

ENERGY BANK FOR THE FUTURE



# THE ALUMINIUM STORY

[www.thealuminiumstory.com](http://www.thealuminiumstory.com)



## IAI Memorandum of Association

“本协会的活动不应导致任何协议，理解，组合或任何其他形式的一致行动来限制生产，固定价格，抑制竞争或以任何其他方式限制贸易或商业，或垄断或企图垄断贸易或商业。”

“The activities of the Institute shall not be such as will result in any agreement, understanding, combination or any other form of concerted action to limit production, fix prices, suppress competition or in any other manner restrain trade or commerce or to monopolize or attempt to monopolize trade or commerce.”

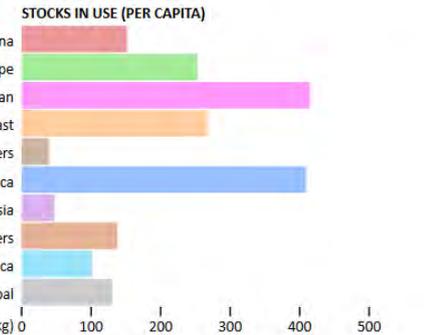
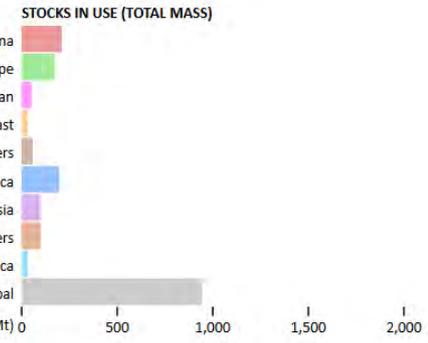
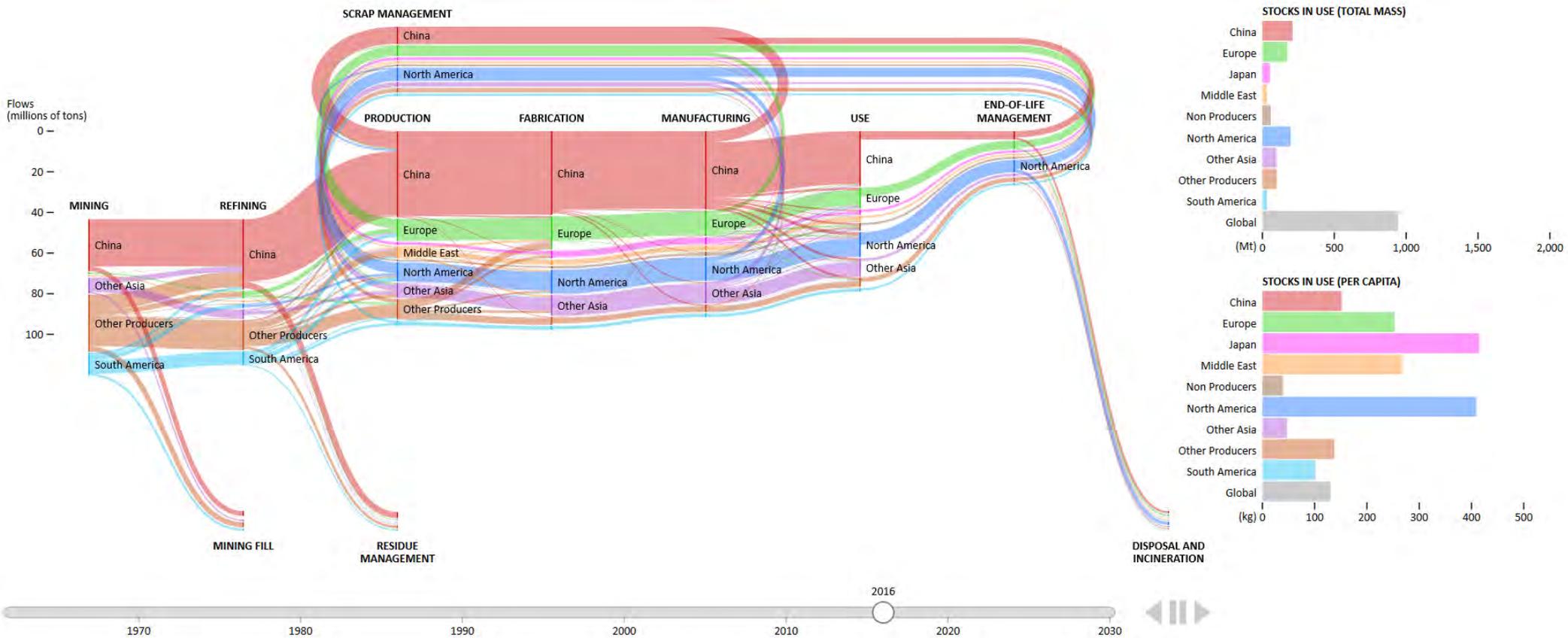
# GLOBAL ALUMINIUM CYCLE 2016

sorted by Name

[Methodology](#) - Resources, Conservation and Recycling Volume 125, October 2017, Pages 48–69

Select regions:  China  Europe  Japan  Middle East  Non Producers  North America  Other Asia  Other Producers  South America

For non-metallic flows (bauxite, alumina, mining fill and residue management), the mass of aluminium within chemical compounds is shown.



Scale  
 relative to latest year

Future Scenarios  
 Baseline  
 Increased EOL Scrap Collection  
 No Scrap Trade  
 US Duties

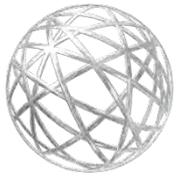
Sort Nodes  
 Name  
 relative to latest year  
 Sort Flows  
 by type, then position (reducing crossings)

Colours  
 Colour nodes by region/country  
 Node spacing: 1px

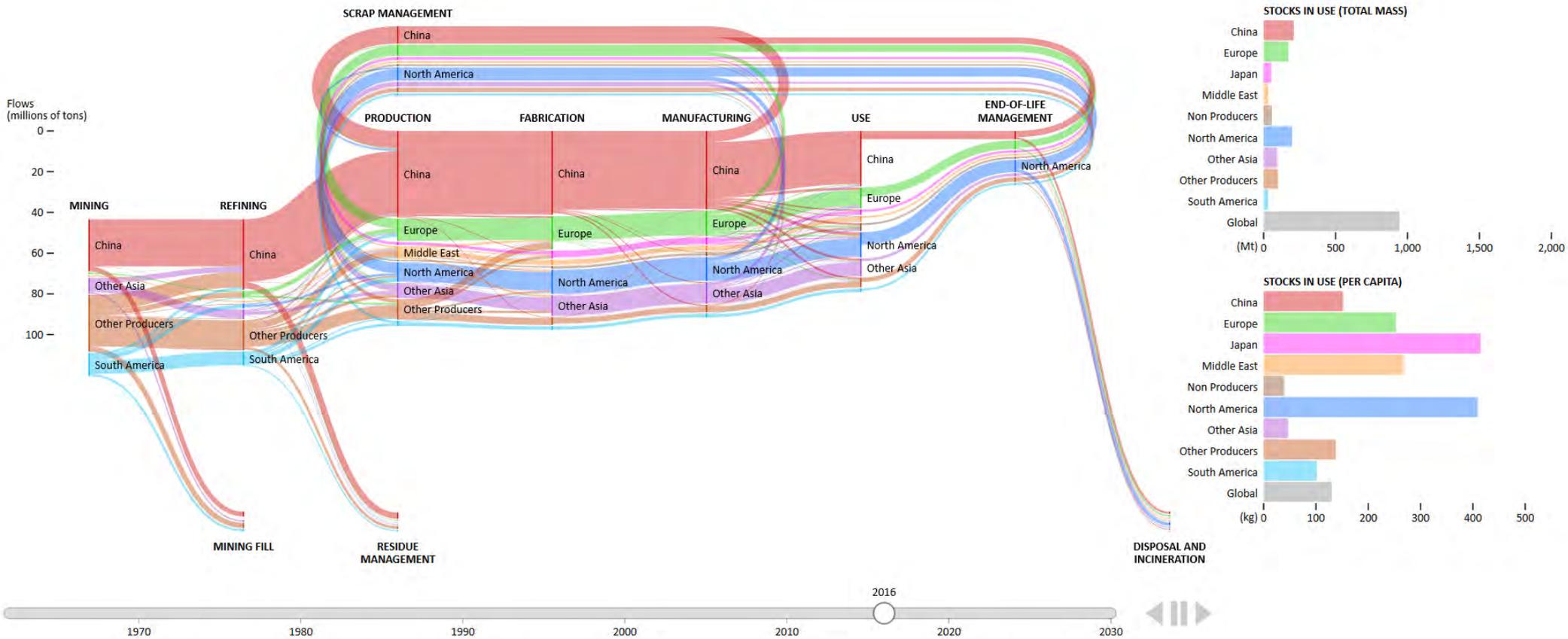
Export  
[Export SVG](#)  
 (Google Chrome only)

