



# **Carbon Considerations in Land Management**

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# IMPORTANCE OF CARBON CONSIDERATIONS

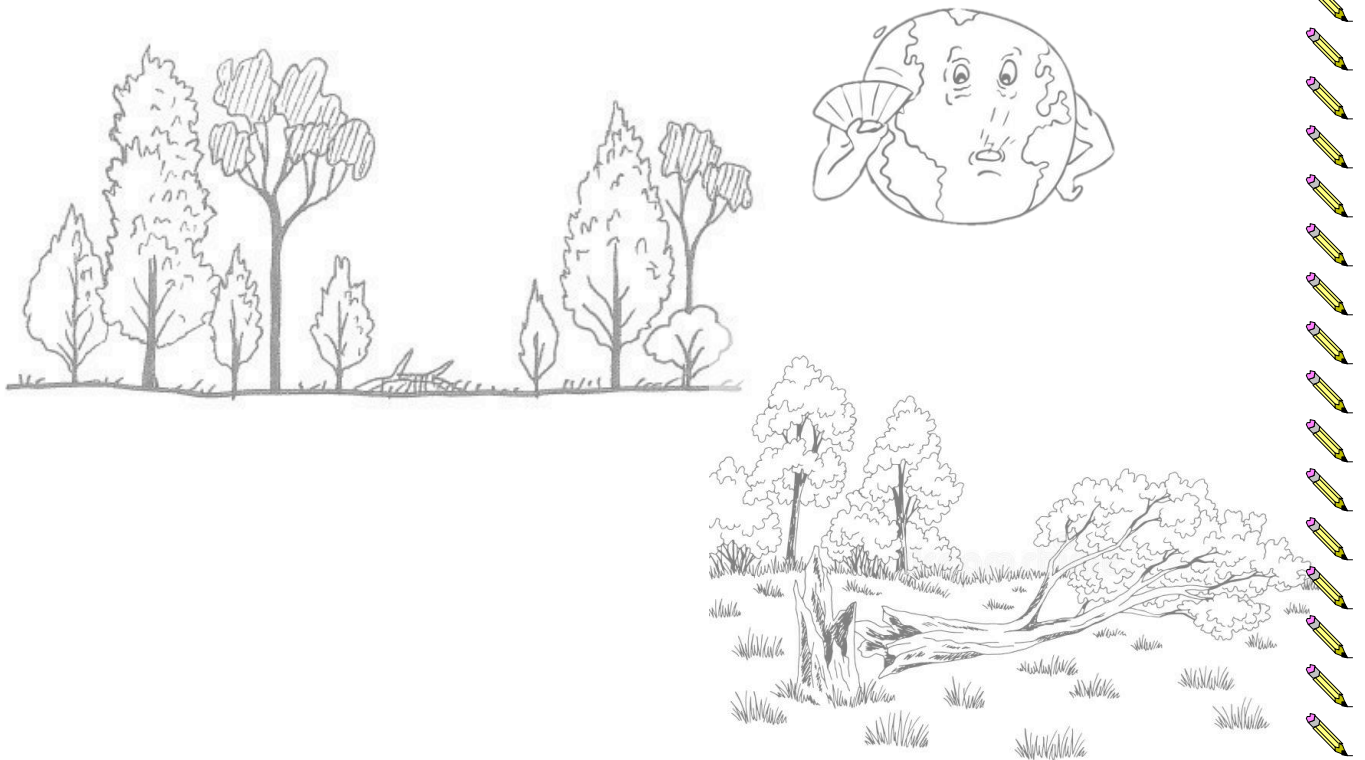
Land management is the planning and monitoring of the utilization and improvement of land resources. Carbon is a major component of pollutants released into the atmosphere. Carbon is in Carbon Monoxide released by cars or factories, carbon dioxide released by people, as a greenhouse gas, burning of fossil fuels and factories, methane released as greenhouse gases or in waste management practices etc.

Forests and vegetated land play an important role in the environment, namely by acting as a means of capturing and storing carbon in the atmosphere to then be used harmlessly by plants. If there is a build-up of carbon products and by-products in the atmosphere, there will be a worsening of global warming and overall climate change due to the carbon's capabilities to cause the depletion of the ozone layer.

As such, certain carbon considerations should be put in place to mitigate any negative effects that improper land management may produce.

1. **There should be an emphasis placed on developing forests and ecosystems.** Ensuring the resilience of forests will directly affect their ability to capture and store carbon from the atmosphere.
2. **There should be recognition of the many different ways in which the ecosystem can store or reuse carbon.** Ecosystems have a variety of ways in which they convert carbon to a more neutral compound. These include the storage of carbon in soils, wood products and biomass. This fact should be recognized when practicing land management as certain ecosystems may be more versatile than others and as such, care should be taken if there is to be any sort of manipulation.
3. **There should be implementation of the investigating and accepting of diverse approaches.** Different cultures and persons with differing educational backgrounds have varying methods of ensuring carbon is considered during land management. It is up to the persons partaking in land management to keep up to date on various approaches that can be taken to ensure a full understanding of forestry and ecosystems along with their relationship to carbon in the context of climate change.

