CROSS-CUTTING SYSTEMS
TASK GROUP
Climate change as a system

The Earth System

One thing changes everything

Human activities like burning coal, oil and gas to power our homes, factories and transport have released huge quantities of carbon dioxide into the atmosphere, causing an enhanced greenhouse effect. This causes an imbalance in the energy cycle that, in turn, impacts the water cycle, atmospheric circulation and ocean currents, leading to changes in weather and climate.

Schematic figure of HadGEM2-ES and the earth system interactions it represents


United Nations/UNEP
DO NO HARM – PEOPLES, COMMUNITIES, THE ENVIRONMENT

Future projections of changes in the statistics of: HDDs, CDDs, heat waves, seasonal precip metrics, air quality, growing season, thresholds (e.g. days >87°F), all natural hazards

Governance & planning – scale, barriers to climate resilience

Residential energy use, changes in amps, stability of the grid

Climate-resilient zones, human and species movements, access & equity

LULC – public/private, Nature-based solutions

Identify existing data gaps, sources of uncertainty, potential system changes in the future

Equity-based data/information visualizations