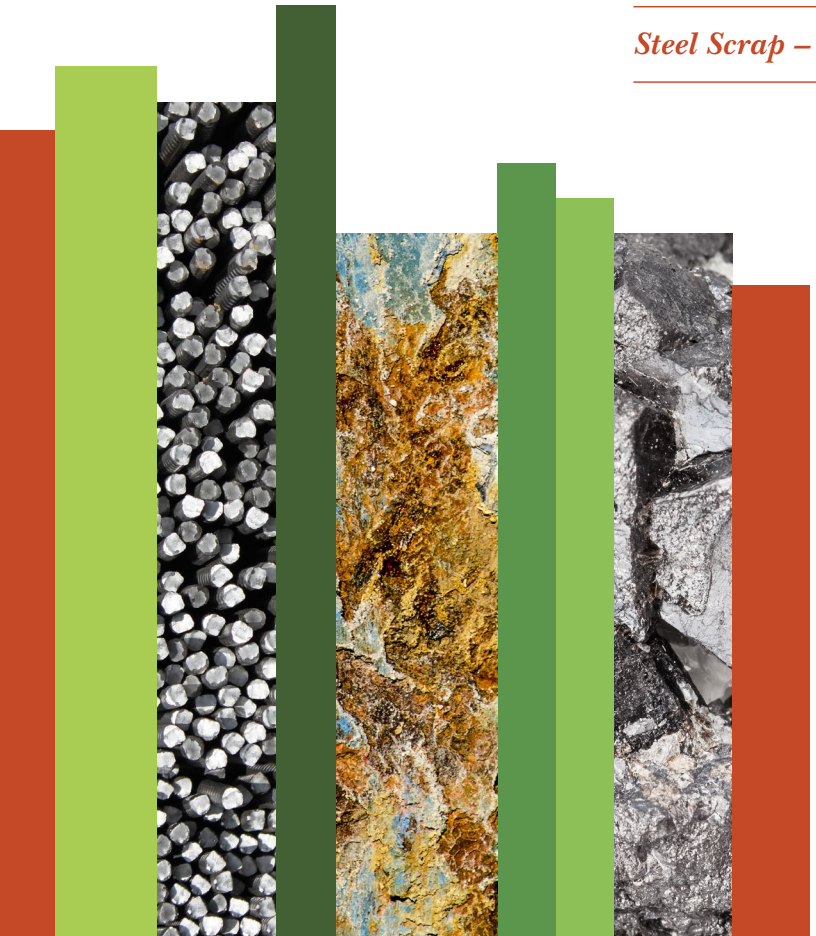
# WORLD STEEL RECYCLING IN FIGURES 2015 – 2019

*Steel Scrap – a Raw Material for Steelmaking*

11TH EDITION



Bureau of International Recycling
Ferrous Division

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# FOREWORD

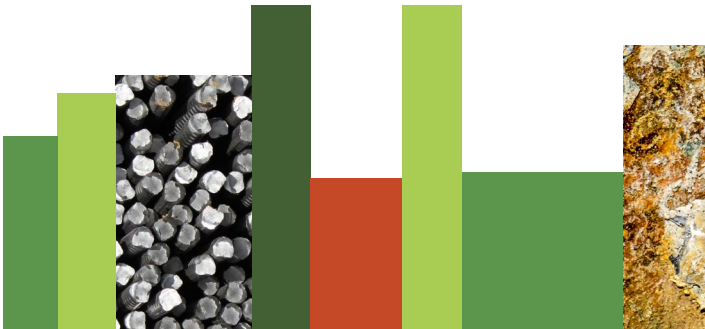
**The latest edition of our BIR report "World Steel Recycling in Figures", which covers the five-year period from 2015 to 2019, once again highlights the importance of steel scrap as a global raw material for the world's steelworks and for its iron and steel foundries.**

It is a great pleasure for me to announce the publication of the eleventh edition of "World Steel Recycling in Figures". This compilation of important statistics relating to the global steel scrap markets has received a hugely positive reception since it appeared for the first time in 2010.

In our eleventh edition, the final figures for 2019 show an increase in world crude steel output and in global steel scrap use as a raw material for steelmaking. Total steel scrap use in the key countries and regions for which we have statistics increased to 491 million tonnes in 2019, while related crude steel production grew to 1.533 billion tonnes. In this edition, we also add Canada to our list of key countries.

For the world as a whole, we calculate that 630 million tonnes of steel scrap is recycled every year, thus saving around 950 million tonnes of $CO_2$ emissions annually - a figure greater than the $CO_2$ emissions of the entire EU transportation sector. Also through saving energy and conserving natural resources, the use of steel scrap as a raw material makes a decisive contribution to climate protection. In difficult business times such as those triggered by the Coronavirus pandemic, these positive aspects of steel recycling are emphasized in the eleventh edition of our brochure.

According to our calculations, annual ferrous scrap use in the world's iron and steel foundries is around 70 million tonnes. Meanwhile, the final figures for 2019 show a drop in external steel scrap trading to 100.4 million tonnes last year.



In the eleventh edition of “World Steel Recycling in Figures”, we have included a special overview (supported by graphs) of the three leading steel scrap importers. For the eight main steel scrap exporters, we have prepared flow charts - features which have received a particularly warm welcome. Four price graphs complete this eleventh edition, which incorporates a total of 60 graphs and tables, one more than its predecessor.

In times of increasing protectionism and trade barriers, the scale of world trade in steel scrap underlines more than ever the need for a free global raw materials market.

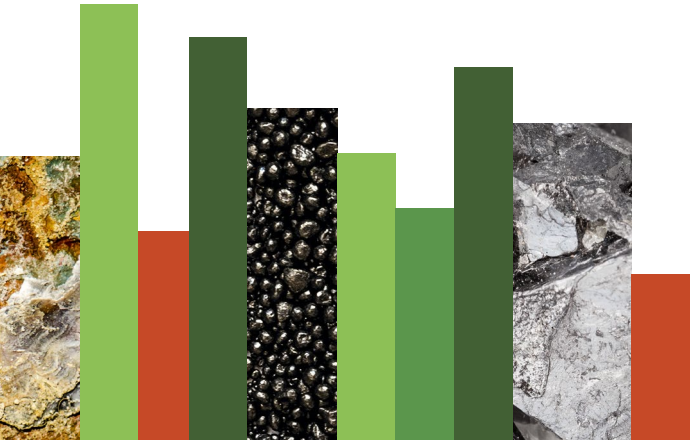
I would like to extend special thanks to Rolf Willeke, the BIR Ferrous Division’s Statistics Advisor, who prepared and evaluated all the figures as well as developed the graphs and tables in our report. Since 2017, he has been co-operating closely with Daniela Entzian, the BIR Ferrous Division’s Deputy Statistics Advisor, to whom I extend my appreciation.

Rolf and his team are working with a worldwide network, and so I would also like to express my deep thanks to all the supporters of our publication.

For an even more accurate appraisal of the market, we would like to continue to improve the steel scrap figures at our disposal, including our quarterly update of the world statistics.

We hope that the eleventh edition of “World Steel Recycling in Figures 2015-2019” will be useful to you.

**Gregory Schnitzer**
President of the BIR Ferrous Division



# EXECUTIVE SUMMARY

**In our eleventh edition of "World Steel Recycling in Figures", the statistics for 2019 show an increase in world crude steel output and in steel scrap use in key countries and regions. Canada is welcomed as a new key country in our table. Furthermore, we highlight the amount of steel scrap recycled worldwide and point to a decrease in global external steel scrap trading.**

Global crude steel production totalled 1.870 billion tonnes in 2019, up 3.4% from the previous year. According to worldsteel, however, production contracted in all regions last year with the exception of Asia and the Middle East.

Worldwide, oxygen furnace production increased by 6.5% to 1.343 billion tonnes whereas the global electric furnace total was virtually unchanged at 523 million tonnes. There was a small increase in global blast furnace iron production (+2.5% to 1.278 billion tonnes) and also in DRI production (+2.4% to 90.2 million tonnes).

Data in our corresponding table show a year-on-year crude steel production increase for China of 8.3% to 996.342 million tonnes, lifting the country's share of global production from 50.9% in 2018 to 53.3% in 2019. There was also growth in US crude steel production (+1.5% to 87.927 million tonnes) whereas declines were registered by the EU-28 (-4.9% to 159.430 million tonnes), Japan (-4.8% to 99.284 million tonnes), Russia (-0.8% to 71.570 million tonnes), the Republic of Korea (-1.4% to 71.421 million tonnes), Turkey (-9.6% to 33.743 million tonnes) and Canada (-4.9% to 12.790 million tonnes).

## China's steel scrap usage surges 15%

According to our statistics, steel scrap consumption soared 15% in China last year to 215.93 million tonnes; this compares to 187.77 million tonnes in 2018 and serves to underline China's position as the world's largest steel scrap user. The proportion of steel scrap used in the country's steel production climbed to 21.7% in 2019.

This increase was mainly due to higher pollutant emission standards for the Chinese steel industry. Most of the country's BOF mills have actively increased scrap inputs and their steel scrap/crude steel ratio is currently said to be 20.2%. There was also a further increase in China's scrap-intensive electric furnace production from 54 million tonnes in 2017 to 103.2 million tonnes last year, according to worldsteel.

Steel scrap usage also increased in the USA last year (+1% to 60.7 million tonnes) while its crude steel production grew 1.5%. The proportion of steel scrap used in the country's crude steel production declined to 69.1% in 2019. Conversely, there were declines in steel scrap consumption in the EU-28, Japan, Russia, the Republic of Korea, Turkey and Canada.

The EU-28 recorded a 3.7% drop in steel scrap consumption in 2019 to 87.545 million tonnes while the region's crude steel production fell 4.9%. The proportion of steel scrap used in its crude steel production declined to 54.8% in 2019.

The 2019 figures reveal a decrease in Japan's steel scrap usage (-7.7% to 33.684 million tonnes) whereas the country's crude steel production dropped by 4.8%. The proportion of steel scrap used in Japan's crude steel production decreased to 33.9% last year.

A decline in steel scrap consumption was also recorded last year by Russia (-4.3% to 30.4 million tonnes) whereas its crude steel production went down by 0.8%. The proportion of steel scrap used in Russia's crude steel production declined to 42.5% in 2019.

Our 2019 figures reveal a decline in the Republic of Korea's steel scrap usage (-4.7% to 28.5 million tonnes) while its steel production dropped by 1.4%. The proportion of steel scrap used in the Republic of Korea's crude steel production decreased to 39.9% last year.

Also in 2019, there was a fall in Turkey's steel scrap consumption of 10.9% to 27.9 million tonnes while the country's crude steel production dropped 9.6%. The proportion of steel scrap used in Turkish crude steel production decreased to 82.8% in 2019.

Our new key country Canada recorded a 5.8% reduction in steel scrap usage in 2019 to 6.28 million tonnes whereas its crude steel production declined by 4.9%. The proportion of steel scrap used in Canada's crude steel production decreased to 49.1% last year.

## 630 million tonnes of steel scrap recycled every year

In 2019, there was an increase to around 491 million tonnes in the amount of steel scrap used by key countries and regions (+3.6% compared to the previous year) while related crude steel production was around 1.533 billion tonnes. The figure of 491 million tonnes represents verified data for 82% of global steelmaking.

Welcoming Canada as a new key country in our table, its domestic steel scrap consumption data were collated by the Canadian Steel Producers Association on behalf of Tracy Shaw (President & CEO of the Canadian Association of Recycling Industries), to whom we would like to extend our deepest thanks. We are hopeful of achieving a similar co-operation with Zain Nathani (Vice-President of the BIR Ferrous Division) so as to enable us to add India to our table.

Our figures provide an excellent basis for a worldwide estimate of steel scrap usage. Like worldsteel, we calculate that 630 million tonnes of steel scrap are recycled every year, saving nearly 950 million tonnes of annual $CO_2$ emissions that would have come from the production of virgin steel. Besides this significant reduction in greenhouse gas emissions, it should also be highlighted that steel recycling saves energy and conserves natural resources, thus making a decisive contribution to climate protection.

## Foundries use more than 70 million tonnes of scrap

Our calculation model for global ferrous scrap use in iron and steel foundries is produced in collaboration with the German Foundry Association (BDG). These calculations cover the period from 2012 to 2018; it was not possible to incorporate figures for 2019 because world casting production is determined only by magazine "Modern Casting" with a time lag of one year. For 2018, a global ferrous scrap usage of 74.4 million tonnes has been calculated (+2.4% when compared to 2018) for a world iron and steel casting production of 90 million tonnes (+2.9%).

## Turkey's steel scrap imports decline by 8.7%

Last year brought an 8.7% decline in Turkey's overseas steel scrap purchases to 18.857 million tonnes. As indicated in our previous report, the main factors behind this reduction were additional US import tariffs on Turkish steel and sluggish long steel demand in the domestic and export markets.

However, Turkey's steel scrap imports are understood to have increased significantly in December last year to 2.041 million tonnes (+25.4% over the previous month). Despite the overall decline, the data for 2019 confirm that Turkey remained the world's foremost steel scrap importer.

Also last year, India reinforced its position as the world's second-largest steel scrap importer with an 11.4% increase in its overseas steel scrap purchases to 7.053 million tonnes. At the same time, third-placed Republic of Korea upped its scrap imports by 1.6% to 6.495 million tonnes.

