

# The challenges of sustainable food packaging.



## Raw material & sourcing



Global demand for primary raw materials expected to double by 2060.

### Rethinking food packaging from the ground up.

- Fossil-based plastic and aluminium production are on the rise
- Both are used in food packaging for their protective attributes
- Production of these raw materials drains natural resources and causes significant carbon emissions

### What can we do?

Replacing fossil-based plastic and aluminium in food packaging with responsibly sourced, plant-based renewable materials can reduce carbon emissions and protect biodiversity and our natural ecosystems.



## Production & distribution

The global food system accounts for

**26%**

of greenhouse gas emissions.



### Reducing greenhouse gas emissions.

- Emissions from global packaging are greater than shipping and aviation
- There is no sign of greenhouse gas emissions peaking any time soon
- That means global warming could reach 4.1°C by the end of the century

### What can we do?

Using renewable energy and renewable materials to produce food packaging while focusing on more efficient packaging distribution can help reduce global greenhouse gas emissions.



## Food protection & consumption



of food produced globally is lost or wasted.

### Securing enough safe food for a growing population.

- 8.9% of the world's population already suffers from hunger
- Food loss and waste affects nutrition, poverty and economic growth
- By 2050, the population will reach 9.1 billion, requiring 70% more food

### What can we do?

Using advanced food processing technologies and protective right-sized packaging solutions can help reduce food waste and improve food availability for people everywhere.



## Recycling



of global waste is recycled.

### Pushing the limits of recycling with systems thinking.

- The world generates about 2 billion tonnes of municipal solid waste a year
- Despite significant industry initiatives, most waste is not recycled
- And only 9% of all plastic is recycled

### What can we do?

We need to enhance recycling by design, focusing on both improving recyclability of the package and building integrated systems to support collection, sorting and recycling to keep materials in use.



## End-of-life

**32%**

of plastic packaging escapes collection systems globally.

### Reducing end-of-life impact on nature.

- Waste management systems are yet far from optimal
- Plastic can only be recycled a limited number of times before it reaches end-of-life
- Plastics that end up in the environment, including the world's oceans, add to pollution

### What can we do?

By using paper-based packaging, reducing the amount of used plastic and increasing the share of renewable materials, we can minimise the impact on nature and climate.

#### Sources:

ECD, Global Material Resources Outlook to 2060, 2018 · Our World in Data, 2019 · Material Economics, IEA Energy Perspectives, 2017 · UN Emissions Gap Report, 2019 · Climate Action Tracker, 2019 · Food and Agriculture Organization of the UN, 2019 · UN Sustainable Development Goals, 2019 · The World Bank, 2018 · UN Environment Report, 2018 · The Ellen MacArthur Foundation, 2016 · Penn State College of Earth and Mineral Sciences, 2020

## Go nature. Go carton.

Packaging plays a critical role in the global food delivery system, helping keep food safe, nutritious and available for people around the world. But it can also cause problems for the planet. We believe that paper-based carton packages have the greatest potential to solve these challenges. By starting with responsibly sourced plant-based or recycled materials, neutralizing carbon emissions, improving recycling and keeping materials in use longer, we can create packaging that secures food availability around the world while protecting nature and climate.

Learn more about the packaging challenges we face and how we're working to solve them at: [www.gonature.tetrapak.com](http://www.gonature.tetrapak.com)

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