economies.
- To improve **statistics** on these metals.
- To increase **market transparency**.
- To undertake **studies** on issues of interest to the Groups.
- To consider special problems or difficulties that exist or may arise in these **metal's international economies**.

The Study Groups endeavour to provide its membership with the most accurate, comprehensive and timely **information** on capacities, production, usage, trade, stocks, prices, technologies, research and development, and other areas that may influence the supply and demand for **copper, nickel, lead & zinc**.

STUDY GROUPS

FORUMS FOR DISCUSSION

- **Markets:** forecasts of supply and demand for metals a year ahead
- **Trade:** monitoring of international trade in metals
- **Environmental policy:** sharing information on approaches to regulation
- **Industry Advisory Panel:** metals industry executives provide input to member governments
- Invite **observer countries, industry and observer organizations** such as UNCTAD, World Bank, UNIDO, Common Fund for Commodities and metals associations

ICSG Membership

- Membership open to any country involved in copper production, usage, or trade.
- 24 member governments (>80% of global copper industry)



ICSG MAIN PUBLICATIONS/OUTPUTS

Copper Bulletin (monthly): includes annual and monthly statistics, by country, on copper mine, smelter, refined and semis production, copper usage and trade, as well as stocks and exchange prices, providing a global view of supply and demand.

Statistical Yearbook : As above, covering the past 10 years.

Monthly Press Release on the state of the copper market (to be included in the email distribution list please contact mail@icsg.org)

World Copper Market Forecast: Prepared twice a year for the following two years.

Copper Factbook: The Factbook provides a broad overview of all facets of copper, from production to trade, usage, recycling and more. It is designed to promote copper and educate readers about the importance and contribution of copper to society. Available in ICSG Website, in PDF and in hard copies.

ICSG MAIN PUBLICATIONS/OUTPUTS

Directory of Copper Mines & Plants (semi-annual): The Directory of Copper Mines and Plants highlights current capacity and provides a five year outlook of forecasted capacity for over 1,000 existing and planned copper mines, smelters and refineries on a country by country basis. Salient details for each operation are included and the Directory separates operations between Operating, Developing, Exploration and Feasibility stages.

Directory of Copper & Copper Alloy Fabricators - First Use (annual): This directory provides a global overview of companies and plants involved in the first use of copper. First users are semis fabricators that process refinery shapes into semi-finished copper & copper alloy products. The Directory covers wire rod plants, ingot makers, master alloy plants, brass mills, and electrodeposited copper foil mills.

ICSG Online Statistical Database: The ICSG maintains one of the world's most complete historical and current databases with statistics on copper production capacities, data on copper production, consumption, stocks, prices, recycling and trade for copper products. The database is accessed via ICSG website. Specific data extraction tools enable users to download the data they require with the layout best suited for their analysis into an Excel spreadsheet.

ILZSG Membership

- Membership open to any country involved in lead and/or zinc production, usage, or trade.
- 30 members (>85% of global lead/zinc industry):

 **Australia**

 **Belgium**

 **Brazil**

 **Bulgaria**

 **Canada**

 **China**

 **Finland**

 **France**

 **Germany**

 **India**

 **Iran**

 **Ireland**

 **Italy**

 **Japan**

 **Korea Rep.**

 **Mexico**

 **Morocco**

 **Namibia**

 **Netherlands**

 **Norway**

 **Peru**

 **Poland**

 **Portugal**

 **Russian Fed.**

 **Serbia**

 **Sweden**

 **Thailand**

 **Turkey**

 **United States**

 **European
Community**

ILZSG Main Publications

50% Discount
For companies
based in member
countries

- **Lead and Zinc Statistics: Monthly Statistical Bulletin (including access to Interactive Statistical Database – data 1988-2014)**
- **Lead and Zinc Interactive Mine and Smelter Database**
- **Lead and Zinc New Mine and Smelter Projects 2015**
- **Zinc Recovery from Electric Arc Furnace (EAF) Dust 2015**
- **Lead-Acid Industrial Batteries 2015**
- **The Chinese Primary and Secondary Lead Metal Sector 2014**
- **Environment and Health Controls on Lead 2014**
- **Environment and Health Controls on Zinc 2014**
- **Risk Factors in Developing Mineral and Metal Projects 2014**
- **World Directory: Lead and Zinc Mines 2014**
- **World Directory: Primary & Secondary Zinc Plants 2014**
- **The By-Products of Copper, Zinc, Lead and Nickel**
- **China Lead Acid Battery Market (prepared for ILZSG by BGRIMM)**
- **China Zinc Recycling Industry (prepared for ILZSG by BGRIMM)**

INSG Member Countries

 Australia

 Brazil

 Cuba

 European Union

 Finland

 France

 Germany

 Greece

 Italy

 Japan

 Norway

 Portugal

 Russian
Federation

 Sweden

 United
Kingdom

INSG Main Publications

Up to 50% discount
For companies
based in member
countries

- **World Nickel Statistics - Monthly Bulletin and Yearbook** (includes access to Online Statistical Database)
- **World Directory of Nickel Production Facilities 2015** (July 2015)
- **Primary Nickel Usage: New Frontiers in China** (March 2015, prepared for INSG by Antaiko)
- **Nickel – A Surface Technology Material 2014** (July 2014, prepared for INSG by Heinz Pariser)
- **China's Nickel Mine and Refined Nickel Production 2014** (March 2014, prepared for INSG by BGRIMM)
- **Cobalt as a By-Product of Copper and Nickel** (March 2014)
- **Report on Taxation and Fiscal Incentives of Copper, Zinc, Lead And Nickel** (January 2014)
- **Report on Risk Factors** (January 2014)
- **Other publications**



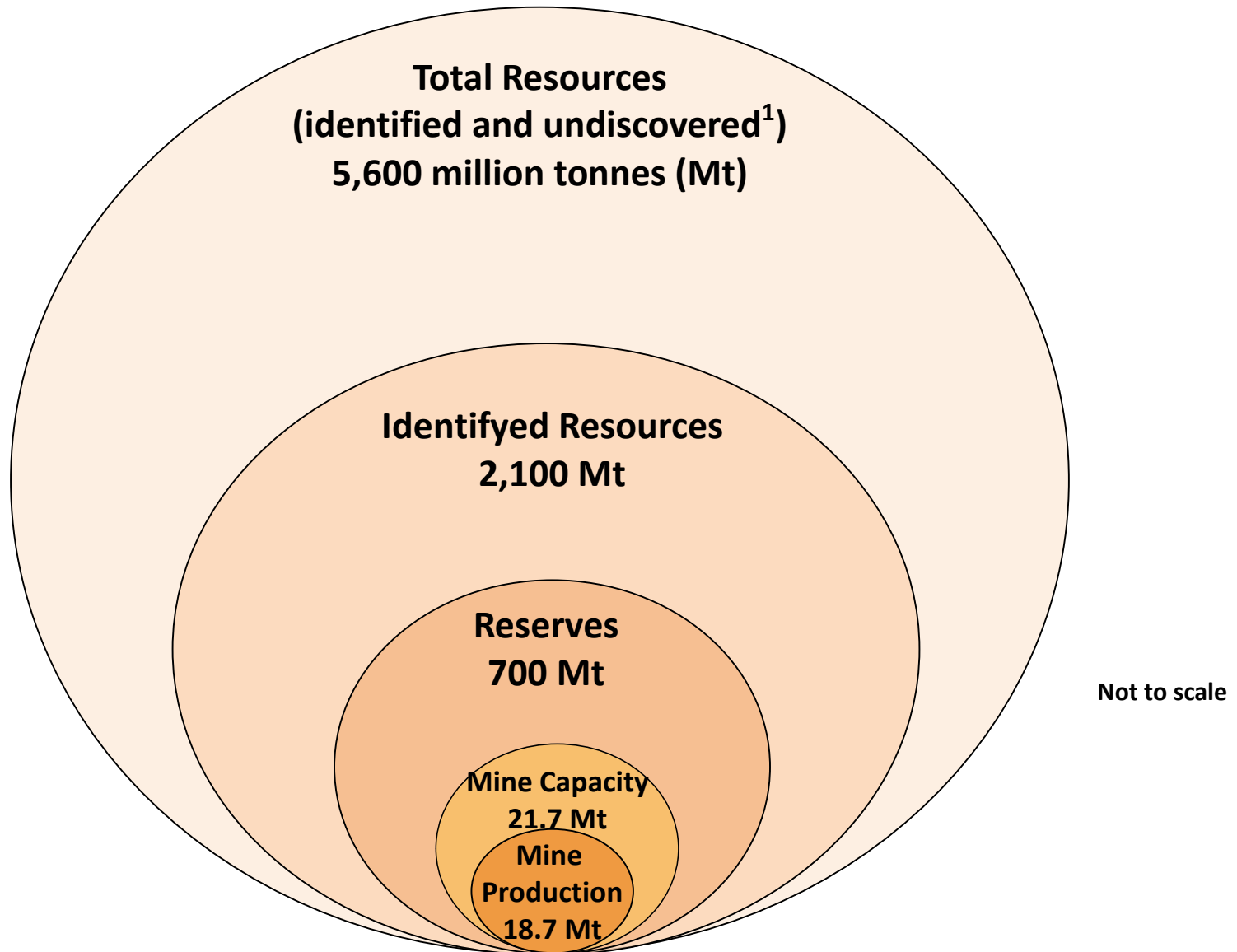
Next Study Group Meetings in Lisbon, Portugal

- **5-6 October 2015** International Copper Study Group
- **5-6 October 2015** International Nickel Study Group
- **7 October 2015** Joint Study Groups Seminar *“Mining and Metals in Latin America: Current Status and Future Prospects”*
- **8-9 October 2015** International Lead and Zinc Study Group

Review and Outlook for Copper

2014 World Copper Reserves & Mine Production

(contained copper metal)

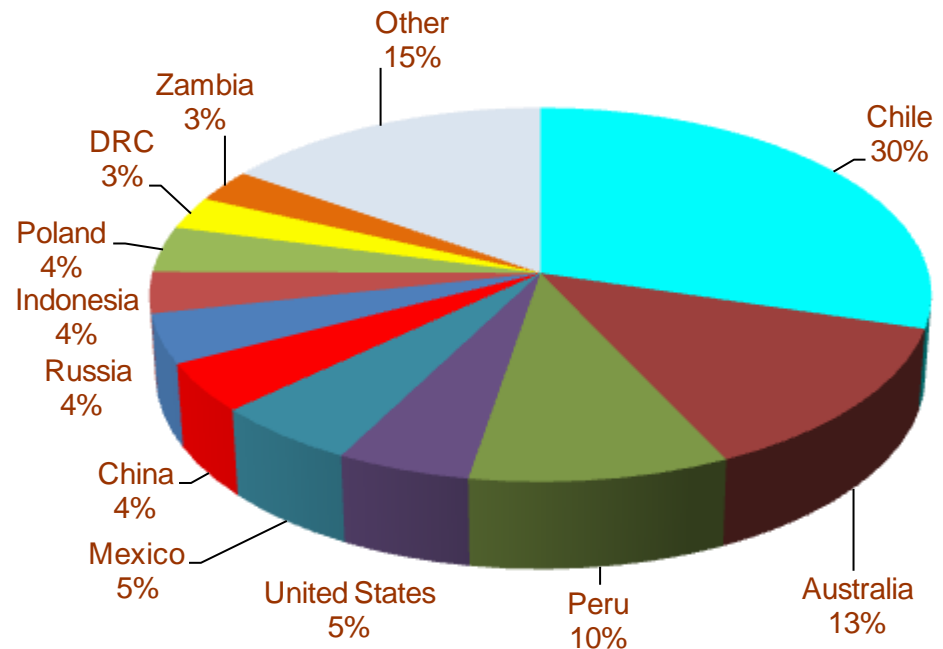


1/ Undiscovered resources not including deep sea nodules and land-based and submarine massive sulfides

Source: USGS (resources/reserves data) and ICSG (capacity/production data)

World Copper Reserves 2014 Breakdown

- Despite increased consumption of copper produced from ore in recent years, increases in reserves have grown more, and there is more copper available to the world than at any other time in the past.



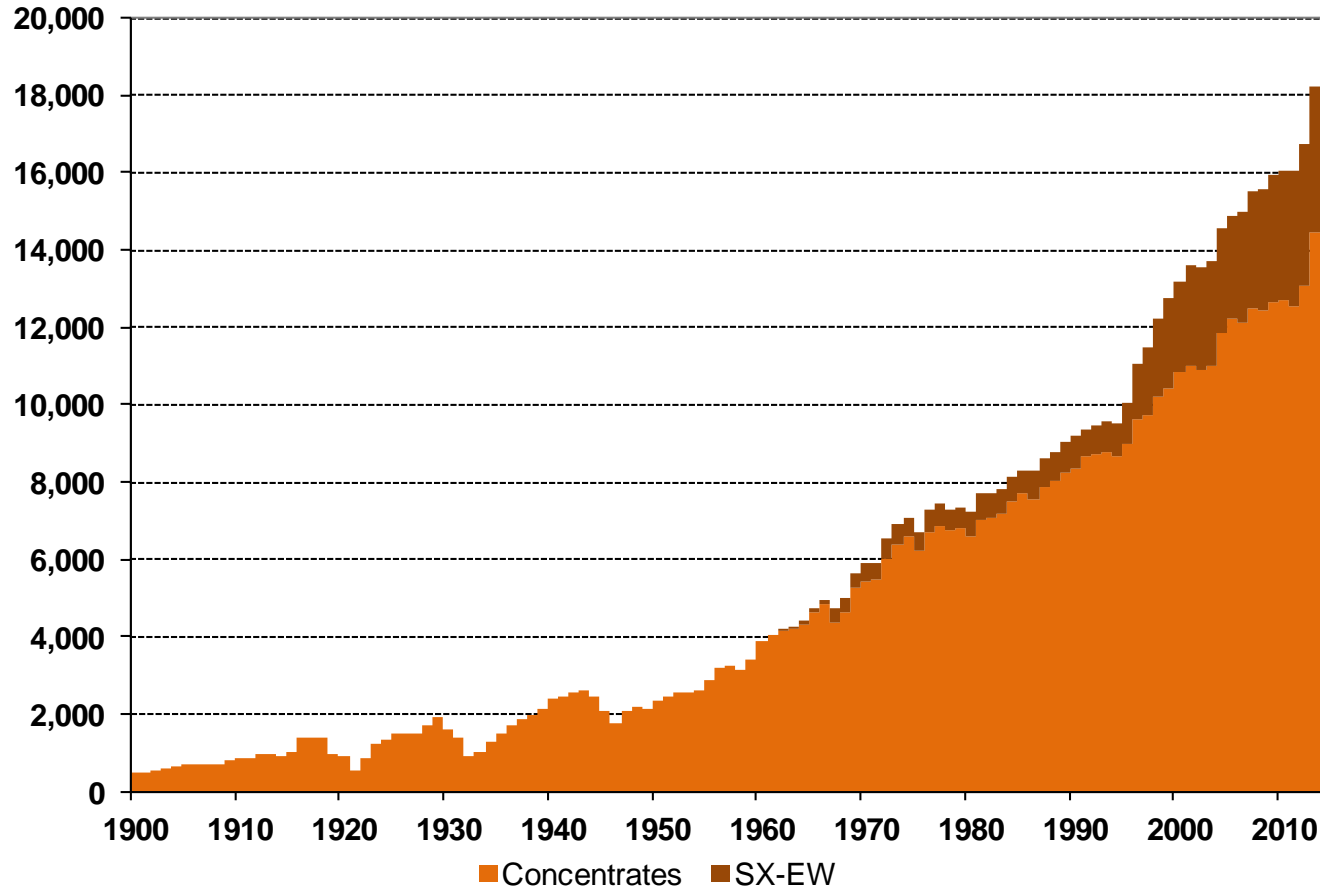
Source: USGS

Chile, Australia and Peru account for half of the current World Copper Reserves reported by USGS

World Copper Mine Production, 1900-2014

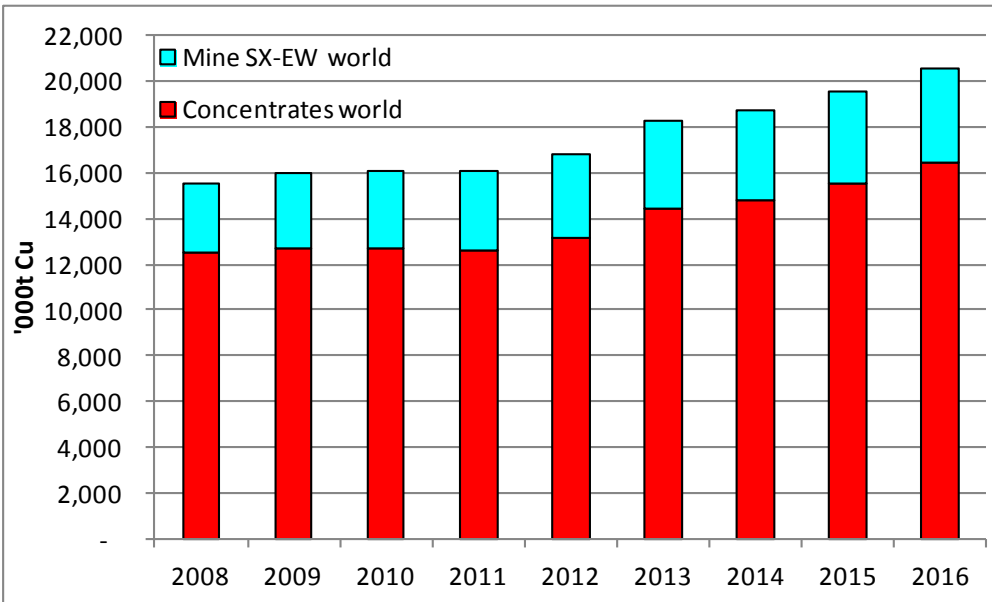
(thousand metric tonnes copper)

Source: ICSG



Average annual grow rate in the last century: 4%
Average annual grow rate in the last decade: 2.3 %
Average annual grow rate in this decade: 3.3%

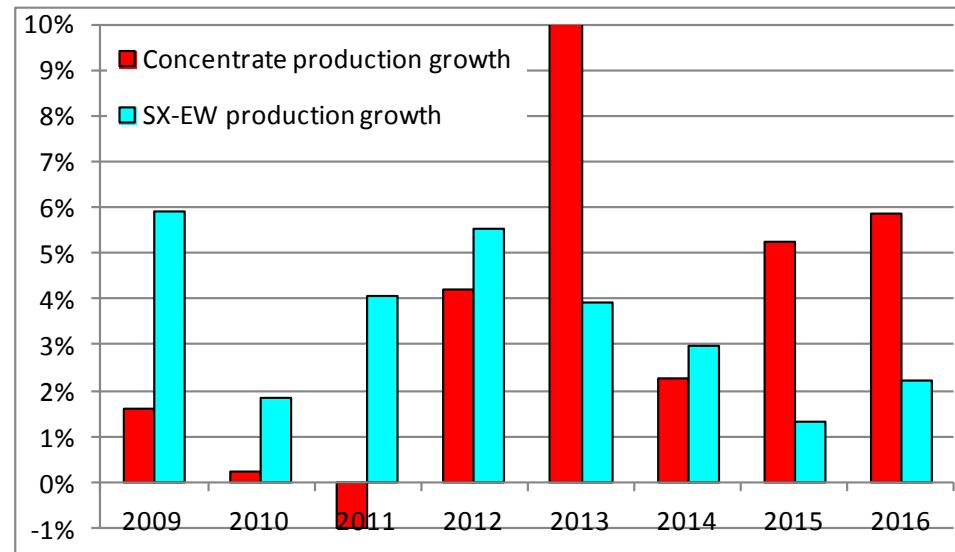
2015/16 World Copper Mine Production Forecast



➤ After a period of almost stagnation in the startup of new mines, as most project were delayed due to the crisis, since last years a number of new mine projects have/will start to come on stream and will contribute to higher growth in world mine production in 2015/2016 (eg. Salobo II, Sierra Gorda, Caserones, Sentinel, Las Bambas, Constancia)

➤ World copper mine production expected to grow by around 5% in 2015 and 2016, reaching 19.5 Mt copper this year and increasing to 20.6Mt in 2016.

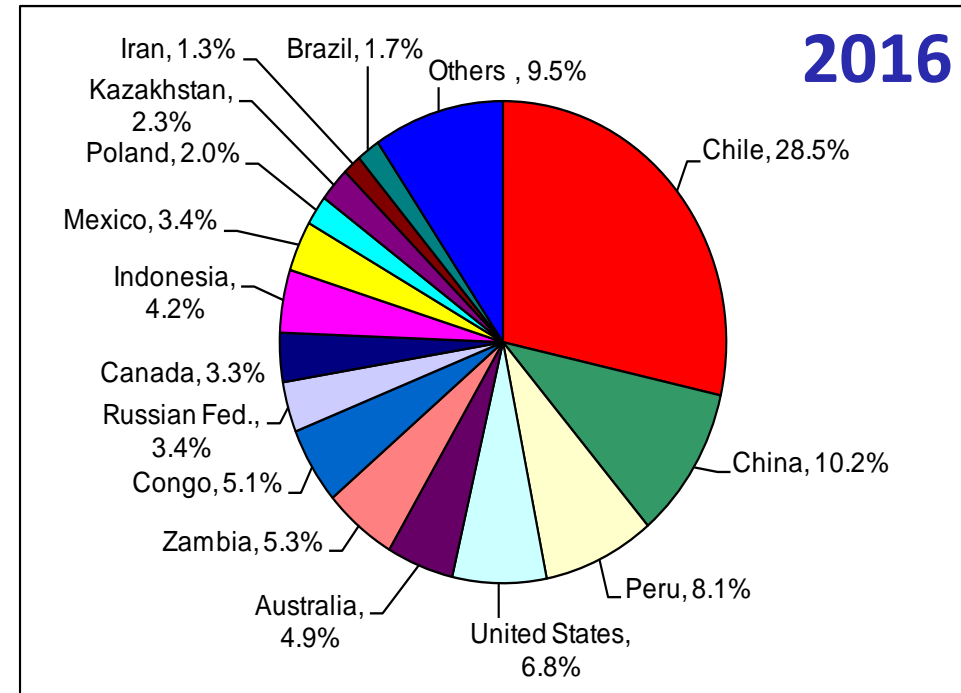
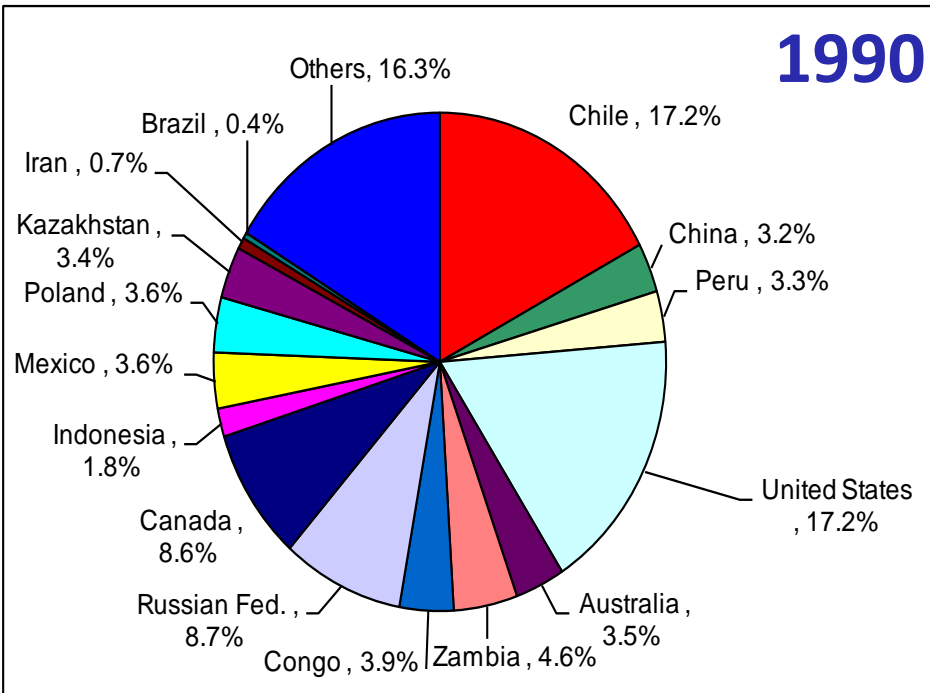
➤ Most of the projects starting in this period are producing concentrates which combined with the recovery in concentrate production in Indonesia will lead to world concentrate production growth rates much higher than SX-EW