Also higher in 2019 were steel scrap imports into the EU-28 (+2.3% to 2.893 million tonnes), Indonesia (+4.1% to 2.614 million tonnes) and Malaysia (+56.3% to 1.532 million tonnes). In contrast, import declines were recorded by the USA (-15.1% to 4.268 million tonnes), Pakistan (-13.5% to 4.337 million tonnes), Taiwan (-2.9% to 3.523 million tonnes), Canada (-38.7% to 2.129 million tonnes), Mexico (-22.5% to 1.483 million tonnes) and Belarus (-14.5% to 1.497 million tonnes).

## EU-28 overseas steel scrap shipments climb 0.6%

Global external steel scrap trade - including internal EU-28 trade - amounted to 100.4 million tonnes last year for a 5.8% decline over 2018.

The EU-28 remained the world's leading steel scrap exporter in 2019 through growing its outbound shipments by 0.6% to 21.793 million tonnes, the main buyer being Turkey on 12.021 million tonnes (-0.7% year on year). The EU-28 increased its overseas shipments to Egypt (+24.1% to 2.015 million tonnes), India (+21.5% to 1.883 million tonnes), Pakistan (+1.3% to 1.642 million tonnes), Bangladesh (+33.9% to 0.956 million tonnes) and Indonesia (+5.8% to 0.525 million tonnes). Conversely, a further drop was recorded in EU-28 deliveries to the USA (-35.4% to 0.528 million tonnes). The largest EU-28 steel scrap exporter was the UK with a 2019 shipment total of 6.613 million tonnes (-6% compared to the previous year).

Last year brought an increase in US overseas steel scrap shipments of 2% to 17.685 million tonnes; among the leading buyers to extend their purchases from the USA were main customer Turkey (+14.1% to 3.916 million tonnes), Canada (+22.5% to 1.726 million tonnes), Vietnam (+24.4% to 1.271 million tonnes), the Republic of Korea (+20.2% to 1.081 million tonnes) and Bangladesh (+19.3% to 1.013 million tonnes). In contrast, decreases in US scrap deliveries were recorded by Taiwan (-4.6% to 1.882 million tonnes) and Mexico (-19.6% to 1.456 million tonnes).

Last year, there were higher steel scrap exports from Australia (+18.1% to 2.325 million tonnes) and Japan (+3.4% to 7.657 million tonnes) whereas declines in overseas shipments were registered by Canada (-14.5% to 4.369 million tonnes), Hong Kong (-26% to 0.958 million tonnes) and Singapore (-2.1% to 0.759 million tonnes). A 27.4% decline in Russia's outbound shipments last year to 4.058 million tonnes reflected the early effects of the government's decision to restrict steel scrap exports through quotas from the end of August 2019.

Most of the world's leading steel scrap exporters are major net steel scrap exporters: last year's export surplus was, for example, 18.9 million tonnes for the EU-28 and 13.4 million tonnes for the USA.

Over the past 10 years, we have been able to show the worldwide use of steel scrap as a raw material in steel works and foundries, as well as to underline that our steel scrap is an ecological raw material and an internationally-traded commodity subject to world market prices.

I am grateful for the very good co-operation with the BIR Ferrous Division board and the BIR Secretariat. I would like to extend my deep thanks to all those supporting this publication. Last but not least, I would like to offer my special thanks to Daniela Entzian, the BIR Ferrous Division's Deputy Statistics Advisor, for her excellent co-operation.

**Rolf Willeke**
Statistics Advisor of the BIR Ferrous Division

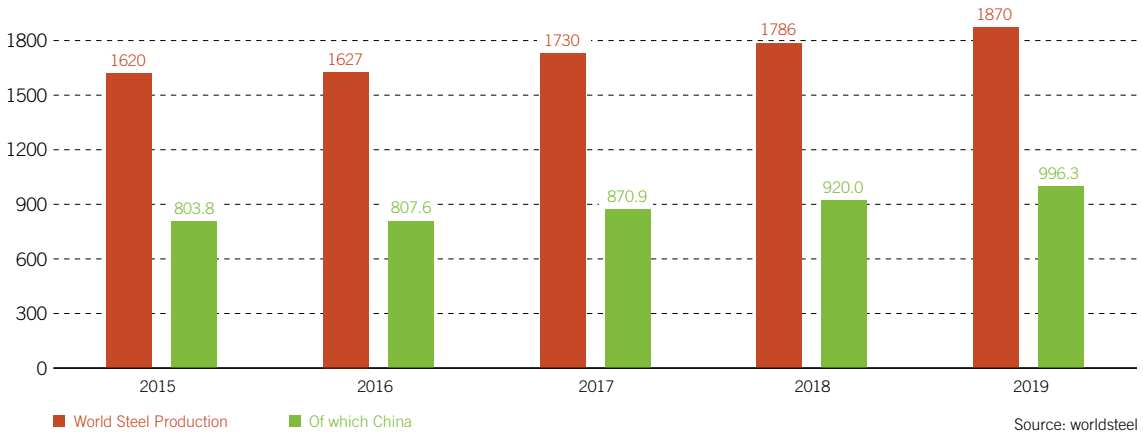
# GRAPHS & TABLES

## WORLD CRUDE STEEL PRODUCTION SUMMARY (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| **European Union (28)** | **166.3** | **162.2** | **168.5** | **167.7** | **159.4** | **-4.9** |
| **Other Europe** | **35.8** | **37.6** | **42.2** | **40.8** | **37.3** | **-8.5** |
| of which Turkey | 31.5 | 33.2 | 37.5 | 37.3 | 33.7 | -9.6 |
| **C.I.S.** | **101.6** | **102.1** | **100,9** | **100.8** | **100.2** | **-0.6** |
| of which Russia | 70.9 | 70.5 | 71.6 | 72.8 | 71.6 | -0.8 |
| **North America** | **110.9** | **110.6** | **115.8** | **120.9** | **120.0** | **-0.8** |
| of which USA | 78.8 | 78.5 | 81.6 | 86.6 | 87.9 | +1.5 |
| of which Canada | 12.5 | 12.6 | 13.2 | 13.4 | 12.8 | -4.9 |
| **South America** | **43.9** | **40.2** | **43.7** | **44.9** | **41.2** | **-8.4** |
| **Africa** | **13.7** | **13.1** | **15.0** | **14.5** | **13.5** | **-6.9** |
| of which South Africa | 6.4 | 6.1 | e 6.3 | 6.3 | 5.7 | -10.4 |
| **Middle East** | **29.4** | **31.5** | **34.5** | **35.6** | **42.9** | **+20.5** |
| of which Iran | 16.1 | 17.9 | 21.2 | 24.5 | 31.9 | +30.1 |
| **Asia** | **1112.9** | **1123.9** | **1203.2** | **1254.5** | **1327.9** | **+5.9** |
| of which China | 803.8 | 807.6 | 870.9 | 920.0 | 996.3 | +8.3 |
| of which India | 89.0 | 95.5 | 101.4 | 109.3 | 111.2 | +1.8 |
| of which Japan | 105.1 | 104.8 | 104.7 | 104.3 | 99.3 | -4.8 |
| of which Korea Republic | 69.7 | 68.6 | 71.0 | 72.5 | 71.42 | -1.4 |
| **Oceania** | **5.7** | **5.8** | **6.0** | **6.3** | **6.2** | **-2.9** |
| of which Australia | 4.9 | 5.3 | 5.3 | 5.7 | 5.5 | -3.4 |
| **World** | **1620** | **1627** | **1730** | **1786** | **1870** | **+3.4** |
| Total 64 Countries | | | | | | |

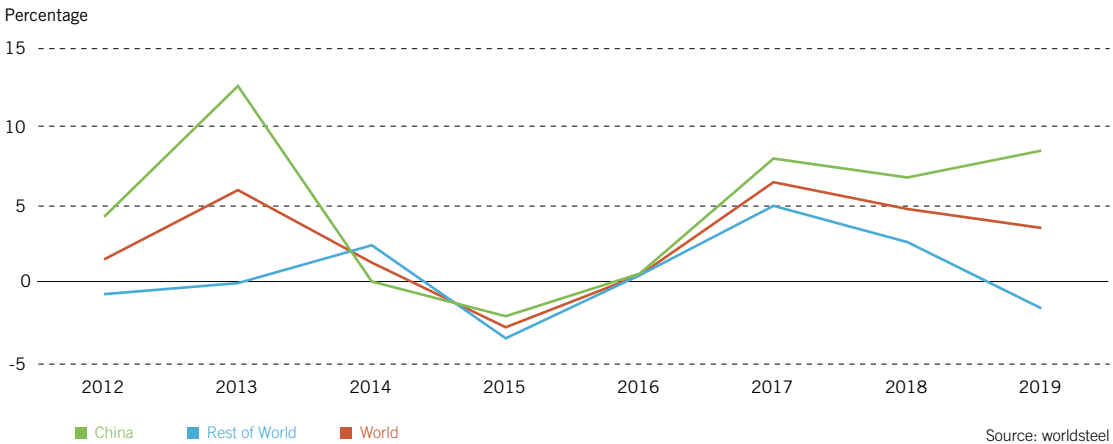
Source: worldsteel

## WORLD CRUDE STEEL PRODUCTION (MILLION TONNES)




Source: worldsteel

## CRUDE STEEL PRODUCTION ANNUAL GROWTH TREND (IN PERCENT)




Source: worldsteel

## WORLD CRUDE STEEL PRODUCTION BY BOF AND EF PROCESS

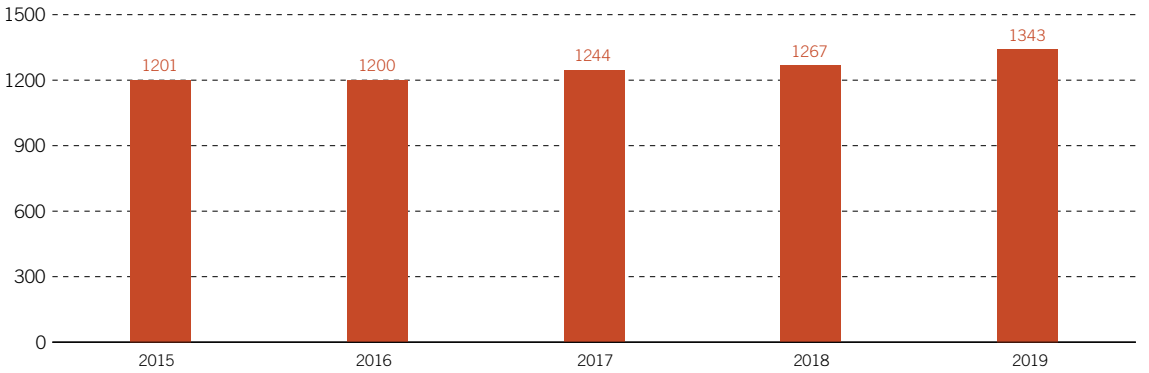
YEAR 2019

| | Million Tonnes | | Percentage of Total Production | |
|---|---|---|---|---|
| | BOF | EF | BOF | EF |
| **European Union (28)** | **93.8** | **65.0** | **59.1** | **40.9** |
| **Other Europe** | **13.4** | **25.5** | **34.4** | **65.6** |
| of which Turkey | 10.9 | 22.9 | 32.2 | 67.8 |
| **C.I.S.** | **64.7** | **29.1** | **64.5** | **29.0** |
| of which Russia | 45.9 | 24.0 | 64.1 | 33.6 |
| **North America** | **38.6** | **81.2** | **32.2** | **67.8** |
| of which USA | 26.6 | 61.2 | 32.2 | 67.8 |
| **South America** | **27.6** | **13.0** | **67.2** | **31.5** |
| **Africa** | **3.9** | **12.7** | **23.5** | **76.5** |
| of which South Africa | 3.3 | 2.3 | 58.9 | 41.2 |
| **Middle East** | **2.5** | **48.0** | **4.9** | **95.1** |
| of which Iran | 2.5 | 29.5 | 7.7 | 92.3 |
| **Asia** | **1094.1** | **247.1** | **81.6** | **18.4** |
| of which China | 893.3 | 103.2 | 89.6 | 10.4 |
| of which India | 48.7 | 62.6 | 43.8 | 56.2 |
| of which Japan | 75.0 | 24.3 | 75.5 | 24.5 |
| of which Korea Republic | 48.7 | 22.7 | 68.2 | 31.8 |
| **Oceania** | **4.7** | **1.5** | **76.1** | **23.9** |
| of which Australia | 4.2 | 1.5 | 74.3 | 25.7 |
| **World** | **1343.4** | **523.0** | **71.7** | **27.9** |
| Total 64 Countries | | | | |

