

# Save the Earth by Carbon Recycling with Cement and Concrete

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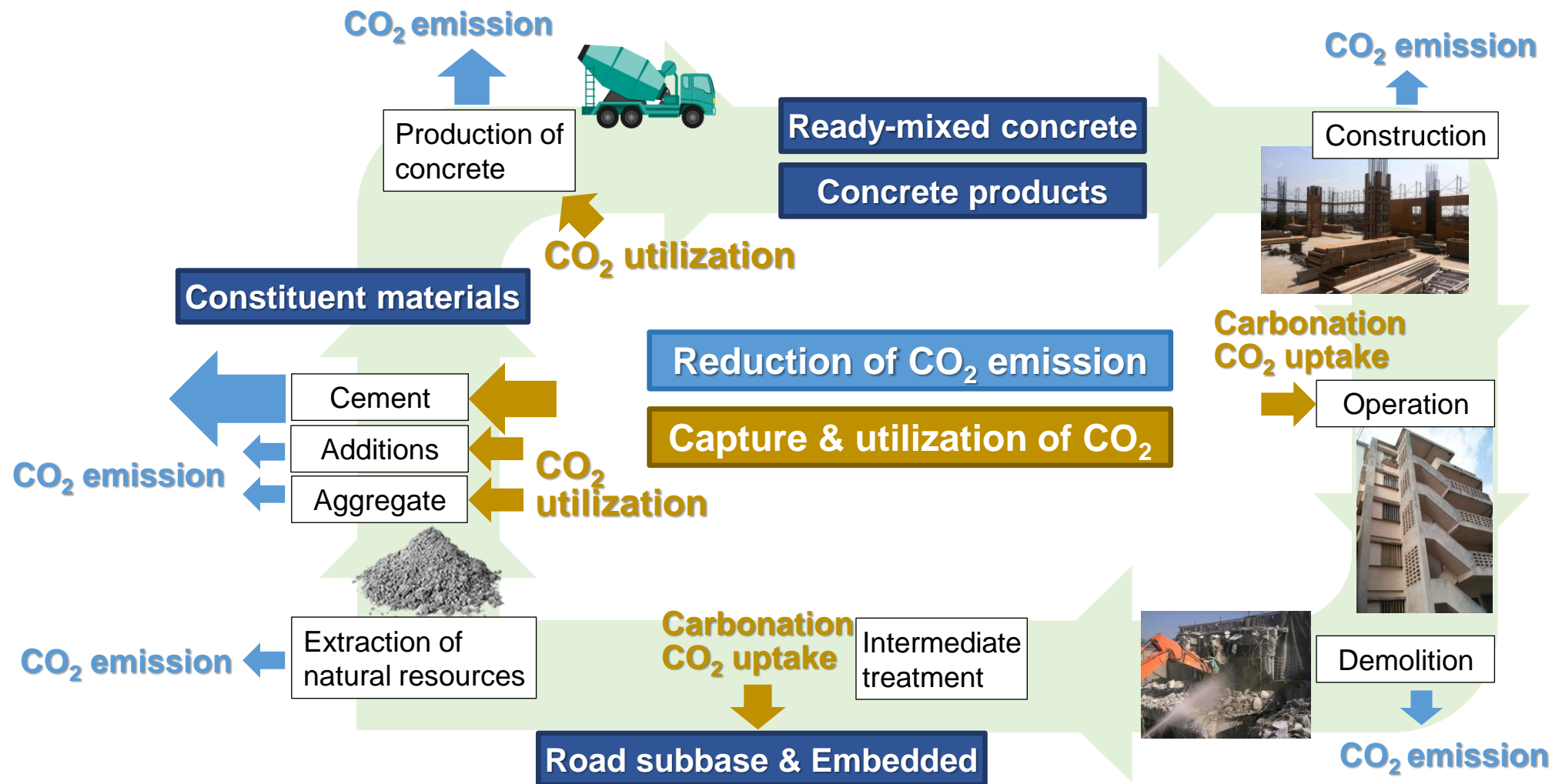


