Adaptation

- Adaptation is a key strategy for responding to climate change.
- The goal of adaptation is to reduce vulnerability to the harmful effects of climate change and make the most of any potential beneficial opportunities.
- Climate change is felt on a local scale, so cities and municipalities are at the forefront of adaptation efforts.
- Cities and local communities are working to build flood defenses, plan for heat waves and higher temperatures, install water-permeable pavements, and improve water storage and use.

Here are the key takeaways from the provided text:

Mitigation:

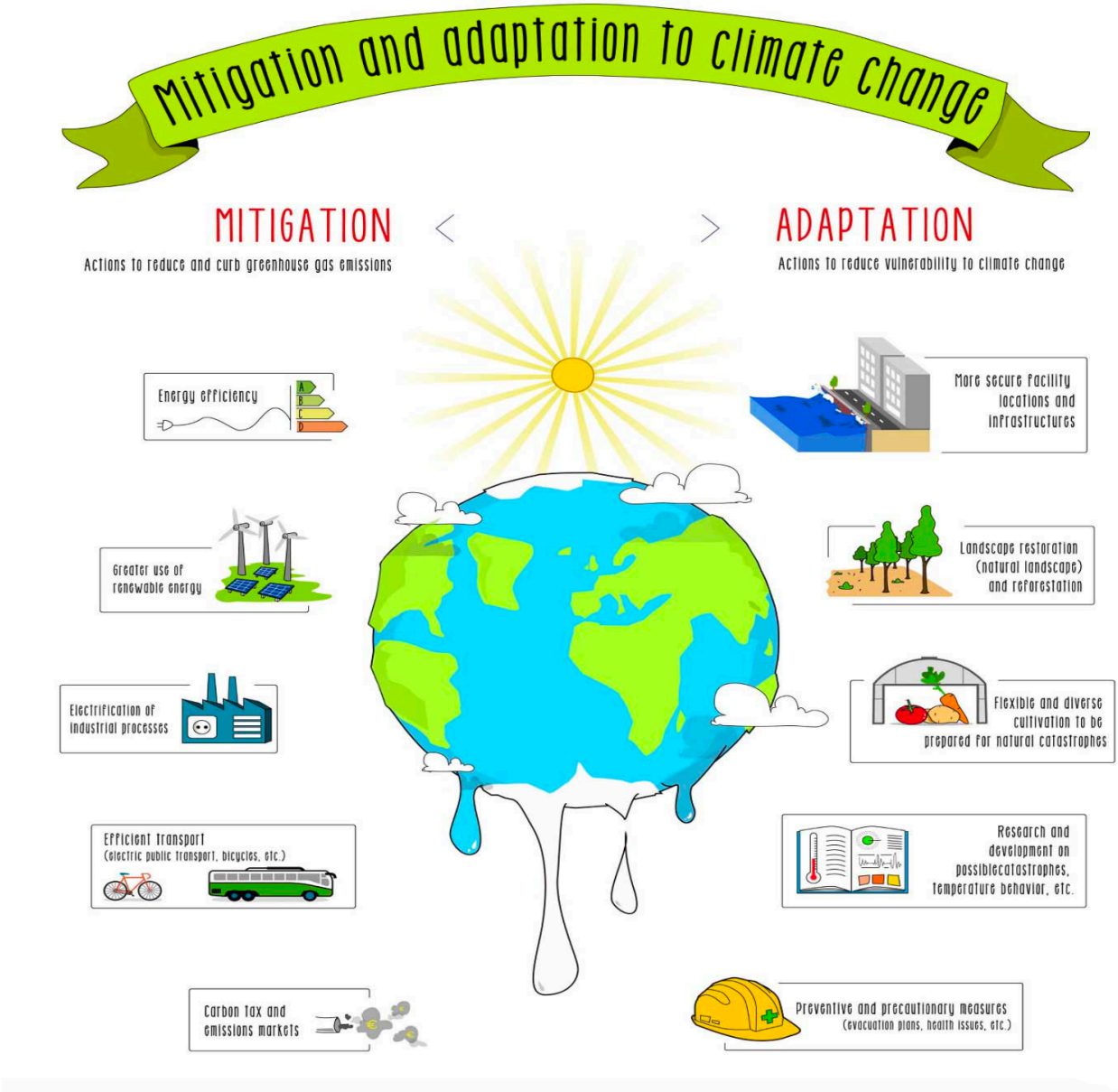
- Mitigation involves reducing greenhouse gas emissions and enhancing natural sinks.
- The goal of mitigation is to stabilize greenhouse gas levels and allow ecosystems, food production, and economic development to adapt to climate change.