BOF – Basic Oxygen Furnace
EF – Electric Furnace

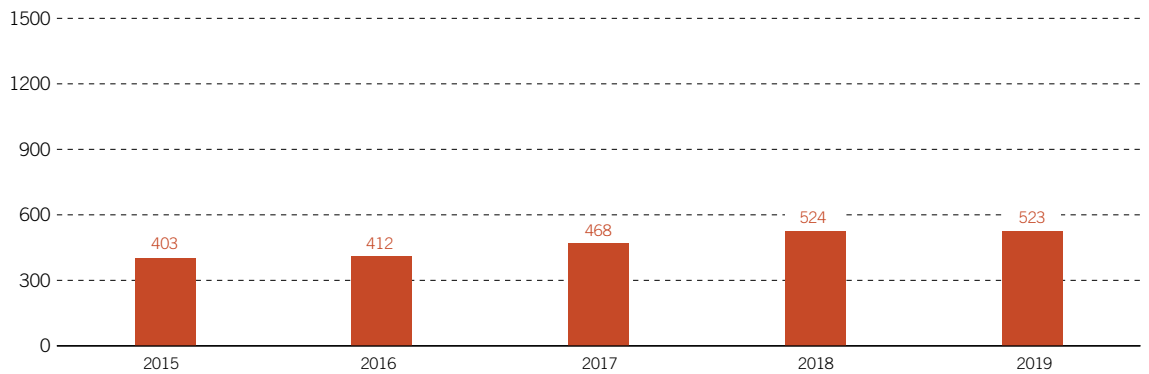
Source: worldsteel

## WORLD BOF – BASIC OXYGEN FURNACE PRODUCTION (MILLION TONNES)




Source: worldsteel

## WORLD EF – ELECTRIC FURNACE PRODUCTION (MILLION TONNES)




Source: worldsteel

## THE 12 LARGEST STEEL-PRODUCING COUNTRIES (MILLION TONNES)

| | | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|---|
| 1 | China | 803.8 | 807.6 | 870.9 | 920.0 | 996.3 | +8.3 |
| 2 | India | 89.0 | 95.5 | 101.4 | 109.3 | 111.2 | +1.8 |
| 3 | Japan | 105.1 | 104.8 | 104.7 | 104.3 | 99.3 | -4.8 |
| 4 | USA | 78.8 | 78.5 | 81.6 | 86.6 | 87.9 | +1.5 |
| 5 | Russia | 70.9 | 70.5 | 71.6 | 72.8 | 71.6 | -0.8 |
| 6 | Korea Republic | 69.7 | 68.6 | 71.0 | 72.5 | 71.4 | -1.4 |
| 7 | Germany | 42.7 | 42.1 | 43.3 | 42.4 | 39.7 | -6.5 |
| 8 | Turkey | 31.5 | 33.2 | 37.5 | 37.3 | 33.7 | -9.6 |
| 9 | Brazil | 33.3 | 31.3 | 34.4 | 35.4 | 32.2 | -9.0 |
| 10 | Iran | 16.1 | 17.9 | 21.2 | 24.5 | 31.9 | +30.1 |
| 11 | Italy | 22.0 | 23.4 | 24.1 | 24.5 | 23.2 | -5.2 |
| 12 | Taiwan | 21.4 | 21.8 | 22.4 | 23.2 | 22.1 | -5.1 |

Source: worldsteel

## PRODUCTION OF CRUDE STEEL AND PRIMARY IRON IN THE WORLD (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| Crude Steel Production | 1620 | 1627 | 1730 | 1786 | 1849 | +3.5 |
| of which | | | | | | |
| Basic Oxygen Furnace (BOF) | 1201 | 1200 | 1244 | 1267 | 1343 | +6.5 |
| Electric Furnace (EF) | 403 | 412 | 468 | 524 | 523 | -0.2 |
| **(Share BOF of Crude Steel) in %** | **73.1** | **74.1** | **72.3** | **70.9** | **72.6** | |
| **(Share EF of Crude Steel) in %** | **24.9** | **25.3** | **27.2** | **29.2** | **28.3** | |
| Blast Furnace Iron | 1158 | 1170 | 1183 | 1217 | 1278 | +2.5 |
| **(Ratio B F Iron / Crude Steel) in %** | **71.5** | **71.9** | **68.4** | **69.9** | **69.1** | |
| Direct Redused Iron (DRI) | 64.1 | 64.2 | 75.4 | 88.1 | 90.2 | +2.4 |
| **(Ratio DRI / Crude Steel) in %** | **4.0** | **3.9** | **4.4** | **4.9** | **4.8** | |

Source: worldsteel

## STEEL SCRAP USE FOR STEELMAKING IN KEY COUNTRIES AND REGIONS (MILLION TONNES)

| | 2016 | 2017 | 2018 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| China | 83.3 | 90.1 | 147.9 | 187.8 | 215.9 | +15.0 |
| EU-28 | 90.61 | 88.4 | 93.6 | 90.939 | 87.545 | -3.7 |
| USA | 56.5 | 56.7 | 58.8 | 60.1 | 60.7 | +1.0 |
| Japan | 33.53 | 33.57 | 35.77 | 36.513 | 33.684 | -7.7 |
| Russia | 27.2 | 27.8 | 29.34 | 31.776 | 30.317 | -4.3 |
| Korea Republic | 29.85 | 27.4 | 30.67 | 29.956 | 28.540 | -4.7 |
| Turkey | 24.1 | 25.9 | 30.27 | 31.317 | 27.900 | -10.9 |
| Canada | | | 6.29 | 6.67 | 6.28 | -5.8 |

Source: EUROFER, CAMU, USGS/ISRI-calculations, Japan Ministry of Economy, RUSLOM, KOSA, TCUD, CARI

## STEEL SCRAP USE AND CRUDE STEEL PRODUCTION IN KEY COUNTRIES AND REGIONS (MILLION TONNES)

| | Steel Scrap Consumption | | | Crude Steel Production | | |
|---|---|---|---|---|---|---|
| | 2019 | 2018 | % Change | 2019 | 2018 | % Change |
| China | 215.93 | 187.77 | +15.0 | 996.342 | 920.027 | +8.3 |
| EU-28 | 87.545 | 90.939 | -3.7 | 159.430 | 167.655 | -4.9 |
| USA | 60.7 | 60.1 | +1.0 | 87.927 | 86.607 | +1.5 |
| Japan | 33.684 | 36.513 | -7.7 | 99.284 | 104.319 | -4.8 |
| Russia | 30.397 | 31.776 | -4.3 | 71.570 | 72.122 | -0.8 |
| Korea Republic | 28.540 | 29.956 | -4.7 | 71.421 | 72.464 | -1.4 |
| Turkey | 27.900 | 31.317 | -10.9 | 33.743 | 37.312 | -9.6 |
| Canada | 6.28 | 6.67 | -5.8 | 12.790 | 13.444 | -4.9 |
| **Total** | **490.976** | **475.041** | **+3.4** | **1532.507** | **1473.950** | **+4.0** |

Source: CAMU, EUROFER, USGS/ISRI-calculations, Japan Ministry Economy, RUSLOM, KOSA, TCUD, CARI, worldsteel

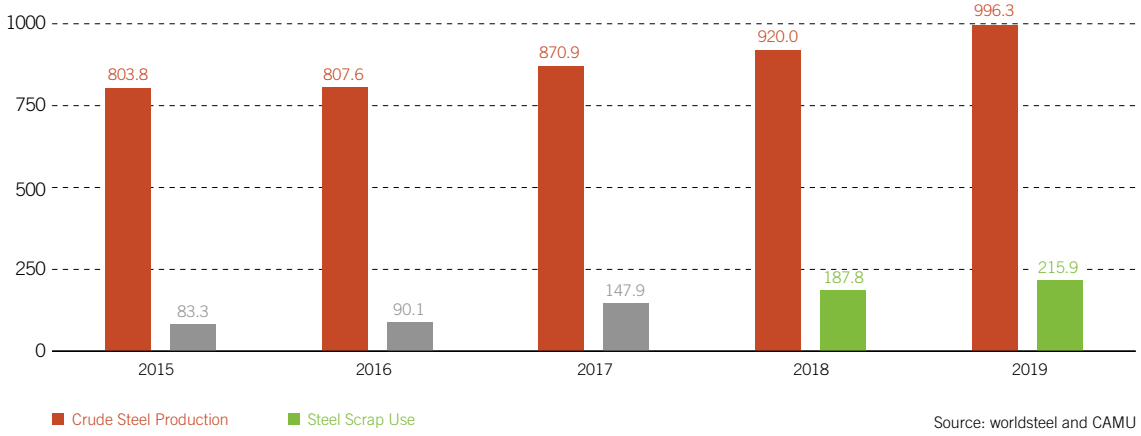
## CRUDE STEEL PRODUCTION AND STEEL SCRAP USE IN **CHINA** (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| Crude Steel Production | 803.8 | 807.6 | 870.9 | 920.0 | 996.3 | +8.3 |
| of which | | | | | | |
| **Share BOF of Crude Steel in %** | **93.9** | **93.7** | **90.7** | **87.0** | **89.6** | |
| **Share EF of Crude Steel in %** | **6.1** | **6.3** | **9.3** | **13.0** | **10.4** | |
| Total Steel Scrap Use | 83.3 | 90.1 | 147.9 | 187.8 | 215.9 | +15.0 |
| **Ratio Steel Scrap / Crude Steel in %** | **10.4** | **11.2** | **17.8** | **20.4** | **21.7** | |

BOF – Bacic Oxygen Furnace
EF – Electric Furnace

Source: worldsteel and CAMU

## STEEL SCRAP FOR STEELMAKING IN **CHINA** (MILLION TONNES)




Source: worldsteel and CAMU

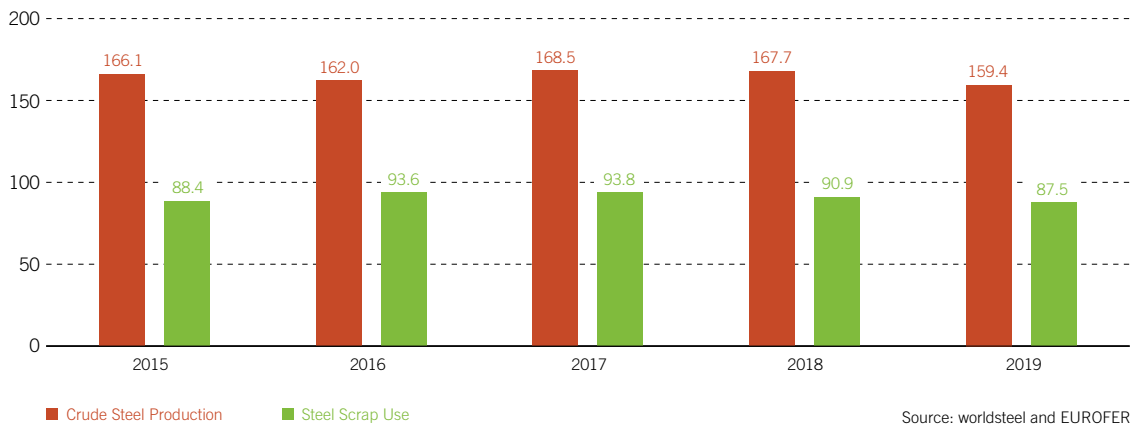
## CRUDE STEEL PRODUCTION AND STEEL SCRAP USE IN THE **EU-28** (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| Crude Steel Production | 166.1 | 162.0 | 168.5 | 167.7 | 159.4 | -4.9 |
| of which | | | | | | |
| **Share BOF of Crude Steel in %** | **60.7** | **60.5** | **59.6** | **58.5** | **59.6** | |
| **Share EF of Crude Steel in %** | **39.3** | **39.5** | **40.4** | **41.5** | **40.4** | |
| Total Steel Scrap Use | 88.4 | 93.6 | 93.8 | 90.9 | 87.5 | -3.7 |
| **Ratio Steel Scrap / Crude Steel in %** | **54.6** | **54.6** | **55.5** | **55.9** | **54.8** | |

BOF – Bacic Oxygen Furnace
EF – Electric Furnace

Source: worldsteel and EUROFER

## STEEL SCRAP FOR STEELMAKING IN THE **EU-28** (MILLION TONNES)




Source: worldsteel and EUROFER

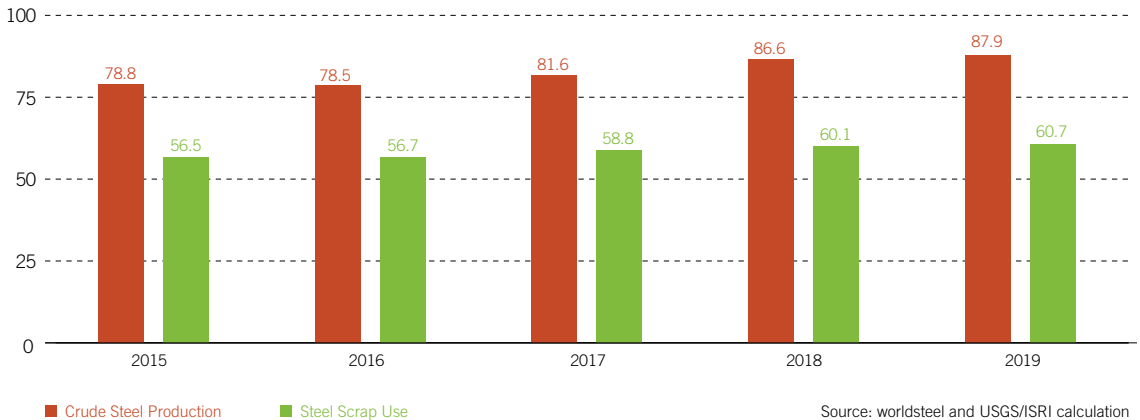
## CRUDE STEEL PRODUCTION AND STEEL SCRAP USE IN THE **USA** (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| Crude Steel Production | 78.8 | 78.5 | 81.6 | 86.6 | 87.9 | +1.5 |
| of which | | | | | | |
| **Share BOF of Crude Steel in %** | **37.3** | **33.0** | **31.6** | **32.0** | **30.0** | |
| **Share EF of Crude Steel in %** | **62.7** | **67.0** | **68.4** | **68.0** | **69.7** | |
| Total Steel Scrap Use | 56.5 | 56.7 | 58.8 | 60.1 | 60.7 | +1.0 |
| **Ratio Steel Scrap / Crude Steel in %** | **71.7** | **72.2** | **72.1** | **69.4** | **69.1** | |