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and concrete structures)

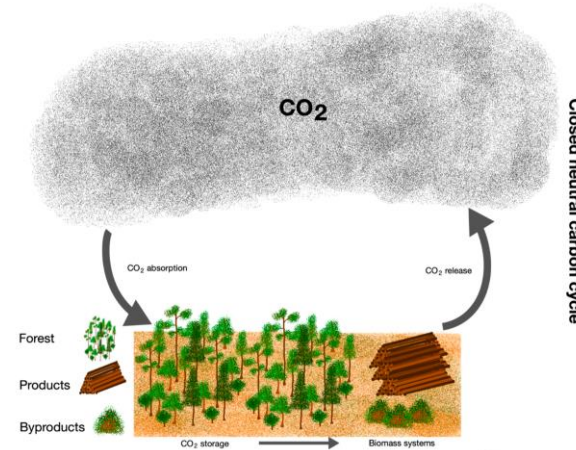
# LCCO<sub>2</sub> in Cement and Concrete



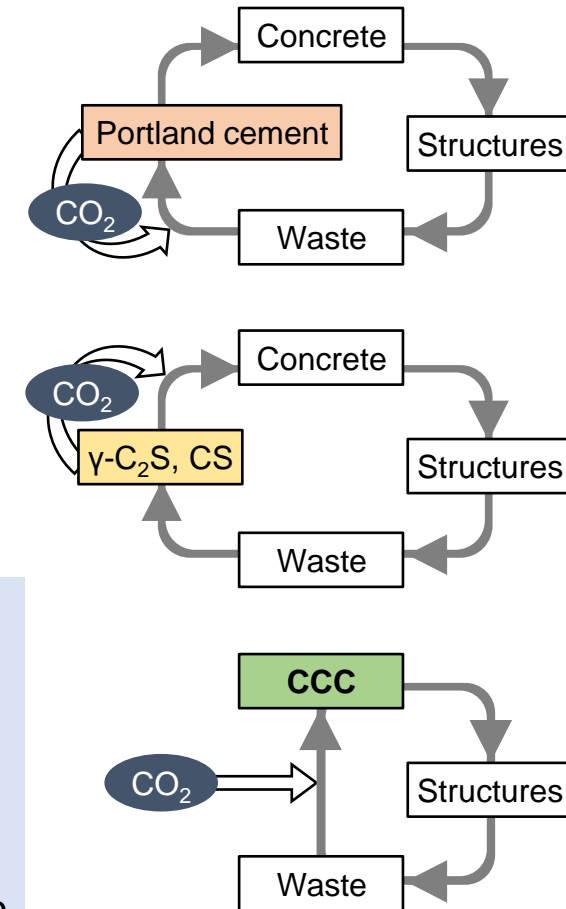
# Toward Carbon Neutrality in Concrete

## Toward carbon neutral concrete

- Concrete is indispensable for construction.
- Concrete shall be sustainable like **wood**.
  - **Sufficient resources**
  - **Well-balanced between raw materials (Ca, Mg, CO<sub>2</sub>) and products (cement, concrete)**
  - **Closed completely recyclable**
  - **Locally produced for locally utilized**
  - **Economic**



