WORLD ECONOMIC FORUM

COMMITTED TO IMPROVING THE STATE OF THE WORLD

The Fourth Industrial Revolution and the New Plastics Economy

Presentation to the UN Consultative Process on Oceans and the Law of the Sea

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Chair, World Economic Forum's Global Agenda Council on Oceans
14th June 2016, New York

About the World Economic Forum

- The World Economic Forum's Mission: *Committed to Improving the State of the World*
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- Several major communities:
  - Davos Annual Meeting
  - Regional Meetings
  - Global Agenda Councils
  - Public Figures
  - Businesses
  - Civil society
  - Technology pioneers

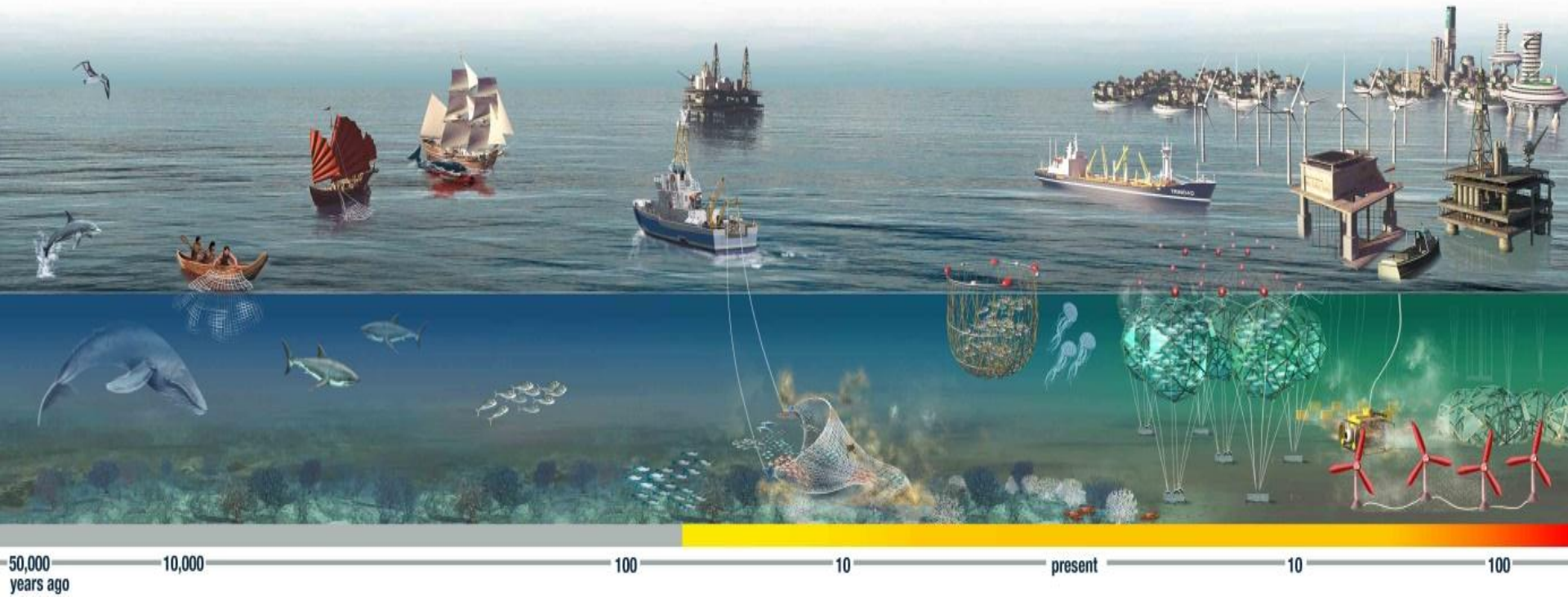
Source: https://www.weforum.org/

Agenda

- The Fourth Industrial Revolution
- The New Plastics Economy
- Governance in a new age

We are in the midst of a Fourth modern Industrial Revolution

Overview of technological advancement in fisheries, shipping, ocean energy, navigation and marine governance



Source: Degnarain, McCauley, https://www.weforum.org/agenda/archive/fourth-industrial-revolution/

