



Transition of Global Chemical Industry

~ICCA (International Council of Chemical Associations)
E&CC (Energy & Climate Change) Leadership Group

02/27/2023

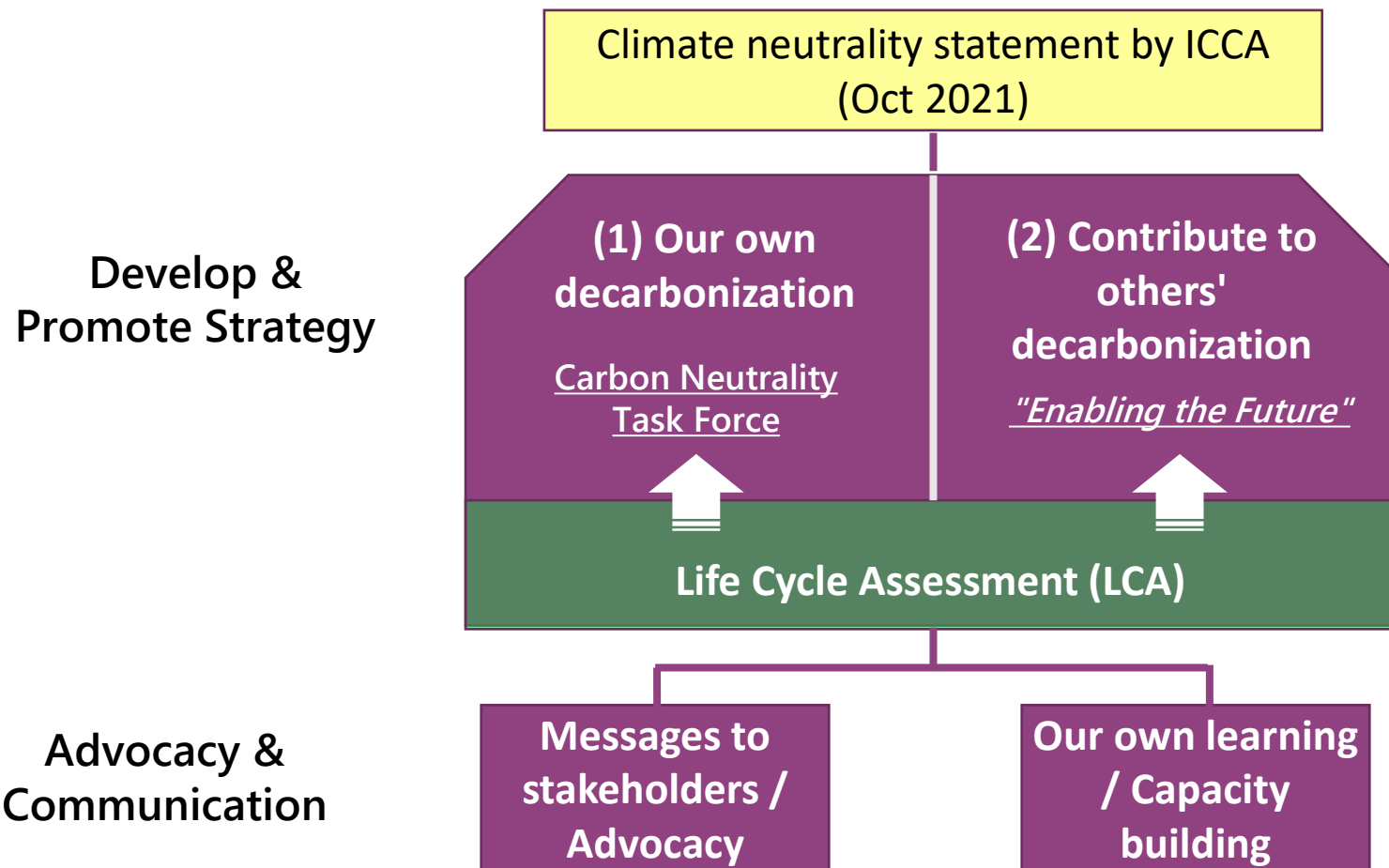
Noriyuki Mita
Chair of ICCA E&CC





Overall concept of E&CC's activities

E&CC is responsible for developing and promoting a comprehensive chemical industry energy and climate change strategy that keeps the industry's competitiveness and growth.





The Chemical Industry is committed to Climate Neutrality

- ✓ ICCA Statement on Climate Neutrality (Oct. 29, 2021)

ICCA fully supports the Paris Agreement and the ambition to achieve a climate neutral world by mid-century.

The chemical and materials manufactures ICCA represents are committed to begin part of the solution to global climate change in two ways: by

1. Reduce GHG emissions associated with our own operations
2. Enable the entire manufacturing value chain including the building and construction, energy, transportation and consumer goods sectors and even individual consumers, to reduce their own GHG footprints through the use of the energy saving and emission-reducing technologies and materials produced or made possible by chemical innovations

LCA is a critical key for both our own reduction efforts and contribution to other sectors and consumers





The chemical industry needs to figure out GHG emissions associated with our own operations first to reduce it, as well as draw up pathways to carbon neutrality.

How:

- Estimate the current GHG emissions based mainly on production amount and manufacturing process
- Cover 18 major chemical products including olefin, ETX, PE/PP/PET, ammonia, and hydrogen
- Aim to draw up multiple pathways to CN considering future technology availability and cost assumptions
- Plan to publish an interim report at COP28 in 2023



ICCA published a report “Enabling the Future (2019)”, which showcases a selection of exemplary solutions from the global chemical industry to support the transformation toward a low-carbon society.

E&CC is updating this report to take into account the latest technological development.

