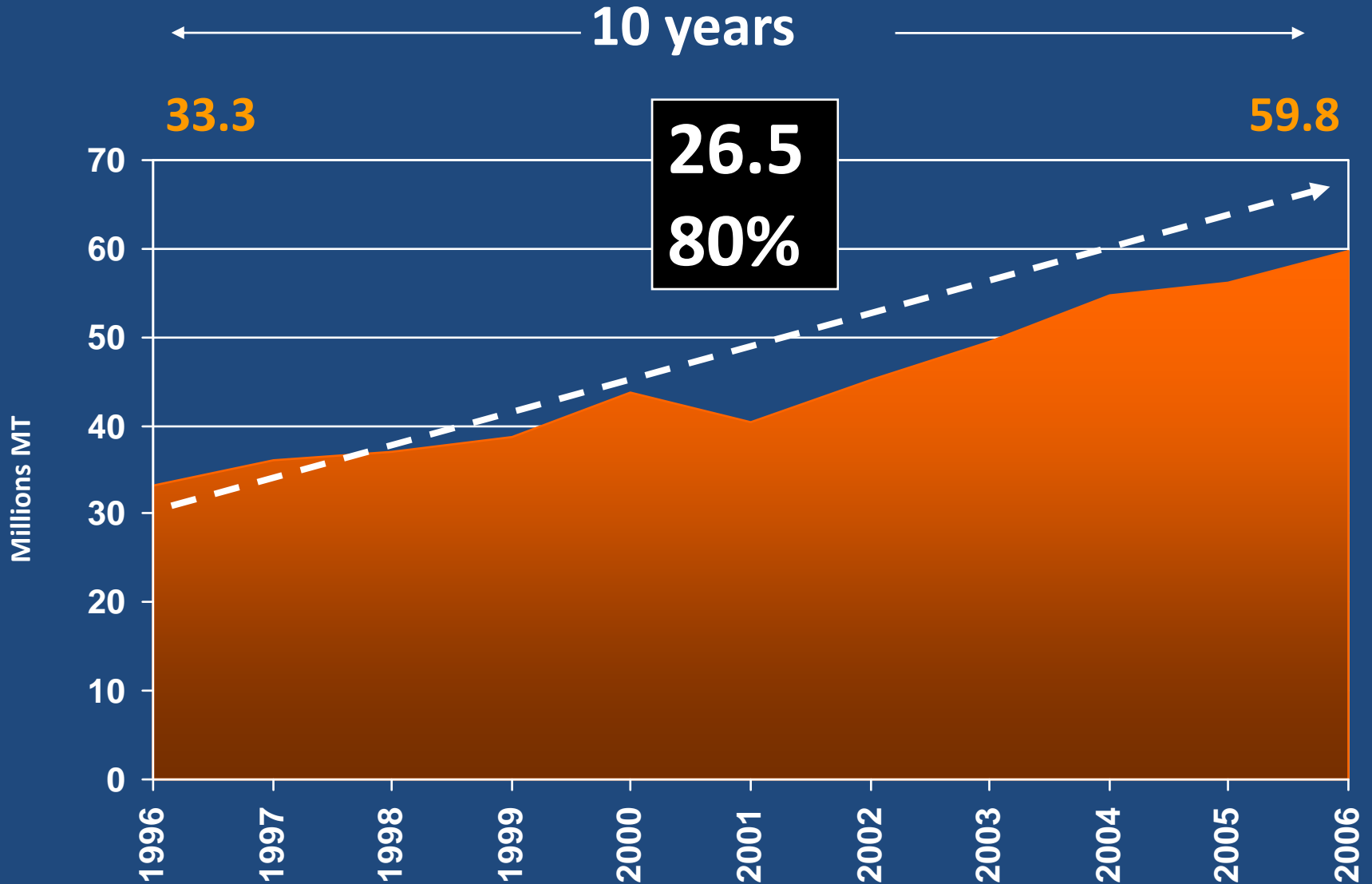




# Worldwide DRI/HBI Production

# Growth in DRI/HBI Output



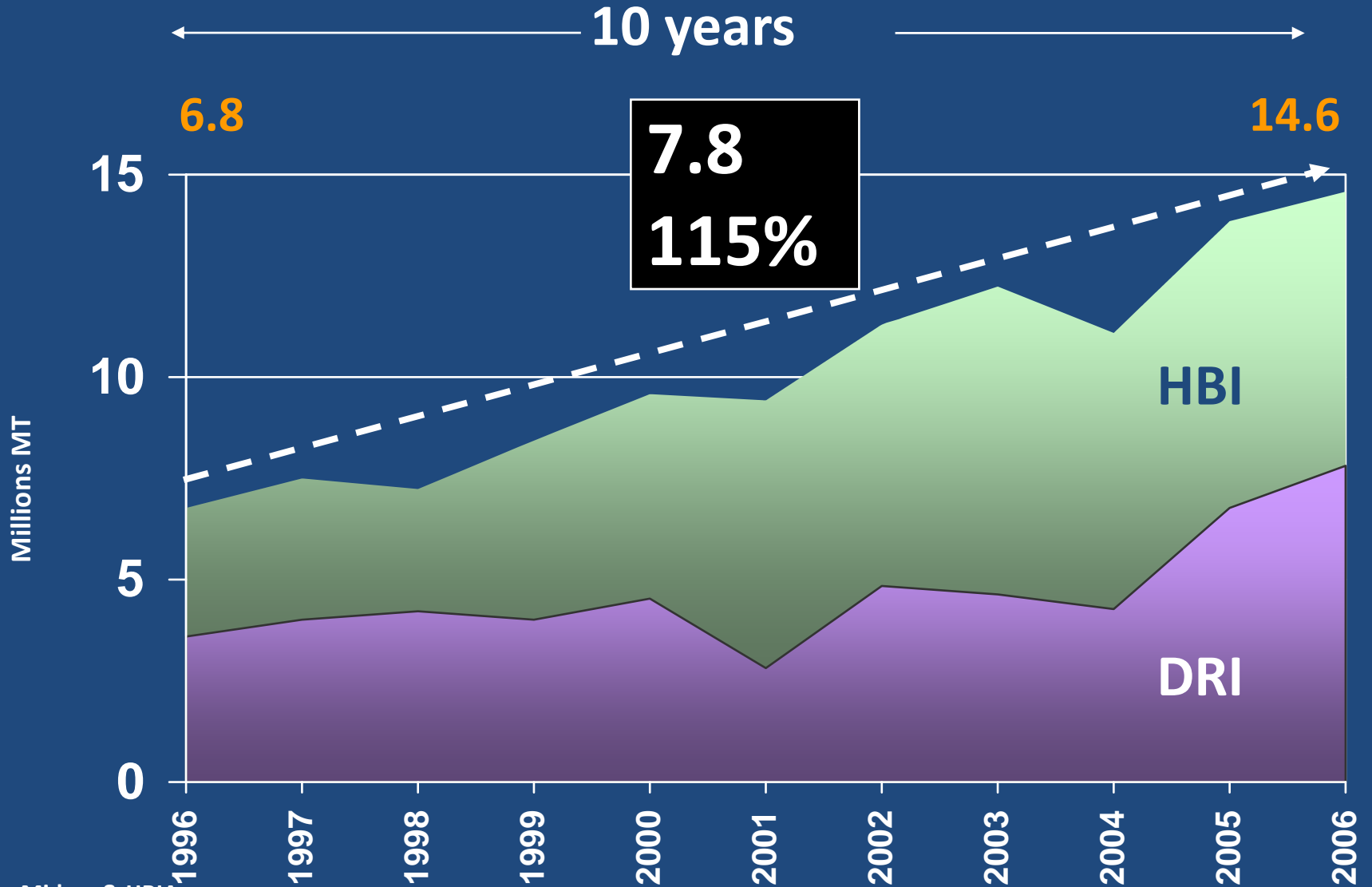
Source: Midrex & HBIA

January 29, 2008

