

The ASEAN Steel Industry Situation

Presentation at:

The Global Forum on Steel Excess Capacity

Organisation for Economic Co-operation and Development

17 March 2020

Yeoh Wee Jin

Secretary General

South East Asia Iron and Steel Institute

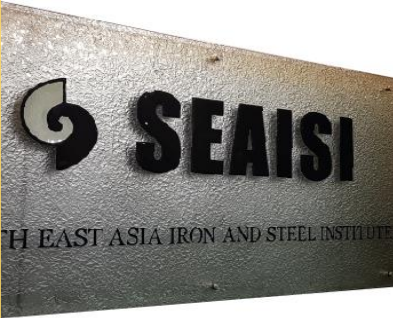
About **SEAISI**

01 Members



~900 members with >400,000 employees • 27 countries
... since 1971

02 Direction



VISION: To become a world-class steel institute to contribute to sustainable steel value chain in ASEAN

MISSION: To educate and advocate sustainable development of ASEAN steel value chain, in partnership with global institution and experts

03 Our Events



SEAISI organizes a major international conference & exhibition and a forum every year. The SEAISI Conference & Exhibition is the one of the largest events on the iron & steel industry in ASEAN.

04 Publications



Statistical Yearbook • Steel Quarterly Journal •
Member Directory • Map of ASEAN Steel Industry •
Monthly Newsletter



OUTLINE:

PART A

The ASEAN Steel Industry

- ☐ ASEAN Economies
- ☐ ASEAN Steel Consumption
- ☐ ASEAN Steel Demand (Sectors)
- ☐ ASEAN Steel Production & Trade
- ☐ Apparent Steel Consumption Forecast

PART B

A Focus on New Steel Investments in ASEAN:

- ☐ Past Events Impacts
- ☐ ASEAN Industry Situation
- ☐ Rise of the Integrated Megamills
- ☐ A Future Scenario

PART C

What's Next?

- ☐ Conclusions
- ☐ Messages

OUTLINE:

PART

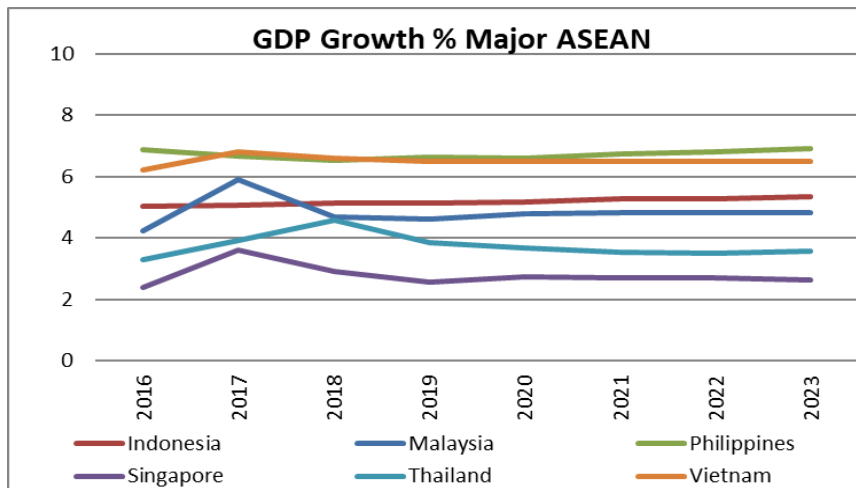
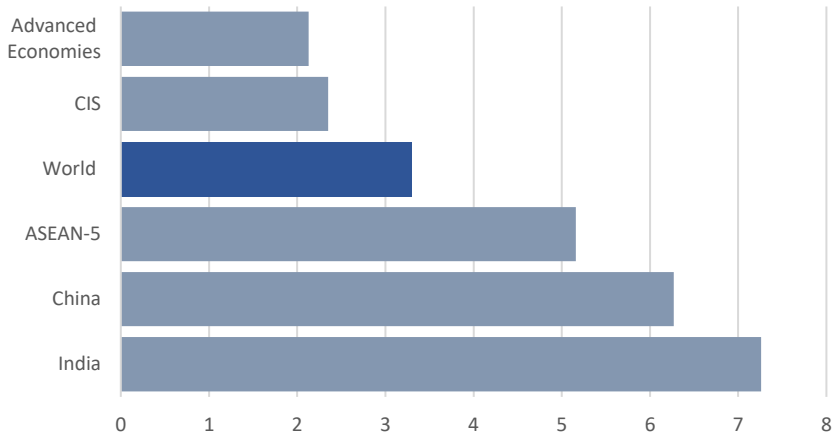
A

- ☐ ASEAN Economies
- ☐ ASEAN Steel Consumption
- ☐ ASEAN Steel Demand (Sectors)
- ☐ ASEAN Steel Production & Trade
- ☐ Apparent Steel Consumption Forecast

ASEAN ECONOMIC PERFORMANCE

ASEAN is among the fastest growing regions in the world, with the ASEAN 5 nations expecting positive growth in the near future

■ Average GDP Growth in %, 2019



Source : IMF World Economic Outlook updated April 2019,

World

- IMF, in its latest World Economic Outlook, cut its global growth forecast for 2019 to 3.3% before picking up to 3.6% in 2020 mainly on account of a number of global issues such as trade tensions and Brexit.

ASEAN

- GDP growth forecast for ASEAN-5 maintained at 5.1% in 2019 and 5.2% in 2020

ASEAN 5 GDP Growth

	2018A	2019F	2020F
Philippines	6.2%	6.5%	6.5%
Vietnam	7.1%	6.5%	6.5%
Indonesia	5.2%	5.2%	5.2%
Malaysia	4.7%	4.7%	4.8%
Thailand	4.1%	3.5%	3.5%

Source : Government's announcements and other sources

OUTLINE:

PART

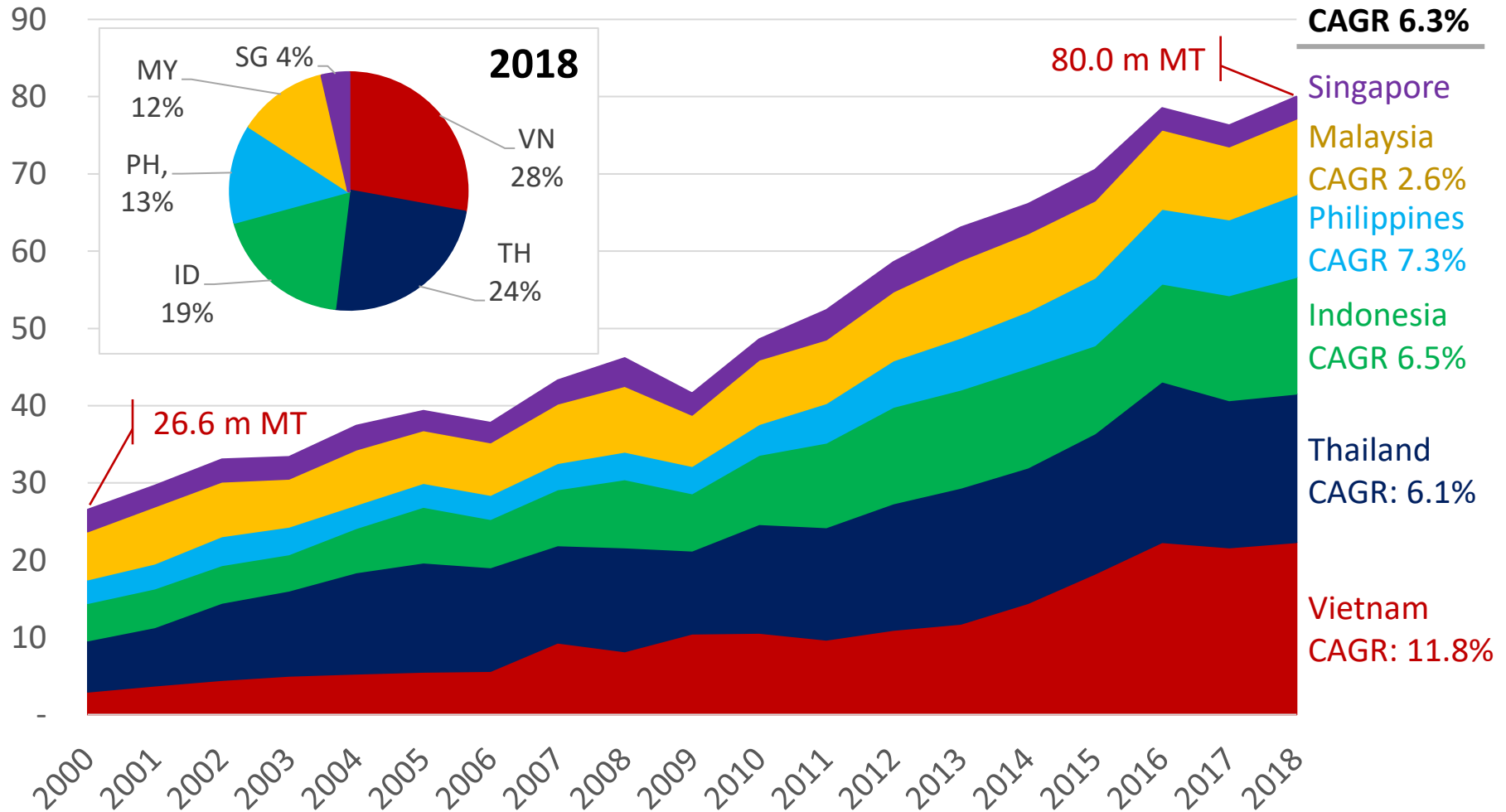
A

- ☐ ASEAN Economies
- ☒ ASEAN Steel Consumption
- ☐ ASEAN Steel Demand (Sectors)
- ☐ ASEAN Steel Production & Trade
- ☐ Apparent Steel Consumption Forecast

APPARENT STEEL CONSUMPTION IN ASEAN

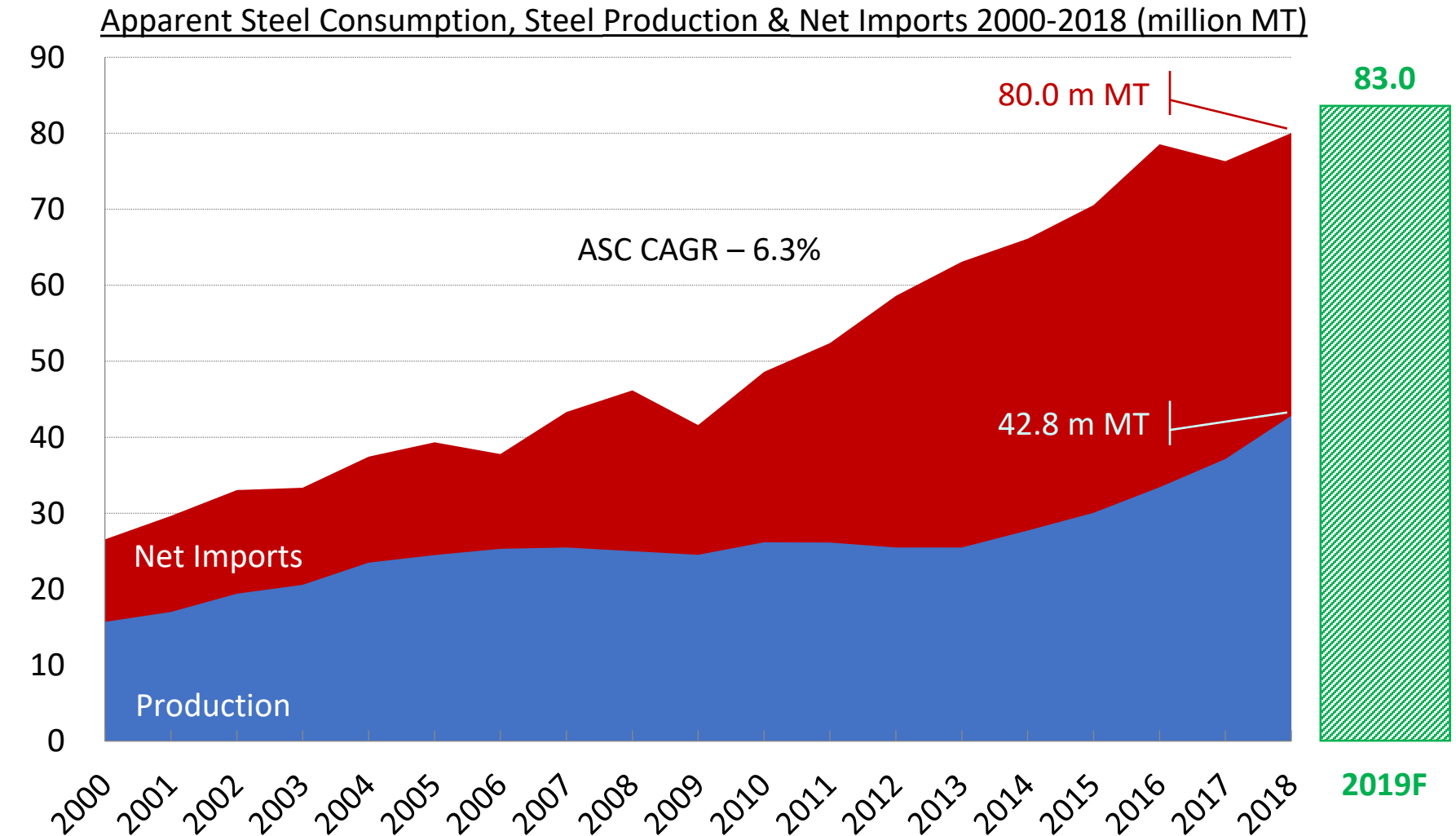
ASEAN-6's apparent steel consumption reached 80 m MT in 2018; Consumption growth is high, with Vietnam, Thailand consuming more than 50% of ASEAN steel