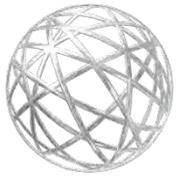
## 2016 demand: 90 million tonnes (Mt)

- 60 Mt primary aluminium
  - 115 Mt alumina
  - ~ 300 Mt bauxite
  - ~ 160 Mt bauxite residue
- 30 Mt recycled aluminium:
  - 17 Mt post consumer (“old”) scrap
  - 13 Mt new scrap



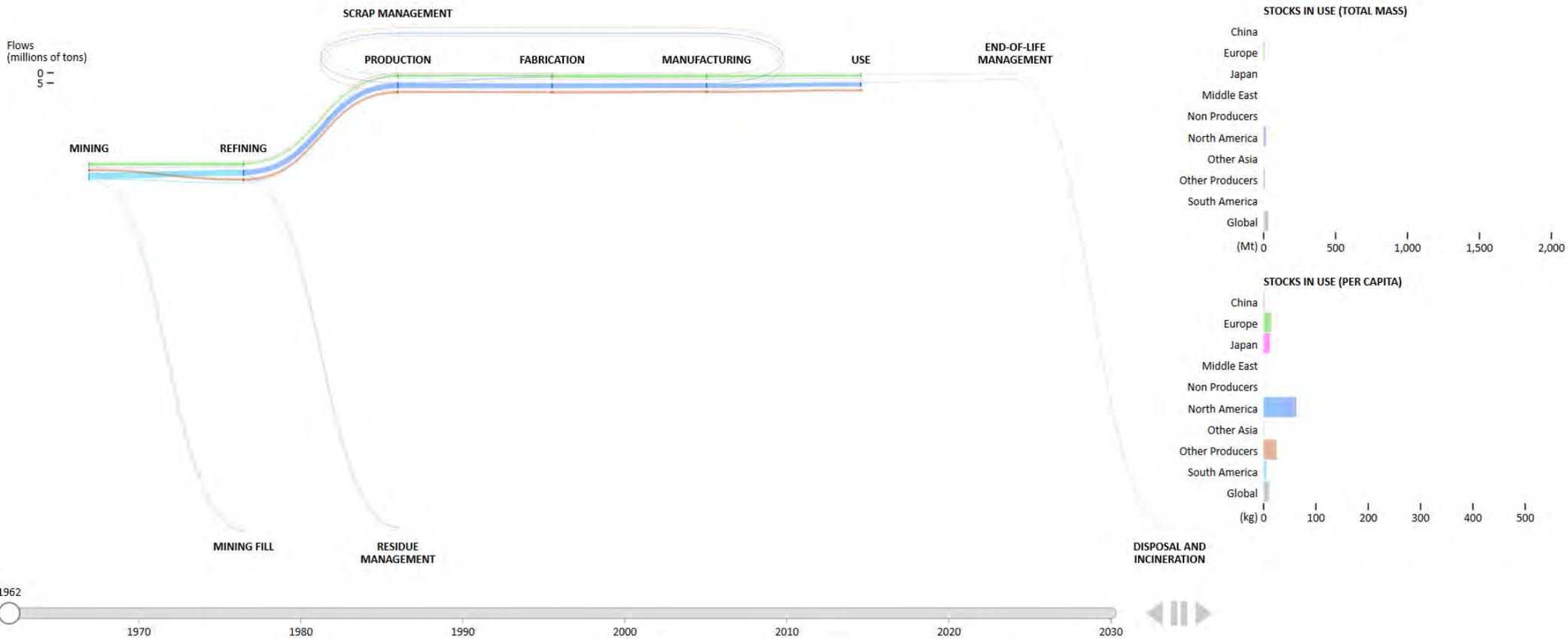
