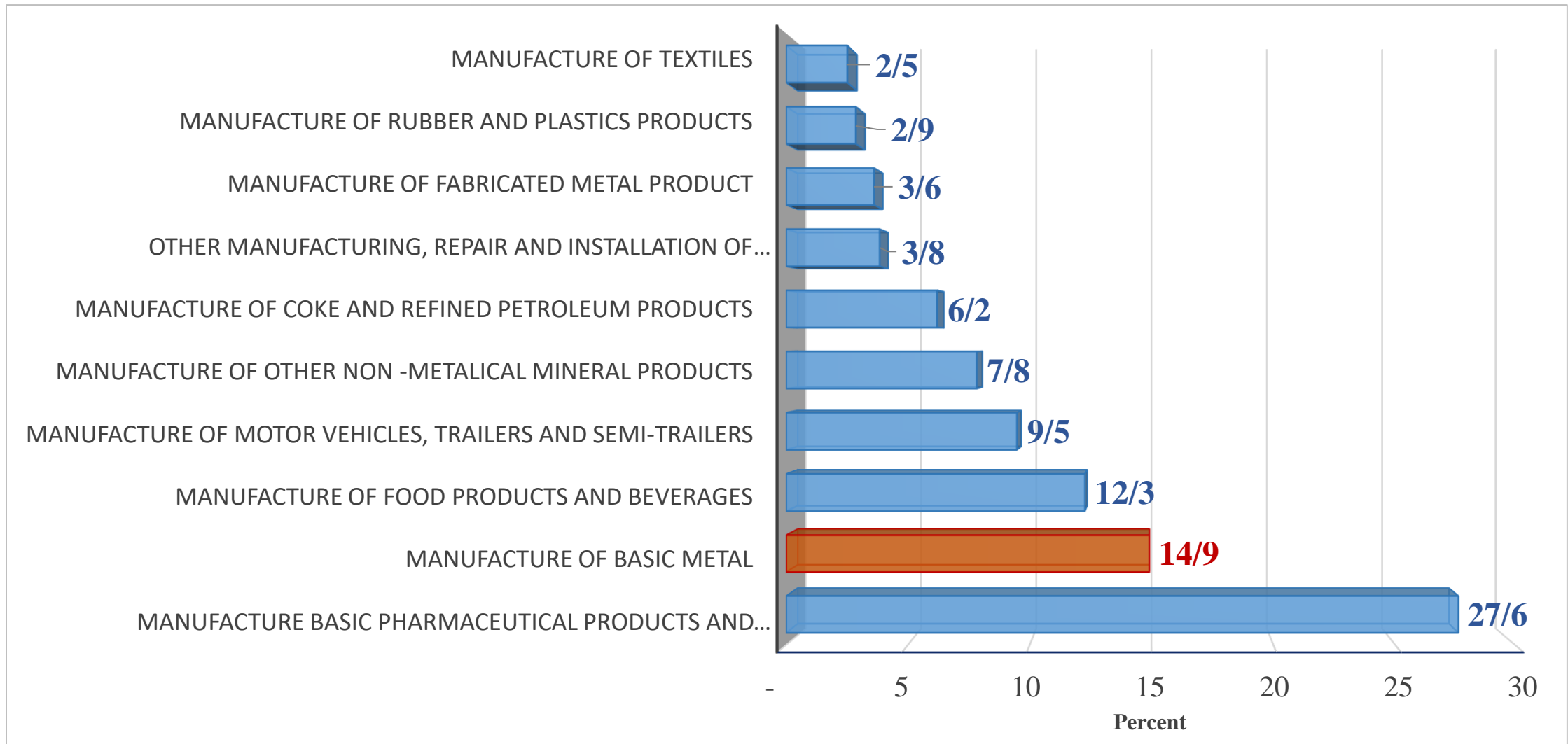


بنام یگانہ صانع هستی

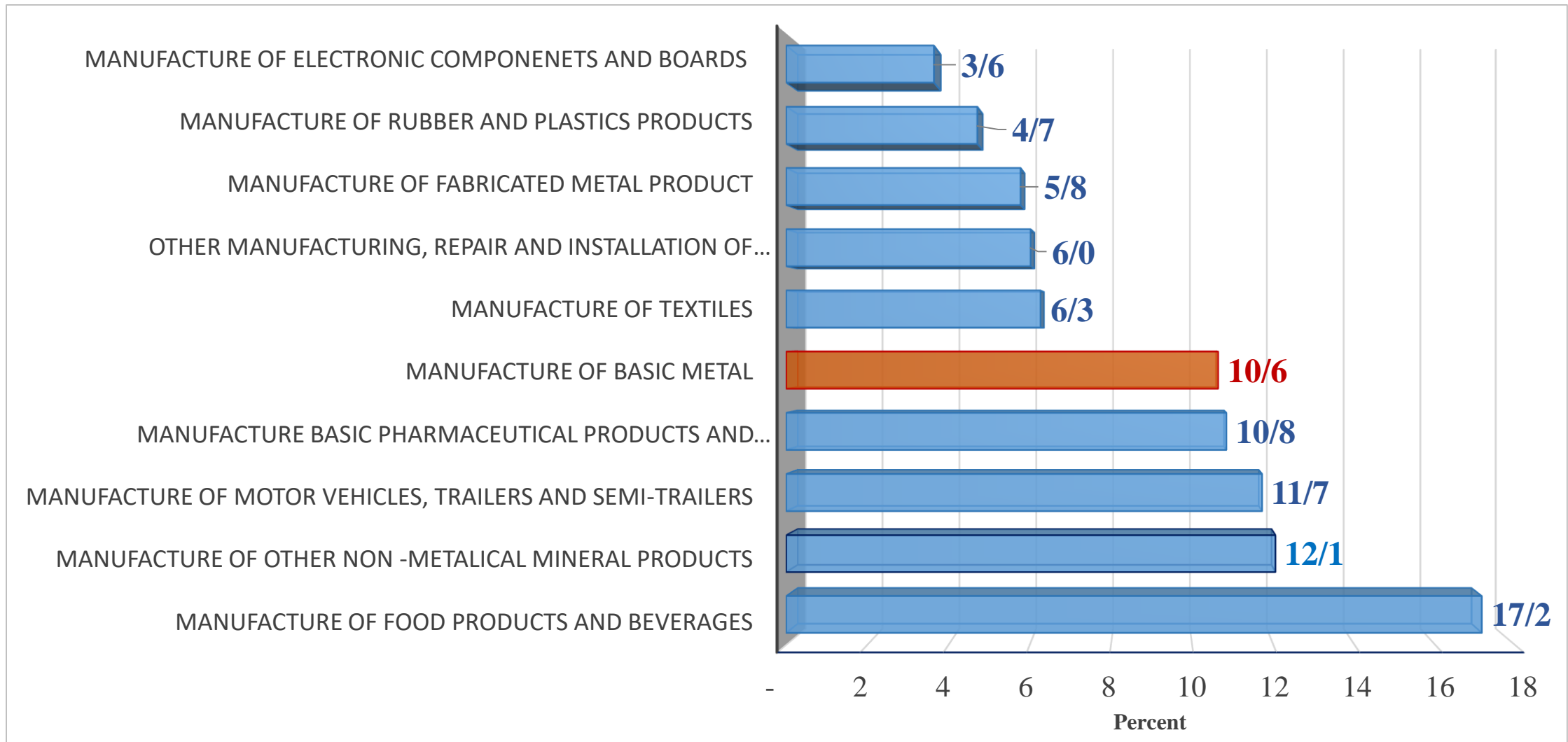
همایش و نمایشگاه
چشم انداز صنایع غیر آهنی ایران و فناوری های وابسته
با نگاهی به بازار

**Iran Non-Ferrous
Industries Market
& Related Technologies
Conference & Expo**

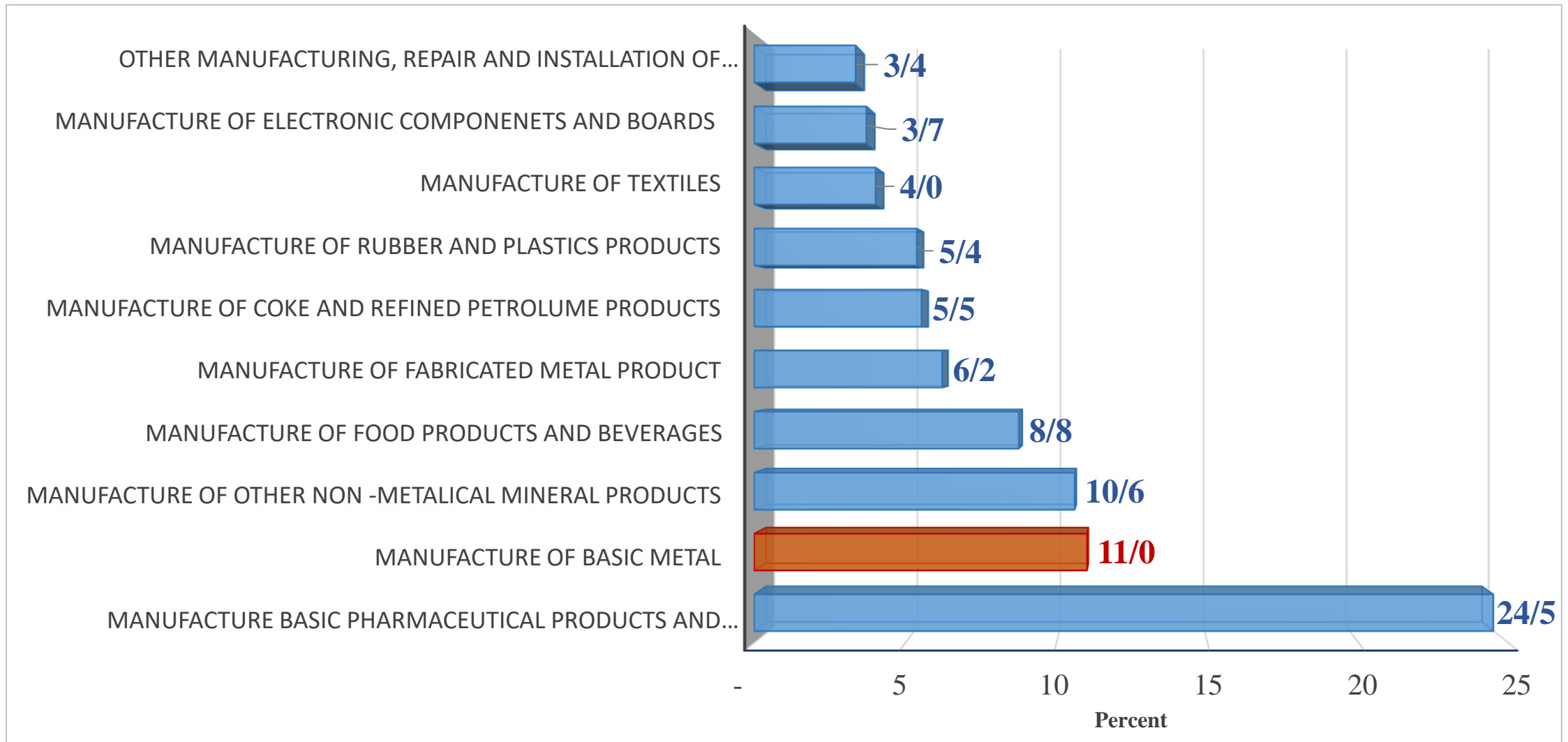
The Share of Value Added in the Top Ten Industrial Activities of Iran



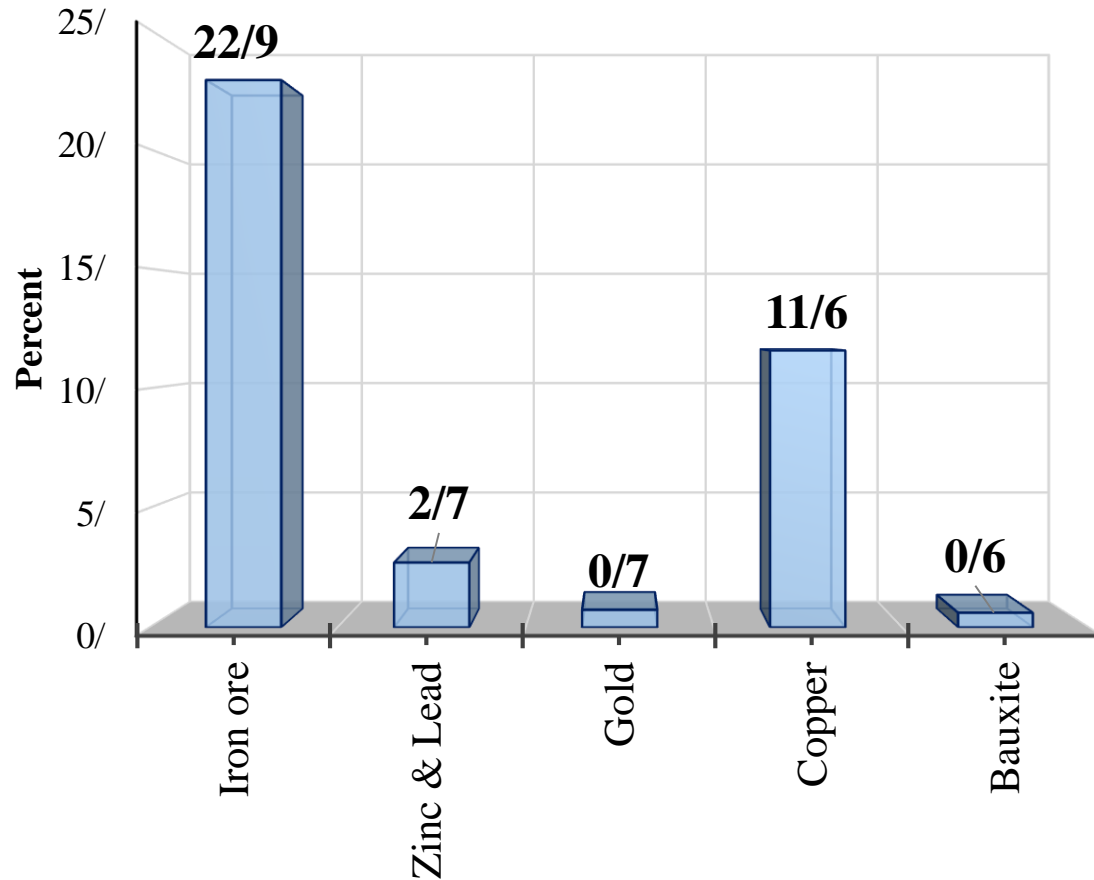
The Share of Employment in the Top Ten Industrial Activities of Iran



