

In the name of God

# Opportunities in Fertilizers Production Industry in Iran

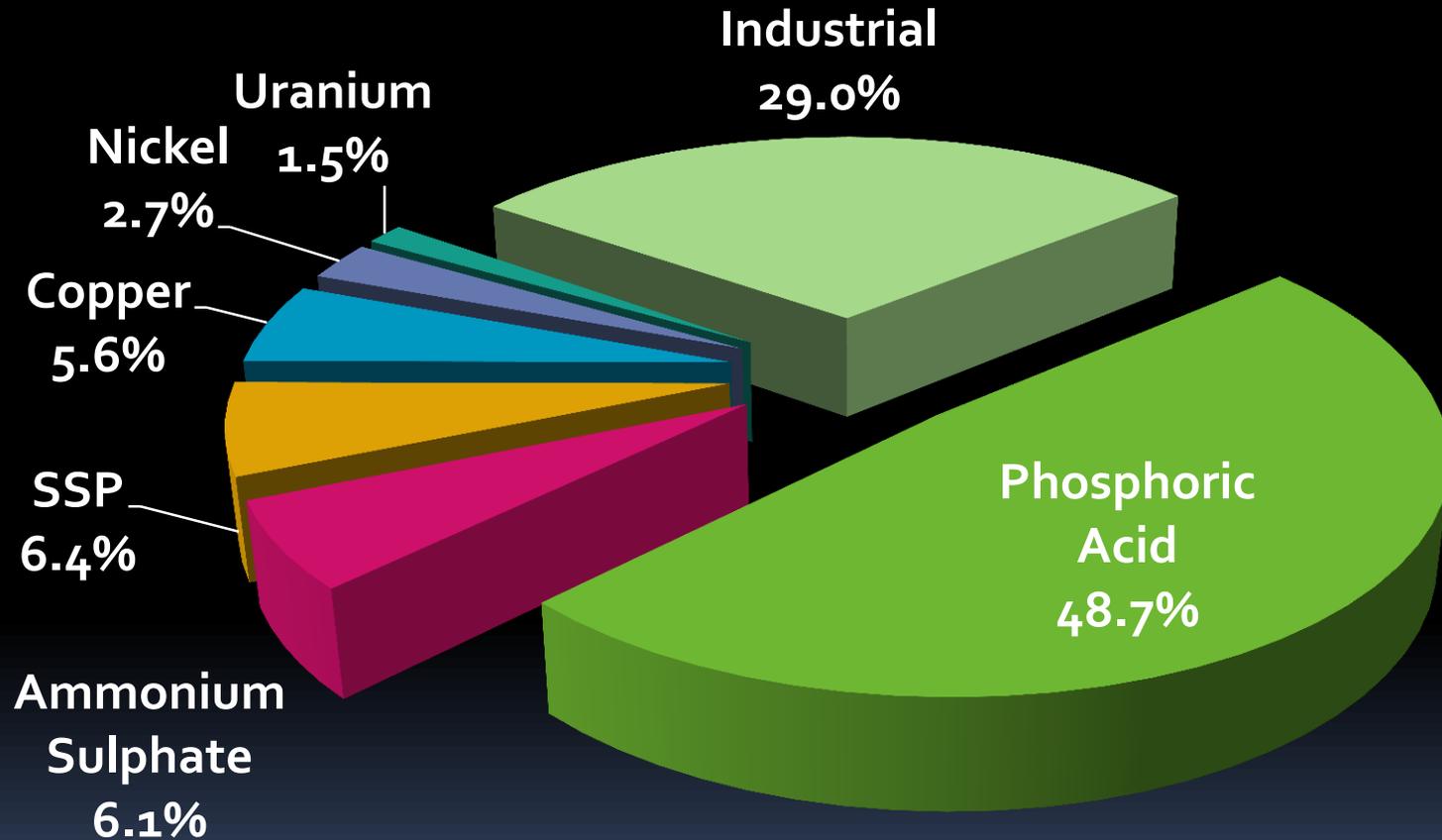
1 Dec, 2014