# 2016

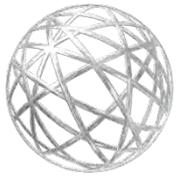




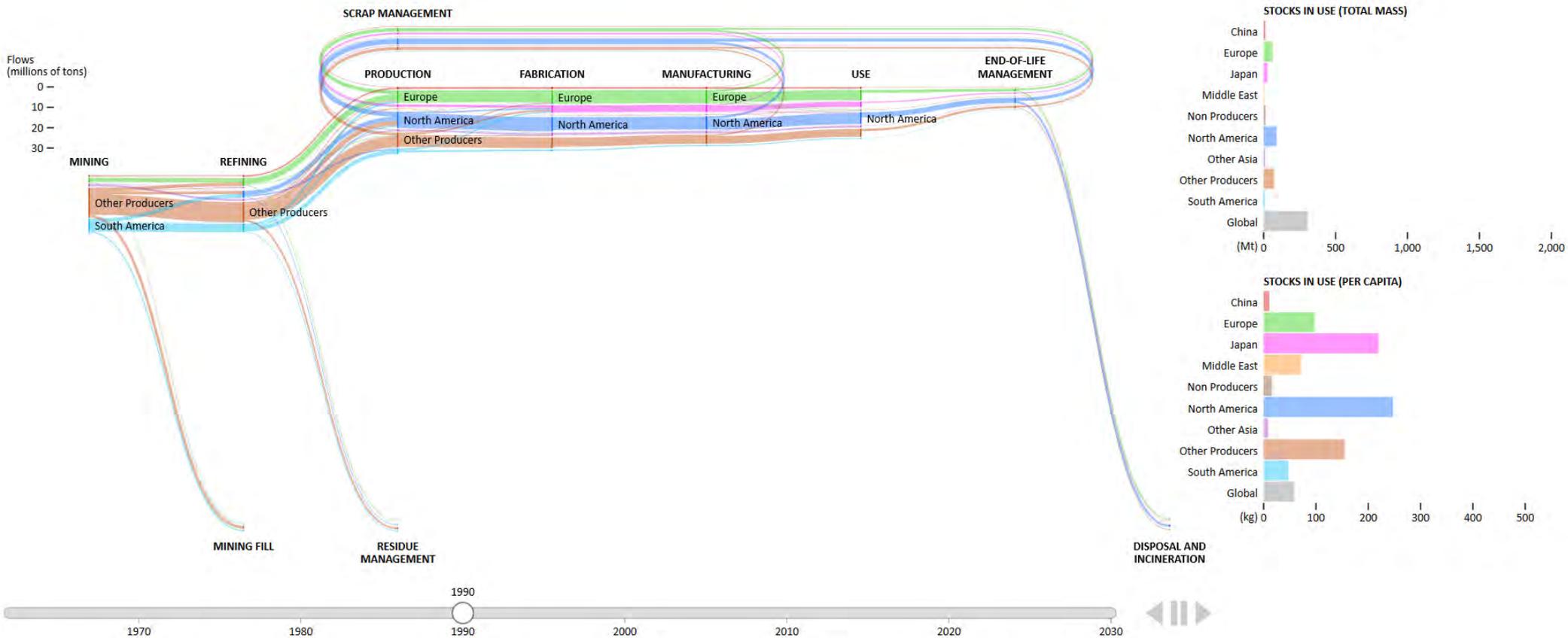
WORLD  
ALUMINIUM

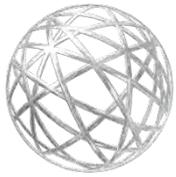
# 1962



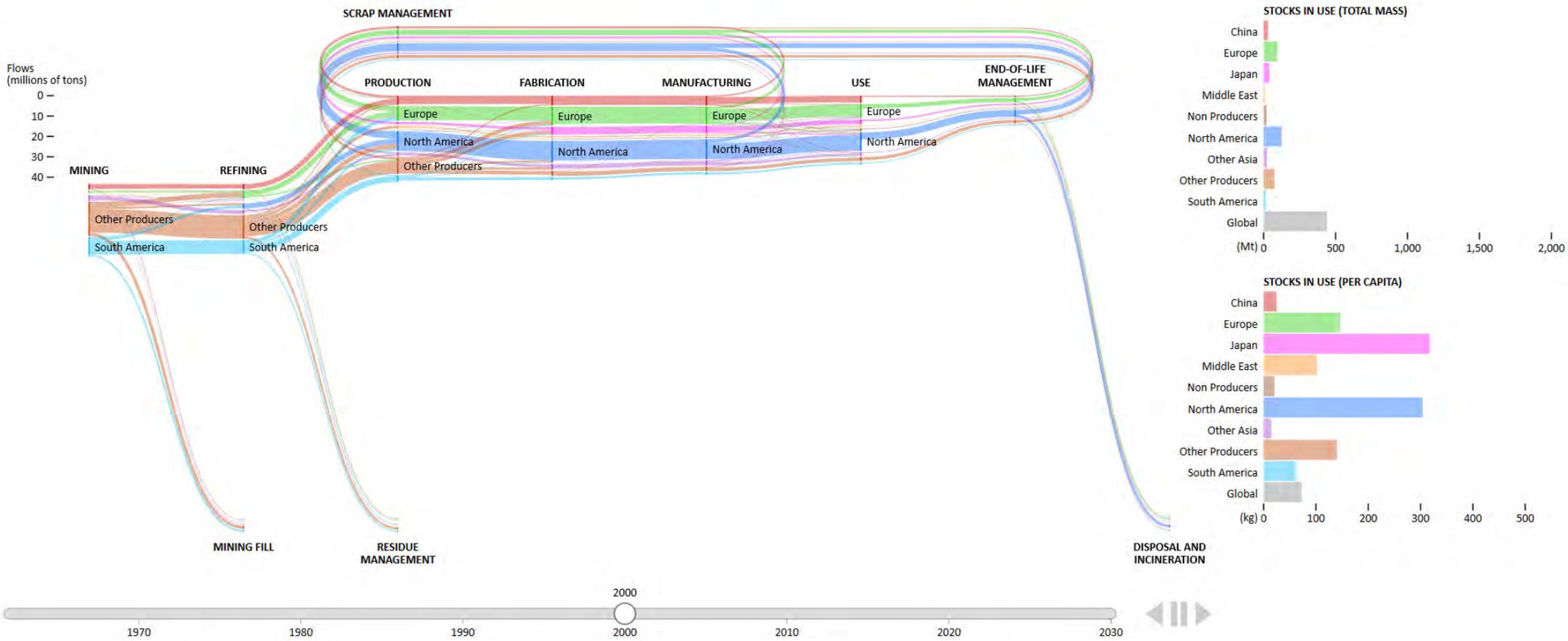


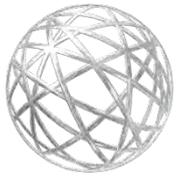
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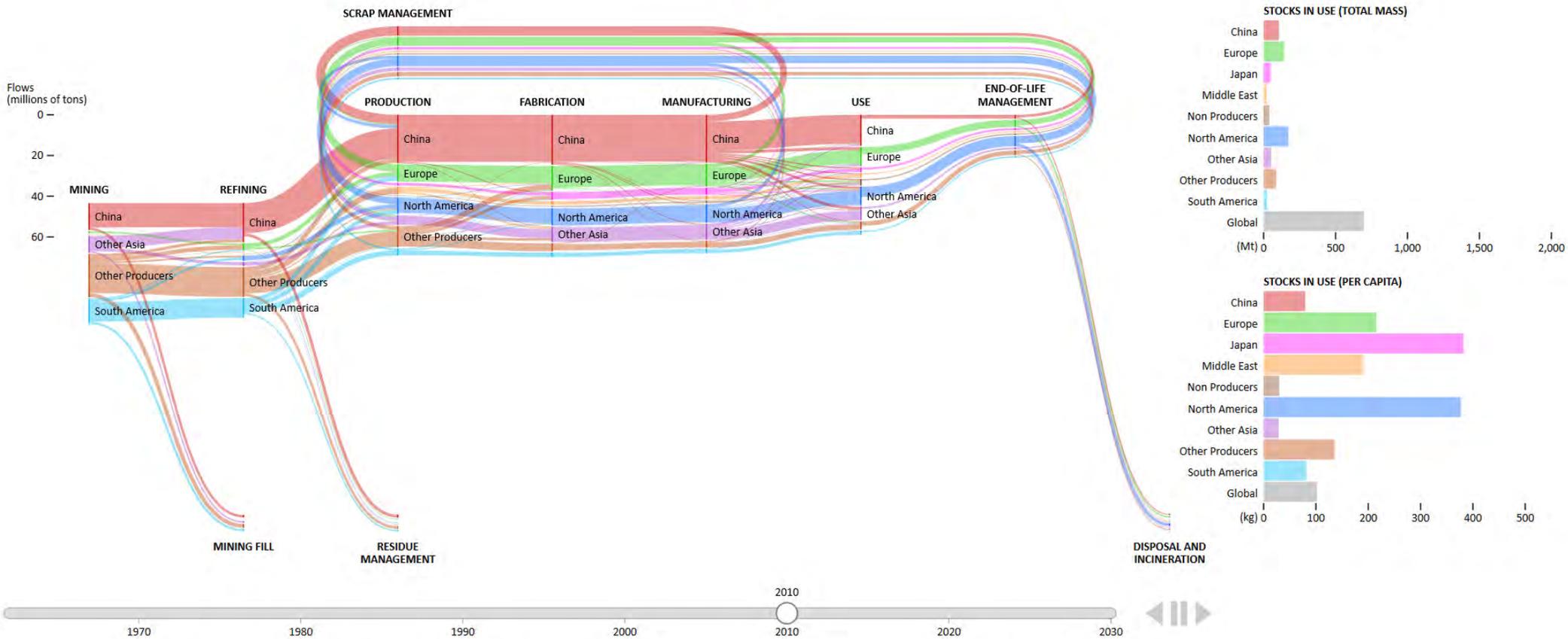