Mine Projects and Expansions for 2015/2016

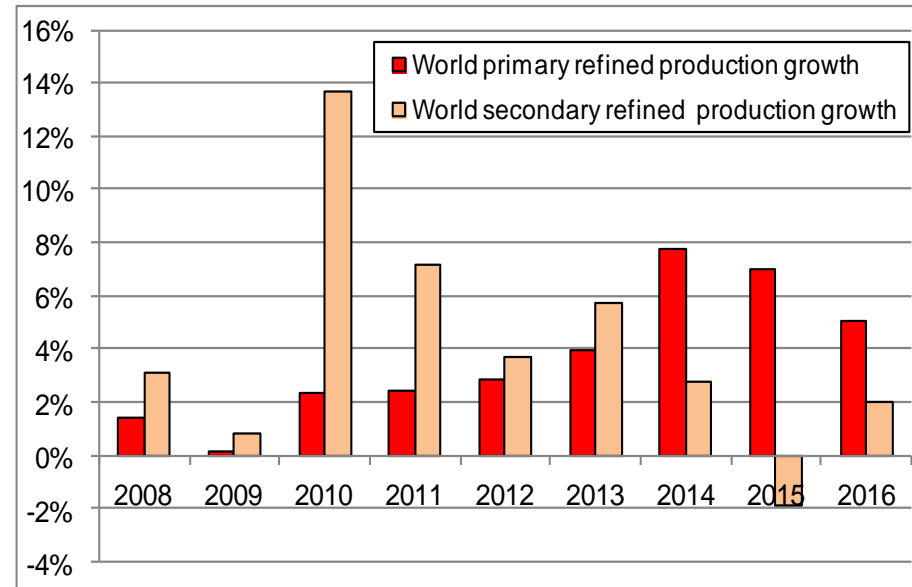
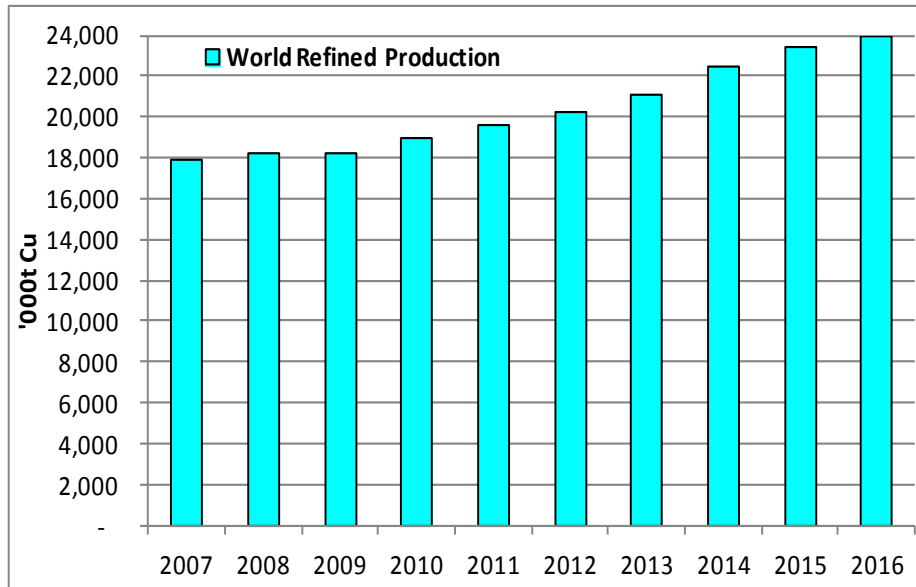
Country	2015	2016
Armenia	Teghout 30kt (Conc.), started Jan 2015	
Australia		Pilbara cap 20kt (conc). Hillside 75kt Cu (Conc.)
Canada	Red Chris 40kt (conc), production Feb 2015	
Chile	Antucoya 85kt (SXEW)	
China	Jia Ma Copper Mine exp 12 to 50kt (Conc.), Shaxi 16kt (conc),	Xietongmen 56kt (Conc.) , Yangla/ Pulang exp 20 to 70 kt (Conc.)
DRC	Kinsenda 26kt (conc), Kamoto gradual exp from 160kt in 2014 and 310kt by 2016 (SXEW), Kolwezi tailings 70kt (SXEW),	Kamoto gradual exp 90 in 2013 to 310kt by 2016 (SXEW)
Eritrea		Asmara 29kt (Conc.)
Indonesia	Wetar cap 28 kt (SX-EW), end 2015	
Iran		Sungun exp 45 to 90 kt (conc.), Darehzar 26kt (Conc.)
Israel		Arava Mines 22kt (SXEW)
Kazakhstan	Aktogay 15kt (SX-EW), Bozhakol 100kt (Conc.)	
Laos	Phu Kham exp 65 to 75kt (Conc.)	
Mexico	Boleo 56kt (SX-EW), Buenavista exp 125 to 313kt (Conc.)	
Myanmar	Monywa exp 40 to 50kt (SX-EW)	Letpadaung 100kt (SXEW) year-end
Namibia	Tschudi 17kt (SXEW)	
Peru	Constancia 118kt (Conc.) started end 2014 with production in 2015	Las Bambas 400kt (Conc.), Toquepala exp 120 to 200kt (conc.) Cerro Verde expansion approx 270ktpy Cu
Saudi Arabia		Jabal Sayid 53kt (Conc.)
Spain	Aguas Tenidas exp 30 to 45kt (Conc.)	Rio Tinto Mines 37kt (Conc.)
USA		Pumpkin Hollow phase 1, cap 34kt (Conc.)
Zambia	Ichimpe 35kt (SX-EW), Sentinel 150 kt expanding to 300kt (conc) started end 2014 but prod only 2015, Chingola Refractory Ore 50kt (SXEW),	Kangaluwi Chisawa 35kt (SXEW), Mkushi 20kt (conc),
Ramp-up mines	RAMP-UP of projects that started previous years (inclu. Oyu Tolgoi, Sierra Gorda, Caserones, Toromocho, Salobo)	RAMP-UP of projects that started previous year

Distribution of Copper Mine Production by Country (1990 vs 2016)



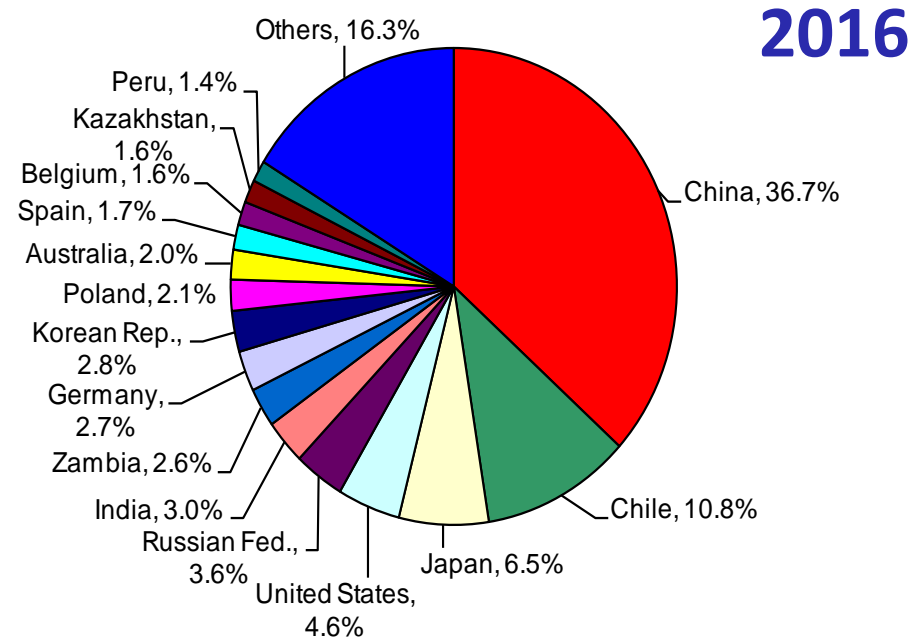
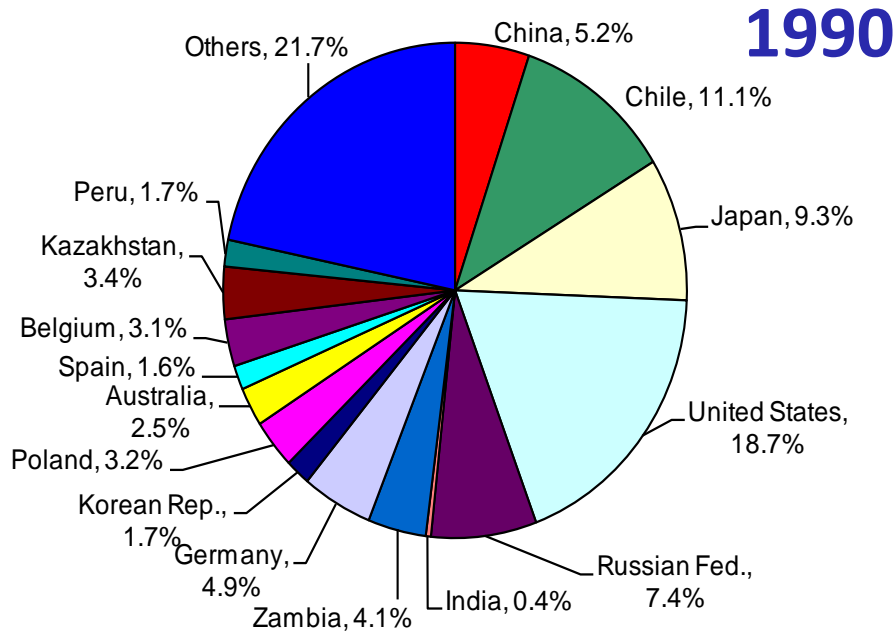
- Chile to continue the biggest copper mine producer in the world
- United States losing share and China and Peru increasing its share
- Africa maintaining the same share at around 11% but more than doubling production to 2.5Mt copper

2015/16 World Refined Copper Production Forecast



- Chinese refined production is continuing its expansion trend although at lower growth levels
- Increase availability of concentrate from expanded mines or new projects boosting primary electrolytic production in 2015/2016
- Tight availability of scrap constraining secondary refined production
- SX-EW expansion in Africa and Mexico contributing to world growth
- After strong growth of 7% in 2014, world copper refined production expected to grow by around 4% and 3% respectively in 2015 and 2016

Distribution of Copper Refined Production by Country (1990 vs 2016)



- Strong growth in Chinese refined production, up from 5% of world share in 1990 to 37% by 2016
- United States and Japan losing share
- Africa maintaining the same share at around 7% but more than doubling production to 1.7Mt copper

2015/2016 World Refined Copper Usage Forecast

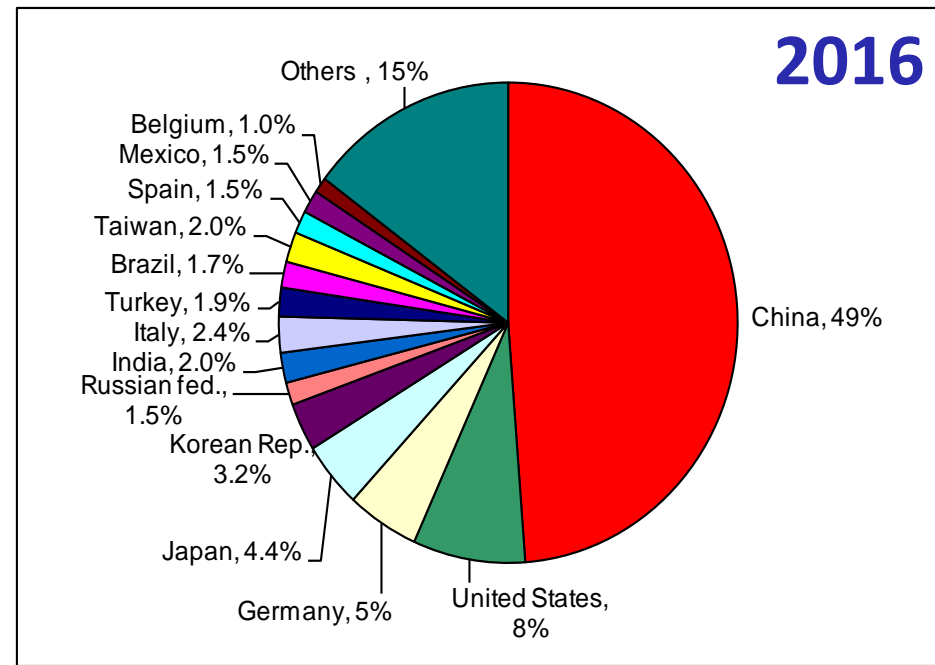
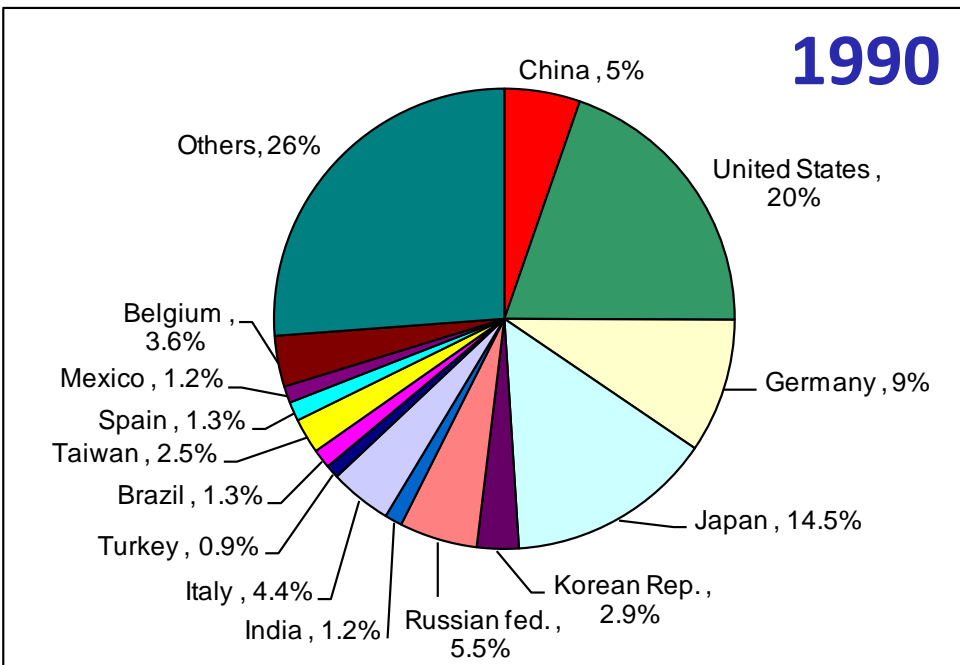
REGIONS (^{'000T Cu})	COPPER USAGE								
	2014	growth		2015	growth		2016	growth	
		(t)	(%)		(t)	(%)		(t)	(%)
Africa	247	0	-0.1%	268	21	8.4%	279	12	4.3%
N.America	2,316	-1	0.0%	2,358	42	1.8%	2,403	45	1.9%
Latin America	579	-33	-5.4%	592	13	2.3%	616	23	4.0%
Asean-10 and Oceania	898	-18	-2.0%	947	49	5.5%	996	49	5.2%
Asia ex Asean/CIS	14,491	1,447	11.1%	14,690	199	1.4%	15,233	543	3.7%
Asia-CIS	102	1	1.0%	103	1	0.5%	103	1	0.5%
EU	3,179	182	6.1%	3,214	35	1.1%	3,247	33	1.0%
Europe Others	1,099	-54	-4.7%	875	-224	-20.4%	880	6	0.6%
WORLD	22,910	1,524	7.1%	23,046	136	0.6%	23,757	711	3.1%
WORLD ex-China	11,924	198	1.7%	11,949	25	0.2%	12,161	212	1.8%

➤ Following growth of around 7% in apparent usage in 2014, ICSG expects world apparent refined usage in 2015 to increase by only 0.6% mainly because, although industrial demand growth in China is expected at around 4.5-5%, apparent demand in China is expected to increase by 1%. On the other hand, usage in the rest of the world is expected to remain essentially flat.

➤ Lower usage growth in some regions will offset higher growth in others and China apparent usage is increasing by only 0.6% after an apparent growth of 14% in 2014

➤ In 2016, with anticipated improvement in world economy, world apparent refined usage is expected to grow by around 3% with underlying Chinese industrial demand growth expected at 5%. Usage in the rest of the world is expected to increase by about 2%.

Distribution of Copper Refined Usage by Country (1990 vs 2016)

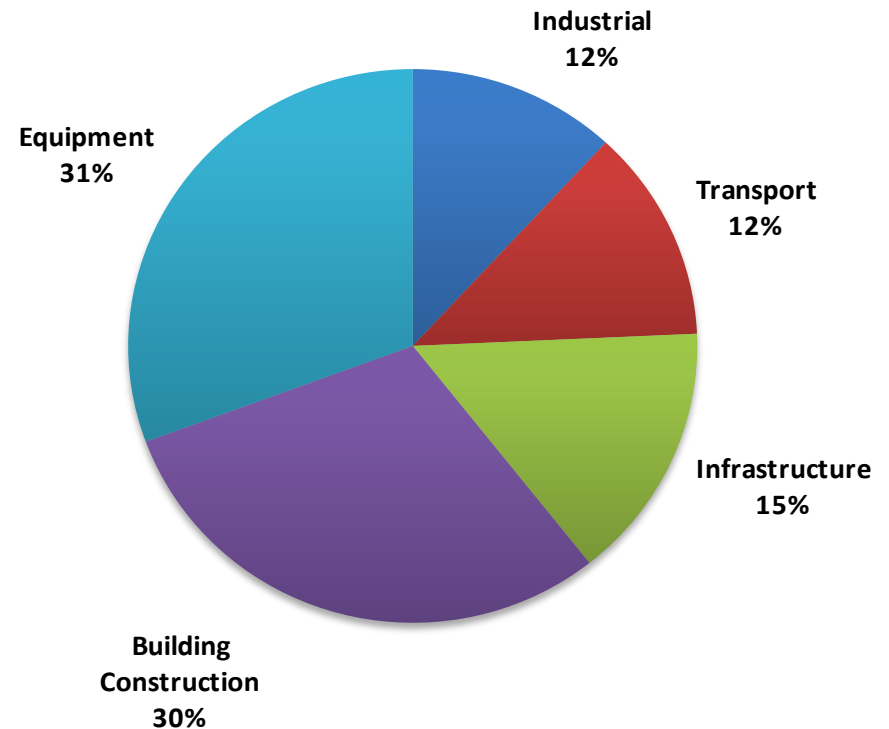
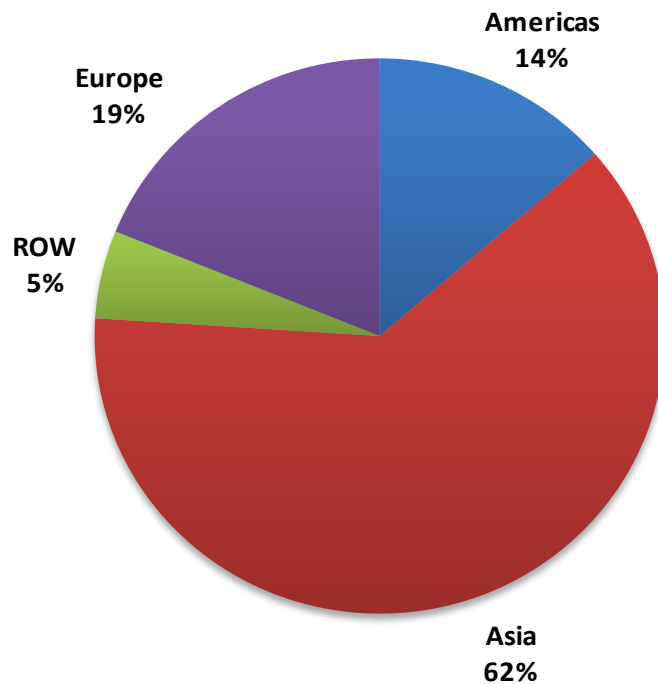


- Strong growth in Chinese apparent refined usage, up from 5% of world share in 1990 to around 45% by 2016
- EU share in world usage declining from 29% in 1990 to 13% in 2016
- United States share in world usage declining from 20% in 1990 to 8% in 2016
- Japan share in world usage declining from around 15% in 1990 to 5% in 2016

Major Uses of Copper: Usage by Region and End Use Sector, 2014

Basis: copper content, thousand metric tonnes

Source: International Wrought Copper Council (IWCC) and International Copper Association (ICA)



ICSG World Copper forecast (Apr 2015) – summary table

FORECAST TO 2016									
Thousand tonnes Cu									
REGIONS	MINE PRODUCTION			REFINED PRODUCTION			REFINED USAGE		
(1000 t)	2014	2015	2016	2014	2015	2016	2014	2015	2016
Africa	1,931	2,212	2,512	1,362	1,515	1,684	247	268	279
N.America	2,598	2,792	2,912	1,809	1,905	1,970	2,316	2,358	2,403
Latin America	7,562	7,887	8,407	3,362	3,331	3,335	579	592	616
Asean-10 / Oceania	1,725	1,958	2,377	999	999	1,098	898	947	996
Asia ex Asean/CIS	2,545	2,733	2,955	10,789	11,729	12,425	14,491	14,690	15,233
Asia-CIS	578	625	675	370	437	485	102	103	103
EU	847	844	864	2,741	2,723	2,708	3,179	3,214	3,247
Europe Others	924	926	924	1,057	1,085	1,100	1,099	875	880
TOTAL	18,710	19,976	21,625	22,487	23,723	24,804	22,910	23,046	23,757
World adjusted 1/ 2/	18,710	19,533	20,536	22,487	23,410	23,985	22,910	23,046	23,757
% change		4.4%	5.1%		4.1%	2.5%		0.6%	3.1%
World Refined Balance							-423	364	228
World Refined Balance Adjusted for Chinese Bonded Stocks Change 3/							-430		

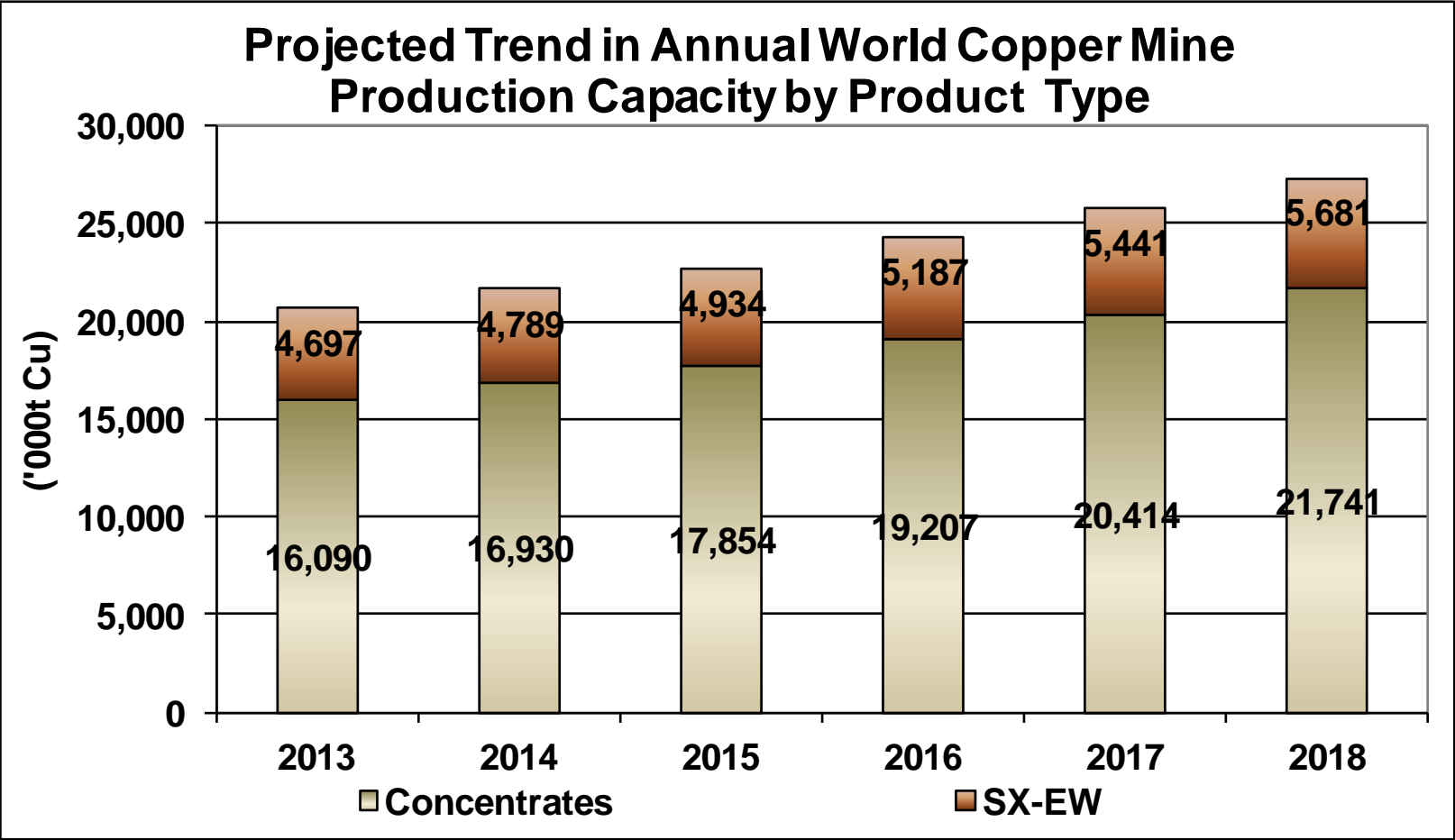
1/ Based on a formula for the difference between the projected copper availability in concentrates and the projected use in primary refined production;

2/ based on average ICSG forecast deviations for preceding 5 years. 3/ Estimated Chinese bonded stock changes; averaged from multiple sources

ICSG projections for 2015 indicate that the market is expected to return to surplus in 2015 . For 2016, the copper market may show a second consecutive production surplus relative to demand. However this is expected to be lower as demand growth outpaces production growth.

