



GRIFFITH INSTITUTE  
FOR HUMAN AND  
ENVIRONMENTAL RESILIENCE

Queensland Australia

# RESEARCH CAPABILITIES

TRANSFORMING COMMUNITIES AND ECOSYSTEMS  
FOR SUSTAINABILITY AND PROSPERITY



# GRIFFITH UNIVERSITY

# GRIFFITH INSTITUTE FOR HUMAN AND ENVIRONMENTAL RESILIENCE

## WHO WE ARE

We are Griffith's flagship institute committed to environmental excellence, dedicated to finding pragmatic and innovative solutions for people to thrive in harmony with nature.

Griffith Institute for Human and Environmental Resilience (GIHER) conducts transdisciplinary research—utilising environmental and social science, ecology, economics, public and environmental health, engineering, law and information technology—to address the complexities of our changing planet and support the economy.

## OUR MISSION

We work to safeguard the health, prosperity and security of both human-made and natural environments. Our research is informed by systems thinking—we approach the challenges of living in harmony with nature as a series of interconnected problems affecting both the natural and built environment.

We are responding to the urgent call to mobilise research leaders into finding sustainable, equitable and adaptable development for all, in an ever-changing climate. We give expert advice that reduces uncertainty in decision making and responds to community values and needs.



## OUR EXPERTISE

Our members boast a rich pool of skills and expertise depth that reflects our collective transdisciplinary research. GIHER is a one-stop shop for delivering high quality and impactful research outcomes.

-  **ENGINEERING**  
Civil, structural, coastal, environmental and mechanical
-  **ECOLOGY**  
Conservation, systems and aquatic
-  **CLIMATE CHANGE**  
Climate adaptation, mitigation and modelling
-  **HEALTH**  
Public, environmental and First Peoples
-  **ECONOMICS**  
Behavioural, environmental and political
-  **LAW**  
Commercial, environmental and intellectual property
-  **SOCIAL SCIENCES**  
Anthropology, sociology and psychology
-  **INFORMATION TECHNOLOGY**  
Knowledge management, AI and data analytics



## ACKNOWLEDGEMENT OF COUNTRY

Griffith University acknowledges the people who are the traditional custodians of the land and pays respect to the Elders, past and present, and extends that respect to all Aboriginal and Torres Strait Islander peoples.

*Connection to water and country by Sandra Ase, Traditional Owner Mapoon, Cape York.*



## OUR RESEARCH

We are known for our exceptionally strong mixed methods research approach, reflecting our depth of expertise. GIHER members design, implement and disseminate research in a way that is tailored for maximum impact across industry, public policy and stakeholder communities.

## OUR RESEARCH LIFECYCLE

### COMMUNICATION AND IMPACT

- Industry reports and showcase events
- Policy briefs and submissions
- Product development and industry-ready tools (Apps, roadmaps, decision-support tools, frameworks and guidelines)
- Peer-reviewed journal articles, books, opinion pieces, industry and government white papers
- Conference and symposia co-presentations with our industry partners
- Visual media

### RESEARCH COLLABORATION AND STRATEGY

- Conduct workshops focused on industry needs
- Prepare funding grants with our transdisciplinary team and stakeholders
- Work with local, state and federal governments; industry and private sector; urban, regional, rural and remote communities; NGOs; First Nations organisations and communities

### ANALYSIS AND INTERPRETATION

- Qualitative coding and thematic analysis (nVIVO and related tools)
- Descriptive and inferential statistical analysis
- Programming and modelling (numerical, analytical, system dynamics, R, Python, social network analysis and other analytical tools)
- AI, GIS, digital mapping and remote sensing

### DESIGN AND DATA ACQUISITION

- Develop mixed method designs
- Employ principles of co-creation, multi-way communication, reciprocity and equity
- Design and conduct interviews, focus groups, and participatory action research methods
- Decolonise research methodologies and methods
- Surveys, sampling and experimental/laboratory methods

## RESEARCH WITH IMPACT

We understand that to create impact, you need stakeholders by your side from the very beginning of a project. Our Knowledge Translation and Impact hub engages early and often on all new projects to maximise positive outcomes for everyone involved. We also firmly believe in weaving First Peoples knowledge across all our research themes and our First Peoples Research Capacity Building platform aims to boost Indigenous-led stewardship.



## RESEARCH THEMES

### PROTECTING AND RESTORING BIODIVERSITY AND ECOSYSTEMS

We are advancing knowledge and innovation to conserve biodiversity, restore degraded landscapes and safeguard the life-supporting systems that underpin human and planetary wellbeing. We combine ecological science, economic environmental management and Indigenous-led approaches to protect and restore resilient terrestrial and aquatic ecosystems.

#### Key capabilities:

- ecosystem restoration and conservation decision science
- nature-based solutions and circular resource systems
- planning and governance for nature-based investment
- IPCC leadership and international climate policy contributions
- threat analysis and spatial conservation planning.



### CREATING CLIMATE AND DISASTER RESILIENT COMMUNITIES

We work with communities, governments, and industry to reduce vulnerability, build adaptive capacity and support equitable responses to climate and disaster risks. Our expertise spans public health, community planning, engineering and social science to co-develop solutions that protect lives and livelihoods.

#### Key capabilities:

- climate change impacts on health, heat and wellbeing
- disaster and emergency preparedness, response and recovery
- community-led resilience and adaptation planning
- infrastructure design for extreme events and recovery
- behavioural and policy innovations for equitable adaptation.



### TRANSITIONING TO SUSTAINABLE LIVING AND BUILT ENVIRONMENTS

We support the transition toward low-carbon, inclusive and sustainable development pathways through transformative research, governance and innovation. We bring together experts across economics, law, policy, engineering and design to shape sustainable and resilient futures.

#### Key capabilities:

- decarbonisation and clean energy transitions
- sustainable and circular economies
- climate-resilient infrastructure and planning
- transformative governance and policy reform
- knowledge integration and innovation management.



## CONNECT WITH US

**PROFESSOR CARA BEAL**  
Director

**DIAN RISELEY**  
Manager



E [GIHER@griffith.edu.au](mailto:GIHER@griffith.edu.au)  
[griffith.edu.au/giher](http://griffith.edu.au/giher)