How to mitigate climate change:

- Practice energy efficiency.
- Increase the use of renewable energy sources.
- Electrify industrial processes.
- Implement efficient means of transportation, such as electric public transport, bicycles, and shared cars.
- Implement carbon taxes and emissions markets.

Adaptation to climate change:

- Adaptation includes measures to reduce vulnerability to climate change impacts.
- Adaptation measures include safer facility locations and infrastructures, landscape restoration, reforestation, flexible cultivation practices, research on climate change, and preventive measures.



S1- SLO-2 Climate change organization and programmes

- **U.S. Environmental Protection Agency (EPA):**
    - Provides scientific information and data on climate change
    - Offers resources on the U.S. government's role in climate change research and assessment
- **NOAA Education:**
    - Provides resources for teachers on climate change
    - Offers background reference material on climate change
- **Intergovernmental Panel on Climate Change (IPCC):**
    - Provides objective reports on climate change and its potential impacts
    - Geography has played a central role in the IPCC's activities
- **National Center for Atmospheric Research (NCAR):**
    - Provides scientists with tools and facilities for atmospheric research
    - Houses the Geographical Information Systems (GIS) Strategic Initiative
- **Center for Remote Sensing of Ice Sheets (CReSIS):**
    - Uses geographic tools and technologies to study ice sheets
    - Measures and predicts the response of sea level change to ice sheets
- **National Climate Data Center (NCDC):**
    - World's largest archive of weather data
    - Produces climate publications and responds to data requests
- **World Meteorological Organization (WMO):**
    - UN system's authoritative voice on the Earth's atmosphere and climate
    - Provides resources on weather, climate, and water resources

- **United Nations Environment Programme (UNEP):**
    - Gateway to UNEP activities related to climate change
    - Offers programs to reduce emissions from deforestation
- **United Nations Framework Convention on Climate Change (UNFCCC):**
    - Supports UN bodies involved in the climate change process
    - Provides resources on climate change, including publications and official texts
- **Pew Center on Global Climate Change:**
    - Brings together experts to bring a new approach to climate change
    - Conducts analyses of key climate issues and engages the business community
- **Food and Agriculture Organization (FAO) of the United Nations:**
    - Activities in climate change cover all agricultural sectors
    - Coordinates activities through the Interdepartmental Working Group on Climate Change and the Environment
- **National Snow and Ice Data Center (NSIDC):**
    - Supports research on snow, ice, glaciers, and climate interactions
    - Director has carried out significant geographic research on climate warming
- **International Geosphere-Biosphere Programme (IGBP):**
    - Studies the phenomenon of Global Change
    - Provides scientific knowledge to improve the sustainability of the living Earth

IPCC

- The Intergovernmental Panel on Climate Change (IPCC) is the international body for assessing the science related to climate change.
- The IPCC was set up in 1988 to provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation.
- IPCC assessments provide a scientific basis for governments at all levels to develop climate-related policies.
- The IPCC is open to all member countries of the WMO and United Nations. It currently has 195 members.
- IPCC assessments are written by hundreds of leading scientists who volunteer their time and expertise.
- IPCC reports undergo multiple rounds of drafting and review to ensure they are comprehensive and objective.
- Thousands of other experts contribute to the reports by acting as reviewers.