BOF – Bacic Oxygen Furnace
EF – Electric Furnace

Source: worldsteel and USGS/ISRI calculation

## STEEL SCRAP FOR STEELMAKING IN THE **USA** (MILLION TONNES)




Source: worldsteel and USGS/ISRI calculation

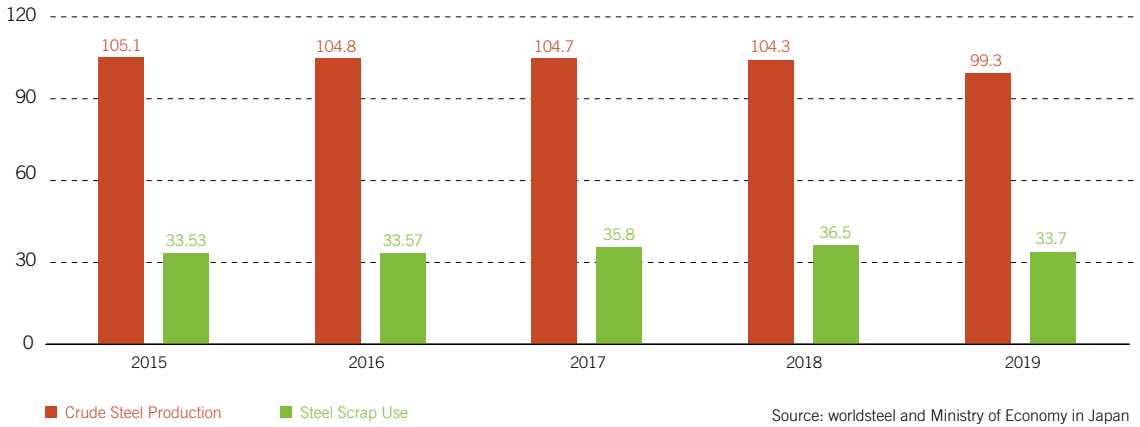
## CRUDE STEEL PRODUCTION AND STEEL SCRAP USE IN **JAPAN** (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2018 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| Crude Steel Production | 105.1 | 104.8 | 104.7 | 104.3 | 99.3 | -4.8 |
| of which | | | | | | |
| **Share BOF of Crude Steel in %** | **77.1** | **77.8** | **75.8** | **75.0** | **75.5** | |
| **Share EF of Crude Steel in %** | **22.9** | **22.2** | **24.2** | **25.0** | **24.5** | |
| Total Steel Scrap Use | 33.53 | 33.57 | 35.8 | 36.5 | 33.7 | -7.7 |
| **Ratio Steel Scrap / Crude Steel in %** | **31.9** | **32.1** | **34.2** | **35.0** | **33.9** | |

BOF – Bacic Oxygen Furnace
EF – Electric Furnace

Source: worldsteel and Ministry of Economy in Japan

## STEEL SCRAP FOR STEELMAKING IN **JAPAN** (MILLION TONNES)




Source: worldsteel and Ministry of Economy in Japan

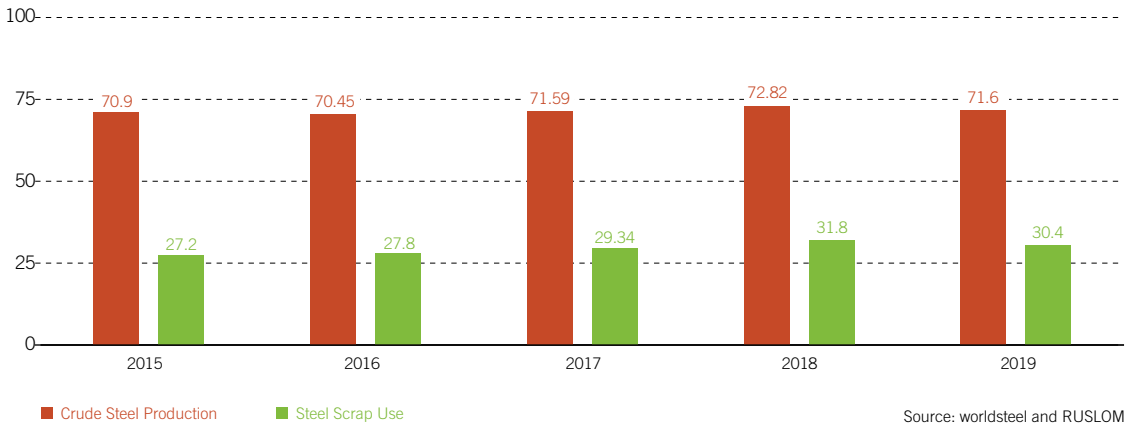
## CRUDE STEEL PRODUCTION AND STEEL SCRAP USE IN **RUSSIA** (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 20187 |
|---|---|---|---|---|---|---|
| Crude Steel Production | 70.9 | 70.45 | 71.59 | 72.82 | 71.6 | -0.8 |
| of which | | | | | | |
| **Share BOF of Crude Steel in %** | **66.6** | **67.7** | **66.7** | **65.9** | **64.1** | |
| **Share EF of Crude Steel in %** | **30.6** | **29.0** | **30.7** | **30.2** | **33.6** | |
| Total Steel Scrap Use | 27.2 | 27.8 | 29.34 | 31.8 | 30.4 | -4.3 |
| **Ratio Steel Scrap / Crude Steel in %** | **38.4** | **39.5** | **41.0** | **43.7** | **42.5** | |

BOF – Bacic Oxygen Furnace
EF – Electric Furnace

Source: worldsteel and RUSLOM

## STEEL SCRAP FOR STEELMAKING IN **RUSSIA** (MILLION TONNES)




Source: worldsteel and RUSLOM

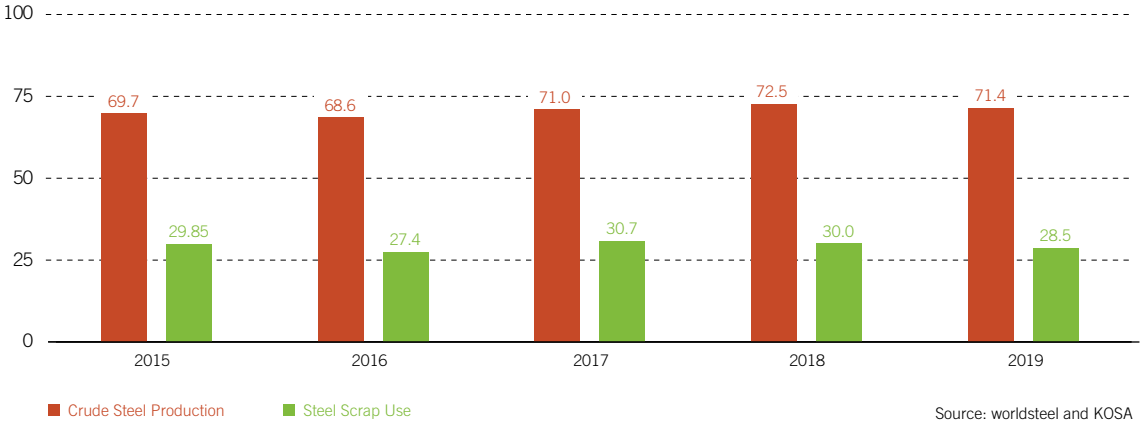
## CRUDE STEEL PRODUCTION AND STEEL SCRAP USE IN THE **REPUBLIC OF KOREA** (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| Crude Steel Production | 69.7 | 68.6 | 71.0 | 72.5 | 71.4 | -1.4 |
| of which | | | | | | |
| **Share BOF of Crude Steel in %** | **77.1** | **69.3** | **67.1** | **66.6** | **68.2** | |
| **Share EF of Crude Steel in %** | **22.9** | **30.7** | **32.9** | **33.4** | **31.8** | |
| Total Steel Scrap Use | 29.85 | 27.4 | 30.7 | 30.0 | 28.5 | -4.7 |
| **Ratio Steel Scrap / Crude Steel in %** | **42.9** | **39.9** | **43.2** | **41.4** | **39.9** | |

BOF – Bacic Oxygen Furnace
EF – Electric Furnace

Source: worldsteel and KOSA

## STEEL SCRAP FOR STEELMAKING IN THE **REPUBLIC OF KOREA** (MILLION TONNES)




Source: worldsteel and KOSA

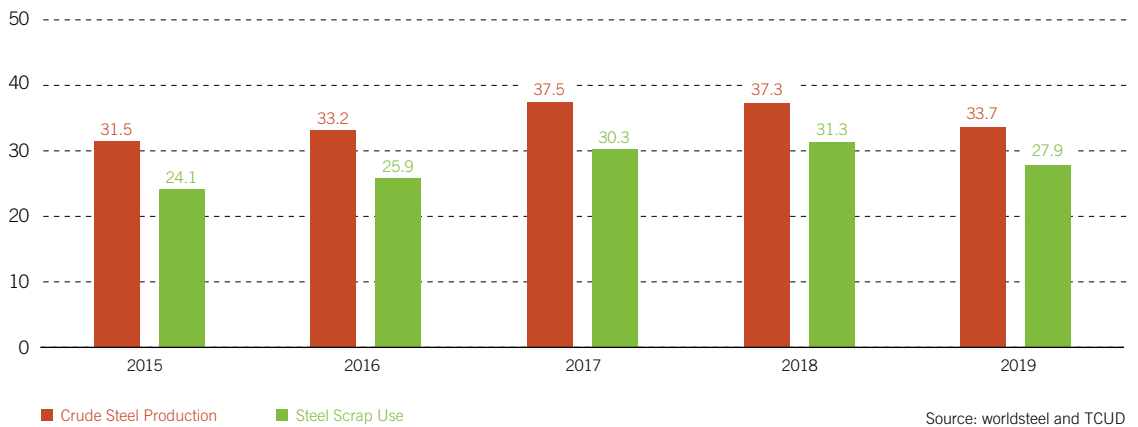
## CRUDE STEEL PRODUCTION AND STEEL SCRAP USE IN **TURKEY** (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| Crude Steel Production | 31.5 | 33.2 | 37.5 | 37.3 | 33.7 | -9.6 |
| of which | | | | | | |
| **Share BOF of Crude Steel in %** | **35.0** | **34.1** | **30.8** | **30.9** | **27.5** | |
| **Share EF of Crude Steel in %** | **65.0** | **65.9** | **69.2** | **69.1** | **68.0** | |
| Total Steel Scrap Use | 24.1 | 25.9 | 30.3 | 31.3 | 27.9 | -10.9 |
| **Ratio Steel Scrap / Crude Steel in %** | **76.5** | **78.0** | **80.8** | **83.9** | **82.8** | |

BOF – Bacic Oxygen Furnace
EF – Electric Furnace

Source: worldsteel and TCUD

## STEEL SCRAP FOR STEELMAKING IN **TURKEY** (MILLION TONNES)




Source: worldsteel and TCUD

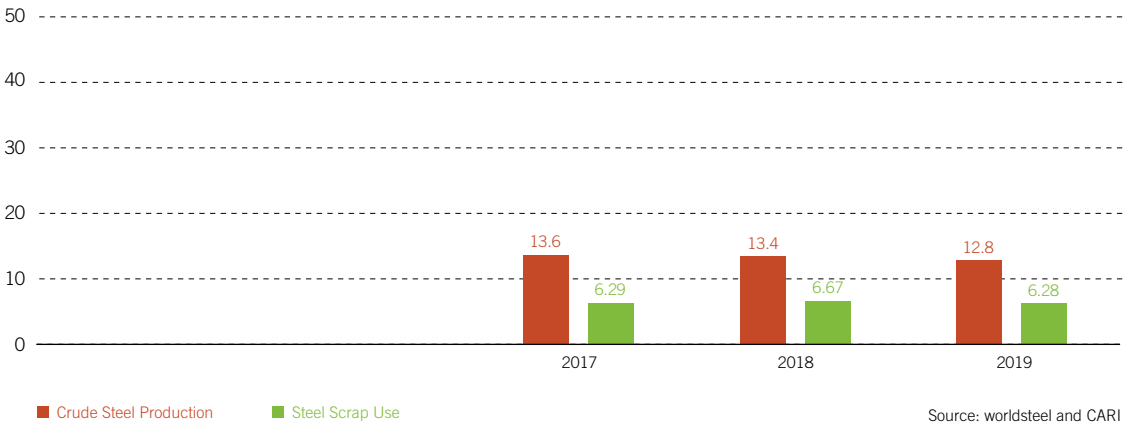
## CRUDE STEEL PRODUCTION AND STEEL SCRAP USE IN **CANADA** (MILLION TONNES)

| | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|
| Crude Steel Production | 13.6 | 13.4 | 12.8 | -4.9 |
| of which | | | | |
| **Share BOF of Crude Steel in %** | **53.4** | **56.9** | **60.6** | |
| **Share EF of Crude Steel in %** | **46.6** | **43.1** | **39.4** | |
| Total Steel Scrap Use | 6.29 | 6.67 | 6.28 | -5.8 |
| **Ratio Steel Scrap / Crude Steel in %** | **46.3** | **49.8** | **49.1** | |