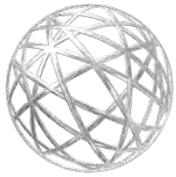
# 2000



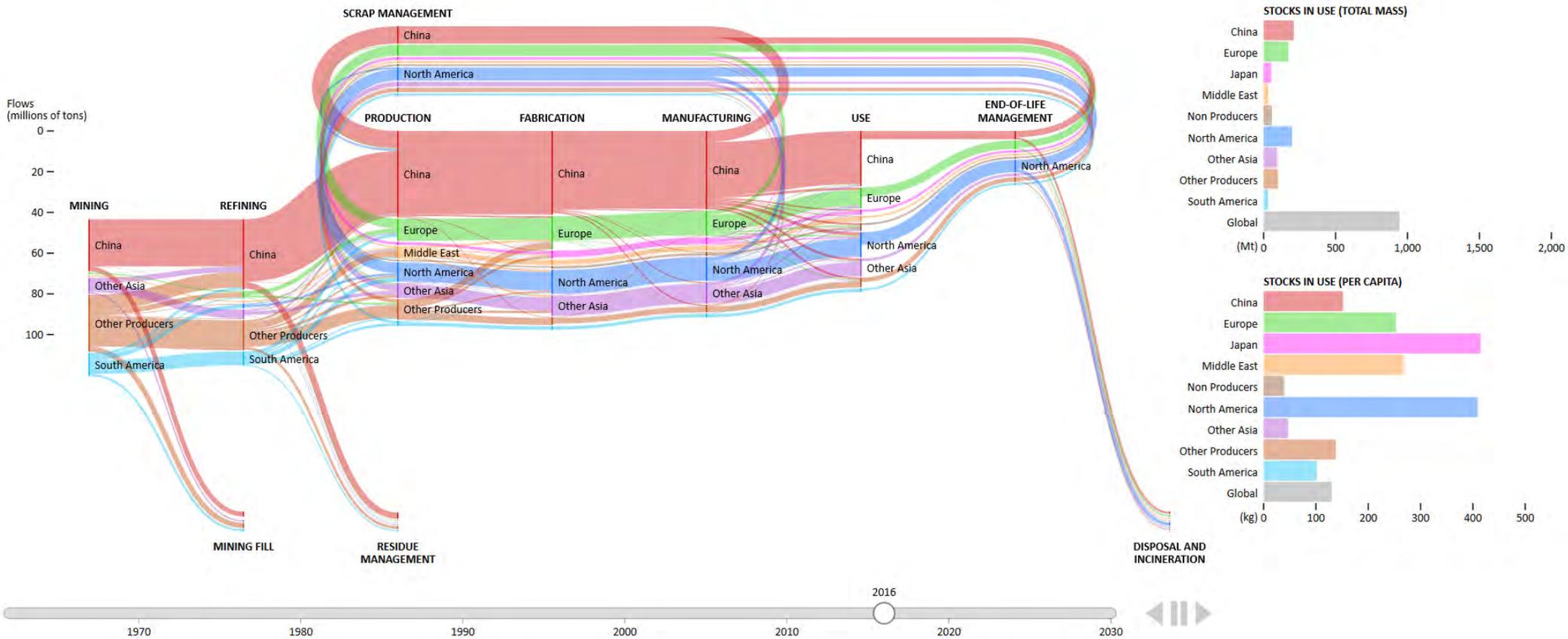


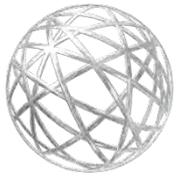
# 2010





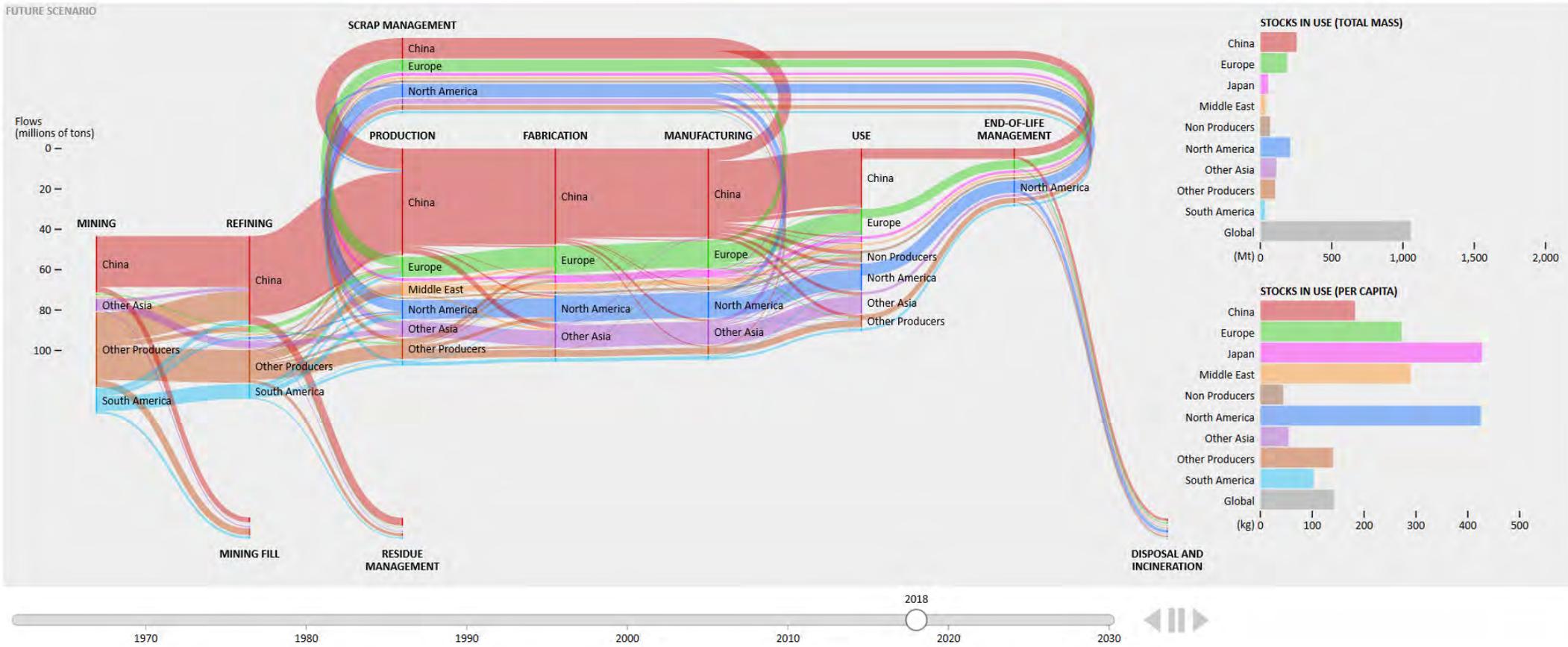
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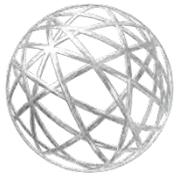




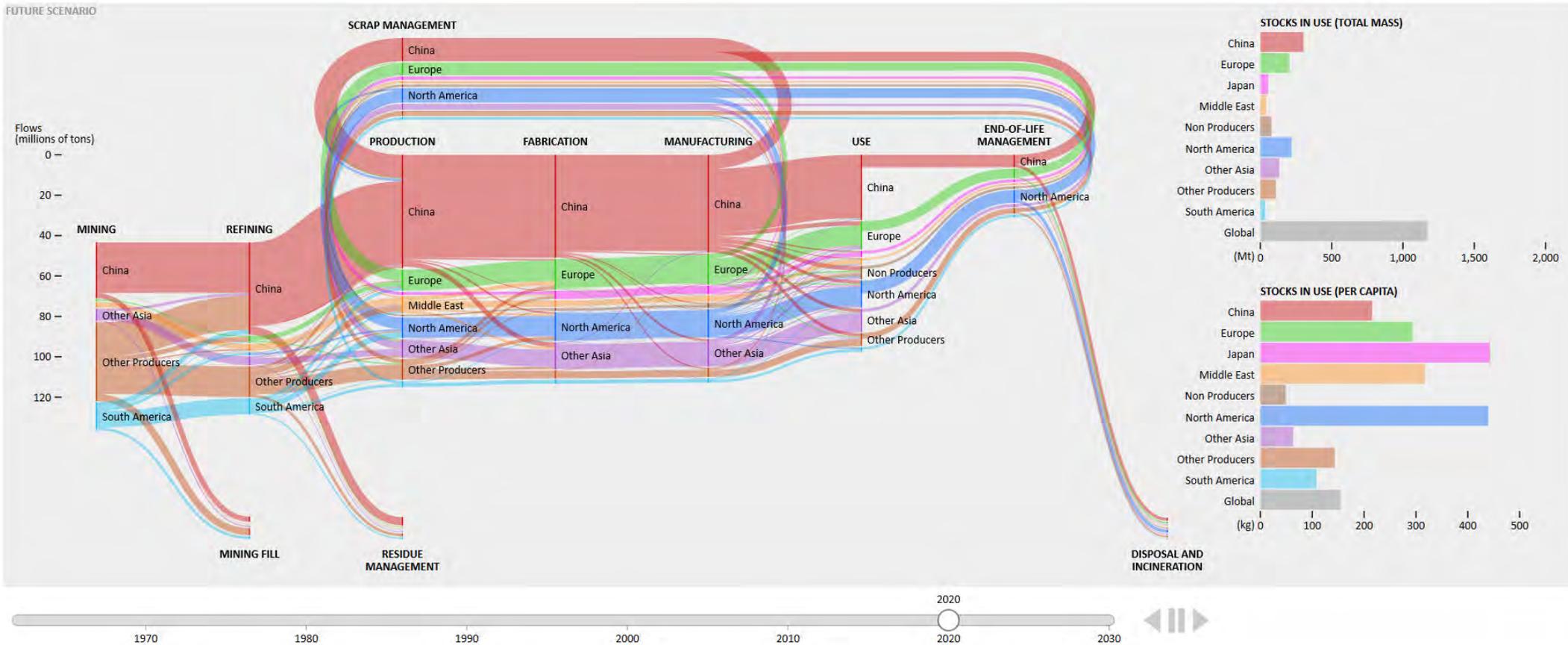
WORLD  
ALUMINIUM

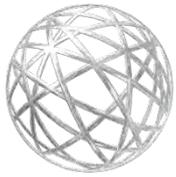
# 2018



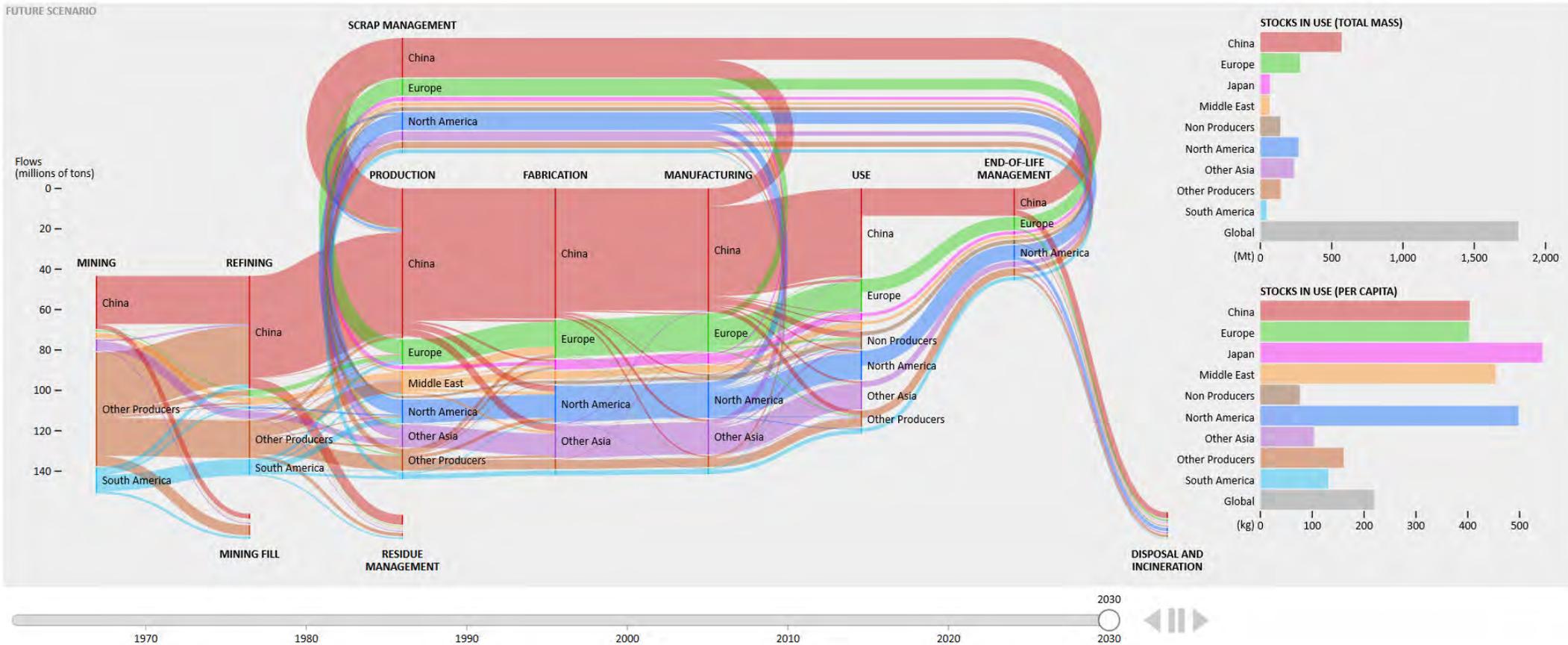


# 2020

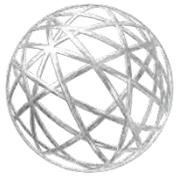




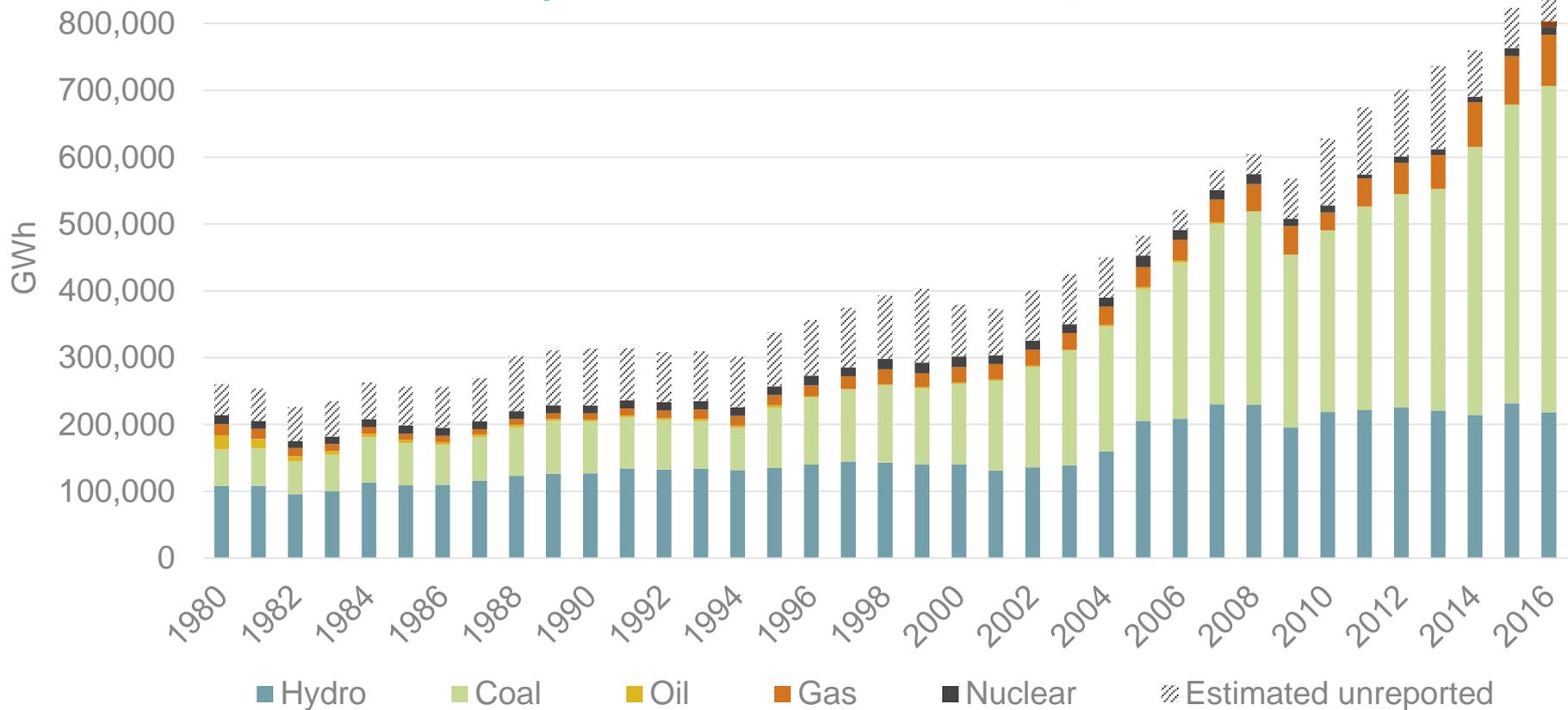
# 2030

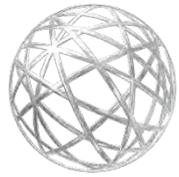


	2000	2016	2030 (scenario)
Semis demand	35 Mt	90 Mt	140 Mt
Recycled aluminium	12 Mt	30 Mt	50Mt
...of which “old”	(7 Mt)	(17 Mt)	(30 Mt)
...of which “new”	(5 Mt)	(13 Mt)	(20 Mt)
Primary required	25 Mt	60 Mt	90 Mt
Bauxite required	~ 125 Mt	~ 300 Mt	~ 500 Mt
Bauxite residue generated	~ 75 Mt	~160 Mt	~ 300 Mt



# 60% electricity demand is currently met by coal-fired power

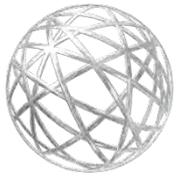




WORLD  
**ALUMINIUM**

# 2030 SUPPLY SCENARIOS

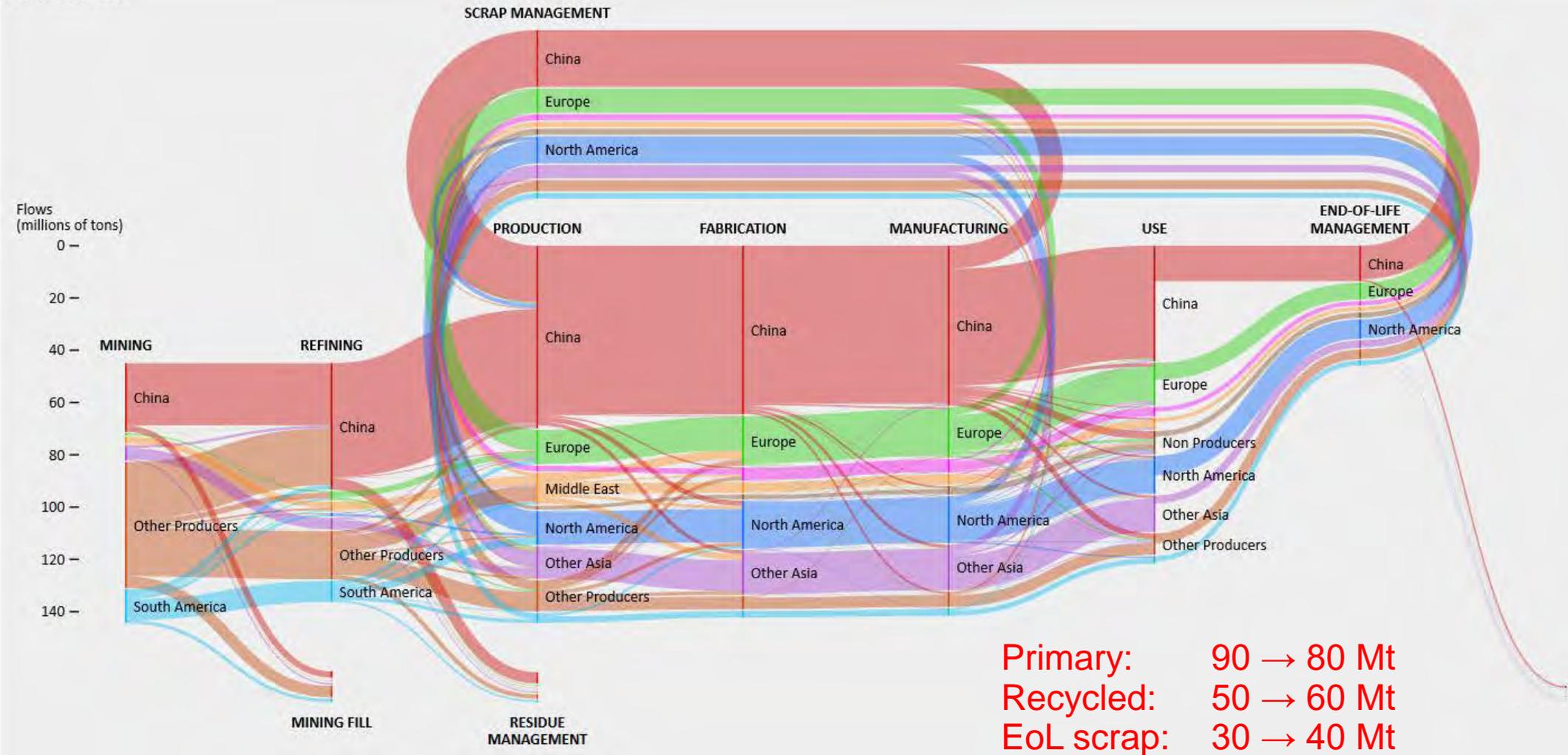




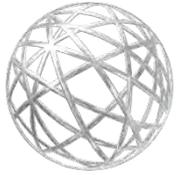
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ALUMINIUM

# Increased Scrap Collection

FUTURE SCENARIO



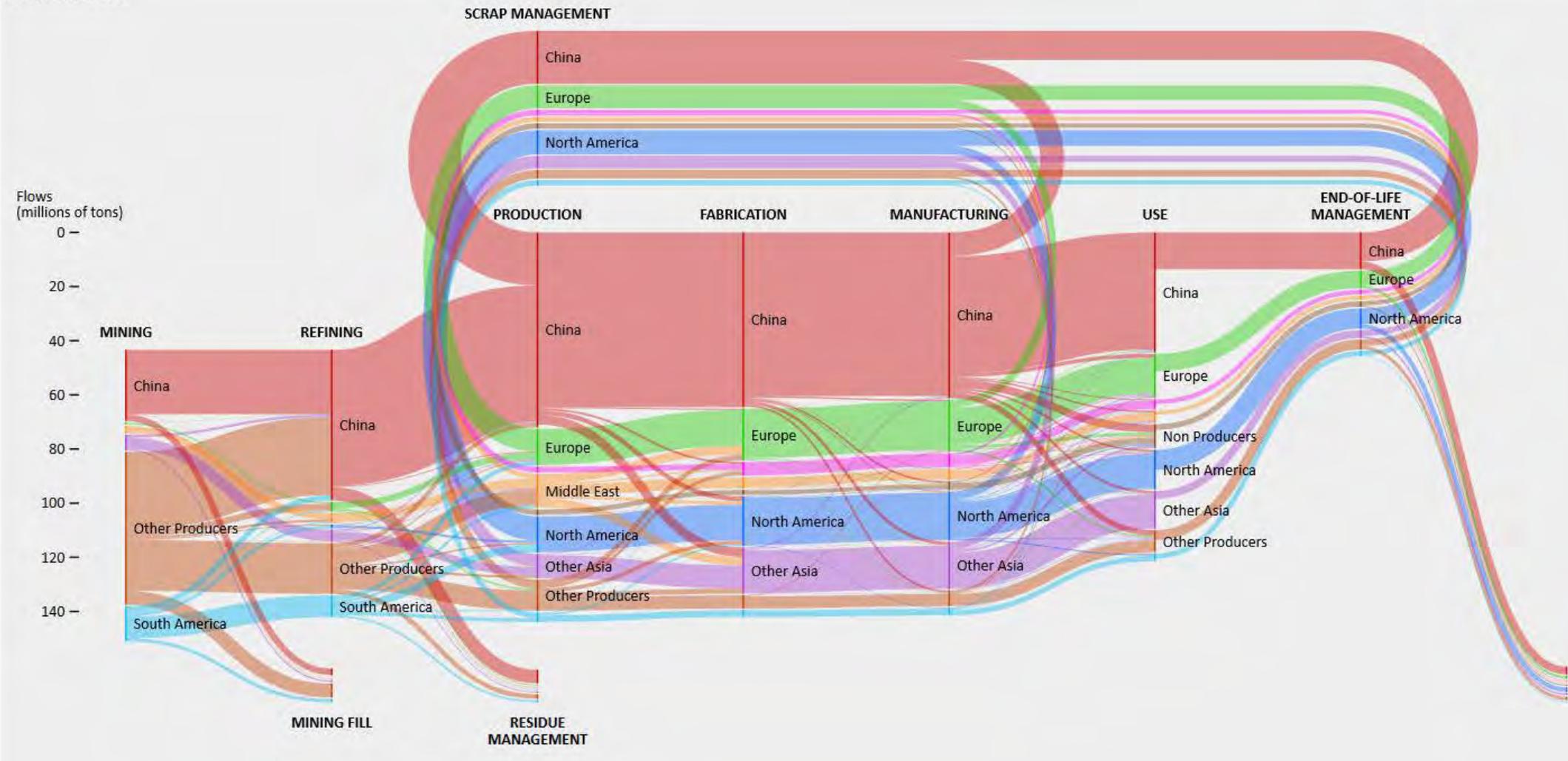




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# No Scrap Exports

FUTURE SCENARIO





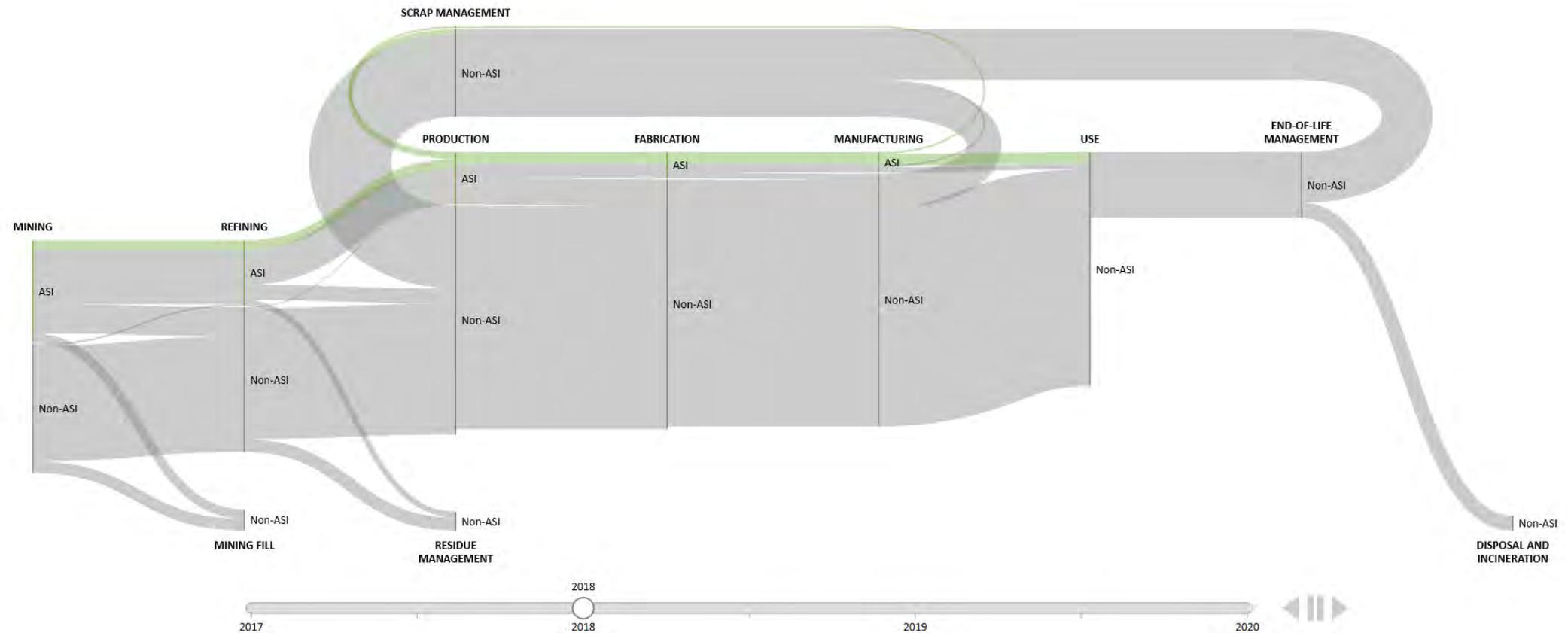
# ASI VISUALISATION

## Assumptions: ASI Demand (2020)

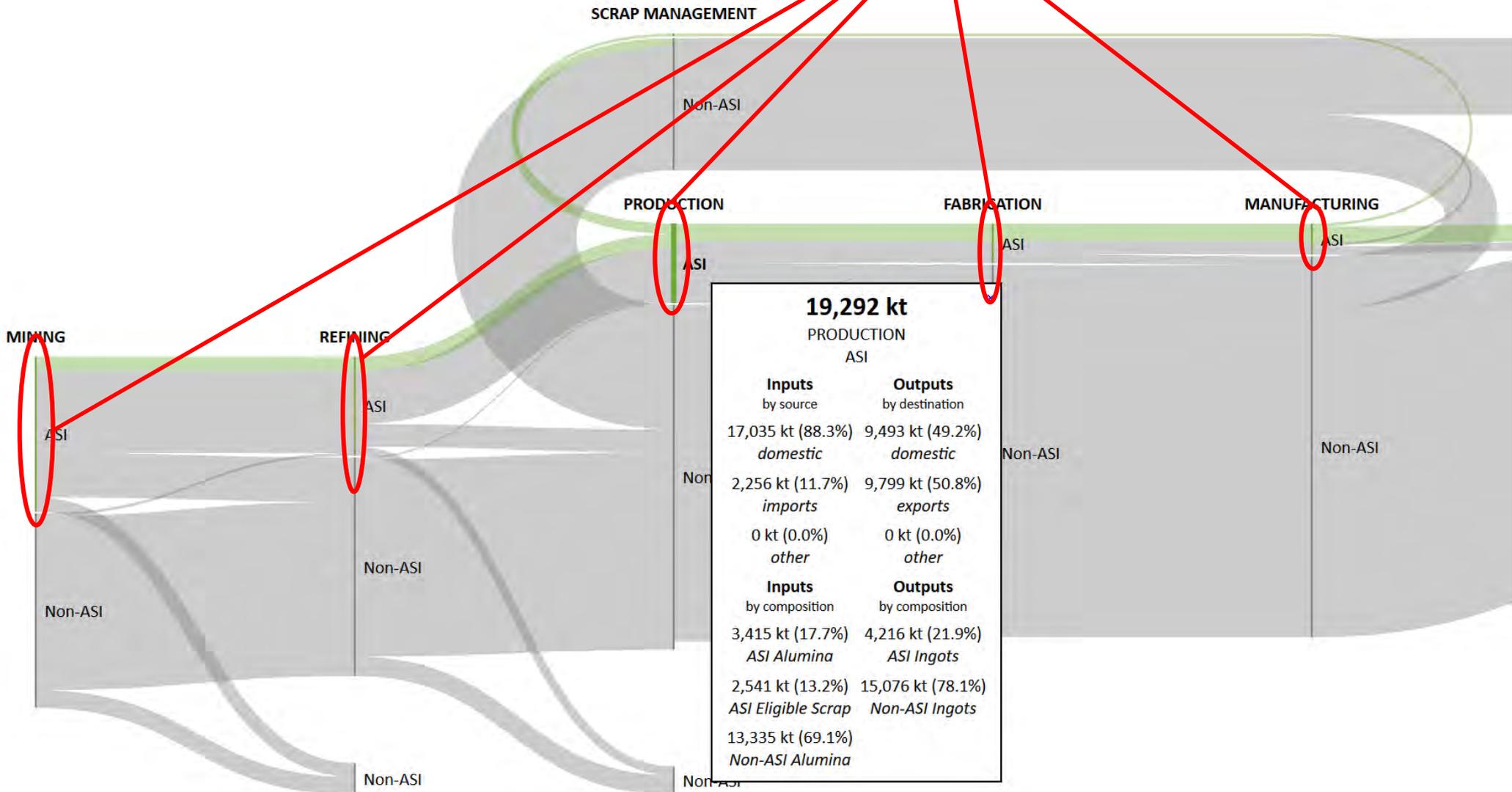
- 10% of global building & construction;
- 15% of global auto manufacturing:
  - BMW
  - Tata (Jaguar Land Rover)
  - Volkswagen (Audi)
- 100% of European foil manufacturing.

## GLOBAL ALUMINIUM ASI CYCLE 2018

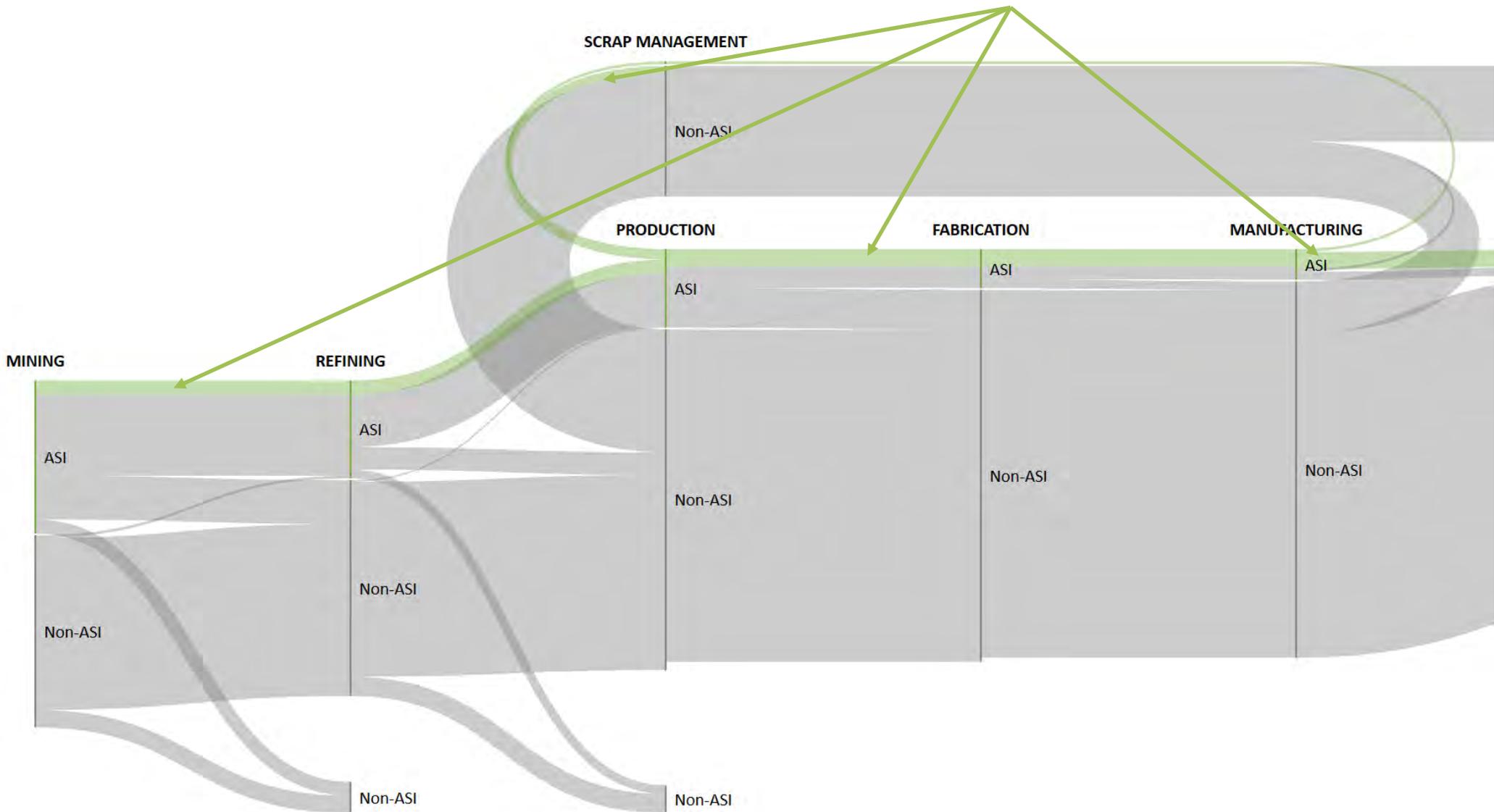
sorted by Name

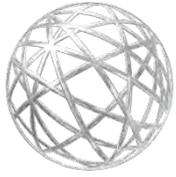


## ASI Membership (current)



# ASI Certified Material/Metal Flow (Chain of Custody)





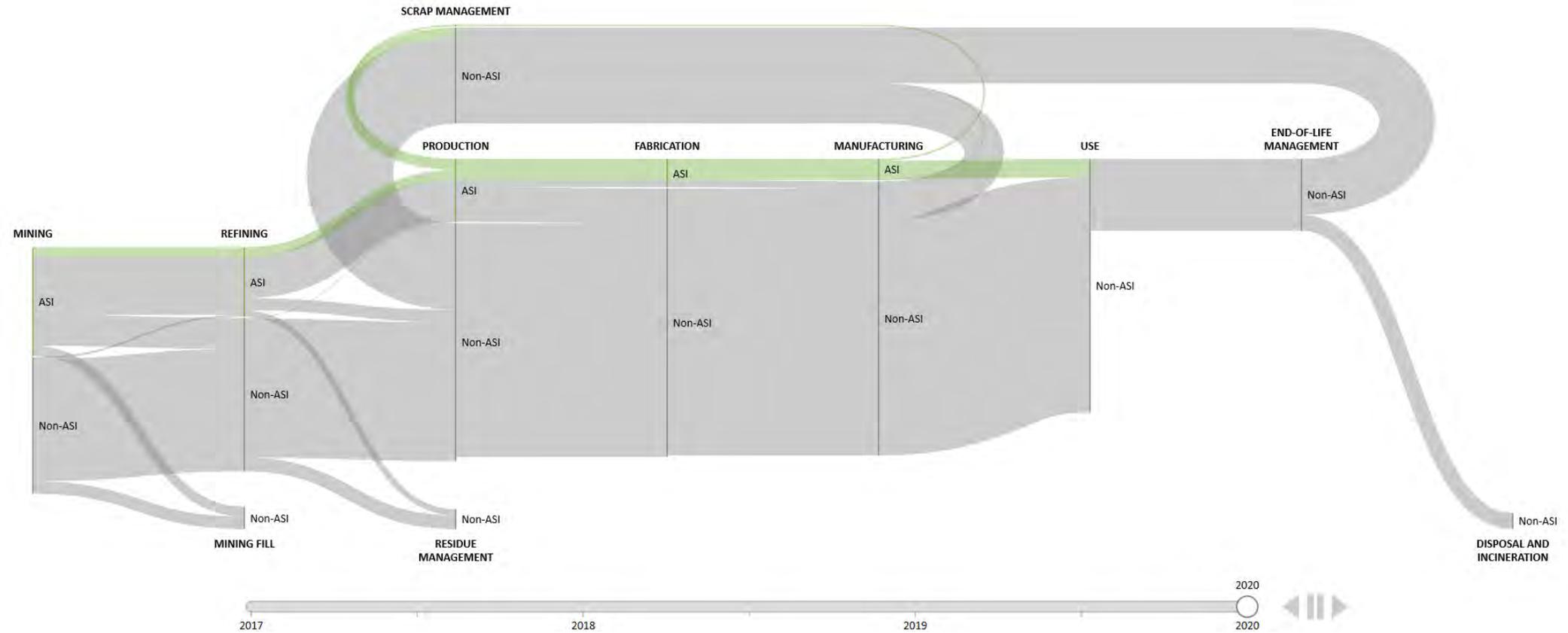
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## 2020 Scenarios

1. ASI demand met by EoL scrap supply
2. ASI demand met by primary supply

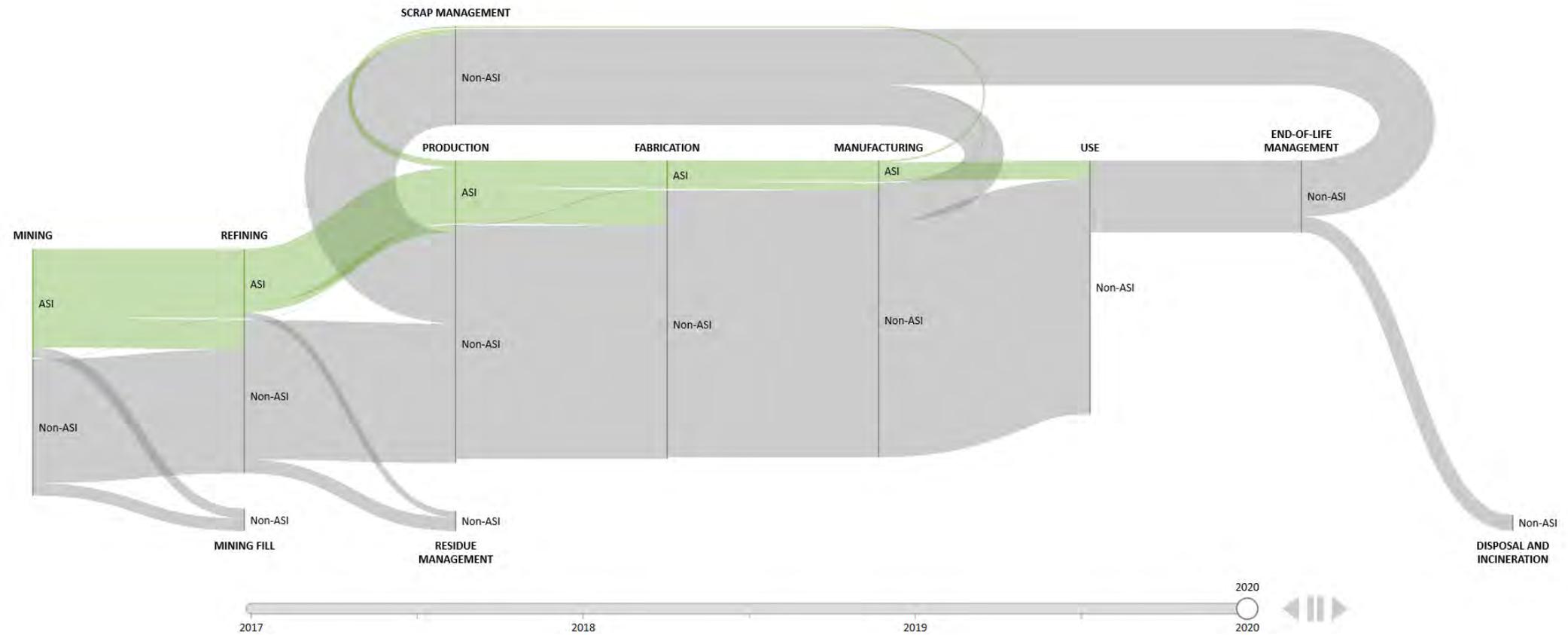
## GLOBAL ALUMINIUM ASI CYCLE 2020

sorted by Name



## GLOBAL ALUMINIUM ASI CYCLE 2020

sorted by Name





[www.world-aluminium.org/statistics/massflow/](http://www.world-aluminium.org/statistics/massflow/)

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