ASEAN Apparent Steel Consumption 2000-2018 (million MT)



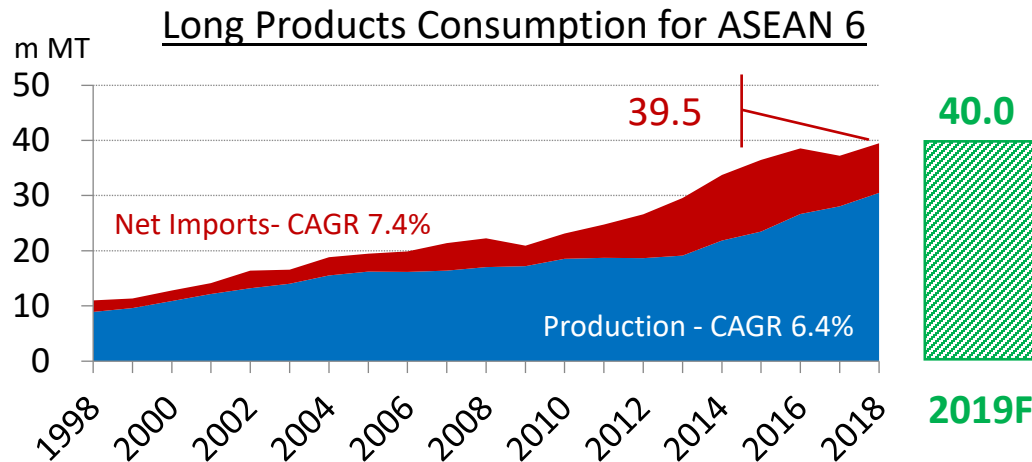
APPARENT STEEL CONSUMPTION IN ASEAN

About half of ASEAN-6's steel consumption is supplied by imports; Forecast for 2019 is 83 m MT



APPARENT CONSUMPTION OF STEEL (FLATS/LONGS)

Demand for long steel products is mostly served by local production while demand for flat products is mostly served by imports

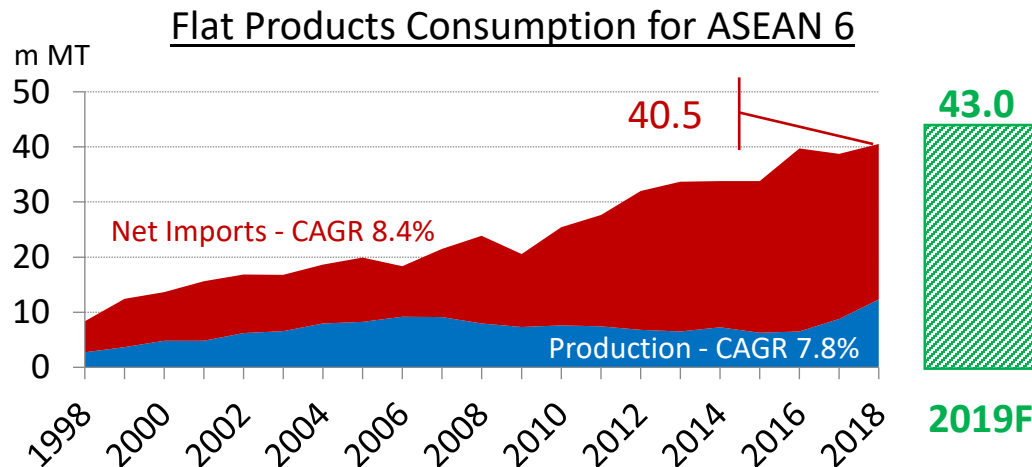


Long Products (2018)

- Consumption : 39.5 m MT
- Production : 30.5 m MT
- Net Imports : 9.0 m MT

- Production growth follows consumption growth

- 2019 Forecast : 40.0 m MT



Flat Products (2018)

- Consumption : 40.5 m MT
- Production : 12.3 m MT
- Net Imports : 28.2 m MT

- Market is mostly served by imports

- Forecast for 2019 is 43 m MT

ASEAN - APPARENT STEEL CONSUMPTION

ASEAN Apparent Steel Consumption is up 5.9% in H1 2019 from H1 2018, mainly due to production growth to cater for increased demand for steel

Apparent Steel Consumption H1 2018 vs H1 2019 (MT)

	H1 2018	H1 2019	% Growth
Production	19,669,009	21,577,696	9.7%
Import	23,747,440	25,080,821	5.6%
Export	6,411,613	7,483,437	16.7%
Consumption	37,004,836	39,175,079	5.9%

Long Steel Apparent Steel Consumption H1 2018 vs H1 2019 (MT)

Long steel	H1 2018	H1 2019	% Growth
Production	13,894,122	15,183,142	9.3%
Import	6,377,624	6,158,758	-3.4%
Export	2,021,898	2,552,594	26.2%
Consumption	18,249,847	18,789,306	3.0%

Flat Steel Apparent Steel Consumption H1 2018 vs H1 2019 (MT)

Flat steel	H1 2018	H1 2019	% Growth
Production	5,774,888	6,394,554	10.7%
Import	17,369,816	18,922,062	8.9%
Export	4,389,715	4,930,843	12.3%
Consumption	18,754,989	20,385,773	8.7%

* Hot rolled production only

- ASC for H1 2019 is up 5.9% from H1 2018
 - Production grew 9.7% y-o-y to 21.6 million MT
 - Import rose to 25.1 m MT, while export reached 7.5 m MT
- Long products ASC rose to 18.9 m MT (3% growth)
 - Increase mainly due to rise in production
 - Imports are slightly down
- Flat Products ASC is up 8.7% to 21.3 m MT
 - Again increase was mainly from production growth being faster than import growth

OUTLINE:

PART

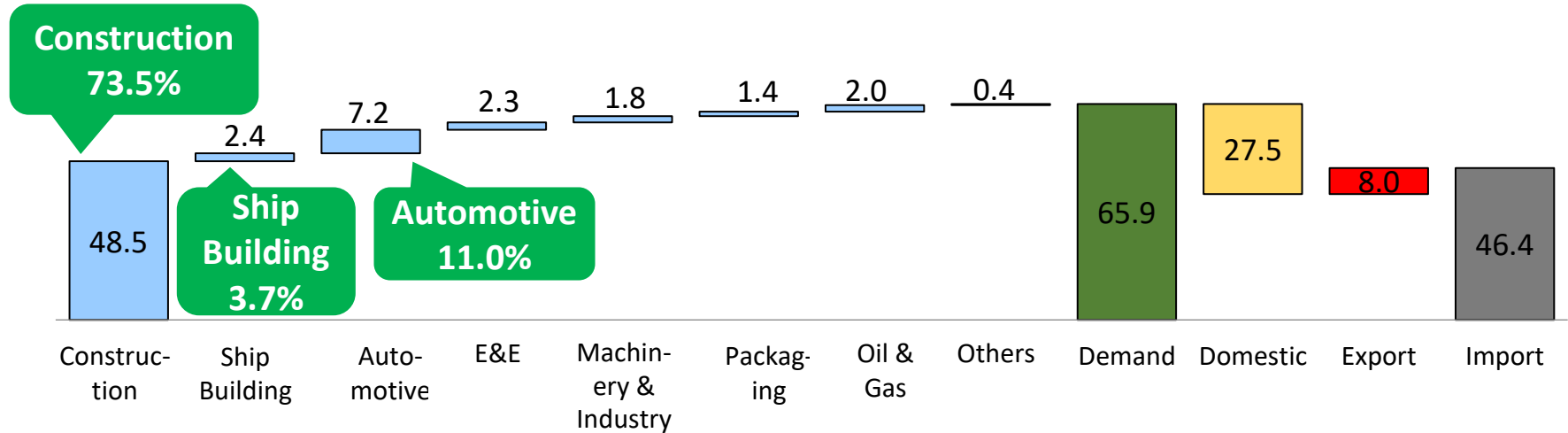
A

- ☐ ASEAN Economies
- ☐ ASEAN Steel Consumption
- ☐ ASEAN Steel Demand (Sectors)
- ☐ ASEAN Steel Production & Trade
- ☐ Apparent Steel Consumption Forecast

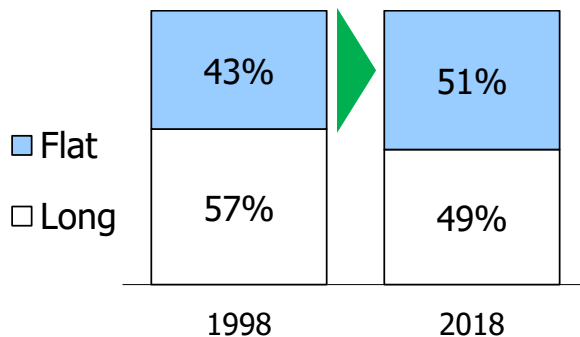
ASEAN STEEL CONSUMING SECTORS

Construction Sector remains the largest steel consuming sector; Proportion of Flat Products consumed in ASEAN has increased significantly for Construction

Apparent Steel Consumption by Steel Consuming Sectors - 2015 Study (m MT)



Flat vs Long Products Proportions

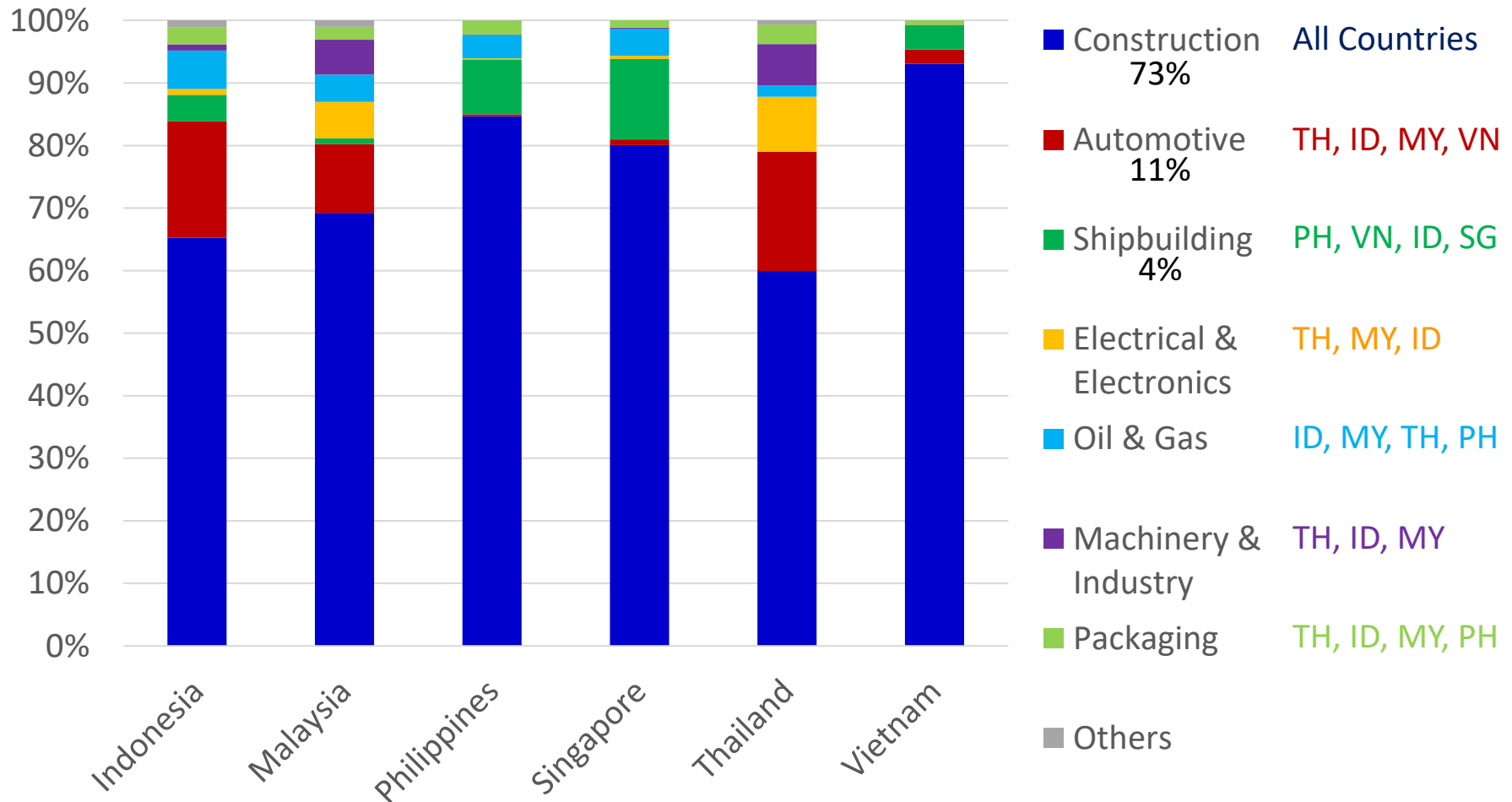


- Largest steel consuming sector (2015 SEAISI study):
 - Construction 73.5%
 - Automotive 11.0%
 - Ship building 3.7%
- Consumption has shifted towards flat products (1998 vs 2018 proportions), but these are mostly for construction