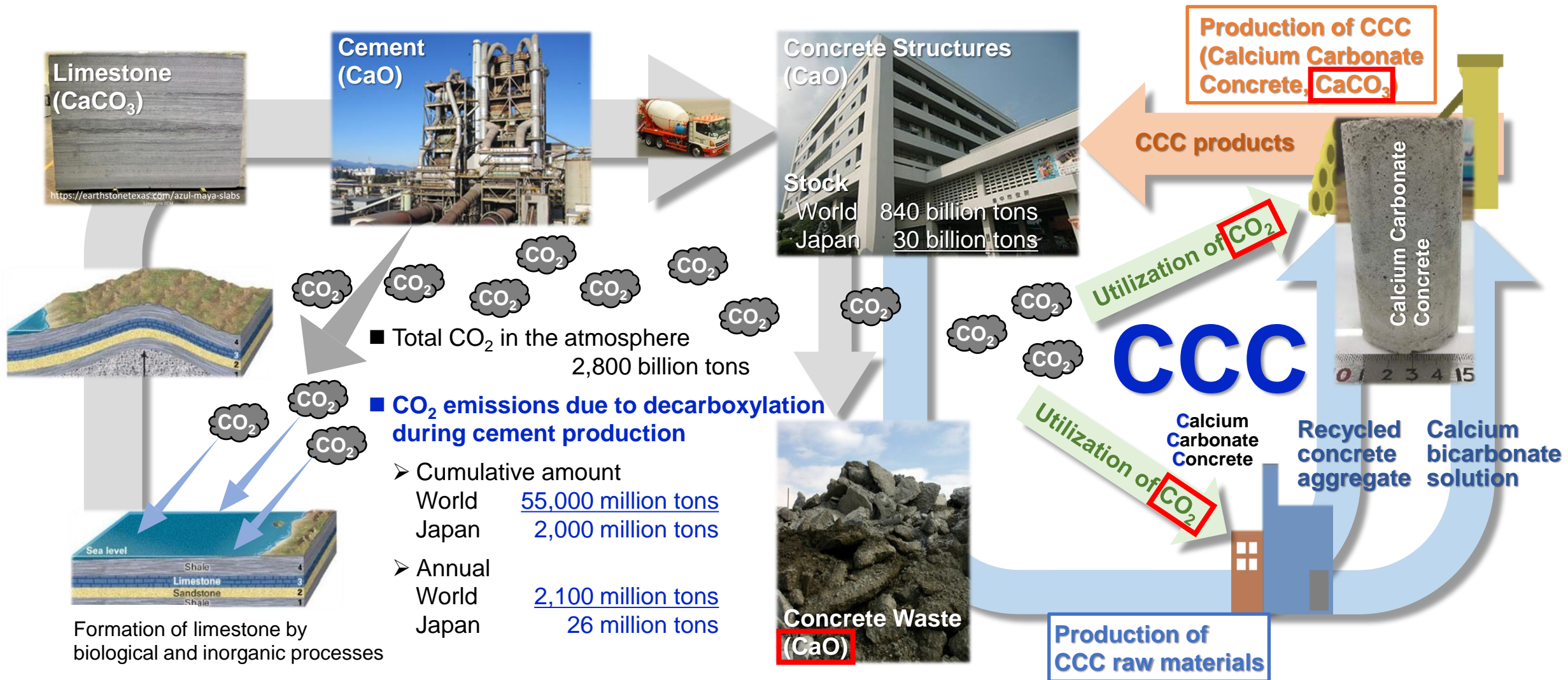
Nunes LJR, Meireles CIR, Pinto Gomes CJ, Almeida Ribeiro NMC. Forest Contribution to Climate Change Mitigation: Management Oriented to Carbon Capture and Storage. *Climate*. 2020; 8(2):21. <https://doi.org/10.3390/cli8020021>



### CCC (Calcium Carbonate Concrete): promising candidate

- ◆ **Carbon negative or neutral**
  - ➔ CCUS equivalent to CO<sub>2</sub> emitted by the past cement concrete
- ◆ **Locally produced for local utilized**
  - ➔ CO<sub>2</sub> and concrete structures that are ubiquitous
- ◆ **Completely recyclable**
  - ➔ Recyclable as many times as you like with negligible CO<sub>2</sub> emission

# Circulation of CO<sub>2</sub> and Ca in Construction



**Thank you for your kind attention!**



**Save the earth!**

**With cement & concrete!!**