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| **Word/Concept** | **Definition** | **Examples/Significance in context** |
| 2ºC | The threshold determined by the Intergovernmental Panel on Climate Change (IPCC) as the global temperature rise limit that we as a planet should not cross | This is actually debated by some small island nations, who believe 1.5C is a better threshold because otherwise their nations will be underwater. |
| Agroecology | the application of ecological principles and concepts to the design and management of sustainable agroecosystems (food-producing, biodiverse landscapes) | [Midnight’s Farm](http://www.midnightsfarm.com/about-us/) on Lopez Island, [Pie Ranch](http://www.pieranch.org/history.html) in California (both are also involved in farm education) |
| Climate Change | A change in the typical or average weather of a region, or the globe. Includes changes in temperature, precipitation, and other weather-related events. | More than global warming, includes changes we are seeing such as sea level rise, Arctic ice loss, more extreme weather, etc. |
| Weather | The atmospheric conditions of a specific place at a specific point in time. | What you see every day, or check the forecast for 10 days out |
| Carbon Sink/carbon sequestration | A place where carbon from the atmosphere can be stored in the ground (terrestrial sink, i.e. trees and soil) or ocean | Properly managed agricultural soils have HUGE potential to be a major carbon sink! |
| Adaptation | Adjustment in natural or human systems to a new or changing environment that moderates negative effects, reduces harm to the environment. | Example: planting drought-resistant almond trees in CA. |
| Mitigation | Technology changes that reduce emissions, reduces or prevents greenhouse gas emissions. | Example: implementing carbon sequestration technology at any combustion power plant |
| Methane | CH4, a carbon-containing molecule | Less common than CO2 but more potent (traps more heat) on a per-molecule basis → higher “global warming potential” |
| Carbon Dioxide | CO2, a carbon-containing molecule | Most common greenhouse gas, concentrations now reaching 400 ppm (unprecedented in human history) |
| Carbon Emissions | The act of producing or sending out carbon-containing molecules to the atmosphere | Main category of greenhouse gases/heat trapping gases |
| Greenhouse Gas | gases which allow direct sunlight to reach Earth’s surface, but absorb the infrared energy (heat) that is reradiated to the atmosphere. These gases include: water vapor, carbon dioxide, methane, nitrous oxide, among others. Also referred to as heat-trapping gases. | Greenhouse effect is strongly related to climate change, the driving force behind many changings Earth is experiencing |
| Regenerative Agriculture | Farming practiced in such a way that restores the health of the land, fertility of the soil, ecosystem diversity, and water resources nearby | Stone Barns Center for Food and Agriculture; Pi Ranch |
| Organic | Farming practices that strive to cycle resources, promote ecological balance, avoid chemical fertilizers/pesticides, and conserve biodiversity. | Requires certification to receive organic labels and access to market pricing |
| Industrial Revolution | Name given the movement in which machines changed people's way of life as well as their methods of manufacture. About the time of the American Revolution, the people of England began to use machines to make cloth and steam engines to run the machines. | Typically referred to as the starting point of human impact on the climate in a way that amplifies the Earth’s climate outside of natural variation ranges |
| Compost | Organic matter that has been decomposed and recycled as a fertilizer and soil amendment | Climate smart ag “best practices,” aids in sequestering more CO2 in soils, builds Soil Organic Matter (SOM) |
| Phenology | the study of cyclic and seasonal natural phenomena, especially in relation to climate and plant and animal life. | One of the natural patterns impacted by climate change |
| Carbon Footprint | the amount of carbon dioxide and other carbon compounds emitted due to the consumption of fossil fuels by a particular person, group, etc. | Great way to calculate your own carbon footprint on CoolClimate calculator! |
| Intercropping | Growing different kinds of crops in side by side rows or within the same row | Good practice for disease resistance, IPM, and learning which kinds of crops do best in changing climates |
| Cover crop | Planted primarily to manage soil erosion, soil fertility, soil quality, water, weeds, pests, diseases, biodiversity and wildlife in an agroecosystem (Lu et al. 2000), an ecological system managed and largely shaped by humans across a range of intensities to produce food, feed, or fiber. | Part of the principles of agroecology and climate smart agriculture |