


BANK 7 — PRE-MAP FINAL (50)

Climate change

Definition: Long-term changes in temperature and weather patterns.

Example: Rising global temperatures.

 *Thermometer rising.*

Cue: Long-term climate shift.

Global warming

Definition: Increase in Earth's average surface temperature.

Example: Melting glaciers.


 *Earth with heat waves.*

Cue: Temperature increase.

Greenhouse gases

Definition: Gases that trap heat in the atmosphere.

Example: Carbon dioxide.

 *Blanket around Earth.*

Cue: Heat trapping.

Carbon cycle

Definition: Movement of carbon through Earth's systems.

Example: CO₂ absorbed by plants.


 *Carbon arrows looping.*

Cue: Carbon movement.

5 Carbon sequestration

Definition: Capture and storage of carbon dioxide.

Example: Forests storing carbon.


 *Trees absorbing CO₂.*

Cue: Store carbon.

6 Climate mitigation

Definition: Actions to reduce climate change severity.

Example: Reducing emissions.

 *Down arrow on emissions.*

Cue: Reduce impact.

7 Climate adaptation

Definition: Adjusting systems to climate impacts.

Example: Drought-resistant crops.

 *Shield against climate.*

Cue: Adjust to change.

8 Sea level rise

Definition: Increase in ocean levels due to warming.

Example: Coastal flooding.

 *Water rising near land.*

Cue: Rising seas.

9 Extreme weather

Definition: Severe or unusual weather events.

Example: Hurricanes.


 *Storm icons.*

Cue: Severe events.

10 Disturbance

Definition: Event that disrupts ecosystem structure.

Example: Fire or flood.


 *Broken ecosystem.*

Cue: Disruption.

1 1 Fire regime

Definition: Pattern of fire occurrence.

Example: Regular low-intensity fires.


 *Fire timeline.*

Cue: Fire pattern.

1 2 Flood regime

Definition: Pattern of flooding over time.

Example: Seasonal floods.


 *Flood calendar.*

Cue: Flood pattern.

1 3 Drought regime

Definition: Frequency and duration of droughts.

Example: Repeated dry years.


 *Dry calendar.*

Cue: Drought pattern.

1 4 Resistance

Definition: Ability to withstand disturbance.

Example: Forest surviving fire.

 *Shielded ecosystem.*

Cue: Withstand change.

1 5 Resilience

Definition: Ability to recover after disturbance.

Example: Regrowth after fire.

 *Rebounding ecosystem.*

Cue: Recover.

1 6 Vulnerability

Definition: Susceptibility to harm.

Example: Coastal habitats at risk.

 *Cracked shield.*

Cue: Easily harmed.

1 7 Exposure

Definition: Degree of contact with stressors.

Example: Coast exposed to storms.

 *Target hit by arrows.*

Cue: Degree of contact.

1 8 Sensitivity

Definition: Degree to which system is affected.

Example: Coral sensitive to heat.


 *Fragile coral.*

Cue: How affected.

1 9 Adaptive capacity

Definition: Ability to adjust to change.

Example: Species shifting range.


 *Flexible shape.*

Cue: Adjust ability.

2 0 Range shift

Definition: Change in species distribution.

Example: Species moving northward.

 *Arrow moving range.*

Cue: Move range.

2 1 Phenology

Definition: Timing of biological events.

Example: Earlier flowering.


 *Calendar + flower.*

Cue: Timing shift.

2 2 Tipping point

Definition: Threshold causing major change.

Example: Coral bleaching collapse.

 *Scale tipping.*

Cue: Point of no return.

2 3 Feedback loop

Definition: Process that amplifies or reduces change.

Example: Ice melt increasing warming.

 *Loop arrow.*

Cue: Reinforcing effect.

2 4 Positive feedback

Definition: Change that amplifies effects.

Example: Warming causing more warming.


 *Growing loop.*

Cue: Amplifies.

