



### Use Case 3

## Energy communities: Distributed solar energy production forecasting and demand management

**Use Case 3** investigates the causal links between **climate change** and **food security**. This project, led by the University of Valencia in partnership with the World Food Programme, applies advanced causal machine learning to analyse the **impacts of climate events**, like droughts and floods, on **food availability** and **stability** in the Horn of Africa. By integrating **Copernicus data**, **socioeconomic factors**, and **food security metrics**, we aim to **enhance risk assessment**, **policy effectiveness**, and **intervention planning for vulnerable regions**.

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# ThinkingEarth

## Copernicus Foundation Models for a Thinking Earth

ThinkingEarth will utilise AI to create Copernicus Foundation Models and a Graph representation of the Earth. Four Use Cases are being developed under the project.



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Funded by the  
European Union

This project has received funding from the European Union's Horizon Europe Research and Innovation Program under Grant Agreement number 101130544.