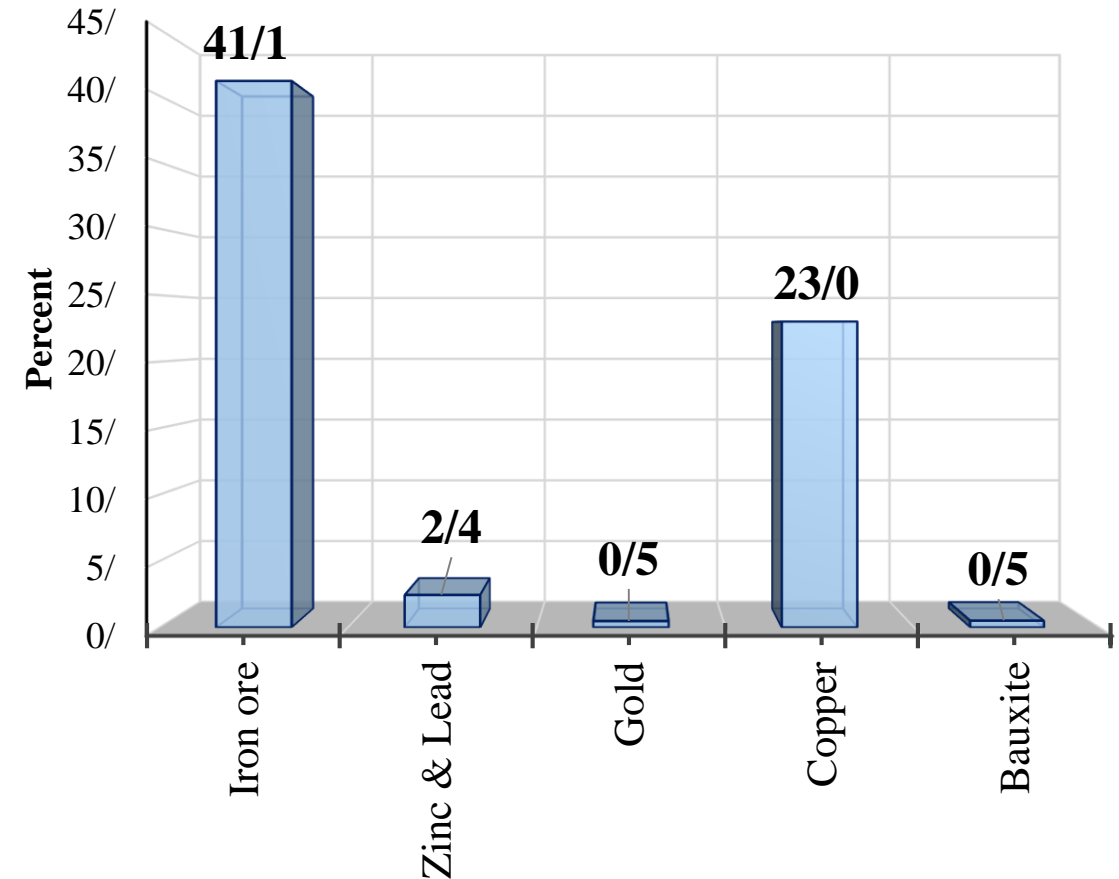
The Share of Investment in the Top Ten Industrial Activities of Iran



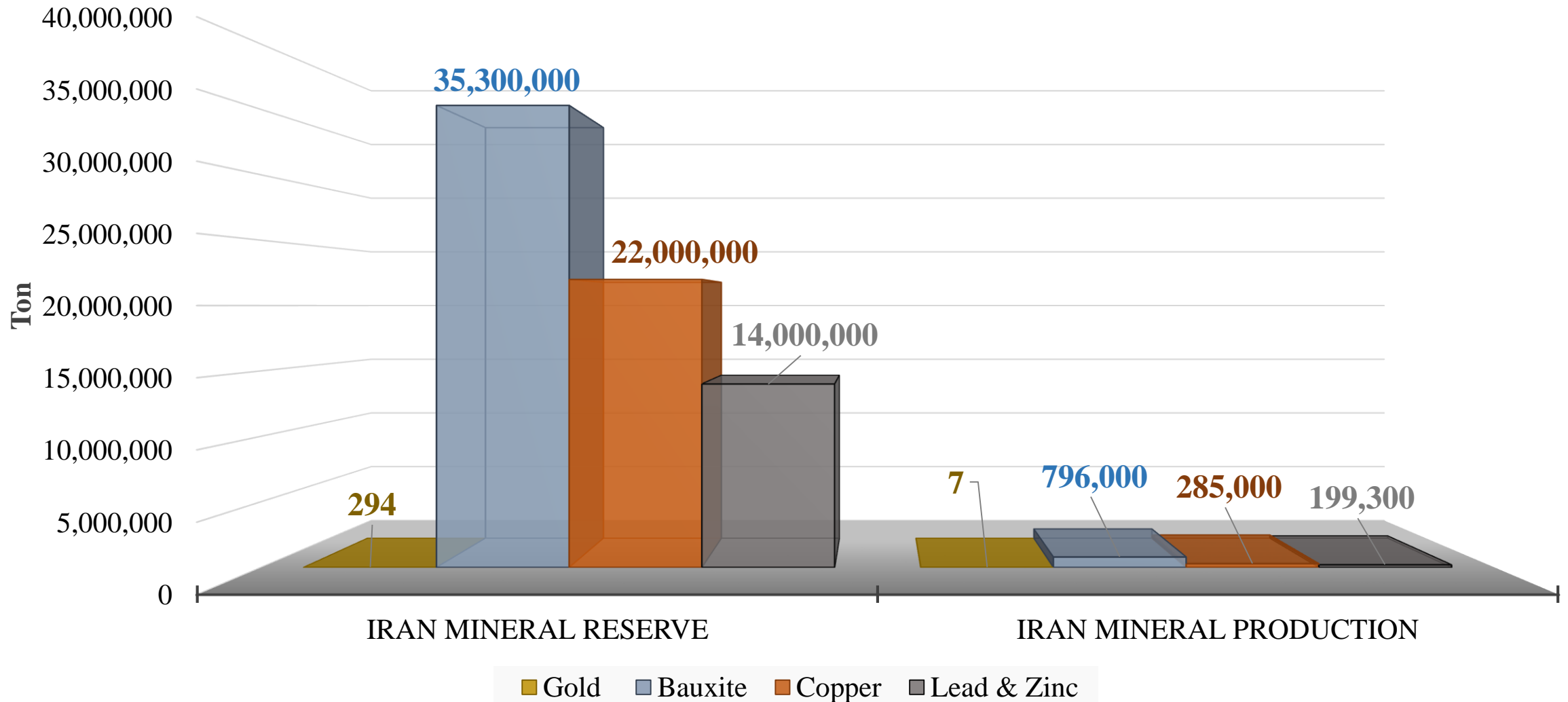
Metal Mines Employment Share in all of the Iran's Mines



Metal Mines Value Added Share in all of the Iran's Mines



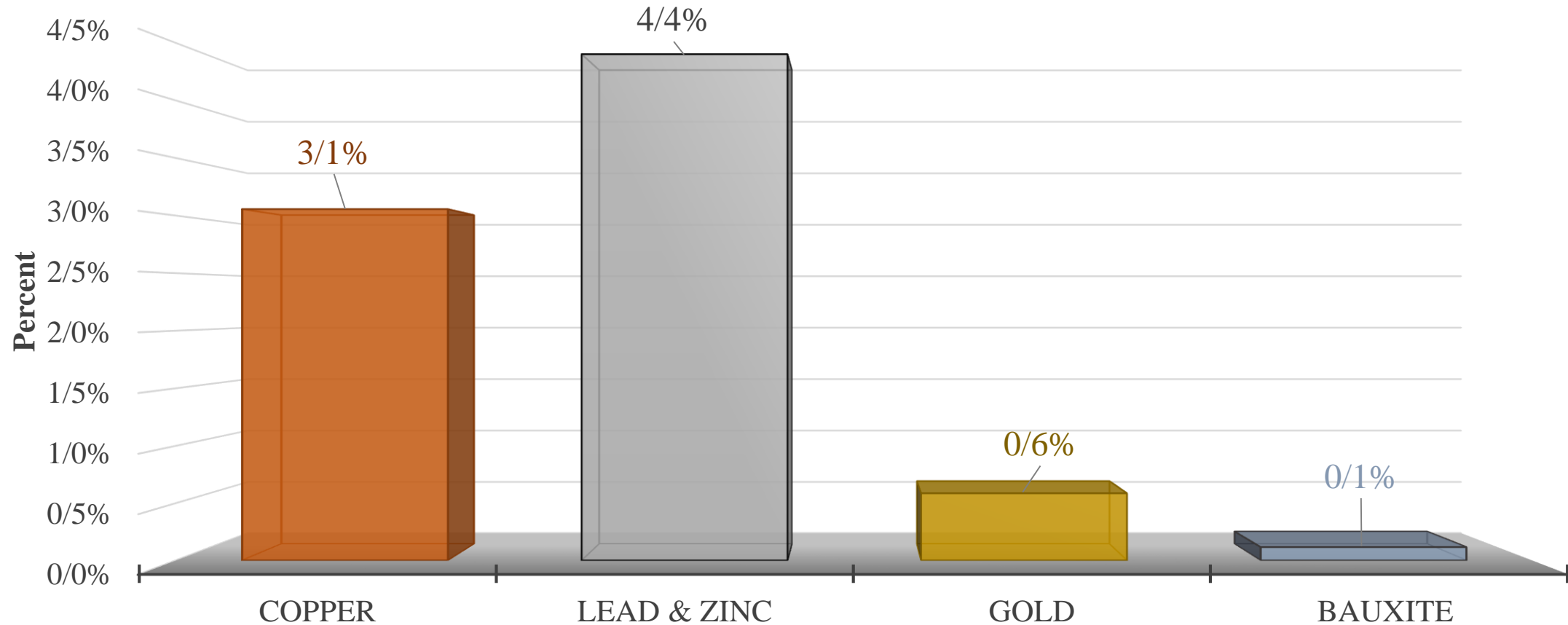
Iran's Mine Reserve & Mine Production, 2017



World's Non Ferrous Metals Reserves

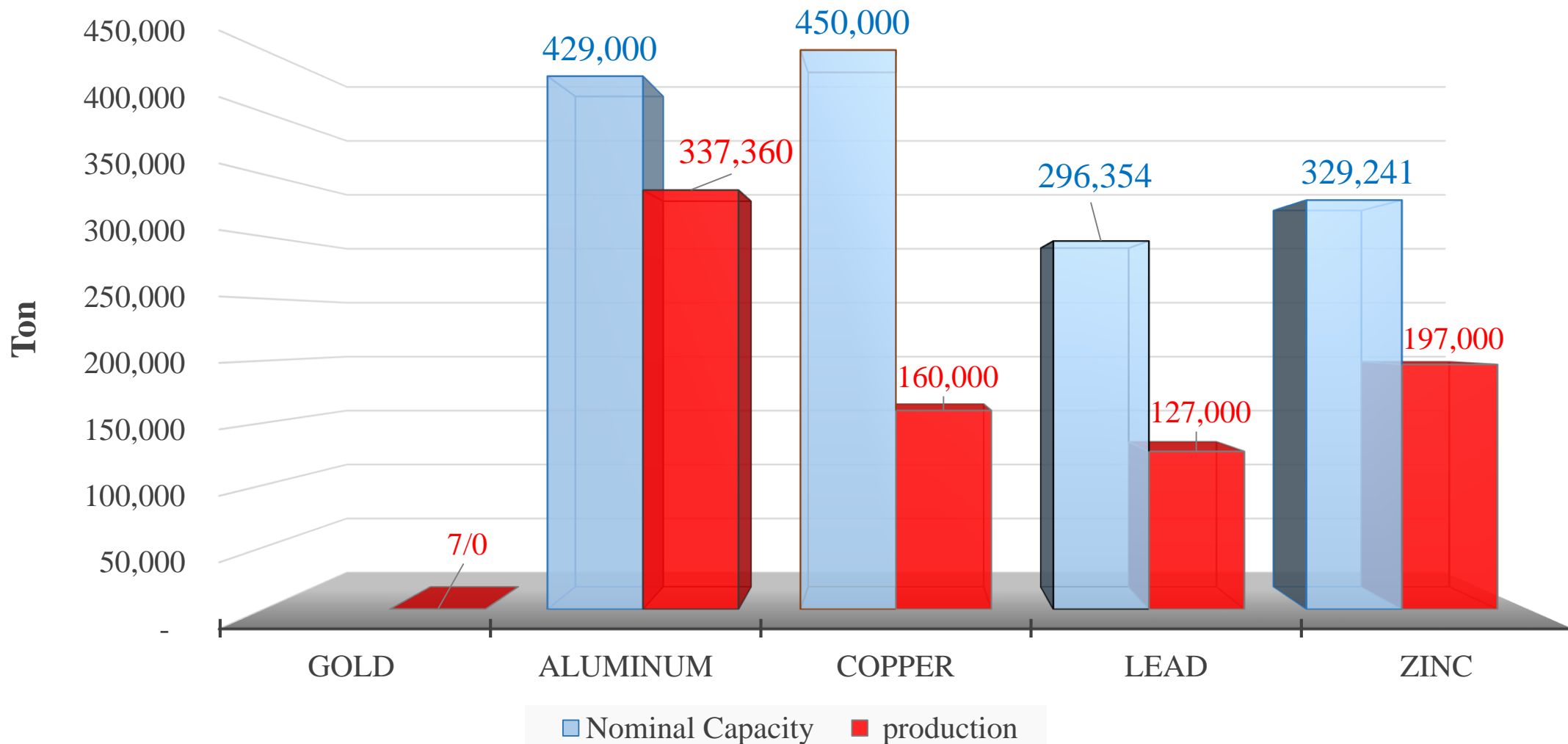
Non Ferrous Metals	Million Tons
Bauxite Ore	30,000
Copper (Content)	790
Zinc (Content)	230
Lead (Content)	88
Gold (Content)	0.05

Iran's Share and Rank in Global Reserves

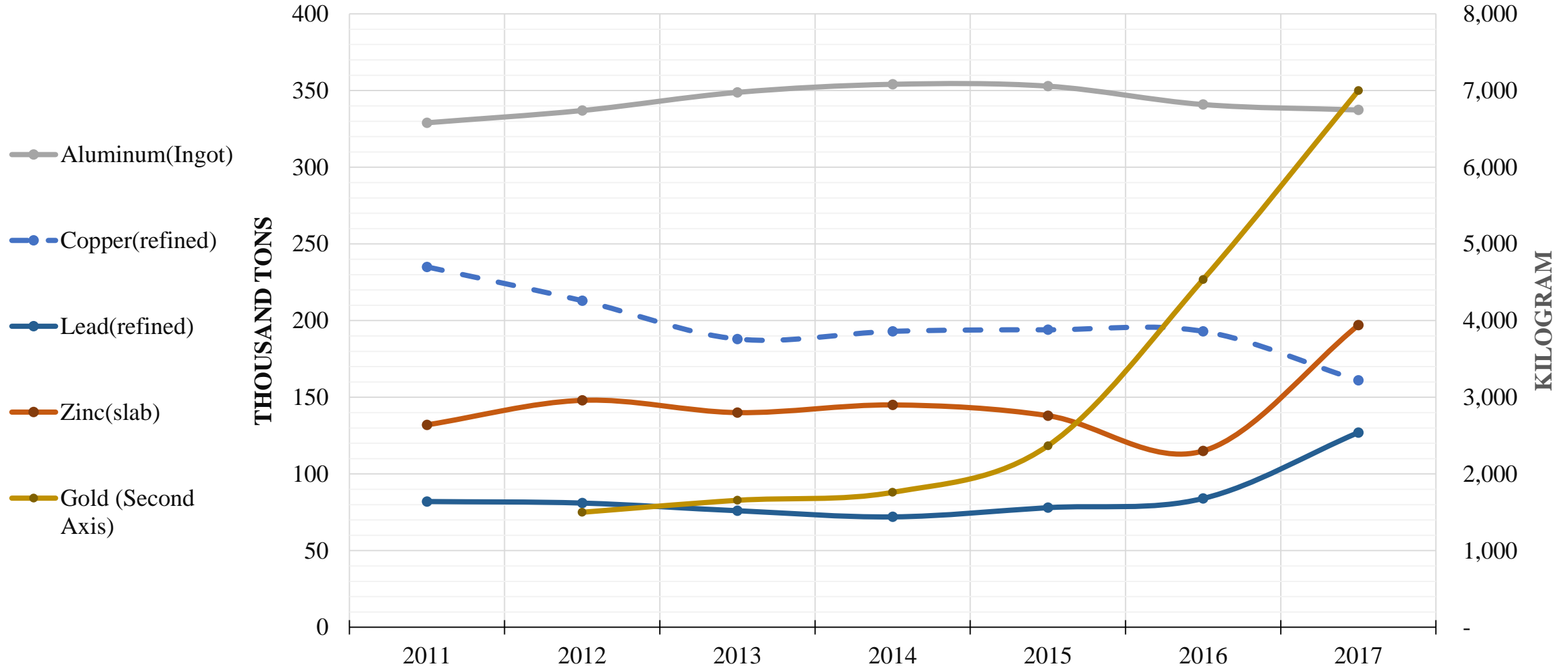


Ranking	8th	12th	NA	NA
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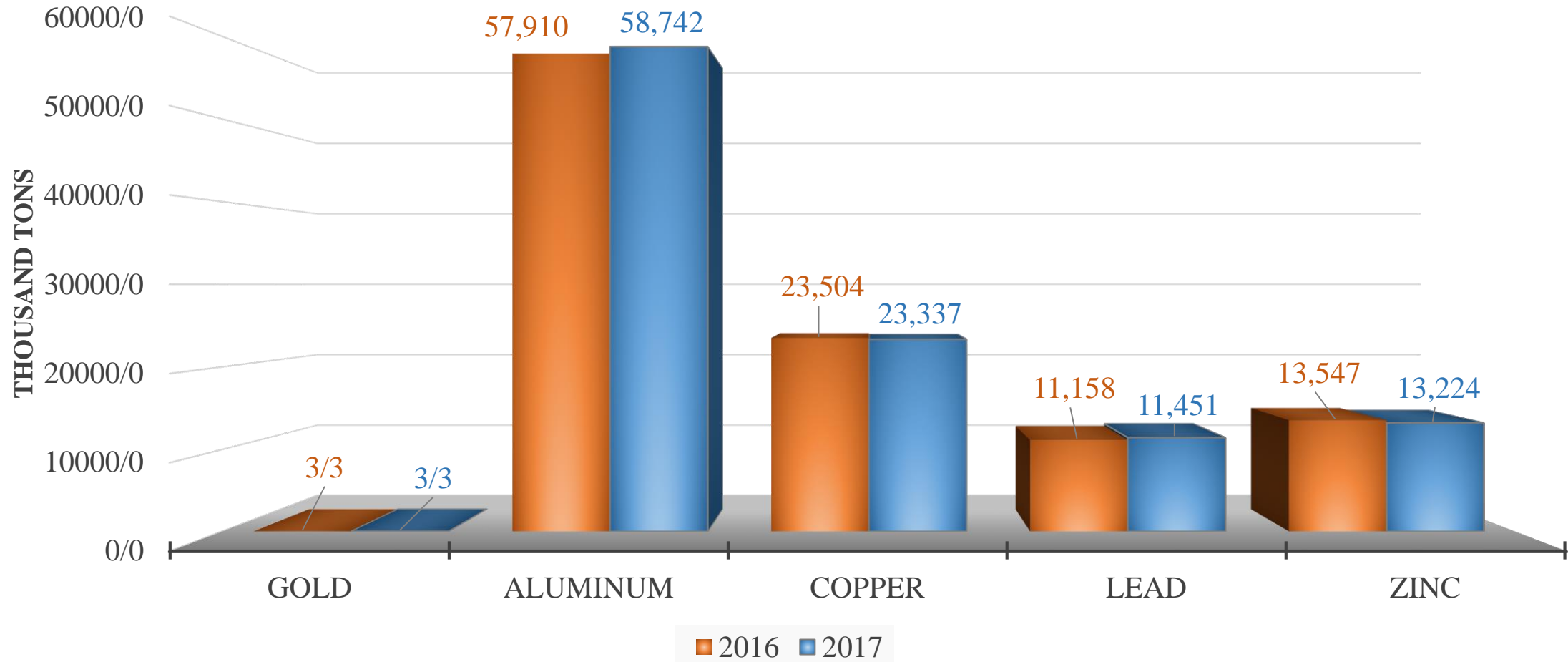
Iran's Non Ferrous Metal Capacity & Production, 2017



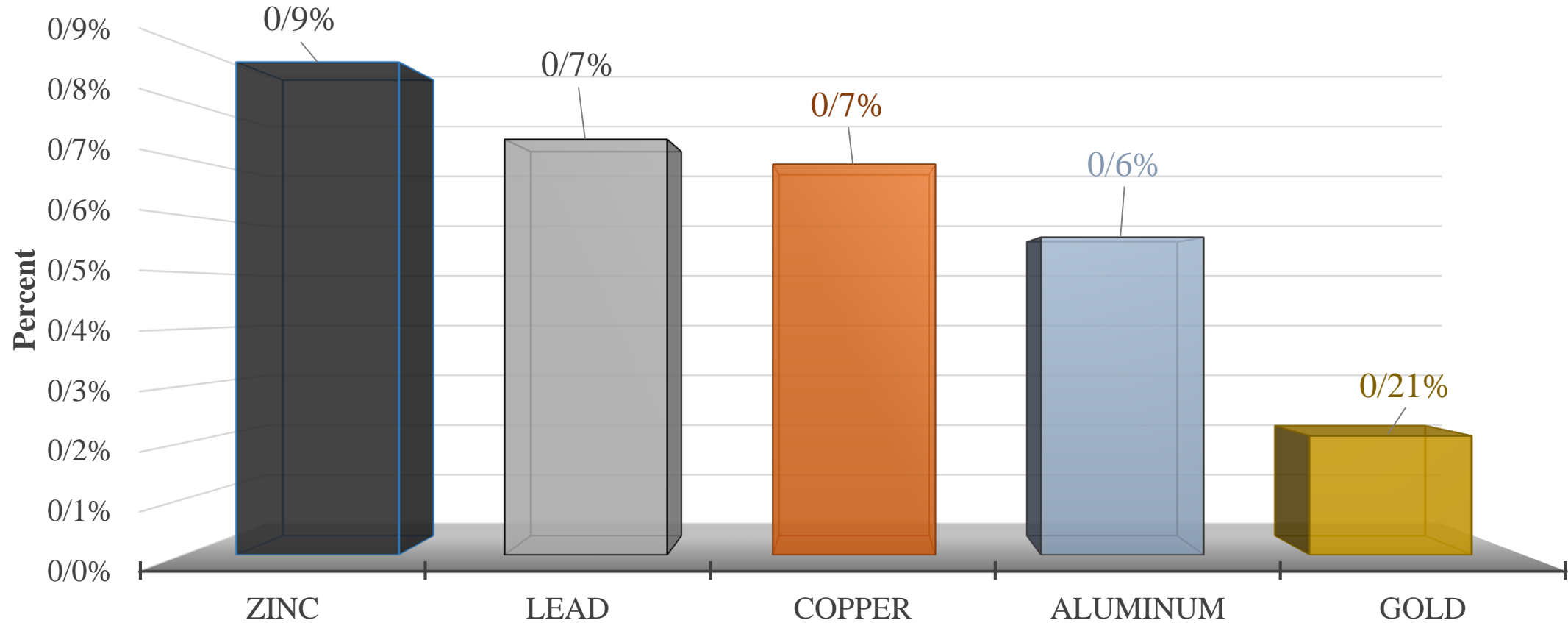
Iran's Non Ferrous Metal Production



World's Non Ferrous Metal Production



Iran's Share and Rank in Non Ferrous Metal Global Production, 2016








Ranking	22 nd	21 st	23 th	21 st	53 th
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Vision of Iran's Non Ferrous Metal for 1404 (2025)

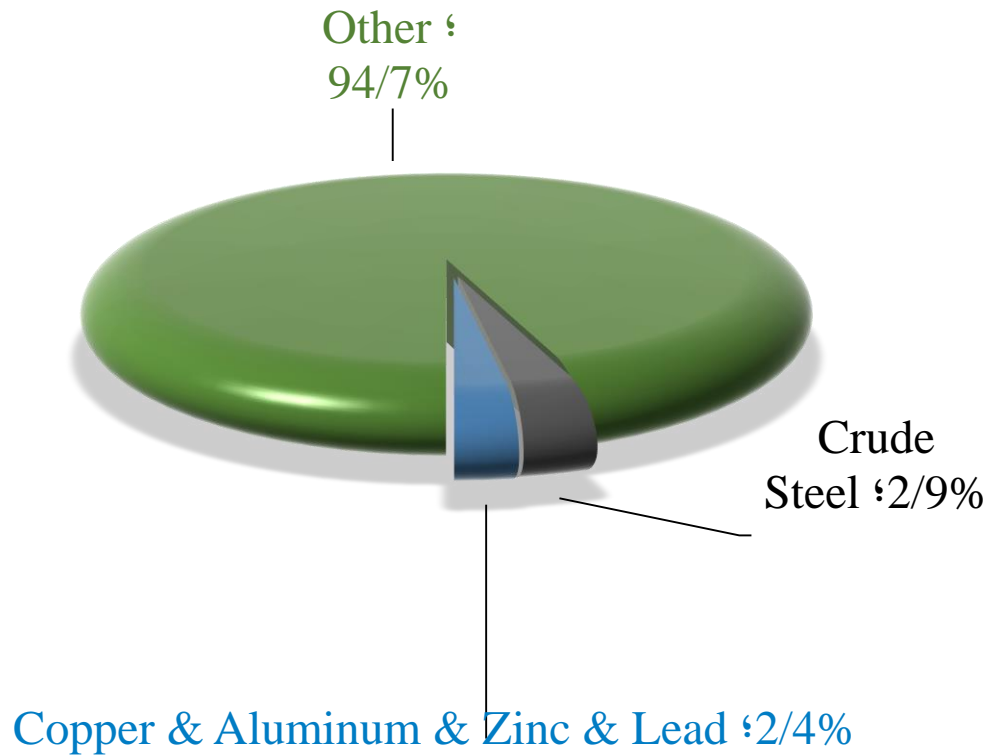
Product	Existing Key projects	2016 (Nominal capacity)	2025 (Nominal capacity)	Future key Plants
Gold	<ul style="list-style-type: none"> Zar Shuran 	-	12 tone	<ul style="list-style-type: none"> Phase II of Zar Shuran
Aluminum	<ul style="list-style-type: none"> Almahdi Aluminum Co. Iranian Aluminum Co. 	429 (Thousand tons)	1,500 (Thousand tons)	<ul style="list-style-type: none"> South aluminum Company
Copper	<ul style="list-style-type: none"> Iran National Copper 	190 Real Production (Thousand tons)	450 Real Production (Thousand tons)	<ul style="list-style-type: none"> Mes Sungun FSC
Zinc	<ul style="list-style-type: none"> Iran Zinc Mines Development 	329 (Thousand tons)	-	<ul style="list-style-type: none"> Mehdi Abad Concentrate & Ingot
Lead	<ul style="list-style-type: none"> National Iranian Lead 	296 (Thousand tons)	-	<ul style="list-style-type: none"> Mehdi Abad Concentrate & Ingot

Vision of Iran's Non Ferrous Metal for 1404 (2025)

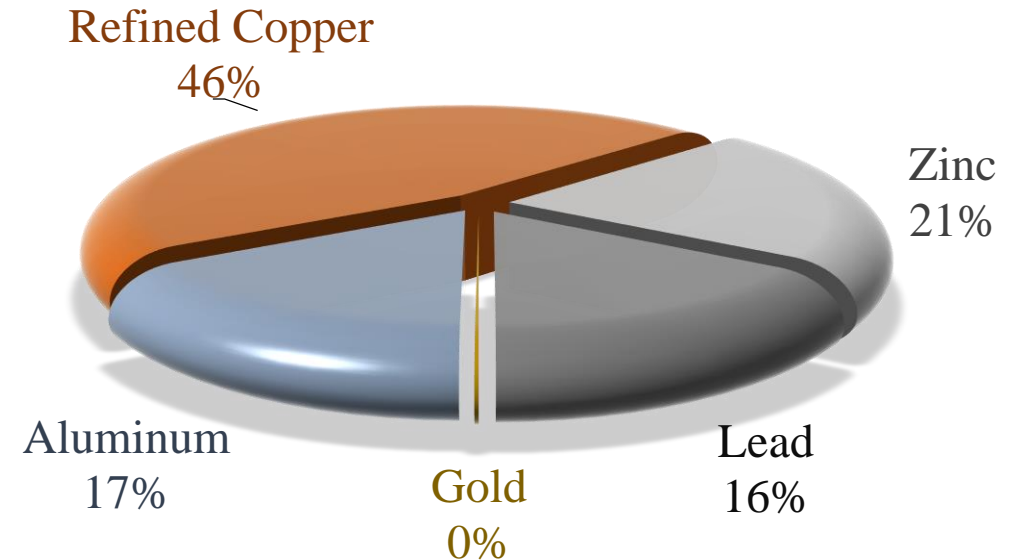
Product	2016 (Nominal capacity)		2025 (Nominal capacity)
Gold	7 (Ton) (Production)		12 (Ton) (Production)
Aluminum	429 (Thousand tons)		1,500 (Thousand tons)
Copper	450 (Thousand tons)		450 (Thousand tons)
Zinc	329 (Thousand tons)		-
Lead	296 (Thousand tons)		-

Share of Iran's Non-Ferrous Metals Export in Non-oil exports

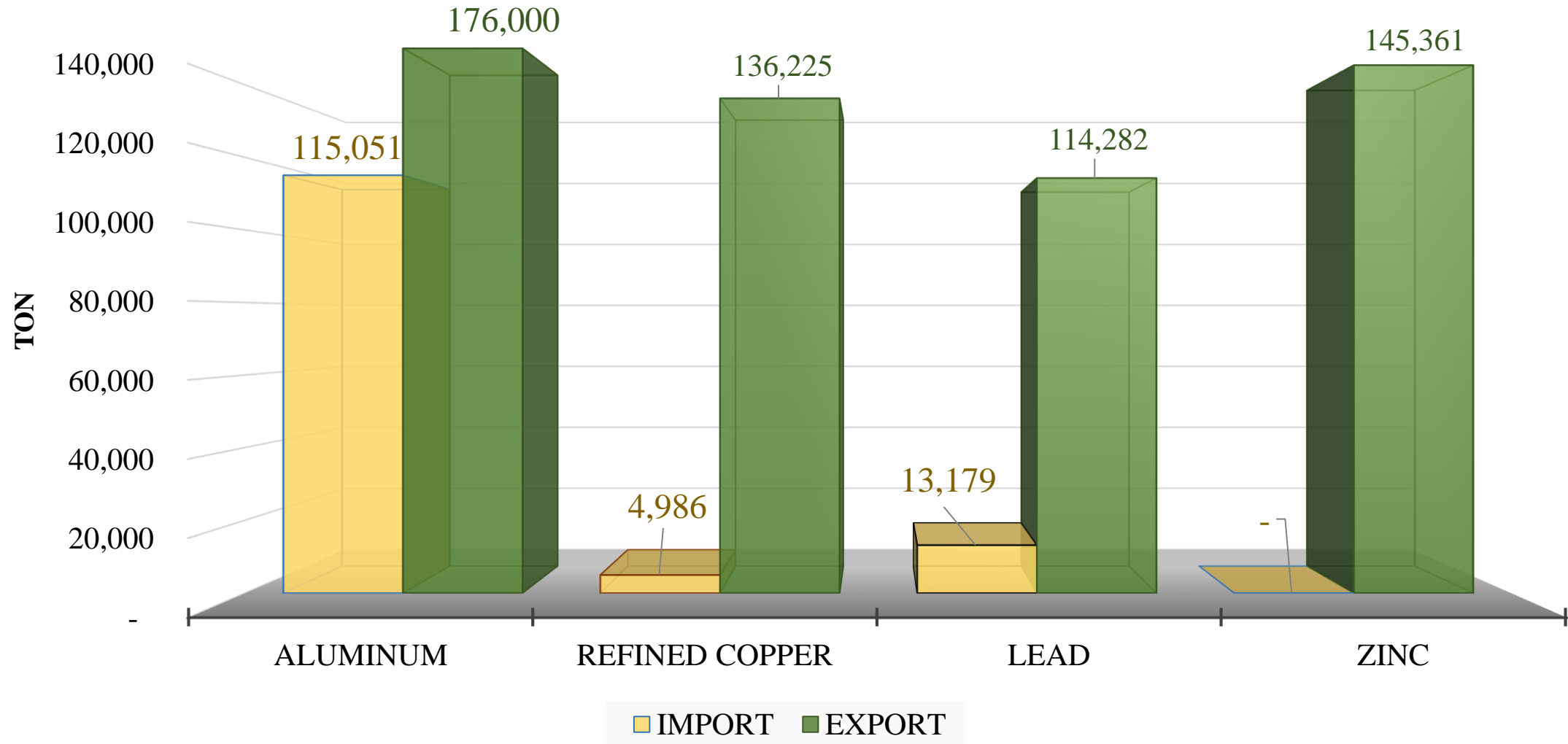
Non-oil exports of Iran in 2016



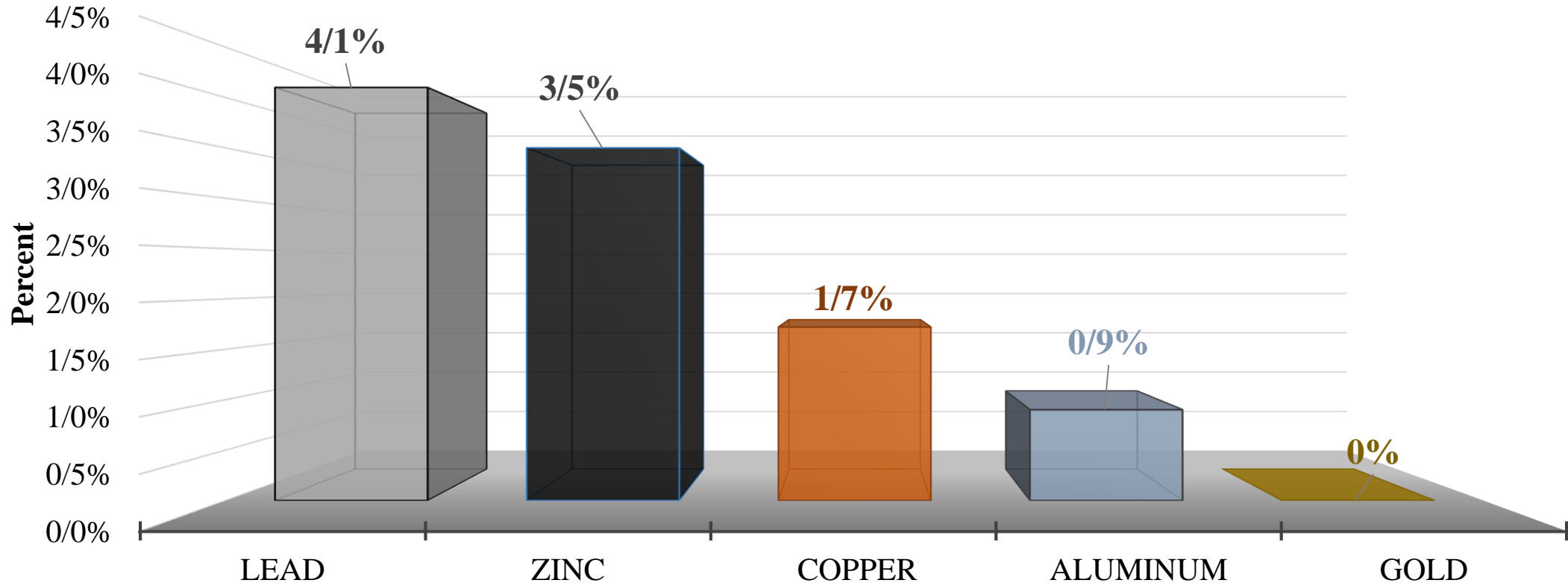
Exports of non-ferrous metals (dollar value)



Iran's Non-Ferrous Metals Trade in 2017



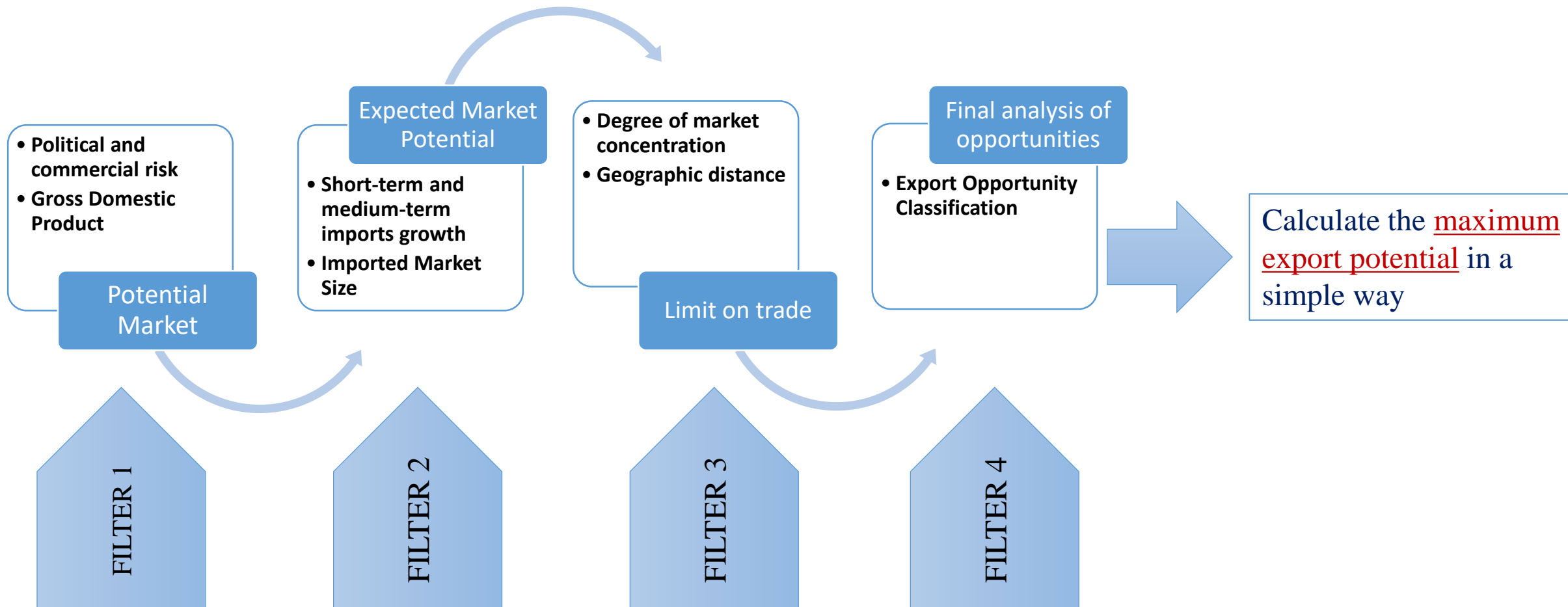
Iran's Share and Rank in Non Ferrous Metal Global Export, 2016



Ranking	8th	13th	18th	19th	NA
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Iran's Non Ferrous Metal Export Capacity, (DSM Method)

Decision Support System (DSM)



Iran's Export Potential Markets (Calculated by DSM Method)

Lead (30)

Bahrain	Romania
Kazakhstan	Switzerland
Kuwait	Tunisia
Lebanon	Czech
Oman	Canada
Qatar	Colombia
Emirates	France
India	Ireland
Turkey	United States
Lithuania	Paraguay
Bosnia	Portugal
Latvia	Spain
Slovenia	Germany
Finland	Thailand

Zinc (35)

Belgium	Germany
India	Italy
Netherlands	Turkey
Algeria	United States
Bosnia	Vietnam
Croatia	Argentina
Cyprus	Australia
Egypt	Canada
Hungary	Costa Rica
Latvia	Mexico
Thailand	New Zealand
Norway	Paraguay
Qatar	Peru
Switzerland	Portugal
Ukraine	Indonesia
Austria	Malaysia
France	South Africa

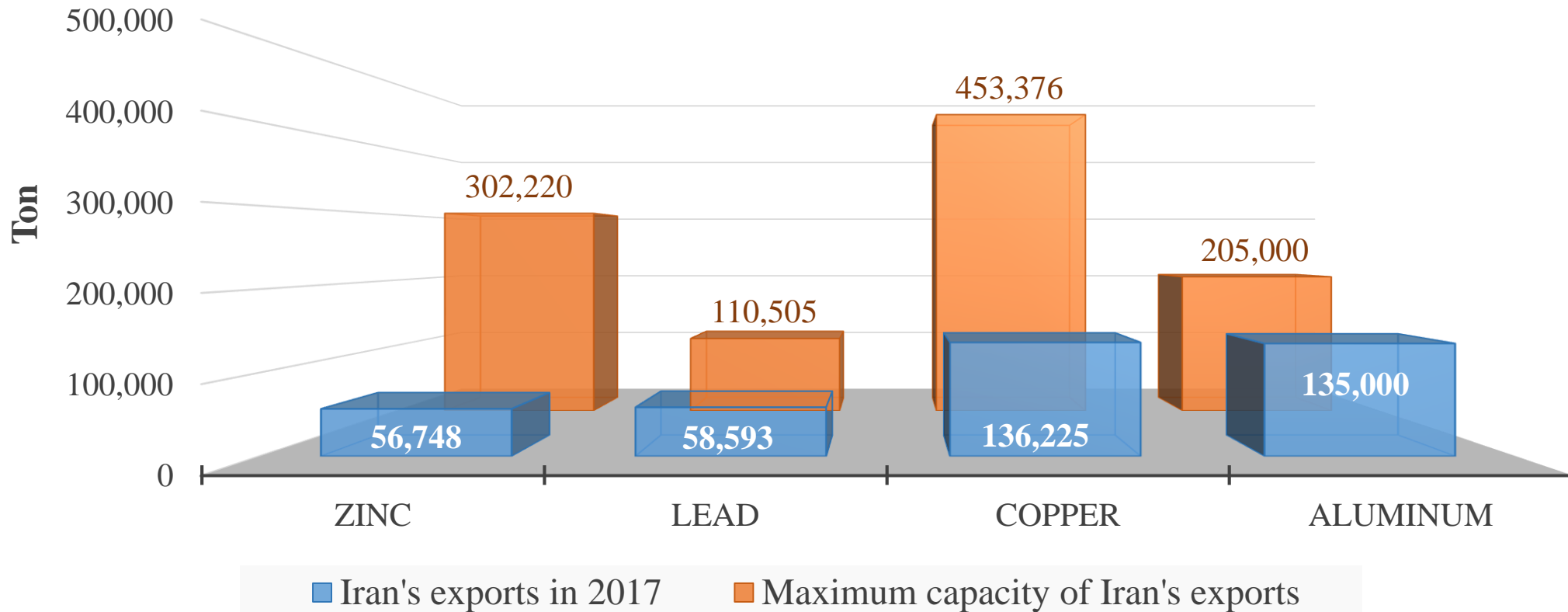
Copper (42)

Algeria	Peru
Bahrain	Qatar
Belgium	Romania
Vietnam	Saudi Arabia
Bosnia	Senegal
Canada	Spain
China	United Kingdom
Estonia	Turkey
France	Ukraine
Germany	Emirates
Indonesia	Austria
Jamaica	Bulgaria
Jordan	Finland
Korea	Greece
Kuwait	Mexico
Lithuania	Netherlands
Thailand	Portugal
Nicaragua	Singapore
Pakistan	Slovak

