GCP aims to develop comprehensive, policy relevant understanding of the global carbon cycle encompassing its natural and human dimensions and their interactions.

The coupled carbon-climate-human system encompasses the linked dynamics of natural biophysical processes and human activities.

State of the carbon cycle: GCP provides an annual update of the global carbon budget

The annual growth rate of global fossil-fuel CO₂ emissions has increased from 0.83% y⁻¹ for the decade 1990-1999 to 3.25% y⁻¹ for 2000-2005, associated with an increased fossil-fuel intensity of Gross World Product (emissions per unit economic activity) since 2000.

Key attributes of this include:
- **the emissions gap** between actual and target CO₂ emissions,
- **vulnerability** of carbon sinks and sources to increased warming and land use change,
- **inertia of processes** affecting increased atmospheric CO₂ concentration and the need for a **systems approach** that integrates carbon management into a broader set of rules and institutions governing the human enterprise.