

# **Position Talk:**

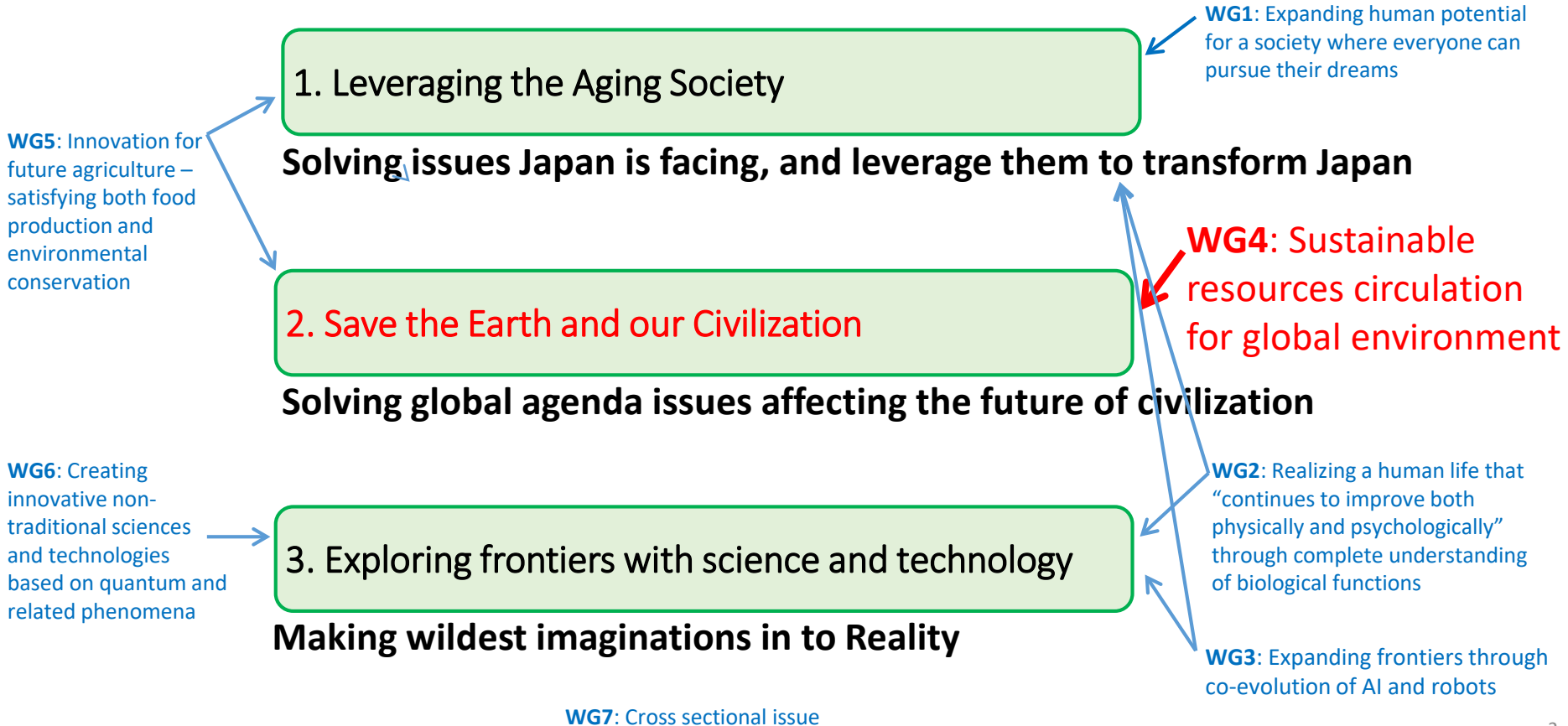
# **Sustainable Resources Circulation for Global Environment**

**Kenji YAMAJI, Chair of WG4**  
Senior Vice President/Director-General,  
Research Institute of Innovative Technology for the Earth (RITE)

Plenary Session2:  
Areas and Visions for Setting Moonshot Goals  
**Moonshot International Symposium**