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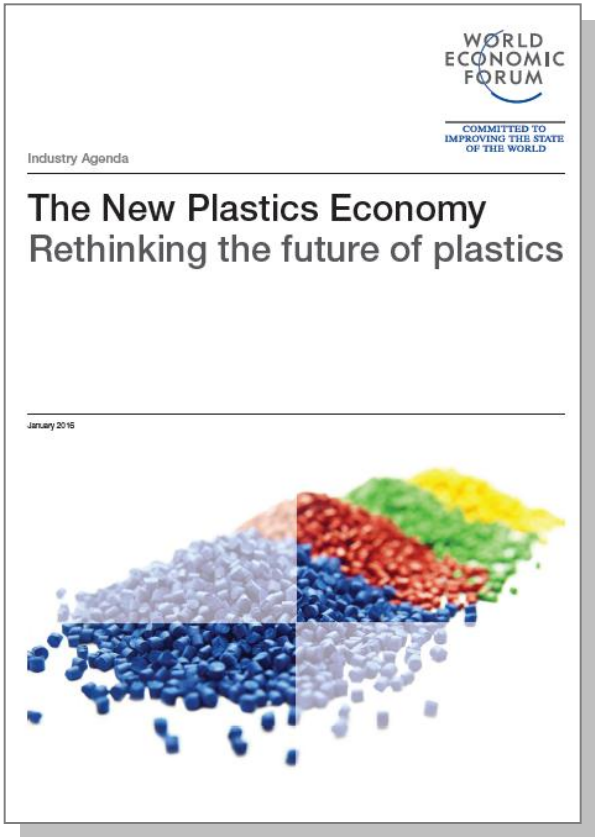
The New Plastics Economy Report and Taskforce

