

In the name of God

# Opportunities in Fertilizers Production Industry in Iran

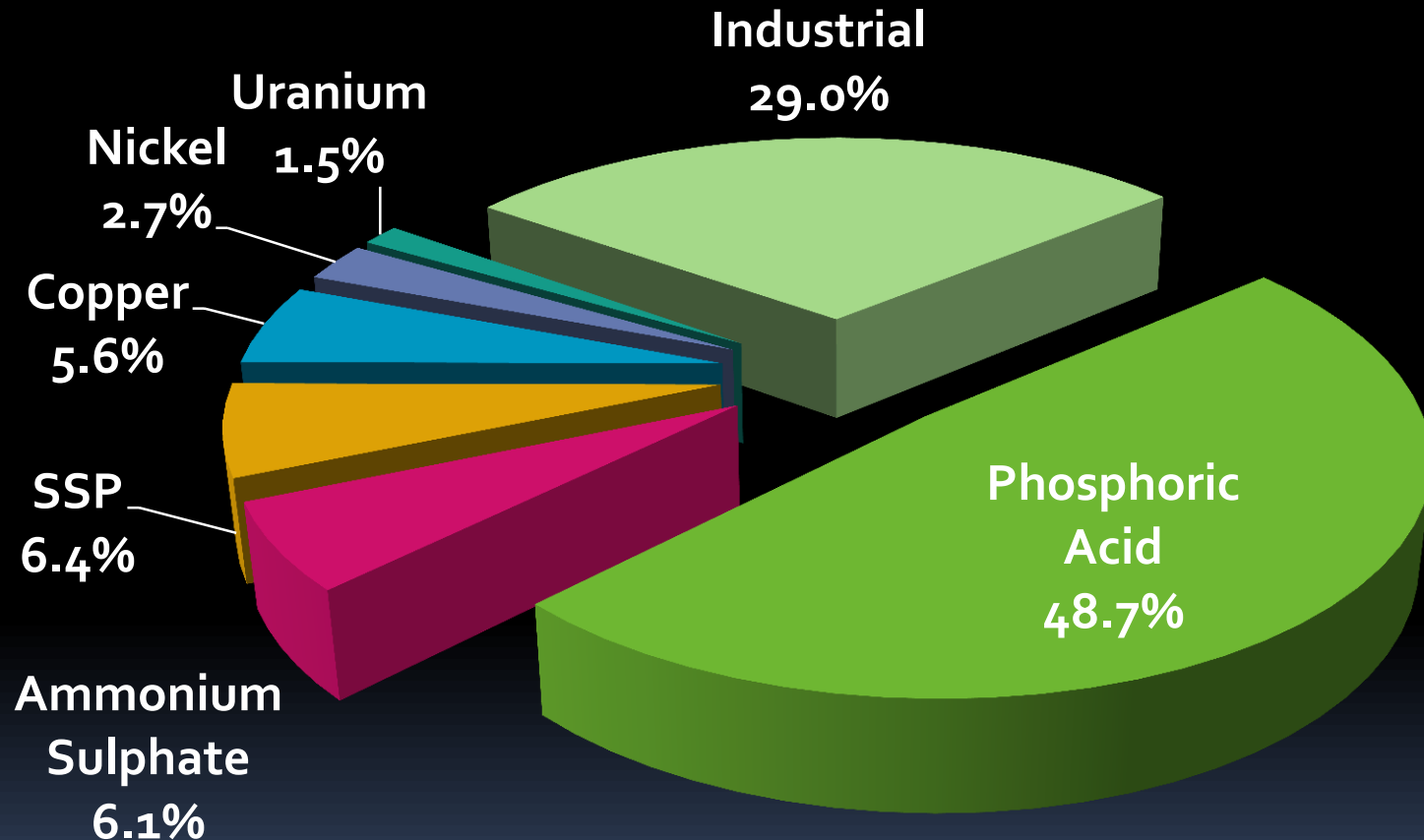
1 Dec, 2014

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

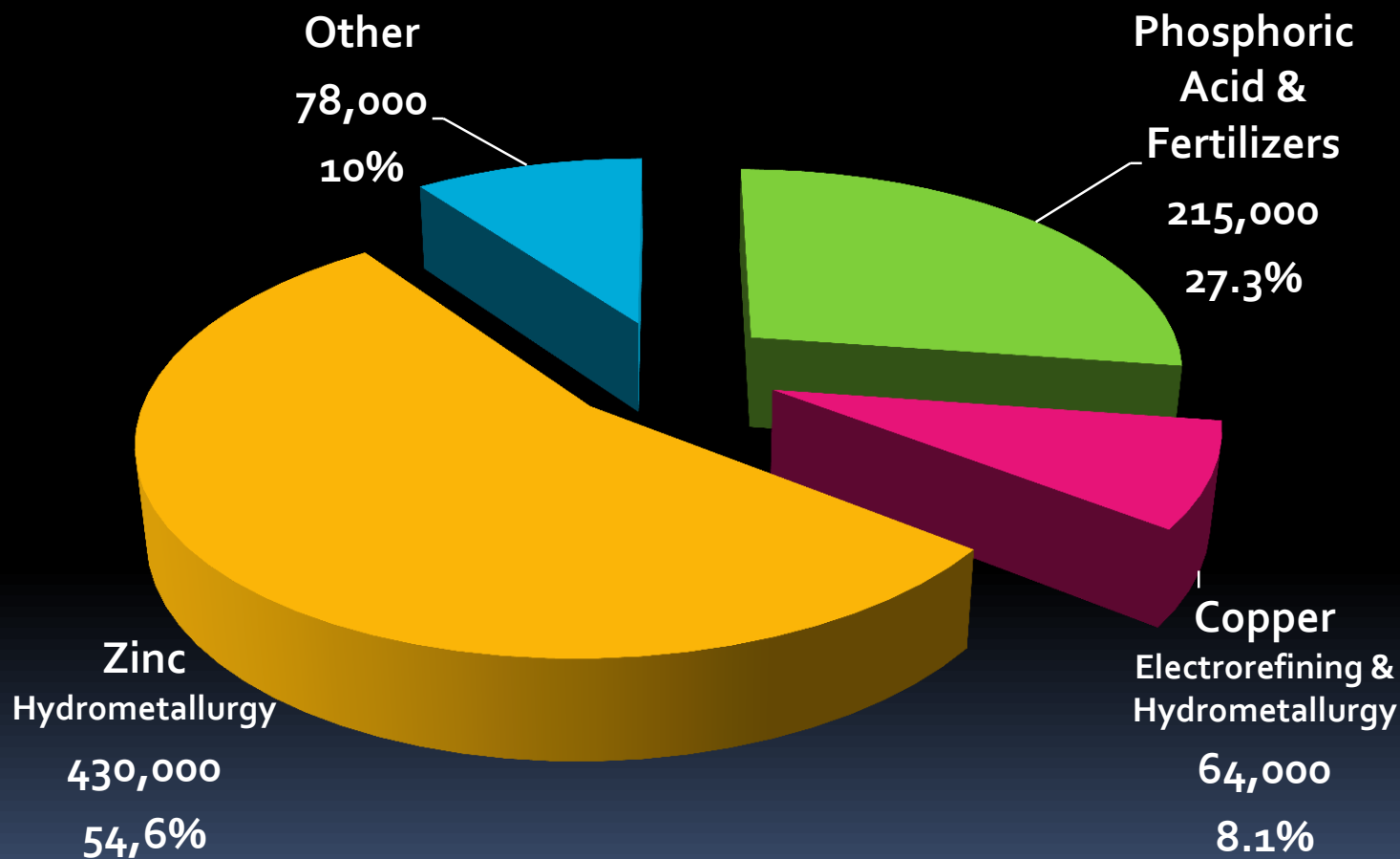