DRI/HBI Overview

2

# Growth in Shipments



Source: Midrex & HBIA

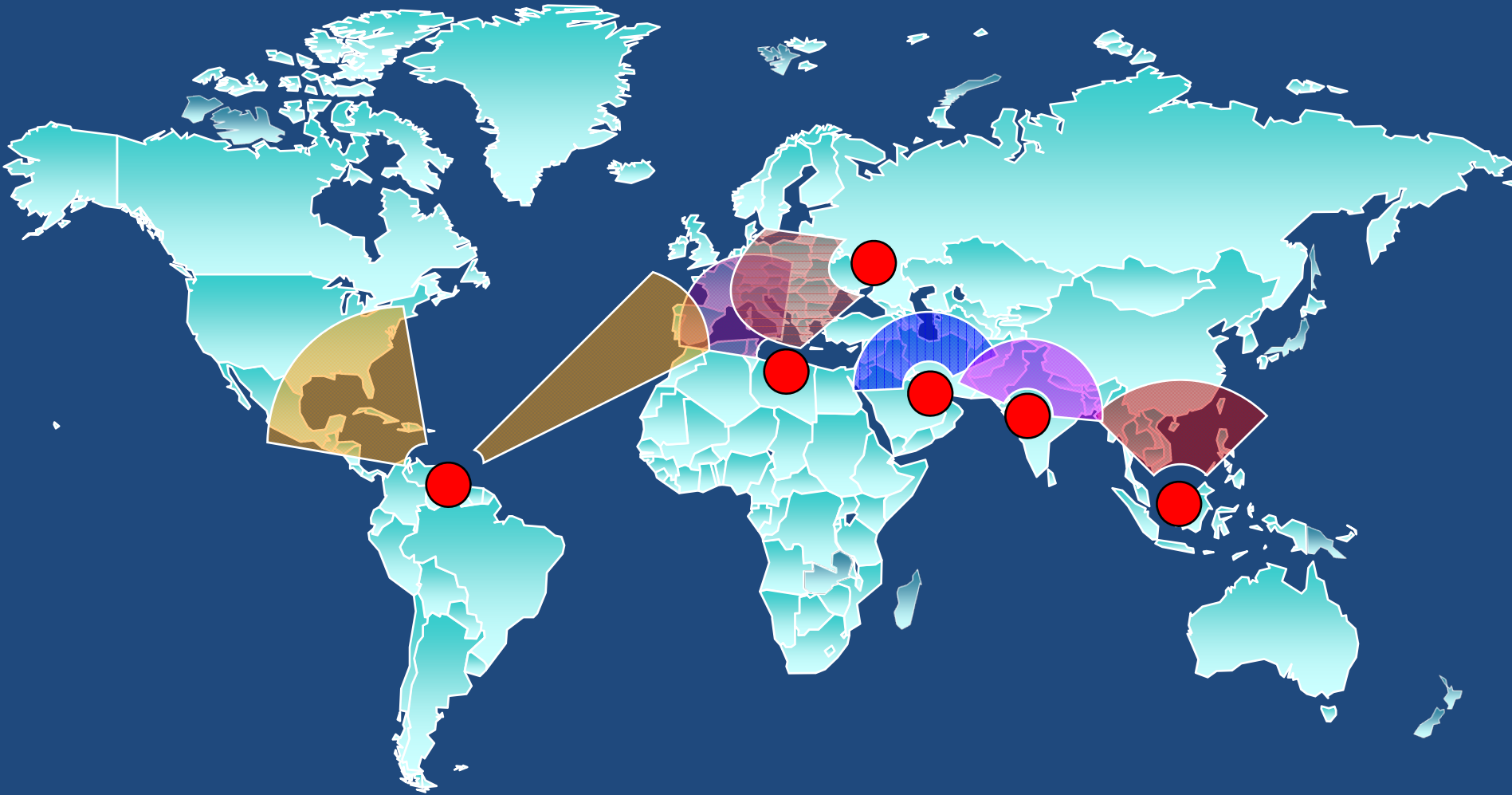
January 29, 2008

DRI/HBI Overview

# HBI Shipments

- Approx. 90.24 million tonnes of HBI have been shipped worldwide (1978 -2007)
- Approx. 84.45 million tonnes have been by water (sea & inland)
- 39.23 million tonnes have been shipped from Venezuela alone

