

Guiding Principle for Informed Climate Decisions: ***Humans can take actions to reduce climate change and its impacts***

- A. Climate information can be used to **reduce vulnerabilities** or **enhance the resilience** of communities and ecosystems affected by climate change. Continuing to improve **scientific understanding** of the climate system and the quality of reports to **policy and decision-makers** is crucial.
- B. Reducing human vulnerability to the impacts of climate change depends not only upon our ability to understand climate science, but also upon our ability to integrate that knowledge into human society. Decisions that involve Earth's climate must be made with an understanding of the **complex inter-connections** among the physical and biological components of the Earth system as well as the **consequences** of such decisions on social, economic, and cultural systems.
- C. The impacts of climate change may affect the **security of nations**. Reduced availability of water, food, and land can lead to competition and conflict among humans, potentially resulting in large groups of climate refugees.
- D. Humans may be able to **mitigate** climate change or lessen its severity by reducing greenhouse gas concentrations through processes that move carbon out of the atmosphere or reduce greenhouse gas emissions.
- E. A **combination of strategies** is needed to reduce greenhouse gas emissions. The most immediate strategy is conservation of oil, gas, and coal, which we rely on as fuels for most of our transportation, heating, cooling, agriculture, and electricity. Short-term strategies involve switching from carbon-intensive to renewable energy sources, which also requires building new infrastructure for alternative energy sources. Long-term strategies involve innovative research and a fundamental change in the way humans use energy.
- F. Humans can **adapt** to climate change by reducing their vulnerability to its impacts. Actions such as moving to higher ground to avoid rising sea levels, planting new crops that will thrive under new climate conditions, or using new building technologies represent adaptation strategies. Adaptation often requires financial investment in new or enhanced research, technology, and infrastructure.
- G. **Actions** taken by individuals, communities, states, and countries all influence climate. Practices and policies followed in homes, schools, businesses, and governments can affect climate. Climate-related decisions made by one generation can provide opportunities as well as limit the range of possibilities open to the next generation. Steps toward reducing the impact of climate change may influence the present generation by providing other benefits such as improved public health infrastructure and sustainable built environments.

Source: *Climate Literacy: The Essential Principles of Climate Science*