S2- SLO-1 IPCC -Intergovernmental Panel on Climate Change and assessment report highlights

- The Intergovernmental Panel on Climate Change (IPCC) produces Assessment Reports, Special Reports, and Methodology Reports.
- Assessment Reports are produced by Working Groups and integrated into a Synthesis Report.
- Special Reports are produced on specific issues agreed by IPCC member governments.
- Methodology Reports provide practical guidelines for the preparation of greenhouse gas inventories.
- The IPCC process for producing reports includes a scoping meeting, draft outline, and author selection.
- Author selection is a careful process that aims to reflect scientific, technical, and socio-economic expertise.

- Authors are selected from a range of countries and backgrounds, including developing countries, developed countries, and those with economies in transition.
- A mixture of authors with and without previous experience in the IPCC is also important.

Preparation of Reports:

- The IPCC report preparation process is rigorous and involves multiple stages of review by experts and governments.
- The report is based on an assessment of all relevant scientific, technical, and socio-economic information.
- The use of non-peer-reviewed literature is considered acceptable, but authors must ensure the quality and validity of cited sources.
- Each chapter of the report is assigned two or more Review Editors who are responsible for ensuring that all review comments are taken into account.
- Authors express the confidence with which a statement is made, reflecting agreement in the scientific literature and the evidence available.
- The final drafts of the report and Summary for Policymakers are distributed to governments for comment.
- All IPCC reports must be formally endorsed by the responsible Working Group(s) or Task Force and by the Panel at an IPCC Plenary Session.
- There are three levels of endorsement: "Approval," "Adoption," and "Acceptance."
- The Synthesis Report is written in a non-technical style and integrates the findings of the Assessment Report and any Special Reports prepared during an assessment cycle.
- The Synthesis Report consists of two sections: a Summary for Policymakers and a longer report.
- The writing team for the Synthesis Report is composed of members of the Bureau, authors of the Assessment Report, and experts from the Technical Support Unit and Secretariat.

About Reports:

- The IPCC is responsible for preparing comprehensive reports on climate change.
- These reports cover the science, impacts, risks, and mitigation options related to climate change.
- The IPCC also produces reports on specific topics and guidelines for preparing greenhouse gas inventories.
- IPCC reports are structured into chapters and may include a technical summary.
- IPCC reports include a summary for policymakers that is approved line by line by a plenary session of the IPCC.
- Since the Fifth Assessment Report, the summary for policymakers has included headline statements.
- Methodology reports include an overview chapter corresponding to the summary for policymakers.

S2-SLO-2 IPCC Assessment Report-1- 1990 & Sub1992

The Intergovernmental Panel on Climate Change (IPCC) released its First Assessment Report (FAR) in 1990.

- The report was divided into three main sections: Working Group I: Scientific Assessment of Climate Change, Working Group II: Impacts Assessment of Climate Change, and Working Group III: The IPCC Response Strategies.
- Each section included a summary for policymakers.
- The report concluded that human activities are increasing the atmospheric concentrations of greenhouse gases, which will enhance the greenhouse effect and result in global warming.
- The report also predicted that under a business-as-usual scenario, global mean sea level could rise by an average of 6 cm per decade over the next century.

Key findings of the FAR:

- There is a natural greenhouse effect, and human activities are substantially increasing the atmospheric concentrations of greenhouse gases.
- CO2 has been responsible for over half of the enhanced greenhouse effect.
- Global mean temperature is increasing at a rate of about 0.3 degrees Celsius per decade.
- The unequivocal detection of the enhanced greenhouse effect is not likely for a decade or more.
- Under a business-as-usual scenario, global mean sea level could rise by an average of 6 cm per decade over the next century.

The FAR had a significant impact on international climate policy.

- It served as the basis for the United Nations Framework Convention on Climate Change (UNFCCC).
- It also informed the first conference of the parties (COP), held in Berlin in 1995.