ASEAN STEEL CONSUMING SECTORS

Construction Sector is the largest steel consuming sector in all ASEAN-6 countries; The other major sectors are concentrated in a few countries only

Apparent Steel Consumption by Steel Consuming Sectors & Country - 2015 Study (%)



OUTLINE:

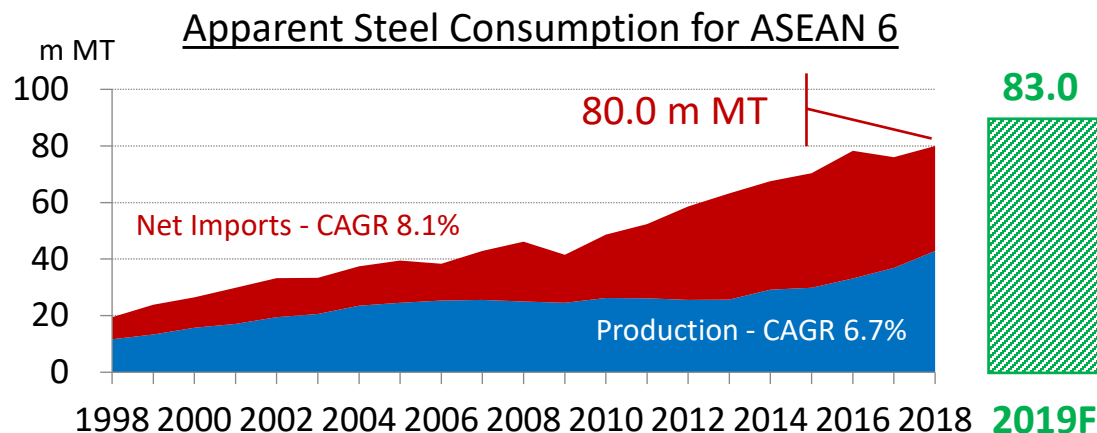
PART

A

- ☐ ASEAN Economies
- ☐ ASEAN Steel Consumption
- ☐ ASEAN Steel Demand (Sectors)
- ☐ ASEAN Steel Production & Trade
- ☐ Apparent Steel Consumption Forecast

ASEAN STEEL PRODUCTION

Major production volume increases, mainly due to new flat product capacities in Vietnam and Indonesia



ASEAN 6 Steel Production by Country

million MT	2016	2017	2018	%Change (2017/18)
Indonesia	6.5	7.9	10.0	26.6%
Malaysia	3.7	3.8	3.8	0.0%
Philippines	4.3	4.3	4.9	14.0%
Singapore	0.5	0.6	0.6	0.0%
Thailand	9.5	9.3	9.0	-3.2%
Vietnam	8.7	11.3	14.5	28.3%
ASEAN-6	33.4	37.2	42.8	15.1%

ASEAN Steel (2018)

- Consumption : 80.0 m MT
- Production : 42.8 m MT
- Net Imports : 37.2 m MT

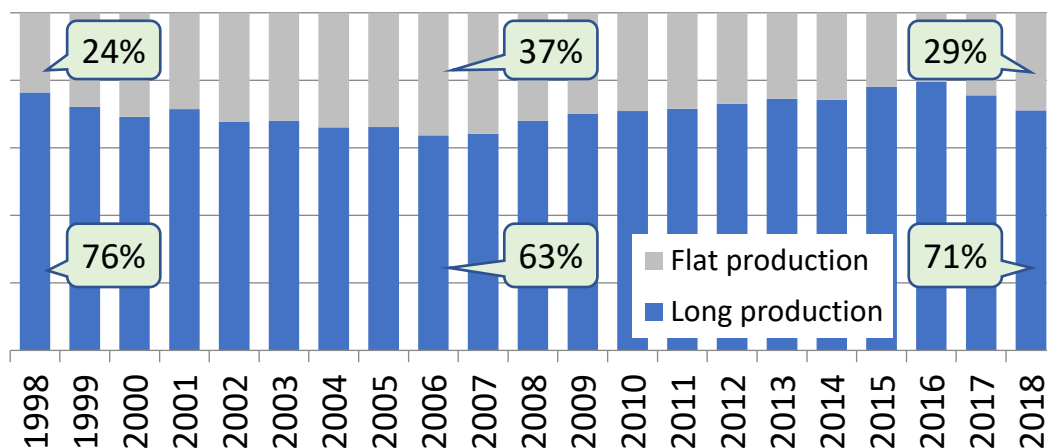
Production Growth

- Production increased due to new flat products capacities
 - Formosa Ha Tinh (Vietnam)
 - Krakatau Posco (Indonesia)
 - Tsingshan Steel (Indonesia)
- Malaysia steel production remained flat even though new capacity (Alliance Steel – 3.5m MT) has come onstream

ASEAN STEEL PRODUCTION (FLATS VS LONGS)

ASEAN steel production is focused on long products, while growth in has been more in flat products; Capacity utilization are still low, more severely in longs

Flat vs Long Production Proportions

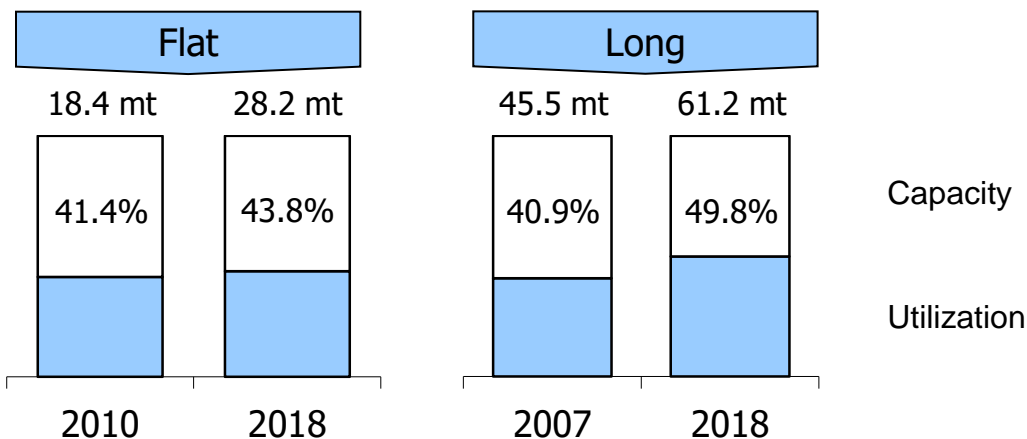


Focus of the Steel Industry

- Steel production is focused on long products
- New capacities coming up in the flat products
 - Proportion of flats was higher from 2016 to 2018

Capacity Utilisation

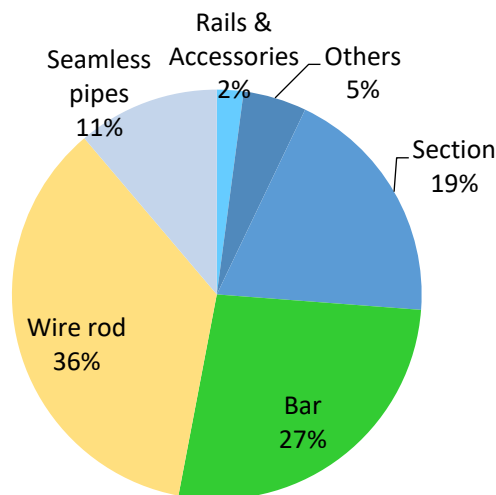
- Utilisation rates are low because:
 - New flat products mills are still on a ramp up
 - Low utilization in long products due to existing overcapacity



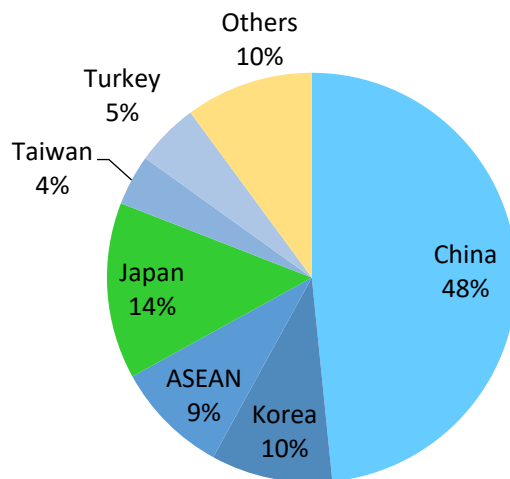
LONG PRODUCT IMPORTS IN ASEAN

ASEAN imported a total of 13.2 million MT of long products in 2018, mainly from China, Japan, Korea and within ASEAN; These are used in the Construction Sector

Long Products Import by Products (2018)



Long Products Import by Countries (2018)



Total Import

- ASEAN imported a total of 13.2 million MT of long steel in 2018

Import by Products

- More than 80% of steel imports are for the Construction sector
 - Wire Rod (36%)
 - Bar (27%)
 - Sections (19%)

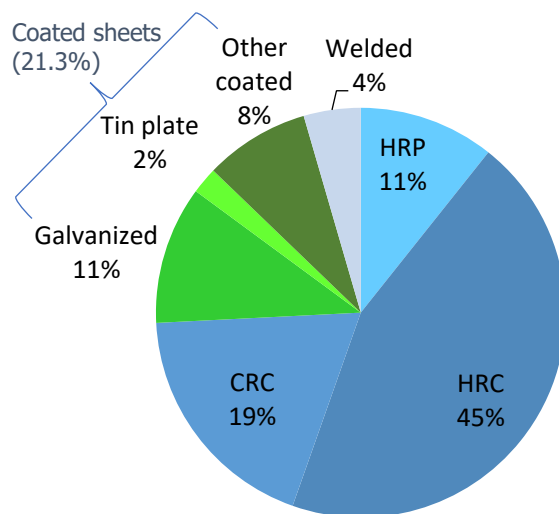
Import by Countries

- China continues to dominate long products supply, supplying 48% of steel in 2018
- The other major suppliers are from Japan (14%), Korea (10%), Turkey (5%) and Taiwan (4%)
- Intra ASEAN imports was 9%

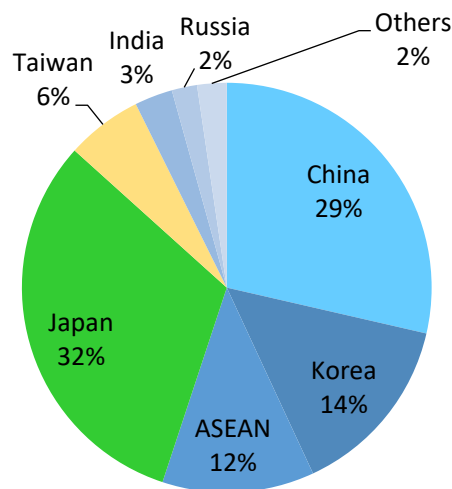
FLAT PRODUCT IMPORTS IN ASEAN

ASEAN imported a total of 37.3 million MT of flat products in 2018, mainly from Japan, China, Korea and within ASEAN

Flat Products Import
by Products (2018)



Flat Products Import
by Countries (2018)



Total Import

- ASEAN imported a total of 37.3 million MT of flat steel in 2018

Import by Products

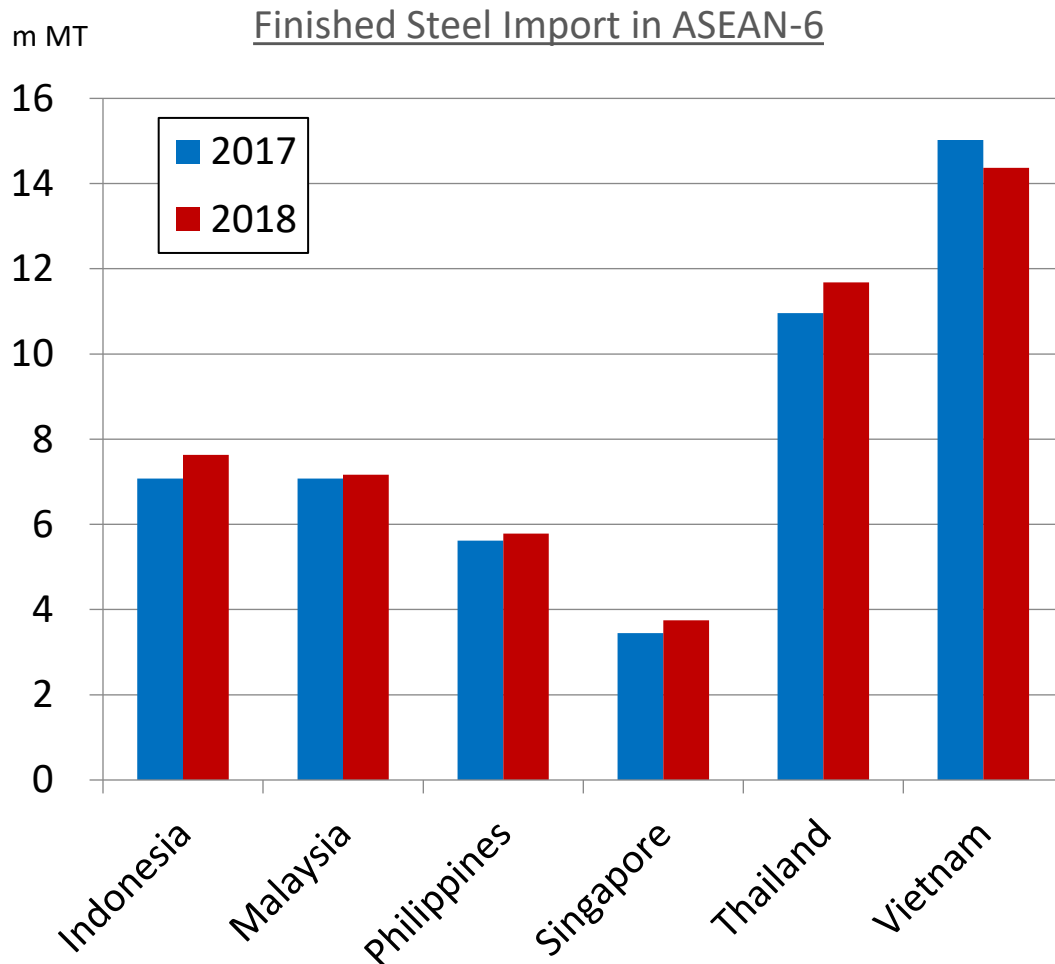
- More than 70% of steel imports into ASEAN are
 - HR Coils (45%)
 - Coated Sheets (21%)
 - CR Coils (19%)
 - HR Plates (11%)

