

Same Carbon, Different Count: Divergent Treatment of Biogenic Carbon in Accounting

Czaneil C. Gomez*, Dan Taylor, Katie Chong, Patricia Thornley & Mirjam Röder

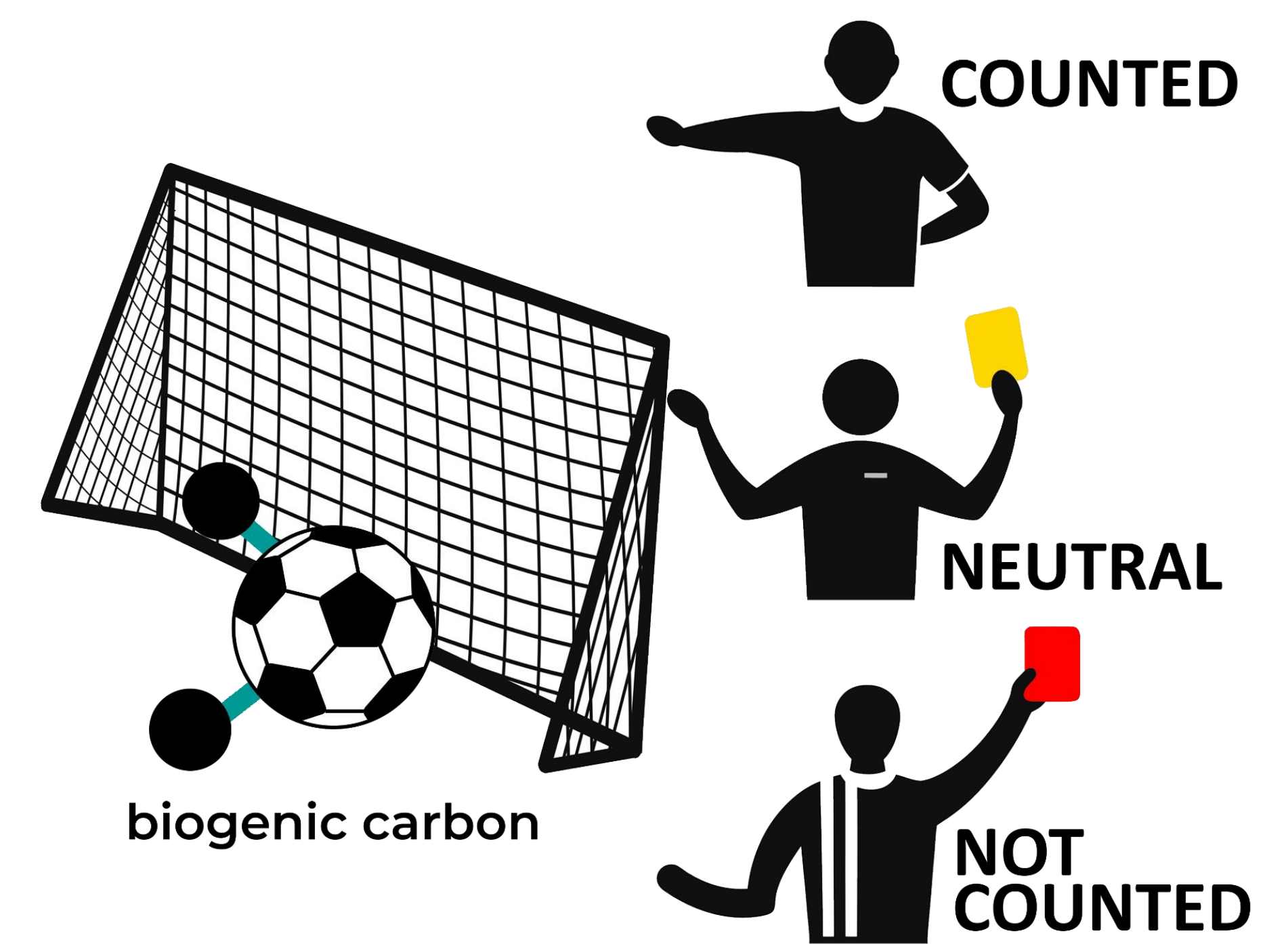
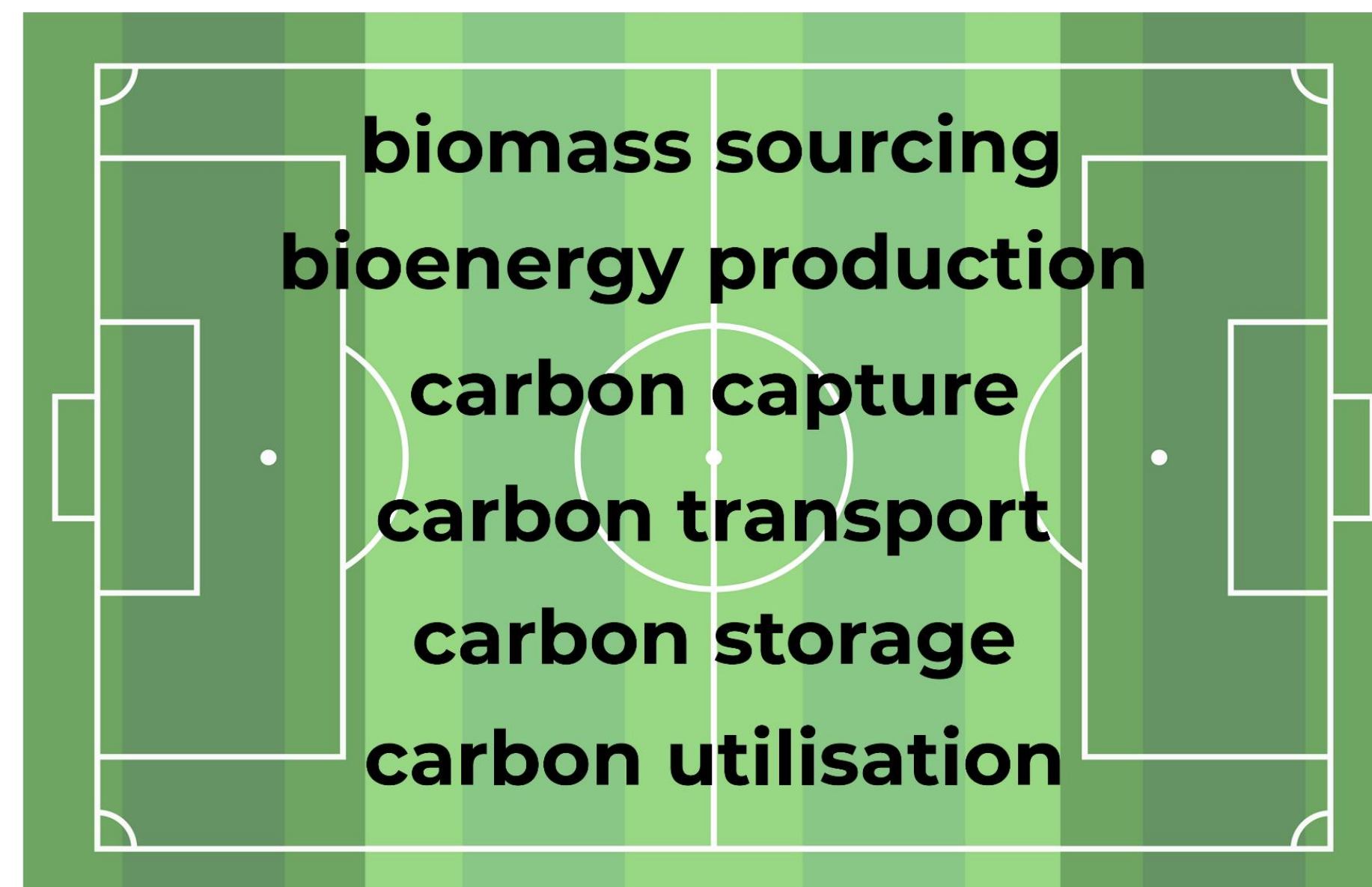
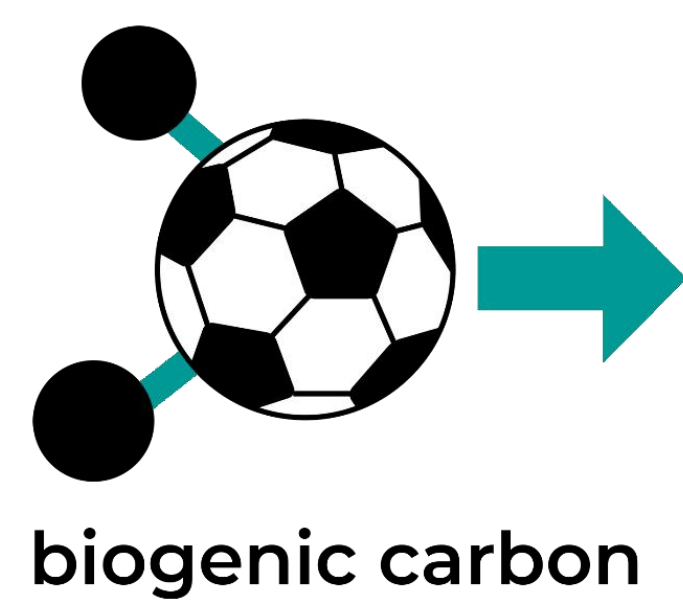
Energy and Bioproducts Research Institute (EBRI), Aston University