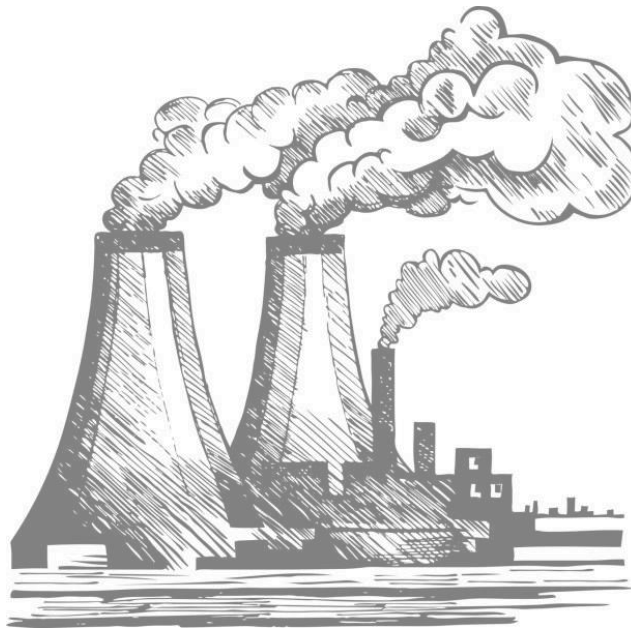
4. **There should be consideration of the “full picture”.** Considering that different systems utilize carbon in different ways and in different time frames, decisions should be made to account for any uncertainties that may arise. If necessary, the ecosystem can be considered as one part of a fuller picture such as a full life cycle.
5. **There should be use of only the best possible solutions.** When the full current knowledge is considered, along with the previously mentioned, then the best course of action should be taken. This course of action should also leave room for revisions and re-evaluations whenever new knowledge is made available or if uncertainties arise.



ACTIVITY 1: FILL IN THE BLANK

Fill in the blank with words using the source above or other sources. The number of letters in the word is in brackets beside the blank. Good Luck!

- a. Land management is mainly the management of land \_\_\_\_\_ (9).
- b. \_\_\_\_\_ (6) is a main component of pollutants released into the atmosphere.
- c. The main detrimental component of greenhouse gas emissions is carbon \_\_\_\_\_ (7).
- d. Carbon Monoxide is commonly known to be released from \_\_\_\_\_ (4).
- e. The greenhouse effect leads to global warming due to Carbon's ability to deplete the \_\_\_\_\_ (5) layer.



ACTIVITY 2: CIRCLE THE CARBON COMPOUNDS

*Feel Free to Look Up What You Don't Know!*

CO<sub>2</sub>

CO

Water

Ethane

Table Salt

Butane

Hydrochloric Acid

Methane

Ammonia

Diamond

Ethanol

Baking Soda





**ACTIVITY 3: CONNECT THE CONSIDERATION TO ITS DEFINITION**

*Draw lines to connect the consideration to its respective definition. At the end, write an original consideration in no more than 2 sentences. You've got this!*

- |   |   |
|---|---|
| i. Diverse approaches   | a. Putting the ecosystem in context of the full life cycle and to make necessary provisions for     |
| ii. Developing the ecosystems                                     | b. Ensuring the ecosystem's resilience  |
| iii. Understand the different ways the ecosystems utilize carbon. | c. Consider all current knowledge and take measures for uncertainties to create a course of action. |
| iv. "Full picture"  | d. Be aware of how different cultures and persons would solve similar issues.                       |
| v. Best possible solution   | e. Acknowledge the versatile ways in which ecosystems may sequester carbon.                         |