Import by Countries

- Major supply of flat products came from
 - Japan (32%)
 - China (29%)
 - Korea (14%)
 - Within ASEAN (12%)

ASEAN FINISHED STEEL IMPORTS

Finished steel import slowed down in 2018 mainly due to increase in domestic production to serve domestic demand and to substitute imports

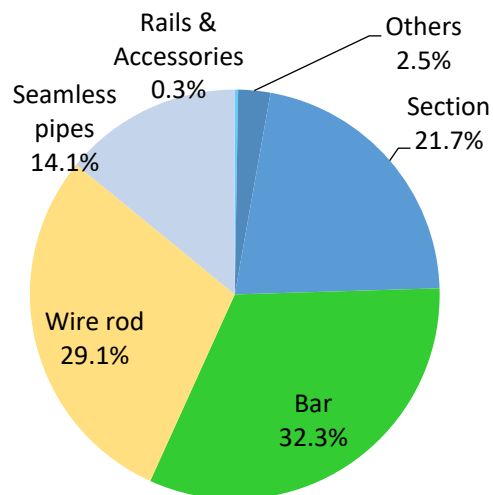


- Finished steel import growth in most ASEAN-6 countries slowed down in 2018
- Vietnam is the only country that experienced continued decline in steel import, dropping 4.4% in 2018
- A major portion of the import in the region was high quality steel, mainly to serve manufacturing sector
- One of main reasons for the slowdown in steel import growth in ASEAN region was the increase in domestic production to serve domestic demand and to substitute import

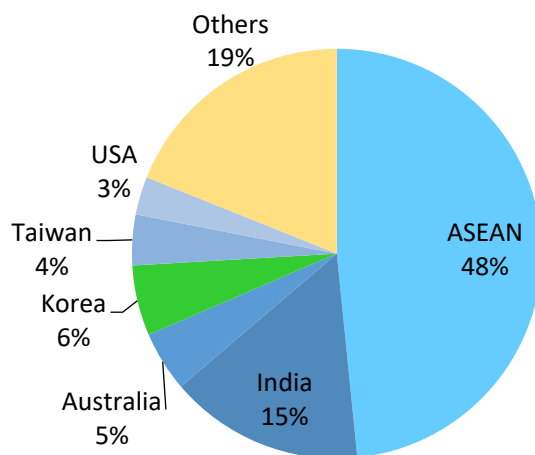
LONG PRODUCT EXPORTS IN ASEAN

ASEAN exported a total of 4.2 million MT of long products in 2018, mainly to other ASEAN countries, India, Korea, Australia and Taiwan

Long Products Export by Products (2018)



Long Products Export by Countries (2018)



Total Exports

- ASEAN exported a total of 4.2 million MT of long steel in 2018

Export by Products

- More than 80% of steel exports are:
 - Bars (32%)
 - Wire Rod (29%)
 - Sections (21%)

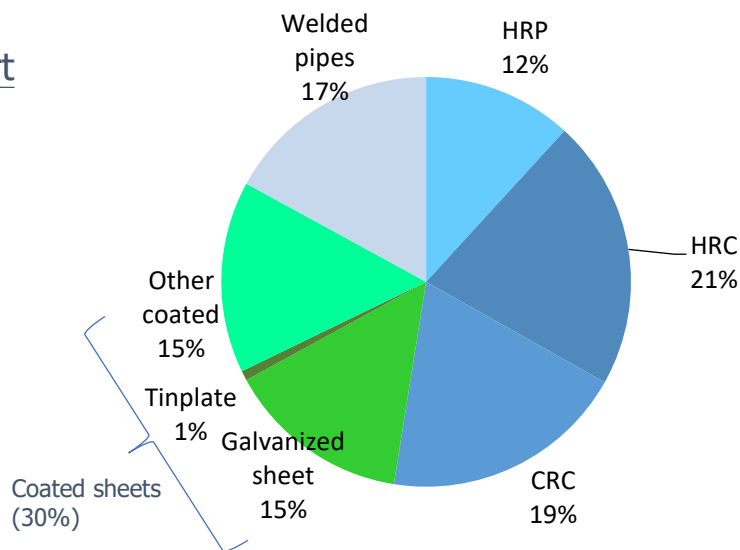
Export by Countries

- Most of ASEAN long products exports are to neighbouring ASEAN countries (48%) and other countries in the Asia Pacific region such as India (15%), Korea (6%), Australia (5%) and Taiwan (4%)

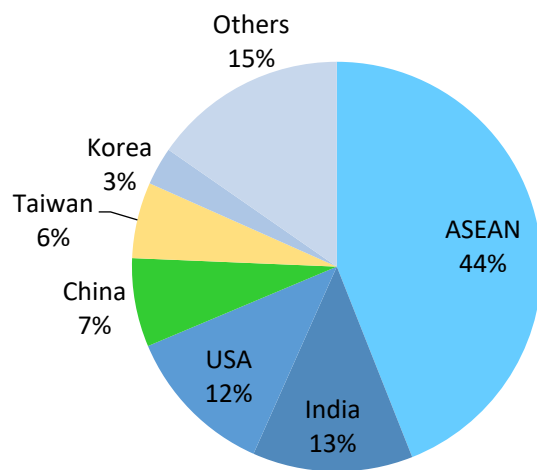
FLAT PRODUCT EXPORTS IN ASEAN

ASEAN exported a total of 9.2 million MT of flat products in 2018, mainly within ASEAN and to India, US, China and Korea

Flat Products Export
by Products (2018)



Flat Products Export
by Countries (2018)



Total Export

- ASEAN exported a total of 9.2 million MT of flat steel in 2018

Export by Products

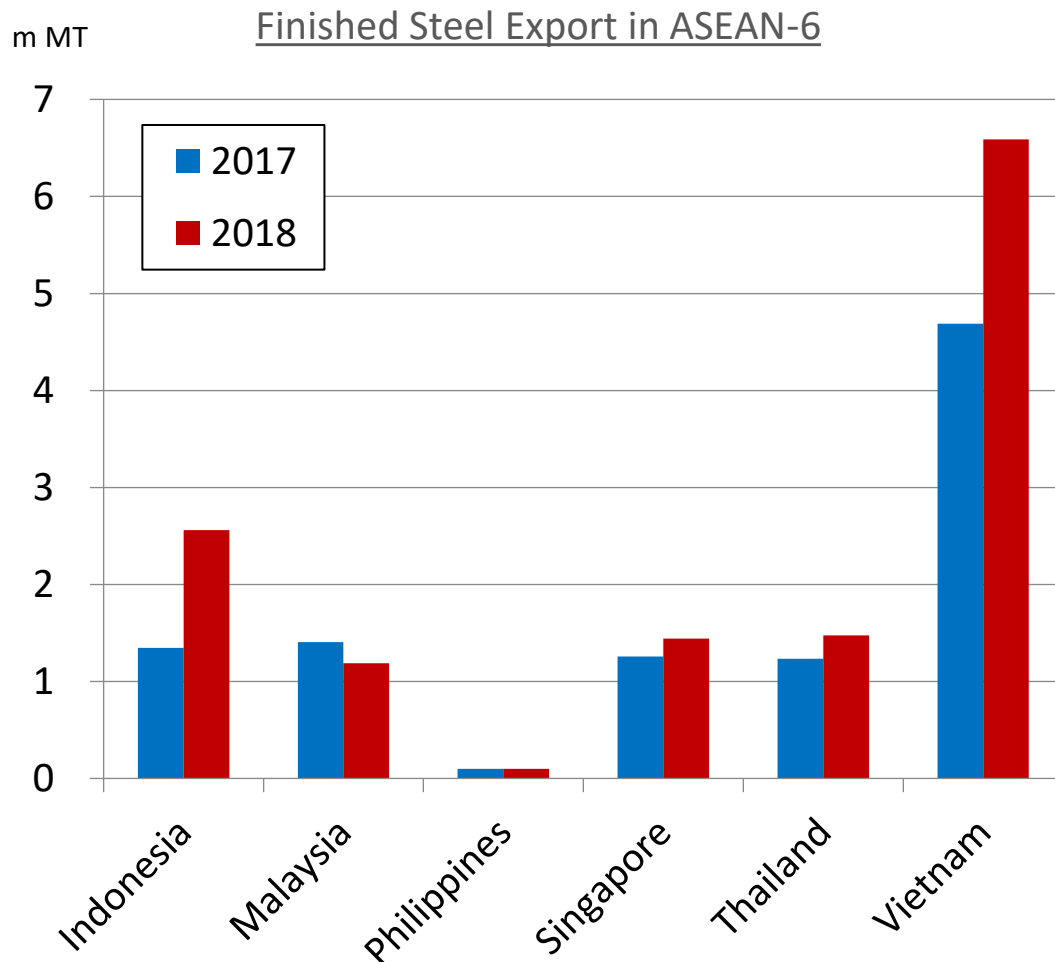
- Most steel exports are:
 - Coated Sheets (30%)
 - HR Coils (21%)
 - CR Coils (19%)
 - Welded Pipes (17%)
 - HR Plates (12%)

Export by Countries

- Most flat products were exported to
 - Within ASEAN (44%)
 - India (13%)
 - US (12%)
 - China (7%)
 - Korea (3%)

ASEAN FINISHED STEEL EXPORTS

Finished steel export from ASEAN-6 registered significant increases in 2018, mainly from Indonesia and Vietnam



- Most of ASEAN countries are not significant steel exporters.
- Domestic production is mainly to serve domestic demand and not for export.
- However, Indonesia's steel export doubled in volume in 2018
 - Stainless Steel
 - Plates
- Vietnam is, by far, the biggest steel exporter in ASEAN. From 1 m MT in 2010, exports exceeded 6 m MT in 2018
 - Hot rolled coils

OUTLINE:

PART

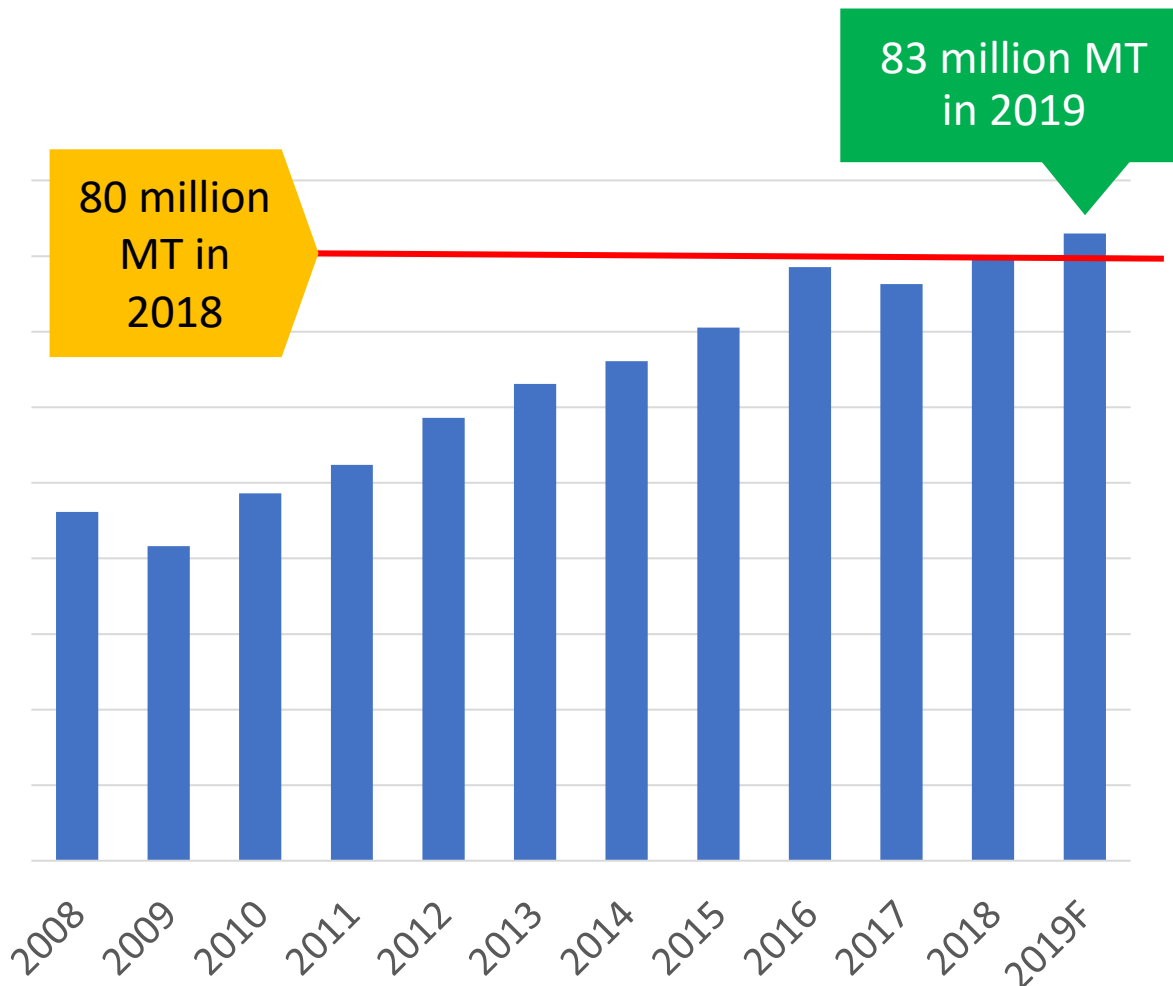
A

- ☐ ASEAN Economies
- ☐ ASEAN Steel Consumption
- ☐ ASEAN Steel Demand (Sectors)
- ☐ ASEAN Steel Production & Trade
- ☐ Apparent Steel Consumption Forecast

ASEAN – APPARENT STEEL CONSUMPTION FORECAST

Steel demand in ASEAN-6 is expected to reach 83 million MT in 2019 with a 4% growth year on year, due to the expanding Construction Sector

Apparent Steel Consumption in ASEAN-6 (million MT)



- ASEAN steel consumption is expected to continue growing in line with the construction industry growth in most ASEAN countries, in particular:
 - Philippines
 - Indonesia
 - Vietnam
- The other more mature ASEAN 6 countries are facing slowing economies and construction sectors
 - Singapore
 - Malaysia
 - Thailand

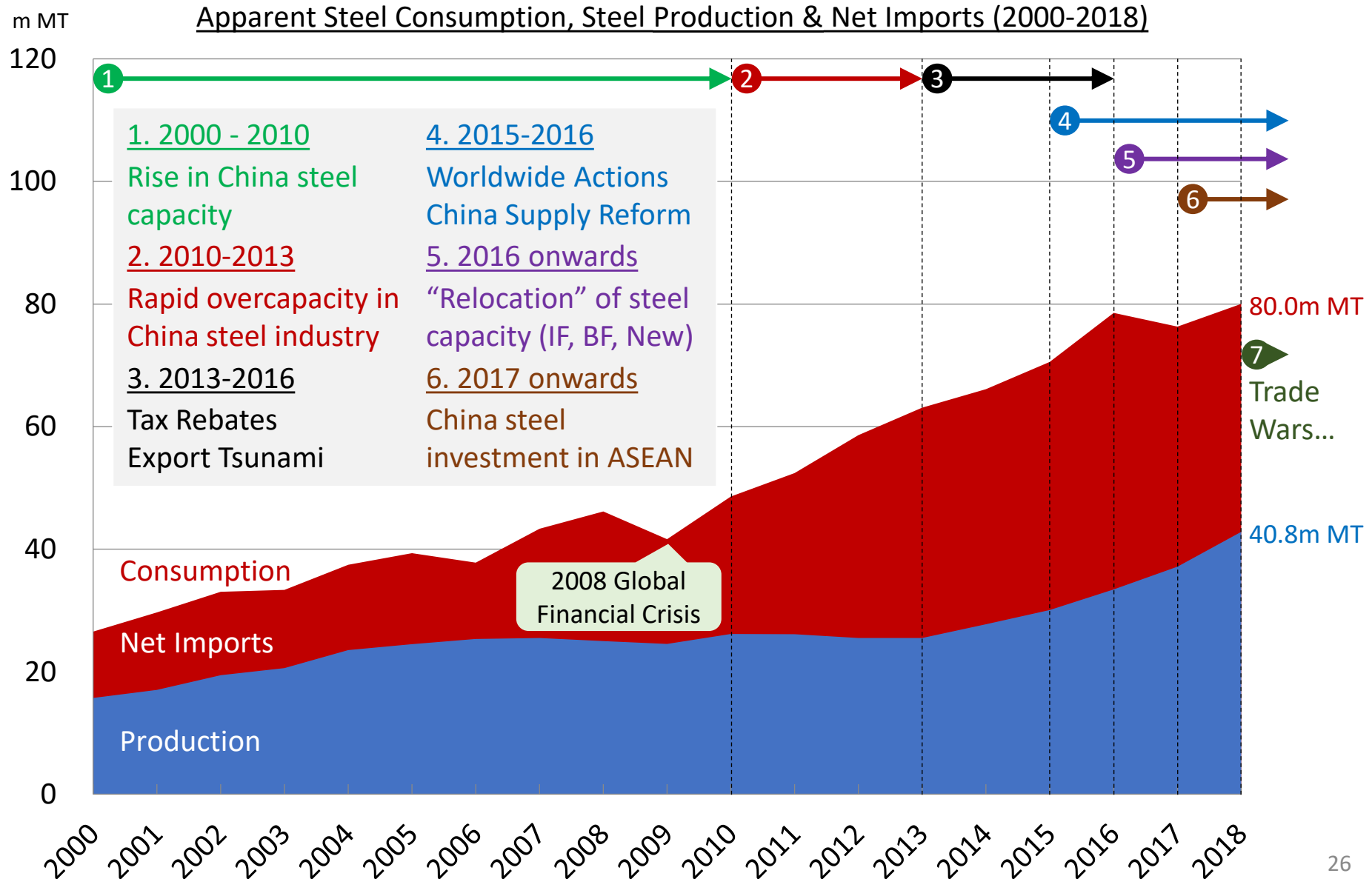
OUTLINE:

PART

B

- ☐ Past Events Impacts
- ☐ ASEAN Industry Situation
- ☐ Rise of the Integrated Megamills
- ☐ A Future Scenario
- ☐ Scenarios by Country (Selected)

PAST EVENTS IMPACTING THE ASEAN STEEL INDUSTRY



OUTLINE:

PART

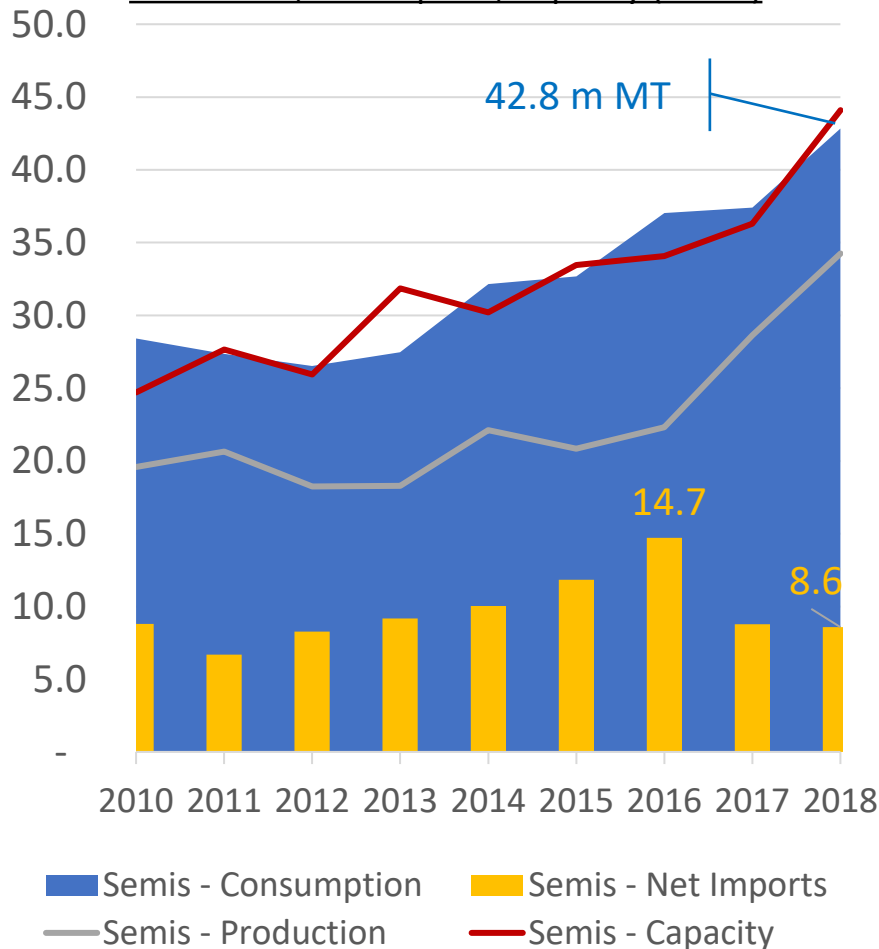
B

- ☐ Past Events Impacts
- ☒ ASEAN Industry Situation
- ☐ Rise of the Integrated Megamills
- ☐ A Future Scenario
- ☐ Scenarios by Country (Selected)

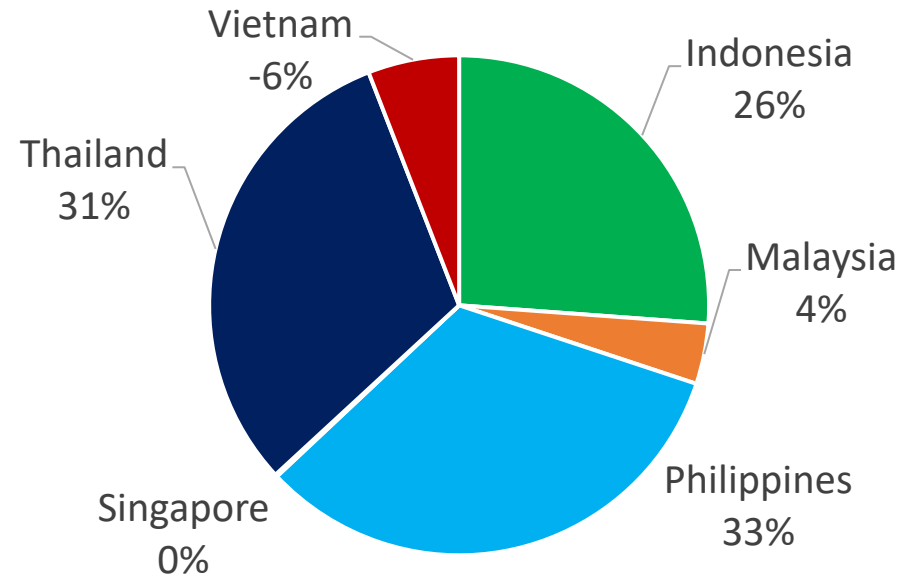
THE ASEAN STEEL INDUSTRY SITUATION - SEMIS

Production of semi finished steel is mostly for the rolling capacity in the steel making facility; Significant imports into Philippines, Thailand and Indonesia

Semi-finished Steel Consumption vs Production, Net Imports, Capacity (m MT)



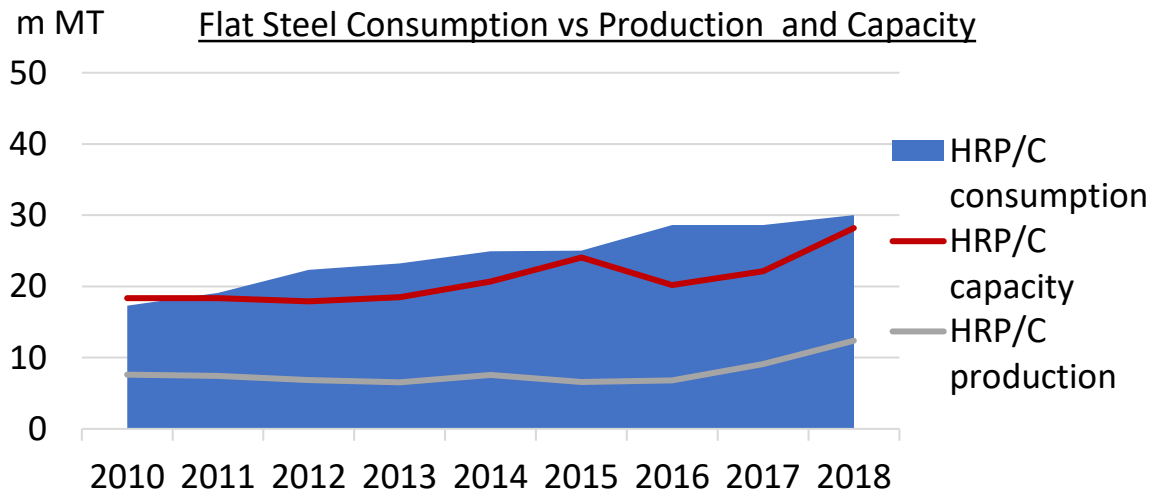
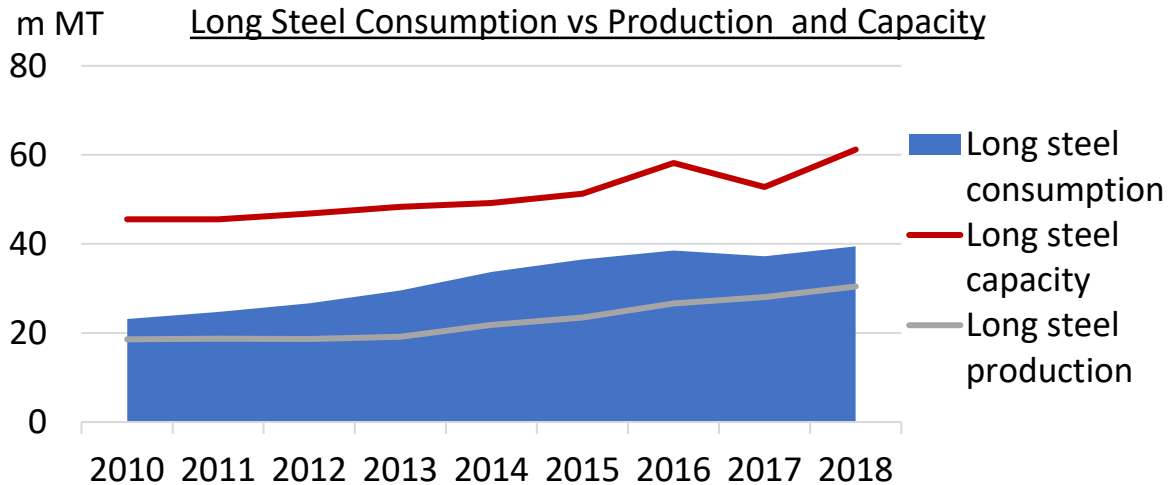
Semi-finished Steel Net Imports (2018)