# Sources

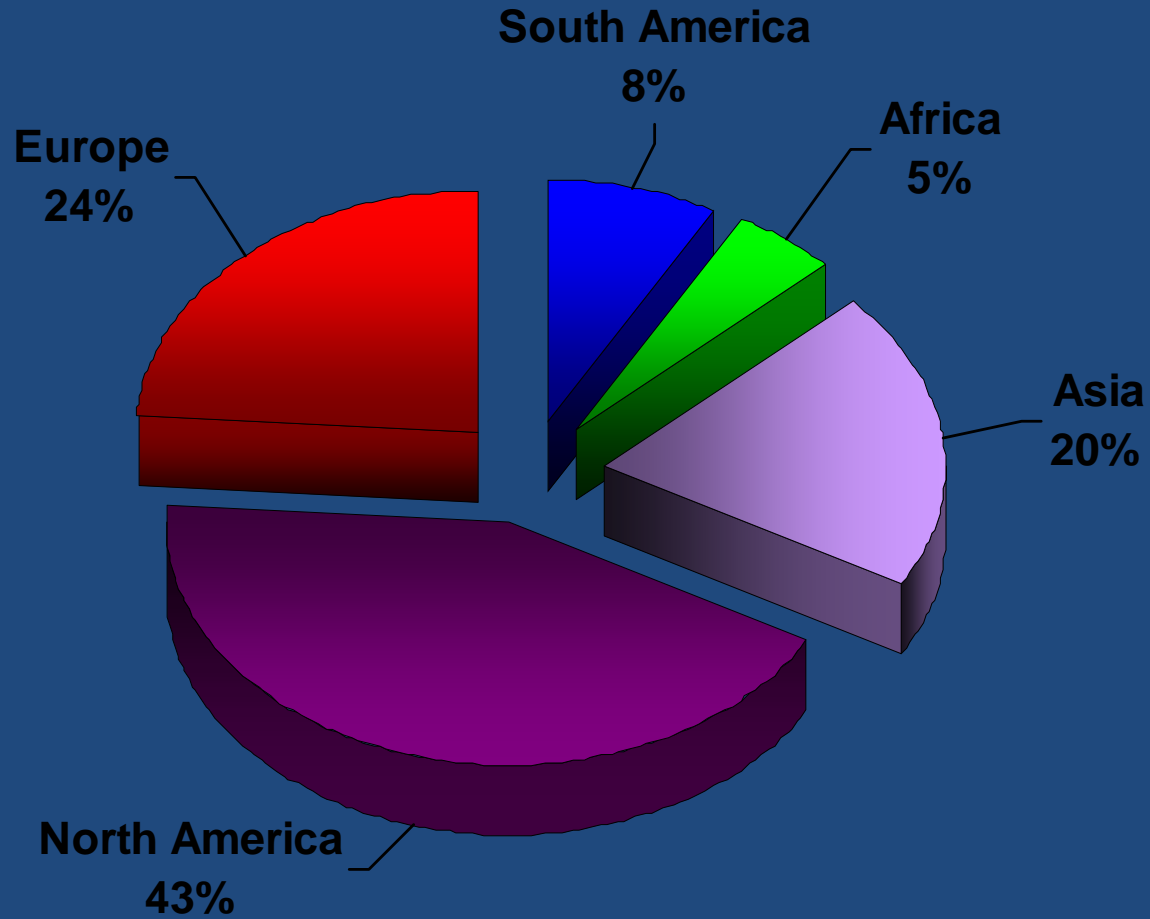


# Where Does HBI Go?

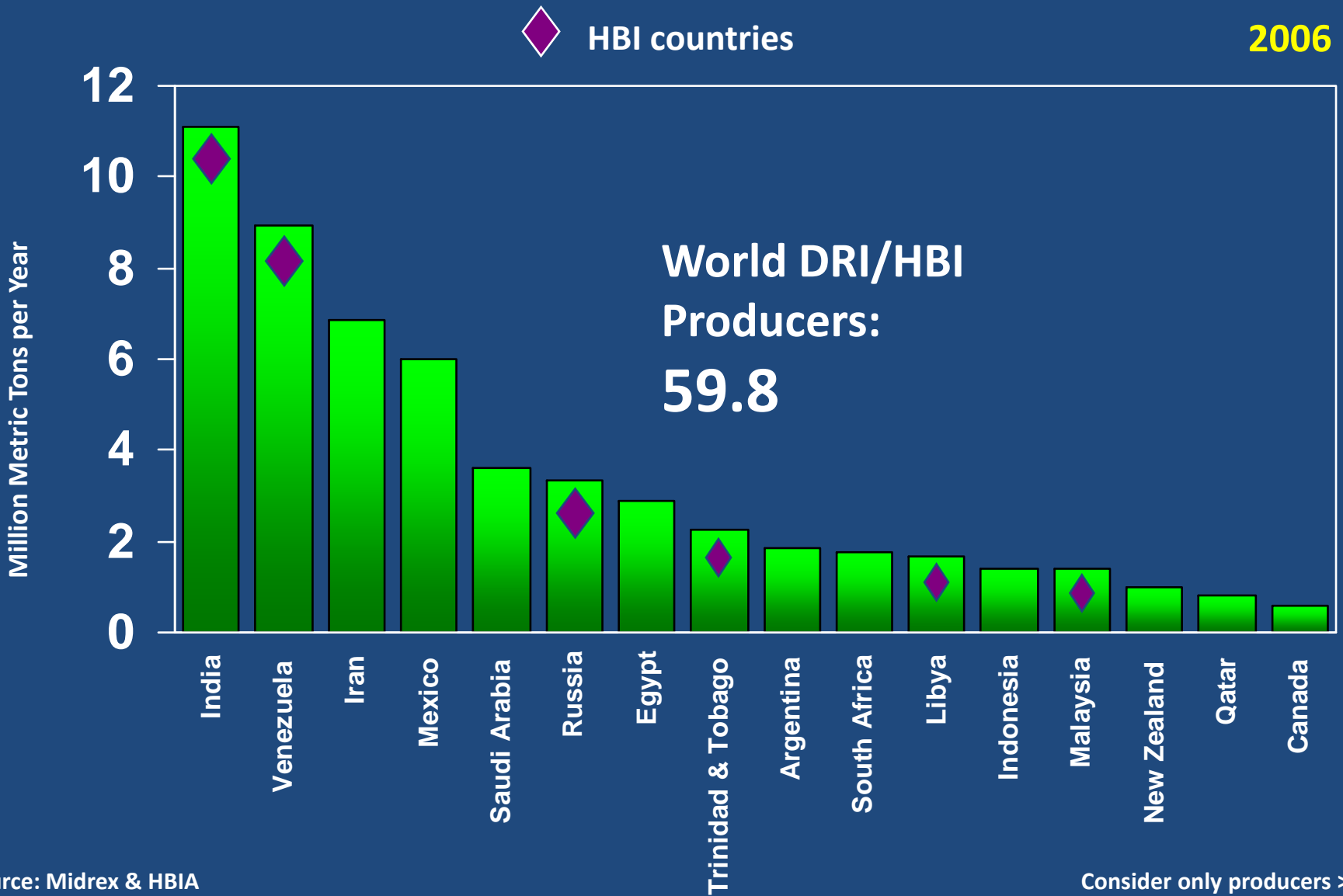


# Where Does HBI Go?

2006



# World DRI/HBI Producers



Source: Midrex & HBIA

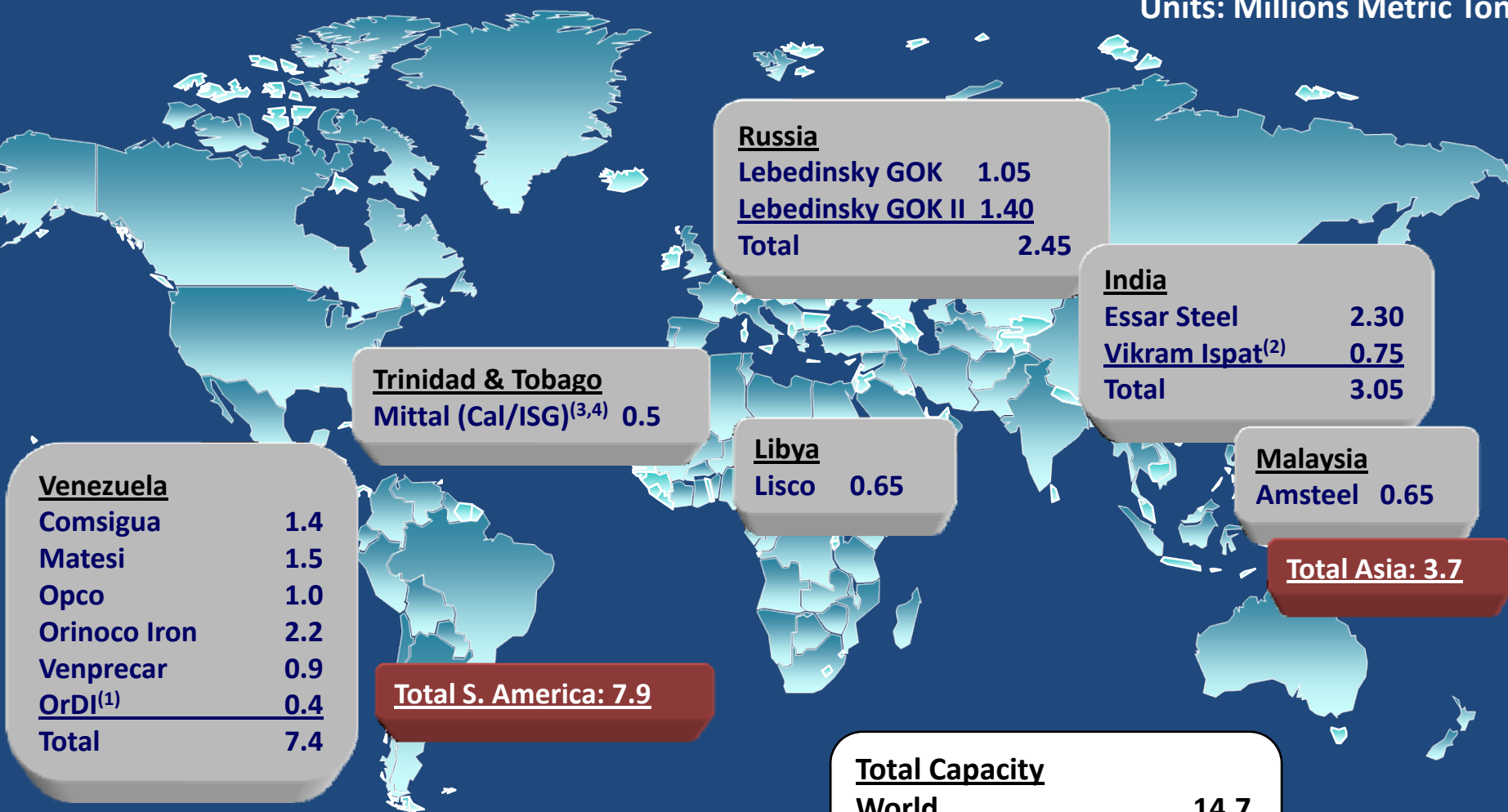
January 29, 2008

DRI/HBI Overview

Consider only producers > 0.5 Mt/yr

# World HBI Producers

Units: Millions Metric Tons



**Russia**

Lebedinsky GOK	1.05
<u>Lebedinsky GOK II</u>	<u>1.40</u>
<b>Total</b>	<b>2.45</b>

**India**

Essar Steel	2.30
<u>Vikram Ispat<sup>(2)</sup></u>	<u>0.75</u>
<b>Total</b>	<b>3.05</b>

**Malaysia**

Amsteel	0.65
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**Libya**

Lisco	0.65
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**Trinidad & Tobago**

Mittal (Cal/ISG) <sup>(3,4)</sup>	0.5
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**Venezuela**

Comsigua	1.4
Matesi	1.5
Opco	1.0
Orinoco Iron	2.2
Venprecar	0.9
<u>OrDI<sup>(1)</sup></u>	<u>0.4</u>
<b>Total</b>	<b>7.4</b>