Hossein Zamani, Iran's D8 Fertilizer Focal Point



# Global Sulfuric Acid Consumer Industries (2013)



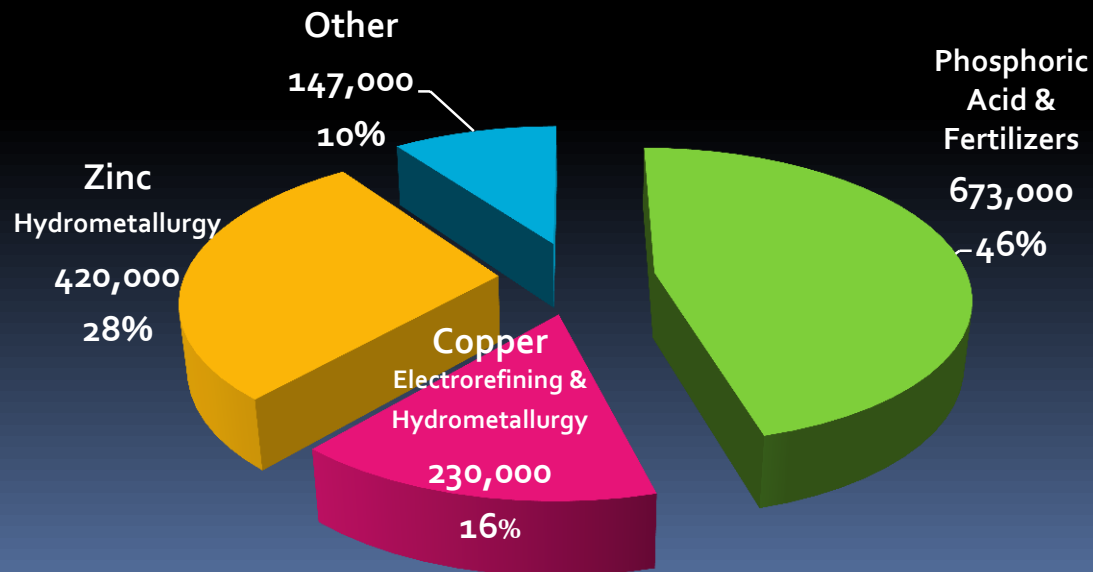
### 3 Sulfuric Acid Consumer Industries in Iran (2013)



