

7.3. Climate Change – Adaptation and Mitigation

Level 4	Level 5	Level 6
Define adaptation and mitigation.	Discuss the mitigation and adaptation strategies.	Evaluate the effectiveness of these strategies on an international level.

Starter: complete the table on the following slide.

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Task: complete the table below.

Greenhouse gas (GHG)	Sources due to human (anthropogenic) activities
Carbon Dioxide (CO ₂)	
Methane (CH ₄)	
Ozone (O ₃)	
Nitrous Oxide (N ₂ O)	
CFCs (Chloroflourocarbons)	

Which GHG contributes most to the greenhouse effect?
(Use the data on p325)

How can these GHGs be reduced?

What is the difference between Adaptation and Mitigation? (p341)

Mitigation – An *anthropogenic* intervention to reduce the anthropogenic forcing of the *climate system*; it includes strategies to reduce *greenhouse gas sources* and emissions and enhancing *greenhouse gas sinks*.

http://www.ipcc.ch/publications_and_data/ar4/wg2/en/annexes/lossary-e-o.html [accessed: 28th April 2018]

Adaptation - Adjustment in natural or *human systems* in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory, autonomous and planned adaptation.

http://www.ipcc.ch/publications_and_data/ar4/wg2/en/annexes/lossary-a-d.html [accessed: 28th April 2018]

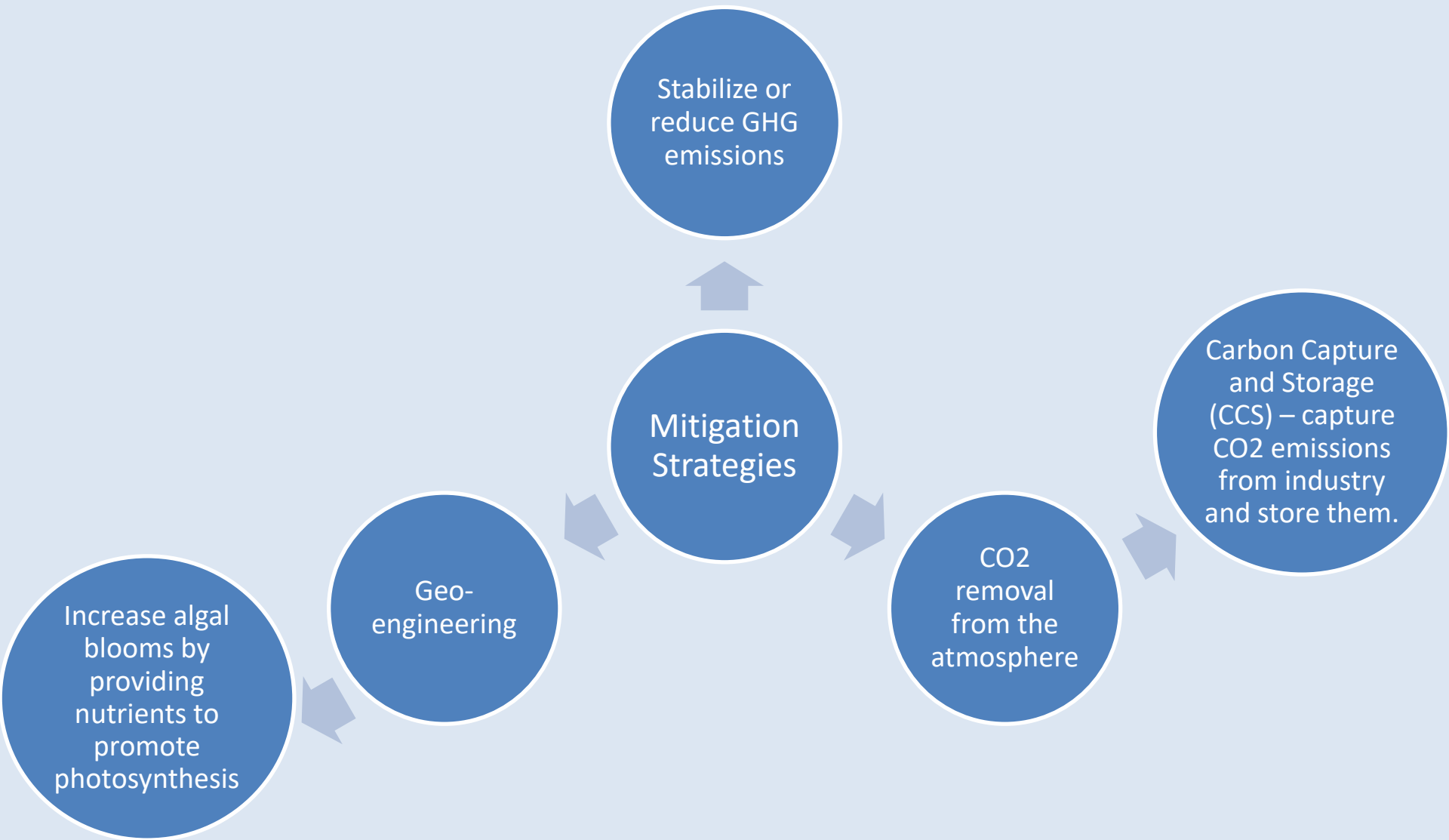
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Mitigation Strategies (p341-344):

- A. Stabilize or reduce GHG emissions
- B. Carbon Dioxide removal from the atmosphere
- C. Geo-engineering

Task: Create a mind-map summarising the mitigation strategies. (20 minutes)

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Adaptation Strategies (p344-345):

- A. Change land use through planning legislation
- B. Build to resist flooding
- C. Change agricultural production
- D. Manage the weather
- E. Migrate to other areas
- F. Vaccinate against water-borne diseases
- G. Manage water supplies