

# GEG 101 Generative AI Activity 4: GeoAI Images and Critical Physical Geography

## What Is Critical Physical Geography?

An emerging body of work that brings together social and natural science in the service of ecological and social transformation, combining attention to the natural and human world.

## Objectives

Use Generative Artificial Intelligence (AI) to inspire deep thought and creative expression about critical physical geographical issues facing humanity and the planet such as climate change, social and economic inequality, and globalization. By leveraging the power of generative AI, we hope to not only illustrate these pressing issues but also foster an awareness of the challenges and opportunities that GeoAI presents to society.

## Learning Outcomes

1. **Use** generative AI to create images
2. **Summarize** the meaning of critical physical geography using ChatGPT.
3. **Understand** the United Nations Sustainability Development Goals, specifically 13, 14, and 15.
4. **Illustrate** one of the major geographical challenges facing humanity and the planet, such as climate change.

## What are United Nations Sustainability Development Goals (SDG)?



Department of Economic and Social Affairs  
Sustainable Development

The 17 Sustainable Development Goals (SDG) are an urgent call for action by all countries - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests. In this activity, you will work on one of three goals:

- [Goal 13 \(https://sdgs.un.org/goals/goal13\)](https://sdgs.un.org/goals/goal13): Climate Change
- [Goal 14 \(https://sdgs.un.org/goals/goal14\)](https://sdgs.un.org/goals/goal14): Life Below Water
- [Goal 15 \(https://sdgs.un.org/goals/goal15\)](https://sdgs.un.org/goals/goal15): Life on Land

## Instructions

1. Go to [Gemini \(https://gemini.google.com\)](https://gemini.google.com) and login with a gmail account, or use your MCC student account to log in to [Copilot \(copilot.microsoft.com\)](https://copilot.microsoft.com).

**Stop. Answer Questions 1-3.**

2. You are now going to ask Gemini to produce an image related to climate change or the physical processes related to goal 13, 14, or 15 of the United Nations Sustainability goals. For example, in your request to Gemini you could focus in on the major geographical challenges facing humanity and the planet, such as climate change, and tie it to the topics we covered in this course such as the monsoon and drought, glacier change, shifting jet streams, heat, hurricanes, flooding events, and more.

**Stop. Answer Question 4.**

3. Ask Gemini or Copilot to create the image from your response to question 4. The image below shows an example of a prompt in Copilot: "Generate an image of a futuristic car driving through an old mountain road surrounded by nature."



**Stop. Answer Question 5.**

4. Make an improvement to your image by asking Gemini or Copilot to change something. For example, I asked it to "make it integrated with people" since the first image did not include people.
5. Make additional requests to Gemini or Copilot until you are pleased with your image.

**Stop. Answer Question 6.**

6. You always want to cite your source. For the image, it could be in APA or MLA style:
  - **APA style:**  
Format: Author. (Year). Title of the image [AI-generated image]. Name of the platform. URL  
  
Example: Google DeepMind. (2024). Surreal landscape at sunset [AI-generated image]. Gemini. <https://platform.gemini.google.com>
  - **MLA style:**  
Format: "Title of Image." Gemini, Google, Year, URL.  
  
Example: "Surreal landscape at sunset." Gemini, Google, 2026,

7. Take a screenshot of your image and place it in your question/answer sheet.

## Submission Details

Submit your answer sheet in Brightspace.

## AI Activity #4 Rubric

- Questions 1-6 = 1 point each, 6 points total
- Image 1 = 4 points

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