D8 , 5<sup>th</sup> Agricultural ministerial Meeting, Fertilizer WG

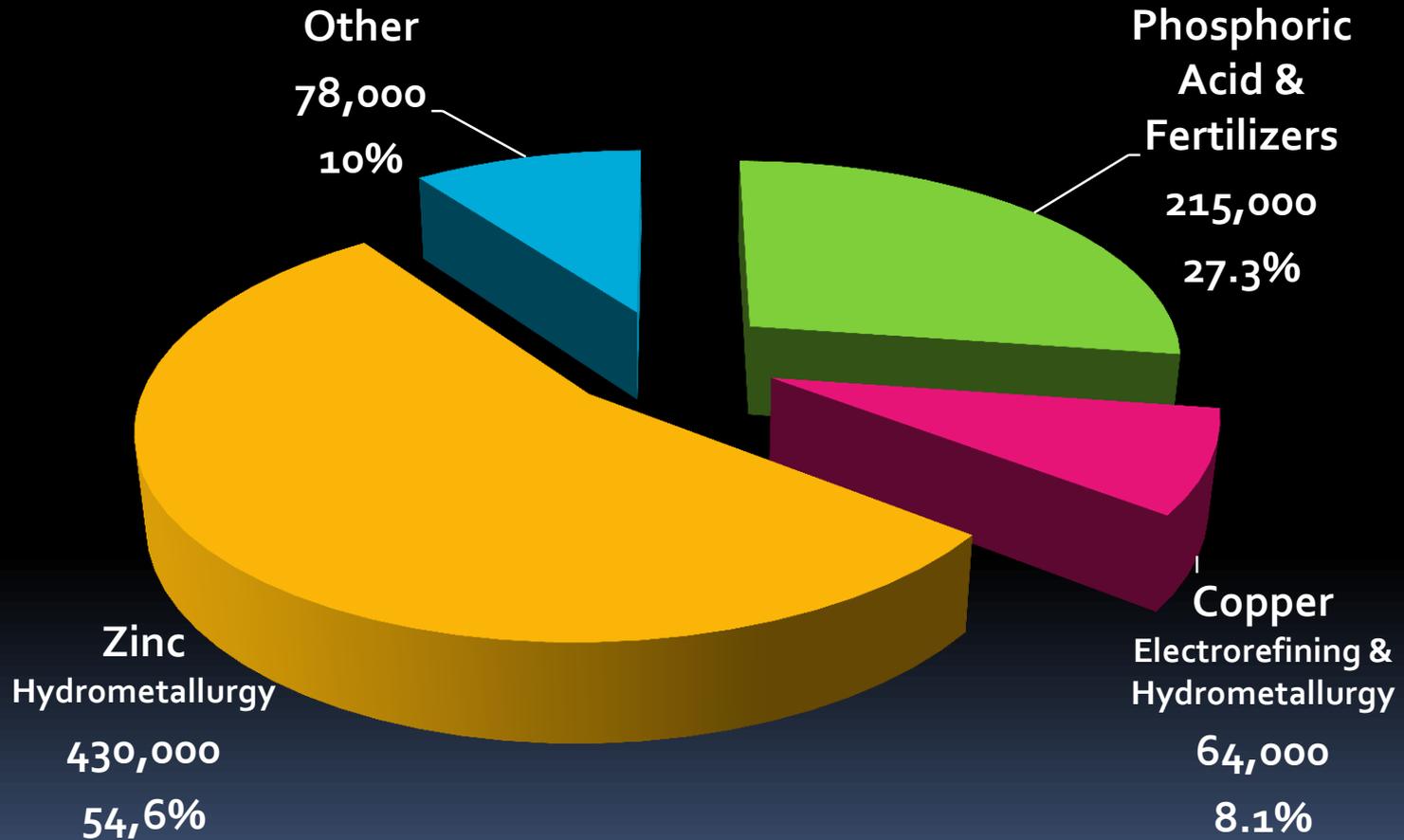
Hossein Zamani, Iran's D8 Fertilizer Focal Point



