Greenhouse Gas Models

Modeling Greenhouse Gas involves developing schemes and strategies for limiting the amount of climate change that are happening. This means that questions like a. What are humans going to do differently in the future and b. how the lands and oceans will react to the human actions taken to mitigate climate change? Modelling can provide a common framework to assess the effectiveness of operational and technological changes that occur in Greenhouse gas activities. Some of the models that has been generated are:

* **The Idealized Greenhouse Model**: The idealized greenhouse model is based on the fact that certain gases in the Earth's atmosphere, including carbon dioxide and water vapour, are transparent to the high-frequency solar radiation, but are much more opaque to the lower frequency infrared radiation leaving Earth's surface.
* **Computer simulation models**: Computer simulation models offer substantial scope for predicting Greenhouse gas emissions. These models often include all farm activities while accurately predicting the Greenhouse Gas emissions, including both direct as well as indirect sources. The models are fast and efficient in predicting emissions and provide valuable information on implementing the appropriate GHG mitigation strategies on farms.
* **Greenhouse Gas Emissions Model (GEM):** Greenhouse Gas Emissions Model for Medium- and Heavy-Duty Vehicle Compliance. EPA is taking a final action to improve the Greenhouse Gas Emissions Model (GEM) compliance tool for heavy-duty vehicles. This includes amending the procedures for demonstrating compliance with the CO2 emission standards for heavy-duty highway engines and vehicles with several corrections, clarifications, and additional flexibilities.
* **Process Models in plant design:** It seeks to help quantify and reduce emissions from the plants.