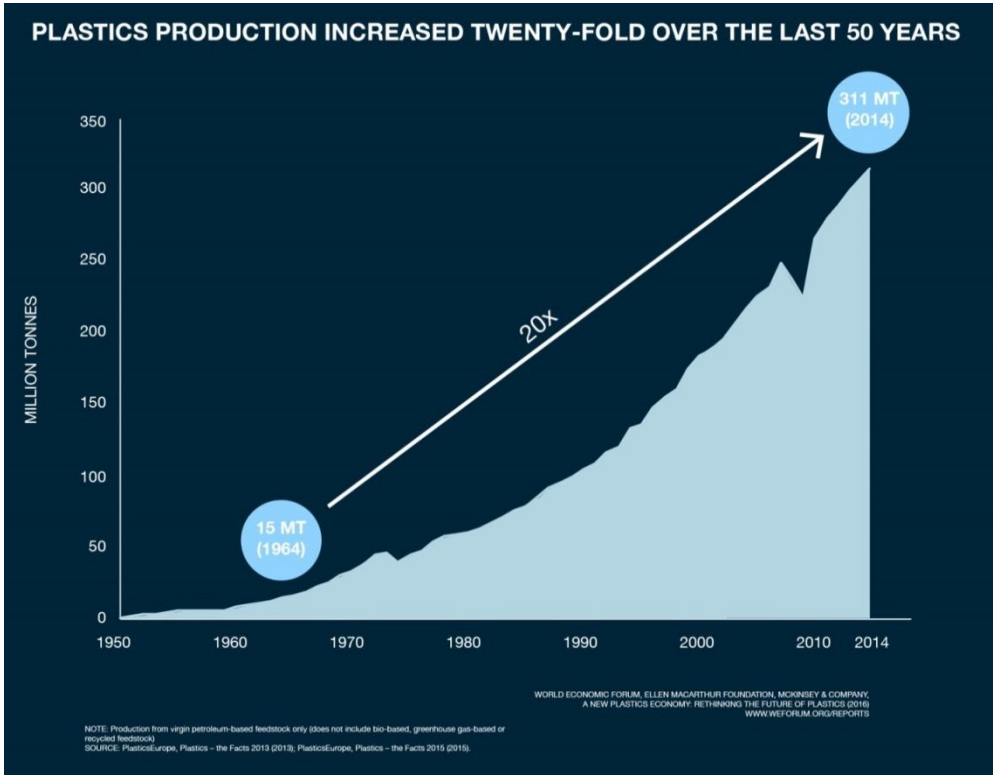


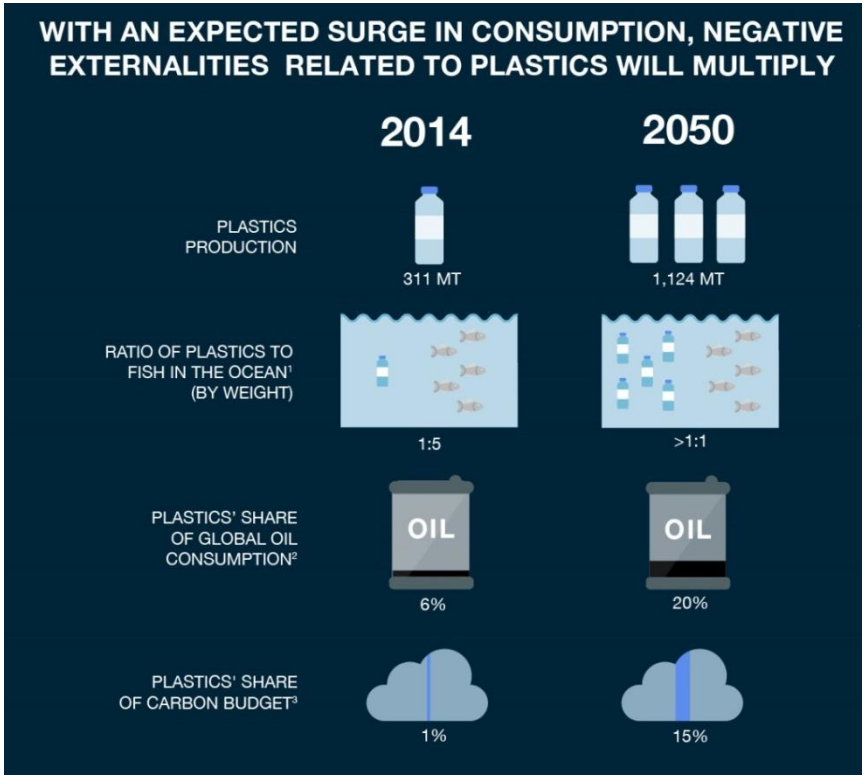
Key partners:

Ellen MacArthur Foundation
McKinsey & Company
Averda
BT
Ecolab
Indorama
Philips
Royal DSM
Suez Environment
Tarkett
Veolia

Source: https://www.weforum.org/reports/the-new-plastics-economy-rethinking-the-future-of-plastics/

Plastics increased 20x in last 50 years… and is expected to increase 4x again by 2050 so there will be more plastics than fish in the sea





Source: https://www.weforum.org/reports/the-new-plastics-economy-rethinking-the-future-of-plastics/

Packaging is a major use of plastics, but 95% of packaging is discarded with a value of ~$100billion a year