December 17, 2019  
@Bellesalle Tokyo Nihonbashi

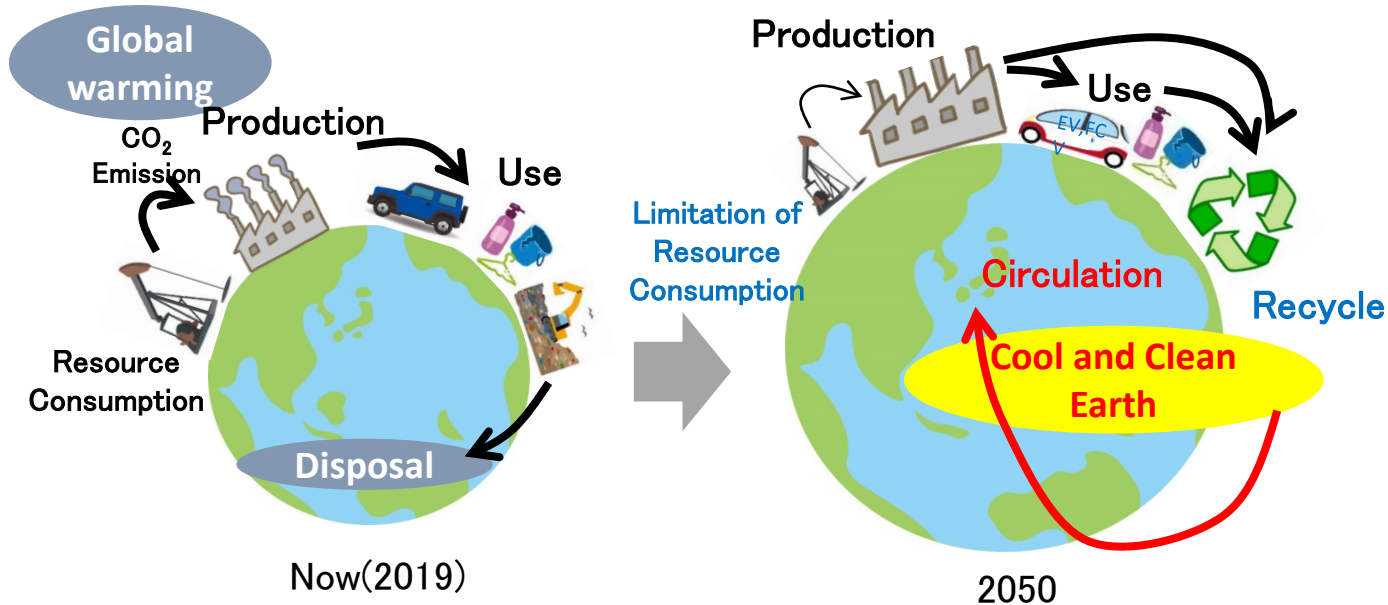
# WG4 in the Mission Areas for Moonshot Program



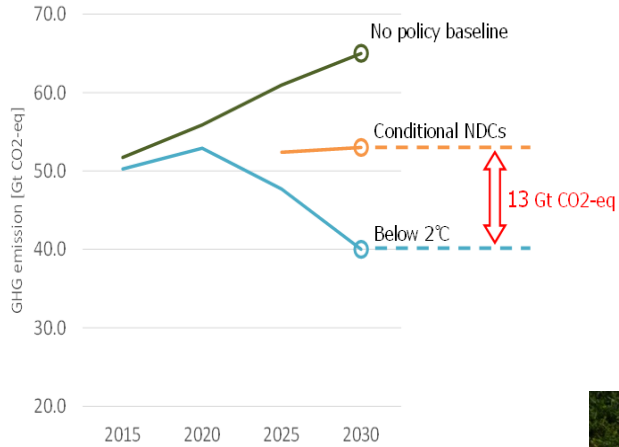
# Moonshot Goal Candidate:

## Realization of Sustainable Resources Circulation to Recover the Global Environment by 2050

The mission of this Moonshot Goal Candidate is to develop technology for reducing the emissions of greenhouse gases and pollutants to contribute to the recovery from the ongoing issues of global warming and environmental pollution. The concept of the this theme consists of pillars of , **“Cool Earth”** and **“Clean Earth”**



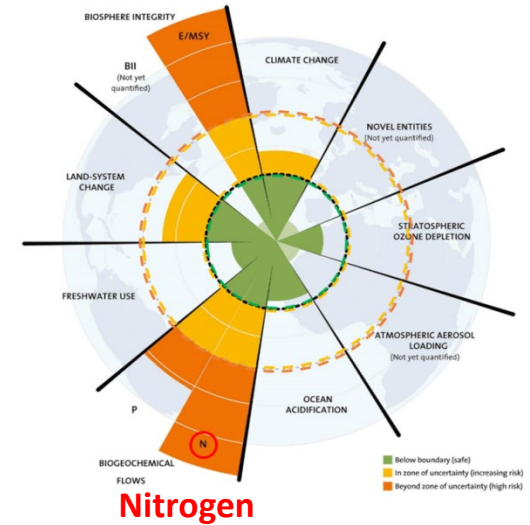
# Global Threats for Cool Earth and Clean Earth