2018 Net Imports: 8.6 m MT

THE ASEAN STEEL INDUSTRY SITUATION – HR PRODUCTS

The long products capacity is way above consumption; The flat products market is mostly served by imports, hence there appears to be room for new capacities



Longs

- Long products capacity is way above consumption
- Local supply is sufficient for current market level
- Consumption remains flat while production increase
 - Import substitution
 - New Investments

Flats

- Flat products capacity appears to be catching up with ASC
- However, production is low and market is served mainly by imports

Note: Long steel refers to bars, wire rod and sections

OUTLINE:

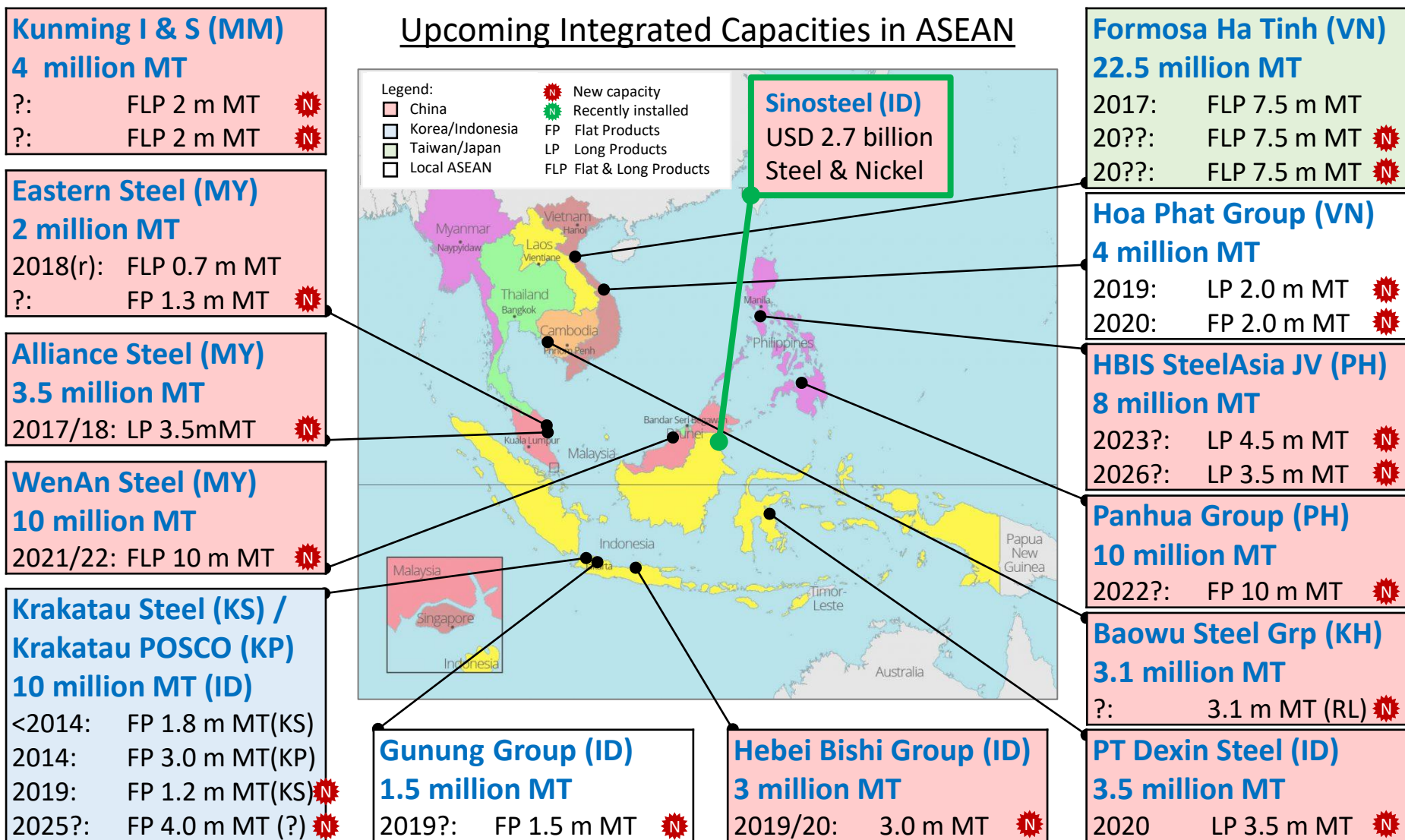
PART

B

- ☐ Past Events Impacts
- ☐ ASEAN Industry Situation
- ☐ Rise of the Integrated Megamills
- ☐ A Future Scenario
- ☐ Scenarios by Country (Selected)

RISE OF THE INTEGRATED MEGAMILLS (CARBON STEEL)

Many huge integrated mills (carbon steel) are starting up in Malaysia, Indonesia, Philippines and Vietnam, with most of the investors being China Steel Mills



EMERGING LOW COST CENTRES FOR STAINLESS STEEL

Over the last 4-5 years, Tsingshan and Jiangsu Delong have invested in Nickel Production facilities in Indonesia, which provided the lowest costs of production

TSINGSHAN GROUP @ MOROWALI (2015-2018)

TSINGSHAN GROUP @ WEDA BAY (2020)

Sulawesi Mining Investment

NPI : 0.3 m MT
SS Slabs : 1.0 m MT

Henjaya Mines Indonesia

FeNi Ore : 180 m MT
Ni : ~2.3 m MT

Weda Bay Nickel Project (Mines)

FeNi Ore : 59.9 m MT
Ni : ~9.3 m MT

Weda Bay Nickel (Smelter)

Nickel : 30,000 +
(NPC) 35,000 MT

Indo Guang Ching Nickel SS Industry

NPI : 0.6 m MT
SS Slabs : 1.0 m MT
SS HRC : 2.0 m MT

IndoTsingshan Stainless Steel

NPI : 0.6 m MT
SS Slabs : 1.0 m MT

Indo Ruipu Nickel and Chrome Alloy

FerroCh : 0.6 m MT
SS CRC : 0.7 m MT
Coke : 0.6 m MT

Tsingshan Steel Indonesia

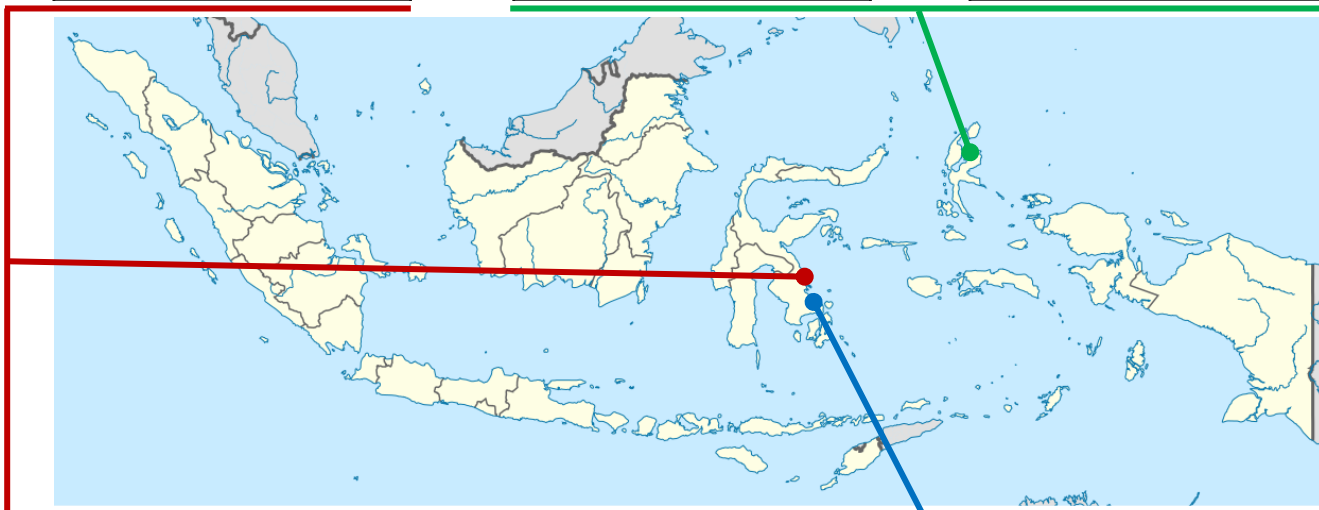
NPI : 0.5 m MT
Carbon : 1.0 m MT

Virtue Dragon Nickel Industry

NPI : 0.8 m MT
S. Steel : 3.0 m MT

Obsidian Stainless Steel

SS Billets : 0.6 m MT
: +2.4 m MT



JIANGSU DELONG @ KONAWE (2019)

WHY SO MANY INVESTMENTS IN ASEAN

A myriad of reasons for investments in ASEAN, with a few success stories

1. Attractiveness of ASEAN as potential Economic Bloc
 - Opportunity to build facilities in one country and export to the others
2. ASEAN is one of the fastest growing market for steel
3. Access to Market / Expansion Strategy
4. Investment opportunities to cover supply demand gaps
(Formosa Ha Tinh, Krakatau POSCO)
5. Low cost source of raw materials
(Tsingshan, Jiangsu Delong)
6. Unable to grow in China due to Supply Reforms
7. Forced to close capacity in China due to Supply Reforms
8. Ability to export products back to China

Applicable to
investments
from Chinese
Steel Mills

OUTLINE:

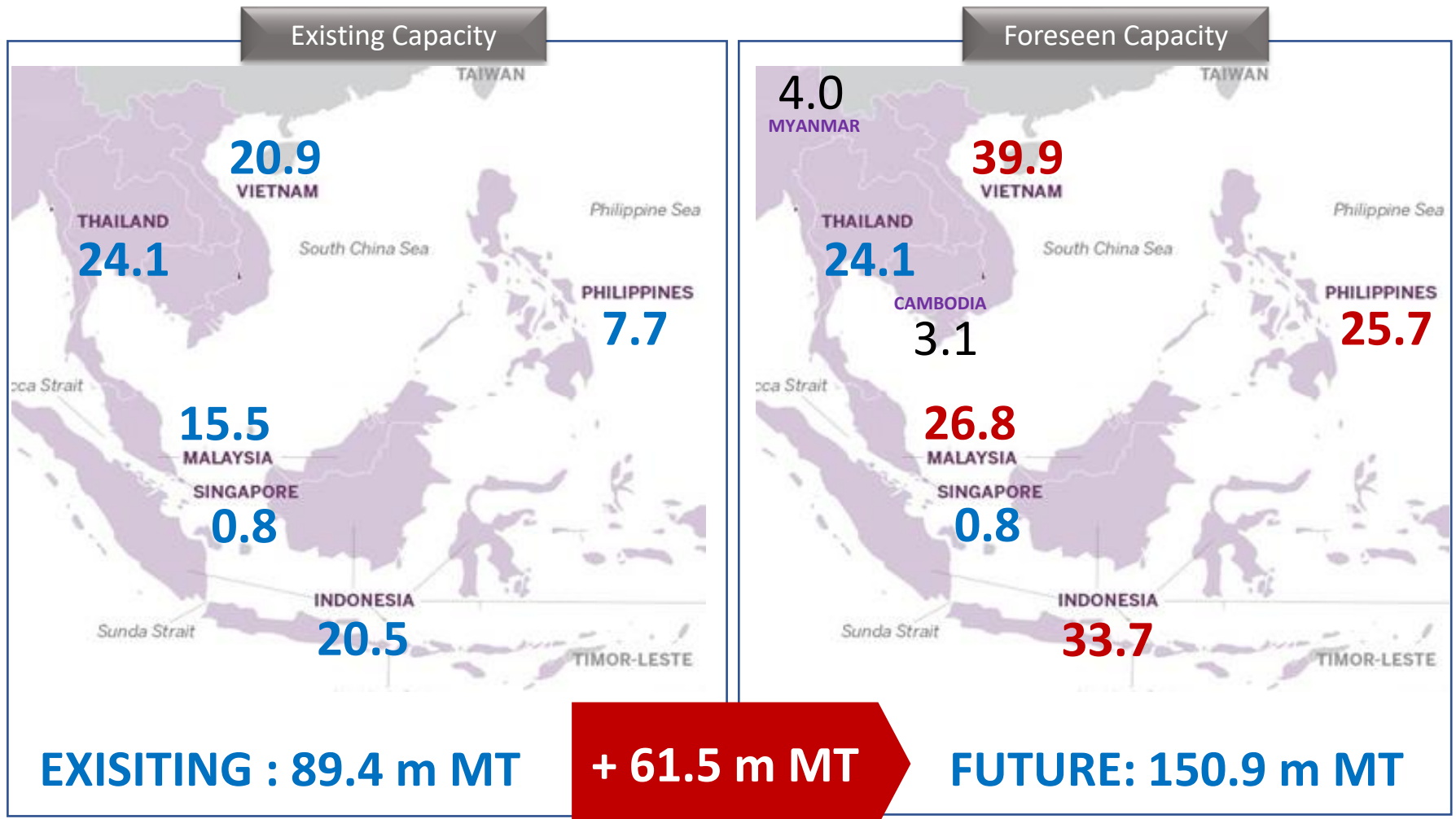
PART

B

- ☐ Past Events Impacts
- ☐ ASEAN Industry Situation
- ☐ Rise of the Integrated Megamills
- ☐ A Future Scenario
- ☐ Scenarios by Country (Selected)