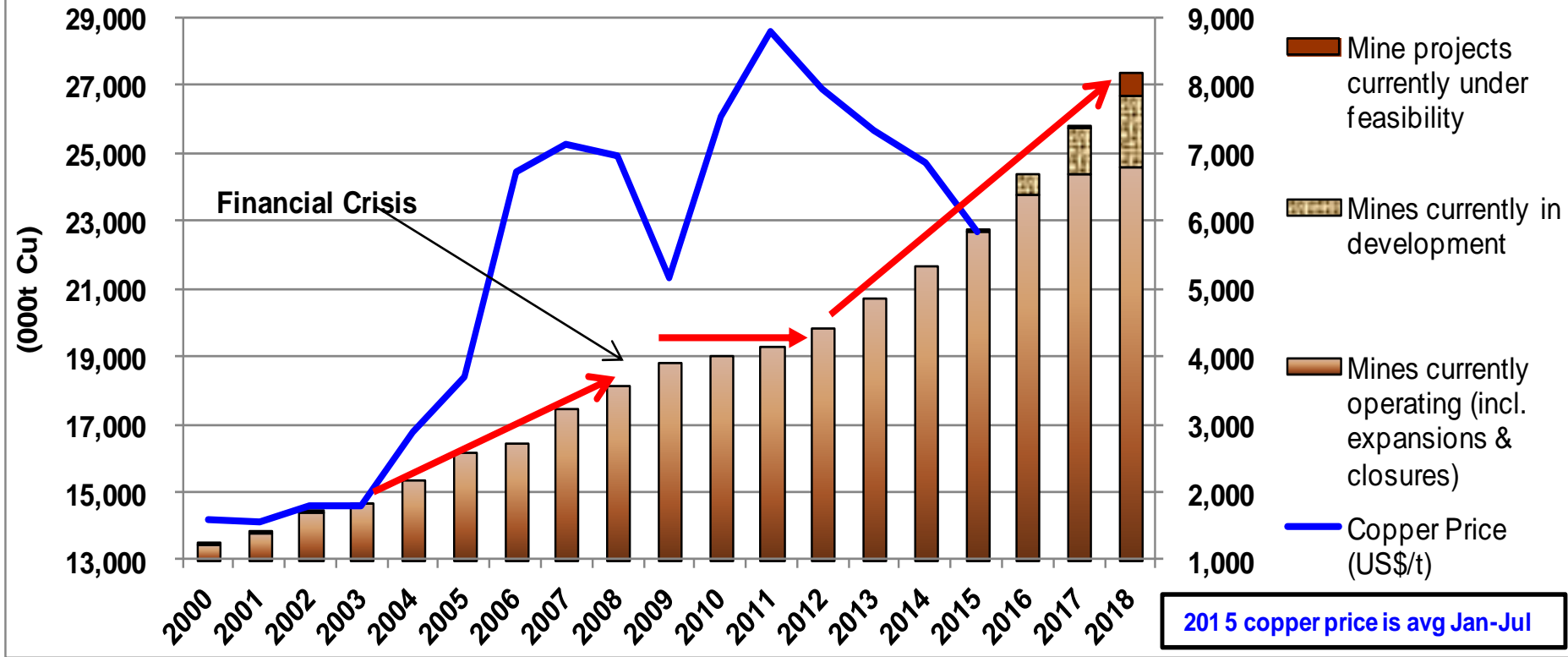
The International Copper Study Group recognizes that numerous factors create significant uncertainty, and that the global market balances could vary from those projected currently

The data presented in ICSG Directory of Copper Mines and Plants reflects copper production capacity or capability, not necessarily meaning effective production rates or production forecasts. Actual production may in fact differ significantly from capacity as many factors may negatively impact output levels.



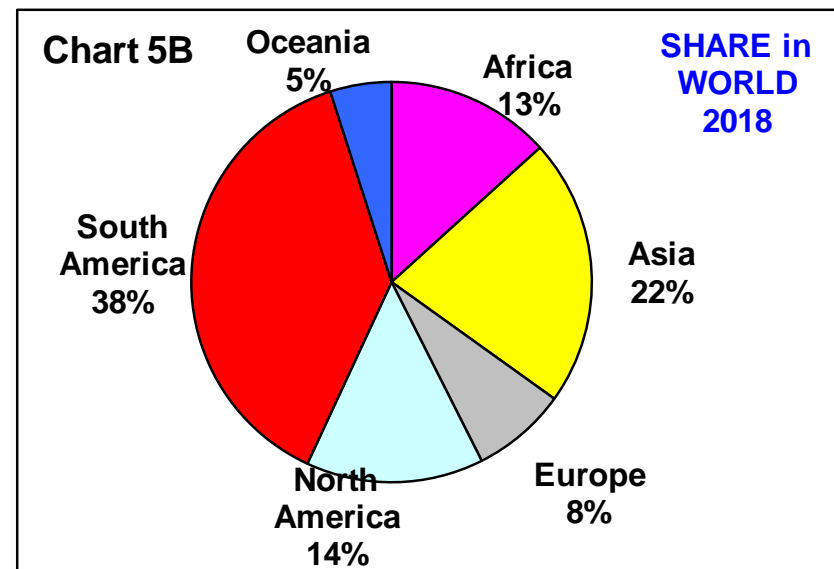
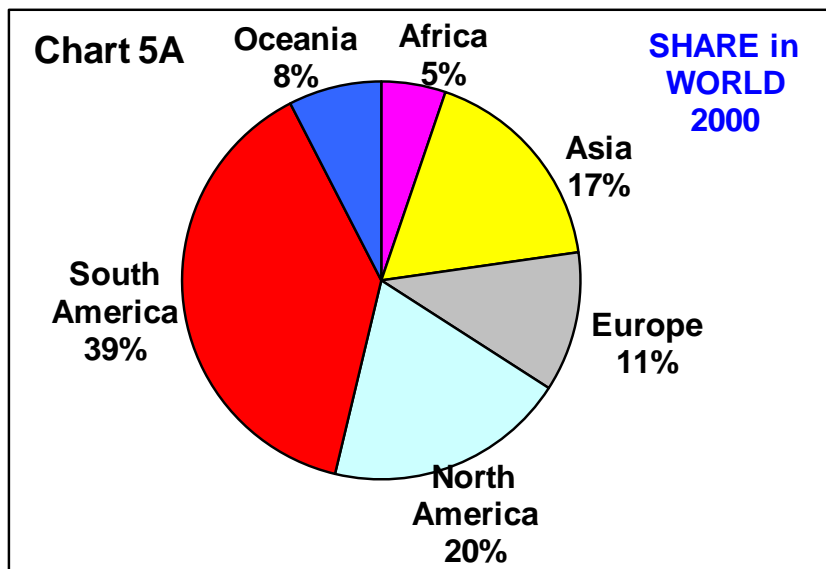
- World mine production capacity expected to grow to 27.4 Mt of copper in 2018 from 21.7 Mt in 2014.
- Concentrate to grow to 21.7Mt and SX-EW to 5.7 Mt.

World Copper Mine Production Capacity Trend vs Copper Price



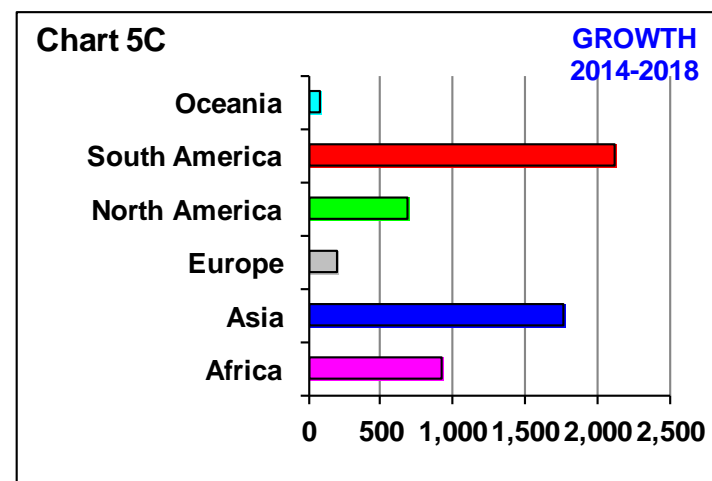
The development of announced mine projects depends on numerous factors. Delays in start-up of projects are common and cancellation may also occur. One of the determinant factors in the development of a project is the copper price.

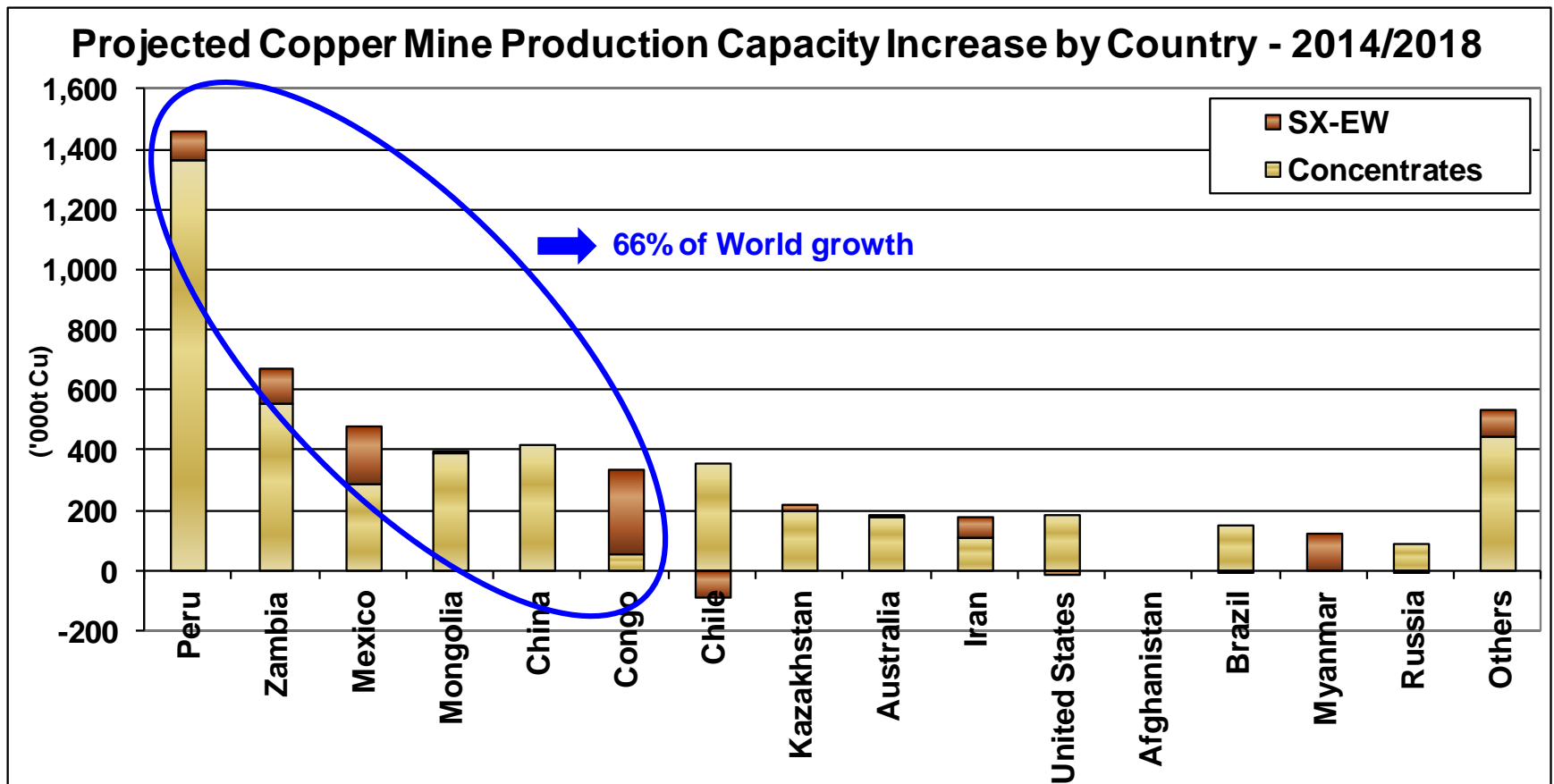
Regional Trend in World Copper Mine Production Capacity



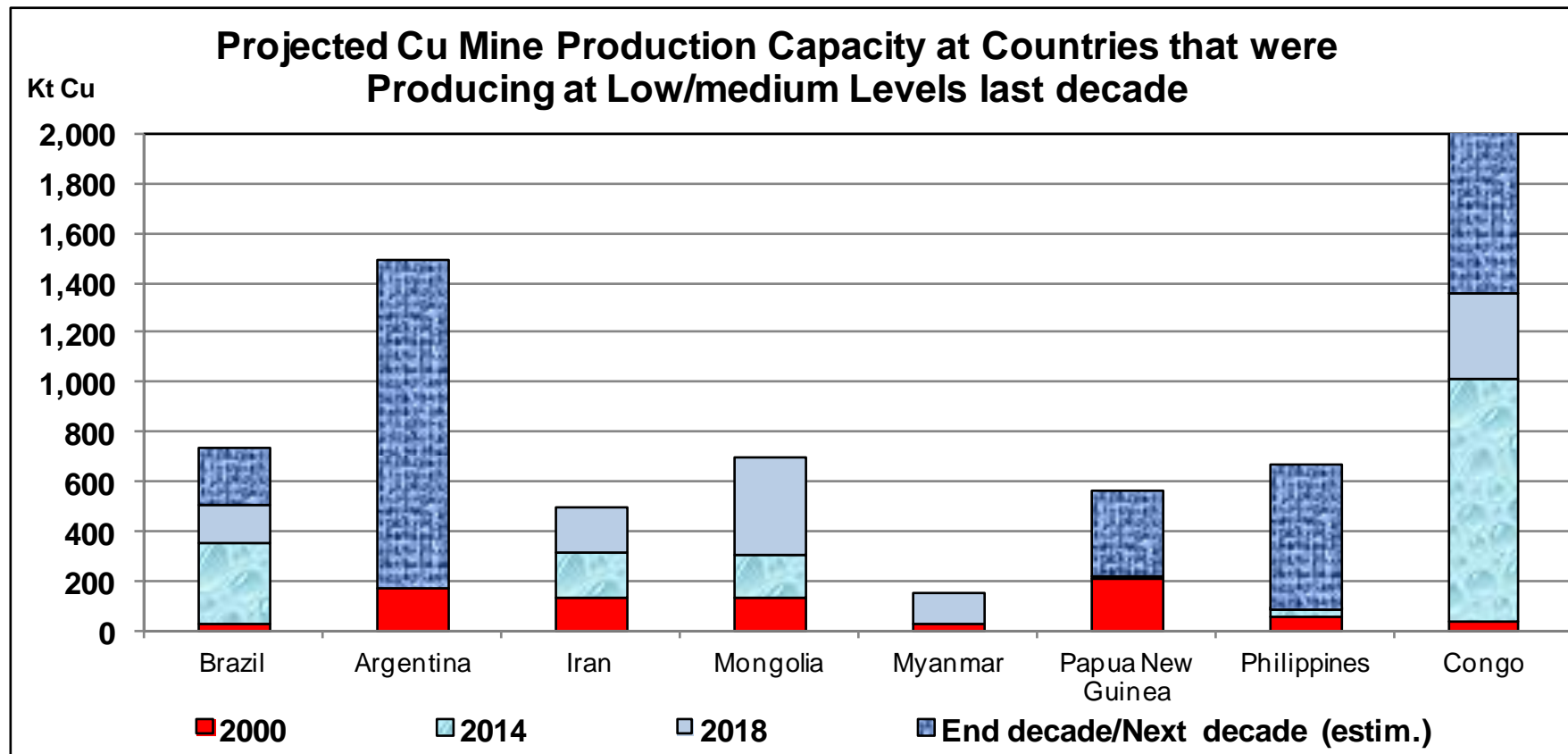
❑ South America will continue to be the region with the largest copper mining production capacity and will maintain its share in world copper production capacity at around 38%. However much of this is owed to the rapid expansion of Peru copper mining industry

❑ Africa and Asia are increasing their share from 5% and 17% in 2000 to 13% and 22% by 2018 respectively due to the start-up of new projects.



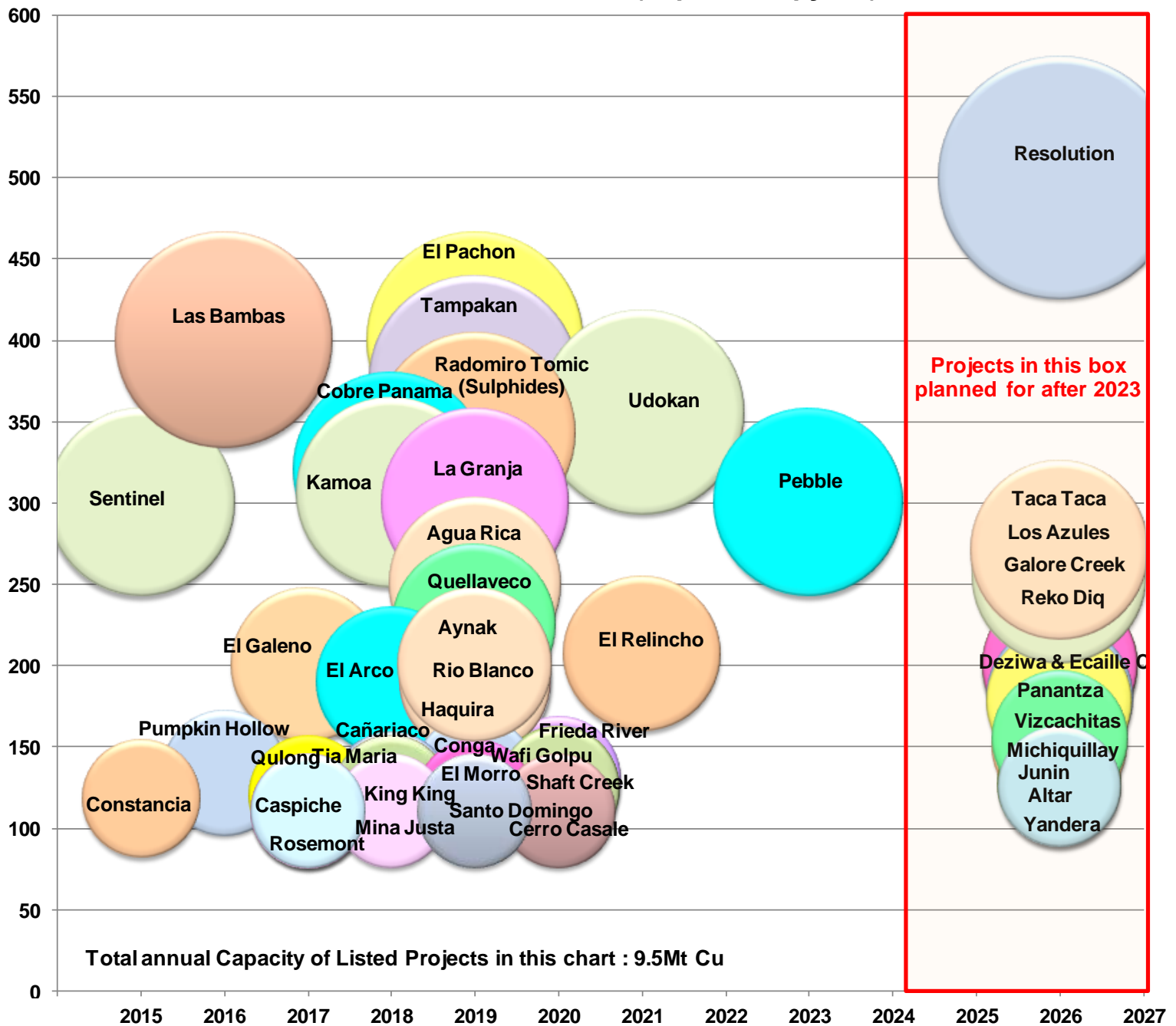


➤ **Chile will retain its position as the biggest copper mine producer in the world but Peru is the leading contributor to world growth**

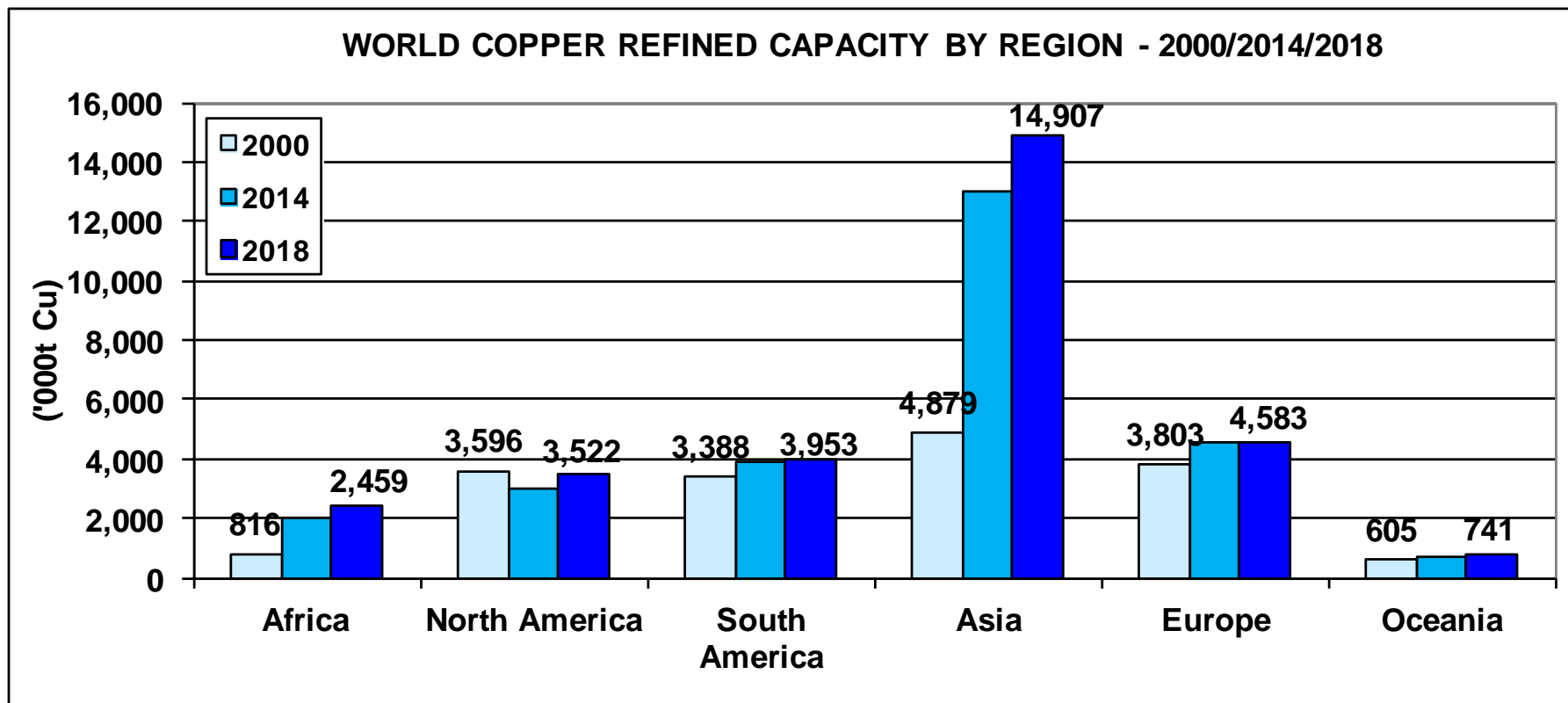


- In the last decade we have observed a geographical enlargement of the copper mining industry.
- There has been growing interest in developing copper projects in countries that up to now are not mining copper or that had limited production.