**Giga-ton Gap for the Below 2°C Target**

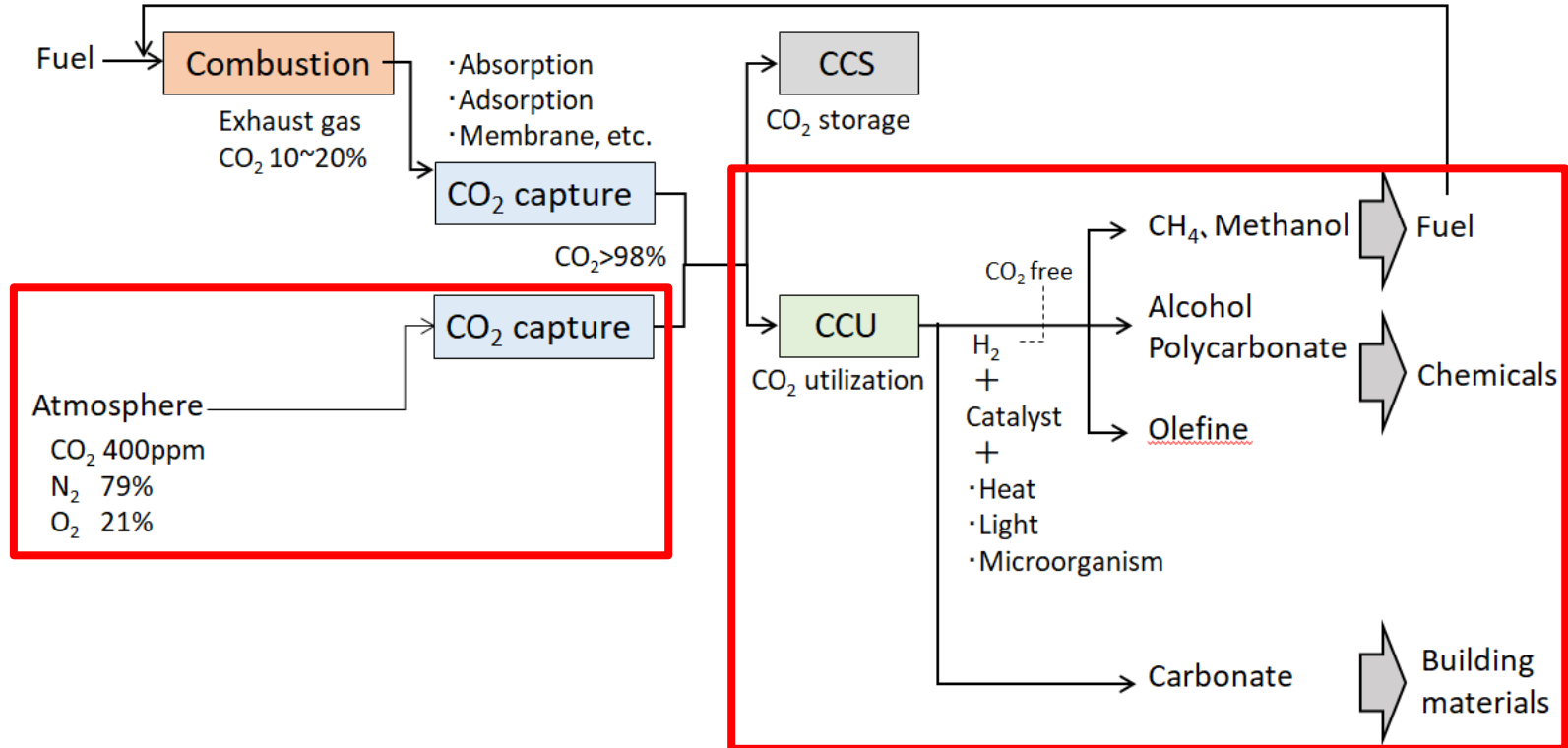


**Marine Plastic Litter**

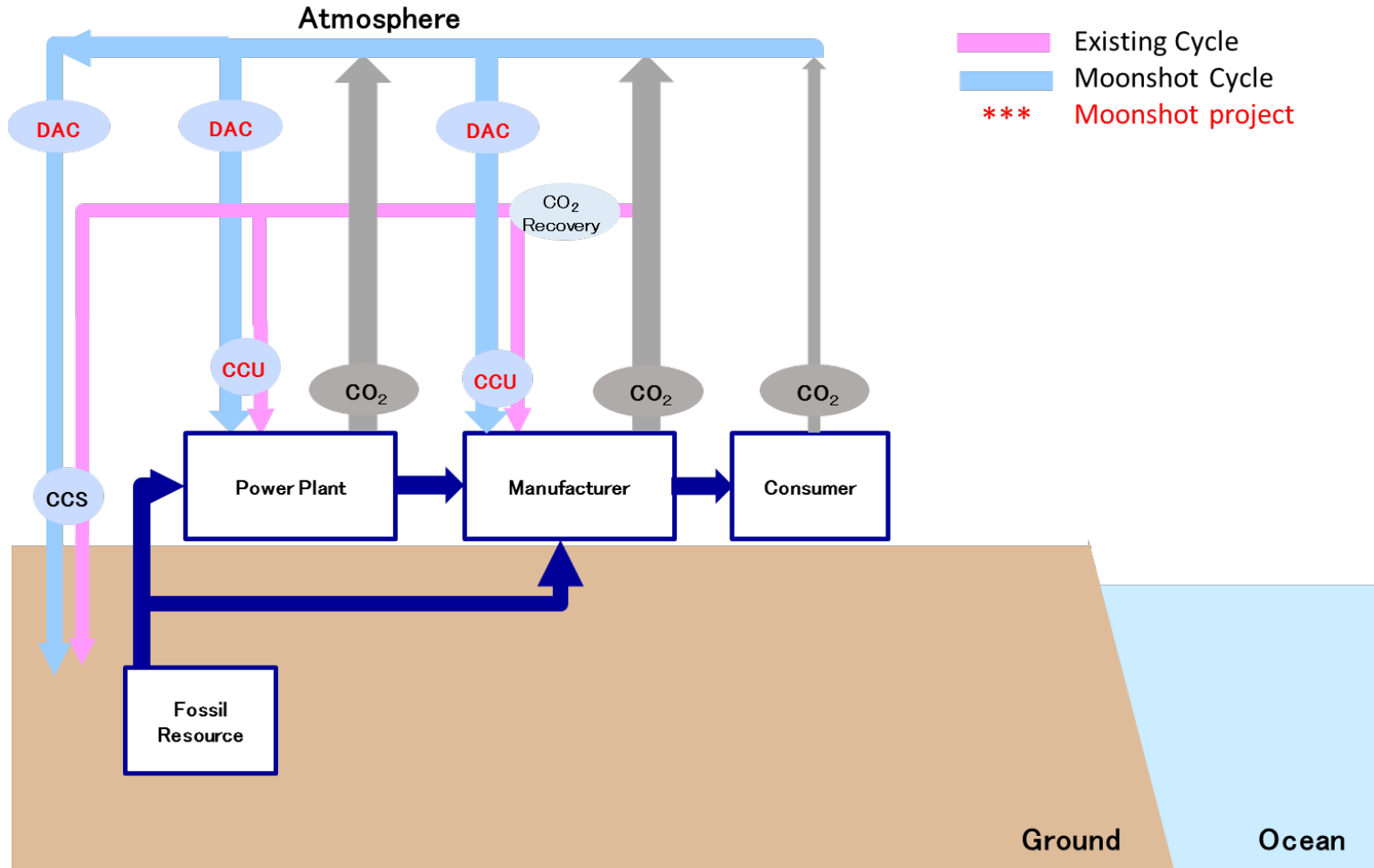


**Beyond Planetary Boundaries**

# Challenge: CO<sub>2</sub> recovery from atmosphere (DAC), and Recovered CO<sub>2</sub> can be converted into fuel and/or various chemicals as a raw material (CCU)



# Moonshot Carbon Circulation (materials emitted to the nature are recycled)



# Conclusion of the Initiative Report of Sustainable Resources Circulation for Global Environment

Circulation of the resources that are released or disposed into the environment **widely in space** and **thinly in concentration** is clarified as an essential pathway for realizing of Cool Earth and Clean Earth.

As specific circulation methods, there are the following two methods. One is to **capture thin and widespread resources and circulate them artificially**, and the other is to **detoxify or decompose them to be circulated by nature**.