

Agriculture and Climate Change

Agriculture is one of the sources of GHG's contributing to climate change and it is also affected by it, so farming practices must adjust to mitigate against and adapt to the effects of climate change.



Climate change is caused by the release of Greenhouse Gases (GHGs), such as carbon dioxide (CO₂) and nitrous oxide (N₂O). Ten percent of the GHGs emitted in the EU come from agriculture. In Ireland, agriculture remains the single largest contributor to overall emissions at 33.1% of the total. This reflects the importance of agriculture to the Irish economy, the significance of an efficient grass based livestock industry and Ireland's lack of heavy industry.

The primary sources of GHG emissions from agriculture are; Methane (CH₄) from livestock digestion processes and stored animal manure and Nitrous Oxide (N₂O) from the application of organic and mineral nitrogen fertilisers.



Agriculture is highly vulnerable to Climate Change since farming activities depend on weather



Image: *Runoff of Soil and Fertiliser During Heavy Rain*

Source: U.S. Department of Agriculture, Natural Resources Conservation Service

Climate change is affecting farming through changes in rainfall patterns; rising temperatures; variability in seasons; and extreme events, such as heat-waves, droughts, storms and flooding.



Image: *Ploughed Field*

Source: Ciaran Buckley