

Comments from Nobuko Saigusa (NIES)

- **Maximize the co-benefits** of climate action, food production, and biodiversity conservation.

Enhanced sinks are necessary. However, large-scale plantations and increased production of biofuel crops will cause severe conflicts with food production and biodiversity conservation over limited land and water.

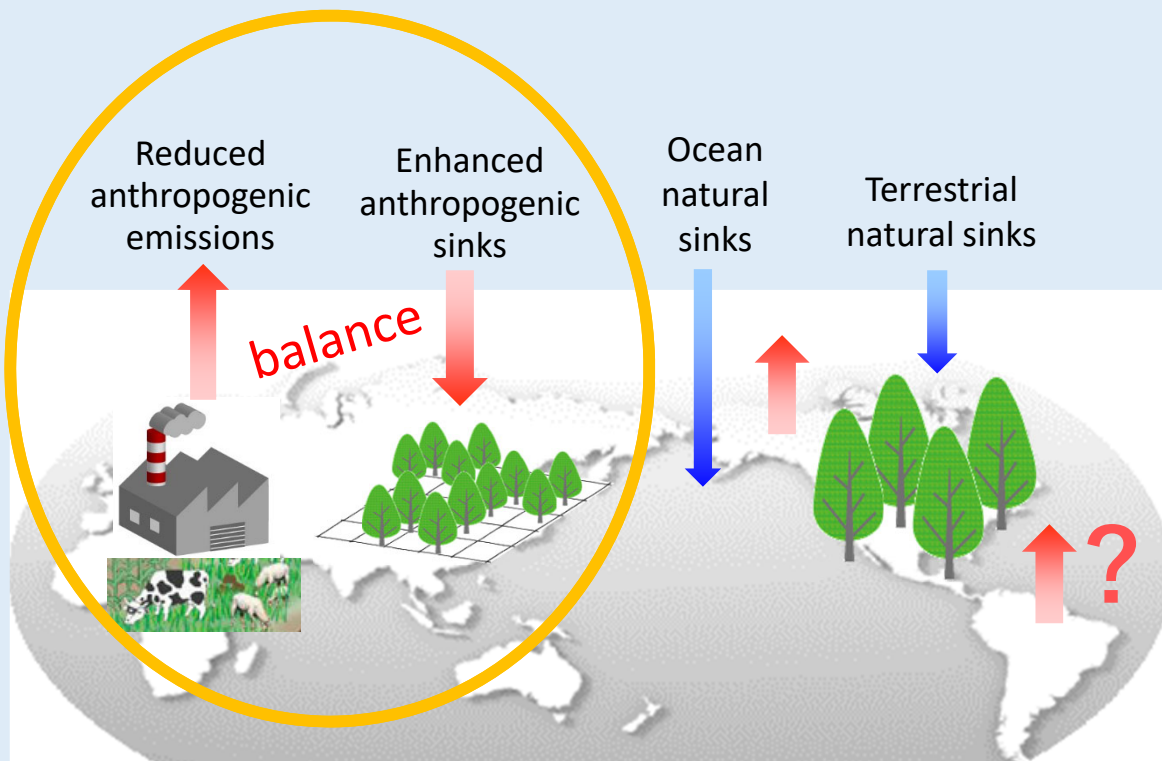
- Pay attention to changes in **natural*** GHG sinks and sources on a global scale as well as **anthropogenic sinks and sources**.

*Natural sinks include those are difficult to separate between natural and anthropogenic, such as forest fires and CO₂ emissions from land soils.

Carbon Neutrality on a Global Scale

Carbon Neutrality:

Achieving a balance between **anthropogenic emissions** and **anthropogenic removals** by sinks



Global sinks and sources of GHGs

Possible issues:

- (1) Even if energy decarbonization were to be well taken, **emission reduction from food production, etc. are limited.**
- (2) **Sinks need to be enhanced, but they compete with biodiversity conservation and food security over land and water.**
- (3) **Natural emissions may increase due to climate change:** Forest fires due to drought and heat waves, increased GHG emissions due to thawing of frozen soil, etc.

To confirm if the climate is really moving toward stability, we need to monitor both anthropogenic and natural sinks and sources on a global scale.