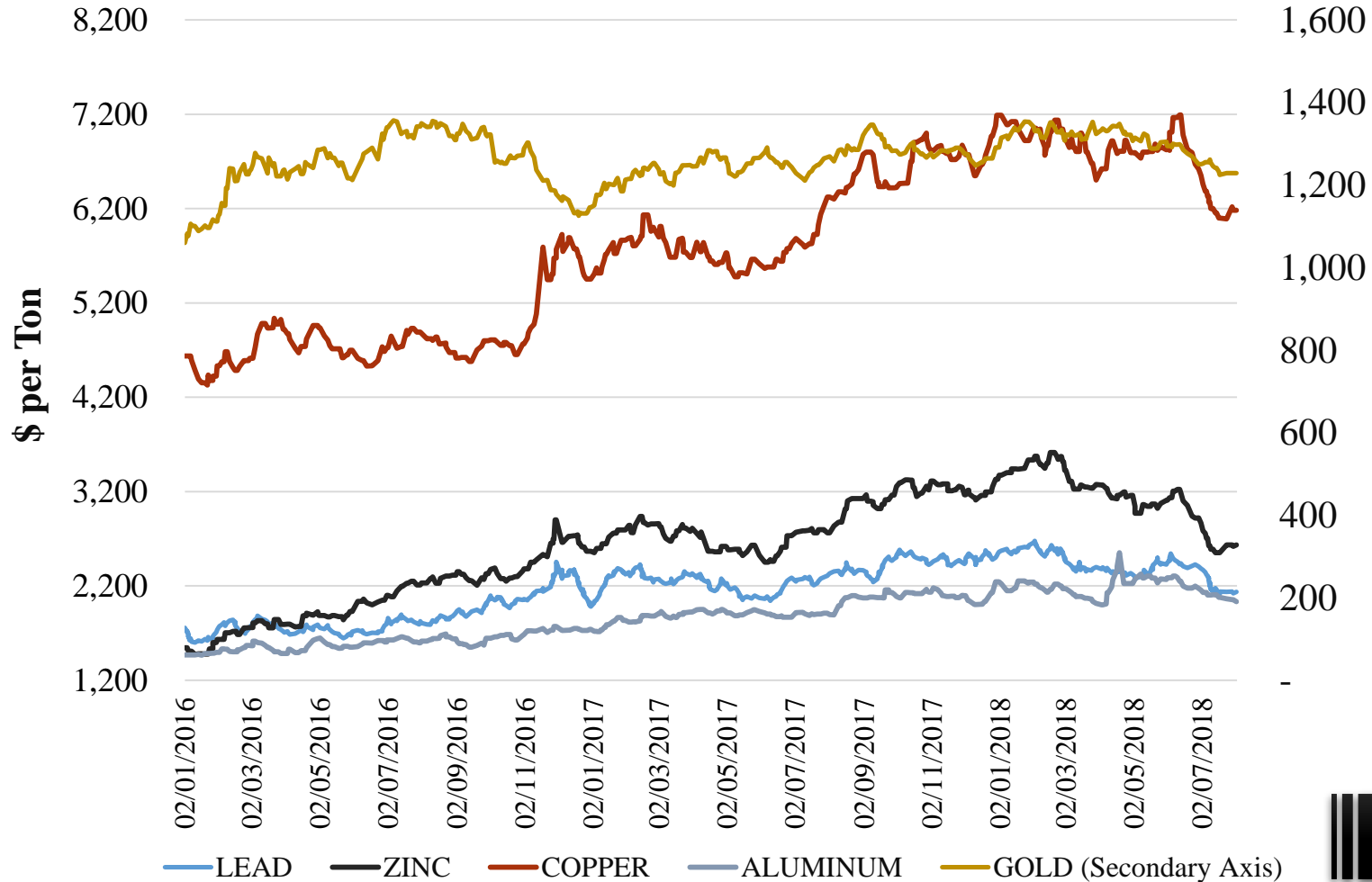
Aluminum (23)

Italy	Kazakhstan
Korea, Rep.	Kuwait
Netherlands	Lithuania
Thailand	Malaysia
United States	Mexico
Australia	Montenegro
Bahrain	Nepal
Brazil	Norway
Denmark	Pakistan
Estonia	Spain
Iceland	Turky
Vietnam	

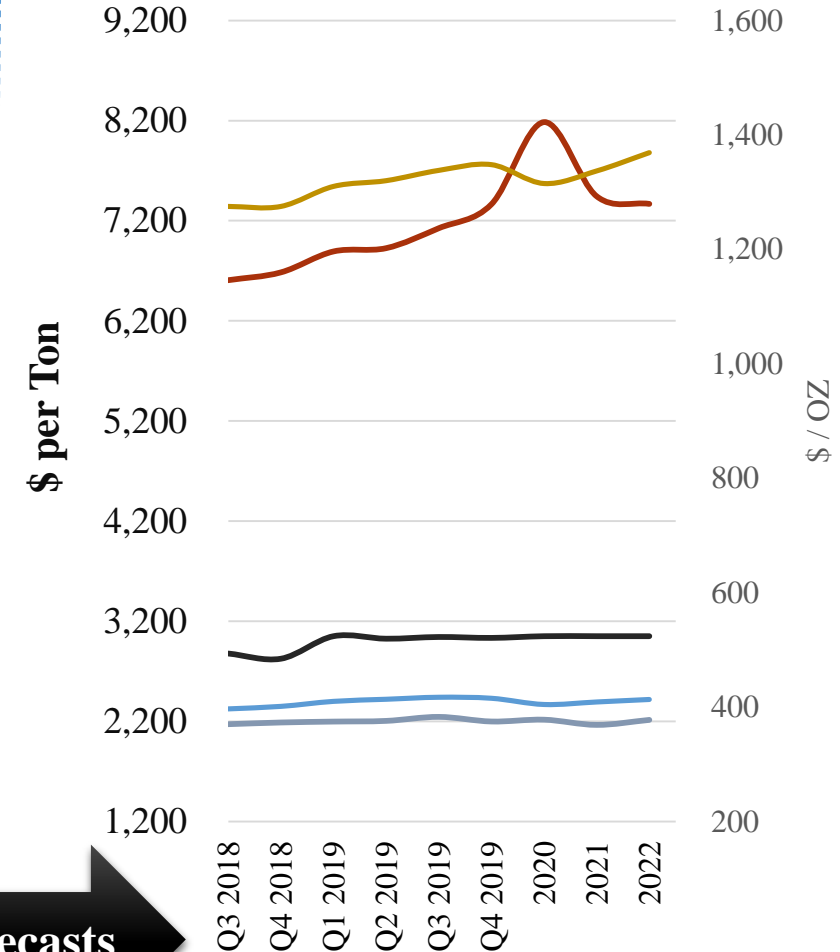
Iran's Export Potential Capacity 2016



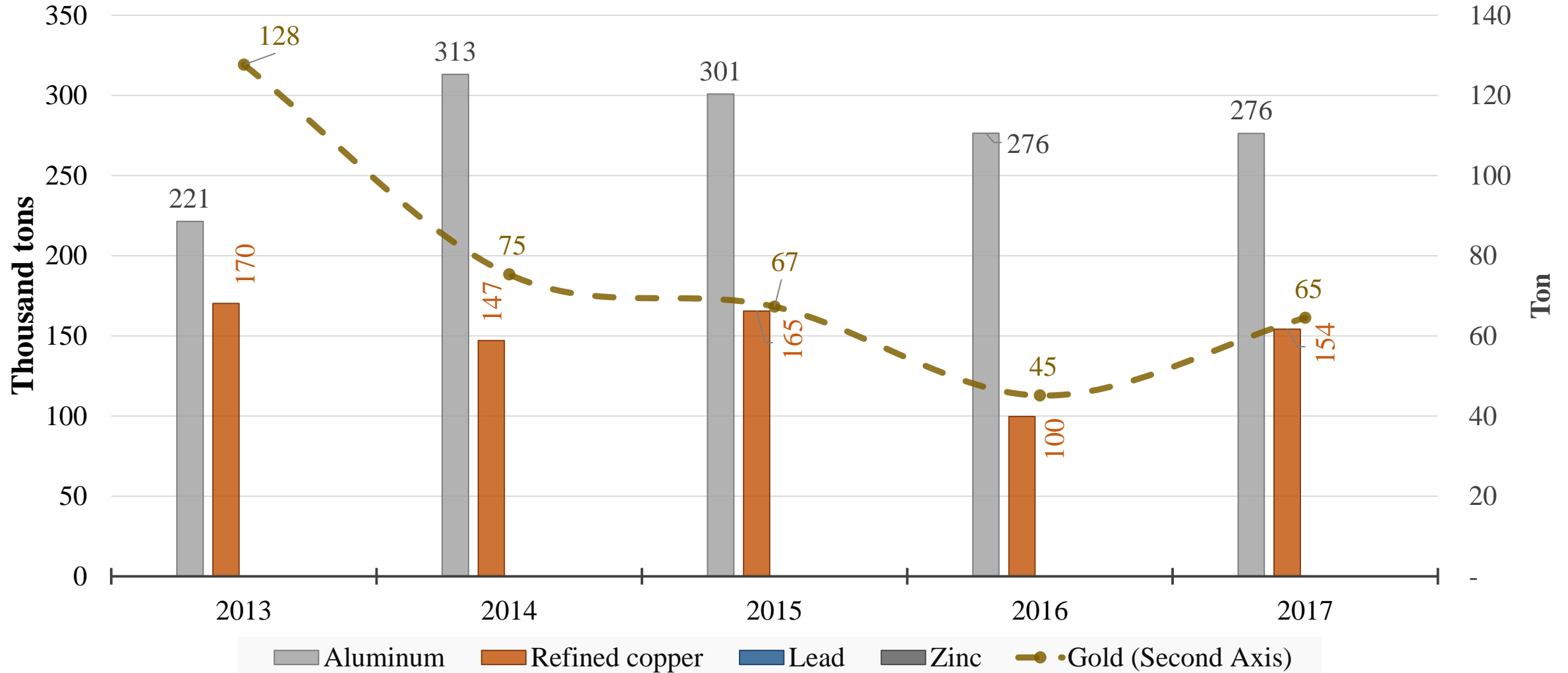
World's Price of Non Ferrous Metals



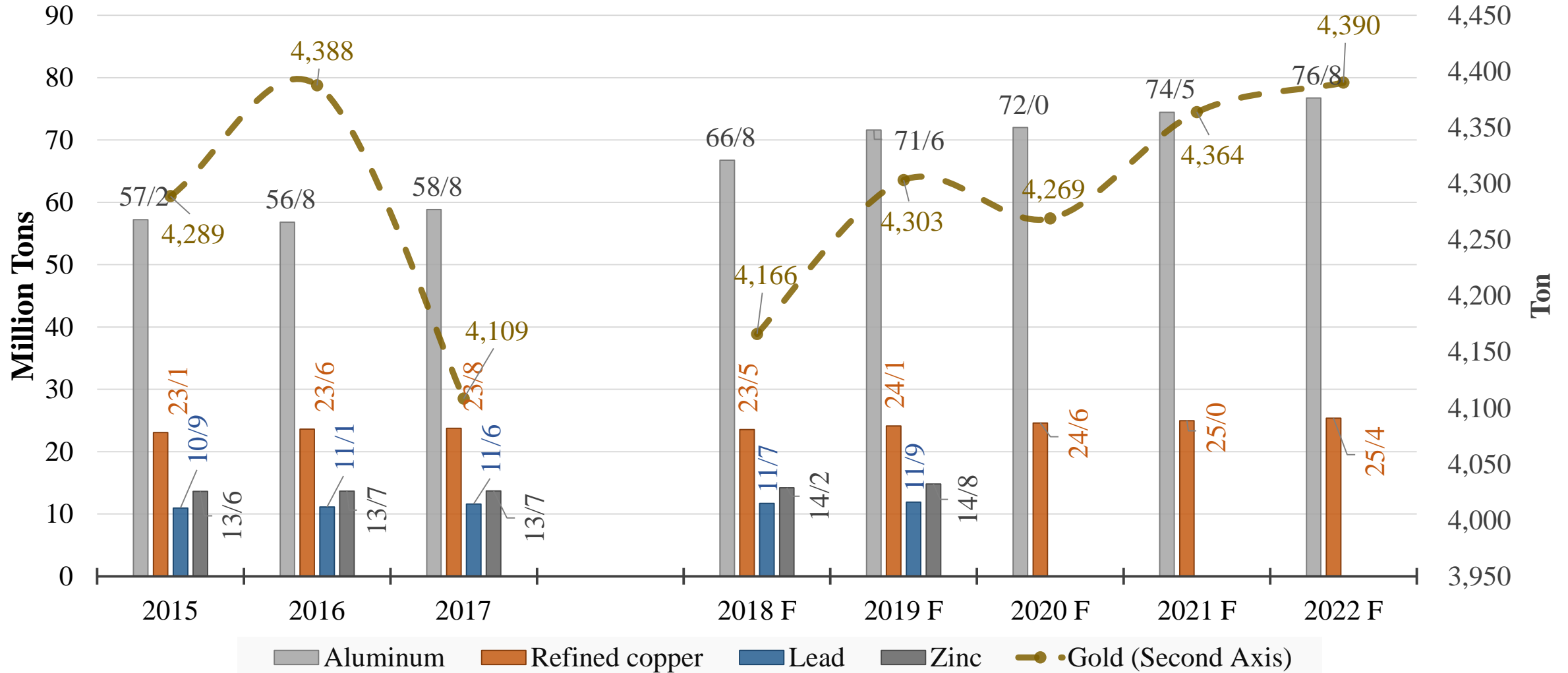
World's Price Forecast



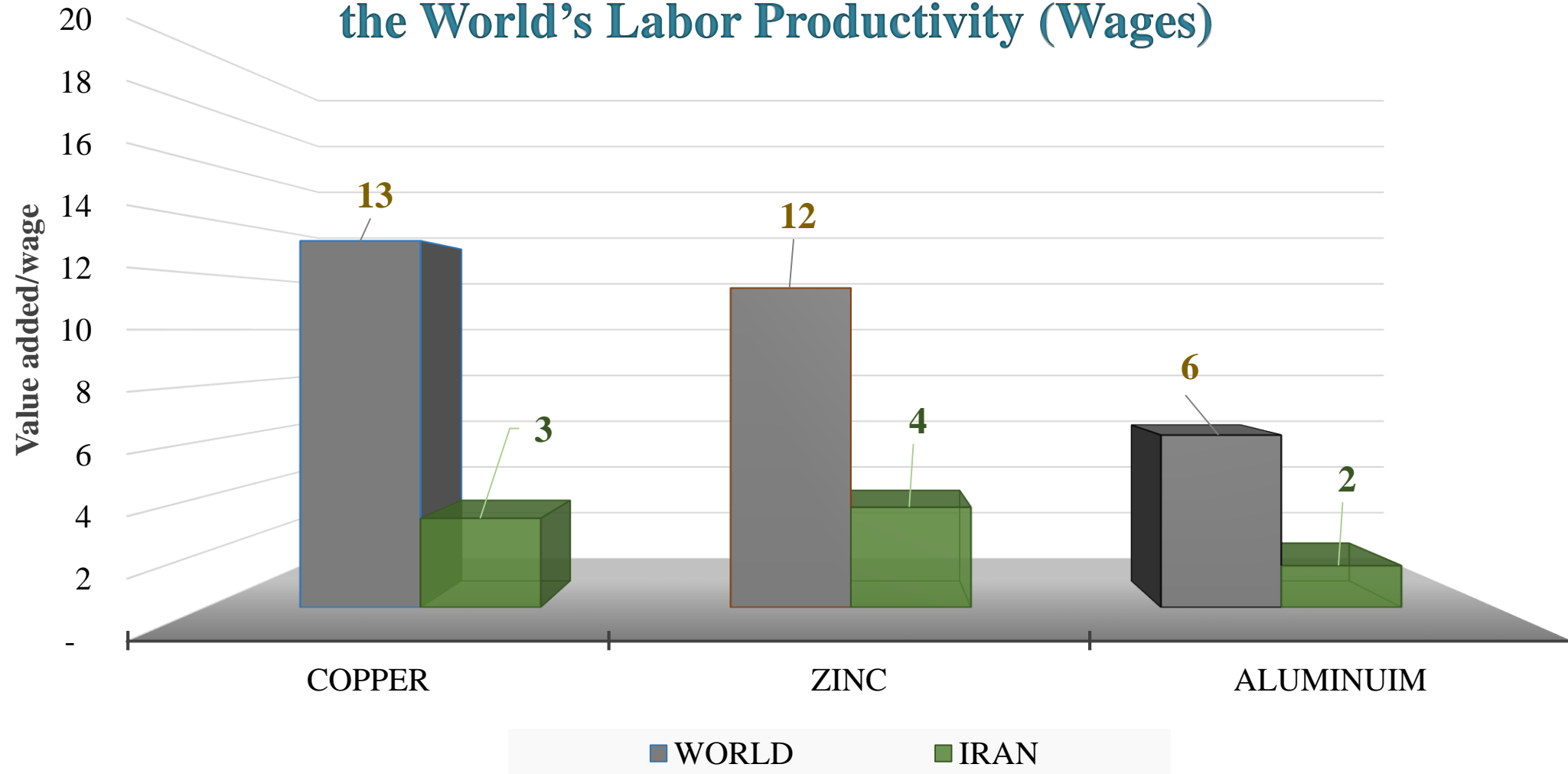
Iran's Non-Ferrous Metals Consumption

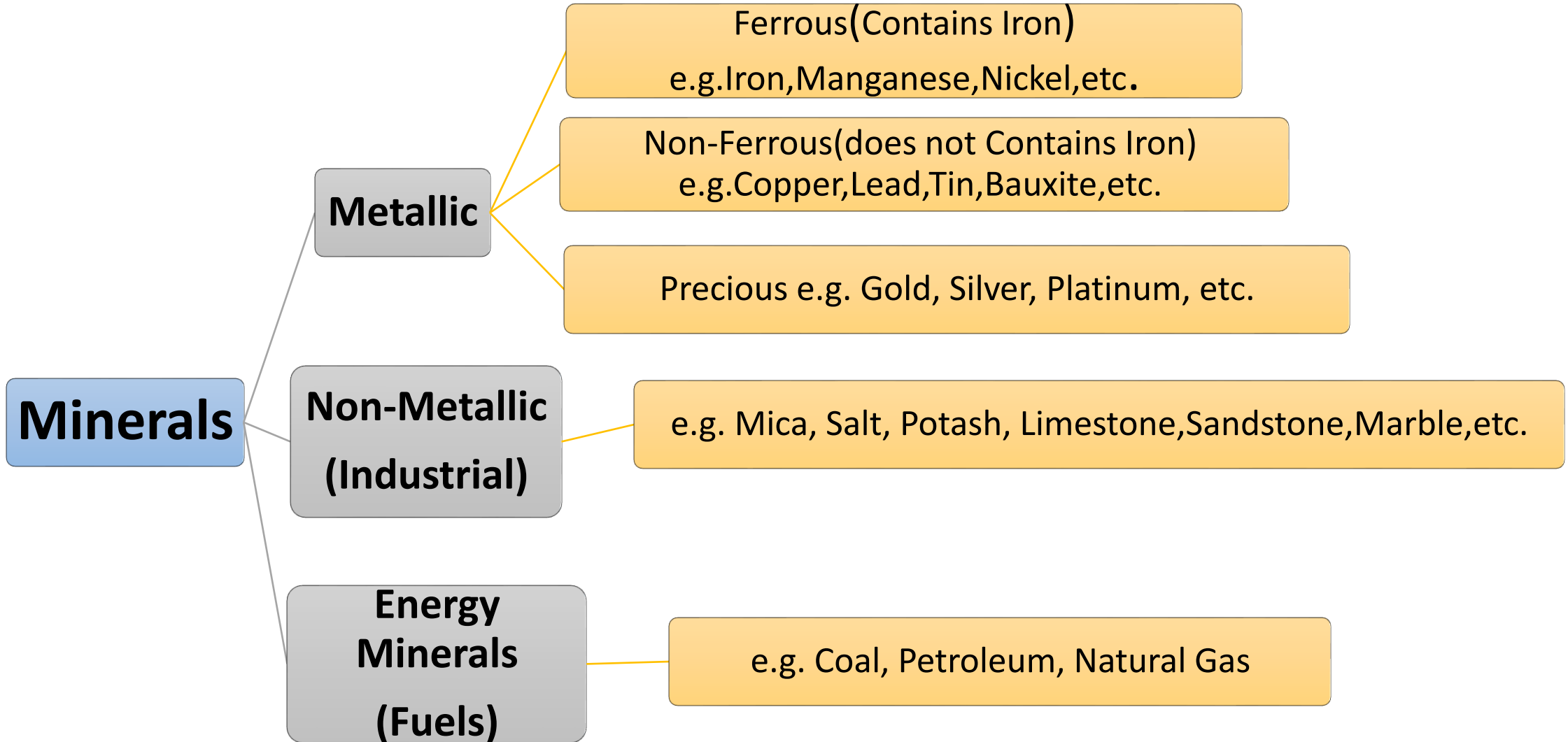


World's Non-Ferrous Metals Consumption

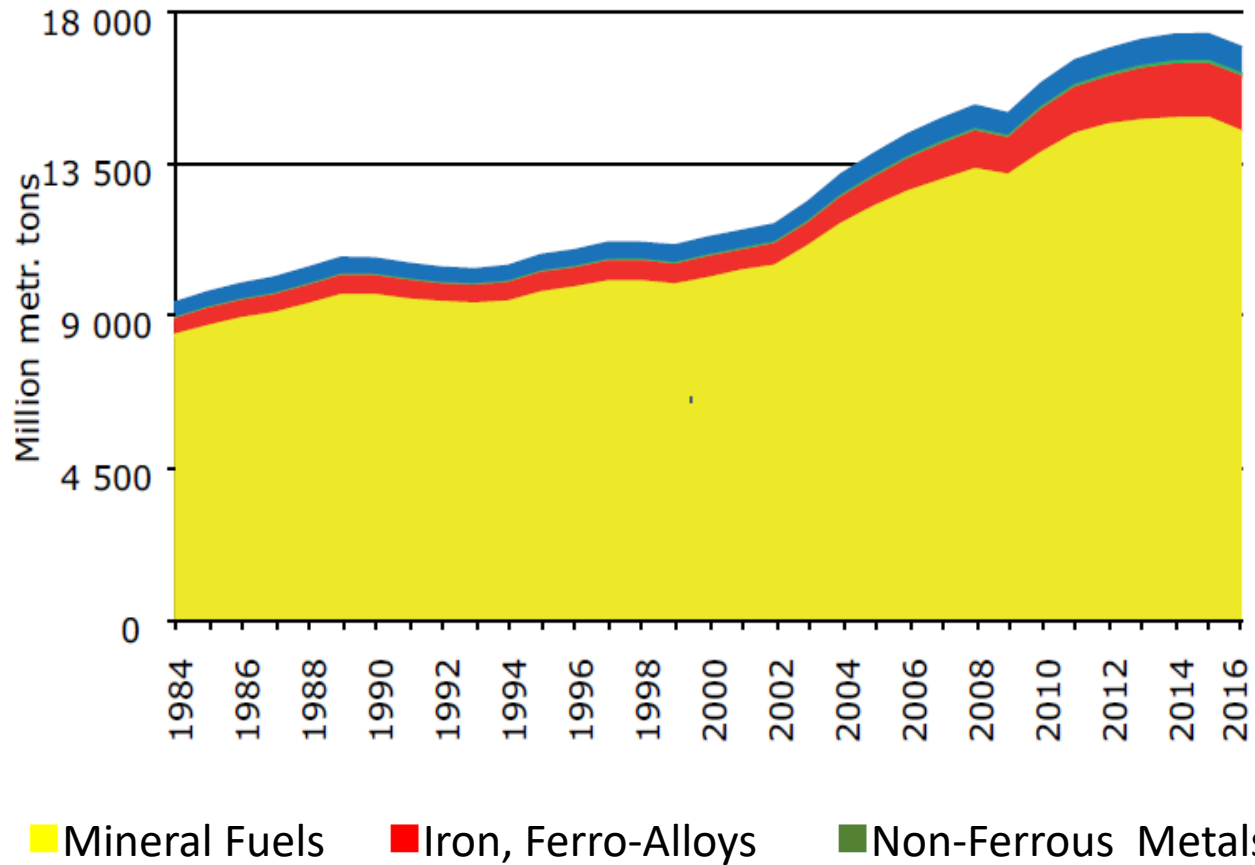


Comparison Iran's Labor Productivity with the World's Labor Productivity (Wages)

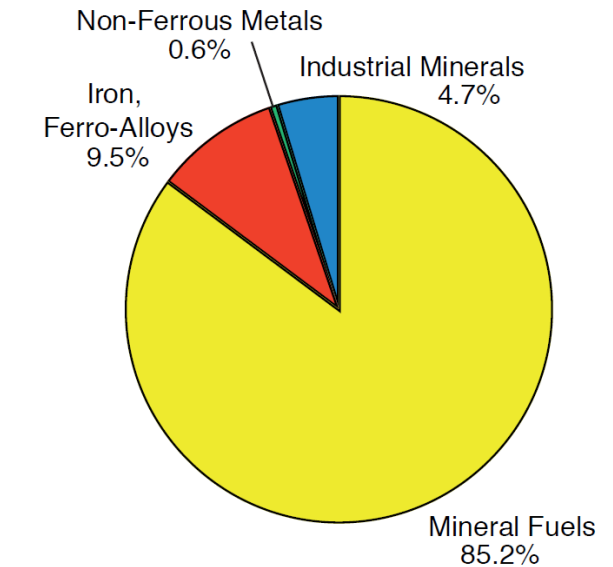




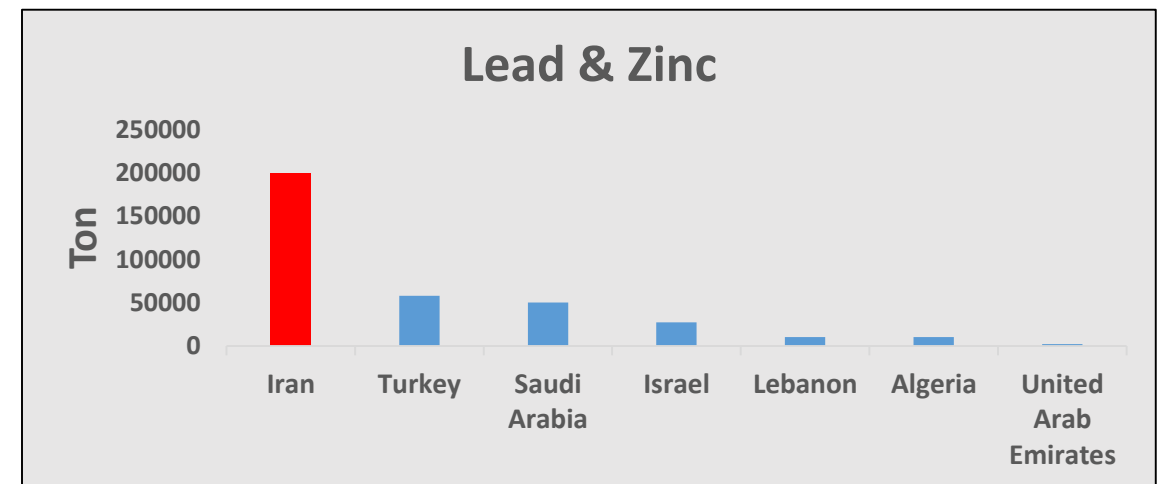
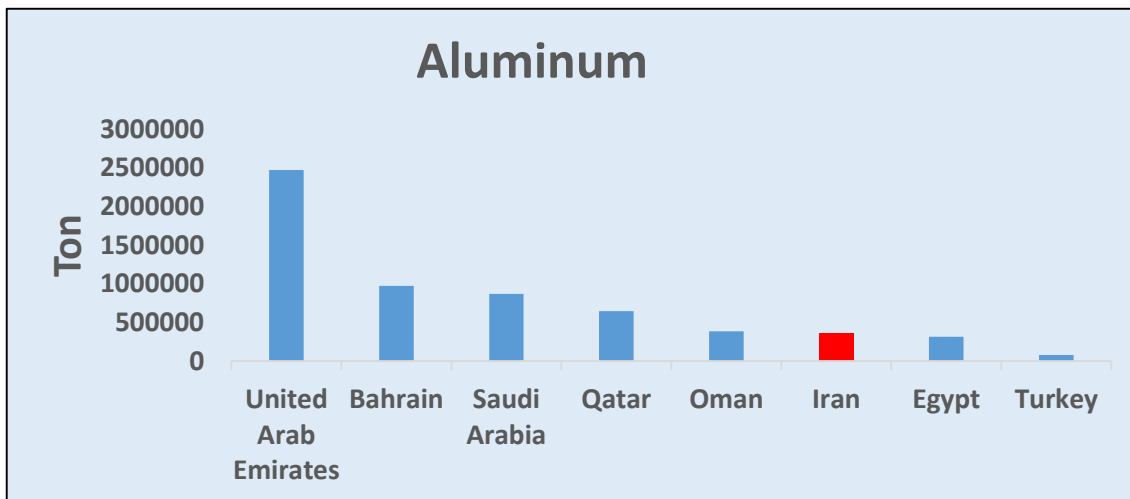
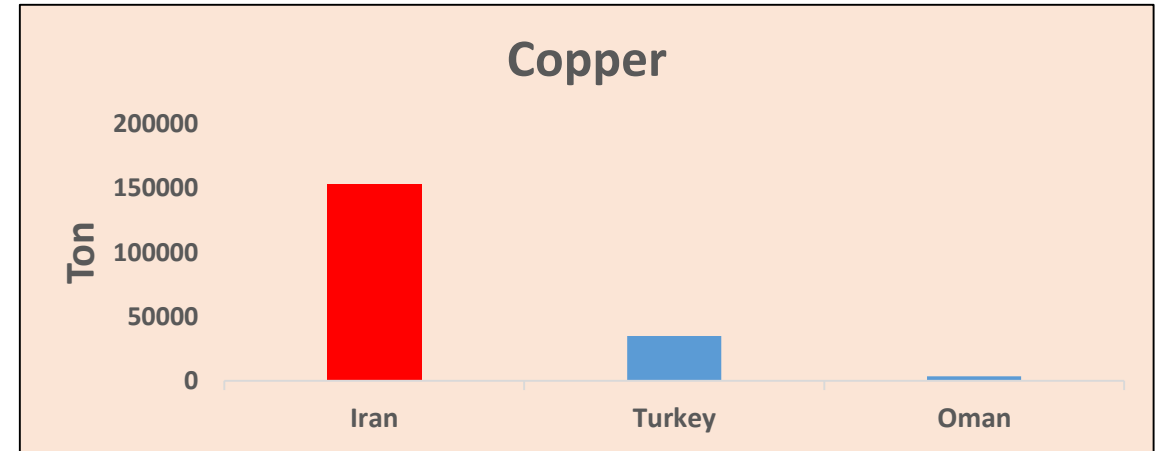
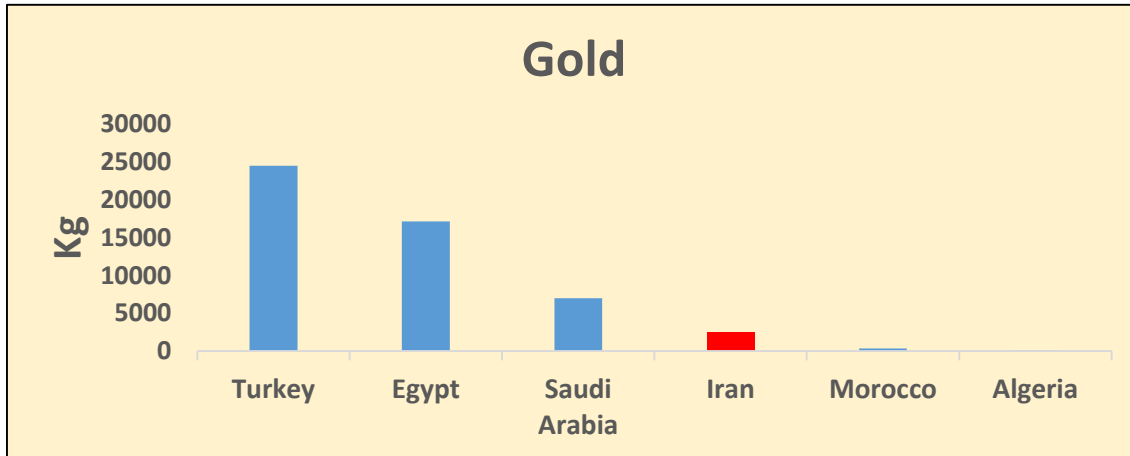
Total mining production 1984-2016 (Million tons)



Total production 2016 by groups of minerals



IRAN Non-Ferrous Production Status in MENA Region (2016)



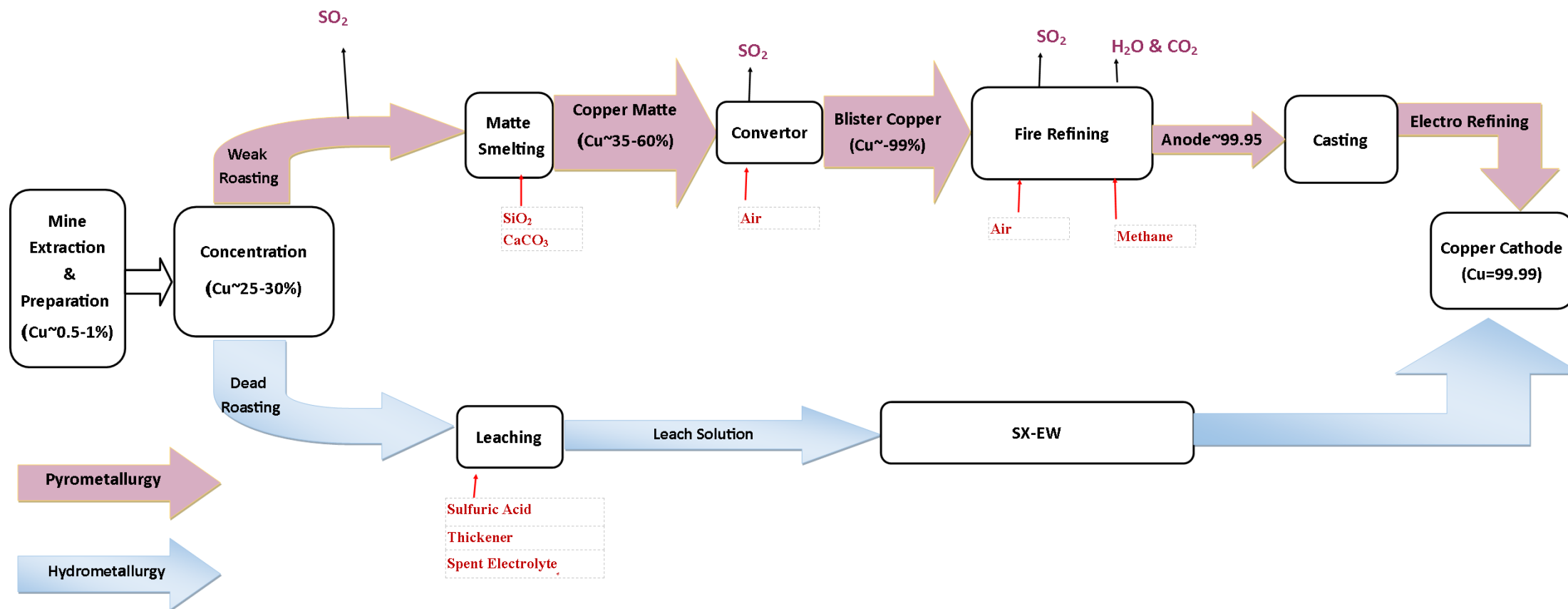
Exploration

The implementation of the exploration project in 21 prime mines with an area of 250,000 square kilometers has been started by Iranian Mines & Mining Industries Development and Renovation Organization (IMIDRO) and other organizations such as the Geological Survey of Iran since 2014 and is still ongoing.

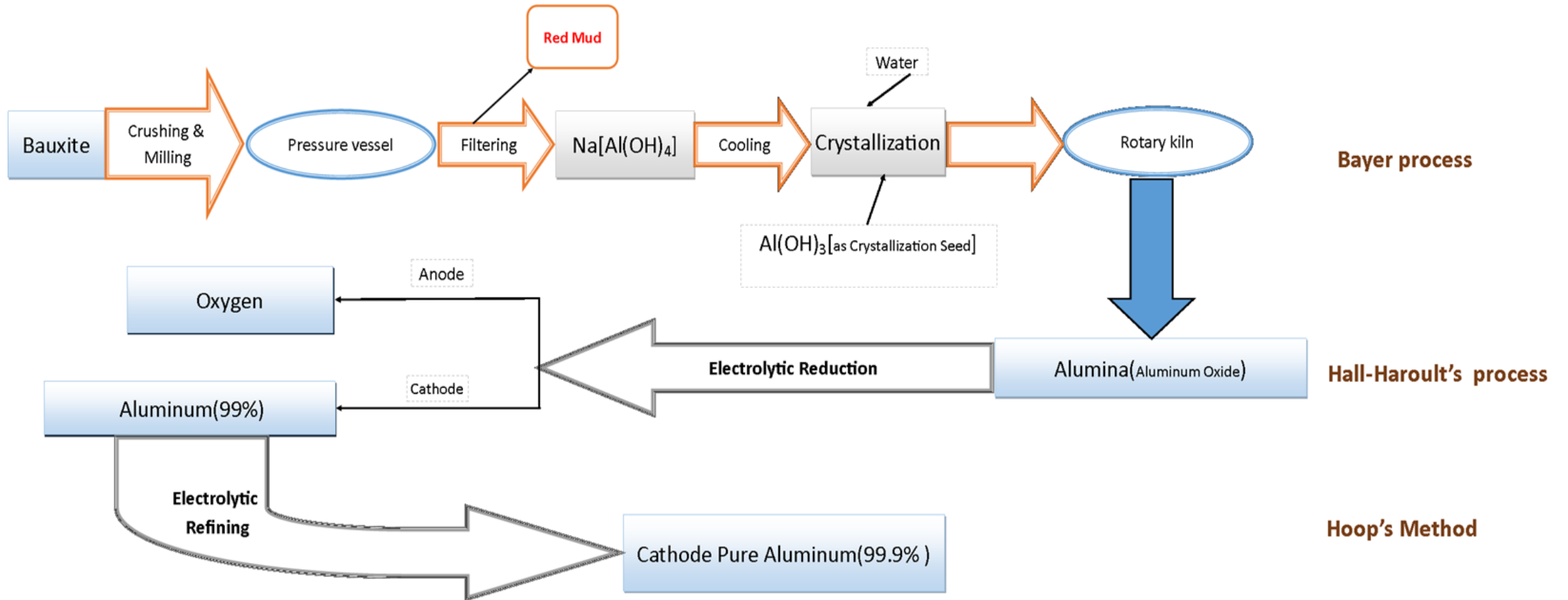
During the identification and tracking phases of operations, about 400 new promising areas have been identified in the country.

Mineral Ore	Reserves (before discoveries)	Current Reserves	Increase Percentage
Gold(t)	252	294	16.67%
Bauxite(Mt)	14	35	200%
Copper(Mt)	17	22	29.41%
Lead & Zinc (Mt)	-	14	-