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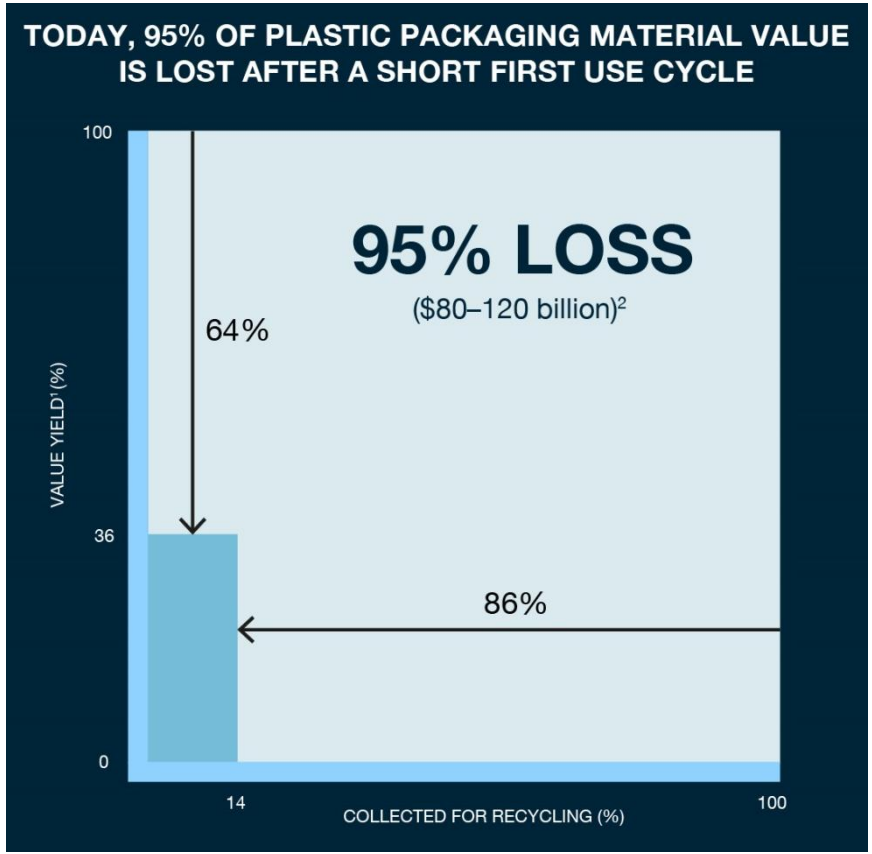
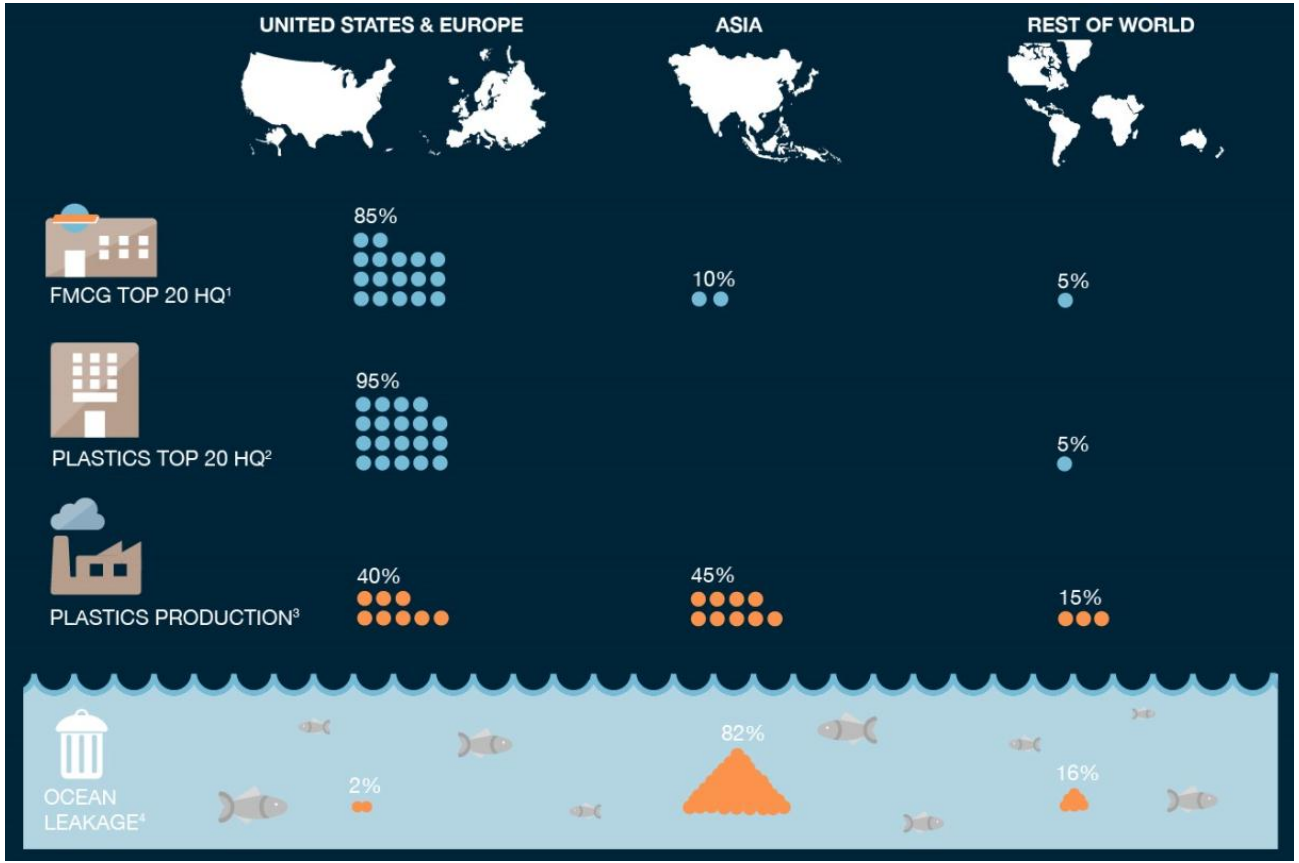
Main plastic resin types and their use in packaging