2 5 Negative feedback

Definition: Change that dampens effects.

Example: Increased vegetation cooling climate.


 *Balancing loop.*

Cue: Stabilizes.

2 6 Climate refugia

Definition: Areas buffered from climate change.

Example: Cool mountain valleys.

 *Sheltered habitat.*

Cue: Safe zones.

2 7 Assisted adaptation

Definition: Human actions aiding adaptation.

Example: Planting resilient species.

 *Helping hand.*

Cue: Help adapt.

2 8 Ecosystem services

Definition: Benefits humans receive from ecosystems.

Example: Clean water.


 *Nature providing services.*

Cue: Nature benefits.

2 9 Provisioning services

Definition: Material goods from ecosystems.

Example: Food and timber.

 *Food icons.*

Cue: Products.

3 0 Regulating services

Definition: Ecosystem processes regulating environment.

Example: Flood control.


 *Shielded land.*

Cue: Regulation.

3 1 Cultural services

Definition: Non-material ecosystem benefits.

Example: Recreation.

 *People enjoying nature.*

Cue: Cultural value.

3 2 Supporting services

Definition: Services enabling other ecosystem services.

Example: Soil formation.

 *Foundation layer.*

Cue: Support processes.

3 3 Trade-offs

Definition: Gains in one area causing losses in another.

Example: Development vs habitat.


 *Scale tipping sides.*

Cue: Give and take.

3 4 Synergies

Definition: Actions producing multiple benefits.

Example: Wetlands improving water and habitat.


 *Multiple arrows up.*

Cue: Win-win.

3 5 Natural capital

Definition: Natural resources providing benefits.

Example: Forests.


 *Nature as assets.*

Cue: Nature value.

3 6 Valuation

Definition: Assigning value to ecosystem services.

Example: Pricing clean water.


 *Dollar sign + leaf.*

Cue: Assign value.

3 7 Payment for ecosystem services

Definition: Incentives for conservation actions.

Example: Paying landowners to protect forests.

 *Money + forest.*

Cue: Pay to protect.

3 8 Climate policy

Definition: Laws addressing climate change.

Example: Emission standards.

 *Law book + climate.*

Cue: Climate laws.

3 9 International agreements

Definition: Treaties addressing global issues.

Example: Climate accords.


 *World icons linked.*

Cue: Global cooperation.

0 Mitigation hierarchy

Definition: Avoid, minimize, restore, offset impacts.

Example: Development planning.


 *Step ladder.*

Cue: Impact order.

1 Offsetting

Definition: Compensating for environmental damage.

Example: Restoring habitat elsewhere.

 *Balance restored.*

Cue: Compensate.

2 Restoration ecology

Definition: Science of repairing ecosystems.

Example: Wetland restoration.

 *Ecosystem healing.*

Cue: Repair systems.

3 Rewilding

Definition: Restoring natural processes and species.

Example: Predator reintroduction.


 *Wild animals returning.*

Cue: Restore wild.

Nature-based solutions

Definition: Using nature to address challenges.

Example: Mangroves for storm protection.

 *Nature solving problems.*

Cue: Nature solution.

Adaptive management

Definition: Management adjusted using monitoring results.

Example: Changing actions based on outcomes.

 *Feedback loop.*

Cue: Adjust management.

Monitoring

Definition: Collecting data over time.

Example: Climate tracking.

 *Data chart.*

Cue: Track change.

Evaluation

Definition: Assessing effectiveness.

Example: Reviewing climate plans.

 *Checklist.*

Cue: Did it work?

Indicators

Definition: Measures reflecting system condition.

Example: Temperature trends.


 *Gauge.*

Cue: Measure state.

Thresholds

Definition: Points where change occurs.

Example: Temperature limits.


 *Line crossed.*

Cue: Critical point.

5 0 Long-term planning

Definition: Planning over extended time horizons.

Example: Climate adaptation strategies.

 *Long timeline.*

Cue: Think ahead.