BOF – Bacic Oxygen Furnace
EF – Electric Furnace

Source: worldsteel and CARI

## STEEL SCRAP FOR STEELMAKING IN **CANADA** (MILLION TONNES)




Source: worldsteel and CARI

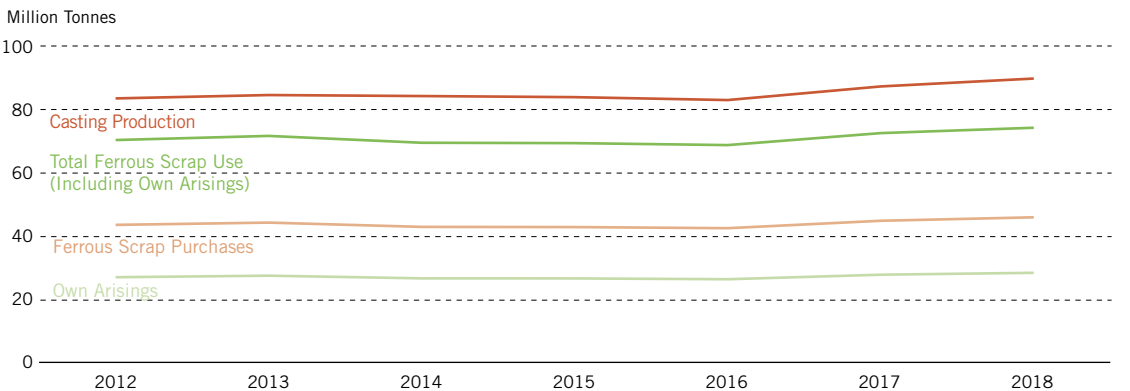
## FERROUS SCRAP USE IN IRON AND STEEL FOUNDRIES IN THE WORLD (MILLION TONNES)

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | % 2018/ 2017 |
|---|---|---|---|---|---|---|---|---|
| Iron Steel and Malleable Casting Production | 83.7 | 84.8 | 84.4 | 84.0 | 83.2 | 87.5 | 90.0 | +2.9 |
| Total Ferrous Scrap Use | 70.5 | 71.8 | 69.6 | 69.5 | 68.9 | 72.7 | 74.4 | +2.4 |
| **(Ratio Scrap Use / Casting Production) in %** | **84.24** | **84.71** | **82.47** | **82.66** | **82.83** | **83.03** | **82.60** | |
| Own Arisings (Circulating Scrap)* | 27.0 | 27.5 | 26.6 | 26.6 | 26.4 | 27.8 | 28.4 | +2.0 |
| **(Share Own Arisings of Scrap Use) in %** | **38.22** | **38.28** | **38.26** | **38.29** | **38.25** | **38.25** | **38.13** | |
| Ferrous Scrap Purchases | 43.6 | 44.3 | 43.0 | 42.9 | 42.5 | 44.9 | 46.0 | +2.6 |
| **(Share Purchases of Scrap Use) in %** | **61.78** | **61.72** | **61.68** | **61.71** | **61.75** | **61.75** | **61.87** | |

Source: Modern Casting and own calculations by BDG/BIR

* Own Arisings (Circulating Scrap) is the term for lumpy metal remains evolving during the casting process. Elements belonging to this process such as sprues, runners, ingates and feeders are essential to produce a raw casting, but they do not belong to the actual casting and are therefore eliminated during the finishing process of it. Rejects and scrap developing in the foundry are added to the Circulationg Scrap as well.

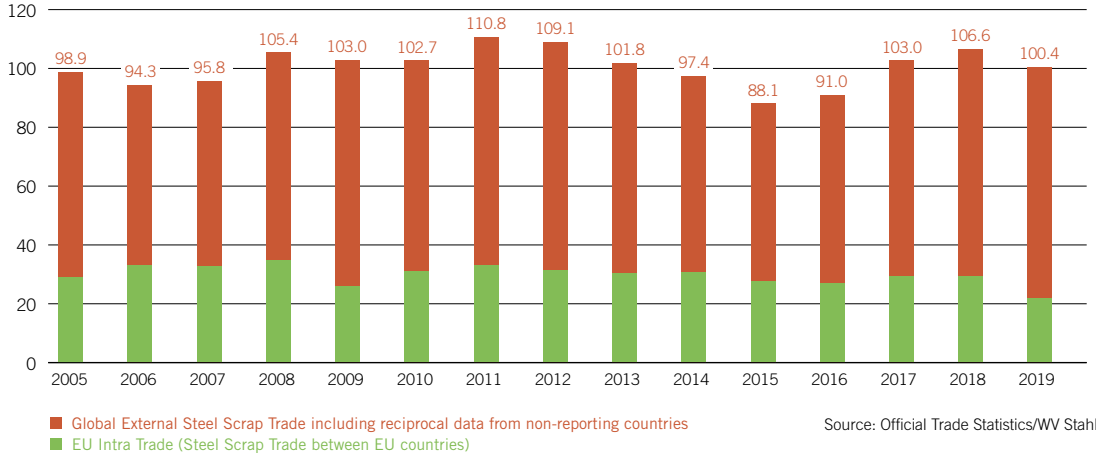
## FERROUS SCRAP USE IN IRON AND STEEL FOUNDRIES IN THE WORLD (MILLION TONNES)




Source: Modern Casting and own calculations by BDG/BIR

## VOLUME OF GLOBAL EXTERNAL STEEL SCRAP TRADE (MILLION TONNES)

Steel Scrap External Trade Including EU Intra Trade




Source: Official Trade Statistics/WV Stahl

## MAIN STEEL SCRAP IMPORTERS (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| Turkey | 16.251 | 17.716 | 20.980 | 20.660 | 18.857 | -8.7 |
| India | 6.710 | 6.380 | 5.365 | 6.330 | 7.053 | +11.4 |
| Korea Republic | 5.758 | 5.845 | 6.175 | 6.393 | 6.495 | +1.6 |
| USA | 3.513 | 3.864 | 4.636 | 5.030 | 4.268 | -15.1 |
| Pakistan | 3.257 | 4.034 | 5.123 | 5.013 | 4.337 | -13.5 |
| Taiwan | 3.373 | 3.155 | 2.919 | 3.629 | 3.523 | -2.9 |
| EU-28 | 2.849 | 2.749 | 3.071 | 2.828 | 2.893 | +2.3 |
| Indonesia | 1.020 | 1.020 | 1.857 | 2.510 | 2.614 | +4.1 |
| Canada | 1.516 | 1.839 | 2.115 | 3.471 | 2.129 | -38.7 |
| Malaysia | 0.446 | 0.316 | 0.644 | 0.980 | 1.532 | +56.3 |
| Mexico | 1.483 | 1.893 | 1.782 | 1.913 | 1.483 | -22.5 |
| Belarus | 1.382 | 1.235 | 1.353 | 1.497 | 1.280 | -14.5 |

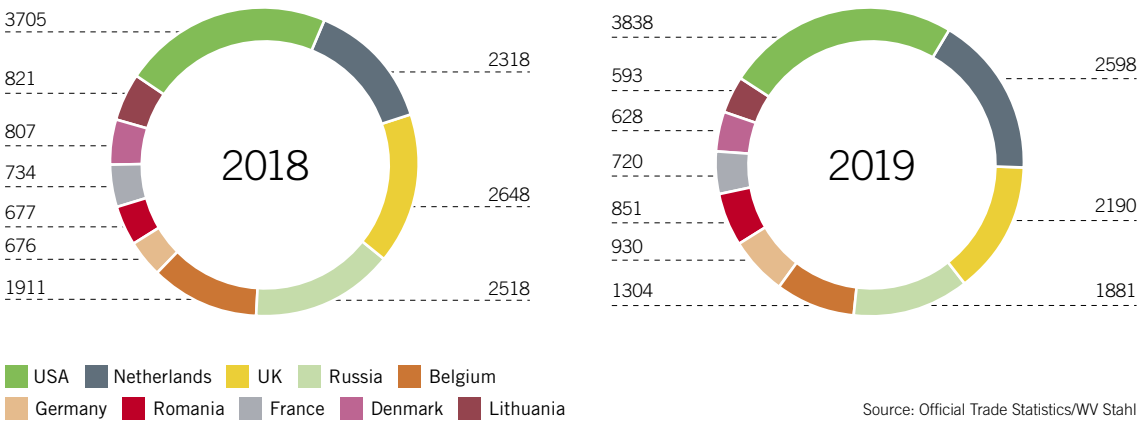
Source: Official Trade Statistics/WV Stahl

## STEEL SCRAP IMPORTS OF **TURKEY** (THOUSAND TONNES)

| | 2018 | 2019 | % Change | | 2018 | 2019 | % Change |
|---|---|---|---|---|---|---|---|
| **Total** | **20660** | **18857** | **-8.7** | USA | 3705 | 3838 | +3.6 |
| | | | | Netherlands | 2318 | 2598 | +12.1 |
| | | | | UK | 2648 | 2190 | -17.3 |
| | | | | Russia | 2518 | 1881 | -25.3 |
| | | | | Belgium | 1911 | 1304 | -31.8 |
| | | | | Germany | 676 | 930 | -37.6 |
| | | | | Romania | 677 | 851 | +25.7 |
| | | | | France | 734 | 720 | -1.9 |
| | | | | Denmark | 807 | 628 | -22.2 |
| | | | | Lithuania | 821 | 593 | -27.8 |

Source: Official Trade Statistics/WV Stahl

## MAIN STEEL SCRAP SUPPLIERS OF **TURKEY** – DEVELOPMENT 2018 VS. 2019 (THOUSAND TONNES)



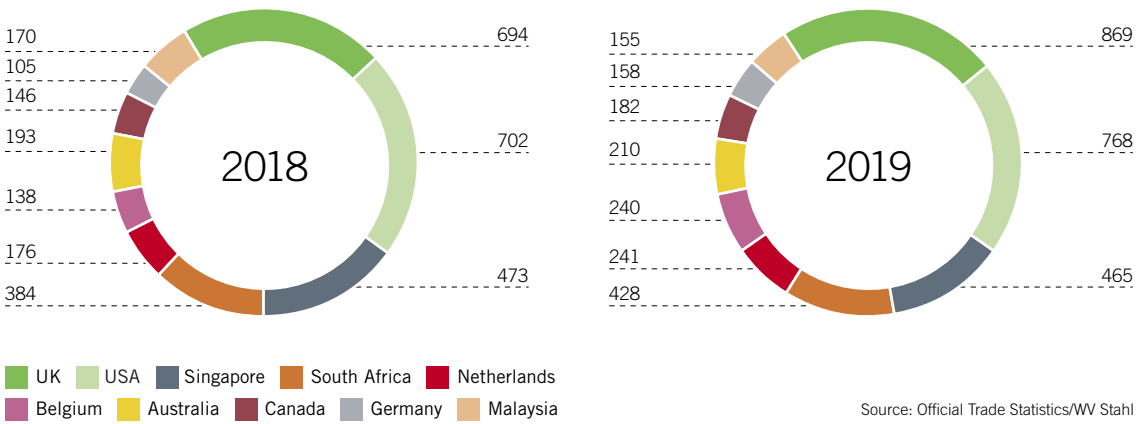

Source: Official Trade Statistics/WV Stahl

## STEEL SCRAP IMPORTS OF **INDIA** (THOUSAND TONNES)

| | 2018 | 2019 | % Change | | 2018 | 2019 | % Change |
|---|---|---|---|---|---|---|---|
| **Total** | **6330** | **7053** | **+11.4** | UK | 694 | 869 | +25.3 |
| | | | | USA | 702 | 768 | +9.4 |
| | | | | Singapore | 473 | 465 | -1.7 |
| | | | | South Africa | 384 | 428 | +11.5 |
| | | | | Netherlands | 176 | 241 | +36.9 |
| | | | | Belgium | 138 | 240 | +73.9 |
| | | | | Australia | 193 | 210 | +8.8 |
| | | | | Canada | 146 | 182 | +24.7 |
| | | | | Germany | 105 | 158 | +50.5 |
| | | | | Malaysia | 170 | 155 | -8.8 |