# Global Sulfuric Acid Consumer Industries (2013)



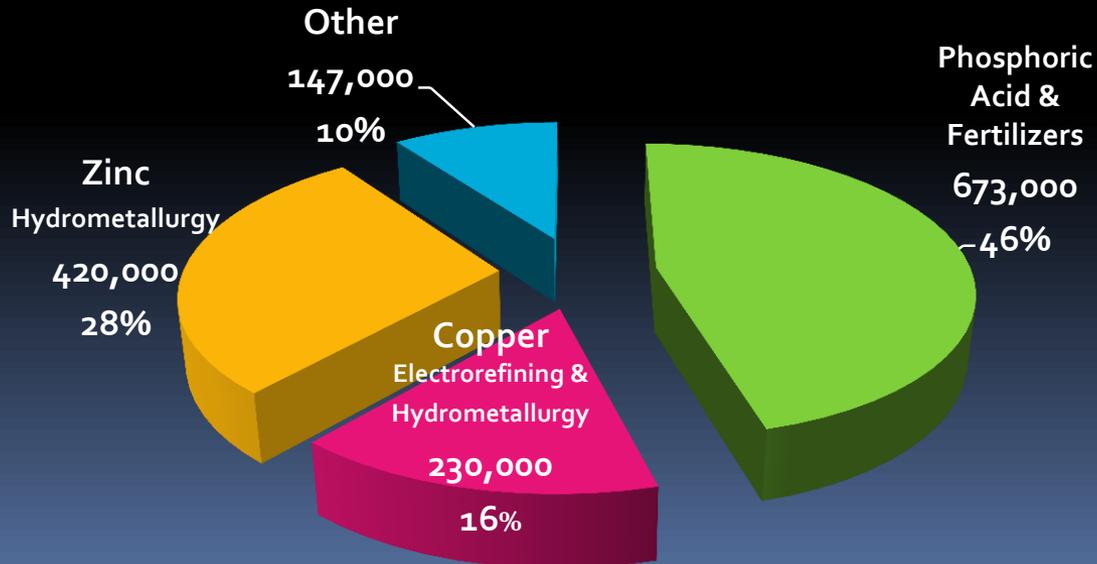
### 3 Sulfuric Acid Consumer Industries in Iran (2013)



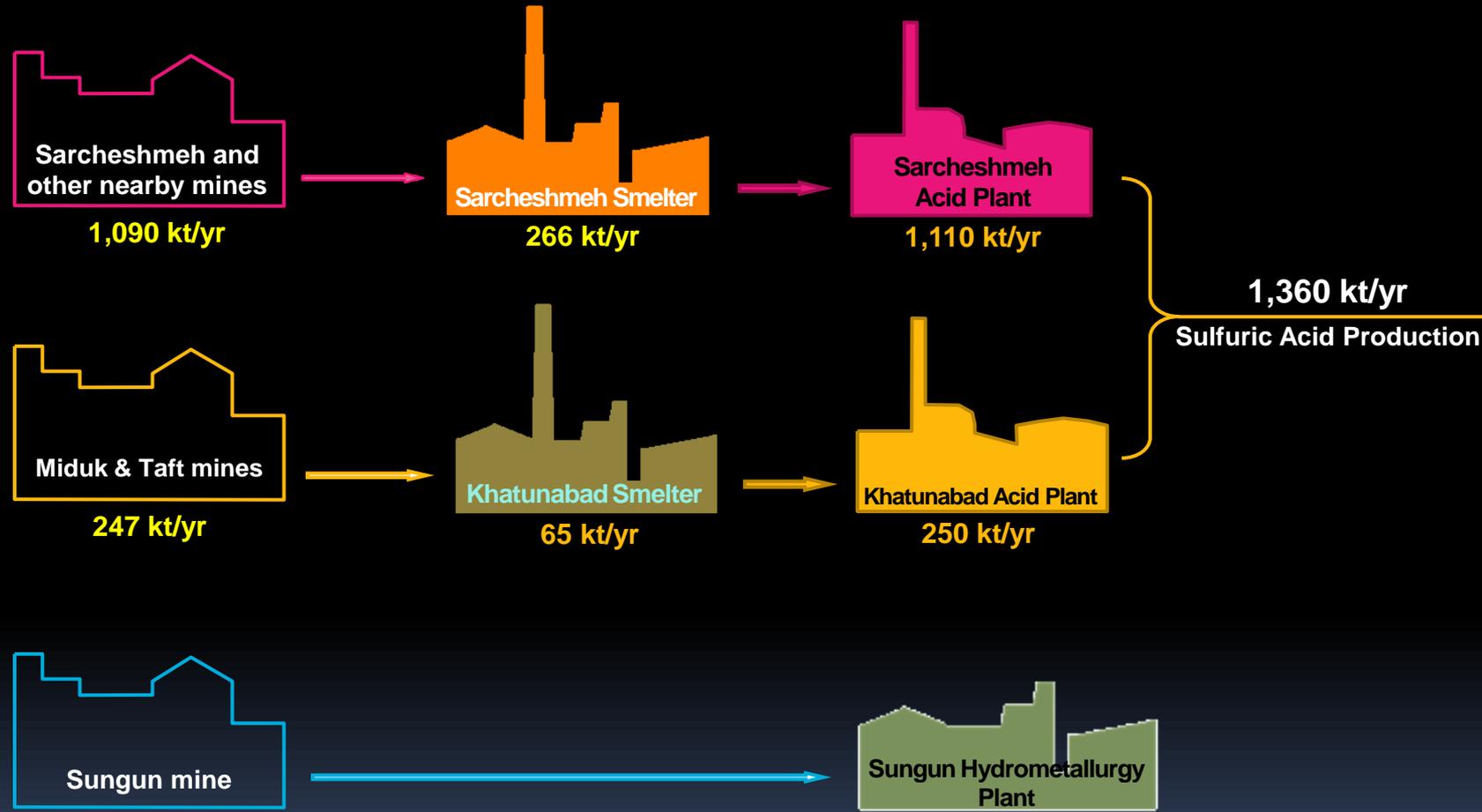
# Iran Sulfuric Acid Production & Consumption