Source: https://www.weforum.org/reports/the-new-plastics-economy-rethinking-the-future-of-plastics/

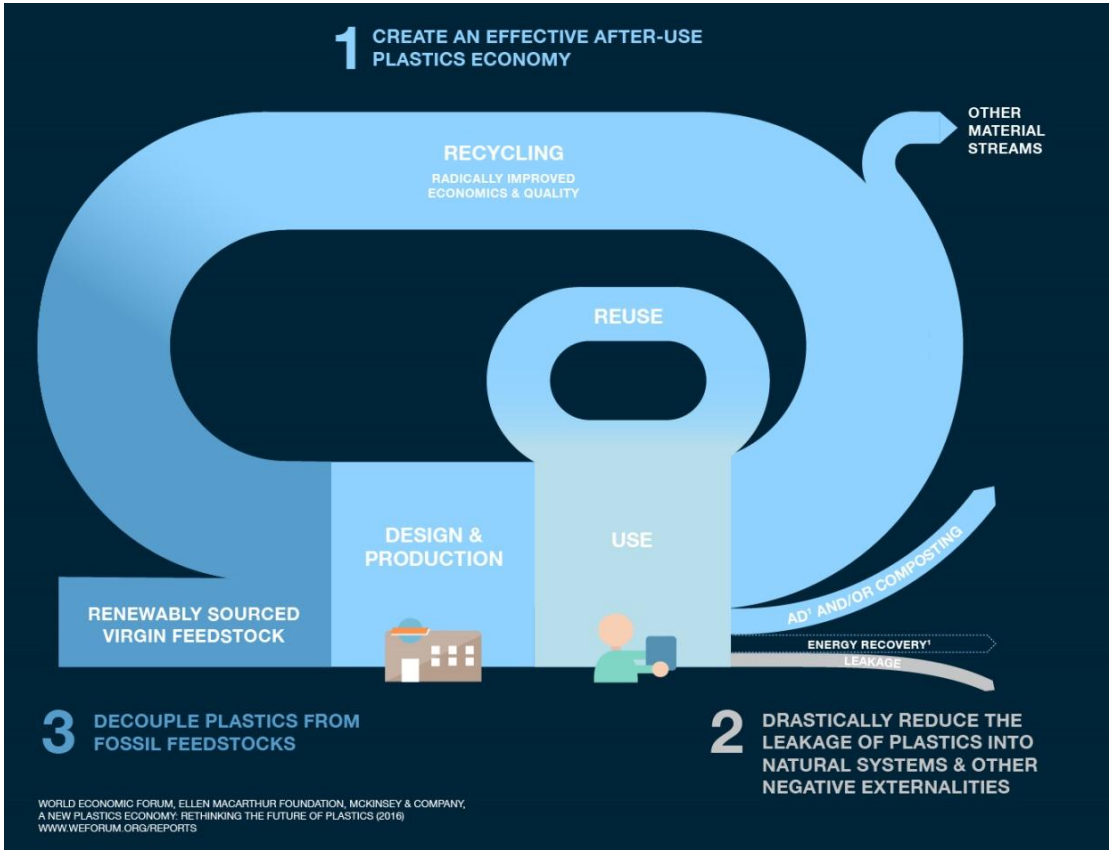
It is critical to engage Asia, US and Europe in transitioning to a new plastics economy