Source: Official Trade Statistics/WV Stahl

## MAIN STEEL SCRAP SUPPLIERS OF **INDIA** – DEVELOPMENT 2018 VS. 2019 (THOUSAND TONNES)



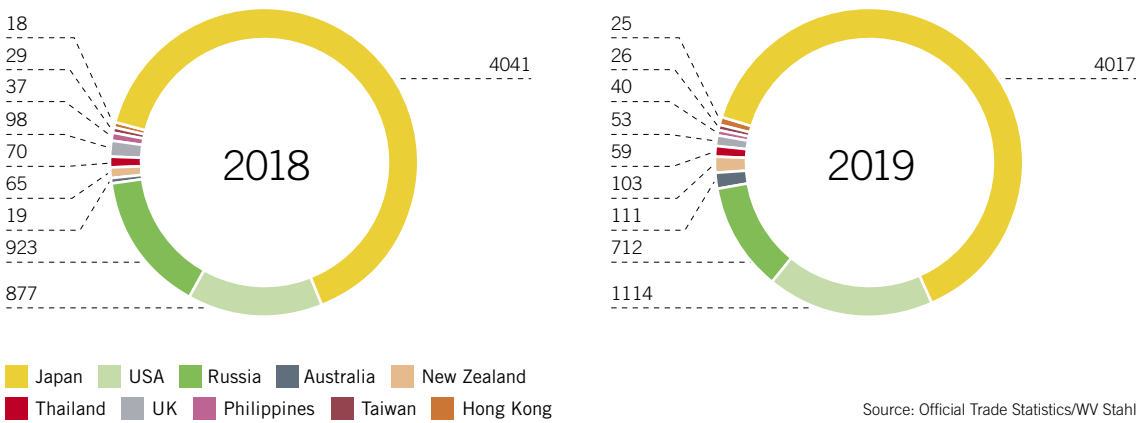

Source: Official Trade Statistics/WV Stahl

## STEEL SCRAP IMPORTS OF **REPUBLIC OF KOREA** (THOUSAND TONNES)

| | 2018 | 2019 | % Change | | 2018 | 2019 | % Change |
|---|---|---|---|---|---|---|---|
| **Total** | **6393** | **6495** | **+1.6** | Japan | 4041 | 4017 | -0.6 |
| | | | | USA | 877 | 1114 | +27.0 |
| | | | | Russia | 923 | 712 | -22.9 |
| | | | | Australia | 19 | 111 | +484.2 |
| | | | | New Zealand | 65 | 103 | +58.5 |
| | | | | Thailand | 70 | 59 | -15.7 |
| | | | | UK | 98 | 53 | -45.9 |
| | | | | Philippines | 37 | 40 | +8.1 |
| | | | | Taiwan | 29 | 26 | -10.3 |
| | | | | Hong Kong | 18 | 25 | +38.9 |

Source: Official Trade Statistics/WV Stahl

## MAIN STEEL SCRAP SUPPLIERS OF **REP. OF KOREA** – DEVELOPMENT 2018 VS. 2019 (THOUSAND TONNES)



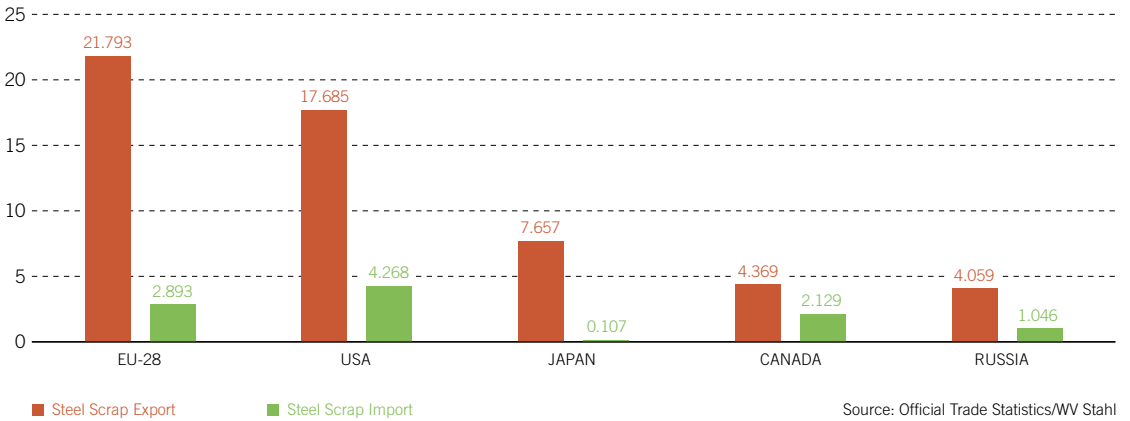

Source: Official Trade Statistics/WV Stahl

## MAIN STEEL SCRAP EXPORTERS (MILLION TONNES)

| | 2015 | 2016 | 2017 | 2018 | 2019 | % 2019/ 2018 |
|---|---|---|---|---|---|---|
| EU-28 | 13.743 | 17.769 | 20.085 | 21.656 | 21.793 | +0.6 |
| USA | 12.976 | 12.819 | 15.016 | 17.332 | 17.685 | +2.0 |
| Japan | 7.839 | 8.698 | 8.208 | 7.402 | 7.657 | +3.4 |
| Canada | 3.415 | 3.632 | 4.409 | 5.107 | 4.369 | -14.5 |
| Russia | 5.646 | 5.524 | 5.320 | 5.591 | 4.059 | -27.4 |
| Australia | 1.898 | 1.583 | 1.979 | 1.968 | 2.325 | +18.1 |
| HongKong | 1.239 | 1.347 | 1.380 | 1.295 | 0.958 | -26.0 |
| Singapore | 0.844 | 1.048 | 0.790 | 0.775 | 0.759 | -2.1 |

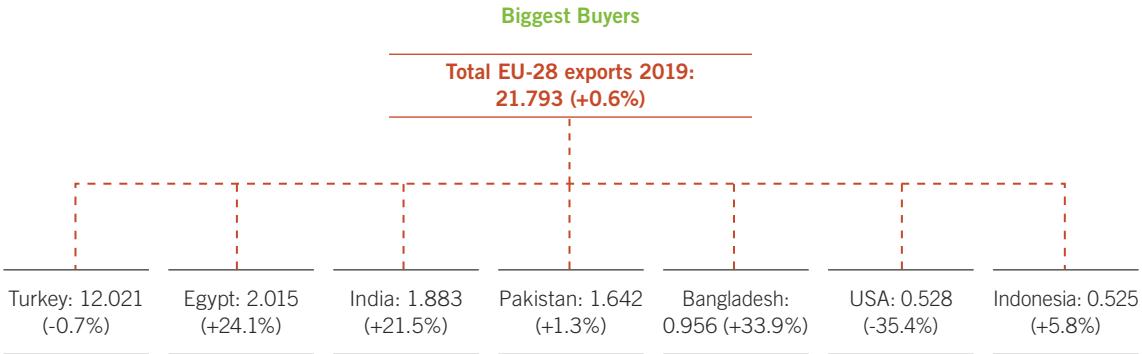
Source: Official Trade Statistics/WV Stahl

## MAJOR NET STEEL SCRAP EXPORTERS 2019 (MILLION TONNES)




Source: Official Trade Statistics/WV Stahl

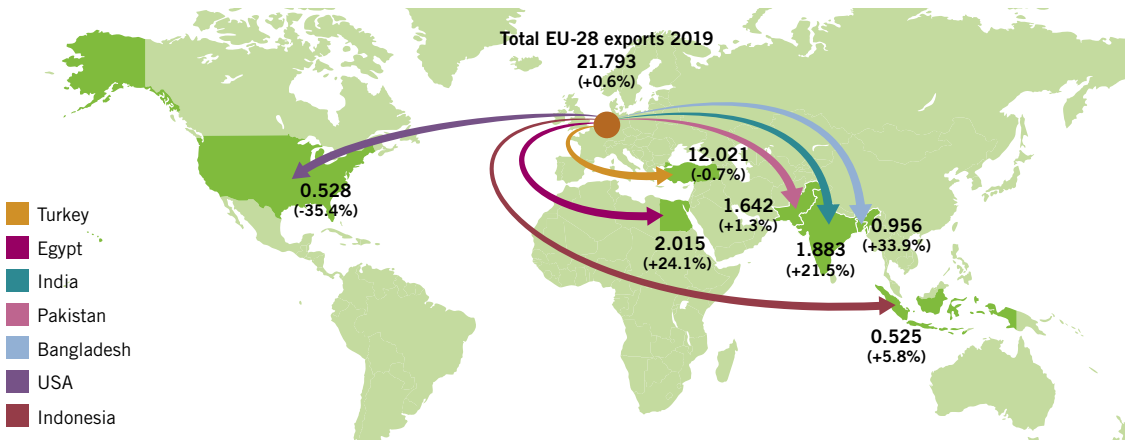
## **EU-28** STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

## MAIN FLOWS OF **EU-28** STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

## Steel Scrap Exports by Main EU-28 Exporters to Third Countries

| Exporters | 2019 | 2018 | % Change | Biggest Buyers | 2019 | % Change |
|---|---|---|---|---|---|---|
| UK | 6.613 | 7.031 | -6.0 | Turkey | 2.142 | -15.0 |
| | | | | Pakistan | 0.993 | -6.0 |
| | | | | Egypt | 0.958 | +12.0 |
| | | | | India | 0.799 | +14.0 |
| | | | | Bangladesh | 0.739 | +35.0 |
| | | | | Indonesia | 0.341 | -17.0 |
| Netherlands | 3.837 | 3.651 | +5.0 | Turkey | 3.055 | +26.0 |
| | | | | India | 0.257 | +8.0 |
| | | | | USA | 0.137 | -47.0 |
| | | | | Egypt | 0.133 | -35.0 |
| | | | | Pakistan | 0.083 | +84.0 |
| Belgium | 2.655 | 2.768 | -4.0 | Turkey | 1.356 | -29.0 |
| | | | | Egypt | 0.870 | +64.0 |
| | | | | India | 0.209 | +73.0 |
| Germany | 1.362 | 1.373 | -1.0 | Turkey | 0.673 | -3.0 |
| | | | | Switzerland | 0.253 | -28.0 |
| | | | | India | 0.224 | +25.0 |
| | | | | Pakistan | 0.118 | +18.0 |
| Sweden | 1.001 | 0.898 | +11.0 | Turkey | 0.391 | +26.0 |
| | | | | USA | 0.196 | -11.0 |
| | | | | Norway | 0.168 | +17.0 |
| Romania | 0.859 | 0.676 | +27.0 | Turkey | 0.699 | +19.0 |
| France | 0.888 | 0.960 | -8.0 | Turkey | 0.638 | -5.0 |
| | | | | Switzerland | 0.071 | -21.0 |
| | | | | India | 0.052 | -24.0 |
| Bulgaria | 0.361 | 0.311 | +16.0 | Turkey | 0.262 | +7.0 |
| **EU-28 Extra Trade** | **21.793** | **21.565** | **+0.6** | | | |

Change: % 2019/2018
Source: Official Trade Statistics/WV Stahl

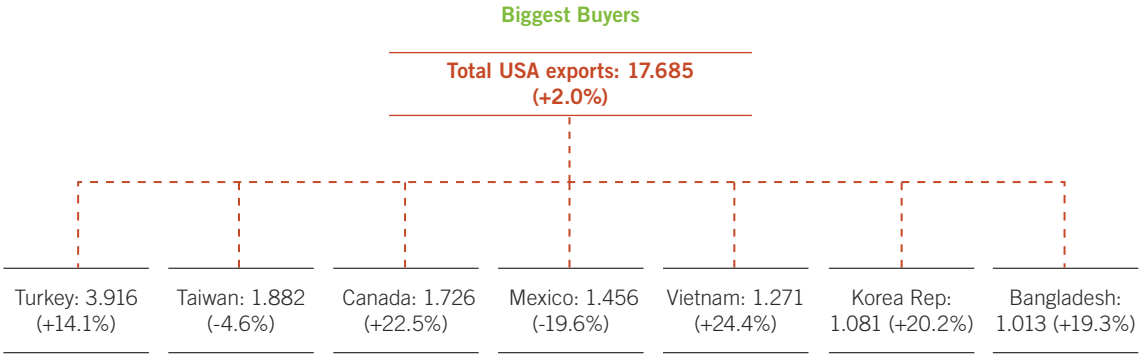
## EU-28 INTERNAL STEEL SCRAP EXPORTS BY COUNTRY (MILLION TONNES)

### Main Steel Scrap Exports between EU-28 Countries

| Exporters | 2019 | 2018 | % Change | Biggest Buyers | 2019 | % Change |
|---|---|---|---|---|---|---|
| Germany | 7.098 | 7.407 | -4.0 | Netherlands | 1.757 | +12.0 |
| | | | | Italy | 1.735 | -7.0 |
| | | | | Luxembourg | 1.096 | -11.0 |
| | | | | Belgium | 1.067 | -18.0 |
| | | | | France | 0.549 | -7.0 |
| France | 5.704 | 5.542 | +3.0 | Spain | 1.959 | +12.0 |
| | | | | Belgium | 1.678 | +5.0 |
| | | | | Luxembourg | 0.811 | +2.0 |
| | | | | Italy | 0.576 | -14.0 |
| Netherlands | 2.476 | 2.673 | -7.0 | Germany | 0.926 | -3.0 |
| | | | | Belgium | 0.643 | -5.0 |
| | | | | Finland | 0.367 | -7.0 |
| Czech Rep. | 2.248 | 2.279 | -1.0 | Germany | 1.022 | +2.0 |
| | | | | Poland | 0.445 | -2.0 |
| | | | | Italy | 0.389 | +4.0 |
| UK | 1.421 | 1.662 | -14.0 | Spain | 0.753 | -10.0 |
| | | | | Portugal | 0.238 | -25.0 |
| Poland | 1.398 | 1.376 | +2.0 | Germany | 0.739 | +3.0 |
| | | | | Czech Republic | 0.280 | -12.0 |
| Belgium | 1.114 | 1.267 | -12.0 | France | 0.460 | -15.0 |
| | | | | Netherlands | 0.286 | +3.0 |
| | | | | Luxembourg | 0.236 | -11.0 |
| Austria | 0.967 | 0.998 | -3.0 | Italy | 0.556 | +5.0 |
| | | | | Germany | 0.305 | -15.0 |
| **EU-28 Intra Trade** | **21.684** | **22.120** | **-2.0** | | | |