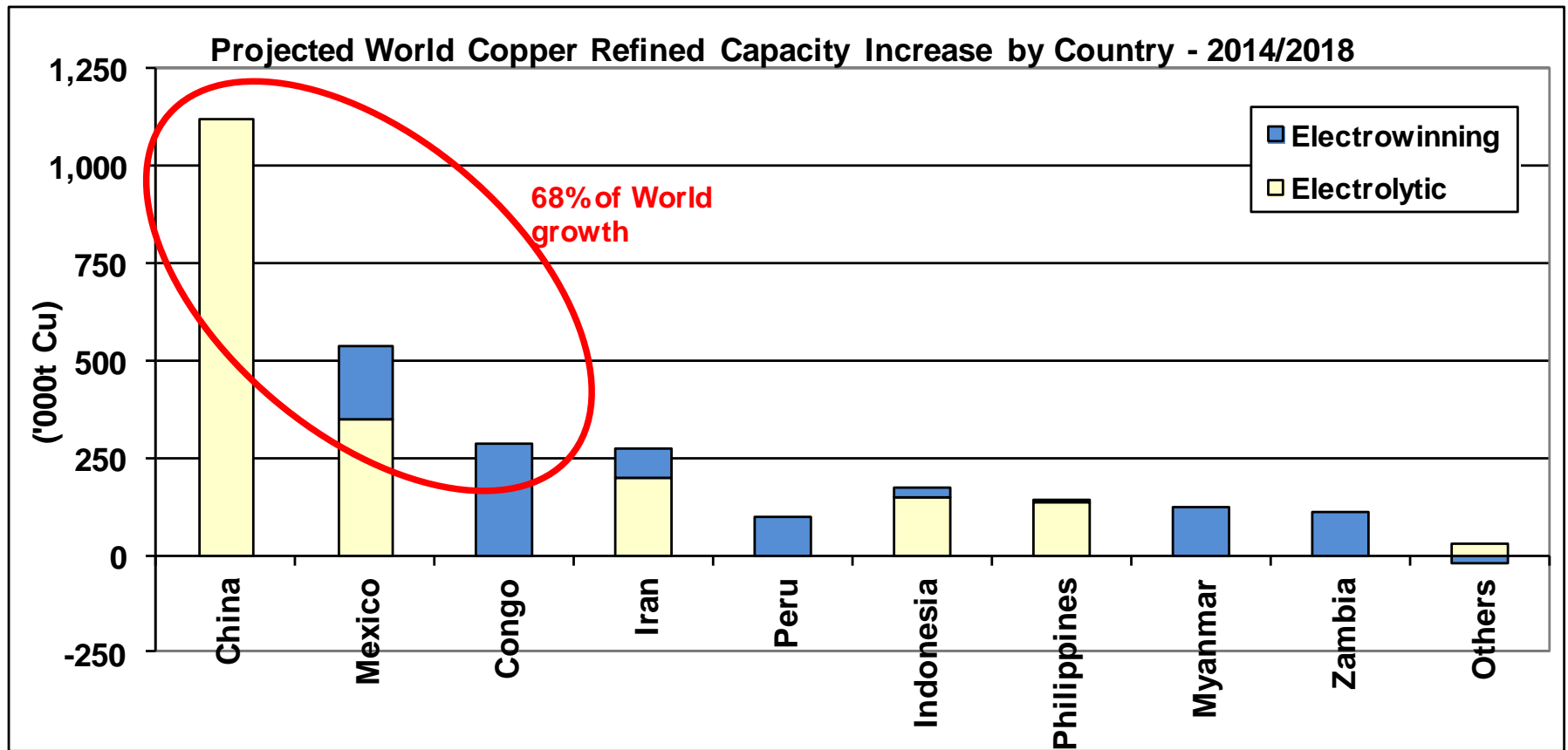
COPPER MINE PROJECTS (cap ≥110Ktpy Cu)



Source: ICSG
Directory of
Copper
Mines and
Plants – June
2015



- ❑ Until 2018, world copper refinery capacity expected to grow by 2.9 Mt to 30.2 Mt.
- ❑ 2Mt of the expansion expected to come from electrolytic refineries and almost 1 Mt from electrowinning capacity.
- ❑ Supremacy of Asia over the other regions (currently 47% of total world capacity)
- ❑ Africa copper refined capacity almost tripled from 2000 to 2014 and is expected to increase further until 2018 (all in the form of electrowinning production)

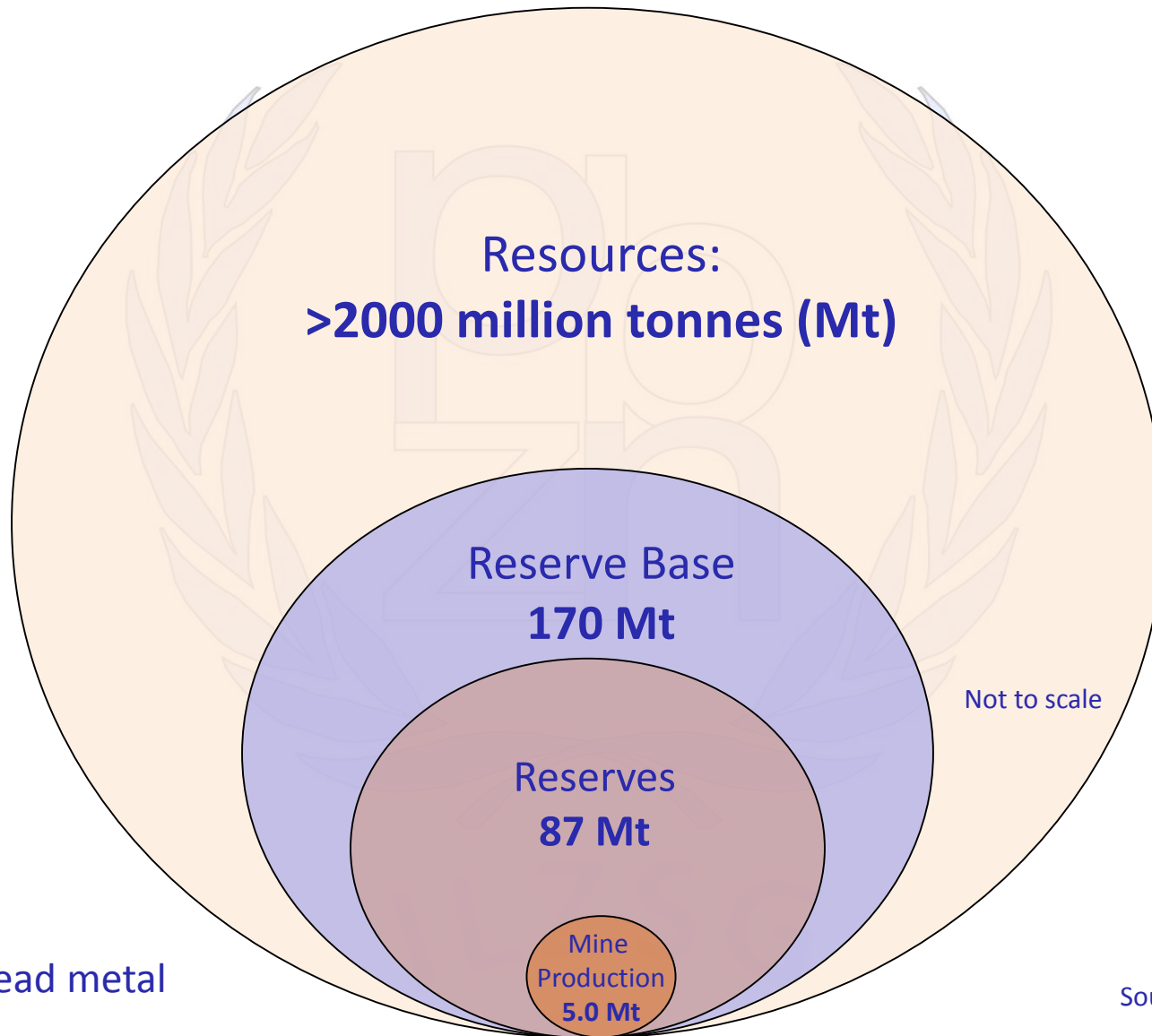


- China is by far the biggest contributor to the growth with a strong increase of around 1Mt, representing 38% of the world growth in the period.
- The DRC and Mexico will be important contributors too
- These 3 countries represent almost 70% of the world growth



Review and Outlook for Lead & Zinc

World Lead Reserves 2014



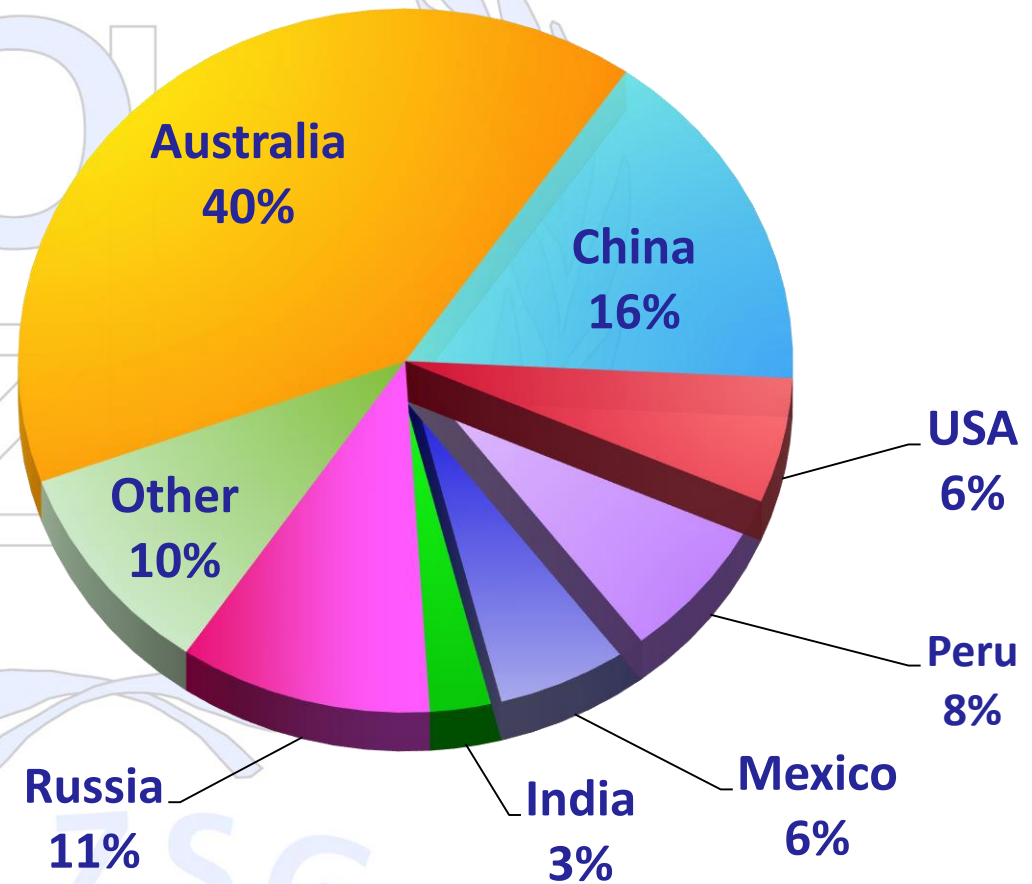
contained lead metal

Sources: USGS, ILZSG

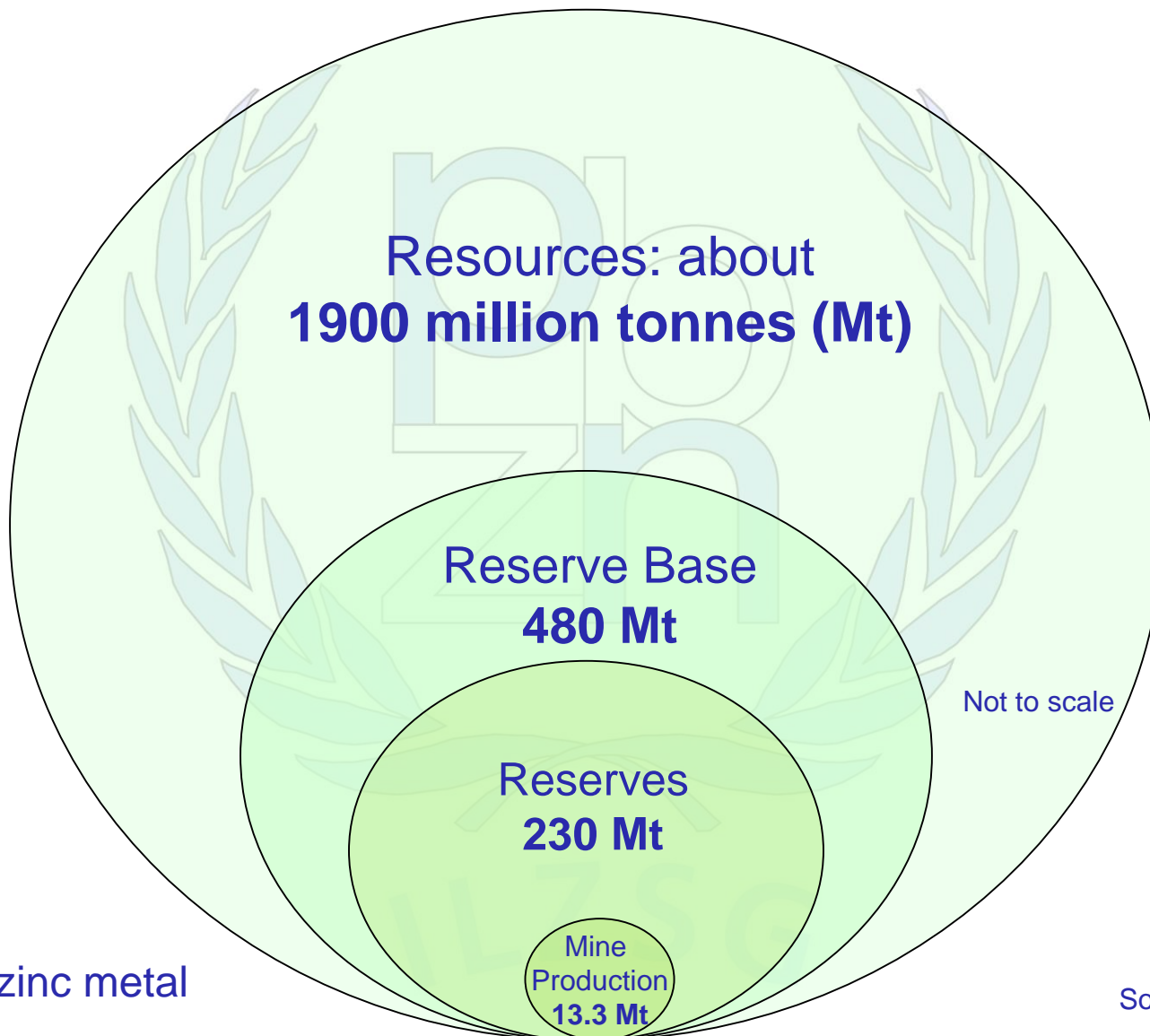
World Lead Reserves 2014 Breakdown

Source: USGS

- Despite increased consumption of lead produced from ore in recent years, increases in reserves have grown more, and there is more lead available to the world than at any other time in the past.



World Zinc Reserves 2014



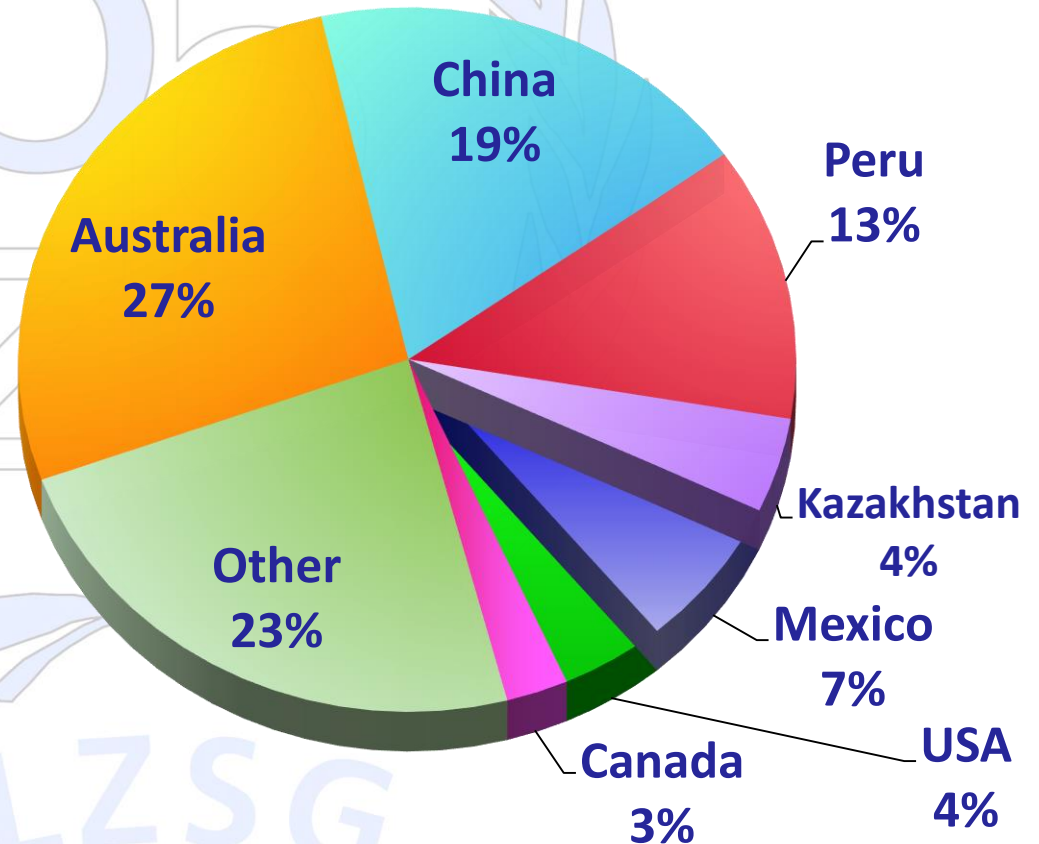
contained zinc metal

Sources: USGS, ILZSG

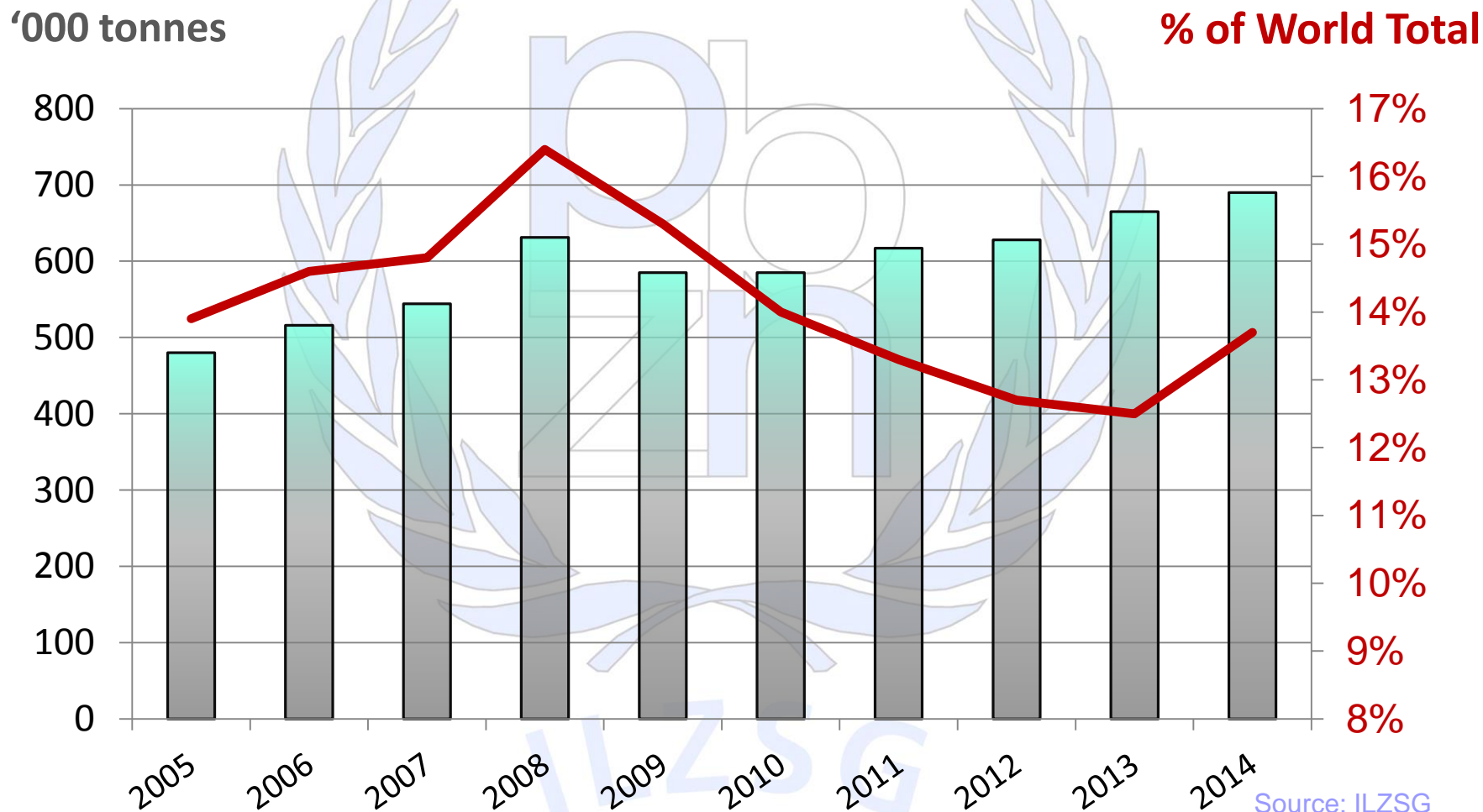
World Zinc Reserves 2014 Breakdown

Source: USGS

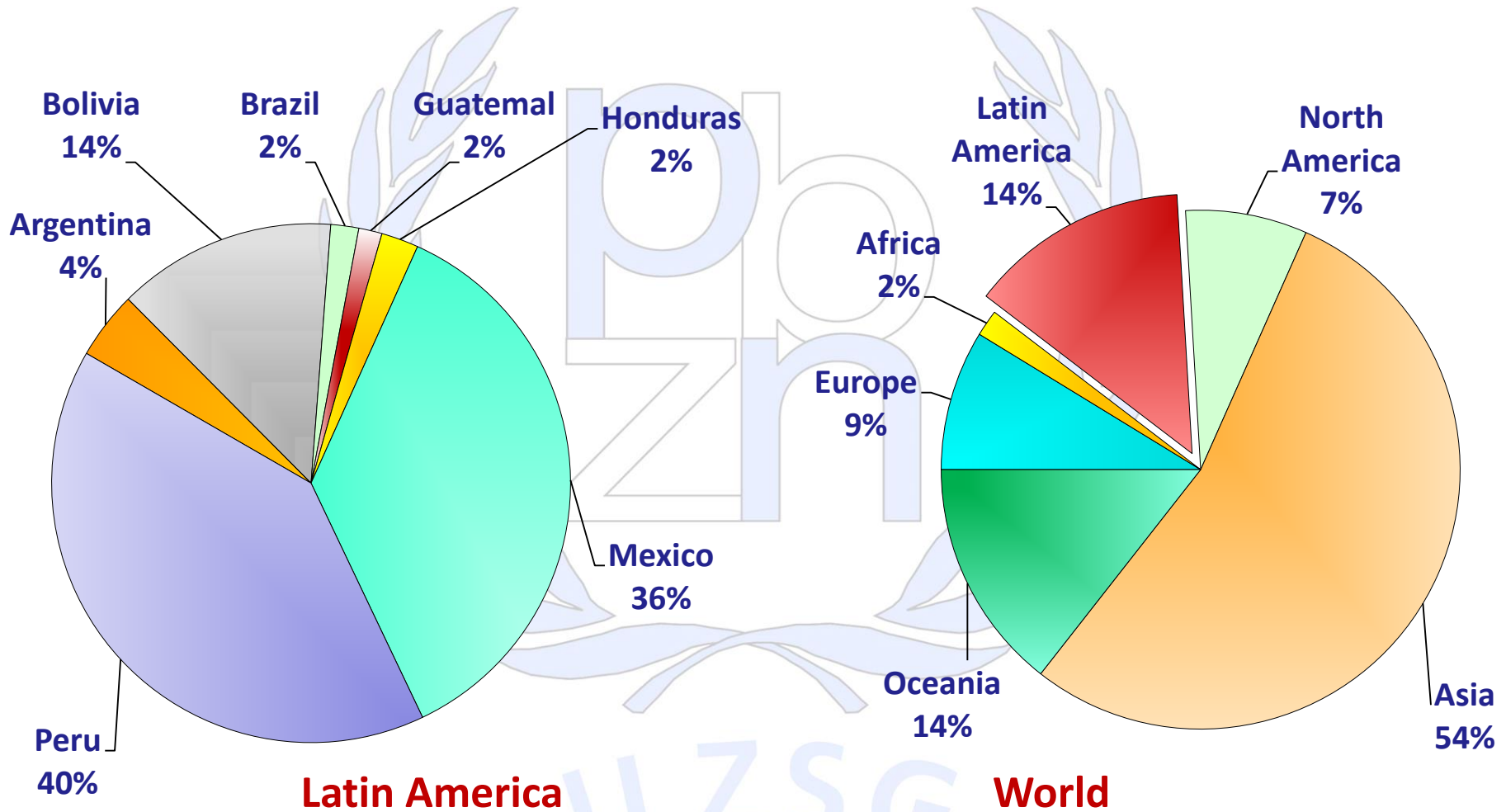
- Despite increased consumption of zinc produced from ore in recent years, increases in reserves have grown more, and there is more zinc available to the world than at any other time in the past.