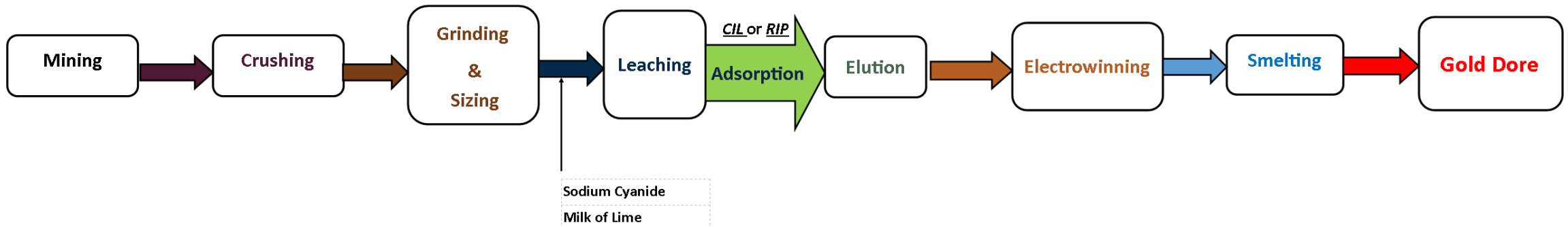
Copper production process



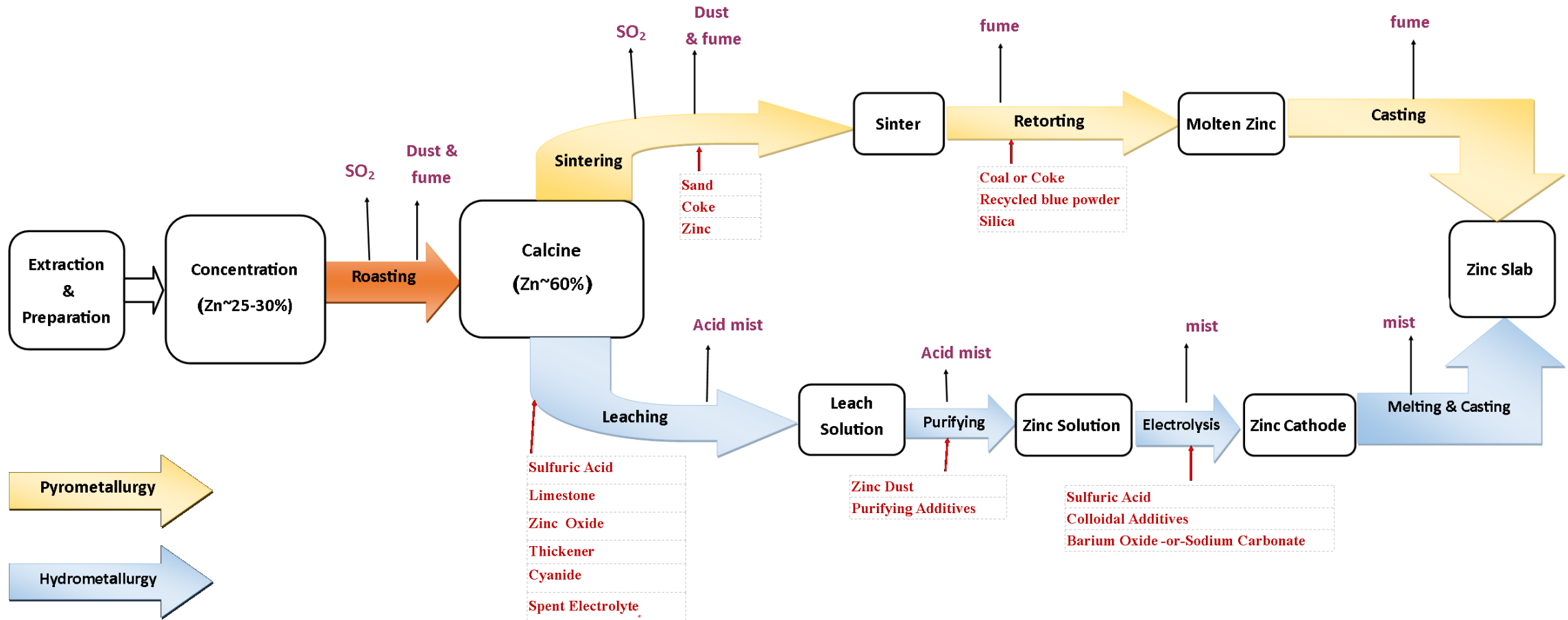
Aluminum production process



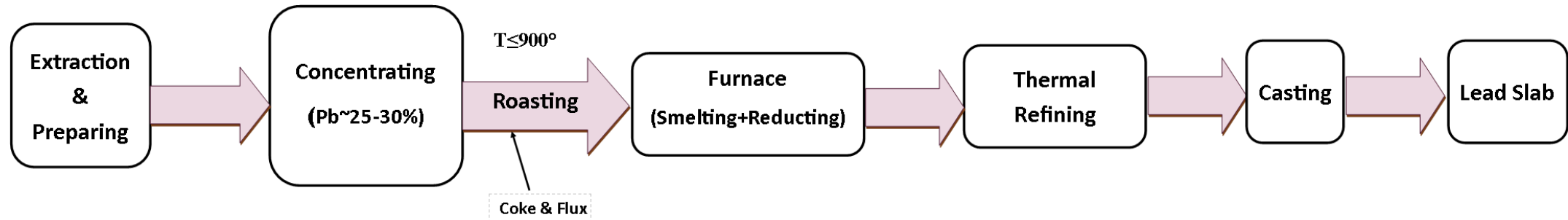
Gold production process



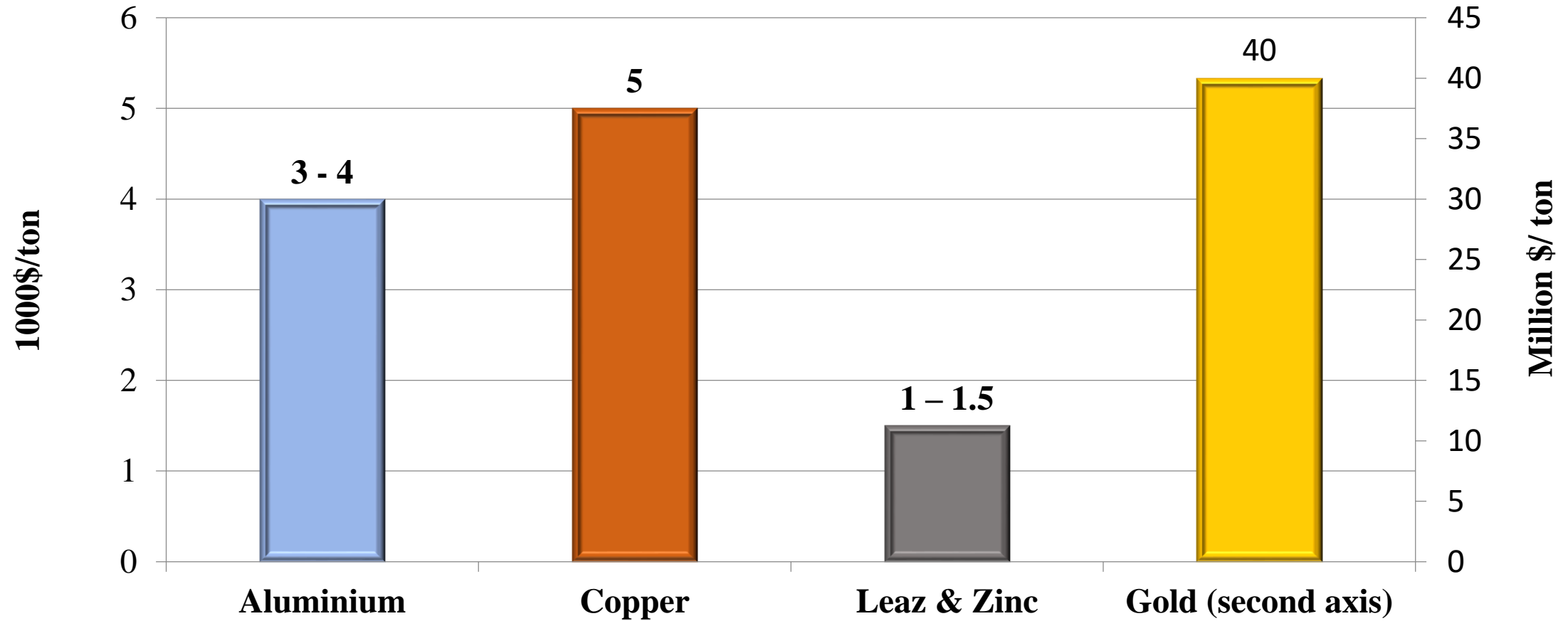
Zinc production process



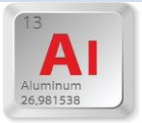



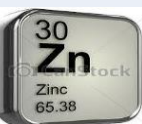
Lead production process



The Amount of Production Investment



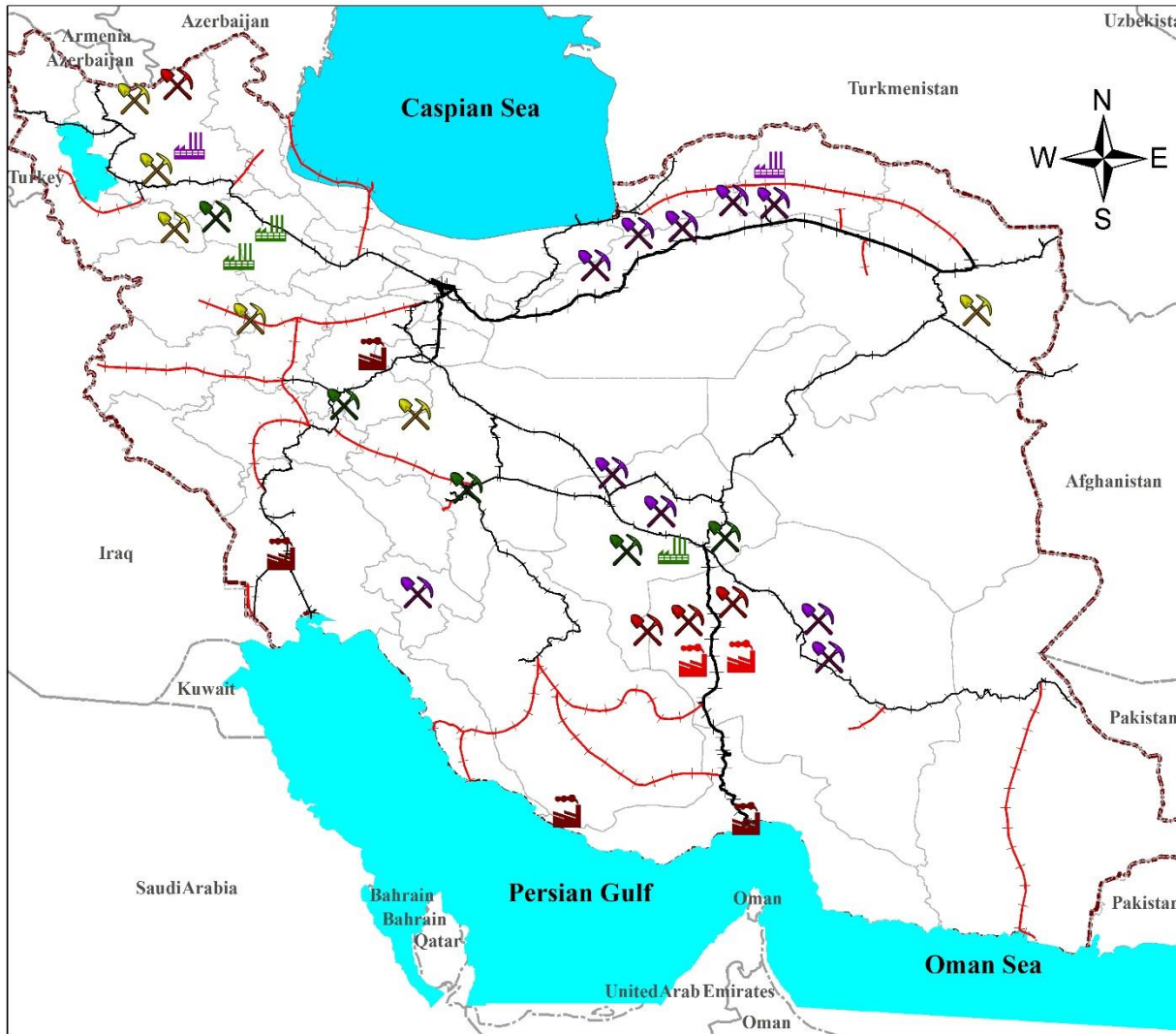
Average of Water and Energy Consumption

Metal	Process	Water (m ³ /Ton)	Natural Gas (MJ/Ton)	Electricity (KWh/Ton)
 Aluminum	Hall-Hérout	5.3~7.5	~20000	13500
 Copper	Hydrometallurgy	72	~600	6880
	Pyrometallurgy	91	~4000	5250
 Gold	Cyanidation	246000	~350	114~140
 Lead	Caldo Furnace	14	~16000	1540
 Zinc	Sintering	14	9100~10400	3890
	Leaching	13	2700~3900	4015

1 MJ/Ton \approx 0.027 Nm³/Ton

<p>طلا</p>	<p>هوا: حداکثر غلظت ذرات ۱۰۰، Co ۷۰۰، So₂ ۸۰۰، No_x ۸۰۰ میلی گرم بر متر مکعب می باشد آب: حداکثر غلظت تخلیه آرسنیک ۰/۱ سلنیوم ۱، سیانور ۰/۵ میلی گرم بر لیتر و جیوه ناچیز در آبهای سطحی می باشد صوت: تراز متوسط روز ۷۵ و شب ۶۵ دسی بل می باشد</p>
<p>آلومینیوم</p>	<p>هوا: حداکثر غلظت ذرات ۱۵۰، Co ۵۰۰، So₂ ۱۲۰۰، No_x ۸۰۰ میلی گرم بر متر مکعب می باشد آب: حداکثر غلظت تخلیه آلومینیوم ۵ میلی گرم بر لیتر در آبهای سطحی می باشد صوت: تراز متوسط روز ۷۵ و شب ۶۵ دسی بل می باشد</p>
<p>روی</p>	<p>هوا: حداکثر غلظت ذرات ۱۰۰، Co ۵۰۰، So₂ ۱۲۰۰، No_x ۸۰۰ میلی گرم بر متر مکعب می باشد آب: حداکثر غلظت تخلیه روی ۲ میلی گرم بر لیتر در آبهای سطحی می باشد صوت: تراز متوسط روز ۷۵ و شب ۶۵ دسی بل می باشد</p>
<p>مس</p>	<p>هوا: حداکثر غلظت ذرات ۱۰۰، Co ۵۰۰، So₂ ۱۲۰۰، No_x ۸۰۰ میلی گرم بر متر مکعب می باشد آب: حداکثر غلظت تخلیه مس ۱ میلی گرم بر لیتر در آبهای سطحی می باشد صوت: تراز متوسط روز ۷۵ و شب ۶۵ دسی بل می باشد</p>
<p>سرب</p>	<p>هوا: حداکثر غلظت ذرات ۱۰۰، Co ۵۰۰، So₂ ۱۲۰۰، No_x ۸۰۰ میلی گرم بر متر مکعب می باشد آب: حداکثر غلظت تخلیه سرب ۱ و کادمیوم ۰/۱ میلی گرم بر لیتر در آبهای سطحی می باشد صوت: تراز متوسط روز ۷۵ و شب ۶۵ دسی بل می باشد</p>

Iran's Non-Ferrous Metals Factory and Mines Map



Map Title:
Location of Factory & Mines
(Non-Ferrous Metals)

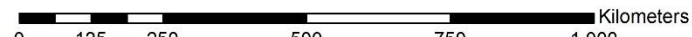
Legend

- Boundary City
- Boundary Country
- Lakes & Seas
- Bauxite mine
- Alumina refinery
- Alumina smelter
- Zinc Refinery
- Zinc Mine
- Cooper smelter
- Cooper mine
- Gold Mine

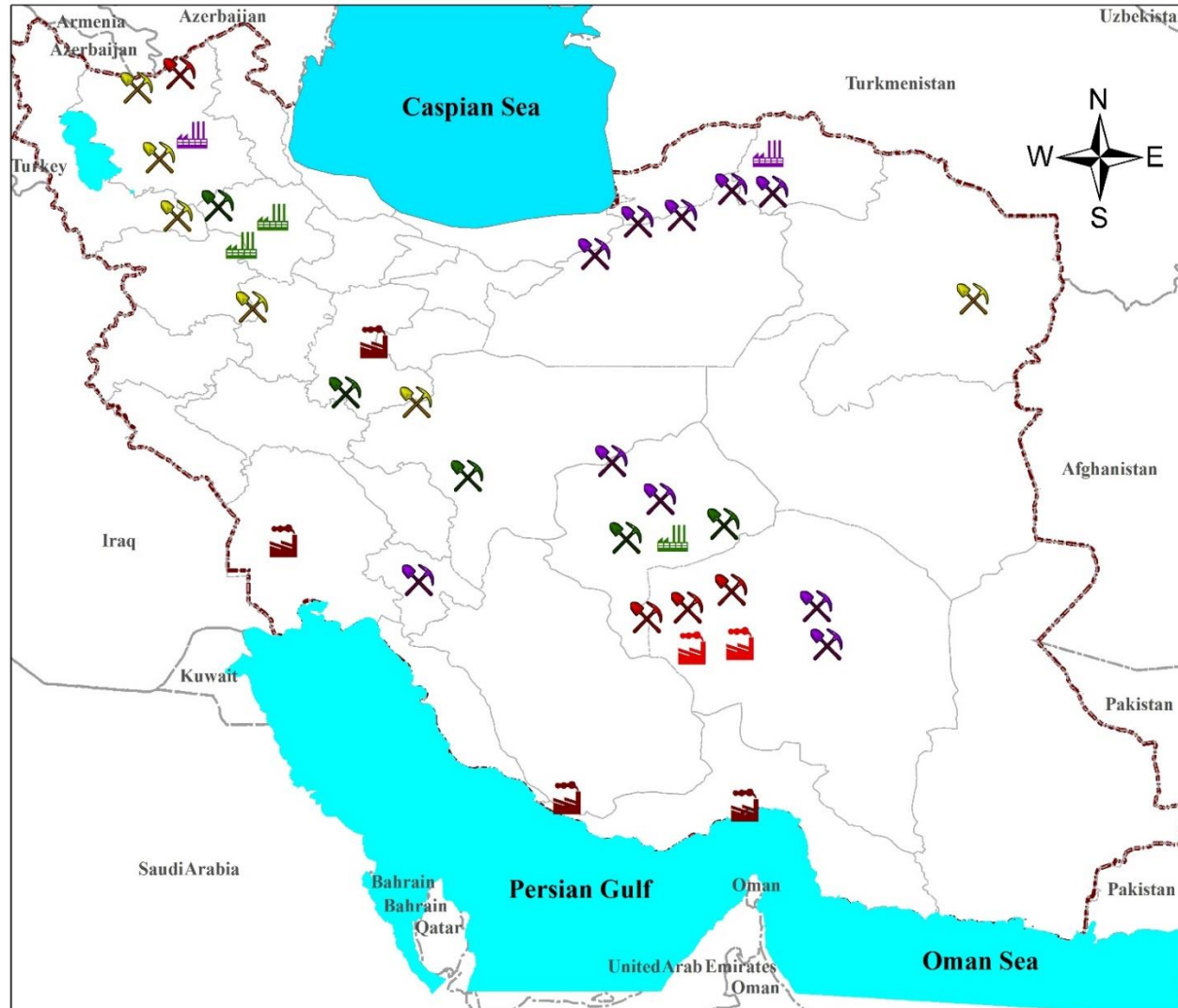
Railways:

- 2 line- Existing
- 1line-Existing
- 1line- under the construction

Provider:



Iran's Non-Ferrous Metals Factory and Mines Map

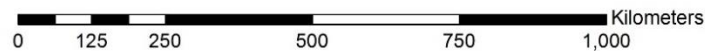


Map Title:
Location of Factory & Mines
(Non-Ferrous Metals)

Legend

- Boundary City
- Boundary Country
- Lakes & Seas
- Bauxite mine
- Alumina refinery
- Alumina smelter
- Zinc Refinery
- Zinc Mine
- Cooper smelter
- Cooper mine
- Gold Mine

Provider:



چالش‌های توسعه فلزات غیر آهنی

- نقش مهم فلزات اساسی در ایجاد ارزش افزوده در کشور و در عین حال عدم وجود استراتژی مشخص برای توسعه فلزات غیر آهنی.
- پایین بودن بازدهی نسبت به مقیاس.
- به روز نبودن برخی فناوری‌های موجود.
- تراکم نیروی انسانی و بهره‌وری پایین.
- کمبود منابع تامین مالی برای طرح‌های در حال توسعه.
- نبود اطلاعات شفاف، در دسترس و قابل اعتماد از وضعیت بازار.
- عدم شفاف‌سازی در مورد پایش زیست محیطی صنایع معدنی کشور.
- کمبود آب
- انرژی بر بودن