Change: % 2019/2018
Source: Official Trade Statistics/WV Stahl

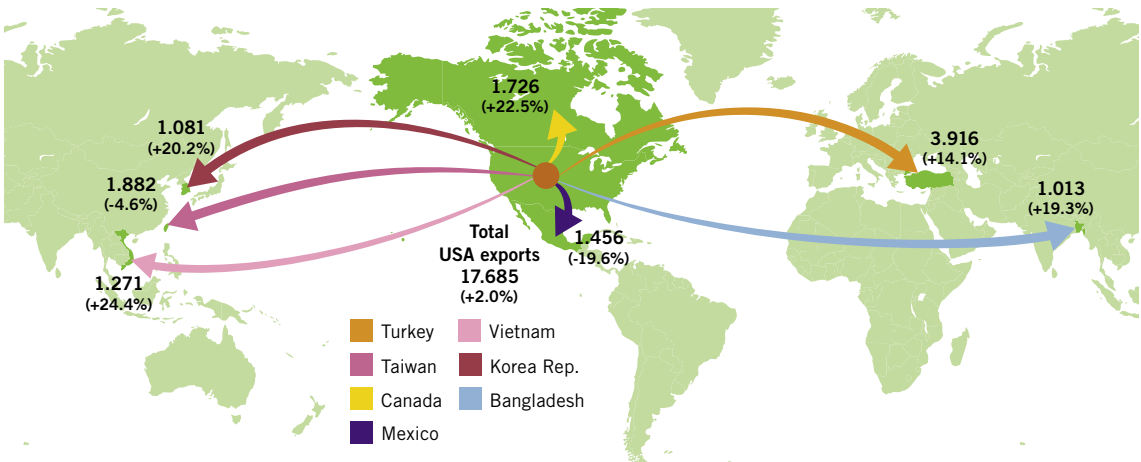
## **US** STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

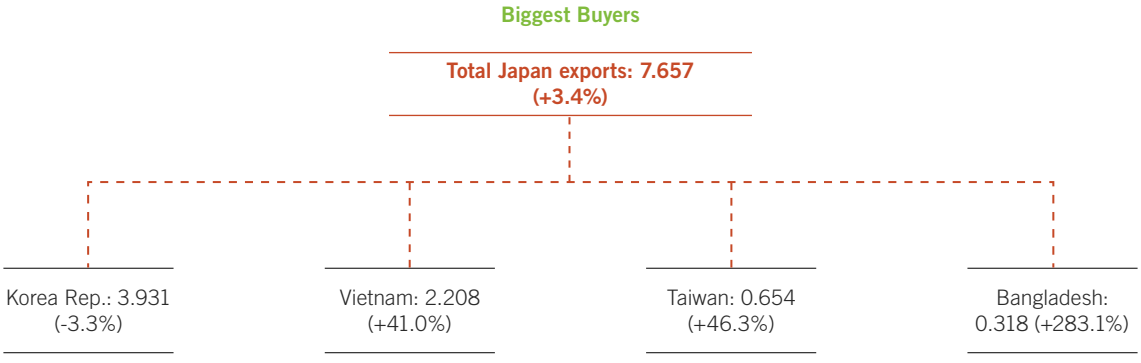
## MAIN FLOWS OF US STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

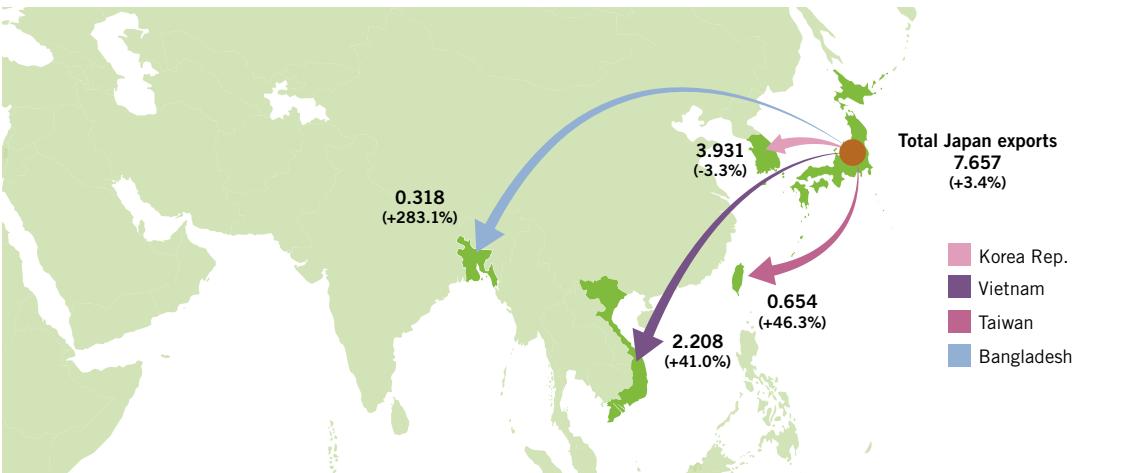
## **JAPAN** STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

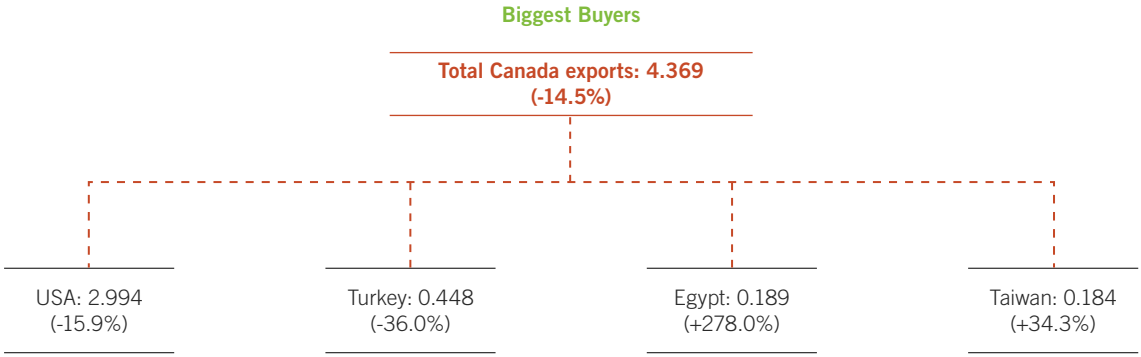
## MAIN FLOWS OF JAPANESE STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

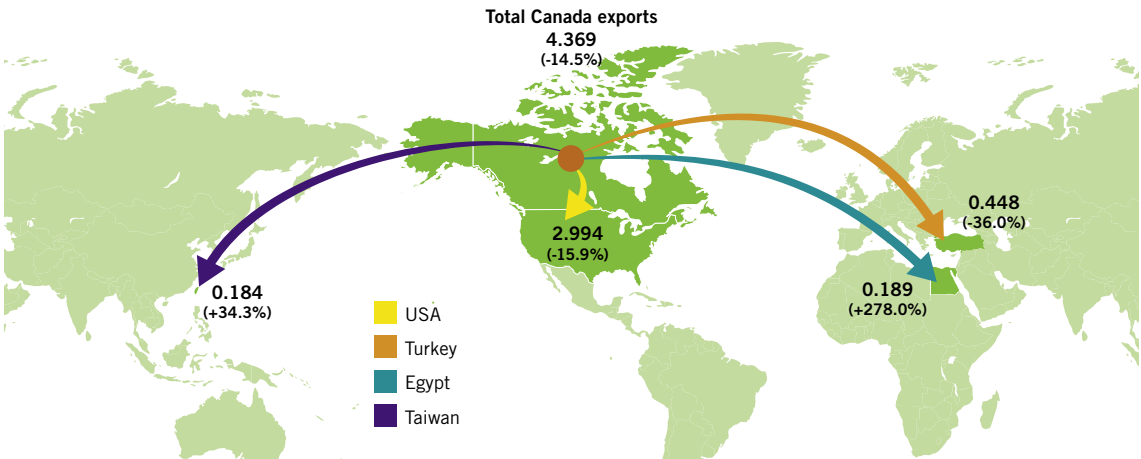
## **CANADA** STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

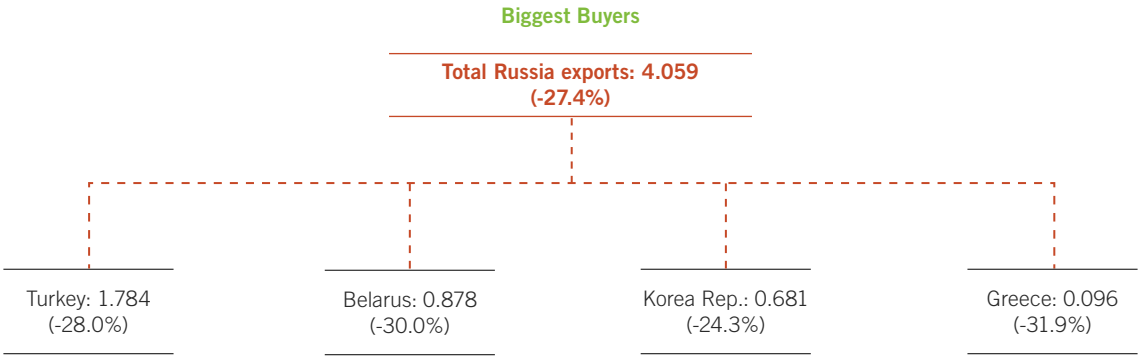
## MAIN FLOWS OF CANADIAN STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

## **RUSSIA** STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

## MAIN FLOWS OF RUSSIAN STEEL SCRAP EXPORTS 2019 (MILLION TONNES)


Change: % 2019/2018

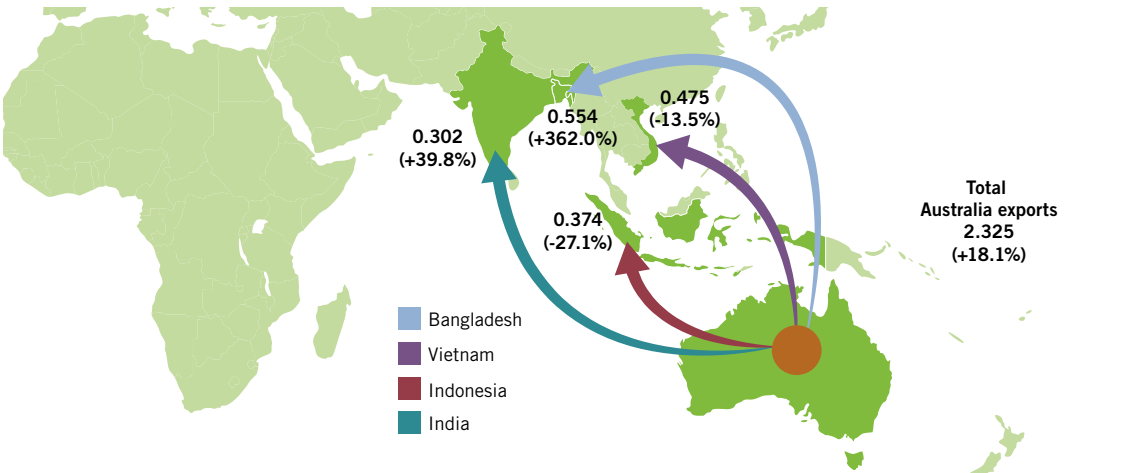
Source: Official Trade Statistics/WV Stahl