*Email: c.gomez@aston.ac.uk/220421768@aston.ac.uk

PROBLEM

As global decarbonisation efforts increasingly rely on bioenergy and bio-based systems, **biogenic carbon now plays a central role in climate mitigation strategies.**

However, **the way biogenic carbon is accounted for varies across methodologies.**



OBJECTIVE

This study investigates accounting practices within the bio-based system, with a focus on biogenic carbon.

It aims to identify existing methods, highlight gaps, and explore challenges in accounting across the bioenergy with carbon capture, utilisation and storage lifecycle.

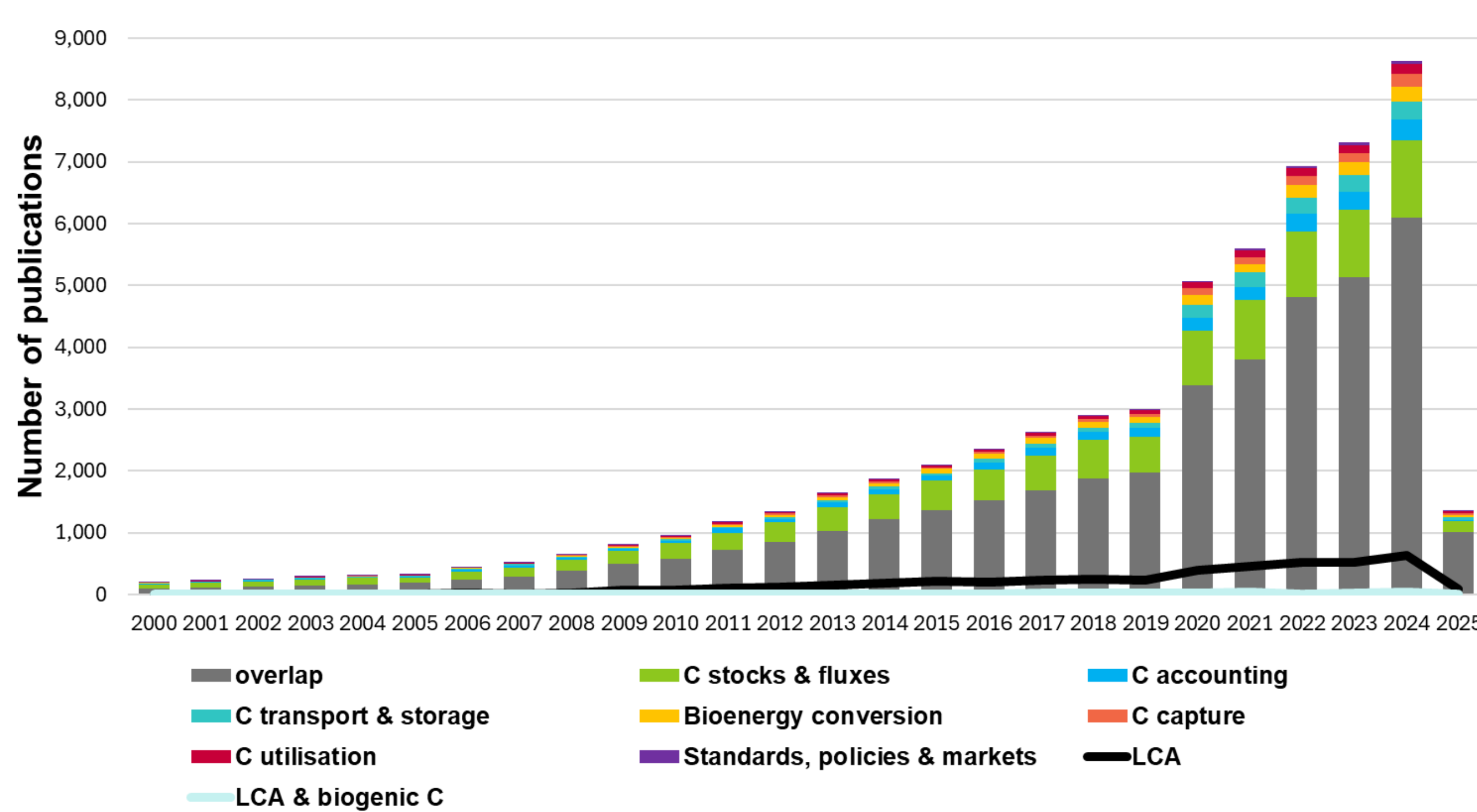
METHODOLOGY

Systematic literature review

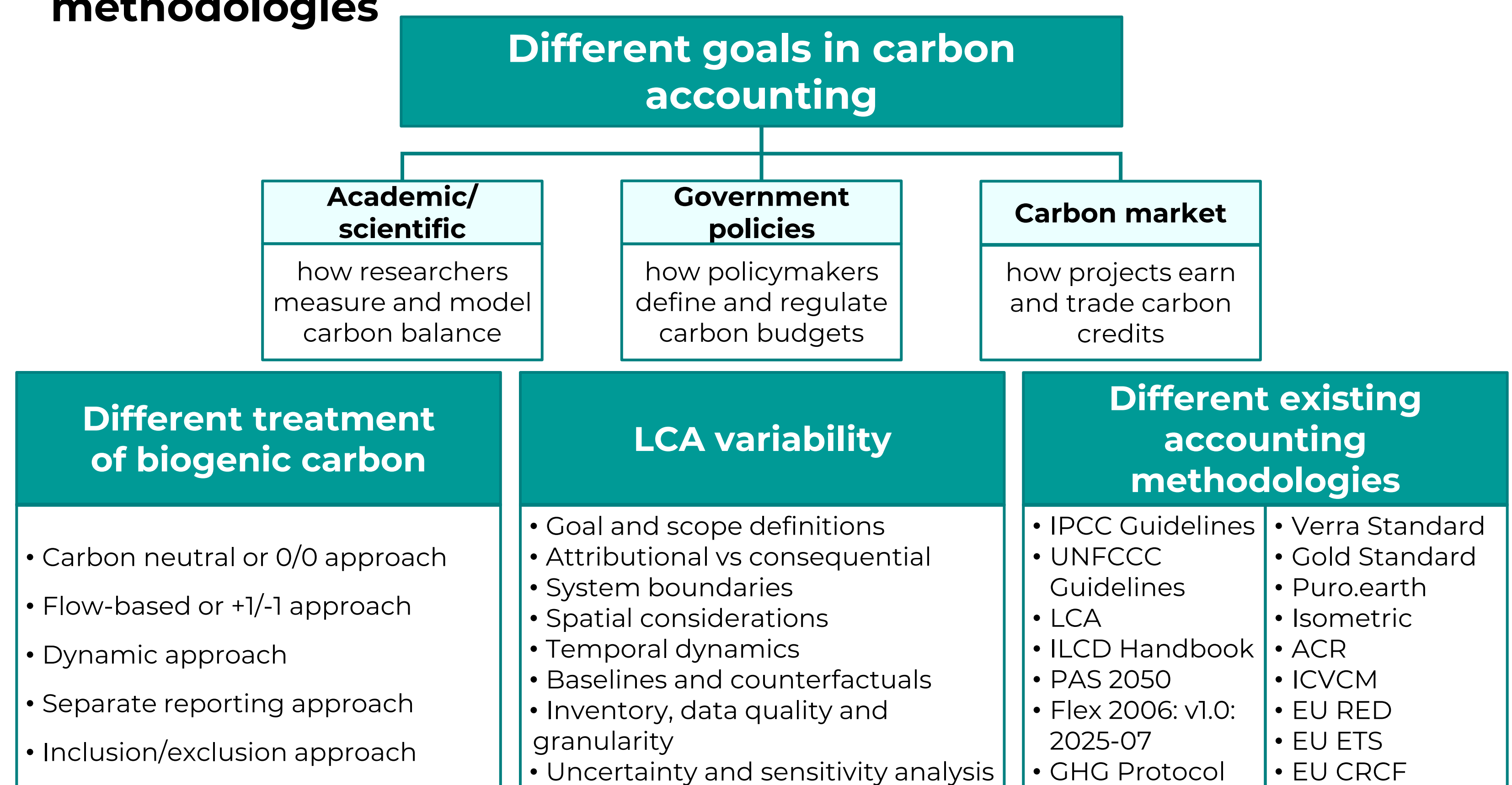


RESULTS

Despite thematic overlap, **few literatures mention lifecycle assessment, and even fewer mention biogenic carbon.**



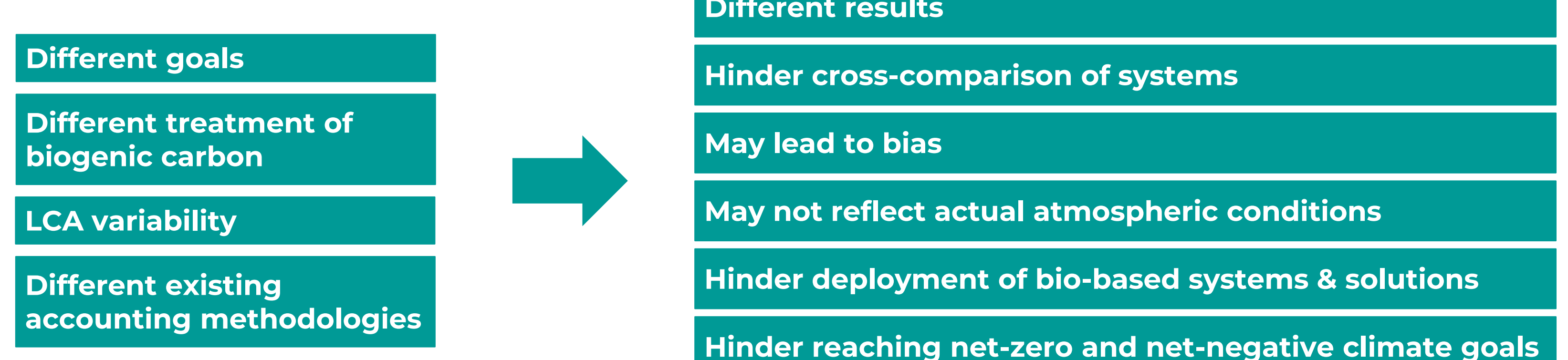
There is high variability in assessments due to different goals and methodologies



FINDINGS OF THE STUDY

- **Biogenic carbon accounting varies significantly,** with different goals and boundaries across sectors.
- **Lifecycle assessment choices are important** because the methods and assumptions used can significantly change the results.
- **Treating biogenic carbon as “neutral” is misleading,** risking credibility.
- **We need an approach with clear definitions and transparent methods.**

RESEARCH IMPACTS



Carbon accounting is not just about numbers; its impact on the climate depends on when, where, and how it is accounted.

Inconsistent accounting not only distorts figures, but also alters how we understand, value, and respond to climate solutions.