- 82% of global plastics leaking into the ocean comes from Asia
- 85% of major Fast Moving Consumer Goods Headquarters are in the US and Europe
- 95% of major Plastics Producers Headquarters are in US and Europe (even if plastics production is more distributed across US, Europe and Asia)

Source: https://www.weforum.org/reports/the-new-plastics-economy-rethinking-the-future-of-plastics/

Several major steps are needed by both the private and public sector to transition to a new Plastics Economy



1. Establish the Global Plastics Protocol and coordinate large-scale pilots and demonstration projects
2. Mobilize large-scale, targeted “moon shot” innovations
3. Develop insights and build a base of economic and scientific evidence
4. Engage policy-makers
5. Coordinate and drive communication

Source: https://www.weforum.org/reports/the-new-plastics-economy-rethinking-the-future-of-plastics/

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New Governance approaches using new technologies are needed in the era of a Fourth Industrial Revolution

Technologies that could transform governance of our oceans:

- Big Data
- Artificial Intelligence/Deep Machine Learning
- New satellite technologies
- New Materials
- Social Media
- Blockchain legal technologies
- Synthetic Biology
- Biological engineering

Source: World Economic Forum's New Vision for Oceans Initiative

THANK YOU

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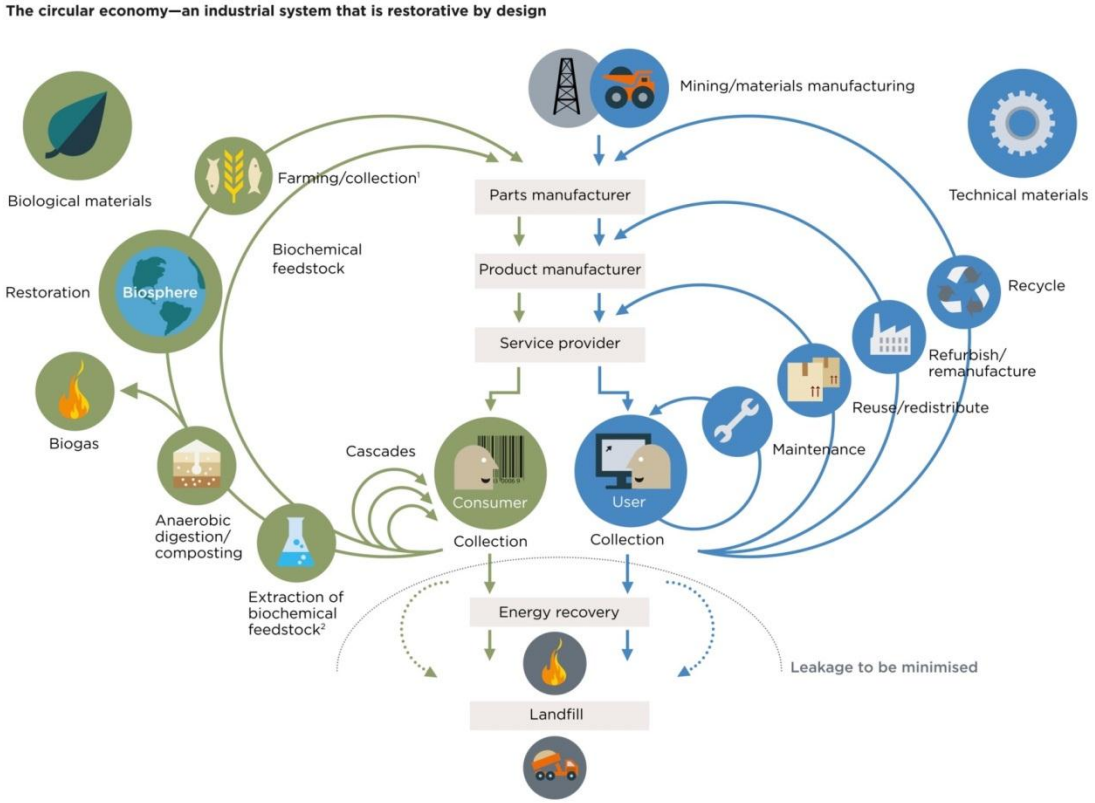
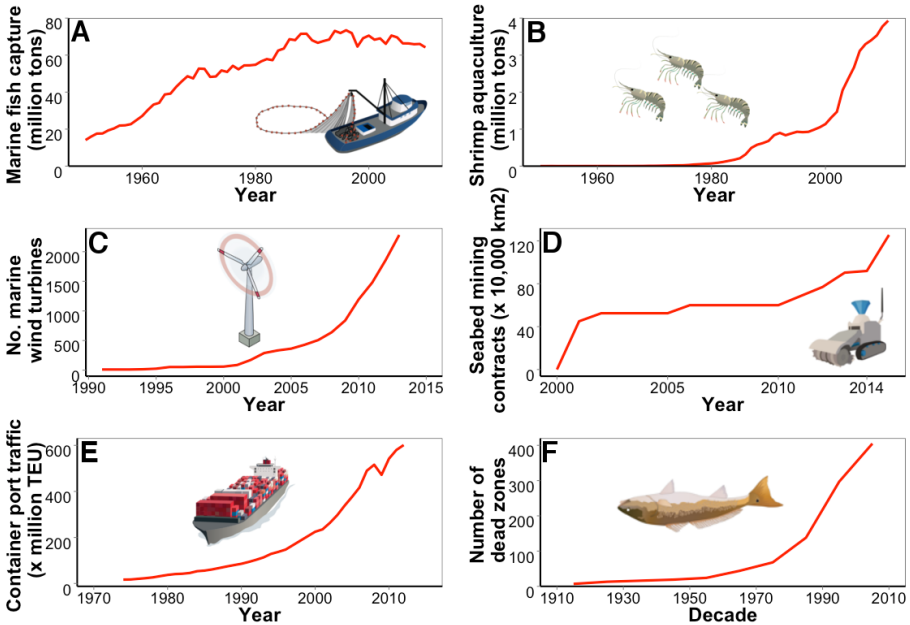
APPENDIX