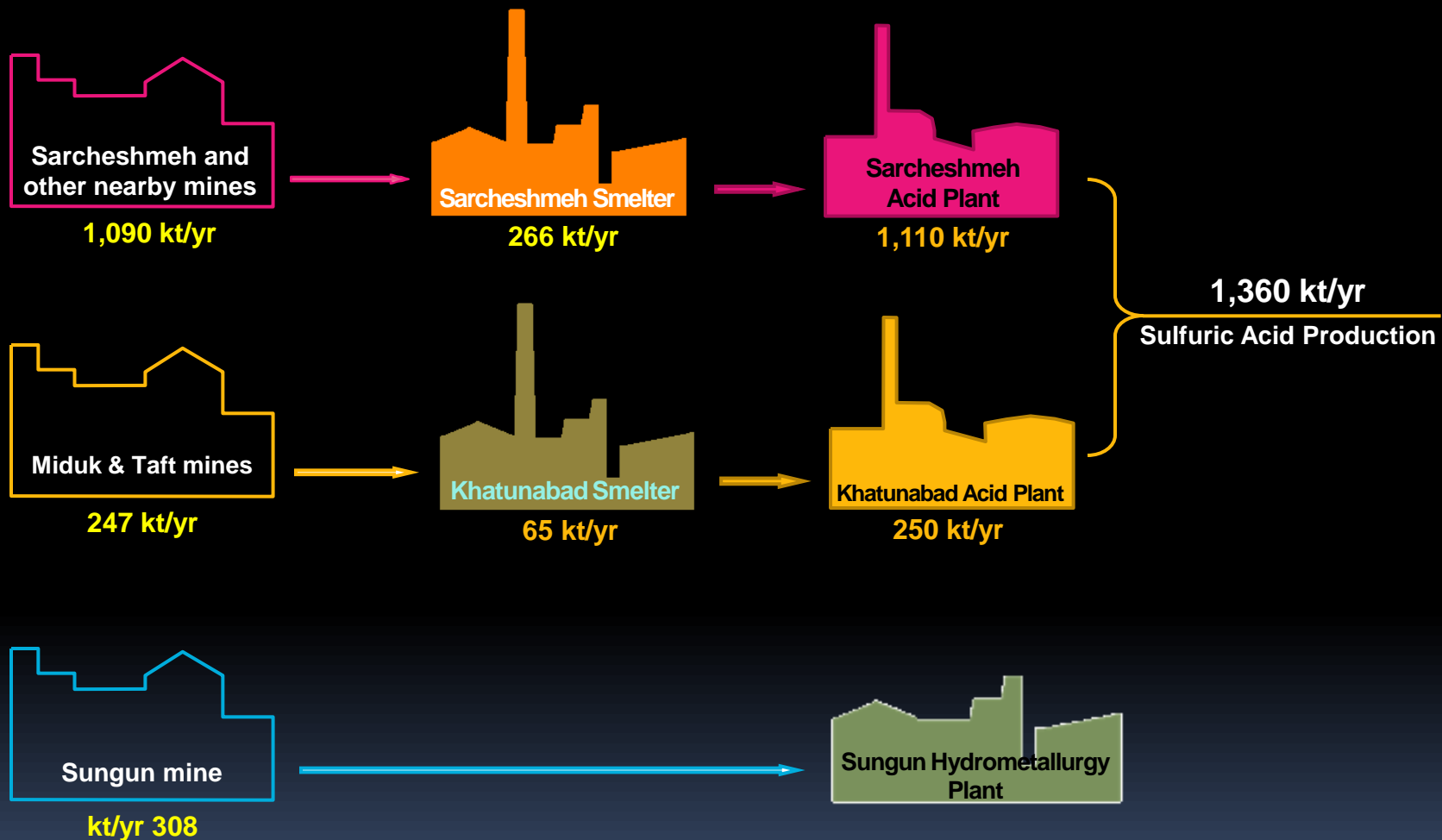
# Iran Sulfuric Acid Production & Consumption

- 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





- **More than 1mt Sulfuric Acid Surplus In Iran Market in 2018**
- **More than 1mt Phosphate Fertilizers (TSP&DAP) Import by Iran**
- 

**Excellent Opportunity for  
Investment In Production of TSP  
and Ammonium Sulphate Iran**



Thank You For  
Your Attention