## **AUSTRALIA** STEEL SCRAP EXPORTS 2019 (MILLION TONNES)


Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

## MAIN FLOWS OF AUSTRALIAN STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

## **HONG KONG** STEEL SCRAP EXPORTS 2019 (MILLION TONNES)

**Biggest Buyers**

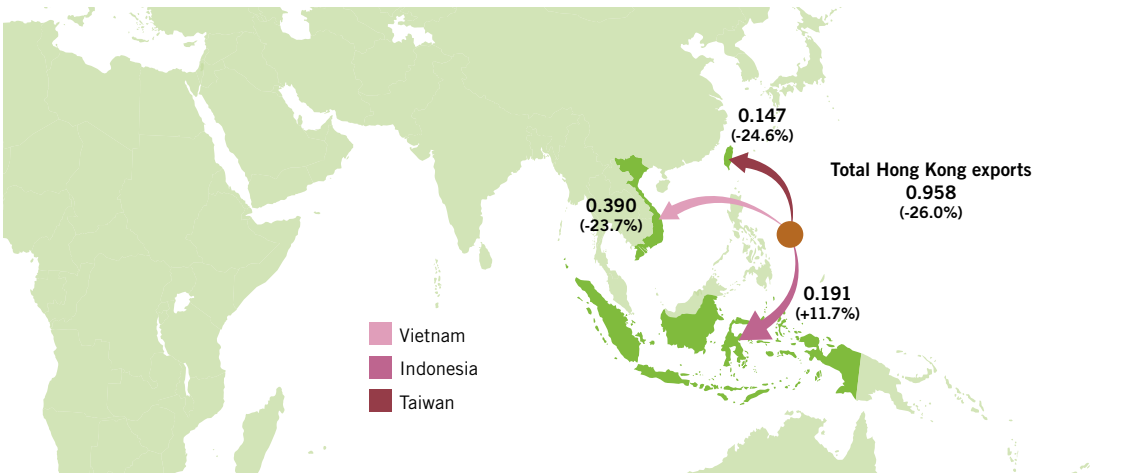
**Total Hong Kong exports: 0.958 (-26.0%)**

- Vietnam: 0.390 (-23.7%)
- Indonesia: 0.191 (+11.7%)
- Taiwan: 0.147 (-24.6%)

Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

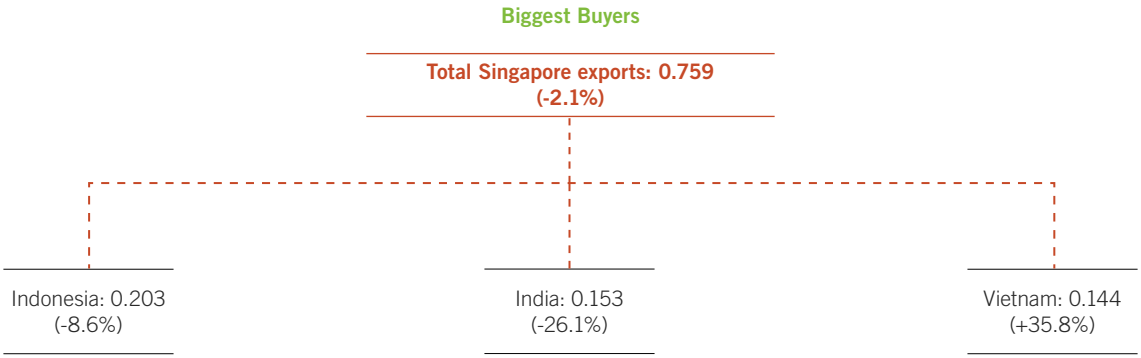
## MAIN FLOWS OF HONG KONG STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

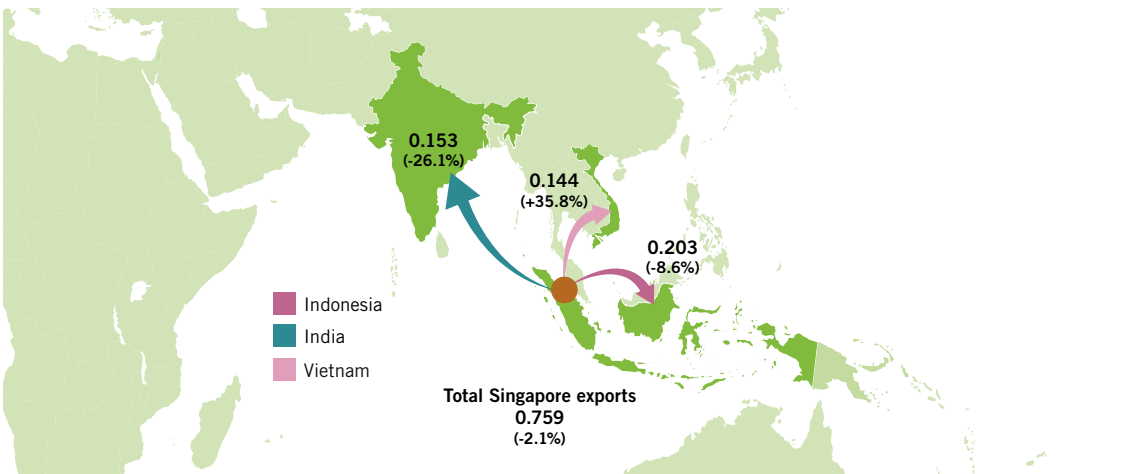
## **SINGAPORE** STEEL SCRAP EXPORTS 2019 (MILLION TONNES)




Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

## MAIN FLOWS OF SINGAPORE STEEL SCRAP EXPORTS 2019 (MILLION TONNES)

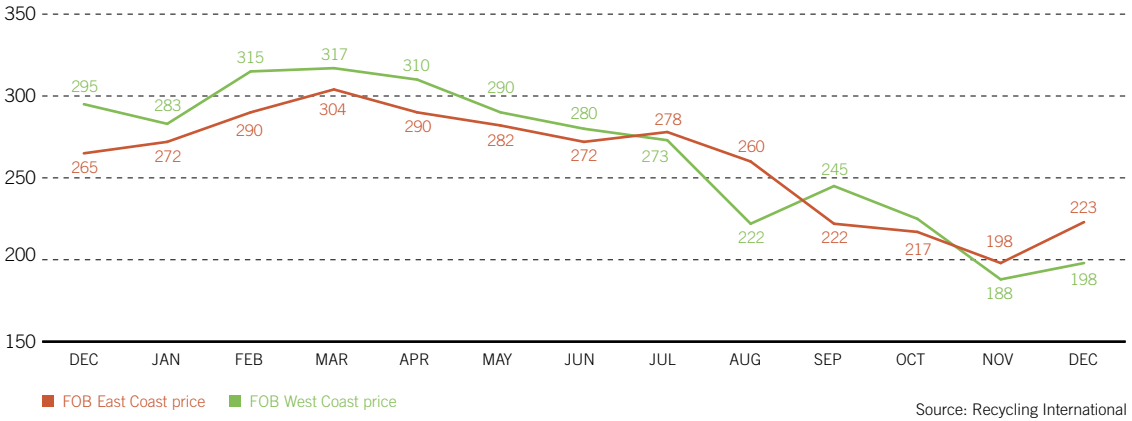



Change: % 2019/2018

Source: Official Trade Statistics/WV Stahl

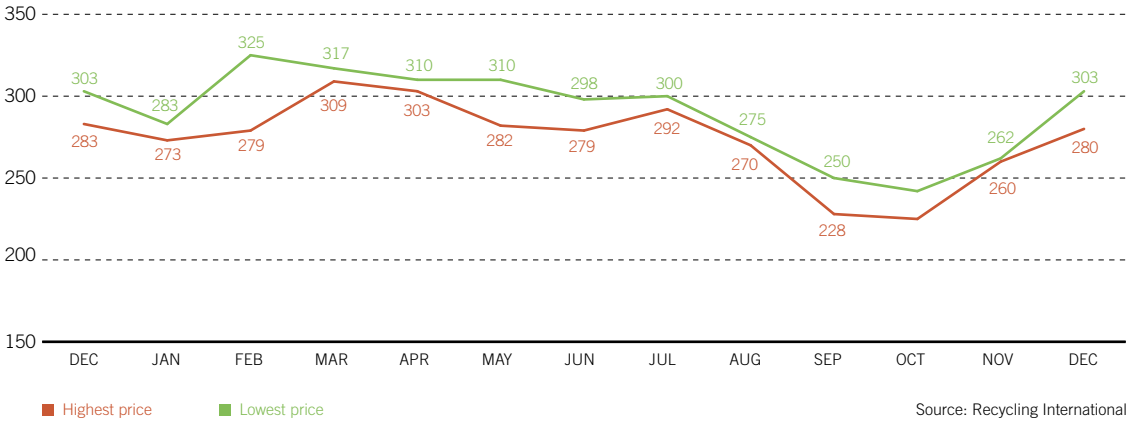
## STEEL SCRAP PRICE CURVES DECEMBER 2018/2019

**USA Export Price (US$/GRT)**
HMS 1, heavy steel scrap (1/4 Inch)




Source: Recycling International

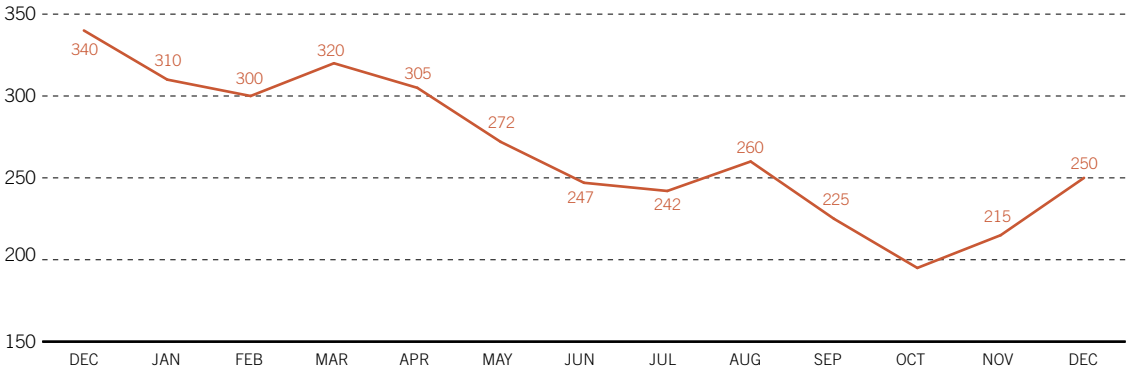
**CFR Prices for shipments from EU to Turkey (US$/t)**
HMS 80/20, heavy steel scrap




Source: Recycling International

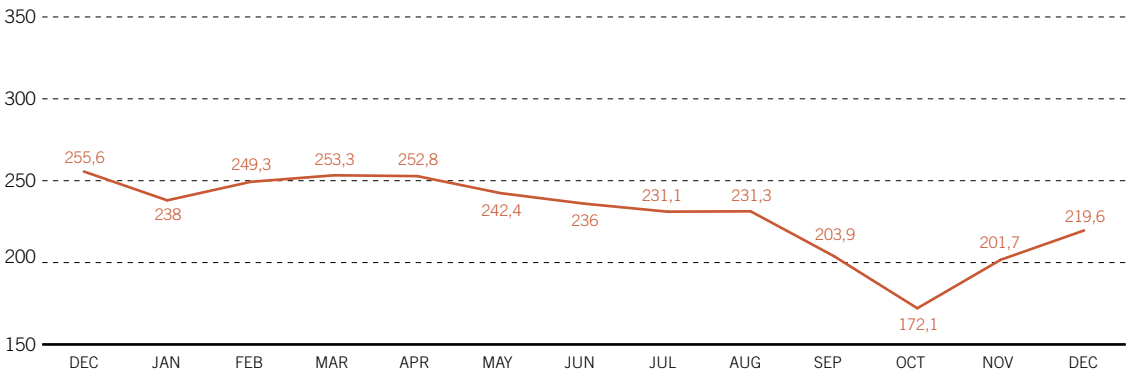
## STEEL SCRAP PRICE CURVES DECEMBER 2018/2019

**USA Domestic Scrap Prices (US$/GRT)**
HMS 1, heavy steel scrap (1/4 Inch) composite price delivered at mills




Source: Recycling International

**Composite Sales Price ex Yard in Germany* (€/t)**
E3/European Standard Quality No. 3, heavy old steel scrap (>6mm)
* Composite sales price considers sales to domestic and international steel works and foundries on weighted average basis
Source: BDSV/SecureCalc




Source: Recycling International

# GLOSSARY

| | |
|---|---|
| **BIR** | Bureau of International Recycling, Brussels, Belgium |
| **BDG** | German Foundry Association, Düsseldorf, Germany |
| **BDSV** | German Steel Recycling Federation, Düsseldorf, Germany |
| **CAMU** | China's Association of Metalscrap Utilization, Beijing, China |
| **EuRIC** | European Recycling Industries' Confederation, Brussels, Belgium |
| **EUROFER** | European Confederation of Iron and Steel Industries, Brussels, Belgium |
| **ISRI** | Institute of Scrap Recycling Industries, Washington, USA |
| **CARI** | Canadian Association of Recycling Industries, Ottawa, Canada |
| **KOSA** | Korea Iron & Steel Association, Seoul, Republic of Korea |
| **METI** | Ministry of Economy, Trade and Industry, Tokyo, Japan |
| **Modern Casting** | Magazine for Foundries and Diecasters, Schaumburg, Illinois, USA |
| **Official Trade Statistics** | Prepared by WV Stahl, Düsseldorf, Germany |
| **Recycling International** | International Trade Magazine, Doetinchem, The Netherlands |
| **RUSLOM** | National Recycling Association of Russia, Moscow, Russia |
| **TCUD** | Turkish Steel Producers Association, Ankara, Turkey |
| **USGS** | U.S. Geological Survey, Reston, USA |
| **worldsteel** | World Steel Association, Brussels, Belgium |
| **WV Stahl** | German Steel Federation, Düsseldorf, Germany |

Design by **karakas**

Bureau of
International Recycling
**Ferrous Division**

**BIR** – REPRESENTING THE FUTURE LEADING RAW MATERIAL SUPPLIERS

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