Latin America Lead Mine Supply 2005-2014

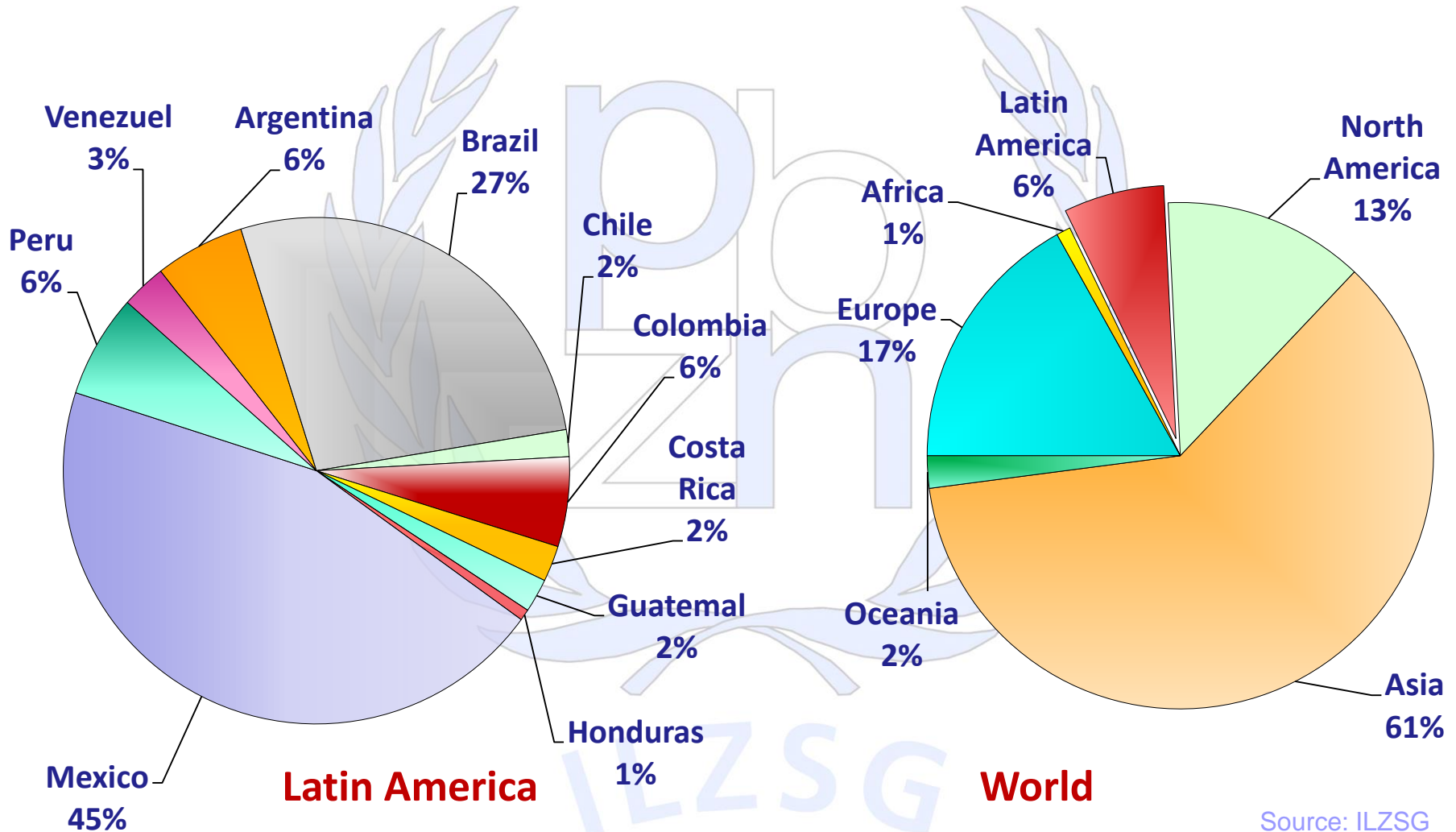


Breakdown of Lead Mine Supply 2014



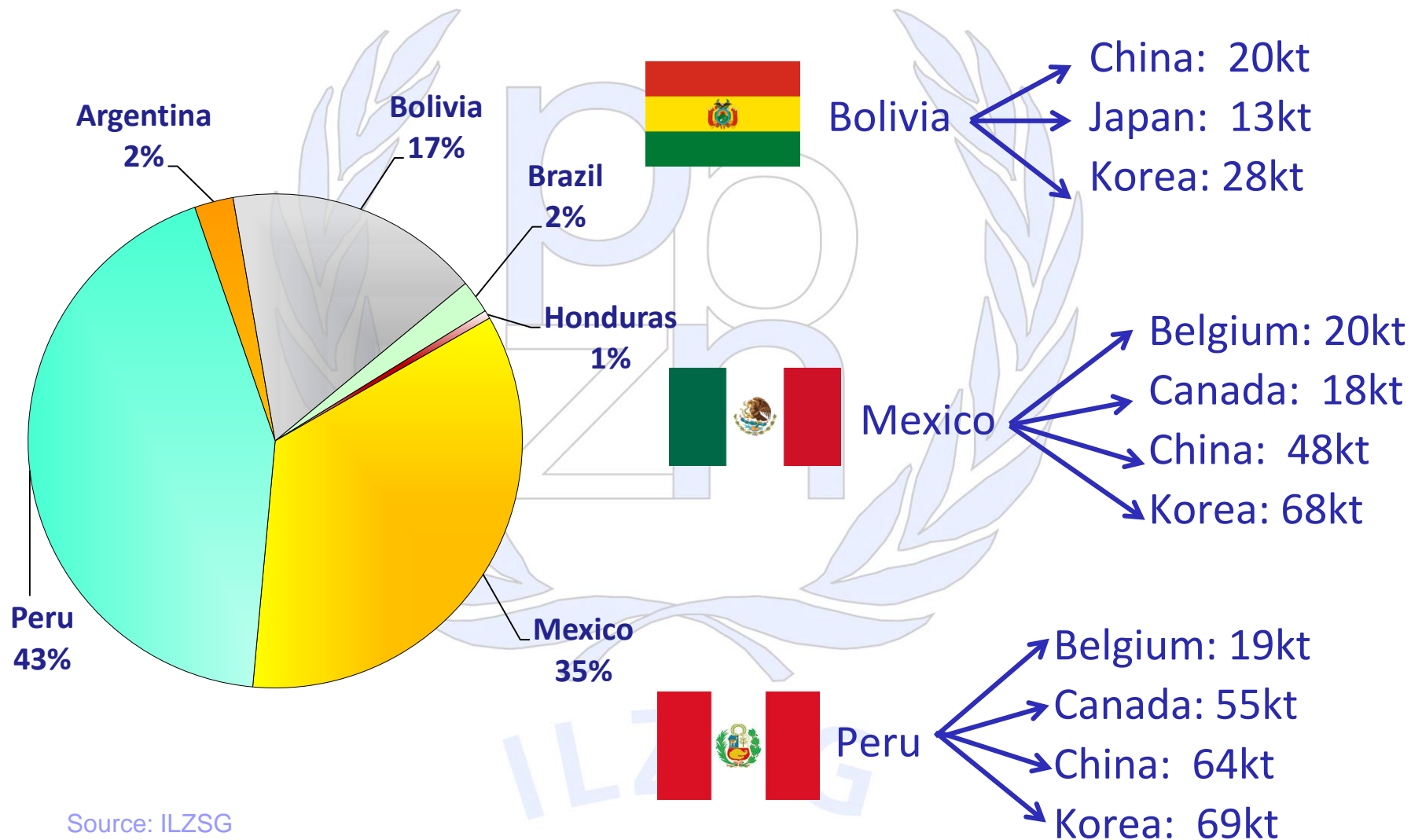
Source: ILZSG

Breakdown of Lead Metal Supply 2014



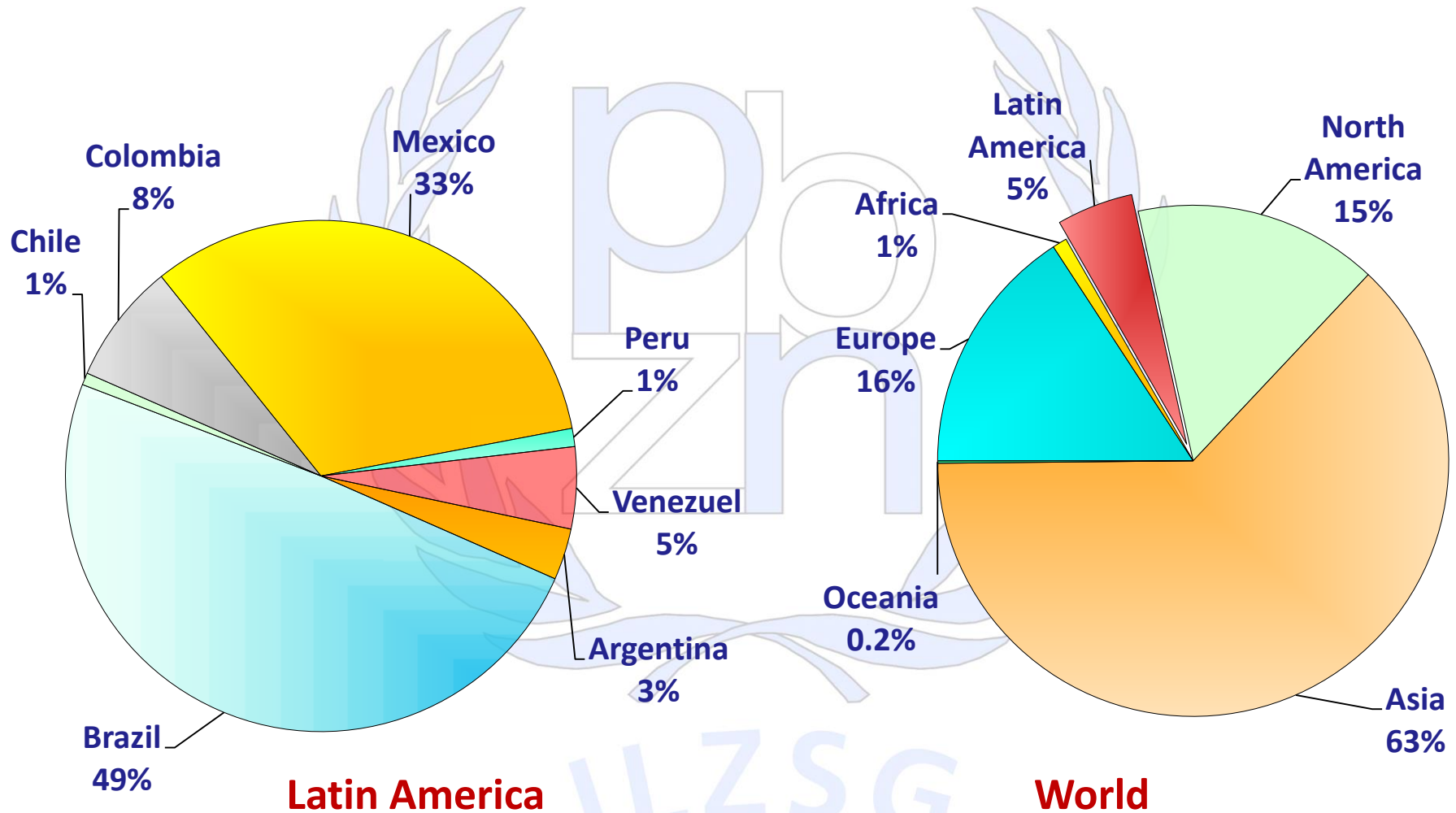
Source: ILZSG

Breakdown of Lead Concentrate Exports 2014



Source: ILZSG

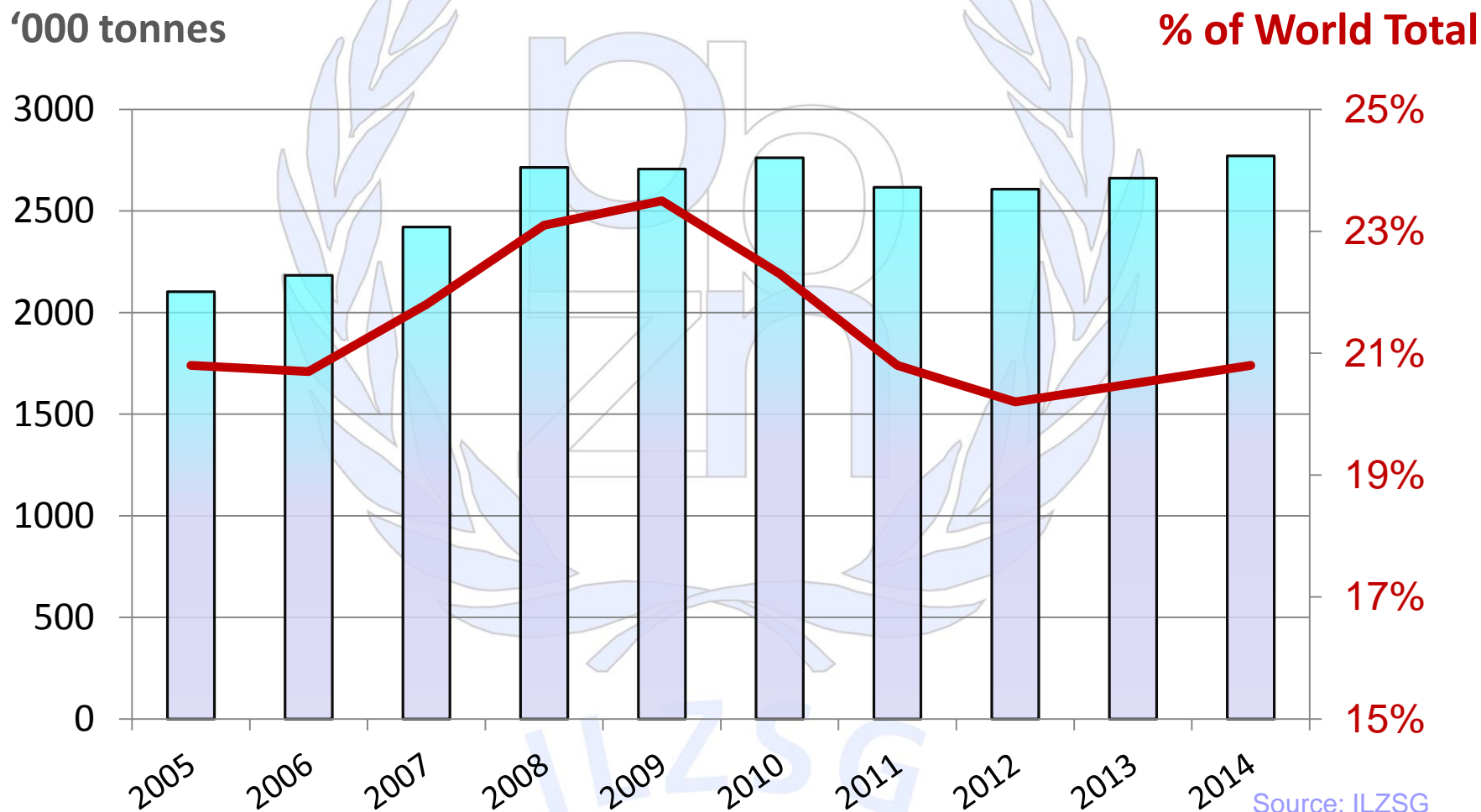
Breakdown of Lead Metal Usage 2014



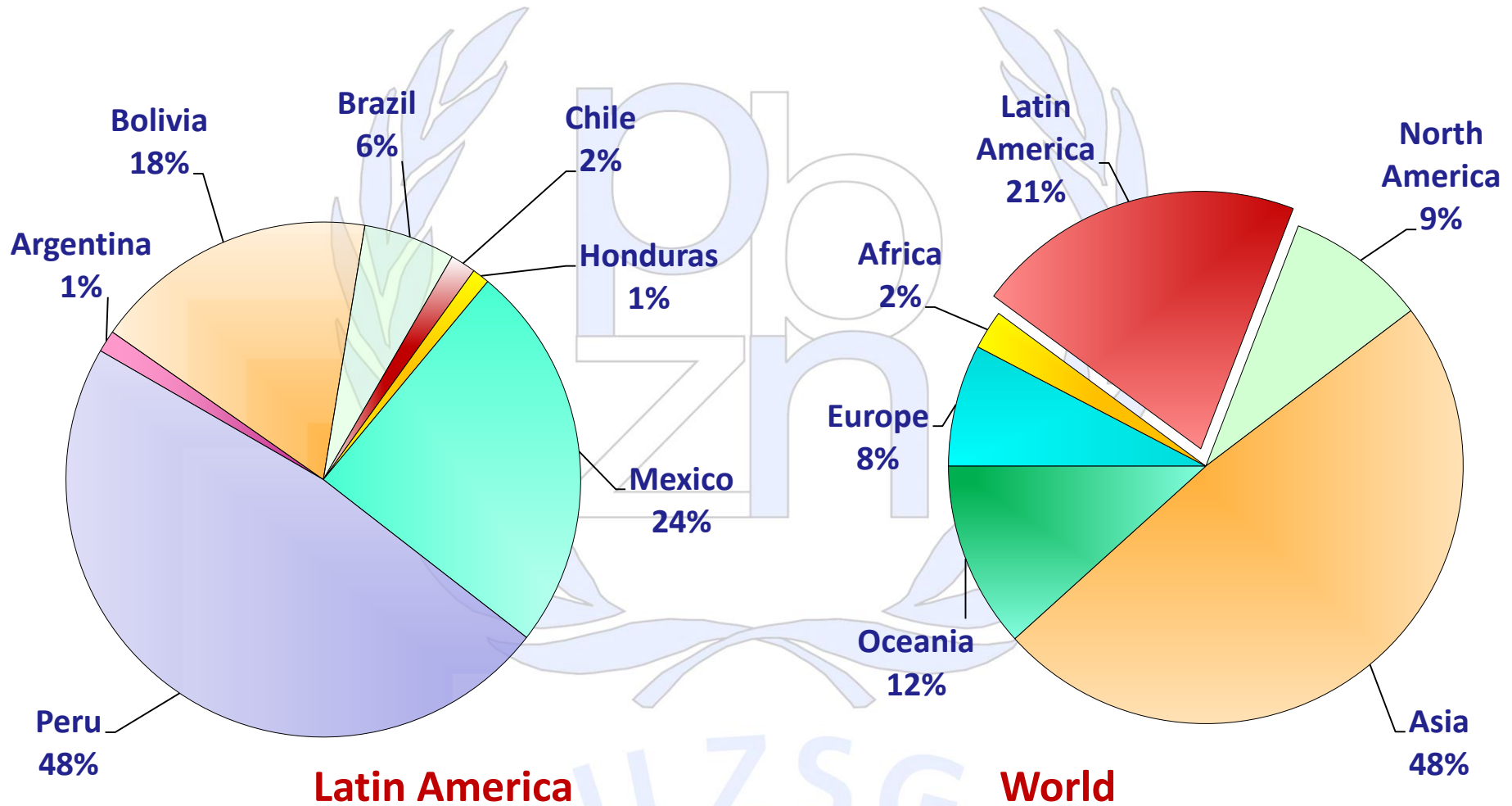
Source: ILZSG

Latin America Zinc Mine Supply

2005-2014

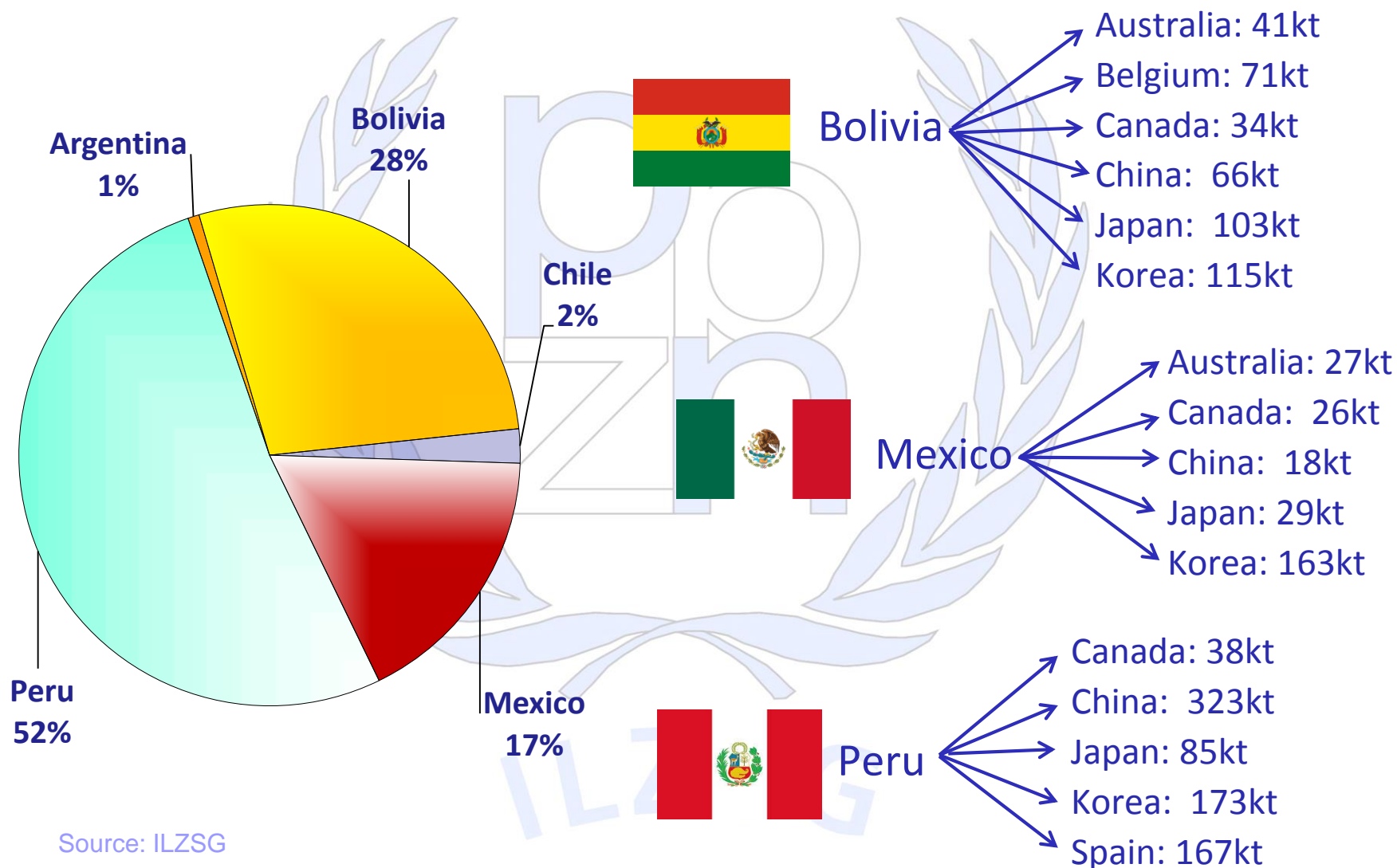


Breakdown of Zinc Mine Supply 2014



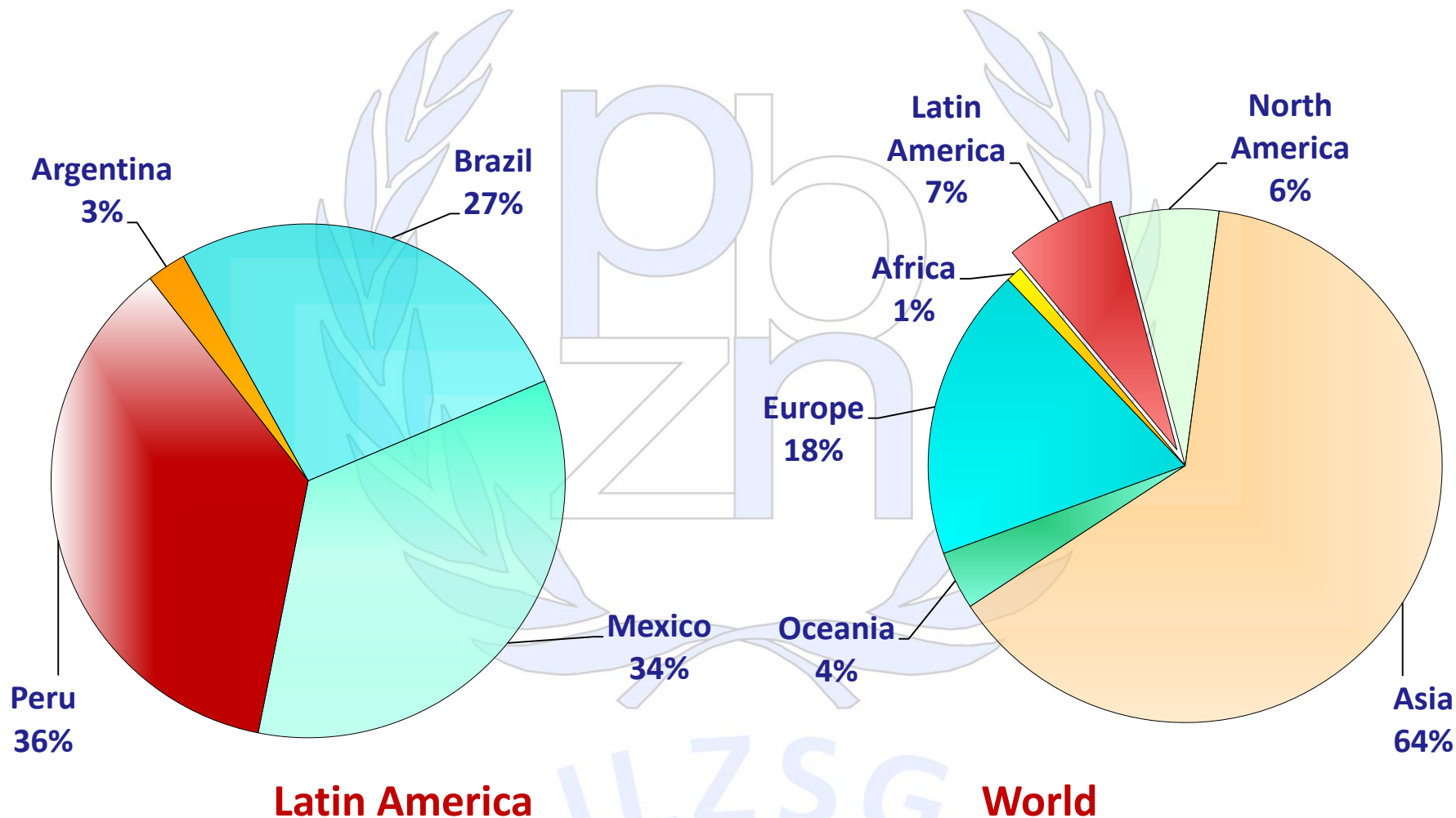
Source: ILZSG

Breakdown of Zinc Concentrate Exports 2014



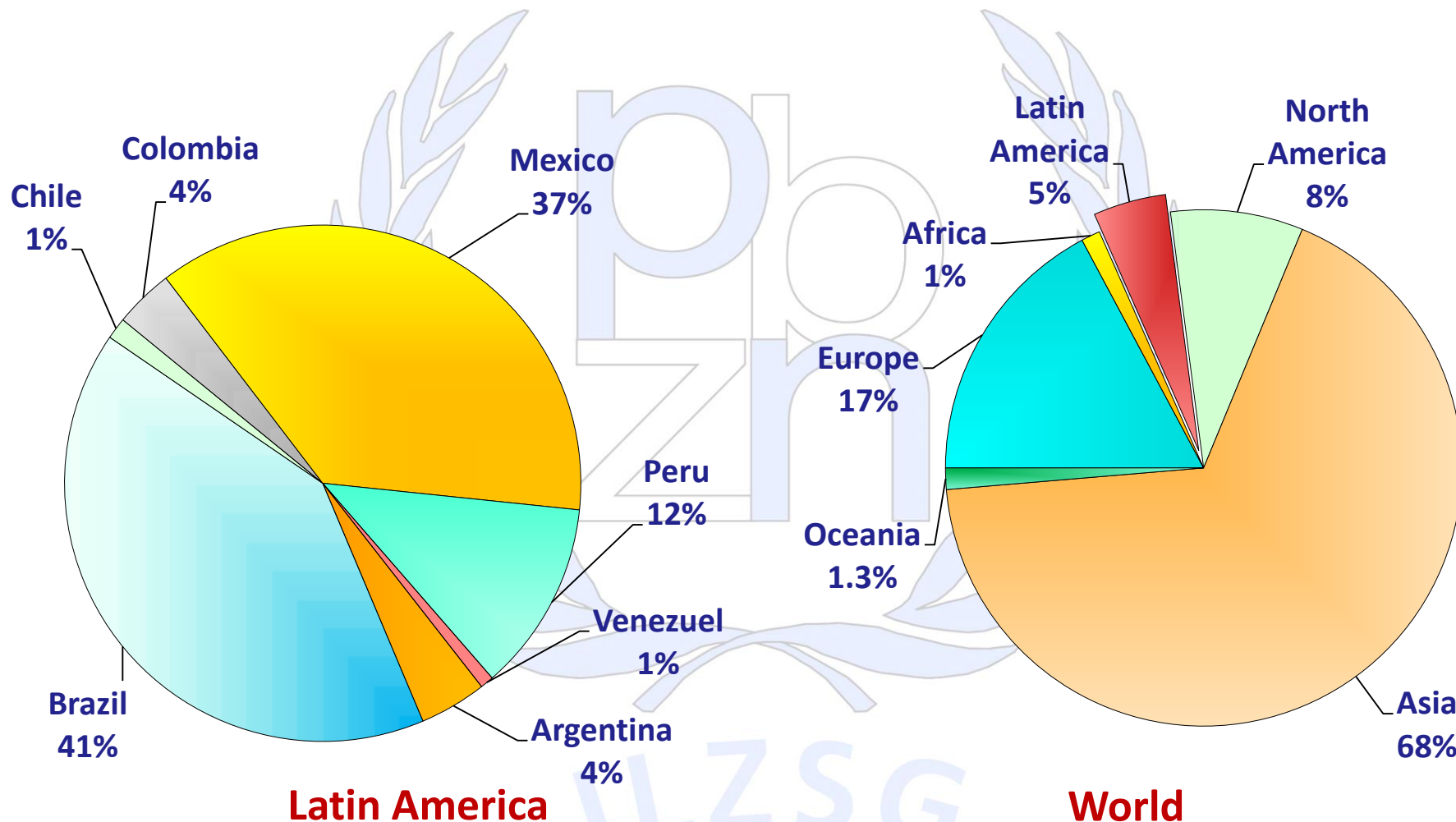
Source: ILZSG

Breakdown of Zinc Metal Supply 2014



Source: ILZSG

Breakdown of Zinc Metal Usage 2014

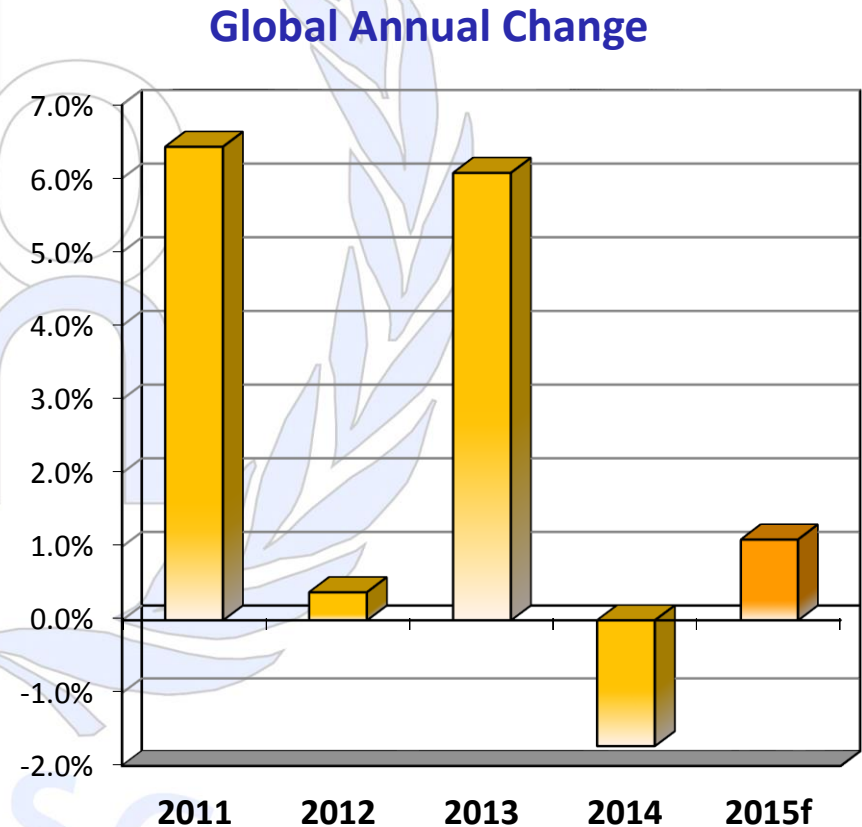


Source: ILZSG

World Lead Metal Demand Forecast

ILZSG Forecast

- **2015**
 - **Global** **1.1%**
 - **China** **0.9%**
 - **Ex China** **1.2%**

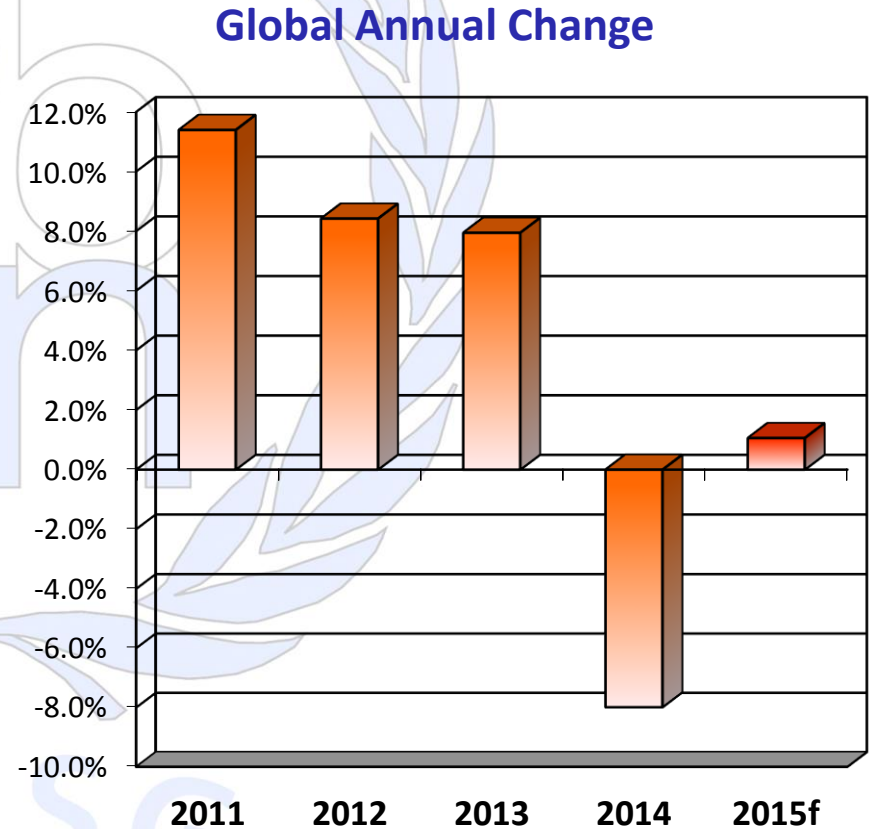


Source: ILZSG

World Lead Mine Supply Forecast

ILZSG Forecast