The circular economy aims to decouple economic growth from resource constraints

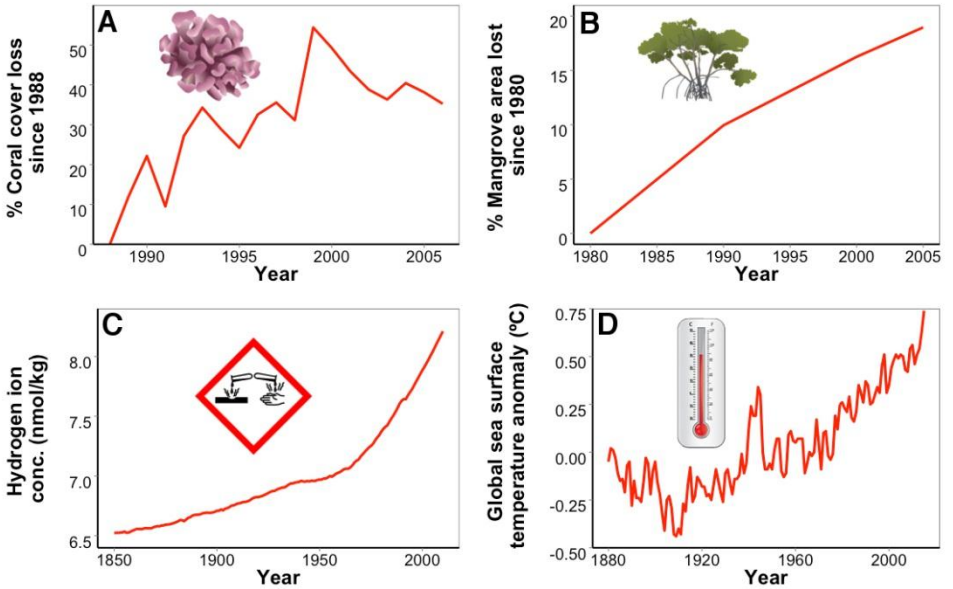


The marine Industrial Revolution and its impact on Ocean Health

Technological progress from recent industrial revolutions...



…impact on ocean health



Source: McCauley, https://www.weforum.org/agenda/archive/fourth-industrial-revolution/

SDG 14: Life under the Oceans

14.1 by 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution