

# Climate Change and Sustainability Research at NUS



## Integrative Sustainability Solutions

We advance integrated sustainability solutions that are optimised for tropical, urban and Asian settings, including clean energy materials and systems, environmental surveillance and treatment of urban waterways, waste-to-energy conversion, seawater desalination and sustainable urban transport systems.

## Overview of Climate Change and Sustainability Research at NUS

NUS conducts systems-level research in climate change and sustainability. Under the climate system, NUS expertise lies in downscaling global climate models to regional and local models to understand microclimate, including extremes in temperature, rainfall, humidity and drought and its urban heat island effect. Under the water system, NUS research comprises of coupling global atmospheric and ocean models with regional and local land-coastal inundation models, including sea level rise to present a holistic assessment of coastal defence. Under the biological system, NUS conducts cutting-edge research on understanding relationships between ecosystems and society, including ecosystem services, coastal protection (green infrastructure) and biodiversity conservation to inform climate policies, strategies and actions. Under the social system, NUS expertise lies in understanding the impacts of climate change on society, including socio-economic impacts and suggesting effective public policy interventions to address these impacts together with enhancing public understanding of risk. Additionally, climate mitigation research focusses on green energy technologies, specifically solar energy technologies and platforms and CO<sub>2</sub> removal along with energy policy studies.

For more information [click here](#)

## Research Institutes and Centres

The list of Institutes/Centres managed under the Sustainability Research Cluster include:

### [Centre for Nature-Based Climate Solutions](#)

University-level Research Institute

### [Energy Studies Institute](#)

University-level Research Institute

### [NUS Environmental Research Institute](#)

University-level Research Institute

### [Sembcorp-NUS Corporate Lab](#)

Corporate Laboratory

### [Singapore Nuclear Research and Safety Initiative](#)

University-level Research Centre/Institute

### [Solar Energy Research Institute of Singapore](#)

University-level Research Institute



Other centres and institutes working towards developing new integrated sustainability solutions for the rapidly urbanising Asia include:

**[Advanced Robotics Centre](#)**

NUS Faculty of Engineering and NUS Faculty of Science

**[Centre for Advanced Studies in Architecture](#)**

NUS School of Design and Environment

**[Centre for Energy Research and Technology](#)**

NUS Faculty of Engineering

**[Centre for Environmental and Occupational Health Research](#)**

Saw Swee Hock School of Public Health

**[Centre for Integrated Building Energy and Sustainability in the Tropics](#)**

NUS School of Design and Environment

**[Centre for Next Generation Logistics](#)**

NUS Faculty of Engineering, Industrial and Systems Engineering and Management

**[The Centre for Project and Facilities Management](#)**

NUS School of Design and Environment

**[Centre for Remote Imaging Sensing & Processing](#)**

University-level Research Institute/Centre

**[Centre for Sustainable Asian Cities](#)**

NUS School of Design and Environment

**[Centre for Water Research](#)**

NUS Faculty of Engineering, Civil and Environmental Engineering

**[Green Energy Management and Smart Grid Research Centre](#)**

NUS Faculty of Engineering, Electrical and Computer Engineering

**[LTA-NUS Transport Research Centre](#)**

NUS Faculty of Engineering, Civil and Environmental Engineering

**[Centre for 5G Digital Building Technology](#)**

NUS School of Design and Environment

**[NUS Flagship Green Energy Programme](#)**

NUS Faculty of Engineering and Faculty of Science

**[Singapore Centre for Environmental Life Sciences Engineering](#)**

Research Centre of Excellence (partnership with NTU)

**[The Logistics Institute-Asia Pacific](#)**

University-level Research Institute

**[WIL@NUS Corp Lab](#)**

Corporate Laboratory