THE FUTURE SCENARIO

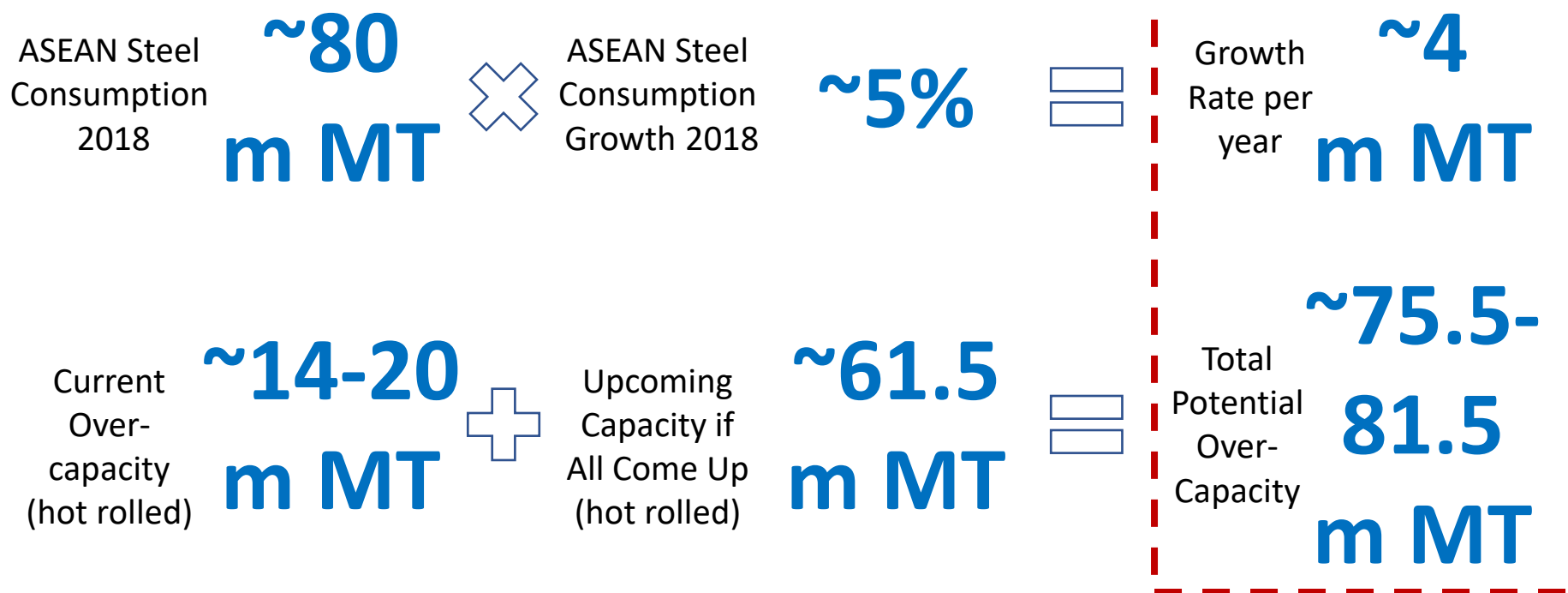
Should all integrated mill capacities come on stream, there will be an additional 61.5 million MT of steel coming from all the identified integrated mills in ASEAN



Excluding Myanmar
& Cambodia

RECOVERY – SIMPLE NUMBERS

How long does it take for current consumption growth to catch up with all potential installed capacity in ASEAN?



Years for Consumption Growth of
~4 m MT to reach ~85.7 m MT of
Overcapacity, excluding all other EAF
steelmaking capacities coming up

~18.9 – 20.4 years ↩

OBVIOUS IMPLICATIONS

Demand growth will not be able to catch up with the oversupply for a long time;
While gross overcapacity is looming, there are still opportunities;

1. Gross overcapacity is looming in the ASEAN Market
 - Overcapacity in the long products market, especially bars and wire rod
 - Overcapacity in the flat products market in certain countries
 - If an investor is thinking of exporting from one ASEAN country to another, think again!
 - If all the potential capacities materialise as expected, the industry will be in doldrums for many years. Think about phasing the investments!
2. There are still opportunities in invest in ASEAN
 - Addressing demand supply gaps, whether it is products or regions. Detail studies are needed.
 - Diversification of supply chain from China due to Coronavirus and Trade War
 - With the massive interests in investing in ASEAN, opportunities are getting fewer

OUTLINE:

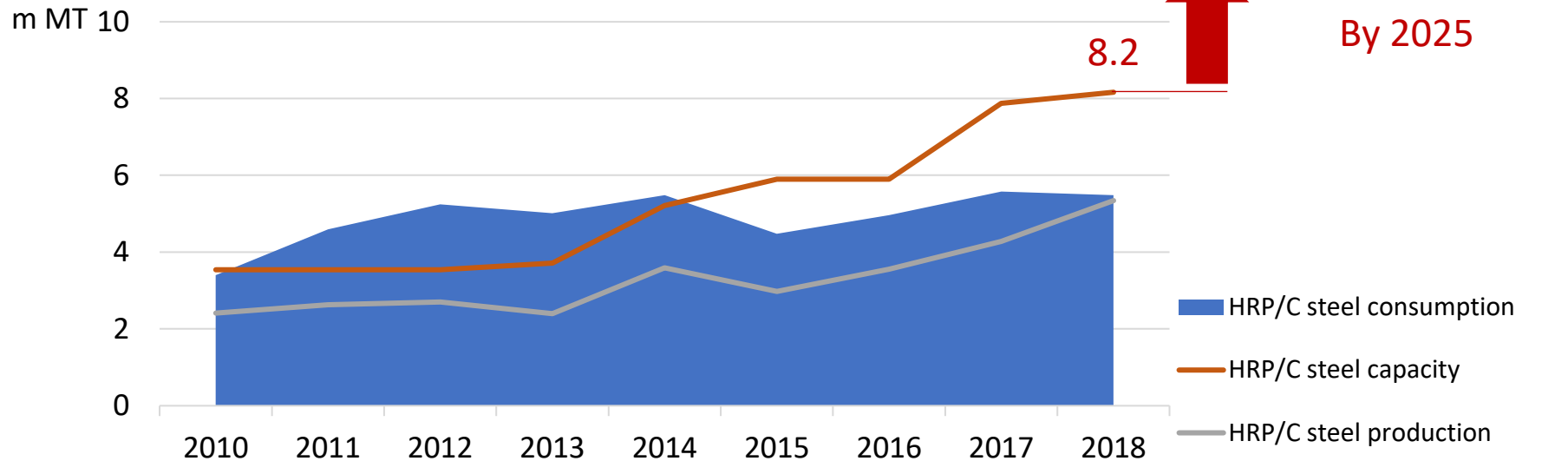
PART

B

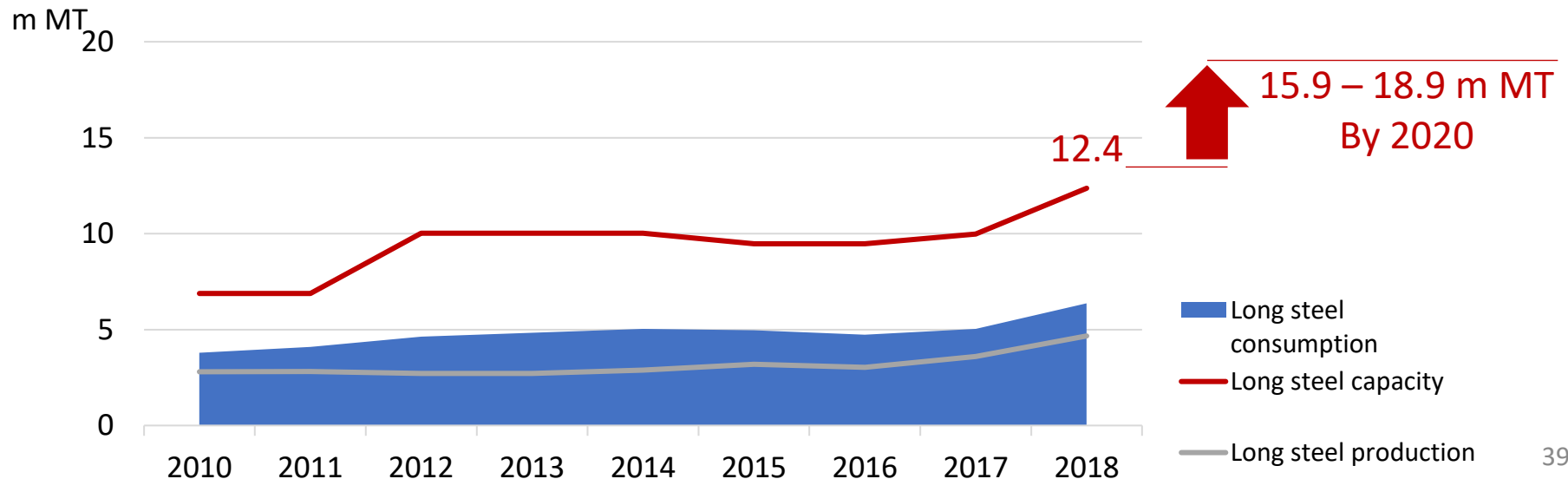
- ☐ Past Events Impacts
- ☐ ASEAN Industry Situation
- ☐ Rise of the Integrated Megamills
- ☐ A Future Scenario
- ☐ Scenarios by Country (Selected)