**WRITE AN ORIGINAL CARBON CONSIDERATION IN LAND MANAGEMENT PRACTICES (LIMIT: 2 SENTENCES)**

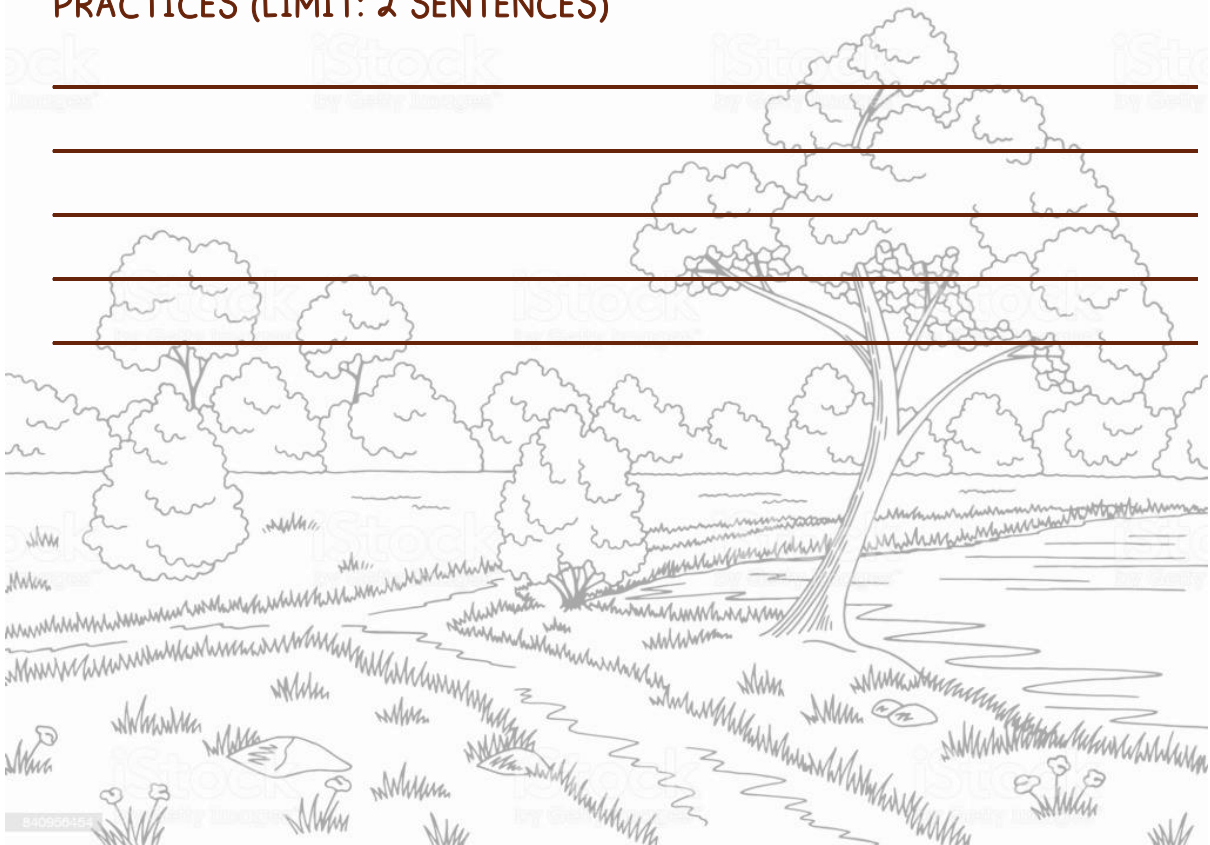
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**ACTIVITY 4: SORT THE FOLLOWING PHRASES**

*Place a "GW" beside examples of Global Warming, a "P" beside examples of pollutants and a "LP" beside examples of Land Management practices. Do your best to reason these out without using additional sources. This is Light Work for You!*

1. The ice caps keep melting! \_\_\_\_
2. There has been an increasing number of reports of flooding in the temperate regions \_\_\_\_
3. Farmer Shawn has planned in advance a ploughing schedule for his plot of land, ensuring that it is not done too often \_\_\_\_
4. The small village near the coal factory has a record number of reports of cases of pneumonia in the past month due to fumes coming from the building \_\_\_\_
5. Beijing heat wave clouds long weekend and sets multi-day temperature records \_\_\_\_
6. There is a general distaste for deforestation in society, especially if there are no plans for reforestation, and as such alternatives exist \_\_\_\_
7. Mrs. Brown and others in the community have repeatedly called the police to report excessive noise coming from the tiling factory \_\_\_\_
8. Today records the highest temperature recorded in the previous 30 years \_\_\_\_
9. In the news, they are encouraging farmers to practice crop rotation \_\_\_\_
10. Jack spotted someone throwing multiple plastic bottles out the window of their car on the highway \_\_\_\_
11. The cases of cholera have risen in the village due to the dumping of waste from the new chicken company built near the mouth of a popular river \_\_\_\_
12. The farmer and his wife work to implement a proper system of ditches and drains along the edge of their property \_\_\_\_
13. Many years ago, there was a report of persons dying from arsenic poisoning due to consuming potatoes grown on land where there was dumping of arsenic \_\_\_\_
14. At a farming workshop, the speaker discourages fellow farmers against the practice of "slash and burn" \_\_\_\_
15. Due to a lack of regular solid waste management, residents have become disgusted by the pile up of trash in their common dumping zone \_\_\_\_

**REFERENCES:**

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