- **2015**
 - **Global** **1.1%**
 - **China** **2.5%**
 - **Ex China** **-0.3%**



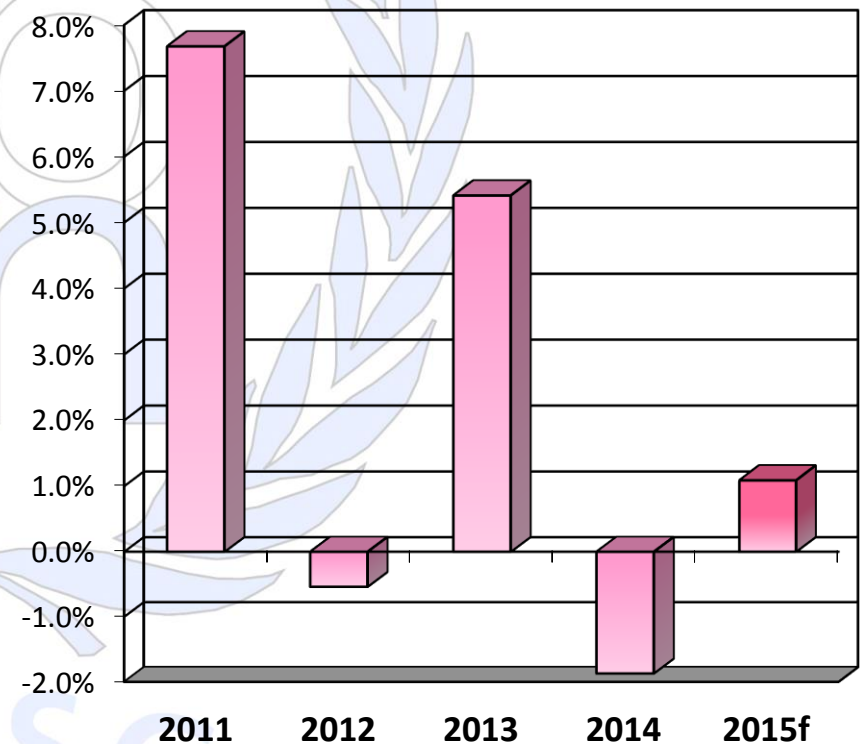
Source: ILZSG

World Lead Metal Supply Forecast

ILZSG Forecast

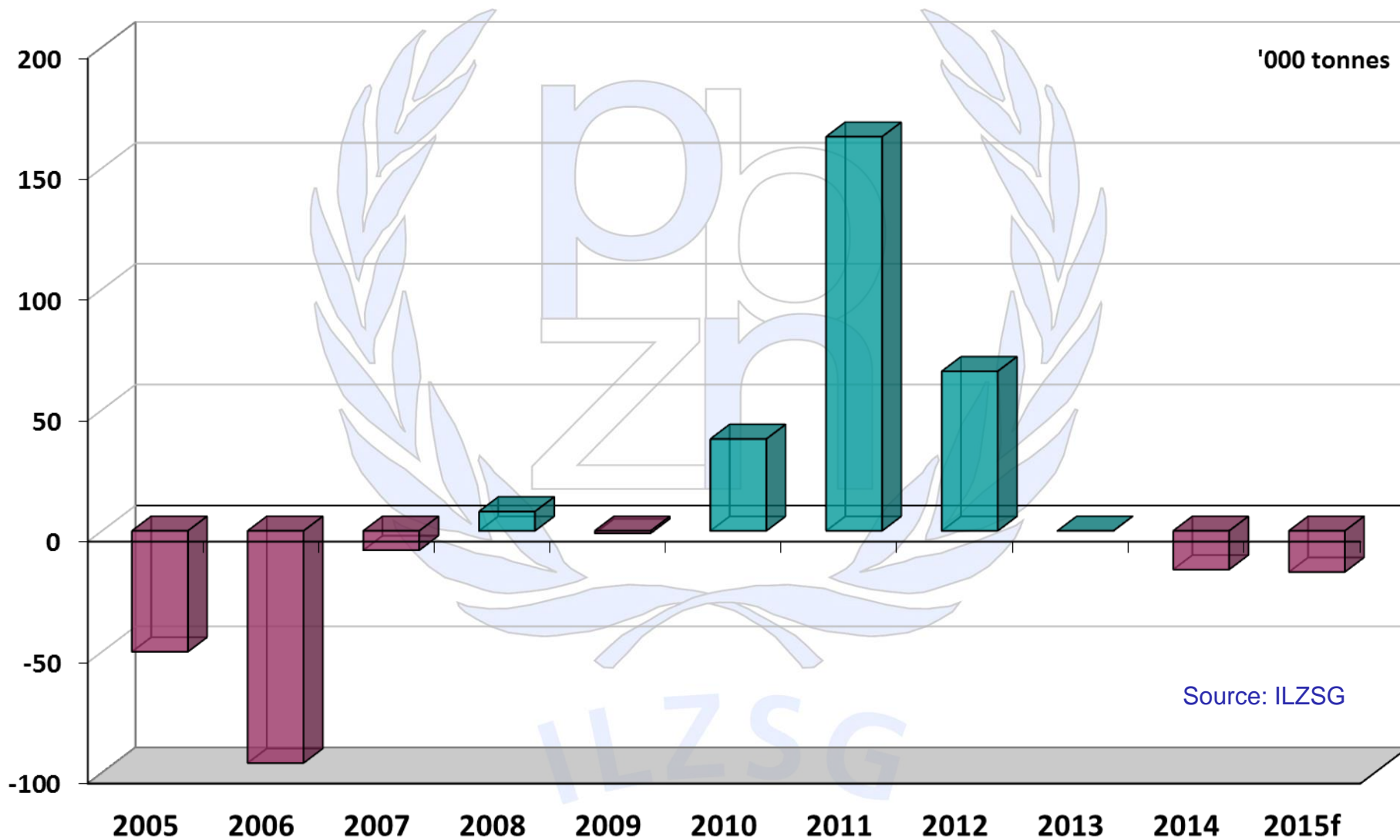
- **2015**
 - **Global** **1.1%**
 - **China** **1.3%**
 - **Ex China** **1.0%**

Global Annual Change



Source: ILZSG

World Refined Lead Metal Balance

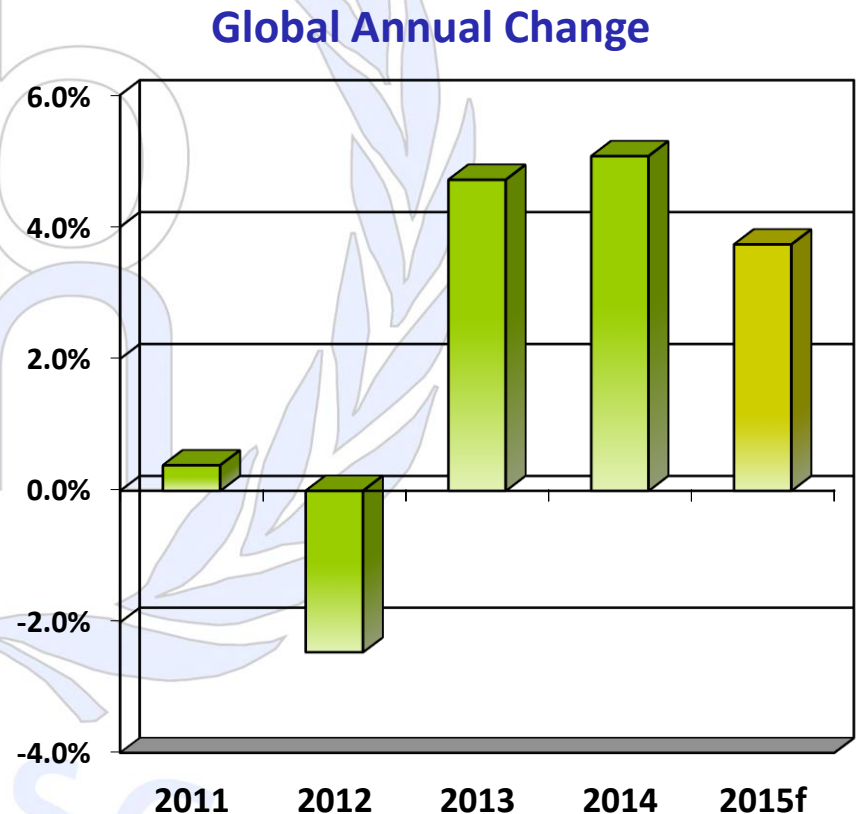


Source: ILZSG

World Zinc Metal Demand Forecast

ILZSG Forecast

- **2015**
 - **Global** **3.7%**
 - **China** **4.8%**
 - **Ex China** **2.8%**

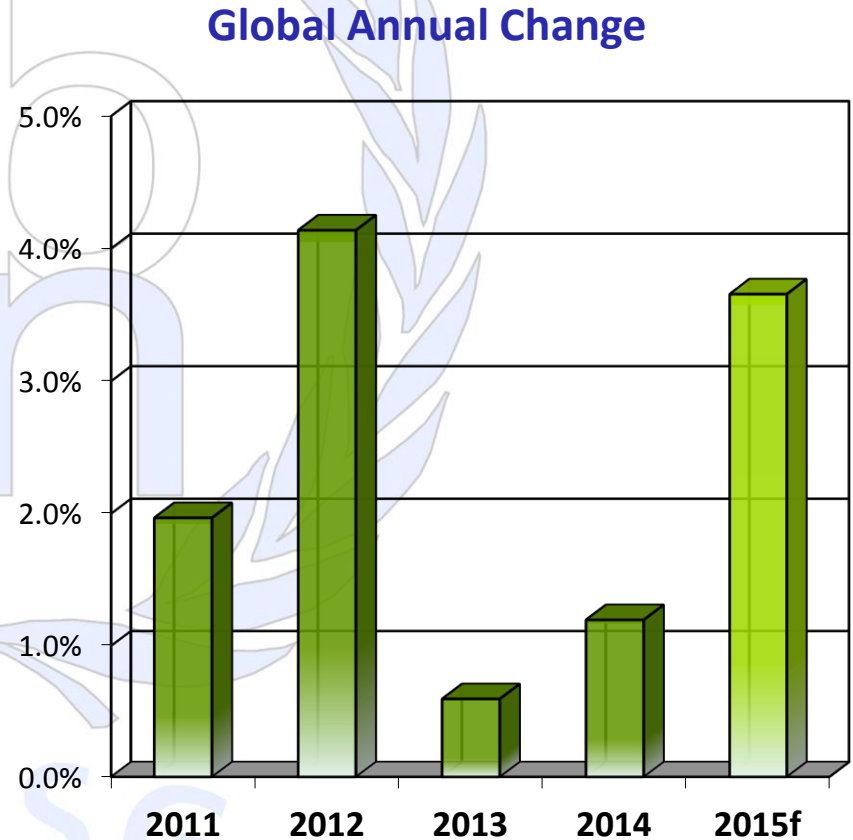


Source: ILZSG

World Zinc Mine Supply Forecast

ILZSG Forecast

- **2015**
 - **Global** **3.7%**
 - **China** **5.5%**
 - **Ex China** **2.6%**

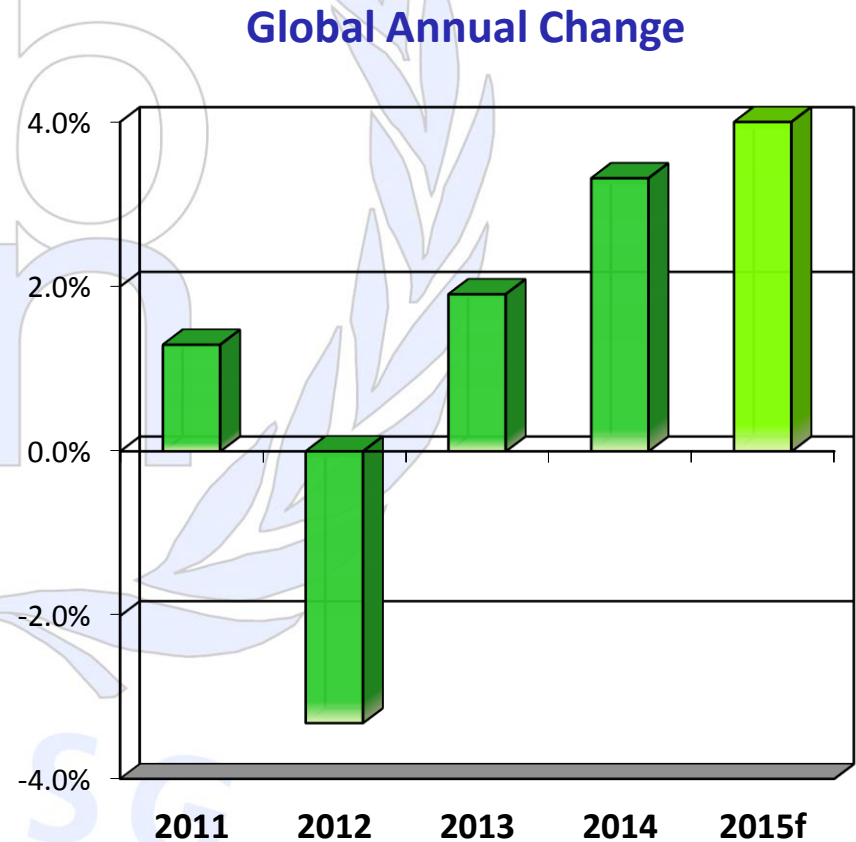


Source: ILZSG

World Zinc Metal Supply Forecast

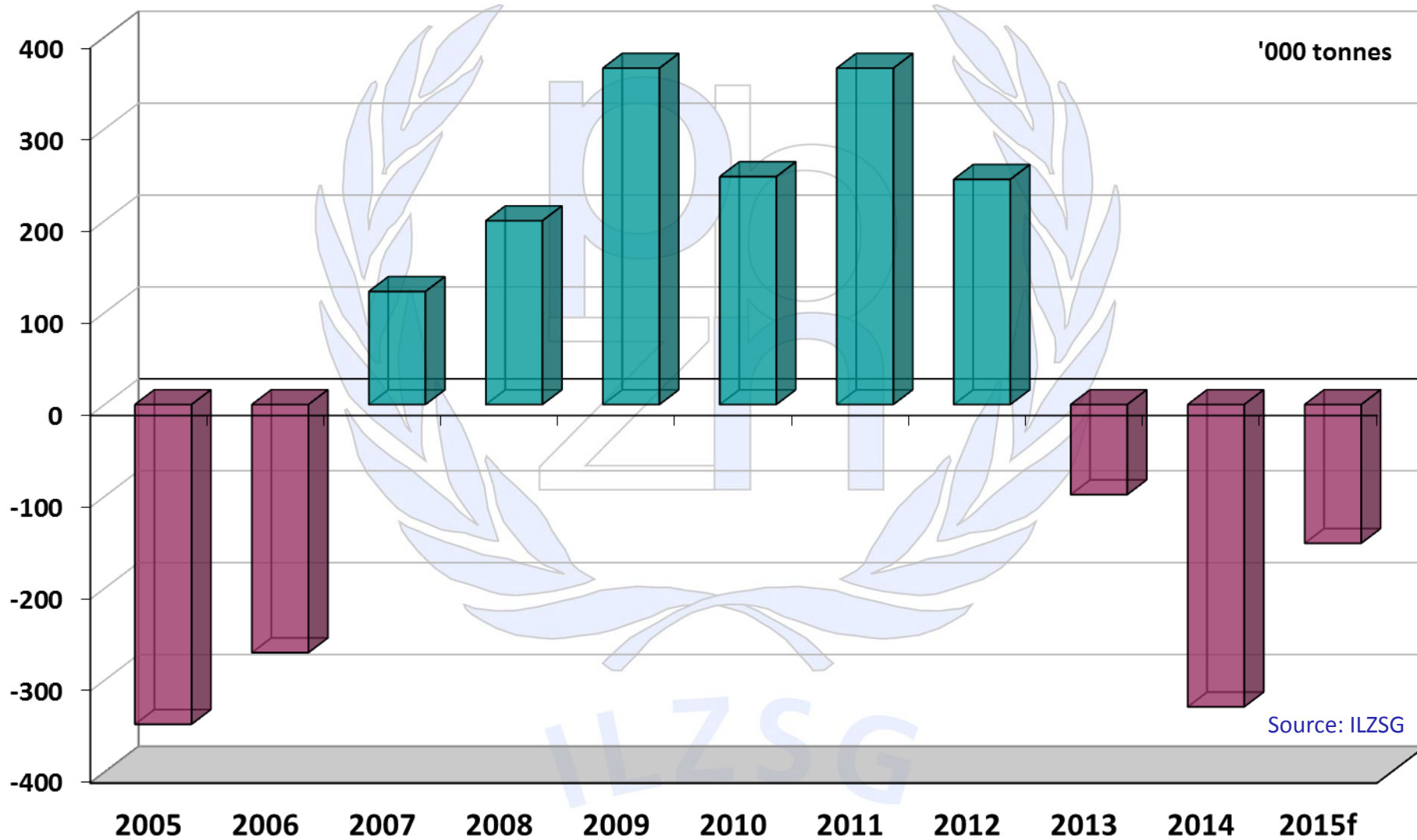
ILZSG Forecast

- **2015**
 - **Global** **5.2%**
 - **China** **8.9%**
 - **Ex China** **2.4%**



Source: ILZSG

Zinc Metal World Balance



Source: ILZSG

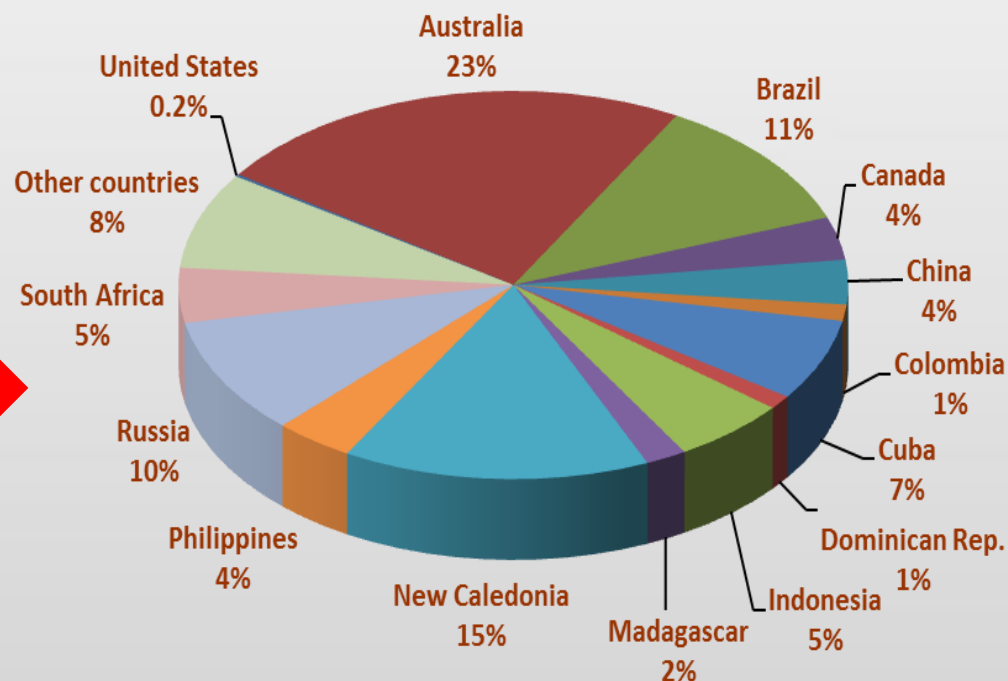
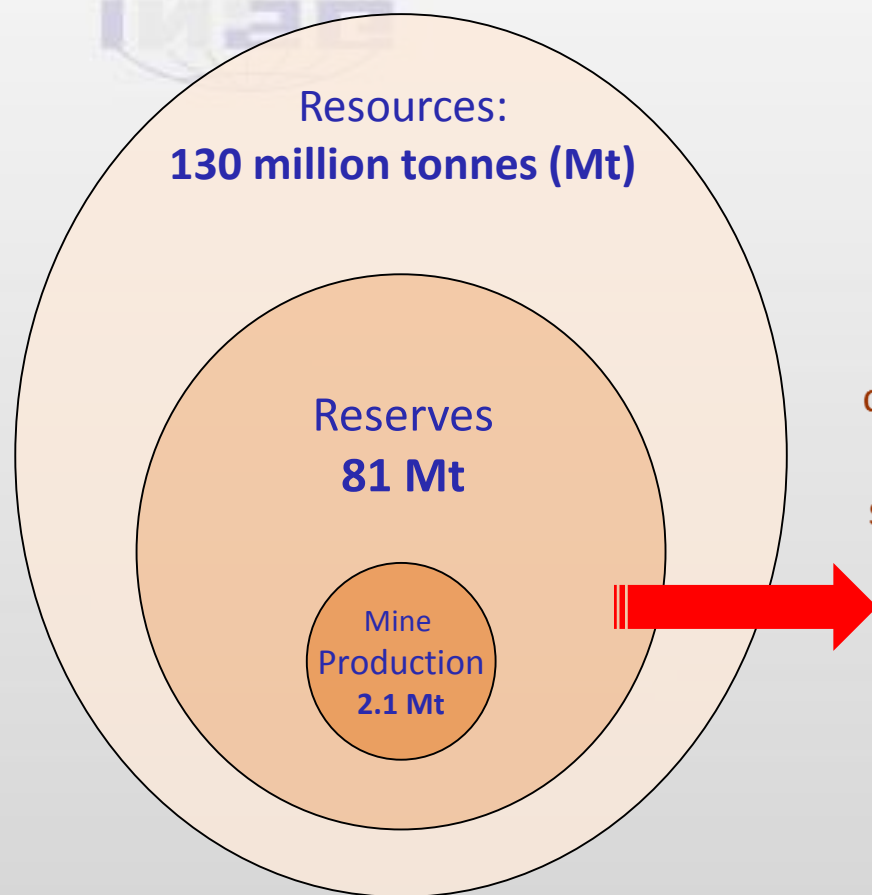