- Consumption in 2013: 785 kt
- Estimated Consumption in 2021: 1,500 kt
- Production in 2013: 795 kt
- Production Capacity in 2021: 3,800 kt

Sulphuric Acid Consumer Industries in 2021



# NICICO Plant's Material Flow Outlook in 2017



## 6 Materials Consumption in Sulfuric Acid Downstream Industries

### Raw Material & Utilities Required for Consuming 1mt Sulfuric Acid

000'	Phosphate Rock (32% P <sub>2</sub> O <sub>5</sub> )	Ammonia (ton)	Water (m <sup>3</sup> )	Power (KWh)	Phosphogypsum (ton)	Product (ton)
Phosphoric Acid	1,183	-	2,200	28,800	1,800	666
DAP	1,183	171	2,200	84,200	1,800	770
SSP	1,600	-	5,400	91,900	-	2,700
AS	-	340	100	110,000	-	1,330



# 7 Phosphoric Acid, DAP, TSP & AS Production Economy

## Various Product's Financial Indices Comparison

	Phosphoric Acid	DAP	TSP	Ammonium Sulphate
Construction Period (yrs)	4	4	4	5
Production Period (yrs)	20	20	20	20
Product Price (\$/t)	640	520	484	6.77 mRls/t
Sulfuric Acid Consumption (kt)	850	850	850	412
Product (kt)	500	580	782	550
Fixed Investment (m\$)	107	170	172	114
Working Capital (m\$)	37	25	38	14
Total Investment (m\$)	144	195	233	128
IRR (%)	44.7	21	31.6	21.5
Discounting Rate (%)	25	25	25	25
NPV (m\$)	71	-24	33	-9
Payback Period (yrs)	7	8.9	8	9.2





**LEGEND**

**راهنما**

- Existing Railway Lines
- Line Under Construction
- Under second Phase Study Railway Lines
- Under First Phase Study Railway Lines
- Under Preliminary Phase Study Railway Lines
- Capital
- Province Center
- Township Center
- Stations

- راه آهن موجود
- خط در دست احداث
- راه آهن در دست مطالعه مرحله دوم
- راه آهن در دست مطالعه مرحله اول
- راه آهن در دست مطالعه مرحله مقدماتی
- پایتخت
- مرکز استان
- مرکز شهرستان
- ایستگاه

-  Sulphuric Acid Plants
-  Available Ammonia Plants
-  Ammonia Production Projects



## Summary

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- **More than 1mt Sulfuric Acid Surplus In Iran Market in 2018**
- **More than 1mt Phosphate Fertilizers (TSP&DAP) Import by Iran**
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**Excellent Opportunity for  
Investment In Production of TSP  
and Ammonium Sulphate Iran**



Thank You For  
Your Attention

