



# The Purpose of Packaging – and Aluminium Foil's Contribution to Sustainable Consumption

Stefan Glimm

ASI AGM Week, Molde, Norway, 5<sup>th</sup> June 2019

# Who is talking to you

- Economist with 30+ years experience  
(24 years on Executive level)
- At organisations on national, European, global level (UNEP)
- In market analysis, communication, sustainability (LCA, recycling, legislation,...)

*Stefan Glimm*



- Today:



*Senior Executive Advisor*



*Senior Executive Advisor*



*Advisory Board*



*Chairman Advisory Board*



*Director General*



*Co-Initiator*



*Board & Co-Founder*



*VP Board of Trustees*

# Global Aluminium Foil Roller Initiative (GLAFRI)



- GLAFRI founded 13<sup>th</sup> January 2015
- **62 members from 25 countries** and 5 continents
- **Representing >55 % of global aluminium foil markets** up to 200 µm
- Support foil market growth globally (communication, sustainability, market analysis)
- **Share best practice on sustainability globally**



**Göksal Güngör**  
(Turkey)  
**President**



**Simon Chan**  
(China)  
**Vice-President**



**Patrick Lawlor**  
(Americas)  
**Vice-President**



**Christian Muckermann**  
(Europe)  
**Vice-President**



**Stefan Glimm**  
(Germany)  
**Director General**

# GLAFRI 2019 - Members and Supporters

## Foil rollers:

- Alnan (CN)
- AL INVEST (CZ)
- Alcomet (BG)
- Aludium (ES)
- **Amcor Flexibles (DE)**
- **Arconic (BR)**
- ASAS (TR)
- **Assan Alüminyum (TR)**
- Buildtrade (BD)
- Carcano Antonio (IT)
- **CBA (BR)**
- China Winbo Industrial Development (Weiqiao Group - CN)
- Chinalco Henan Luoyang Foil (CN)
- **Constantia Flexibles (AT)**
- **Constellium (DE, FR)**
- Dare / Danyang (CN)
- Dingsheng (CN)
- Dongwon (KR)
- Eurofoil (FR, LU)
- **Gränges (CN, SE)**

- Gränges (Americas)
- Henan Mingtai Technology Develop. (CN)
- Hindalco (IN)
- Hulamin (ZA)
- **Hydro (DE, NO)**
- Iberfoil (ES)
- **Impol (SI)**
- Jindal (India) (IN)
- Konin (Impexmetal - PL)
- Kunshan (CN)
- Laminazione Sottile (IT)
- Lotte (KR)
- LSKB Aluminium Foils (IN)
- Luoyang Longding (CN)
- **Luoyang Wanji (CN)**
- North China (CN)
- **Novelis (DE)**
- OARC (OM)
- Panda (TR)
- Raviraj Foils (IN)
- Reynolds (US)
- SAM-A (KR)
- Shandong Deli Aluminium Techn. (CN)

- **Shanghai Shenhua (CN)**
- Slim (DE, IT)
- SNT0 (CN)
- Symetal (GR)
- Toyo (JP)
- UACJ Foil (JP/MY)
- **UC Rusal (RU)**
- Xiashun (CN)
- **Yantai Donghai/Nanshan (CN)**
- Yunnan Haoxin Aluminium (CN)

## Suppliers:

- Achenbach (DE)
- Actega (DE)
- Guizhou Chalco (CN)
- Herkules Machine-tools
- Kampf (DE)
- IAI (UK)
- Novelis PAE (FR)
- Otto Junker (DE)
- Thiel & Hoche (DE)



# What is the purpose of packaging?

Feed people: **yes**



Reduce food waste: **yes**



Produce litter: **no**



Without packaging it is impossible to

- Feed the world
- Enable sustainable consumption
- Including **\*minimizing losses** of food and packaging materials, e.g. by closing cycles: **Collect all packaging is key**

# The Food Waste Dimension



Dr Ren Wang, FAO (2014)

“Just imagine that global food loss and waste were a country. It would have a surface area larger than my own homeland, China. Its fields and meadows would be producing food that nobody would eat. It would be the largest user of water for irrigation and the third largest generator of greenhouse gases.”

