

Reduce greenhouse gas emissions...

Mitigation!

Adapt to the effects of climate change...

Adaptation!

Intervene in the climate system...

Climate Engineering?

Risks and unresolved questions



Can it be ethically justified?



Who takes part in the debate, and how?



Who pays? Who profits?



Climate effects and environmental risks?

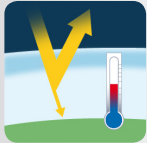


Who negotiates? Who decides? Who is liable?



How can decisions be made?

Reflect solar radiation?



To reduce atmospheric warming
Radiation Management

Increase the albedo of earth's surface

Mirrors or artificially lightened surfaces could reflect solar radiation

Inject aerosols into the stratosphere

Sulphur particles could generate reflective atmospheric particles

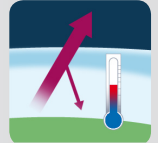
Increase cloud formation over the ocean

Spraying sea water over the ocean could promote the formation of reflective clouds



Remove CO₂ from the air?

To reduce the greenhouse effect
Carbon Dioxide Removal



Erect artificial trees

CO₂ from the air could be chemically bound and stored or used as a resource

Afforestation / biochar production

Trees could photosynthetically bind CO₂, which could be sequestered long-term as biochar

Ocean fertilization

Algal blooms could absorb large quantities of CO₂, which would sink to the bottom of the sea when the algae die off