1,000 solutions
through desktop
research

137
solutions

17 technology clusters

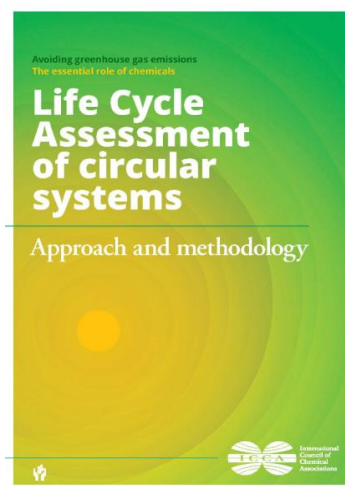
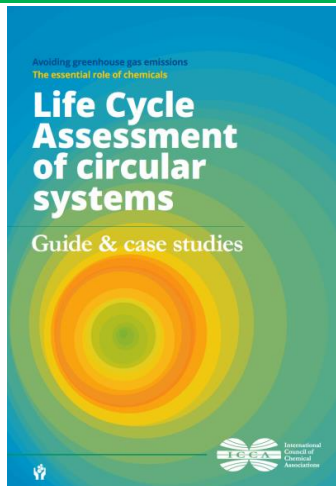
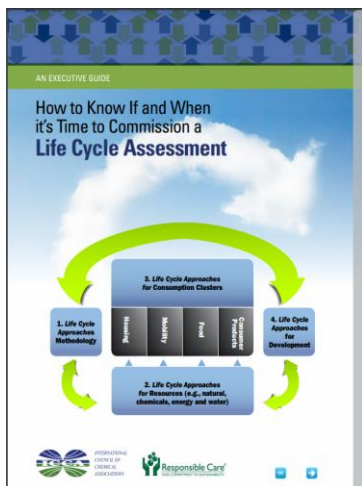
- Alternative Energy Generation
- Batteries
- Biodegradable Products
- Biofuels
- CCS
- CCU
- Energy Storage Solutions
- Fuel Cells
- Hydrogen Production
- Lightweight Materials
- New Catalytic Processes
- Waste to Chemicals ...

5 sectors

- Power Generation and Storage
- Industry and Production
- Mobility and Transport
- Nutrition and Agriculture
- Building and Housing

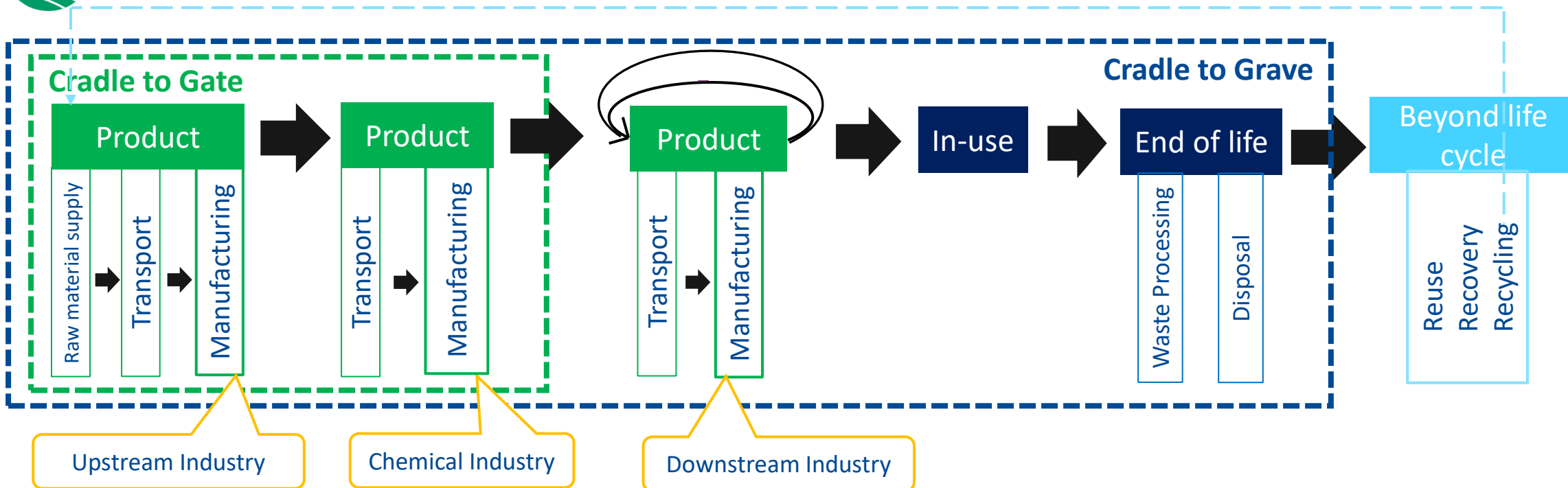
- ✓ **LCA** is a critical key to make a **science-based decision** to reduce GHG emissions considering **impacts throughout entire value chain**, for both 1) our own reduction efforts and 2) contribution to other sectors and consumers.
 - ⇒ **collaboration between upstream and downstream industry** is necessary
- ✓ ICCA strives to study and publish results as well as to engage in capacity building in order to enhance the understanding of LCA.
 - ⇒ develop/improve calculation **methods** and improve **data quality**
 - ⇒ **raise awareness/understanding on LCA**

Publications



Calculation tool development and Capacity building

- Collaborating with ISC3 and GIZ, ICCA has been participating in **Climate Action Programme for the Chemical Industry (CAPCI)** project to raise awareness/understanding on trends, risks and opportunities related to climate change in developing and emerging countries based on LCA.



Sharing LCA thinking / information and common methods

Provide value (better products/service) with science-based information

✓ develop/improve calculation methods and improve data quality

Select (procure) better product/service, Share costs

✓ raise awareness/understanding on LCA

ICCA Activities

- Study and publications
- Capacity building





E&CC strives to publish scientific reports

Avoided Emissions