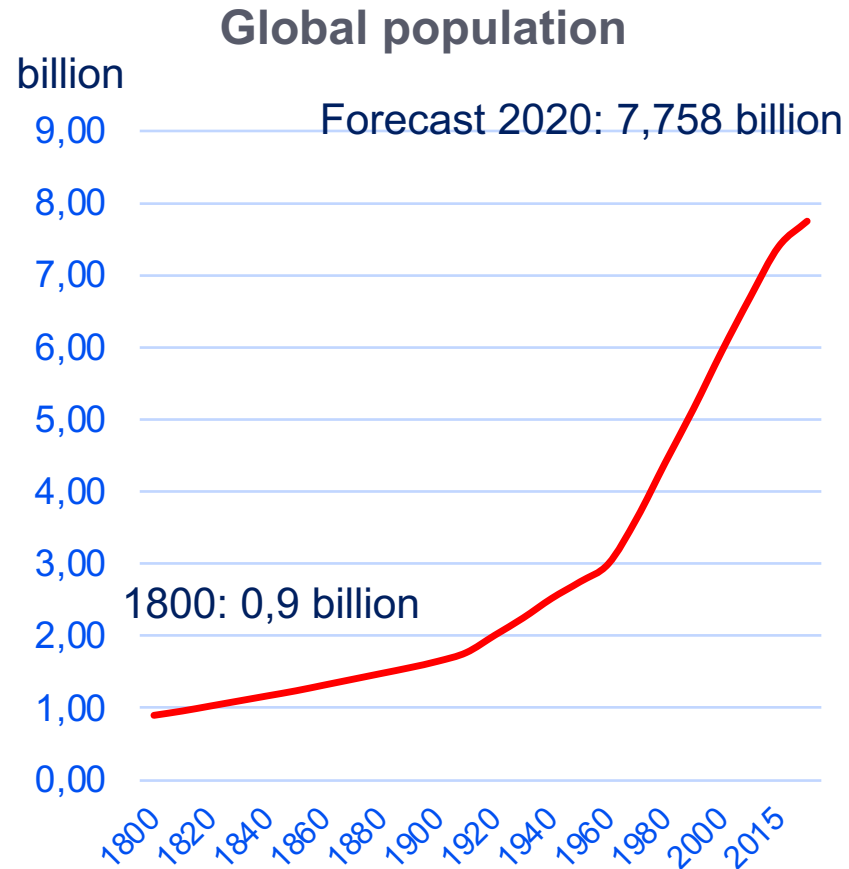


Solutions for a world aware of its resources

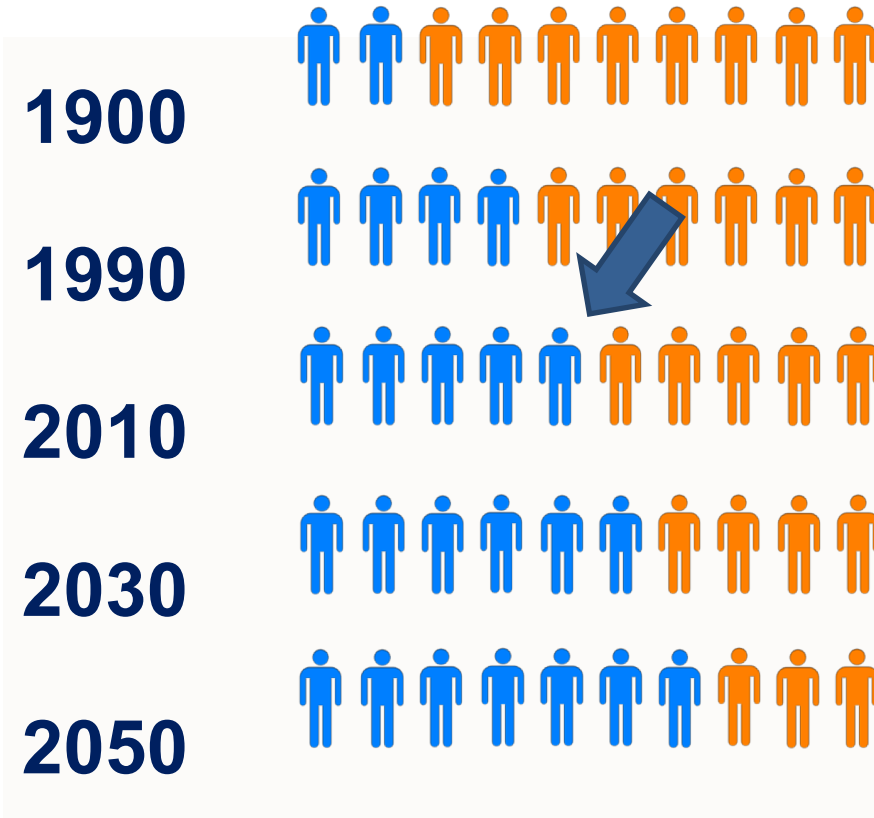


(GLAFRI is member of Save Food Initiative)

# Food loss reduction = feed world population 2050+



### People living in an urban area

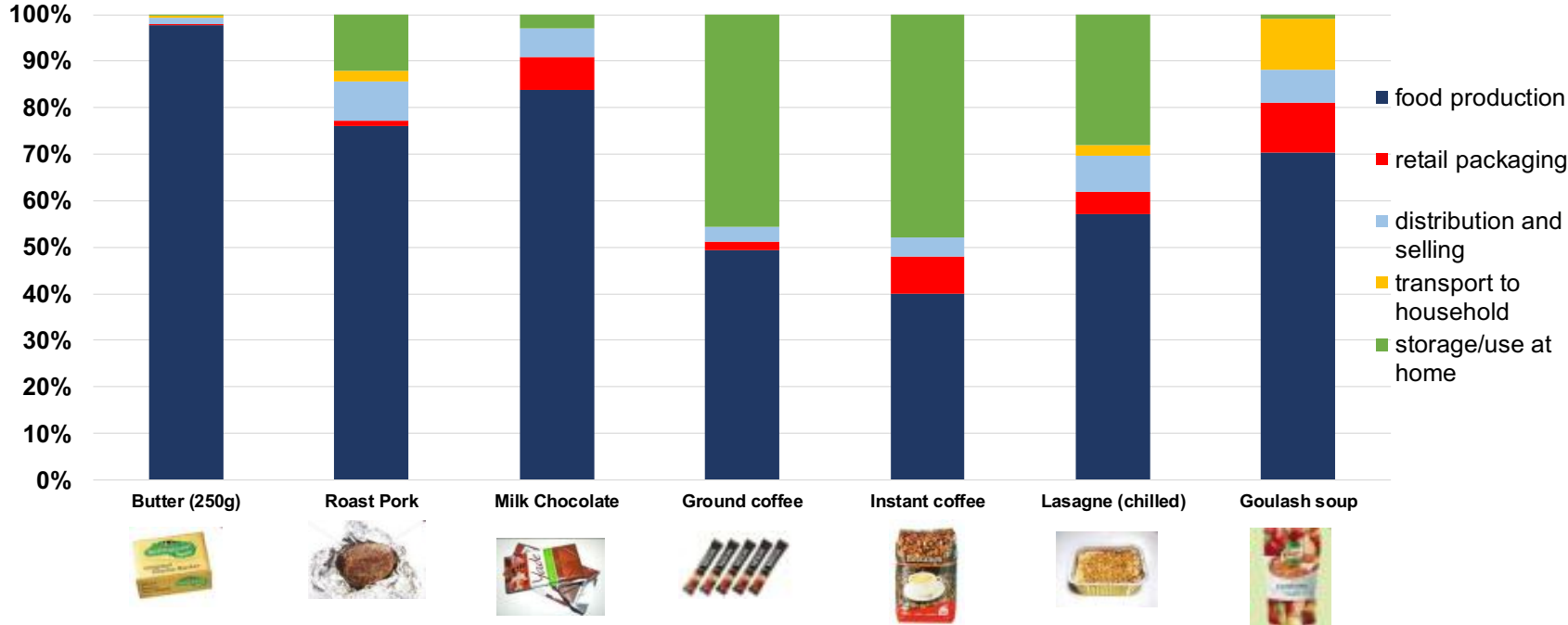


**They all need food, medicine,...**

# Alufoil Helps to Reduce Food Waste

Alufoil packaging helps to prevent spoilage and wastage of valuable food, the production of which requires significantly more resources than the production of the packaging itself.

*Carbon Footprint (GWP) of Food Products – Breakdown by life cycle stage*



**All these LCA's qualified as best practice by UNEP/SETAC**

**➔ Alufoil based packaging represents a relative small part of the overall environmental product impact – usually below 10%.**



# Investment in Appropriate Packaging saves more Resources than it needs



2 -10 %  
Packaging

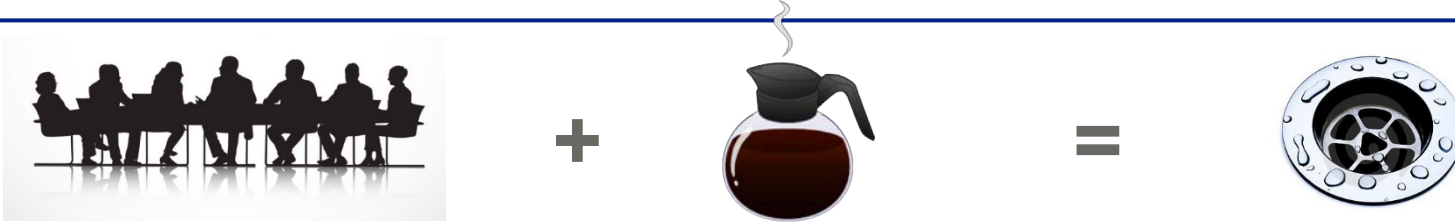
Resources required

90 -98 %  
Coffee production,  
transport and distribution,  
boiling water

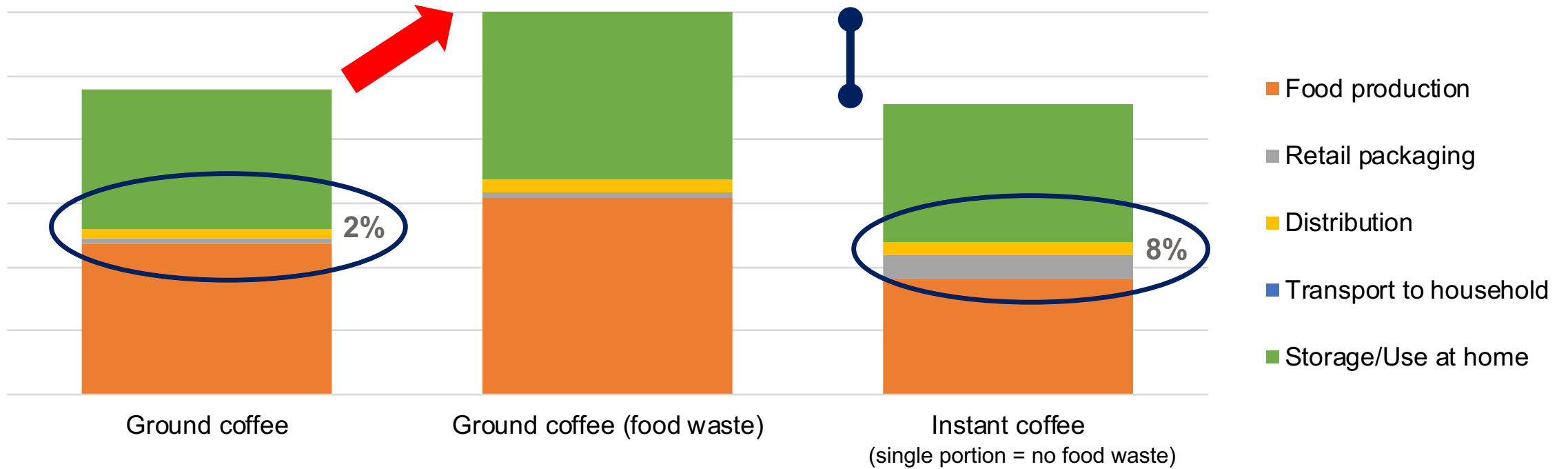
*More is Less*

EFA's "More is Less":  
<http://youtu.be/hHFKkOU1-dg>

# Which cup of coffee has the higher carbon footprint?



Coffee in meetings can easily result in 30% waste



Measured in g CO2-eq

Source: ESU Services

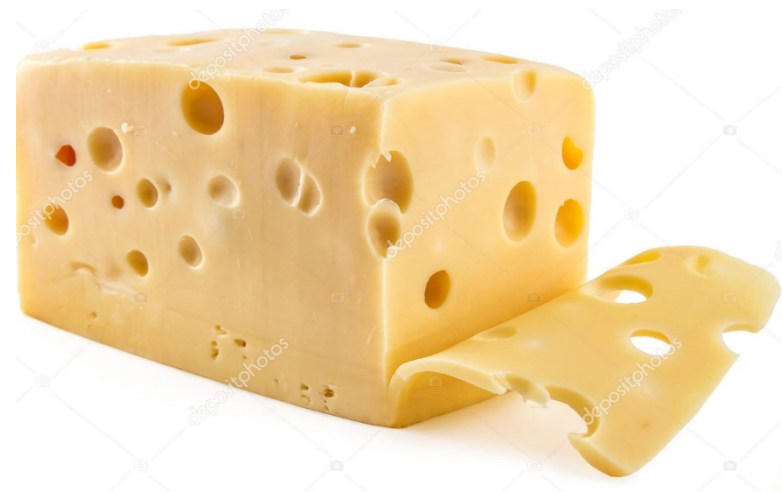
# What generates less food losses in canteens: packed or sliced cheese?

Measured cheese waste in French canteens:

- 6% for individually packed cheese
  - leftovers on the meal tray



- 15% for cheese cut on-site
  - 3% left-over during preparation
  - 9% leftovers on the meal tray
  - 3% surplus thrown away at the end of service



# Single Serve, Easy-to empty and Food Waste

Jam



Joghurt





# Food Waste Reduction by Lotus Effect



Lotus leaves have an effect to show very high water repellency because of **the fine physical structure and the chemical property**. The effect is called as a "Lotus Effect".



TOYAL LOTUS®

Conventional

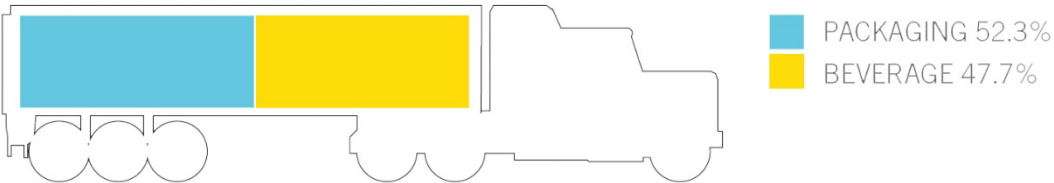


- ✓ Clean aluminium packaging material
- ✓ Effective for food loss reduction (SAVE FOOD)

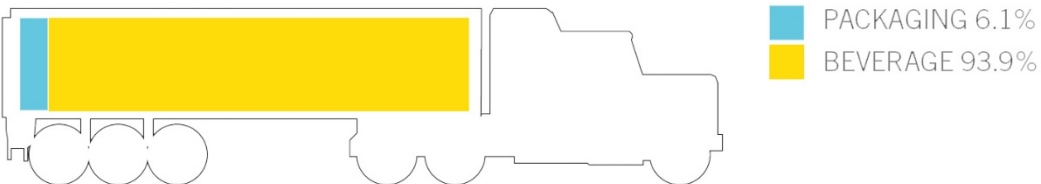
# Prevention and Light-weighting

## From filler to retailer:

TRANSPORTING BEVERAGES IN GLASS (0.2L IN CRATE OF 12)



TRANSPORTING BEVERAGE IN A POUCH (0.2L IN 10-PACK CARTONS)



## From packaging supplier to filler:

1 truck for flexibles vs up to 26 trucks for non-flexibles

# Prevention of packaging waste – the 2 options



**Material prevented from becoming waste:**

**= 5g or 10% less**

**= 45g or 90% less**

# Which packaging is more resource efficient?

- A rigid pack (weight 50 g) with 80% recycling rate?



→ Material loss is 10 g

- Or a flexible pack (weight 5 g) with 0% recycling rate?