Review and Outlook for Nickel



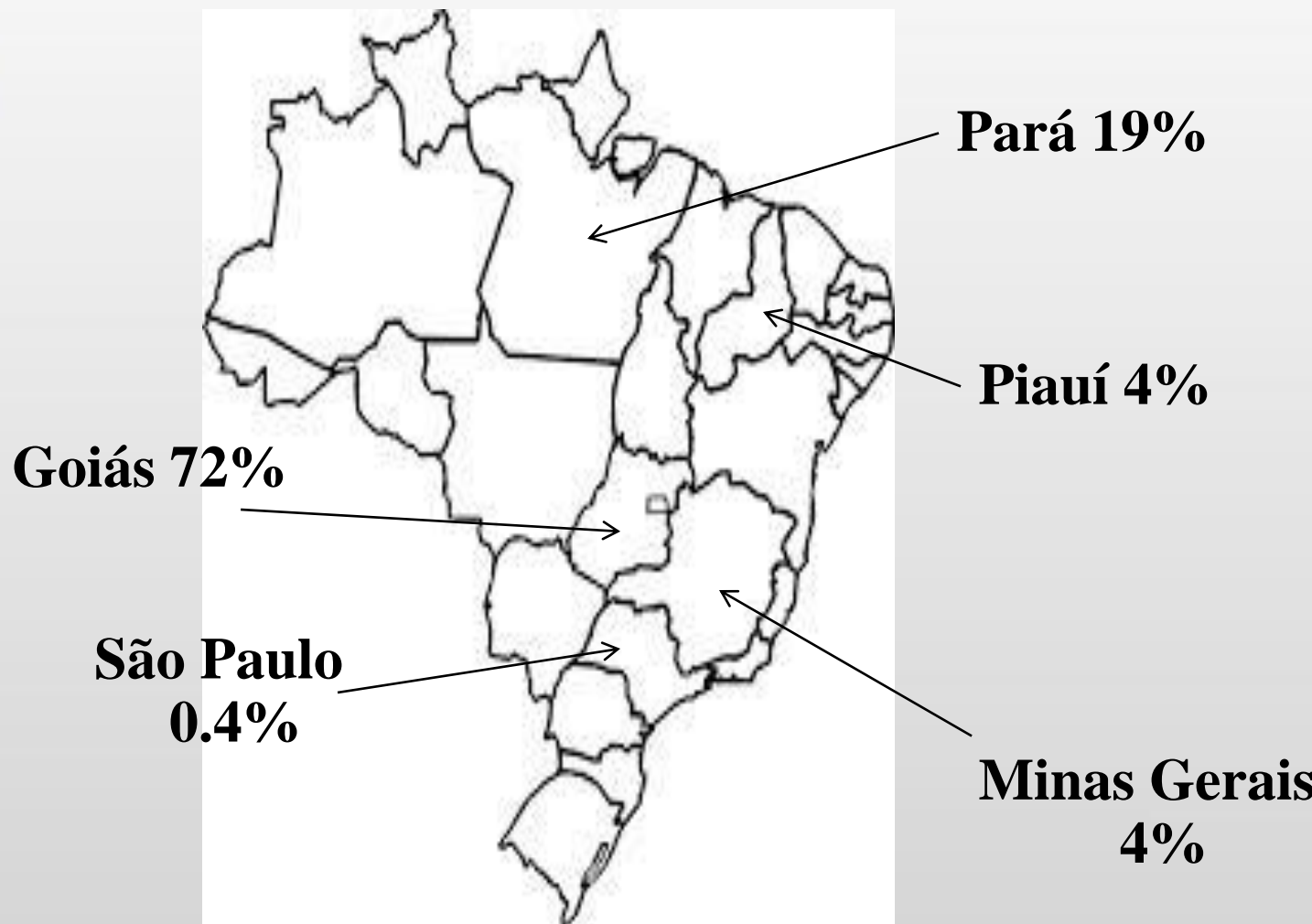
WORLD NICKEL RESERVES

2014



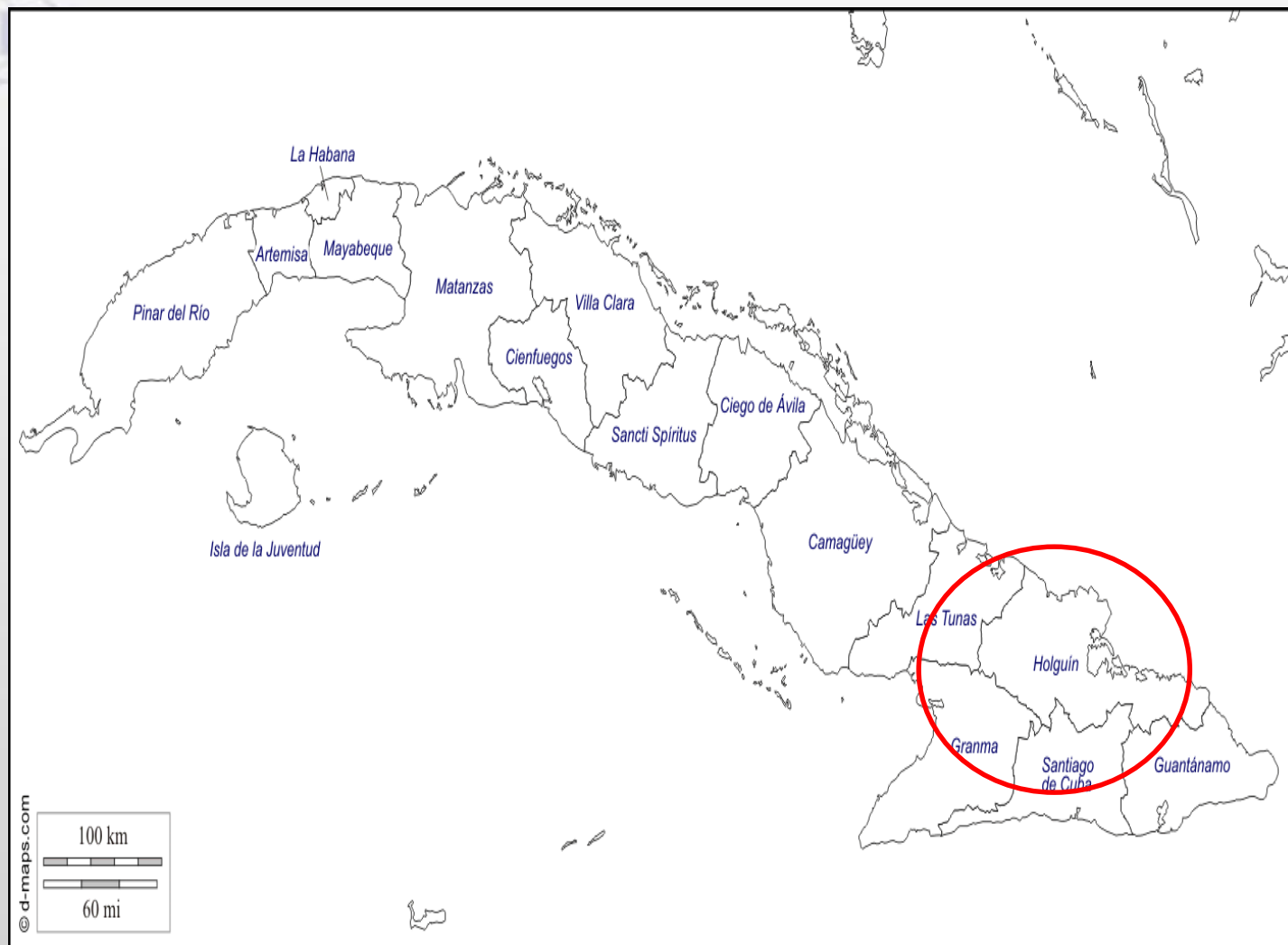


NICKEL RESERVES - BRAZIL





NICKEL RESERVES - CUBA

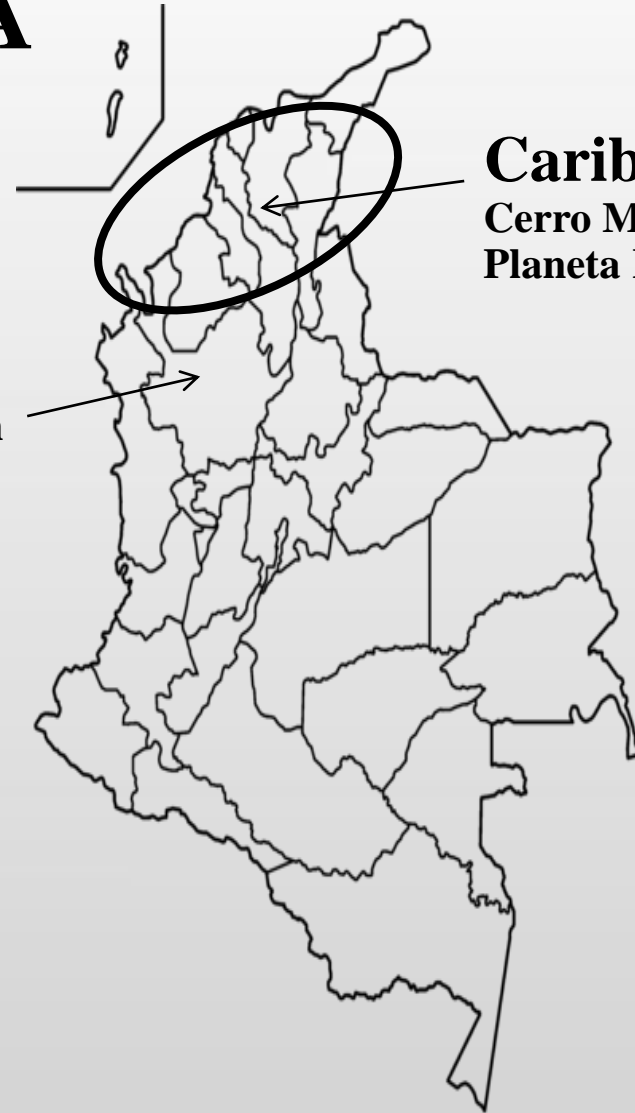




NICKEL RESERVES - COLOMBIA



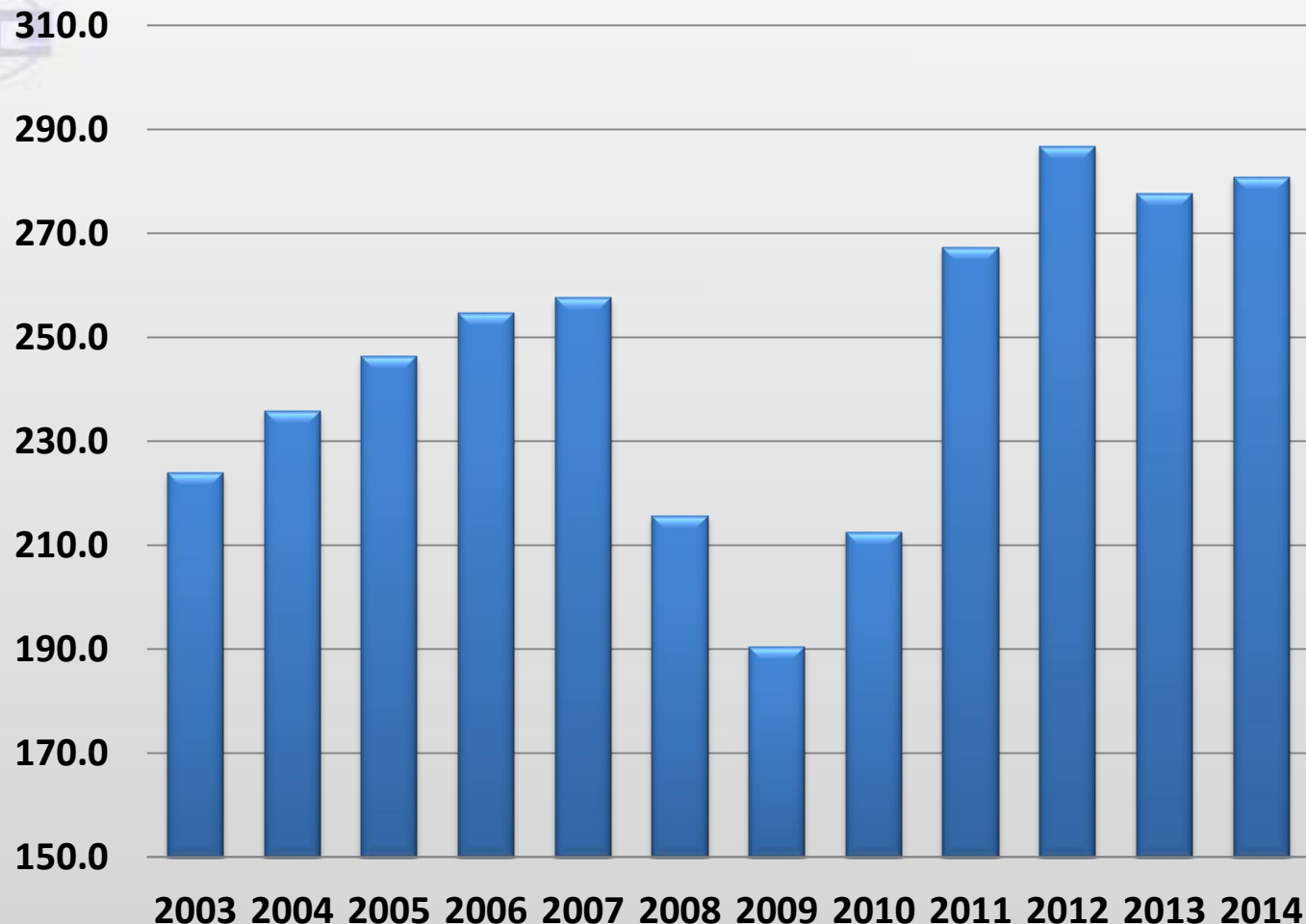
Antioquia
Ituango, Morro Pelon
Medellin



Caribe
Cerro Matoso
Planeta Rica, Uré



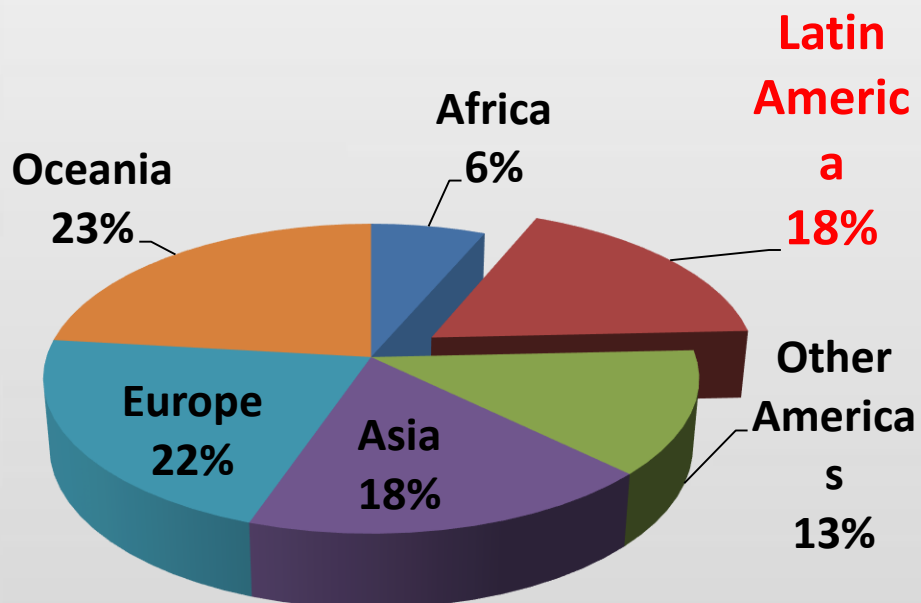
LATIN AMERICA NICKEL MINE PRODUCTION (KT)