**Total Asia: 3.7**

**Total S. America: 7.9**

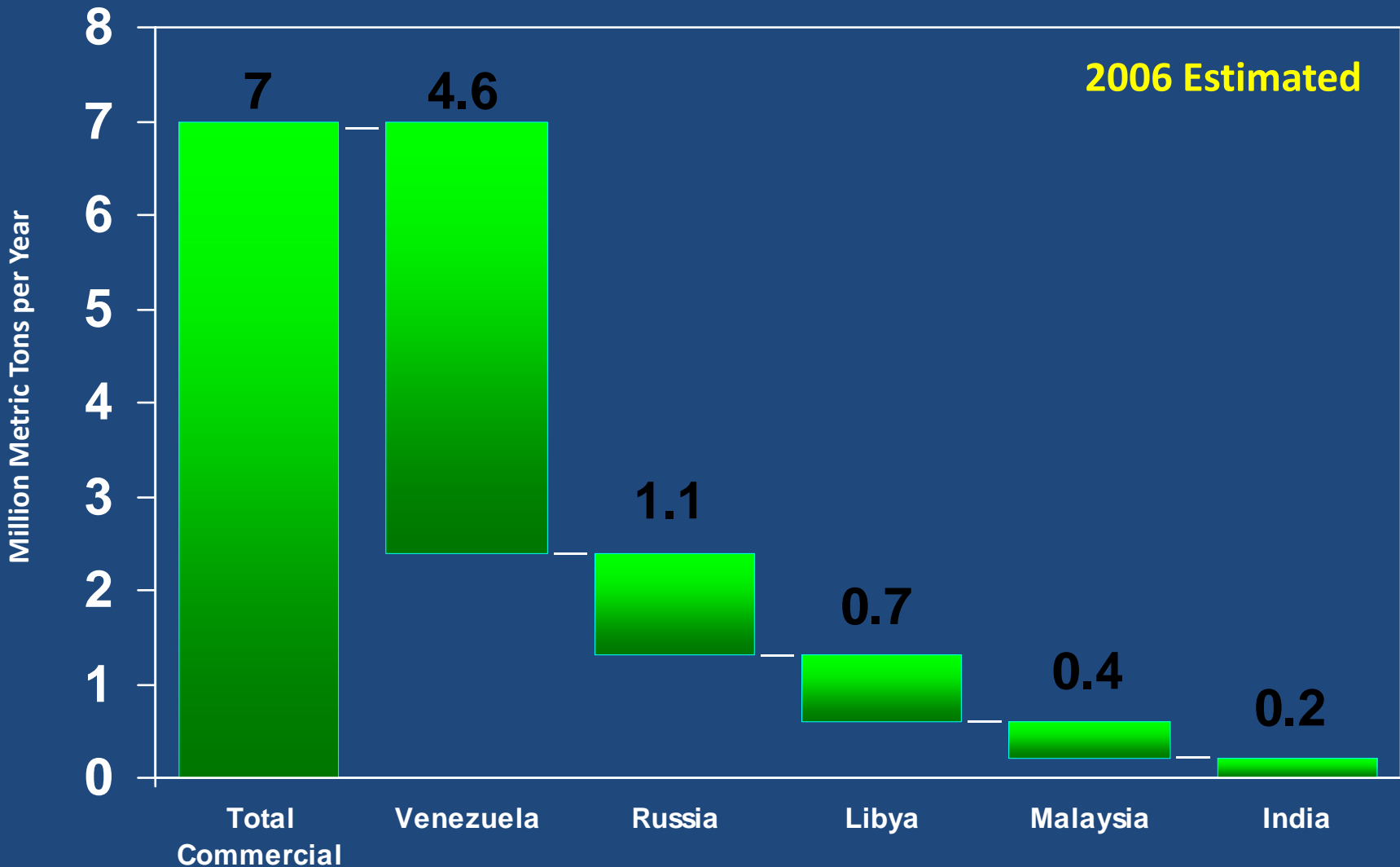
**Total Capacity**

World	14.7
Merchant	11.9
Available Merchant	11.5

1/ Idled  
 2/ Hybrid HBI/DRI 50%/50%  
 3/ Uncertain  
 4/ Closed

# HBI Market Structure

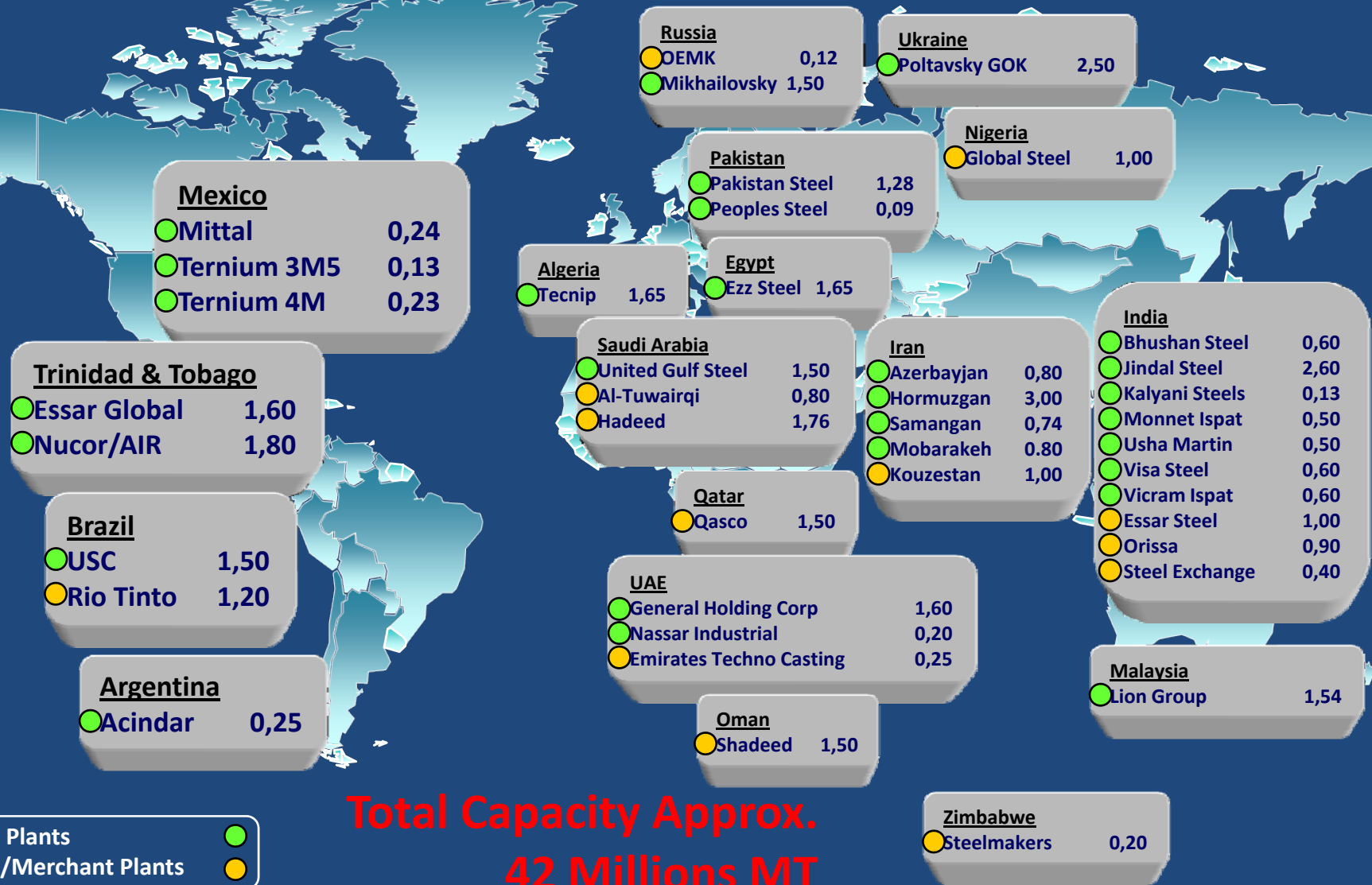
## Commercial Production



Source: Exiros & HBIA

# New DRI/HBI Plants (Gas Based)

Units: Millions Metric Tons



**Total Capacity Approx.  
42 Millions MT**

Captive Plants ●  
Captive/Merchant Plants ●

# New DRI/HBI Plants (Gas Based)

Units: Million Metric Tons



**Total Capacity Approx.  
42 Millions MT**

# 2008 / Beyond

- Nature of the Beast-Identity 
- Price volatility 
- Basic raw material cost increase (*Iron Ore, Gas & Energy*) 
- Low silica pellet supply (When?) 
- Freight & Transportation cost increase 
- Technology – Hybrid plants 
- Die hard operating practices 
- Consolidation 
- Upstream and downstream integration 
- The return of China 
- Additional availability of HBI from Russia, Malaysia, Gulf Region and possibly India 