THE ASEAN STEEL INDUSTRY SITUATION - INDONESIA

Flat Steel Consumption vs Production and Capacity

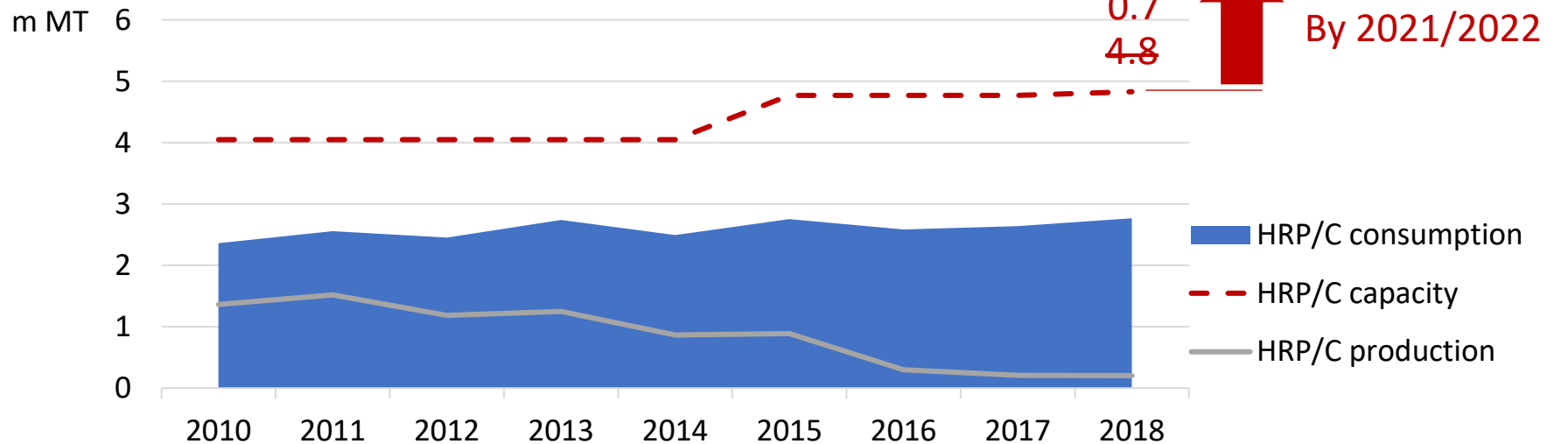


Long Steel Consumption vs Production and Capacity

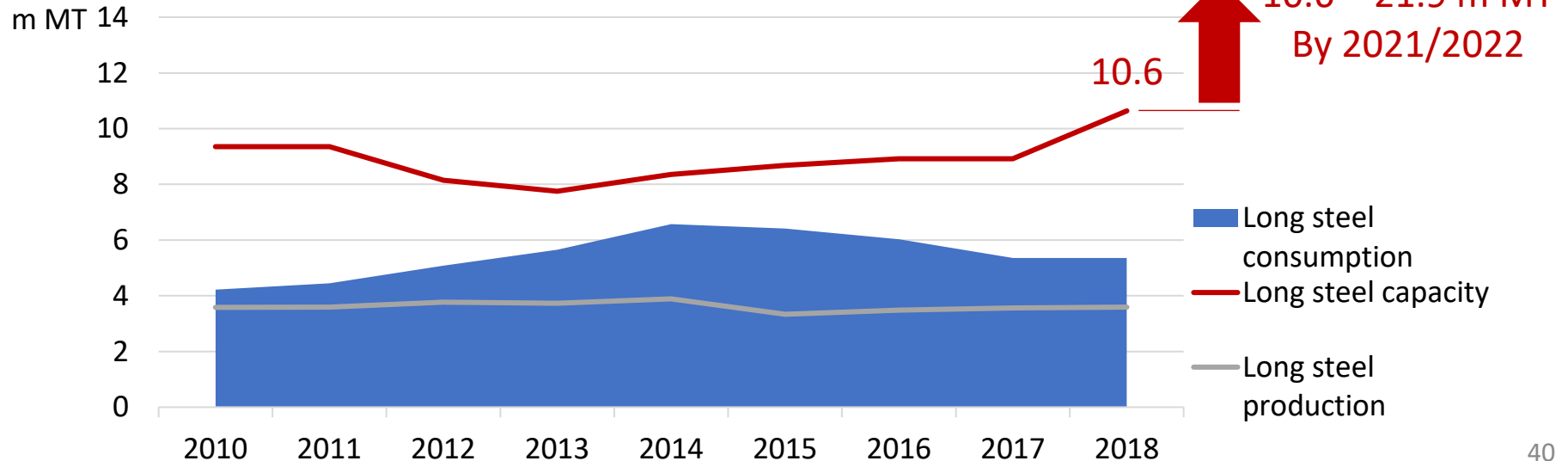


THE ASEAN STEEL INDUSTRY SITUATION - MALAYSIA

Flat Steel Consumption vs Production and Capacity

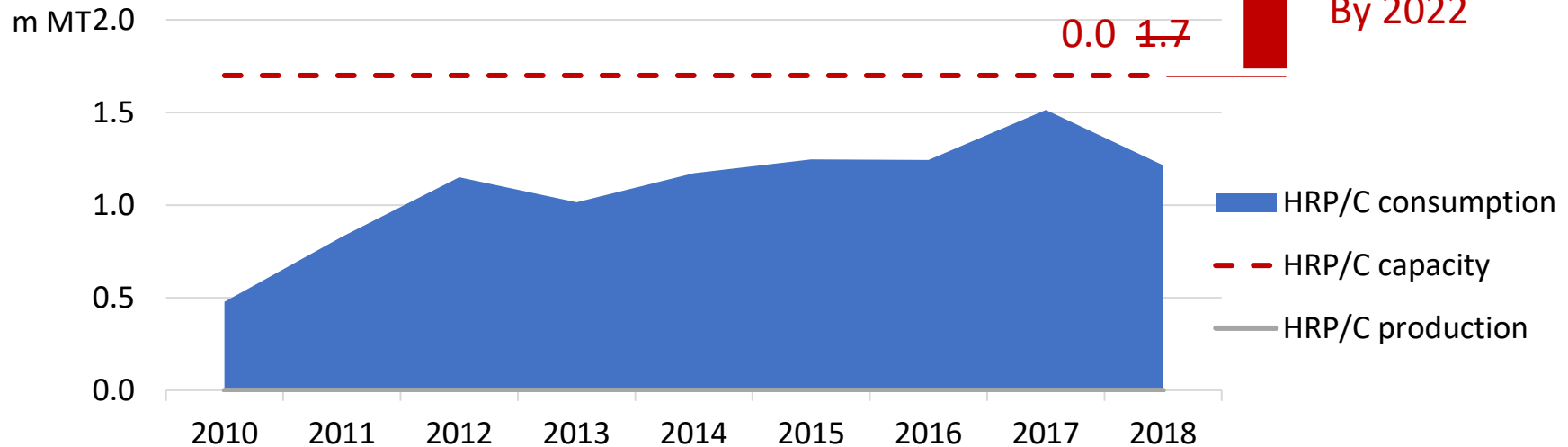


Long Steel Consumption vs Production and Capacity

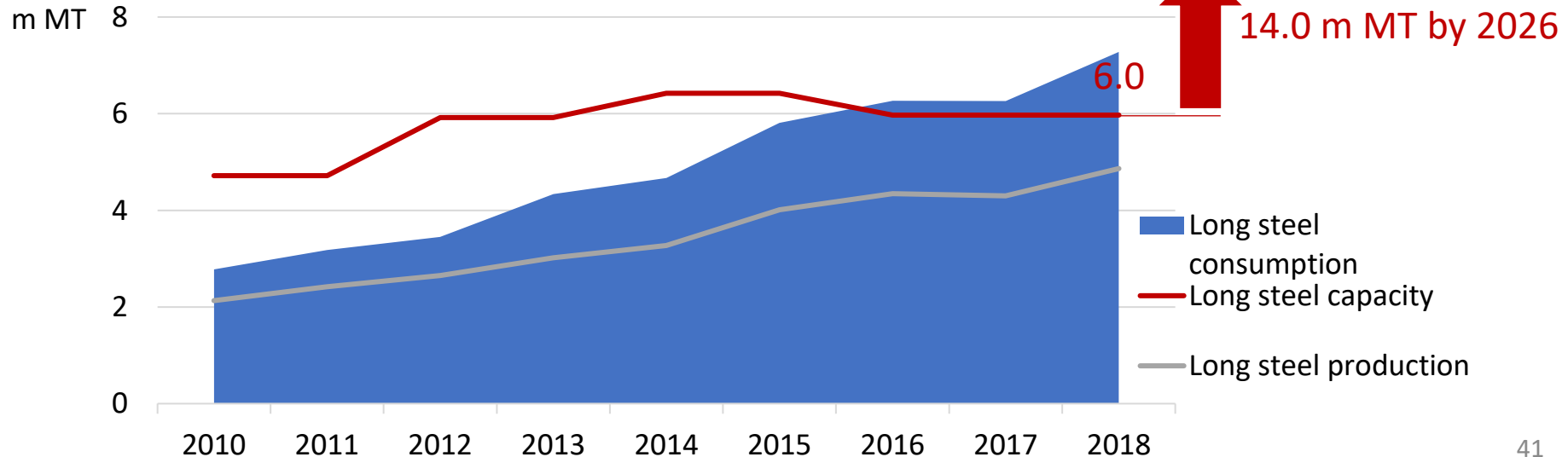


THE ASEAN STEEL INDUSTRY SITUATION - PHILIPPINES

Flat Steel Consumption vs Production and Capacity

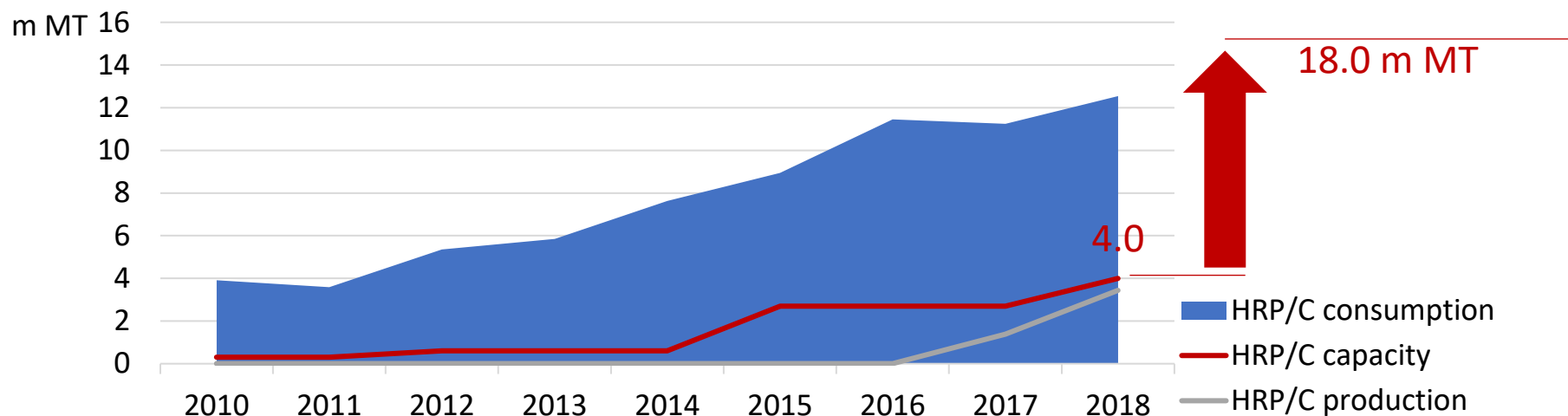


Long Steel Consumption vs Production and Capacity

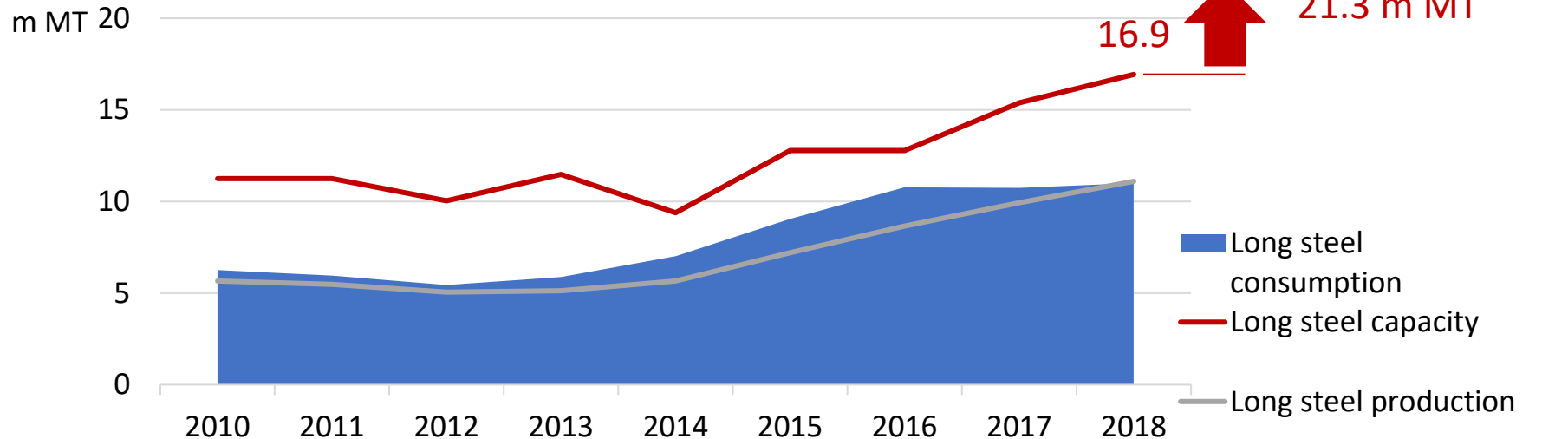


THE ASEAN STEEL INDUSTRY SITUATION - VIETNAM

Flat Steel Consumption vs Production and Capacity



Long Steel Consumption vs Production and Capacity



OUTLINE:

PART

- ☐ Conclusions
- ☐ Messages

C

CONCLUSIONS

A Macro Impact

- ASEAN Steel Industry has faced many challenges, especially from the developments related to the Chinese Steel Industry

B Capacity Situation

- Long Products: Capacity is more than ASC by ~20 million MT
- The flat products ASC is slightly below consumption
- Overall, capacity is more than ASC by ~14-20 million MT

C Integrated Mega Mills

- Many investment projects have been proposed (mostly Chinese)
- If all come up, 61.5 million MT more will appear soon

D Some Got the Right Positioning

- Formosa Ha Tinh (HRC)
- Krakatau Posco (Plates)
- Tsingshan Steel (Stainless Steel)

E Recovery – How Long?

- ASEAN ASC will grow at ~4 million MT a year
- Looming overcapacity of ~76 – 82 million MT
- It will take 18.9 – 20.4 years for ASC to catch up with all the potential overcapacity

F Situation in 4 Selected ASEAN Countries

- The Long Products markets are in overcapacity situation
- The Flat Products markets are heading towards an overcapacity situation given the massive investments (except Vietnam)

MESSAGES

A ASEAN Government Authorities

- Government Authorities should consider FDI in the steel industry with a clear view of the regional developments
- Such FDIs should include high technology equipment along with the latest cost effective, environmental friendly processes
- FDI impact should be win-win for the country, for the investor, for the industry and for the people
- In certain countries, there are still supply-demand gap to substitute imports. Do not encourage FDI in like products
- For investments in steel industry hoping to export, ask: is there really an export market?

B Other Countries

- Obviously ASEAN market cannot absorb all those capacity
- Where then, will all the steel go?
- Do you think, there is a need to continue with the G20 Global Forum on Steel Excess Capacity?

C Potential Investors

- It will take about 20 years for ASC to catch up with all the potential overcapacity, of everything comes up
- There are still supply-demand gaps to cover



SEAISI EVENT AND
PUBLICATION ARE

THANK YOU

THE BEST SOLUTION
FOR YOUR BUSINESS