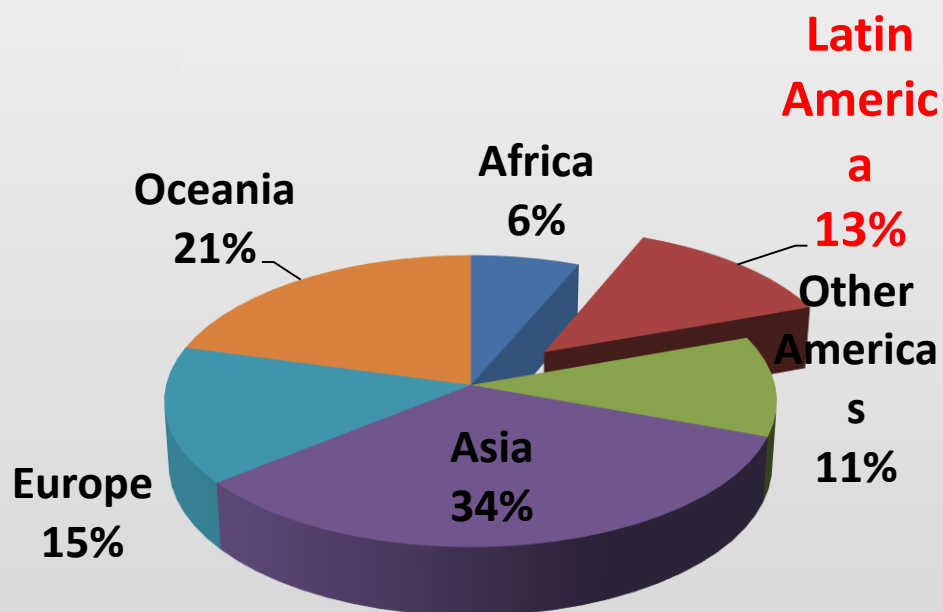


Nickel Mine Production

2003

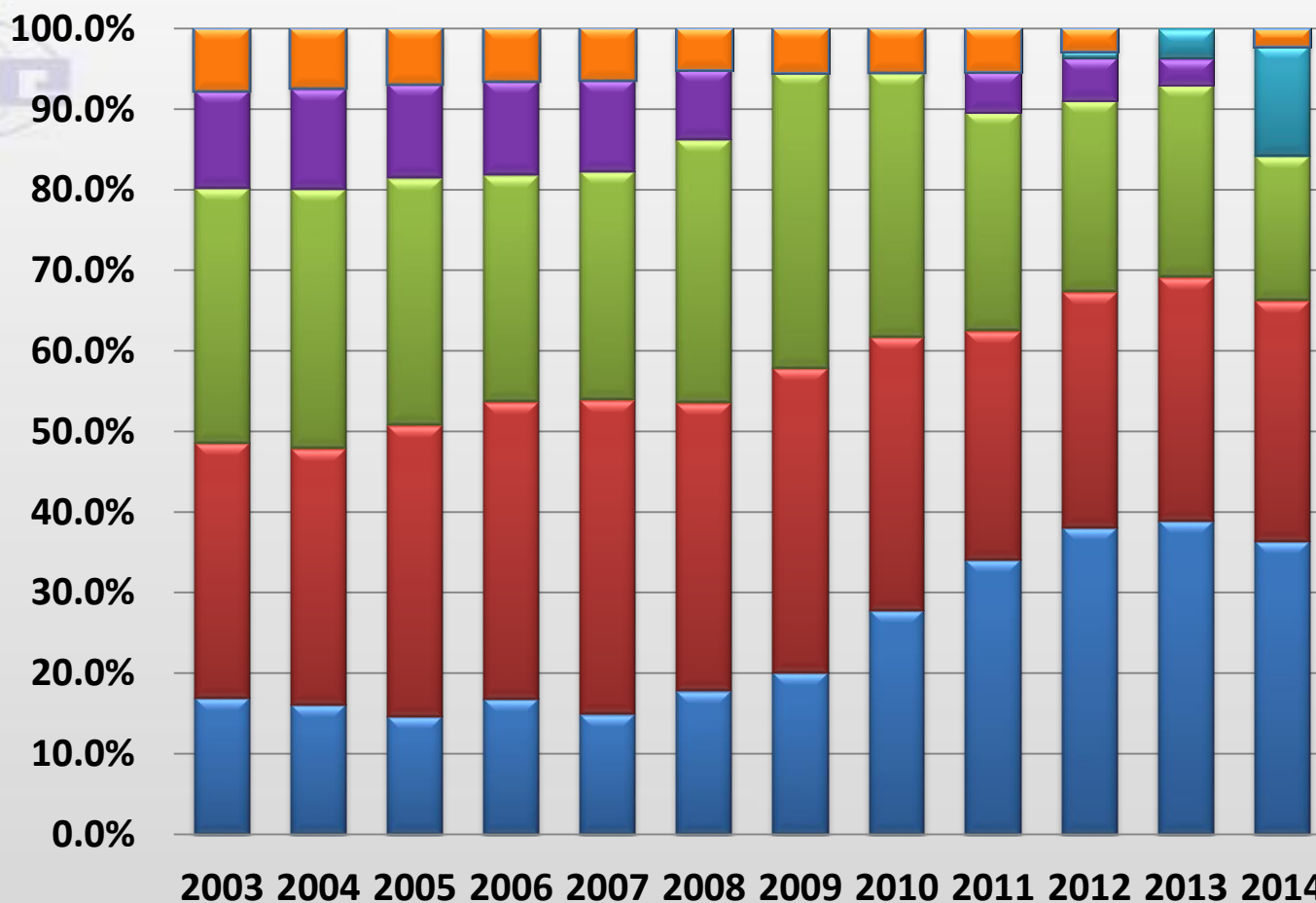


2014



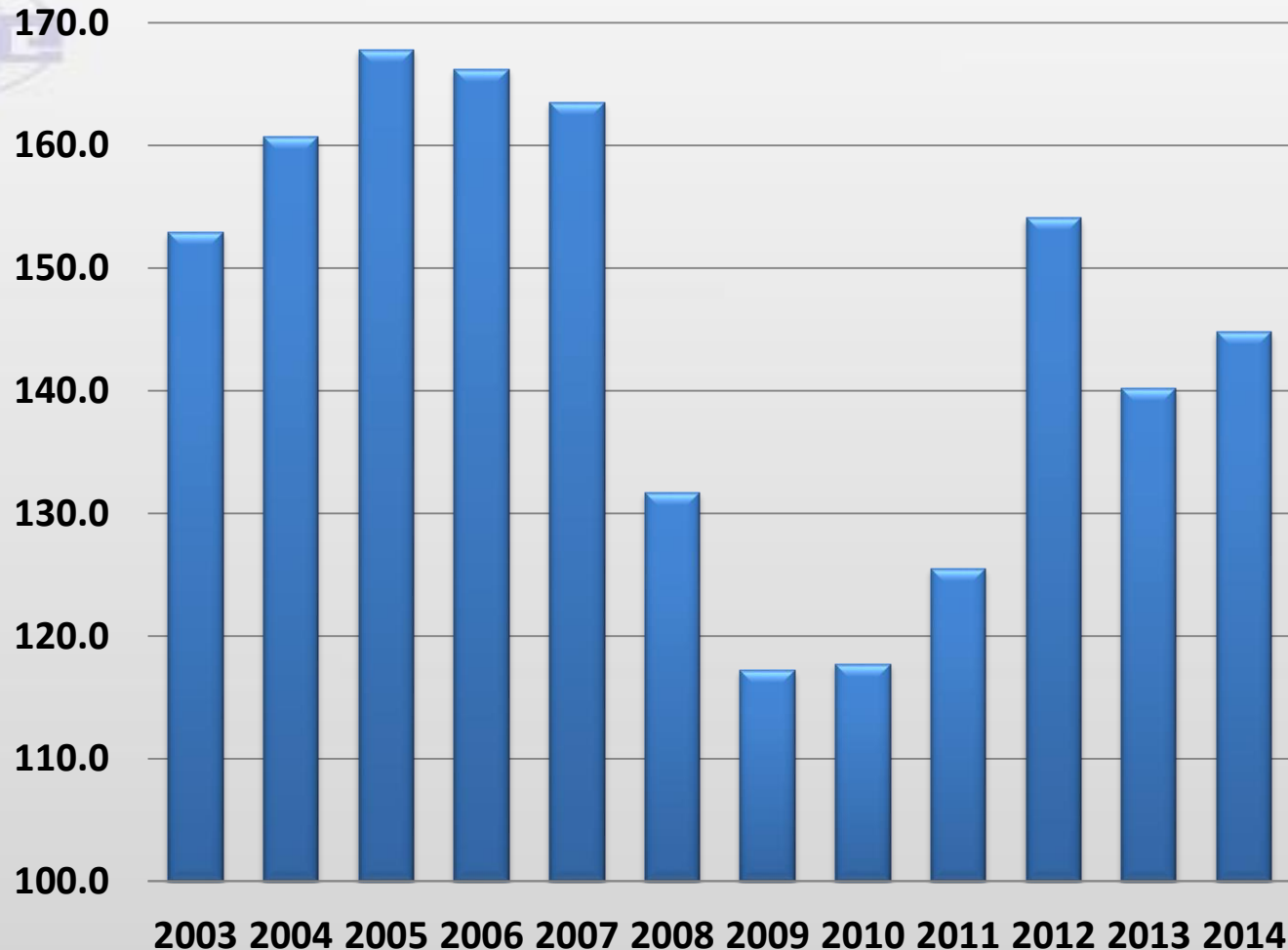


LATIN AMERICA NICKEL MINE PRODUCTION BY COUNTRY





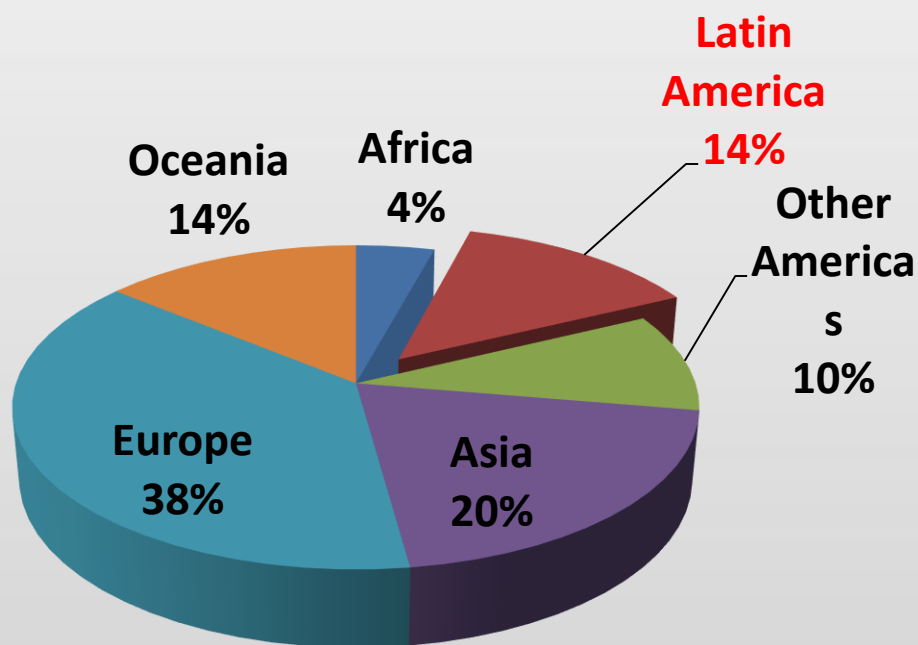
Latin America Primary Nickel Production (kt)



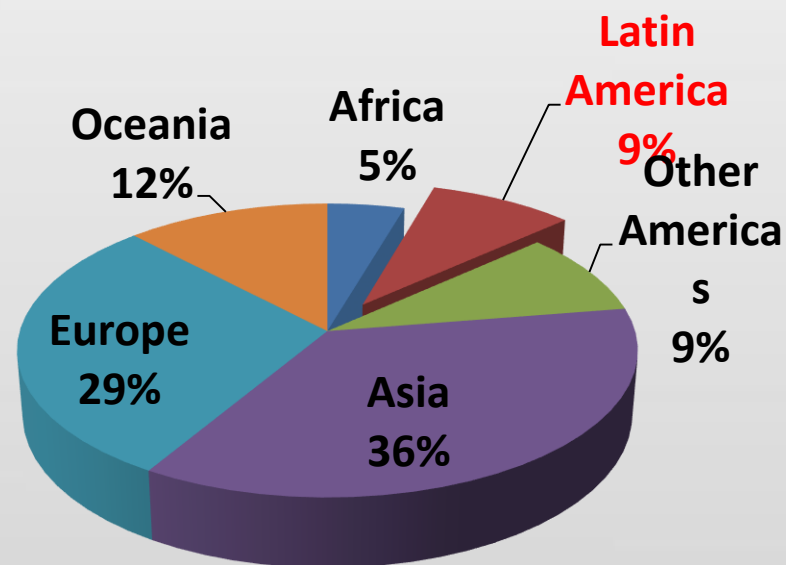


PRIMARY NICKEL PRODUCTION

2003



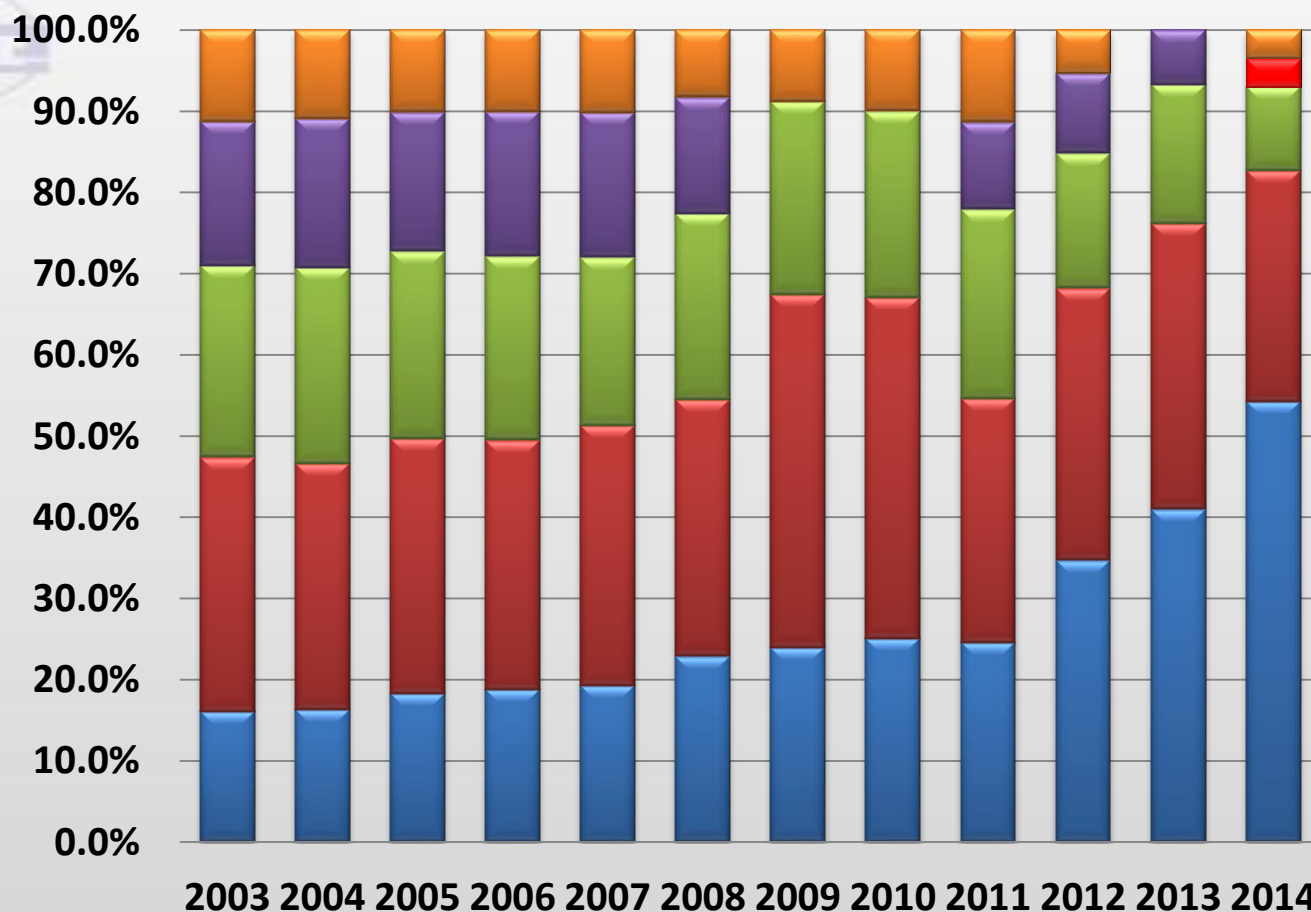
2014





Latin America

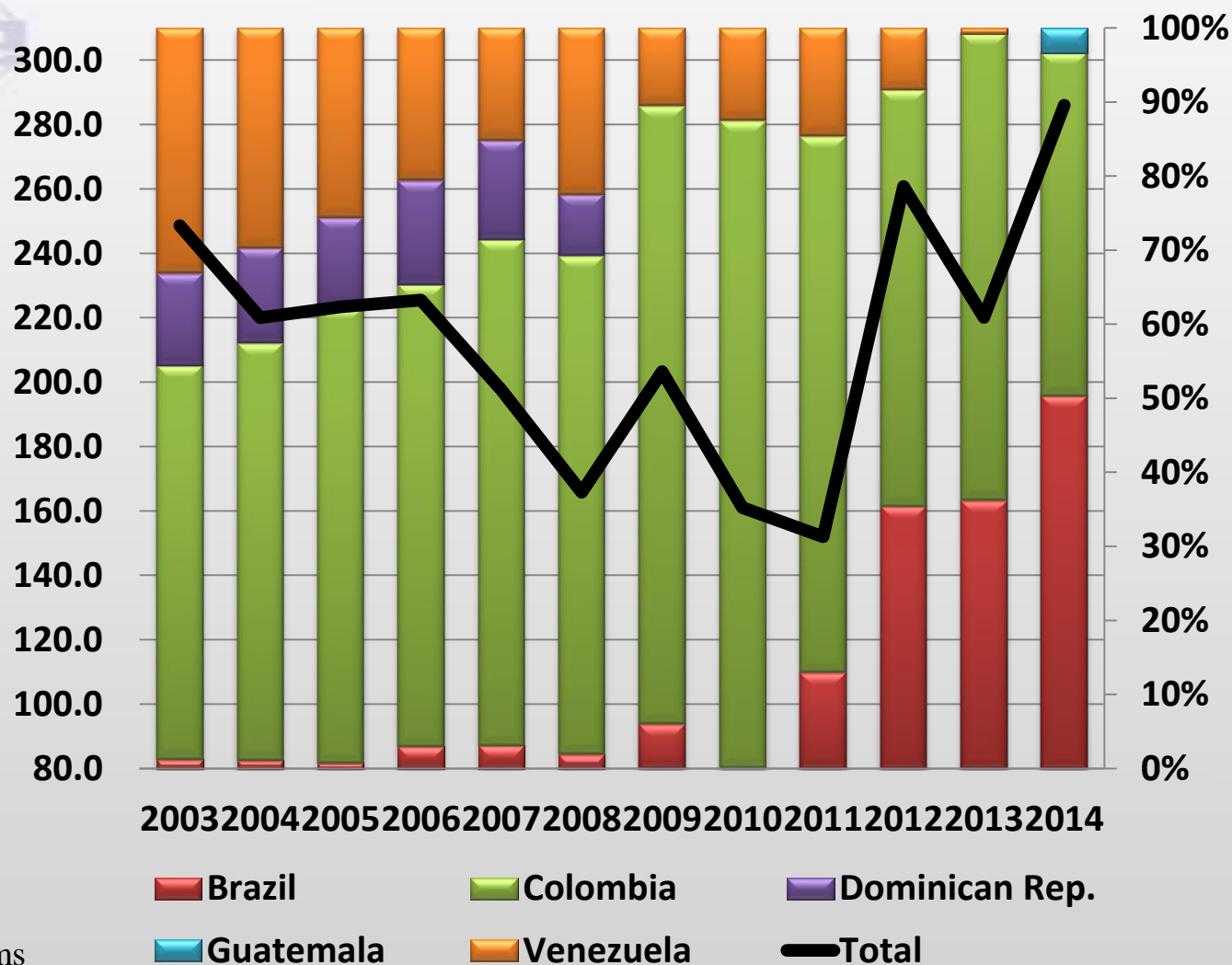
Primary Nickel Production BY COUNTRY





Latin America

Export of Ferronickel (kt, %)

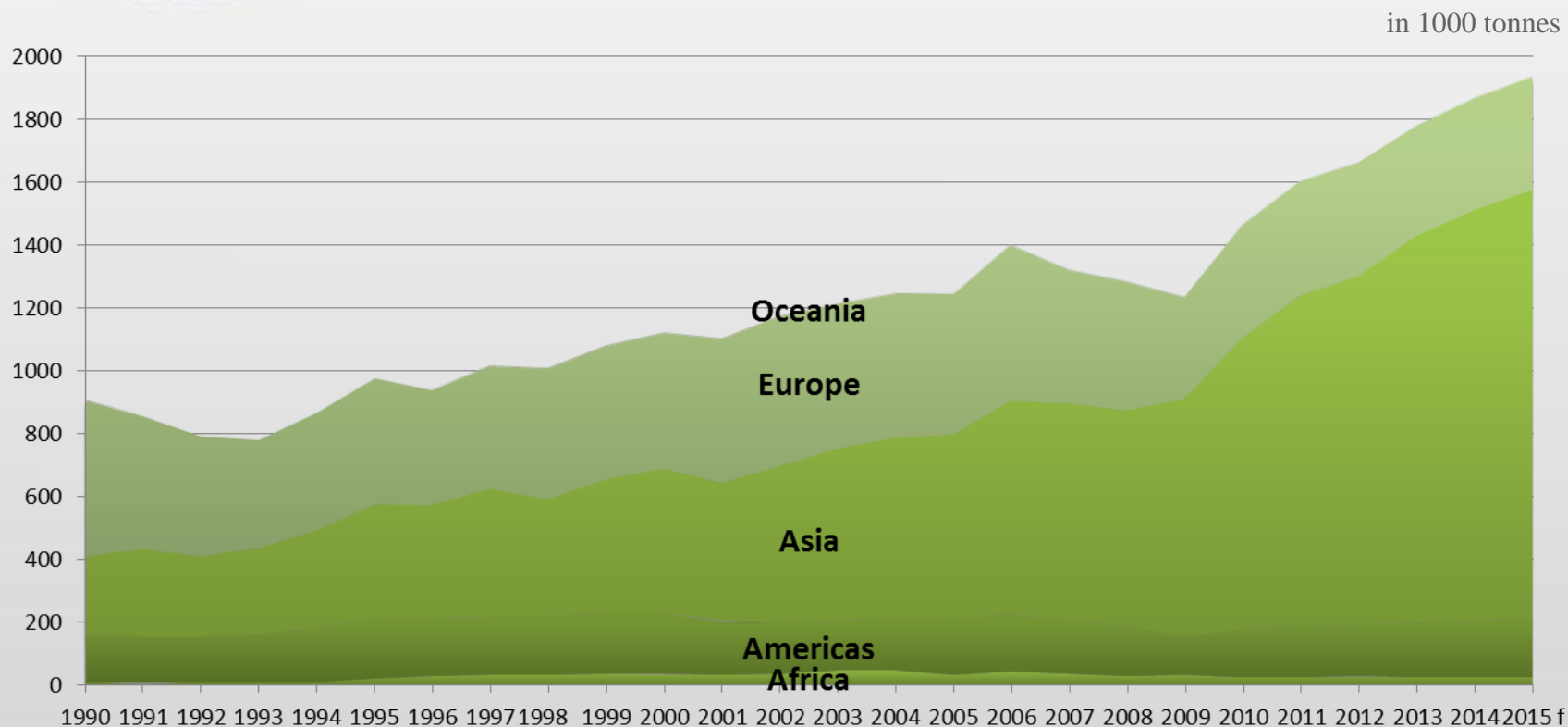


Country/ Facilities	Producer	Product	Estimated Production 2015	Projected Total Production
Brazil				
Barro Alto	Anglo American	FeNi	20,000	40,000
Codemin	Anglo American	FeNi	9,000	10,000
Niquel Tocantins	Votorantim	Electrolytic	21,000	26,000
Onca Puma	Vale	FeNi	22,000	53,000
Santa Rita	Mirabela Nickel	Concentrate	15,000	20,000
Colombia				
Cerro Matoso	South32	FeNi	36,000	55,000
Cuba				
Punta Gorda	Empresa Niquelifera Ernesto Che Guevara (100% Government)	Ni Oxide	15,000	31,000
Nicaró	Empresa Niquelifera Com.te René Ramous Latour (100% Government)	Ni Oxide	-	15,000

Country/ Facilities	Producer	Product	Estimated Production 2015	Projected Total Production
Dominican Rep. Falcondo	Americano Nickel (previously Glencore)	FeNi	-	32,000
Guatemala Fenix	Solway Invest. Group	FeNi	12,000	25,000
Guaxilan	Cunico Resources	Ni Ore	10,000	25,000
Montufar	Solway Group	Ni Ore	18,000	25,000
Venezuela Loma do Niquel	Petroleos de Venezuela	FeNi	7,000	17,000



World Primary Nickel Usage (consumption) ^(1/2)



(f) forecast April 2015



World Nickel Ore Production 2012 to 2015 (f)

in 1000 tonnes

Area	2012	2013	change	2014	change	2015 (f)	change
Africa	91.5	120.1	31.3%	122.8	2.2%	137.1	11.6%
America	491.2	500.9	2.0%	517.2	3.3%	549.0	6.1%
<i>North America</i>	204.5	223.3	9.2%	239.1	7.1%	261.0	9.2%
<i>Latin America</i>	286.7	277.6	-3.2%	278.1	0.2%	288.0	3.6%
Asia	1078.9	1264.6	17.2%	658.5	-47.9%	675.5	2.6%
Europe	322.3	317.4	-1.5%	325.2	2.5%	313.3	-3.7%
Oceania	380.6	409.5	7.6%	433.9	6.0%	494.3	13.9%
Total	2364.5	2612.5	10.5%	2057.6	-21.2%	2169.2	5.4%



World Primary Nickel Production 2012 to 2015 (f)

in 1000 tonnes

Area	2012	2013	change	2014	change	2015 (f)	change
Africa	41.0	58.8	43.4%	75.0	27.6%	87.6	16.8%
America	306.1	293.3	-4.2%	295.7	0.8%	290.6	-1.7%
<i>North America</i>	152.0	153.1	0.0%	150.9	-1.4%	152.0	0.7%
<i>Latin America</i>	154.1	140.2	-0.1%	144.8	3.3%	138.6	-4.3%
Asia	728.0	922.4	26.7%	939.7	1.9%	879.5	-6.4%
Europe	510.1	497.8	-2.4%	484.0	-2.8%	471.9	-2.5%
Oceania	174.2	189.9	9.0%	204.5	7.7%	228.5	11.7%
Total	1759.4	1962.2	11.5%	1998.9	1.9%	1958.1	-2.0%



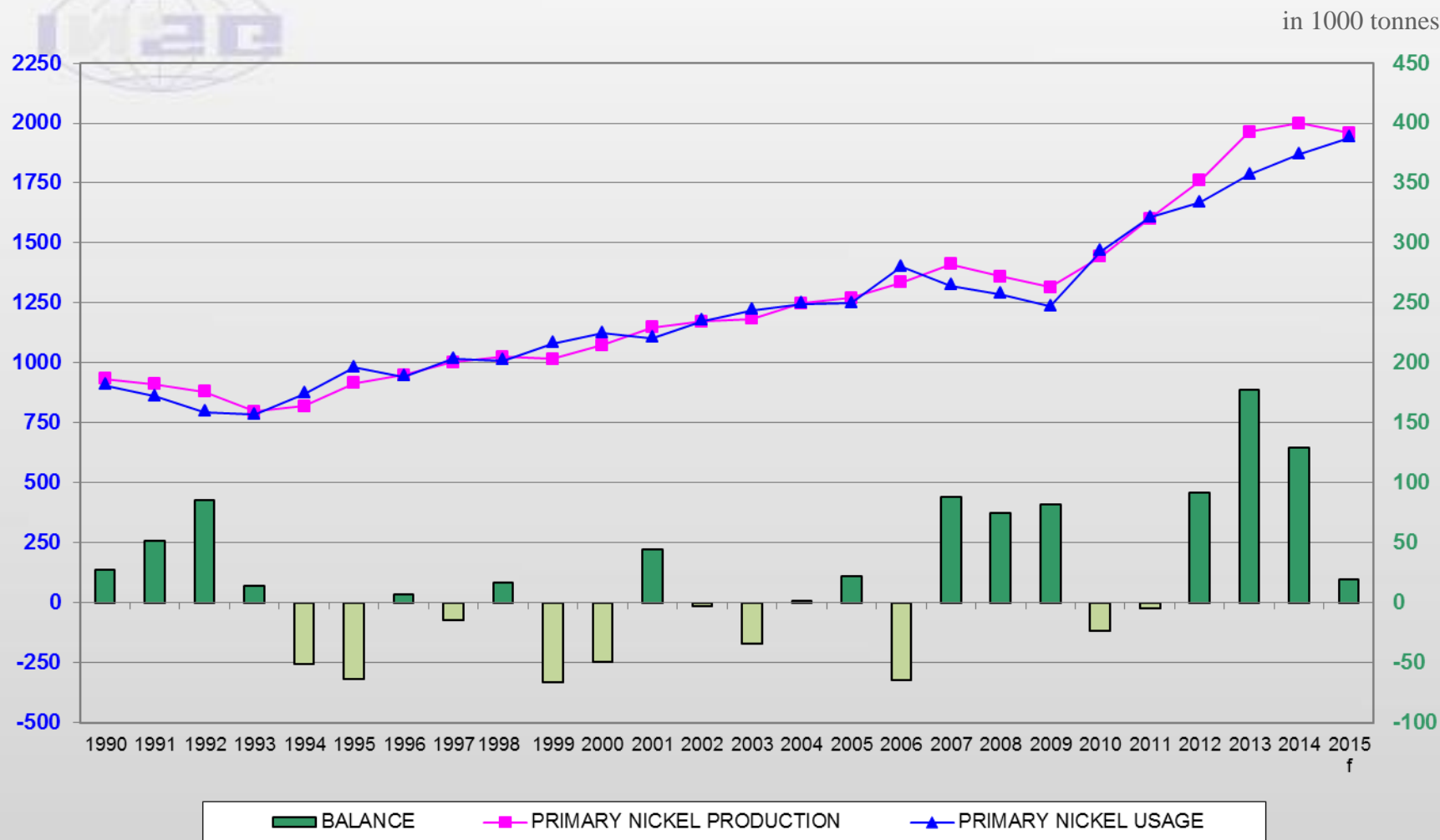
World Primary Nickel Usage 2012 to 2015 (f)

in 1000 tonnes

Area	2012	2013	change	2014	change	2015 (f)	change
Africa	24.6	22.9	-6.9%	21.4	-6.6%	23.7	10.7%
America	166.4	174.8	5.0%	181.8	4.0%	187.1	2.9%
<i>North America</i>	142.1	150.1	0.1%	157.6	5.0%	163.5	3.7
<i>Latin America</i>	24.3	24.7	0.0%	24.2	-2.0%	23.6	-2.5
Asia	1109.9	1233.6	11.1%	1309.1	6.1%	1367.3	4.4
Europe	364.1	350.8	-3.7%	354.4	1.0%	357.6	0.9
Oceania	2.7	2.7	0.0%	2.7	0.0%	2.8	3.7
Total	1667.7	1784.8	7.0%	1869.4	4.7%	1938.5	3.7



World Primary Nickel Balance - annual





“Importance of Latin America’s Contribution to the Global Supply of Copper, Lead, Zinc and Nickel”

Don Smale

Secretary-General

International Lead and Zinc Study Group

International Copper Study Group

International Nickel Study Group

2nd EU - Latin America Dialogue on Raw Materials

Cartagena, Colombia, 22-23 September 2015