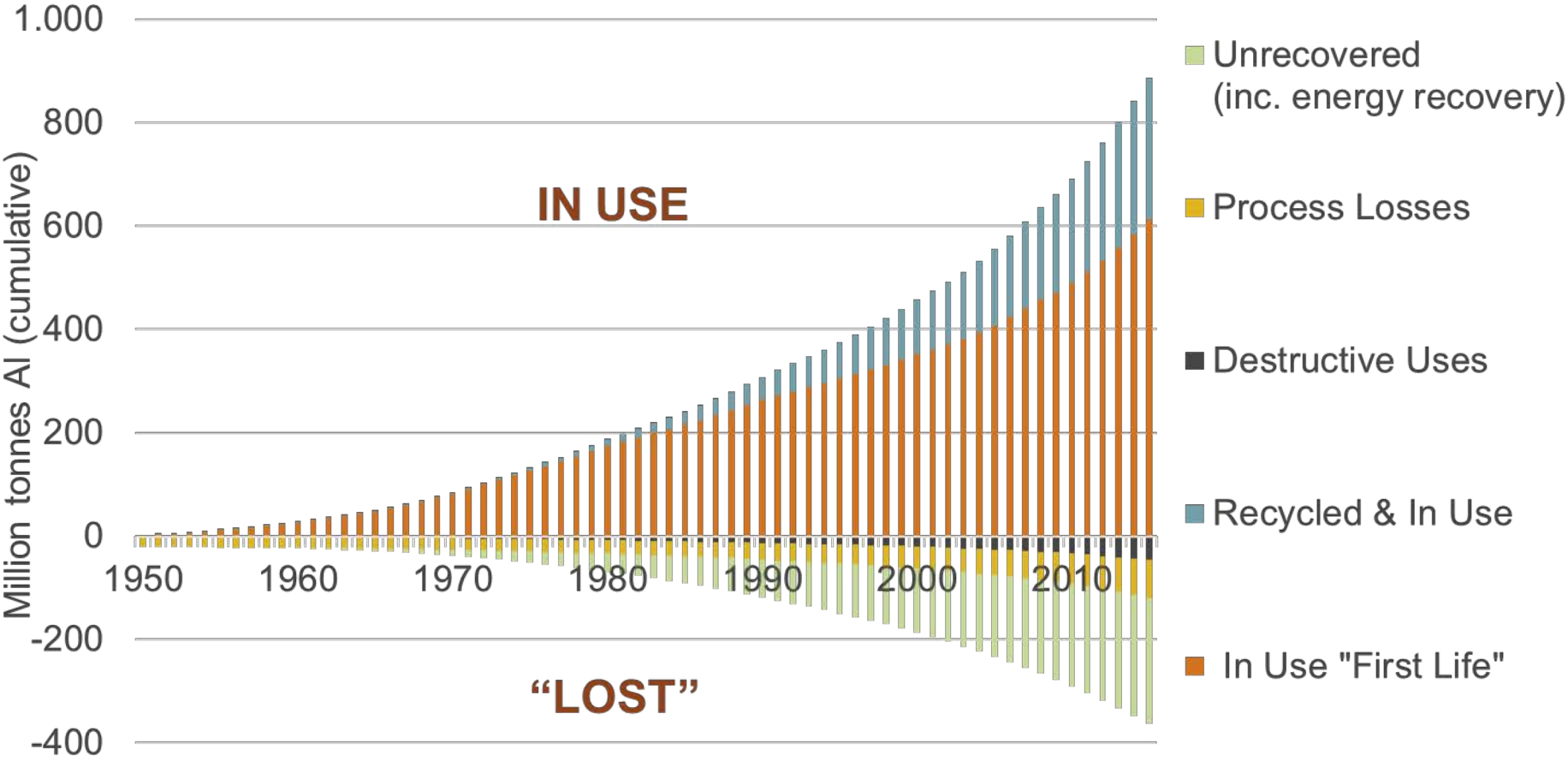


→ Material loss is 5 g

**Minimizing material losses is of key importance for a circular economy!**



# Aluminium: 75% still in use, but...



Source: IAI

 **Reducing the losses further would make aluminium more sustainable...**

# Conclusions

- No collection – no recycling (Collect All Packaging)
- Resource efficiency: enable consumption with lowest possible resources
- Prevention: Serve same purpose with less material / resources
- Minimizing food and packaging material losses

➔ Invest in primary aluminium greenfield – or invest in collecting ‘lost’ aluminium?

➔ Need for new business models with intrinsic incentive to minimize v-ALU-e-able material losses?  
(‘leasing’ aluminium rather than selling?)



# Thank you!



**Contact:**

Stefan Glimm, Director General

GLAFRI - Global Aluminium Foil Roller Initiative

Mörsenbroicherweg 200 – 40470 Düsseldorf – Germany

Mobile +49 172 26 56 301

[stefan@global-alufoil.org](mailto:stefan@global-alufoil.org)

[www.global-alufoil.org](http://www.global-alufoil.org)